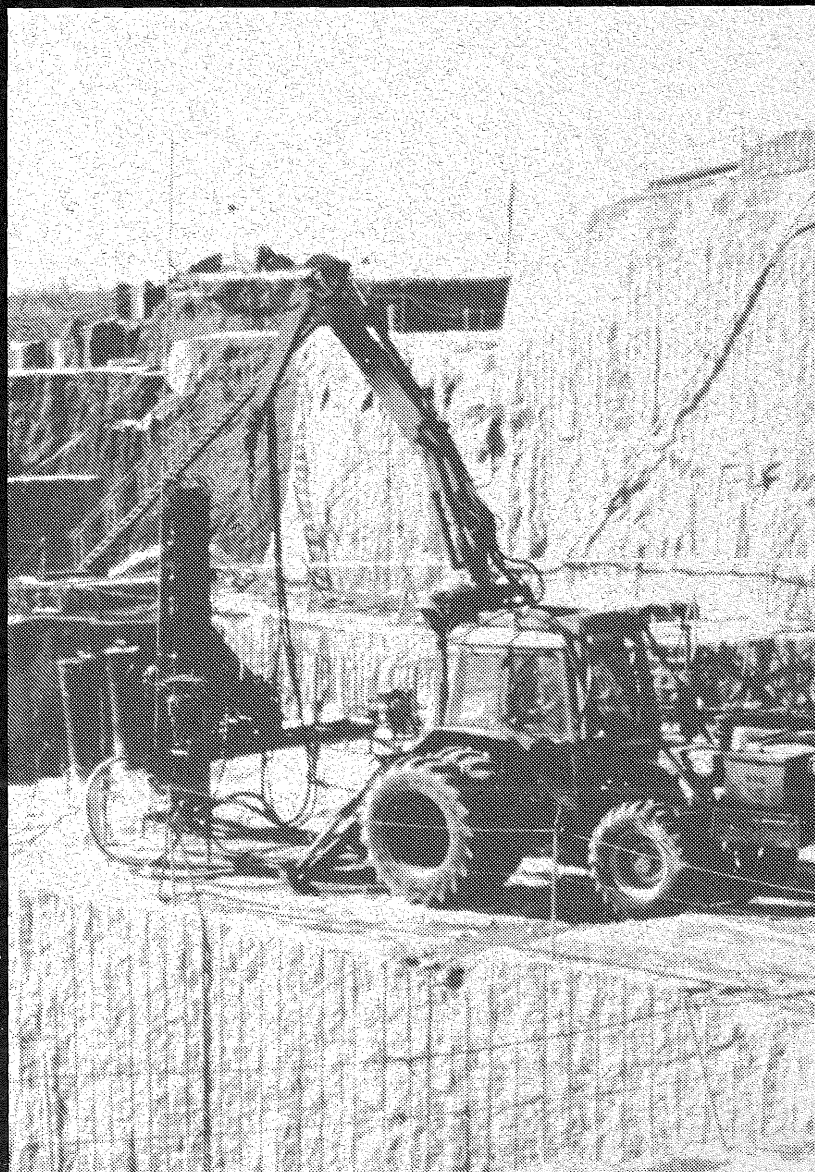




Industrial Minerals

Inventory of Industrial Mineral Pits and Quarries in Minnesota

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Volume 2

Minnesota
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**Inventory of Industrial Mineral Pits and
Quarries in Minnesota**

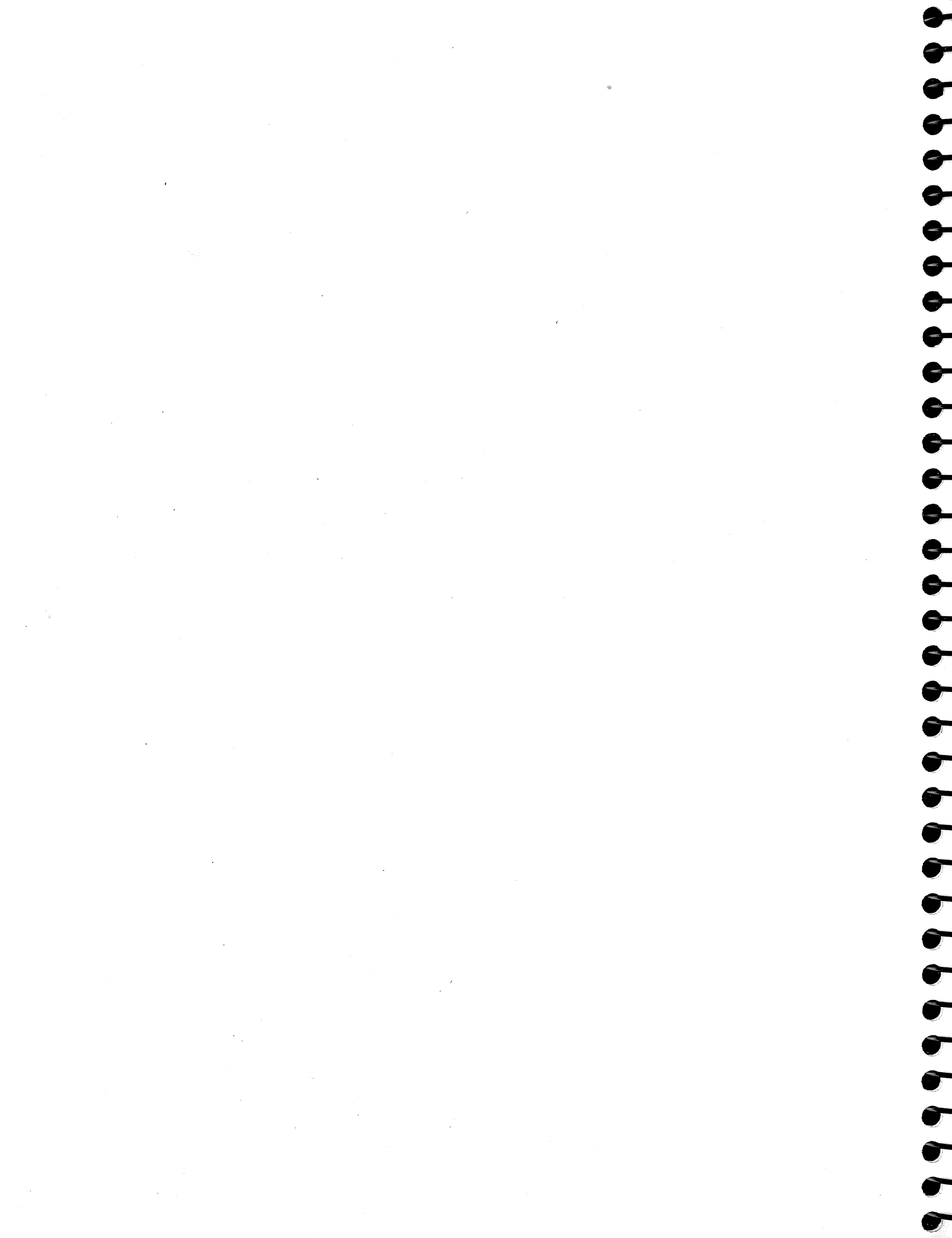
By

S. L. Nelson, M. W. Oberhelman, and D. J. Olson

1990

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Volume 2 of 2

Minnesota Department of Natural Resources
Division of Minerals
William C. Brice, Director



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Records of Inactive Pits and Quarries

Main commodity: Clay/Shale
County: Aitkin
Status: Inactive
Location: T 47 R 27 W
Location comments: Near the town of Aitkin (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
Remarks: At least four brickyards operated near the town of Aitkin between 1884 and 1910 (1)
References: 1) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Aitkin
Date opened: 1890 (1)
Status: Inactive
Location: T 47 R 27 W Sec 24 (1)
Location comments: At the northeast edge of Aitkin; (Ref. 1 states township as 46 but the town of Aitkin is actually in township 47)
Description: "The pit is so close to the banks of the river that probably a considerable proportion of the clay used was alluvium, but the deposit extends so far in all directions that most of it must be classed as a lake deposit." (1)
Physical test data: See Refs. 1 and 2 for test data
Uses of commodity: Common brick (1,2)
References: 1) Grout. 1919, p. 111, 112
 2) Grout; Soper. 1914, p. 63, 64

Main commodity: Clay/Shale
County: Anoka
Date opened: 1879 (1)
Status: Inactive
Township name: Fridley (1)
Location: T 30 R 24 W Sec 34 S1/2 (1)
Location comments: About two miles north of Minneapolis (1); (T., R. locations determined from county highway map)
Description: Modified drift forming the east bank of the Mississippi River (1)
Uses of commodity: Bricks (1)
Remarks: Two brick-making operations were active at this location in 1880 (1)
References: 1) Winchell; Upham. 1888, p. 423

Main commodity: Clay/Shale
County: Anoka
Status: Inactive
Location: T 31 R 22 W

Location comments: At Centerville (1); (T., R. locations determined from Ref. 1, plate 45)
Uses of commodity: Bricks (1)
References: 1) Winchell; Upham. 1888, p. 424, plate 45

Main commodity: Clay/Shale
County: Anoka
Date opened: 1879 (1)
Status: Inactive
Location: T 31 R 24 W
Location comments: Coon Creek (1-9); (T., R. locations determined from Ref. 7, plate 45)
Description: Red drift (1,3,4); slightly calcareous brown glacial clay (2); gray laminated clay (7)
Chemical analyses: See Ref. 8, p. 398 for chemical analyses
Physical test data: See Ref. 1, p. 65-68, Ref. 5, p. 59 and Ref. 8, p. 113-118 for test data
Uses of commodity: Brick, tile (6)
Remarks: At least seven brickyard operators have been located at Coon Creek (1-9)
References: 1) Grout; Soper. 1914, p. 64-68
 2) Burchard. 1910, p. 289
 3) Grout. 1947, p. 6
 4) Grout. 1916, p. 187
 5) Prokopovich; Schwartz. 1957, p. 59
 6) Schwartz; Thiel. 1954, p. 183
 7) Winchell; Upham. 1888, p. 423, plate 45
 8) Grout. 1925, p. 398
 9) Grout. 1919, p. 113-118

Main commodity: Clay/Shale
County: Anoka
Status: Inactive
Location: T 31 R 24 W Sec 15 (1)
Location comments: Old pit near Northern Pacific Railroad tracks (1)
Description: Laminated glacial lake clay (1)
Physical test data: See Ref. 1 for test data
References: 1) Prokopovich; Schwartz. 1957, p. 9, 59

Main commodity: Clay/Shale
County: Anoka
Date opened: 1871 (1)
Status: Inactive
Township name: Grow (1)
Location: T 32 R 24 W
Location comments: On the west side of Round Lake, two miles northeast of Anoka (1); (T., R. locations determined from Ref. 1, plate 45)
Description: Levelly stratified clay (1)
Physical test data: See Ref. 2, p. 118 for test data
Uses of commodity: Cream-colored bricks (1)
Remarks: References indicate at least five brickyard operators were located near Anoka

References: 1) Winchell; Upham. 1888, p. 423, plate 45
2) Grout. 1919, p. 118
3) Grout. 1947, p. 4
4) MN Business Gazette. referenced data compiled from NRRI

Main commodity: Clay/Shale
County: Anoka
Status: Inactive
Location: T 32 R 25 W
Location comments: South of intersection of Hwy. 10 and 56 (1,2); 1.8 miles south of intersection (2); (T., R. locations determined from county highway map)
Description: Glacial lake clays (1)
Remarks: Pit (1)
References: 1) NRRI. compiled referenced data
2) Prokopovich; Schwartz. 1957, p. 59

Main commodity: Clay/Shale
County: Becker
Status: Inactive
Location: T 139 R 41 W OR
T 138 R 41 W
Location comments: Near the town of Detroit (Detroit Lakes) (1,2); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
Remarks: At least two brickyards operated near the town of Detroit (Detroit Lakes) between 1906 and 1918 (1)
References: 1) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Becker
Status: Inactive
Location: T 139 R 41 W OR
T 138 R 41 W
Location comments: Along the Minneapolis, St. Paul and Sault Ste. Marie Railway (1); about a mile south of the station at Detroit (Detroit Lakes) (1,2); (T., R. locations determined from county highway map)
Description: Gray drift (1,2)
Uses of commodity: Bricks (1,2)
Remarks: The clay contained many limestone pebbles (1,2)
References: 1) Grout. 1919, p. 118, 119
2) Grout; Soper. 1914, p. 68

Main commodity: Clay/Shale
County: Becker

Date opened: 1878
Status: Inactive
Past operator/owner: Shaw and Martin (1888) (1)
Location: T 139 R 41 W OR
T 138 R 41 W
Location comments: In Detroit (Detroit Lakes), about a third of a mile south of the town (1); (T., R. locations determined from county highway map)
Description: "The clay used seems to be an alluvial deposit..." (1)
Uses of commodity: Bricks (1)
Remarks: The color of the brick varies from yellowish to red, depending on the position in the kiln (1)
References: 1) Winchell; Upham. 1888, p. 655

Main commodity: Clay/Shale
County: Becker
Status: Inactive
Location: T 142 R 41 W OR
T 142 R 42 W
Location comments: Near Ogema (1,2); (T., R. locations determined from county highway map)
Description: Swamp or lake clay (1,2)
Uses of commodity: Bricks (1,2)
Remarks: "Very attractive and durable bricks were made, though a few lime pebbles are visible." (2)
References: 1) Grout. 1919, p. 118, 119
2) Grout; Soper. 1914, p. 68, 69

Main commodity: Clay/Shale
County: Becker
Date opened: 1879 (1)
Status: Inactive
Past operator/owner: Thomas J. Martin (1888) (1)
Location: T 142 R 41 W
Location comments: Near White Earth (1,2); at the White Earth Agency, about 15 rods northeast from the agent's house. (1); (T., R. locations determined from county highway map)
Description: Glacial clay (1); swamp or lake clay (2,3)
Uses of commodity: Bricks (1-3)
Remarks: "Very attractive and durable bricks were made though a few lime pebbles are visible." (3)
References: 1) Winchell; Upham. 1888, p. 655
2) Grout. 1919, p. 118, 119
3) Grout; Soper. 1914, p. 68, 69

Main commodity: Clay/Shale
County: Beltrami
Status: Inactive
Location: T 146 R 33 W

Location comments: At south Bemidji, near the south shore of the lake (1,2); (T., R. locations determined from county highway map)

Description: Blue and yellow laminated clay (1,2)

Physical test data: See Ref. 1 for test data

Uses of commodity: Bricks (1,2)

References: 1) Grout. 1919, p. 119, 120
2) Grout; Soper. 1914, p. 69

Main commodity: Clay/Shale

County: Beltrami

Status: Inactive

Past operator/owner: Bemidji Brick Co. (1-3)

Location: T 146 R 33 W Sec 21 (1)

Location comments: Near Bemidji (3)

Description: Glacial lake clay (1)

Physical test data: See Ref. 1, table 3 and Ref. 2 for test data

Uses of commodity: Bricks (3)

Remarks: Clay pit (1,2)

References: 1) Grosh; Hamlin. 1963, p. 7, 18
2) Prokovich; Schwartz. 1957, p. 66
3) Grout. 1947, p. 4

Main commodity: Clay/Shale

County: Benton

Status: Inactive

Past operator/owner: Harshman (1)

Location: T 36 R 30

Location comments: "...at the crossing of the state road, over Elk River." (1); northeast of Sauk Rapids, along Elk River (2); (T., R. locations determined from county highway map)

Description: Glacial clay (1)

Physical test data: See Ref. 1 for test data

Uses of commodity: Bricks (2)

References: 1) Grout. 1919, p. 121
2) Grout; Soper. 1914, p. 69, 70

Main commodity: Clay/Shale

County: Benton

Status: Inactive

Location: T 37 R 28 W

Location comments: At Ronneby (1); (T., R. locations determined from county highway map)

Uses of commodity: Bricks (1)

Remarks: A brick kiln was located near Ronneby (1)

References: 1) Benton County Engineer. 1989, personal communication

Main commodity: Clay/Shale

County: Blue Earth

Date opened: 1867

Status: Inactive since 1871 (1)

Township name: Shelby (1)

Location: T 105 R 28 W Sec 6 SW1/4 (1)

Location comments: Southeast side of Willow Creek (1); (T., R. locations determined from county highway map)

Uses of commodity: Red bricks of fair quality (1)

References: 1) Winchell and others. 1884, p. 451

Main commodity: Clay/Shale

County: Blue Earth

Status: Inactive

Township name: Shelby (1)

Location: T 105 R 28 W Sec 8 NW1/4 (1)

Location comments: On the east side of the Blue Earth River (1); (T., R. locations determined from county highway map)

Uses of commodity: Bricks (1)

References: 1) Winchell and others. 1884, p. 451

Main commodity: Clay/Shale

County: Blue Earth

Status: Inactive since 1904 (1,2)

Location: T 106 R 27 W

Location comments: About half a mile south of Good Thunder Station (1,2); (T., R. locations from county highway map)

Description: Swamp deposit (1,2)

Chemical analyses: See Ref. 1, p. 126 and Ref. 2, p. 73 for chemical analyses

Uses of commodity: Bricks (1-3)

Remarks: At least three brickyard operators were located near Good Thunder (1-3)

References: 1) Grout. 1919, p. 125, 126
2) Grout; Soper. 1914, p. 73, 74
3) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale

County: Blue Earth

Status: Inactive

Township name: Ceresco (1)

Location: T 106 R 29 W Sec 32 SW1/4 (1)

Location comments: West of Perch Creek (1)

Uses of commodity: Bricks (1)

References: 1) Winchell and others. 1884, p. 451

Main commodity: Clay/Shale

County: Blue Earth

Date opened: 1878 (1)

Status: Inactive
Township name: McPherson (1)
Location: T 107 R 25 W Sec 8 NW1/4 (1)
Description: Alluvium from the Le Sueur River (1)
Uses of commodity: Red bricks (1)
References: 1) Winchell and others. 1884, p. 451

Main commodity: Clay/Shale
County: Blue Earth
Status: Inactive
Location: T 107 R 27 W
Location comments: At Rapidan (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
Remarks: A brickyard located at Rapidan (1)
References: 1) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Blue Earth
Date opened: 1869 (1)
Status: Inactive
Location: T 107 R 28 W
Location comments: South of Garden City fairgrounds (1884), on the north bank of the Watonwan River (1); (T., R. locations determined from county highway map)
Uses of commodity: Red bricks (1)
Remarks: Bricks cracked because of limestone particles (1)
References: 1) Winchell and others. 1884, p. 451

Main commodity: Clay/Shale
County: Blue Earth
Date opened: 1867 (1)
Status: Inactive since 1871 (1)
Location: T 107 R 28 W
Location comments: Southwest edge of the town of Lake Crystal (1); (T., R. locations determined from county highway map)
Physical test data: See Ref. 2, p. 123 and Ref. 3, p. 71 for test data
Uses of commodity: Bricks (1)
Remarks: Three plants are located in the Lake Crystal area (2,3)
References: 1) Winchell and others. 1884, p. 451
 2) Grout. 1919, p. 123
 3) Grout; Soper. 1914, p. 71

Main commodity: Clay/Shale
County: Blue Earth
Status: Inactive

Location: T 108 R 26 W AND
 T 108 R 27 W
Location comments: Mankato (1-4); one was located 2.5 miles west of Mankato (4); another 5 miles southwest of Mankato (6) and another in the north part of the city (1); (T., R. locations determined from county highway map)
Description: Alluvium from the Minnesota River (1)
Uses of commodity: Brick (1-4); pottery clay (5)
Remarks: At least seven brickyard operators were located near Mankato (1-6)
References: 1) Winchell and others. 1884, p. 451
 2) MN Census. referenced data compiled by NRRI
 3) MN Business Gazette. referenced data compiled by NRRI
 4) Grout; Soper. 1914, p. 73
 5) Schrader and others. 1917, p. 169
 6) NRRI. compiled referenced data

Main commodity: Clay/Shale
County: Brown
Status: Inactive
Township name: Sigel (1)
Location: T 109 R 31 W Sec 3 NW1/4 (1)
Location comments: Near New Ulm from the bluffs of the Cottonwood River (1)
Uses of commodity: Pottery (1)
References: 1) Winchell and others. 1884, p. 452, 573

Main commodity: Clay/Shale
County: Brown
Status: Inactive
Past operator/owner: A. C. Ochs Brick and Tile Co. (see Producer Directory) (1)
Location: T 109 R 34 W Sec 17 NE1/4 (1)
Geologic age: Cretaceous
Description: Shale (1)
References: 1) Sloan. 1964, p. 21, 49

Main commodity: Clay/Shale
County: Brown
Quarry/pit name: Ochs Pit (1,2)
Status: Inactive
Location: T 109 R 34 W Sec 30 (1,2)
Location comments: 1/2 mile south of U.S. Hwy. 14 (1,2)
Geologic age: Cretaceous
Physical test data: See Ref. 1 for test data
References: 1) Riley. 1950a, p. 8
 2) Riley. 1950b, p. 9

Main commodity: Clay/Shale

County: Brown
Status: Inactive
Location: T 109 R 35 W Sec 16 NW1/4 AND
 T 109 R 35 W Sec 17 NE1/4 (1)
Location comments: At Springfield (1); (this site may possibly be in R 34)
Geologic age: Cretaceous
Physical test data: See Ref. 1 for test data
Remarks: Old pit (1)
References: 1) Prokopovich; Schwartz. 1957, p. 58

Main commodity: Clay/Shale
County: Brown
Status: Inactive
Location: T 109 R 35 W Sec 36 SW1/4 NE1/4 (1)
Description: Common clay (1)
Remarks: Past producer (1)
References: 1) USBM. [1980], MILS

Main commodity: Clay/Shale
County: Brown
Date opened: 1875 (3,4)
Status: Inactive
Location: T 110 R 30 W
Location comments: Brickyard at New Ulm at the southeast end of the city, on a terrace about 40 feet above the Minnesota River (1); 1.5 miles southeast of the center of New Ulm (1919) (3,4); (T., R. locations determined from county highway map)
Description: Laminated clays from the river terrace (1); river clay (4)
Physical test data: See Ref. 2 for test data
Uses of commodity: Bricks (1)
Remarks: Red bricks of fair quality (1)
References: 1) Winchell and others. 1884, p. 576,587
 2) Prokopovich; Schwartz. 1957, p. 57
 3) Grout; Soper. 1914, p. 74-79
 4) Grout. 1919, p. 127-134

Main commodity: Clay/Shale
County: Brown
Status: Inactive
Location: T 110 R 30 W OR
 T 109 R 30 W
Location comments: At the base of the north bluff of the Cottonwood River, south of New Ulm (1); three miles from New Ulm (2); (T., R. locations determined from county highway map)
Geologic age: Cretaceous
Description: See Ref. 1, p. 574 and Ref. 2, p. 185 for section descriptions

Uses of commodity: Pottery clay (1,2)
Remarks: (Ref. 2 states river name as Waraju, this is assumed to be the Cottonwood River)
References: 1) Winchell and others. 1884, p. 574
 2) Winchell; Peckham. 1874, p. 185

Main commodity: Clay/Shale
County: Brown
Status: Inactive
Location: T 110 R 31 W Sec 36 (1,2)
Location comments: Near New Ulm (1,2); (Ref. 2 states R 30 which appears to be a typographical error)
Geologic formation: Big Cottonwood Fm. (1)
Uses of commodity: Fire bricks (1)
Remarks: Bricks did not show a satisfactory strength after being repeatedly heated and cooled (1)
References: 1) Grout. 1919, p. 130, 131
 2) Grout; Soper. 1914, p. 75

Main commodity: Clay/Shale
County: Brown
Status: Inactive
Location: T 110 R 31 W
Location comments: Brickyard at Milford (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
References: 1) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Brown
Status: Inactive
Township name: Milford (1)
Location: T 110 R 31 W Sec 12 NW1/4 (1)
Location comments: Three miles northwest of New Ulm (1)
Description: Stratified yellow clay (1)
Uses of commodity: Bricks (1)
References: 1) Winchell and others. 1884, p. 587

Main commodity: Clay/Shale
County: Brown
Status: Inactive
Location: T 110 R 32 W
Location comments: At Sleepy Eye (1); (T., R. locations determined from county highway map)
Description: Till (1)
Uses of commodity: Bricks (1)
Remarks: Bricks failed due to limestone pebbles in the till (1)
References: 1) Winchell and others. 1884, p. 587

Main commodity: Clay/Shale
County: Brown
Status: Inactive
Location: T 112 R 33 W Sec 29 SE1/4 NW1/4 SW1/4 (1,2)
Geologic age: Pleistocene and Upper Cretaceous (1)
Remarks: Small pit (1,2)
References: 1) Parham. 1970, p. 84
 2) Parham; Hogberg. 1964, p. 40

Main commodity: Clay/Shale
County: Brown
Quarry/pit name: Ochs Spring Field Mine (1)
Status: Inactive
Location: T 112 R 35 W Sec 18 SE1/4 SW1/4 (1)
Geologic age: Cretaceous
Description: Shales/clays (1)
References: 1) NRRI. clay sample site

Main commodity: Clay/Shale
County: Carlton
Quarry/pit name: Nemadji Clay Pit (3)
Status: Inactive (3)
Past operator/owner: Nemadji Tile and Pottery Co. (1,2)
Location: T 46 R 18 W Sec 14 S1/2 NW1/4 (1,2)
Location comments: (Ref. 3 states T 36 which appears to be a typographical error)
Description: Reddish-brown clay (1,2); recent and glacial lake clay (3)
Physical test data: See Ref. 3, p. 64 for test data
Uses of commodity: Clay tile, brick, pottery (2)
References: 1) Emmons; Grout. 1943, p. 97
 2) Grout. 1947, p. 3, 4
 3) Prokopovich; Schwartz. 1957, p. 64
 4) Bradley. 1949, p. 16

Main commodity: Clay/Shale
County: Carlton
Quarry/pit name: Nemadji Tile and Pottery Pit No. 3 (1)
Status: Inactive
Past operator/owner: Nemadji Tile and Pottery Co. (1)
Location: T 46 R 19 W Sec 18 SW1/4 SW1/4 (1)
Description: Common clay (1)
References: 1) USBM. [1980], MILS

Main commodity: Clay/Shale
County: Carlton
Quarry/pit name: Nemadji Tile and Pottery Pit No. 1 (1)
Status: Inactive

Past operator/owner: Nemadji Tile and Pottery Co. (1)
Location: T 46 R 19 W Sec 18 NE1/4 SE1/4 (1)
Description: Common clay (1)
References: 1) USBM. [1980], MILS

Main commodity: Clay/Shale
County: Carlton
Quarry/pit name: Nemadji Tile and Pottery Pit No. 2 (1)
Status: Inactive
Past operator/owner: Nemadji Tile and Pottery Co. (1)
Location: T 46 R 19 W Sec 18 NE1/4 SW1/4 (1)
Description: Common clay (1)
References: 1) USBM. [1980], MILS

Main commodity: Clay/Shale
County: Carlton
Quarry/pit name: Blackhoof Pit (1,2)
Status: Inactive
Past operator/owner: Nemadji Tile and Pottery Co. (3); Dodge Tile and Pottery (5)
Location: T 47 R 17 W Sec 26 SW1/4 NW1/4 (3,4)
Location comments: Near Moose Lake (3,4); north bank of the Blackhoof River (5)
Description: Red clay (3,4)
Chemical analyses: See Ref. 5 for chemical analyses
Physical test data: See Refs. 1, 2, and 5 for test data
Uses of commodity: Clay tile, brick, pottery (4)
References: 1) Riley. 1950a, p. 8
 2) Riley. 1950b, p. 9
 3) Emmons; Grout. 1943, p. 97
 4) Grout. 1947, p. 3, 4
 5) Bradley. 1949, p. 17, 31, 46, 48

Main commodity: Clay/Shale
County: Carlton
Quarry/pit name: Barnum Clay Pit (4)
Status: Inactive
Location: T 47 R 19 W Sec 25 SE1/4 SE1/4 (4)
Location comments: Just north of the town of Barnum (1,2)
Description: Glacial till (4)
Physical test data: See Refs. 1 and 2 for test data
Uses of commodity: Red brick (1,2)
Remarks: At least five brickyard operators were located near Barnum (3,5)
References: 1) Grout. 1919, p. 139
 2) Grout; Soper. 1914, p. 81
 3) Winchell and others. 1899, p. 22
 4) NRRI. clay sample site
 5) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Carlton
Status: Inactive
Past operator/owner: Duluth Brick and Tile Co. (1899) (1)
Location: T 48 R 16 W
Location comments: Near Wrenshall (1); (T., R. locations determined from county highway map)
Description: Clay (1)
Uses of commodity: Bricks (1)
Remarks: Duluth Brick and Tile Co. obtained clay near Wrenshall (1)
References: 1) Winchell and others. 1899, p. 21

Main commodity: Clay/Shale
County: Carlton
Status: Inactive
Past operator/owner: M. J. Rushfeldt (1)
Location: T 48 R 16 W
Location comments: In the vicinity of Wrenshall (1); (T., R. locations determined from Ref. 1, plate 56)
Description: Glacial lake clay (1)
Uses of commodity: Bricks (1)
References: 1) Winchell and others. 1899, p. 21, plate 56

Main commodity: Clay/Shale
County: Carlton
Alternate name: Kelly Pit (1-4)
Status: Inactive
Location: T 48 R 16 W Sec 20 (1-4)
Location comments: 0.5 miles south of Wrenshall on aid road No. 1 (1)
Description: Glacial lake clay (1)
Physical test data: See Refs. 1-4 for test data
Uses of commodity: Bricks (1-4)
Remarks: Clay pit (1-4)
References: 1) Prokopovich; Schwartz. 1957, p. 64
 2) Riley. 1950a, p. 8
 3) Riley. 1950b, p. 9
 4) Bradley. 1949, p. 19

Main commodity: Clay/Shale
County: Carlton
Quarry/pit name: Hart Plant and Pit (1)
Status: Inactive
Past operator/owner: Hart (1)
Location: T 48 R 16 W Sec 20 SE1/4 (1)
Location comments: Near Wrenshall (1)
Description: Glacial lake clay (1)
Uses of commodity: Bricks (1)
Remarks: Clay pit (1)

References: 1) Heine; Hauck. 1988

Main commodity: Clay/Shale
County: Carlton
Quarry/pit name: Jaeger/Jaggar Plant and Pit (1)
Status: Inactive
Past operator/owner: Jaggar and Hanft (1899) (2)
Location: T 48 R 16 W Sec 20 E1/2 (1,3)
Location comments: Center of east half of section 20 (1); near Wrenshall (1,2)
Description: Glacial lake clay (1,2)
Uses of commodity: Bricks (1-2)
Remarks: Clay pit (1,3)
References: 1) Heine; Hauck. 1988
 2) Winchell and others. 1899, p. 21
 3) MN Dept. of Conservation. 1964a, p. 54

Main commodity: Clay/Shale
County: Carlton
Quarry/pit name: Kelly Brick and Tile Pit (1)
Status: Inactive
Past operator/owner: Kelly Brick and Tile Co. (1,2)
Location: T 48 R 16 W Sec 28 NE1/4 NW1/4 (1)
Location comments: Near Wrenshall (1,2)
Description: Glacial lake clay (1)
Physical test data: See Ref. 1, Appendix 1 for test data
Uses of commodity: Bricks (1,2)
Remarks: Clay pit (1)
References: 1) Heine; Hauck. 1988
 2) Winchell and others. 1899, p. 21

Main commodity: Clay/Shale
County: Carlton
Quarry/pit name: Enterprise Pit (1)
Status: Inactive
Location: T 48 R 16 W Sec 28 NE1/4 (1,2)
Location comments: Near Wrenshall (1)
Description: Red glacial lake clay (1)
Physical test data: See Ref. 1, Appendix 1 for test data
Uses of commodity: Bricks (1)
Remarks: Enterprise has two plants near Wrenshall (1); clay pit at this location (1)
References: 1) Heine; Hauck. 1988
 2) MN Dept. of Conservation. 1964a, p. 54
 3) NRRI. clay sample site

Main commodity: Clay/Shale
County: Carlton
Quarry/pit name: Hart Pit (1)
Status: Inactive

Location: T 48 R 16 W Sec 28 N1/2 (1)
Location comments: Near Wrenshall (1)
Description: Glacial lake clay (1)
Uses of commodity: Bricks (1)
Remarks: Clay pit (1)
References: 1) Heine; Hauck. 1988

Main commodity: Clay/Shale
County: Carlton
Quarry/pit name: Wrenshall Pit (1-3)
Status: Inactive
Location: T 48 R 16 W Sec 28 (1-4)
Location comments: (Near Wrenshall)
Description: Glacial lake clay (1)
Chemical analyses: See Ref. 1, p. 15 for chemical analyses
Physical test data: See Refs. 1-4 for test data
Uses of commodity: Bricks (4)
References: 1) Prokopovich; Schwartz. 1957, p. 15, 64
 2) Riley. 1950a, p. 8
 3) Riley. 1950b, p. 9
 4) Bradley. 1949, p. 17

Main commodity: Clay/Shale
County: Carlton
Quarry/pit name: Wrenshall Brick Co. Clay Pit (1)
Status: Inactive (1)
Past operator/owner: Wrenshall Brick Co. (1)
Location: T 48 R 16 W Sec 28 SE1/4 SE1/4 (1)
Location comments: (Near Wrenshall)
Description: Laminated gray glacial lake clay (1)
Physical test data: See Ref. 1 for test data
Uses of commodity: Bricks (1)
References: 1) Grosh; Hamlin. 1963, p. 7, 16

Main commodity: Clay/Shale
County: Carlton
Date opened: 1882 (1)
Status: Inactive
Past operator/owner: Fred Habhegger/Habhaggar (1,2)
Location: T 48 R 16 W Sec 28 NW1/4 (1)
Location comments: Near Wrenshall, earlier operation was located near Clear Creek, northeast of the town of Wrenshall (1)
Uses of commodity: Bricks (1,2)
References: 1) Heine; Hauck. 1988, p. 1
 2) Winchell and others. 1899, p. 21

Main commodity: Clay/Shale
County: Carlton

Status: Inactive
Past operator/owner: Nemadji Tile and Pottery Co. (1,2)
Location: T 48 R 16 W Sec 28 (1,2)
Description: Gray glacial lake clay (1,2)
Uses of commodity: Pottery, floor tile (1,2)
References: 1) Emmons; Grout. 1943, p. 97
 2) Grout. 1947, p. 3, 4
 3) Bradley. 1949

Main commodity: Clay/Shale
County: Carlton
Status: Inactive
Location: T 49 R 17 W
Location comments: At Cloquet (1-3); (T., R. locations determined from county highway map)
Physical test data: See Refs. 1 and 2 for test data
Uses of commodity: Red brick (1-3)
Remarks: A small brickyard produced red brick of fair quality (1-3)
References: 1) Grout. 1919, p. 139, 140
 2) Grout; Soper. 1914, p. 84
 3) MN Dept. of Conservation. 1964a, p. 77

Main commodity: Clay/Shale
County: Carver
Status: Inactive
Location: T 115 R 23 W
Location comments: Pits located one mile northwest of Chaska (1,2); (T., R. locations determined from county highway map)
Description: Glacial clay (1,2)
Physical test data: See Ref. 1, table 2 and Ref. 2, table 2 for test data
References: 1) Riley. 1950a, p. 7
 2) Riley. 1950b, p. 8

Main commodity: Clay/Shale
County: Carver
Quarry/pit name: Chaska Pit and Mill (1)
Status: Inactive (1)
Past operator/owner: Can-Tex Industries (1)
Location: T 115 R 23 W OR
 T 116 R 23 W
Location comments: (T., R. locations determined from county highway map)
Description: Common clay (1)
References: 1) USDL. MSHA mine reference list

Main commodity: Clay/Shale
County: Carver
Status: Inactive

Location: T 115 R 23 W AND
T 116 R 23 W

Location comments: Near Chaska (1-5); (T., R. locations determined from county highway map)

Uses of commodity: Bricks (1,2)

Remarks: At least twenty-five brickyards operated near Chaska between 1870 and 1914 (1,2)

References: 1) MN Business Gazette. referenced data compiled by NRRI
2) MN Census. referenced data compiled by NRRI
3) Winchell; Upham. 1888, p. 141-145
4) Grout. 1947, p. 4
5) Burchard. 1910, p. 289, 290

Main commodity: Clay/Shale

County: Carver

Status: Inactive

Location: T 115 R 23 W AND
T 115 R 24 W

Location comments: Near Carver (1,2); one brickyard is located 2/3 of a mile SW of Carver (1); (T., R. locations determined from county highway map)

Uses of commodity: Bricks (1,2)

Remarks: At least eight brickyards operated near the town of Carver between 1870 and 1910 (1,2)

References: 1) Winchell; Upham. 1888, p. 131-133, 145, 146
2) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale

County: Carver

Quarry/pit name: Chaska Brickyard (1)

Status: Inactive

Location: T 115 R 23 W Sec 4 NE1/4 SW1/4 (1)

Description: Recent fluvial clay (1)

Uses of commodity: Bricks (1)

References: 1) NRRI. clay sample site

Main commodity: Clay/Shale

County: Carver

Status: Inactive

Location: T 115 R 23 W OR
T 116 R 23 W

Location comments: Just north of the Hastings and Dakota railroad, at the east edge of Chaska, about a half mile west of the railroad bridge (1); (T., R. locations determined from county highway map)

Description: See Ref. 1, p. 141-143 for descriptions; gray laminated river clays of the glacial River Warren (2)

Physical test data: See Refs. 2-5 for test data

Uses of commodity: Bricks (1-5)

Remarks: At least four brickyards operated at the east edge of Chaska in the late 1800's (1-5); the pits were all within an area of about an eighth of a mile in extent (1,2)

References: 1) Winchell; Upham. 1888, p. 133, 141-143
2) Grout; Soper. 1914, p. 84, 85
3) Grout. 1919, p. 140, 141
4) Knapp. 1923, p. 80
5) Schwartz. 1936, p. 123, 124

Main commodity: Clay/Shale

County: Carver

Status: Inactive

Location: T 116 R 23 W Sec 33 NW1/4 (1)

Description: Glacial lake clay (1)

Physical test data: See Ref. 1 for test data

Remarks: Clay pit (1)

References: 1) Prokopovich; Schwartz. 1957, p. 9, 54

Main commodity: Clay/Shale

County: Chippewa

Date opened: 1886 (1)

Status: Inactive 1888 (1)

Past operator/owner: G. J. Rolfsted (1)

Location: T 116 R 39 W

Location comments: Near Granite Falls (1); (T., R. locations determined from county highway map)

Description: Glacial drift (1)

Uses of commodity: Bricks (1)

References: 1) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale

County: Chippewa

Status: Inactive

Past operator/owner: Nils Swennungson (1888) (1)

Location: T 117 R 40 W

Location comments: At the southeast part of Montevideo (1); (T., R. locations determined from county highway map)

Description: Yellow clay (1)

Uses of commodity: Red bricks (1)

References: 1) Winchell; Upham. 1888, p. 219
2) Grout; Soper. 1914, p. 86

Main commodity: Clay/Shale

County: Chippewa

Date opened: 1880 (1)

Status: Inactive

Past operator/owner: Anderson and Sorinungson (1)

Location: T 117 R 40 W

Location comments: Brickyard located at Sparta (1); (T., R. locations determined from county highway map)

References: 1) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale

County: Chisago

Status: Inactive

Location: T 33 R 19 W

Location comments: A mile southwest from Franconia (1); (T., R. locations determined from county highway map)

Description: Till (1)

Uses of commodity: Bricks (1)

Remarks: Red bricks have been made, but were unsuccessful because of lime particles (1)

References: 1) Winchell; Upham. 1888, p. 424

Main commodity: Clay/Shale

County: Chisago

Status: Inactive

Past operator/owner: Eric Brattlund (1888) (1)

Location: T 33 R 21 W

Location comments: In Wyanett on the northwest side of Green Lake (1); (T., R. locations determined from Ref. 1, plate 45)

Uses of commodity: Red bricks (1)

References: 1) Winchell; Upham. 1888, p. 424, plate 45

Main commodity: Clay/Shale

County: Chisago

Status: Inactive

Location: T 34 R 19 W

Location comments: A mile northwest from Taylor's Falls (1); (T., R. locations determined from county highway map)

Description: Till (1)

Uses of commodity: Bricks (1)

Remarks: Red bricks were made, but were unsuccessful because of lime particles (1)

References: 1) Winchell; Upham. 1888, p. 424

Main commodity: Clay/Shale

County: Chisago

Date opened: 1856 (3)

Status: Inactive

Location: T 35 R 20 W

Location comments: Near Low's Mill in Sunrise (3); (T., R. locations determined from Ref. 3, plate 45)

Description: Red laminated clay (1)

Uses of commodity: Red bricks (3)

References: 1) Grout. 1919, p. 143
2) Grout; Soper. 1914, p. 88
3) Winchell; Upham. 1888, p. 424, plate 45

Main commodity: Clay/Shale

County: Chisago

Status: Inactive

Past operator/owner: Archibald Peers (1800's) (1)

Location: T 37 R 21 W

Location comments: South side of Rush Creek at Rush City (1); (T., R. locations determined from county highway map)

Description: Glacial till (1)

Uses of commodity: Red bricks (1)

Remarks: "Only about a third part of these bricks could be used, the remainder being crumbled by lime particles." (1)

References: 1) Winchell; Upham. 1888, p. 424

Main commodity: Clay/Shale

County: Chisago

Date opened: 1880 (1)

Status: Inactive

Past operator/owner: M. T. Spooner (1888) (1)

Location: T 37 R 21 W

Location comments: East of the railroad one and a half miles south of Rush City (1); (T., R. locations determined from county highway map)

Description: Red drift (2,3)

Physical test data: See Refs. 2 and 3 for test data

Uses of commodity: Red brick (2,3)

References: 1) Winchell; Upham. 1888, p. 424
2) Grout. 1919, p. 142, 143
3) Grout; Soper. 1914, p. 87, 88

Main commodity: Clay/Shale

County: Chisago

Status: Inactive

Location: T 37 R 21 W

Location comments: Near Rush City (1); (T., R. locations determined from county highway map)

Uses of commodity: Bricks (1)

Remarks: At least eight brickyards operated near Rush City between 1879 and 1912 (1)

References: 1) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale

County: Chisago

Status: Inactive

Past operator/owner: John Anderson, 1879-1880 (1)
Township name: Nessel (1)
Location: T 37 R 22 W Sec 16 (1)
Location comments: On the west side of Rush Lake (1)
Description: Till (1)
Uses of commodity: Bricks (1)
Remarks: Red bricks of fair quality (1)
References: 1) Winchell; Upham. 1888, p. 424

Main commodity: Clay/Shale
County: Clay
Status: Inactive (1,2)
Location: T 137 R 46 W
Location comments: An old brickyard is located about one mile north of Barnesville (1,2); (possibly located in R. 45); (T., R. locations determined from county highway map)
Physical test data: See Refs. 1 and 2 for test data
Uses of commodity: Bricks (1)
Remarks: Cream colored bricks, generally of good quality (1)
References: 1) Grout. 1919, p. 145
 2) Grout; Soper. 1914, p. 89, 90

Main commodity: Clay/Shale
County: Clay
Status: Inactive
Location: T 139 R 48 W
Location comments: Near Moorhead (1-5); (T., R. locations determined from county highway map)
Description: Alluvial clay (1); only 16 inches of clay here is of good quality (4,5)
Physical test data: See Refs. 4 and 5 for test data
Uses of commodity: Bricks (1)
Remarks: Cream colored bricks, generally of good quality (1); at least seven brickyards operated near Moorhead between 1880 and 1914 (2,3)
References: 1) Winchell; Upham. 1888, p. 671
 2) MN Business Gazette. referenced data compiled by NRRI
 3) MN Census. referenced data compiled by NRRI
 4) Grout. 1919, p. 89
 5) Grout; Soper. 1914, p. 144, 145

Main commodity: Clay/Shale
County: Cottonwood
Date opened: 1904 (1,2)
Status: Inactive
Past operator/owner: Bingham Lake Brick and Tile Co. (1914) (1,2)
Location: T 105 R 35 W

Location comments: Northeast side of Bingham Lake (1,2); (T., R. locations determined from county highway map)
Description: Lake clay (1,2)
Chemical analyses: See Refs. 1 and 2 for test data
Uses of commodity: Tile (1,2)
References: 1) Grout. 1919, p. 146, 147
 2) Grout; Soper. 1914, p. 91

Main commodity: Clay/Shale
County: Cottonwood
Status: Inactive
Location: T 105 R 35 W
Location comments: Near Bingham Lake (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
Remarks: At least five brickyards operated near Bingham Lake between 1898 and 1922 (1)
References: 1) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Cottonwood
Status: Inactive
Location: T 105 R 36 W
Location comments: Near Windom (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
Remarks: At least three brickyards operated near Windom between 1886 and 1926 (1)
References: 1) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Cottonwood
Status: Inactive
Past operator/owner: Windom Brick and Tile Factory (1914) (1,2)
Location: T 105 R 36 W
Location comments: About half a mile from Windom Station (1919) (1,2); (T., R. locations determined from county highway map)
Description: Gray drift (1,2)
Physical test data: See Refs. 1 and 2 for test data
Uses of commodity: Bricks (1,2)
References: 1) Grout. 1919, p. 146
 2) Grout; Soper. 1914, p. 90, 91

Main commodity: Clay/Shale
County: Crow Wing
Date opened: Late 1800's (1-3)
Status: Inactive (1919) (2)

Location: T 45 R 30 W
Location comments: About a mile northeast of Brainerd on the east side of the Mississippi River (1); another pit was opened a few hundred yards to the east (2,3); (T., R. locations determined from county highway map)
Description: Modified drift (1); laminated clay (2,3)
Physical test data: See Refs. 1 and 3 for test data
Uses of commodity: Bricks (1-4)
Remarks: At least nine brickyards operated near Brainerd in the late 1800's (4)
References: 1) Winchell; Upham. 1888, p. 609
 2) Grout. 1919, p. 147, 148
 3) Grout; Soper. 1914, p. 91, 92
 4) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Crow Wing
Quarry/pit name: Brainerd Brickyard (1)
Status: Inactive
Location: T 45 R 30 W Sec 19 NW1/4 NW1/4 (1)
Description: Glacial lake clay (1)
References: 1) NRRI. clay sample site

Main commodity: Clay/Shale
County: Dakota
Status: Inactive
Location comments: Near St. Paul (1,2); (locations undetermined)
Remarks: At least forty-three brickyards have operated near St. Paul (1)
References: 1) MN Business Gazette. referenced data compiled by NRRI
 2) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Dakota
Status: Inactive
Location: T 28 R 22 W
Location comments: A small brickyard at West St. Paul (1,2); (T., R. locations determined from county highway map)
Physical test data: See Refs. 1 and 2 for test data
References: 1) Grout. 1919, p. 149
 2) Grout; Soper. 1914, p. 93
 3) Grout. 1947, p. 5
 4) Grout. 1916, p. 186

Main commodity: Clay/Shale
County: Dakota
Status: Inactive
Past operator/owner: Twin City Brick Co. (1-4)

Location: T 28 R 23 W Sec 13 NW1/4 NE1/4 (5)
 T 28 R 23 W Sec 26 SE1/4 SW1/4 (6)
Location comments: Between West St. Paul and Mendota (1,2); the plant is situated on the Mississippi River bluff partly in West St. Paul in Dakota County (3)
Geologic age: Ordovician
Geologic formation: Decorah Shale (1-3,4-6)
Description: Greenish shale with some limestone beds (3)
Physical test data: See Refs. 1-3 for test data
Uses of commodity: Brick, hollow ware (1,2)
Remarks: (Also see Twin City Brick Co. in Ramsey County)
References: 1) Grout. 1919, p. 152, 153
 2) Grout; Soper. 1914, p. 94, 95
 3) Schwartz. 1936, p. 124
 4) Mossler. 1974a, p. 5
 5) Emmons; Grout. 1943, p. 99
 6) NRRI. clay sample site

Main commodity: Clay/Shale
County: Dakota
Status: Inactive
Location: T 114 R 20 W
Location comments: An old brickyard about a mile northwest from Farmington (1); (T., R. locations determined from county highway map)
Uses of commodity: Red bricks (1)
References: 1) Winchell; Upham. 1888, p. 100

Main commodity: Clay/Shale
County: Dakota
Status: Inactive
Location: T 115 R 17 W
Location comments: Near Hastings (1,2); (T., R. locations determined from county highway map)
Remarks: At least two brickyards have operated near Hastings (1,2)
References: 1) MN Business Gazette. referenced data compiled by NRRI
 2) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Dodge
Status: Inactive
Location: T 107 R 16 W
Location comments: Clay is obtained at Mantorville for the plant at Kasson (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks, drain tiles (1)
References: 1) Winchell and others. 1884, p. 375

Main commodity: Clay/Shale
County: Dodge
Status: Inactive
Location: T 107 R 17 W
Location comments: At Dodge Center and three miles east of Dodge Center (1); (T., R. locations determined from Ref. 1, plate 13)
Description: Surface loam (1)
Uses of commodity: Bricks (1)
References: 1) Winchell and others. 1884, p. 375, plate 13

Main commodity: Clay/Shale
County: Dodge
Status: Inactive
Location: T 108 R 17 W
Location comments: West Concord (1,2); (T., R. locations determined from county highway map)
Description: Gray drift (1,2)
Physical test data: See Refs. 1 and 2 for test data
Uses of commodity: Bricks (1,2)
Remarks: Pebbles in the clay were responsible for the failure of an attempt to produce bricks (1,2)
References: 1) Grout. 1919, p. 153
 2) Grout; Soper. 1914, p. 95, 96

Main commodity: Clay/Shale
County: Douglas
Date opened: 1866 (1)
Status: Inactive since 1880 (1)
Past operator/owner: Mark Bandy (1880) (1)
Township name: Lake Mary (1)
Location: T 127 R 38 W Sec 2 (1)
Location comments: About three miles southwest of Alexandria (1)
Description: See Ref. 1 for description
Uses of commodity: Bricks (1)
Remarks: Red bricks from the yellow brown clay and cream colored bricks from the bluish clay (1)
References: 1) Winchell; Upham. 1888, p. 496, 497, plate 48

Main commodity: Clay/Shale
County: Douglas
Status: Inactive
Past operator/owner: Ole Olson (1888) (1)
Township name: Holmes City (1)
Location: T 127 R 39 W Sec 11 SW1/4 (1)
Uses of commodity: Bricks (1)
Remarks: Cream-colored bricks tinted red (1)
References: 1) Winchell; Upham. 1888, p. 497, plate 48

Main commodity: Clay/Shale
County: Douglas
Quarry/pit name: Alexandria Brickyard (1)
Status: Inactive
Past operator/owner: McKay Brick Co. (1914) (2,3)
Location: T 128 R 37 W
Location comments: 1.5 miles northeast of Alexandria (1); (T., R. locations determined from Ref. 1, plate 48)
Description: Modified drift (1); bog deposit (2,3)
Physical test data: See Refs. 2 and 3 for test data
Uses of commodity: Bricks (1-4)
Remarks: At least 6 brickyards operated in the Alexandria area (4-5)
References: 1) Winchell; Upham. 1888, p. 496, plate 48
 2) Grout. 1919, p. 154, 155
 3) Grout; Soper. 1914, p. 97
 4) MN Business Gazette. referenced data compiled by NRRI
 5) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Douglas
Date opened: 1877 (1)
Status: Inactive
Past operator/owner: R. Partridge (1888) (1)
Location: T 129 R 40 W
Location comments: About a half mile northwest of Evansville (1); (T., R. locations determined from county highway map)
Description: Till (1)
Uses of commodity: Bricks (1)
References: 1) Winchell; Upham. 1888, p. 497

Main commodity: Clay/Shale
County: Douglas
Status: Inactive
Location: T 129 R 40 W
Location comments: Near Evansville (1-3); (T., R. locations determined from Ref. 1, plate 48)
Description: Glacial clay (1)
Uses of commodity: Bricks (1-3)
Remarks: At least four brickyards operated near Evansville since the late 1800's (1-3)
References: 1) Winchell; Upham. 1888, p. 497, plate 48
 2) MN Business Gazette. referenced data compiled by NRRI
 3) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Douglas

Status: Inactive
Location: T 130 R 37 W
Location comments: (T., R. locations determined from Ref. 1 map and county highway map); (exact location undetermined)
Geologic age: Pleistocene
Description: Pit worked for Pleistocene red-burning clays (1)
References: 1) Minnesota State Planning Board. 1937

Main commodity: Clay/Shale
County: Faribault
Status: Inactive
Location: T 101 R 26 W OR
 T 101 R 25 W
Location comments: (T., R. locations determined from Ref. 1 map and county highway map); (exact location undetermined).
Geologic age: Pleistocene
Description: Pit worked for Pleistocene red-burning clays (1)
References: 1) Minnesota State Planning Board. 1937

Main commodity: Clay/Shale
County: Faribault
Status: Inactive
Location: T 102 R 27 W
Location comments: Near Blue Earth City at the south or right bank of the West Branch of the Blue Earth River, 1/4 mile southwest from its junction with the East Branch (1); (T., R. locations determined from county highway map)
Description: Alluvial (1)
Physical test data: See Refs. 2 and 3 for test data
Uses of commodity: Bricks (1-5)
Remarks: Clay from the Blue Earth City area was also used by the Fairmont Drain Tile and Brick Co., at its plant in Fairmont, Martin County (2,3); at least four brickyards operated near Blue Earth City (1-5)
References: 1) Winchell and others. 1884, p. 467
 2) Grout. 1919, p. 156, 157
 3) Grout; Soper. 1914, p. 98, 99
 4) MN Business Gazette. referenced data compiled by NRRI
 5) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Faribault
Status: Inactive
Location: T 102 R 28 W
Location comments: (T., R. locations determined from Ref. 1 map and county highway map); (exact location undetermined)
Geologic age: Pleistocene

Description: Pit worked for Pleistocene red-burning clays (1)
References: 1) Minnesota State Planning Board. 1937

Main commodity: Clay/Shale
County: Faribault
Date opened: 1870 (1)
Status: Inactive since 1872 (1)
Township name: Clark (1)
Location: T 103 R 24 W Sec 8
Location comments: At the north line of section 8, 1/4 mile west of Wells (1); (T., R. locations determined from Ref. 1, plate 17)
Description: Glacial lake clay (1)
Uses of commodity: Bricks (1)
Remarks: Inferior quality because of limestone particles (1)
References: 1) Winchell and others. 1884, p. 468, plate 17

Main commodity: Clay/Shale
County: Faribault
Date opened: 1879 (1)
Status: Inactive
Township name: Verona (1)
Location: T 103 R 28 W Sec 11 (1)
Location comments: At the Rising Sun Mills (1)
Uses of commodity: Bricks (1)
Remarks: Bricks cracked due to limestone particles contained in the clay and sand; bricks have been made at several places in the area (1)
References: 1) Winchell and others. 1884, p. 467

Main commodity: Clay/Shale
County: Faribault
Status: Inactive
Past operator/owner: Winnebago Hollow Block and Tile Co. (1,2)
Location: T 104 R 28 W OR
 T 103 R 28 W
Location comments: Along the Chicago, Milwaukee and St. Paul Railway tracks west of Winnebago (1,2); (T., R. locations determined from county highway map)
Description: Clay containing some limestone pebbles (1,2)
Uses of commodity: Bricks (1-4)
Remarks: At least one other brickyard operated in the Winnebago area (2,3)
References: 1) Grout. 1919, p. 156, 157
 2) Grout; Soper. 1914, p. 98, 99
 3) MN Business Gazette. referenced data compiled by NRRI
 4) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Fillmore
Status: Inactive
Location: T 101 R 8 W
Location comments: Near Mabel (1,2); (T., R. locations determined from county highway map)
Description: Loess (1,2)
Uses of commodity: Bricks (1,2)
References: 1) Grout. 1919, p. 159
 2) Grout; Soper. 1914, p. 100

Main commodity: Clay/Shale
County: Fillmore
Status: Inactive
Location: T 101 R 8 W Sec 15 SE1/4 (1)
Geologic age: Ordovician
Geologic formation: Lower Decorah Shale (1)
References: 1) NRRI. compiled referenced data

Main commodity: Clay/Shale
County: Fillmore
Status: Inactive
Location: T 101 R 10 W
Location comments: Near Harmony (1,2); (T., R. locations determined from county highway map)
Description: Loess (1,2)
Uses of commodity: Bricks (1,2)
References: 1) Grout. 1919, p. 159
 2) Grout; Soper. 1914, p. 100

Main commodity: Clay/Shale
County: Fillmore
Status: Inactive
Location: T 101 R 11 W
Location comments: Near Granger (1); (T., R. locations determined from Ref. 1, plate 10)
Uses of commodity: Bricks (1)
References: 1) Winchell and others. 1884, p. 321, plate 10

Main commodity: Clay/Shale
County: Fillmore
Status: Inactive
Location: T 102 R 11 W
Location comments: Near Carimona (1-2); (T., R. locations determined from Ref. 3, plate 10)
Uses of commodity: Bricks (1,2)
References: 1) Grout. 1919, p. 159
 2) Grout; Soper. 1914, p. 100
 3) Winchell and others. 1884, plate 10

Main commodity: Clay/Shale
County: Fillmore
Status: Inactive
Location: T 102 R 12 W
Location comments: Near Forestville (1-3); (T., R. locations determined from Ref. 1, plate 10)
Description: Loess (2,3)
Uses of commodity: Bricks (1-3)
References: 1) Winchell and others. 1884, p. 321, plate 10
 2) Grout. 1919, p. 159
 3) Grout; Soper. 1914, p. 100

Main commodity: Clay/Shale
County: Fillmore
Status: Inactive
Location: T 103 R 9 W
Location comments: Near Whalen (1,2); (T., R. locations determined from county highway map)
Description: Loess (1,2)
Uses of commodity: Bricks (1,2)
References: 1) Grout. 1919, p. 159
 2) Grout; Soper. 1914, p. 100

Main commodity: Clay/Shale
County: Fillmore
Status: Inactive
Location: T 103 R 10 W OR
 T 102 R 10 W
Location comments: Near Preston (1-7); (T., R. locations determined from Ref. 7, plate 10)
Description: Loess (1-5)
Chemical analyses: See Ref. 1 for chemical analyses
Physical test data: See Refs. 2 and 3 for test data
Uses of commodity: Bricks (1-7)
Remarks: At least five brickyards operated near Preston (5,6)
References: 1) Grout. 1925, p. 400
 2) Grout. 1919, p. 159, 160
 3) Grout; Soper. 1914, p. 100, 101
 4) Grout. 1916, p. 187
 5) MN Business Gazette. referenced data compiled by NRRI
 6) MN Census. referenced data compiled by NRRI
 7) Winchell and others. 1884, p. 321, plate 10

Main commodity: Clay/Shale
County: Fillmore
Status: Inactive
Location: T 103 R 10 W OR
 T 103 R 9 W

Location comments: At least two brickyards operated near Lanesboro (1); (T., R. locations determined from Ref. 1, plate 10)

Description: Loess (2,3)

Uses of commodity: Bricks (1-3)

References: 1) Winchell and others. 1884, p. 321, plate 10
2) Grout. 1919, p. 159
3) Grout; Soper. 1914, p. 100, 101

Main commodity: Clay/Shale

County: Fillmore

Status: Inactive

Location: T 103 R 11 W

Location comments: Near Fountain (1,2); (T., R. locations determined from county highway map)

Description: Loess (1,2)

Uses of commodity: Bricks (1,2)

References: 1) Grout. 1919, p. 159
2) Grout; Soper. 1914, p. 100

Main commodity: Clay/Shale

County: Fillmore

Status: Inactive

Township name: Spring Valley (1)

Location: T 103 R 13 W Sec 17 (1)

Location comments: Near Spring Valley (1-4)

Description: Loess (2)

Uses of commodity: Bricks (1)

Remarks: At least four brickyards operated near Spring Valley (1-4)

References: 1) Winchell and others. 1884, p. 309, plate 10
2) Grout. 1919, p. 159
3) Grout; Soper. 1914, p. 100
4) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale

County: Fillmore

Status: Inactive

Township name: Spring Valley (1)

Location: T 103 R 13 W Sec 20 (1)

Location comments: Near Spring Valley (1-3)

Description: Loess (2,3)

Uses of commodity: Bricks (1)

References: 1) Winchell and others. 1884, p. 321, plate 10
2) Grout. 1919, p. 159
3) Grout; Soper. 1914, p. 100

Main commodity: Clay/Shale

County: Fillmore

Status: Inactive

Location: T 104 R 8 W

Location comments: Near Rushford (1-4); (T., R. locations determined from Ref. 1, plate 10)

Description: Loess (2,3)

Uses of commodity: Bricks (1-4)

Remarks: (At least two brickyards operated near Rushford)

References: 1) Winchell and others. 1884, p. 321, plate 10
2) Grout. 1919, p. 159
3) Grout; Soper. 1914, p. 100
4) Fillmore County Historical Society. 1989, personal communication

Main commodity: Clay/Shale

County: Fillmore

Status: Inactive

Location: T 104 R 8 W

Location comments: Near Peterson (1,2); (T., R. locations determined from county highway map)

Description: Loess (1,2)

Uses of commodity: Bricks (1,2)

References: 1) Grout. 1919, p. 159
2) Grout; Soper. 1914, p. 100

Main commodity: Clay/Shale

County: Fillmore

Status: Inactive

Location: T 104 R 11 W

Location comments: Near Chatfield (1,2); (T., R. locations determined from Ref. 1, plate 10)

Uses of commodity: Bricks (1,2)

References: 1) Winchell and others. 1884, p. 321, plate 10
2) Fillmore County Historical Society. 1989, personal communication

Main commodity: Clay/Shale

County: Freeborn

Status: Inactive

Location: T 101 R 20 W

Location comments: (T., R. locations determined from Ref. 1 map and county highway map); (exact location undetermined)

Geologic age: Pleistocene

Description: Pit worked for Pleistocene red-burning clays (1)

References: 1) Minnesota State Planning Board. 1937

Main commodity: Clay/Shale

County: Freeborn

Status: Inactive

Past operator/owner: Acorn Brick and Tile Co. (1)

Location: T 101 R 20 W OR
T 102 R 20 W

Location comments: Within a mile north of Glennville (1); (T., R. locations determined from county highway map)

Description: Laminated clay (1)

Physical test data: See Ref. 1 for test data

Uses of commodity: Drain tiles, bricks (1)

References: 1) Grout. 1919, p. 162, 163
2) Grout; Soper. 1914, p. 101

Main commodity: Clay/Shale

County: Freeborn

Status: Inactive

Location: T 102 R 21 W

Location comments: Near Albert Lea (1-6); (T., R. locations determined from county highway map)

Description: Clay (1-4)

Physical test data: See Refs. 1 and 2 for test data

Uses of commodity: Bricks (1-6)

Remarks: At least nine brickyards have operated near Albert Lea (1-6)

References: 1) Grout. 1919, p. 162, 163
2) Grout; Soper. 1914, p. 101, 102
3) Winchell and others. 1884, p. 391, 392
4) Winchell; Peckham. 1874, p. 163, 164
5) MN Business Gazette. referenced data compiled by NRRI
6) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale

County: Freeborn

Status: Inactive

Past operator/owner: Rusfeldt and Kleven (1884) (1)

Township name: Albert Lea (1)

Location: T 102 R 21 W Sec 16 W1/2 (1)

Location comments: 1/4 mile south of Albert Lea; (T., R. locations determined from Ref. 1, plate 14)

Description: Clay (1)

Uses of commodity: Bricks (1)

References: 1) Winchell and others. 1884, p. 392, 393, plate 14

Main commodity: Clay/Shale

County: Freeborn

Date opened: 1904 (1)

Status: Inactive

Location: T 102 R 22 W

Location comments: About 2.5 miles southeast of Conger (1); (T., R. locations determined from county highway map)

Description: Laminated clay (1)

Uses of commodity: Bricks (1)

References: 1) Grout. 1919, p. 163
2) Grout; Soper. 1914, p. 101, 102

Main commodity: Clay/Shale

County: Freeborn

Status: Inactive

Location: T 104 R 20 W

Location comments: Bricks were formerly made 2.5 miles east of Geneva and from clay taken from the bank of the Allen Creek at Geneva (1,2); (T., R. locations determined from Ref. 1, plate 14)

Description: Drift clay (1,2)

Uses of commodity: Bricks (1,2)

References: 1) Winchell and others. 1884, p. 393, plate 14

Main commodity: Clay/Shale

County: Goodhue

Status: Inactive

Location: T 109 R 15 W

Location comments: At Pine Island (1-3); (T., R. locations determined from county highway map)

Description: Loess (2,3)

Uses of commodity: Red bricks (2,3)

Remarks: Fair quality red bricks (2,3); at least three brickyards were located at Pine Island (1-3)

References: 1) Winchell; Upham. 1888, p. 55
2) Grout. 1919, p. 172
3) Grout; Soper. 1914, p. 110
4) MN Business Gazette. referenced data compiled by NRRI
5) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale

County: Goodhue

Status: Inactive

Township name: Minneola

Location: T 110 R 15 W OR

T 109 R 15 W

Location comments: Near Zumbrota (1-5); (T., R. locations determined from county highway map); (possibly located in range 16)

Geologic age: Ordovician

Geologic formation: Decorah Shale (4)

Description: Shale (2)

Uses of commodity: Red bricks (1)

Remarks: At least five brickyards were located near Zumbrota (1-5)

References: 1) Winchell; Upham. 1888, p. 55
2) Grout; Soper. 1914, p. 85, 86
3) MN Business Gazette. referenced data compiled by NRRI
4) Cowie. 1941
5) Stauffer. 1935, p. 599

Main commodity: Clay/Shale
County: Goodhue
Status: Inactive
Location: T 110 R 16 W
Location comments: Brick plant at Wanamingo (1,2); (T., R. locations determined from county highway map); (possibly located in range 17)
Geologic age: Ordovician
Geologic formation: Decorah Shale (1)
Description: Shale (1,2)
Uses of commodity: Bricks (1,2)
References: 1) Grout. 1919, p. 165, 166
 2) Grout; Soper. 1914, p. 105, 106

Main commodity: Clay/Shale
County: Goodhue
Status: Inactive
Location: T 110 R 16 W Sec 15 (1)
Location comments: Three miles northwest of Zumbrota (1)
Geologic age: Ordovician
Geologic formation: Decorah Shale (1)
Description: See Ref. 1 for lithologic section description
Remarks: Clay pit (1)
References: 1) Cowie. 1941, p. 92, 95

Main commodity: Clay/Shale
County: Goodhue
Quarry/pit name: Barr Clay Pit (1)
Status: Inactive
Location: T 110 R 16 W Sec 21 NE1/4 SE1/4 AND
 T 110 R 16 W Sec 21 NW1/4 NW1/4 (1)
Geologic age: Ordovician
Geologic formation: Decorah Shale (1)
Remarks: Clay pit (1)
References: 1) NRRI. clay sample site

Main commodity: Clay/Shale
County: Goodhue
Status: Inactive
Location: T 110 R 16 W Sec 21 W1/2 (1)
Location comments: At Barr, south of U.S. Hwy. 52 (1)
Geologic age: Ordovician
Geologic formation: Decorah Shale (1)
Chemical analyses: See Ref. 1 for chemical analyses
Physical test data: See Ref. 1 for test data
Remarks: Old shale pit (1)
References: 1) Prokopovich; Schwartz. 1957, p. 7, 8, 15, 16, 47, 48

Main commodity: Clay/Shale
County: Goodhue
Quarry/pit name: Old Gunderson Pit (1-3)
Alternate name: Peterson Quarry (3)
Status: Inactive
Location: T 110 R 16 W Sec 21 SW1/4 NE1/4 (1,2)
 T 110 R 16 W Sec 21 NE1/4 SW1/4 AND
 T 110 R 16 W Sec 21 NW1/4 SE1/4 (3)
Location comments: Near Zumbrota (1-3)
Geologic age: Ordovician
Geologic formation: Decorah Shale (1-3)
Description: Shale (1-3)
Chemical analyses: For detailed chemical analyses see Ref. 1, p. 14 and Ref. 2, p. 18
Physical test data: For detailed test data see Ref. 1, p. 3, 5, 15, 18; Ref. 2, p. 5, 6, 21; and Ref. 3, p. 18-28
Remarks: Large pit extends across property lines (3)
References: 1) Riley. 1950a, p. 3-18
 2) Riley. 1950b, p. 5-21
 3) Grosh; Hamlin. 1963, p. 8-28
 4) Cowie. 1941, p. 92, 94

Main commodity: Clay/Shale
County: Goodhue
Status: Inactive
Location: T 111 R 14 W Sec 3 SW1/4 SE1/4 (1)
Remarks: Clay pit (1)
References: 1) Sloan. 1964, p. 53

Main commodity: Clay/Shale
County: Goodhue
Quarry/pit name: Bellechester Pits (1,2)
Status: Inactive (1)
Past operator/owner: Red Wing Sewer Pipe Co. (6,8)
Location: T 111 R 14 W Sec 33 NW1/4 SW1/4 (2)
Location comments: 1/2 mile east of Bellechester (3); (Ref. 1 states T 112, this appears to be a typographical error)
Geologic age: Cretaceous
Description: Clay (1)
Physical test data: See Refs. 4 and 5 for test data
Uses of commodity: Used in Red Wing potteries (5); sewer tile, filter tile (7)
Remarks: Extensive pits were operated in this area, mining a semi-refractory clay (5)
References: 1) Austin. 1963, p. 18
 2) Sloan. 1964, p. 53
 3) Stauffer. [1948?], p. 25
 4) Prokopovich; Schwartz. 1957, p. 8, 48
 5) Knapp. 1923, p. 24, 71, 79, 80
 6) Grout; Soper. 1914, p. 108
 7) Hogberg. 1969, p. 3

- 8) Grout. 1919, p. 170
9) Emmons; Grout. 1943, p. 94-96

Main commodity: Clay/Shale
County: Goodhue
Status: Inactive
Past operator/owner: Red Wing Sewer Pipe Co. (1)
Location: T 111 R 15 W
Location comments: At the intersections of County Hwys. 4 and 9, 2+ miles east of Goodhue (1); (T., R. locations determined from county highway map)
Description: See Ref. 1 for lithologic section description
Remarks: Clay pit (1)
References: 1) Stauffer. [1948?], p. 25

Main commodity: Clay/Shale
County: Goodhue
Quarry/pit name: Hinsch Pit (1)
Status: Inactive
Location: T 111 R 15 W Sec 2 NW1/4 SW1/4 (1)
Location comments: Approximately 2,500 ft. northeast of Clay Bank Pits (1)
Description: Glacial lake clay (1)
Remarks: Clay pit (1)
References: 1) Austin. 1963, p. 20, 21

Main commodity: Clay/Shale
County: Goodhue
Quarry/pit name: Red Wing Sewer Pipe Pit No. 3 (1)
Status: Inactive
Past operator/owner: Red Wing Sewer Pipe Co. (1)
Location: T 111 R 15 W Sec 2 SW1/4 (1,2)
Location comments: Near Goodhue (2)
Uses of commodity: Sewer tile, filter tile (2)
References: 1) USBM. [1980], MILS
2) Hogberg. 1969, p. 3

Main commodity: Clay/Shale
County: Goodhue
Quarry/pit name: Red Wing Clay Pit No. 2 (1)
Status: Inactive
Past operator/owner: Red Wing Sewer Pipe Co. (1)
Location: T 111 R 15 W Sec 3 SE1/4 (1-3)
Location comments: Near Goodhue (2)
Geologic age: Cretaceous
Physical test data: See Ref. 3 for test data
Uses of commodity: Sewer tile, filter tile (2); pottery, stoneware (4)
Remarks: Clay was used by Red Wing Sewer Pipe Co. (1-4); Minnesota Stoneware Co., Red Wing

Stoneware Co., Red Wing Pottery Works and others (4)
References: 1) USBM. [1980], MILS
2) Hogberg. 1969, p. 3
3) Prokopovich; Schwartz. 1957, p.47
4) Winchell; Upham. 1888, p. 55, 56

Main commodity: Clay/Shale
County: Goodhue
Quarry/pit name: Clay Bank Pits (1,4)
Status: Inactive
Location: T 111 R 15 W Sec 3 S1/2 S1/2 S1/2 (1)
Location comments: At Clay Bank (2,3); (Ref. 4 states T 112, this appears to be a typographical error)
Geologic age: Cretaceous
Description: Disturbed cretaceous clay (2,3)
Physical test data: See Refs. 2 - 4 for test data
Uses of commodity: Pottery stoneware and sewer pipe produced at Red Wing (2-3)
Remarks: Supplied factories at Red Wing (2,3); clay pits (1)
References: 1) USBM. [1983], MILS
2) Grout. 1919, p. 168-170
3) Grout; Soper. 1914, p. 106-109
4) Austin. 1963, p. 19,20

Main commodity: Clay/Shale
County: Goodhue
Quarry/pit name: Clay Bank Pits (1)
Status: Inactive
Location: T 111 R 15 W Sec 9 SE1/4 (1)
Remarks: Clay pit (1)
References: 1) Sloan. 1964, p. 52

Main commodity: Clay/Shale
County: Goodhue
Quarry/pit name: Struss Clay Pits (2)
Status: Inactive
Location: T 111 R 15 W Sec 10 NE1/4 NW1/4 (2)
Location comments: Center of north edge of section 10 (1); (Ref. 3 states T 110, this appears to be a typographical error)
Geologic age: Cretaceous
Description: Shale (2)
Remarks: Clay pit (1)
References: 1) Sloan. 1964, p. 52
2) NRRI. clay sample site
3) Austin. 1963, p. 19,20

Main commodity: Clay/Shale
County: Goodhue
Quarry/pit name: Goodhue Clay Pits (1,2)

Status: Inactive
Location: T 111 R 15 W Sec 14 (1,2)
Geologic age: Cretaceous
Physical test data: See Refs. 1 and 2 for test data
References: 1) Riley. 1950a, p. 9
 2) Riley. 1950b, p. 7

Main commodity: Clay/Shale
County: Goodhue
Status: Inactive
Past operator/owner: Red Wing Sewer Pipe Corp. (3)
Location: T 111 R 15 W Sec 26 NE1/4 NW1/4 (1)
Geologic age: Cretaceous
Description: Interbedded sandstone and shale (1)
Physical test data: See Ref. 2 for test data
Uses of commodity: Vitrified sewer pipe (3)
Remarks: Clay pit (1,2)
References: 1) Sloan. 1964, p. 53
 2) Prokopovich; Schwartz. 1957, p. 48
 3) Hogberg. 1966, p. 3

Main commodity: Clay/Shale
County: Goodhue
Quarry/pit name: Thomeorde Pits (1)
Alternate name: Thomforde Clay Pits (2)
Status: Inactive
Location: T 111 R 15 W Sec 27 NE1/4 NE1/4 (1)
Geologic age: Cretaceous
References: 1) USBM. [1980], MILS
 2) Austin. 1963, p. 16, 17

Main commodity: Clay/Shale
County: Goodhue
Quarry/pit name: Barr Clay Pit (1)
Status: Inactive
Location: T 111 R 16 W Sec 6 NE1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: Glenwood Fm. (1)
Description: Shale (1)
Remarks: Clay pit (1)
References: 1) NRRI. clay sample site

Main commodity: Clay/Shale
County: Goodhue
Status: Inactive
Location: T 112 R 12 W
Location comments: Central Point (1); (T., R. locations determined from Ref. 1, plate 33)
Uses of commodity: Red bricks (1)

References: 1) Winchell; Upham. 1888, p. 55, plate 33

Main commodity: Clay/Shale
County: Goodhue
Status: Inactive
Township name: Featherstone (1)
Location: T 112 R 15 W Sec 32 AND
 T 112 R 15 W Sec 31 (1)
Uses of commodity: Pottery (1)
Remarks: "According to Mr. D. Hutcheson, sec. 32, Featherstone, the pottery clay is found in several places over an area of a mile or so in sections 32 and 31, from five to ten feet below the surface." (1888) (1)
References: 1) Winchell; Upham. 1888, p. 44

Main commodity: Clay/Shale
County: Goodhue
Status: Inactive
Location: T 112 R 16 W
Location comments: Ten miles from Vasa, along Belle Creek (1); two miles from Vasa, along Belle Creek (2); (T., R. locations determined from county highway map); (Ref. 1 states location as ten miles from Vasa, this appears to be a typographical error. Two miles appears more appropriate)
Description: Sandy alluvial clay (1,2)
References: 1) Grout. 1919, p. 172
 2) Grout; Soper. 1914, p. 110, 111

Main commodity: Clay/Shale
County: Goodhue
Status: Inactive
Past operator/owner: Goodhue County Clay Co. (1)
Location: T 112 R 17 W
Location comments: Brickyards 1.5 miles southeast of Cannon Falls (1) and three miles south of Cannon Falls (2); (T., R. locations determined from Ref. 1, fig. 22)
Geologic age: Ordovician
Geologic formation: Decorah Shale (1)
Physical test data: See Ref. 1 for test data
Uses of commodity: Bricks (1)
References: 1) Grout. 1919, p. 166, 167
 2) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Goodhue
Status: Inactive
Location: T 113 R 14 W

Location comments: Brickyards were located near Redwing (1-3); (T., R. locations determined from county highway map)

References: 1) Winchell; Upham. 1888, p. 55
2) MN Business Gazette. referenced data compiled by NRRI
3) MN Census. referenced data compiled by NRRI
4) Grout. 1919, p. 165-173
5) Grout; Soper. 1914, p. 105-111

Main commodity: Clay/Shale
County: Goodhue
Quarry/pit name: Red Wing Sewer Pipe Clay Pit No. 1 (1)
Status: Inactive
Past operator/owner: Red Wing Sewer Pipe Co. (1)
Location: T 113 R 14 W Sec 33 SW1/4 (1)
Description: Common clay (1)
References: 1) USBM. [1980], MILS

Main commodity: Clay/Shale
County: Grant
Date opened: 1881 (2)
Status: Inactive
Location: T 129 R 42
Location comments: At Elbow Lake (1-3); (T., R. locations determined from county highway map)
Description: Gray drift (1,2); containing limestone pebbles (2,13)
Remarks: At least two brickyards operated near Elbow Lake (3); attempts to use the clay were not very successful due to the limestone pebbles in the clay (1-2)
References: 1) Grout. 1919, p. 173
2) Grout; Soper. 1914, p. 111
3) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Hennepin
Status: Inactive
Location comments: Northtown (1); (location undetermined)
Description: Clay (1)
Uses of commodity: Pottery (1)
References: 1) Schrader and others. 1917, p. 169

Main commodity: Clay/Shale
County: Hennepin
Status: Inactive
Location comments: Minneapolis area (1-5); (exact locations undetermined)
Uses of commodity: Bricks (1-5)

Remarks: At least seventy-six brickyard operators have been located in the Minneapolis area (1-5); most of the plants produced a cream-colored brick (1)

References: 1) Grout. 1919, p. 113-118
2) Grout; Soper. 1914, p. 64-68
3) Burchard. 1910, p. 288-290
4) MN Business Gazette. referenced data compiled by NRRI
5) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Hennepin
Status: Inactive
Location: T 29 R 24 W
Location comments: Valley of Basset Creek, south of the creek, near the intersection of 3rd Ave. N., and 6th St., Minneapolis (1); (T., R. locations determined from county highway map)
Description: Fluvial clay (1)
Uses of commodity: Cream-colored bricks (1)
References: 1) Winchell; Upham. 1888, p. 302, 342

Main commodity: Clay/Shale
County: Hennepin
Status: Inactive
Location: T 29 R 24 W
Location comments: Upper part of St. Anthony (1); (T., R. locations determined from county highway map)
Description: Clay from the old river valley (1)
Uses of commodity: Pottery, bricks (1)
References: 1) Winchell; Upham. 1888, p.342

Main commodity: Clay/Shale
County: Hennepin
Status: Inactive
Location: T 29 R 24 W
Location comments: At the mouth of Shingle Creek (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
Remarks: Extensive manufactories were located above the mouth of Shingle Creek (1)
References: 1) Winchell; Upham. 1888, p. 342

Main commodity: Clay/Shale
County: Hennepin
Status: Inactive
Location: T 116 R 21 W
Location comments: At the Bloomington Ferry along the Minnesota River (1); (T., R. locations determined from county highway map)

Uses of commodity: Red bricks (1)
References: 1) Winchell; Upham. 1888, p. 304, 305

Main commodity: Clay/Shale
County: Hennepin
Status: Inactive (1)
Past operator/owner: Red Wing Sewer Pipe Corp. (1)
Location: T 117 R 21 W
Location comments: At Hopkins (1); (T., R. locations determined from county highway map)
Uses of commodity: Sewer pipe (1)
Remarks: Sewer pipes were fabricated at Hopkins (1)
References: 1) Emmons; Grout. 1943, p. 96, 97

Main commodity: Clay/Shale
County: Hennepin
Status: Inactive
Township name: Crystal Lake (1)
Location: T 118 R 21 W Sec 12 NE1/4 (1)
Description: Blue clay, horizontally stratified and stoneless, obtained from the river bank (1)
Uses of commodity: Cream-colored bricks (1)
References: 1) Winchell; Upham. 1888, p. 303

Main commodity: Clay/Shale
County: Hennepin
Status: Inactive
Past operator/owner: North Central Lightweight (1-5)
Location: T 118 R 22 W Sec 10 SE1/4 NW1/4 (1,2)
Description: Clay was obtained from a 300 acre deposit surrounding the plant (3,4)
Uses of commodity: Light-weight aggregate (1,2,4)
References: 1) Hogberg. 1969, p. 3
 2) Hogberg. 1966, p. 3
 3) Sikich. 1959, p. 529
 4) Froelich. 1961, p. 15
 5) USDL. MSHA mine reference list

Main commodity: Clay/Shale
County: Hennepin
Status: Inactive
Location: T 120 R 23 W
Location comments: Hanover (1-3); (T., R. locations determined from county highway map)
Description: Swamp clay (1-3)
Uses of commodity: Bricks (1-3)
Remarks: Brick operation was not successful (1-3)
References: 1) Grout. 1919, p. 173
 2) Grout; Soper. 1914, p. 112
 3) Schwartz. 1936, p. 124

Main commodity: Clay/Shale
County: Hennepin
Status: Inactive
Location: T 120 R 23 W
Location comments: Rogers (1-3); (T., R. locations determined from county highway map)
Description: Gray drift (1-3)
Uses of commodity: Bricks (1-3)
Remarks: Brick operation was unsuccessful (1-3)
References: 1) Grout. 1919, p. 173
 2) Grout; Soper. 1914, p. 112
 3) Schwartz 1936, p. 124

Main commodity: Clay/Shale
County: Houston
Status: Inactive
Location: T 101 R 7 W
Location comments: Bricks have been made near Spring Grove (1-3) and most towns in Houston County (2-3); (T., R. locations determined from Ref. 1, plate 8)
Uses of commodity: Bricks (1)
Remarks: Bricks can be made from loam almost anywhere in the county (1-3)
References: 1) Winchell and others. 1884, p. 234, plate 8
 2) Grout. 1919, p. 173, 174
 3) Grout; Soper. 1914, p. 112

Main commodity: Clay/Shale
County: Houston
Date opened: 1875 (1)
Status: Inactive
Location: T 102 R 6 W
Location comments: Bricks have been made near Caledonia (1) and most towns in Houston County (2,3); (T., R. locations determined from Ref. 1, plate 8)
Description: Loam (1)
Uses of commodity: Bricks (1)
Remarks: Bricks can be made from the loam almost anywhere in the county (1-3)
References: 1) Winchell and others. 1884, p. 234, plate 8
 2) Grout. 1919, p. 173, 174
 3) Grout; Soper. 1914, p. 112

Main commodity: Clay/Shale
County: Houston
Status: Inactive
Location: T 104 R 4 W
Location comments: Bricks have been made near La Crescent (1-3) and most towns in Houston County (2-3); (T., R. locations determined from Ref. 1, plate 8)
Description: Loam (1-3)
Uses of commodity: Bricks (1-3)

Remarks: Bricks can be made from loam almost anywhere in the county (1-3)

References: 1) Winchell and others. 1884, p. 234, plate 8
2) Grout. 1919, p. 173, 174
3) Grout; Soper. 1914, p. 112

Main commodity: Clay/Shale
County: Houston
Status: Inactive
Location: T 104 R 6 W OR
T 103 R 6 W

Location comments: Bricks have been made near Houston, and most other towns in Houston County (1,2); (T., R. locations determined from county highway map)

Description: Loam (1,2)
Uses of commodity: Bricks (1,2)

Remarks: Bricks can be made from loam almost anywhere in the county (1-2)

References: 1) Grout. 1919, p. 173, 174
2) Grout; Soper. 1914, p. 112

Main commodity: Clay/Shale
County: Houston
Status: Inactive
Location: T 104 R 7 W OR
T 104 R 6 W

Location comments: Bricks have been made two miles south of Money Creek Village (1) and most other towns in Houston County (2,3); (T., R. locations determined from Ref. 1, plate 8)

Description: Loam (1)
Uses of commodity: Bricks (1)

Remarks: Bricks can be made from the loam almost anywhere in the county (1-3)

References: 1) Winchell and others. 1884, p. 234, plate 8
2) Grout. 1919, p. 173, 174
3) Grout; Soper. 1914, p. 112

Main commodity: Clay/Shale
County: Houston
Status: Inactive
MN/DOT source no: 28-2
Location: T 104 R 7 W Sec 12 SW1/4 SW1/4 (1)
Description: Shale quarry (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Clay/Shale
County: Hubbard
Status: Inactive since 1894 (1,2)
Location: T 140 R 35 W

Location comments: A few miles from Park Rapids (1,2); (T., R. locations determined from county highway map)

Description: Gray drift (1,2)
Uses of commodity: Bricks (1)
References: 1) Grout. 1919, p. 174
2) Grout; Soper. 1914, p. 113

Main commodity: Clay/Shale
County: Hubbard
Status: Inactive
Location: T 141 R 32 W

Location comments: Near Akeley, a mile and a half from the Great Northern Railroad (1,2); (T., R. locations determined from county highway map)

Description: Lake clay (1,2)
Uses of commodity: Cream-colored bricks (1,2)
References: 1) Grout. 1919, p. 174
2) Grout; Soper. 1914, p. 112

Main commodity: Clay/Shale
County: Isanti
Date opened: 1879 (1)
Status: Inactive
Location: T 34 R 24 W

Location comments: East part of Stanford (1); (T., R. locations determined from Ref. 1, plate 45)

Uses of commodity: Bricks (1)
Remarks: Cream-colored bricks of good quality (1)
References: 1) Winchell; Upham. 1888, p. 423, plate 45

Main commodity: Clay/Shale
County: Isanti
Status: Inactive
Township name: North Branch (1)
Location: T 35 R 22 W Sec 14

Location comments: (T., R. locations determined from Ref. 1, plate 45)

Description: Till or boulder clay (1)
Uses of commodity: Red bricks (1)
Remarks: Limestone particles in till caused some bricks to crack (1)
References: 1) Winchell; Upham. 1888, p. 424, plate 45

Main commodity: Clay/Shale
County: Isanti
Status: Inactive
Past operator/owner: Frank Ekstrom (1888) (3)
Location: T 35 R 22 W Sec 14 (1-3)
T 35 R 22 W Sec 15 (1,2)

Location comments: Just west of North Branch was a small brickyard (1,2); (Refs. 2 and 3 state location to be in Chisago County, but this location is actually in Isanti County)

Description: Red drift (1); containing particles of lime (3)

Uses of commodity: Red bricks (3)

References: 1) Grout. 1919, p. 143
2) Grout; Soper. 1914, p. 88
3) Winchell; Upham. 1888, p. 424

Main commodity: Clay/Shale

County: Isanti

Date opened: 1881 (1-3)

Status: Inactive

Location: T 36 R 23 W OR
T 35 R 23 W

Location comments: Bricks have been made at the east side of the Rum River, a half mile southwest of Cambridge (1) and elsewhere along the Rum River (2-4); (T., R. locations determined from county highway map)

Physical test data: See Refs. 2 and 3 for test data

Uses of commodity: Bricks (1-4)

Remarks: Salmon-colored bricks (2,3); red bricks of good quality (1)

References: 1) Winchell; Upham. 1888, p. 424
2) Grout. 1919, p. 174, 175
3) Grout; Soper. 1914, p. 113
4) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale

County: Isanti

Status: Inactive

Township name: Wyanett

Location: T 36 R 25 W

Location comments: On the northwest side of Green Lake (1); (T., R. locations determined from Ref. 1, plate 45)

Uses of commodity: Red bricks (1)

References: 1) Winchell; Upham. 1888, p. 424, plate 45

Main commodity: Clay/Shale

County: Itasca

Status: Inactive

Past operator/owner: Verna Brick Co. (1,2); Wrenshall Brick Co. (3)

Location: T 54 R 23 W Sec 28 NW1/4 NW1/4 (4)

Location comments: At Verna (1-3); Warba station on the Great Northern Railway (1,2)

Description: Gray laminated clay (1,2)

Physical test data: See Refs. 1 and 2 for test data

Uses of commodity: Bricks (1,2)

References: 1) Grout. 1919, p. 175, 176
2) Grout; Soper. 1914, p. 113, 114
3) MN Business Gazette. referenced data compiled by NRRI
4) NRRI. clay sample site

Main commodity: Clay/Shale

County: Itasca

Status: Inactive

Past operator/owner: Itasca Brick Co. (3)

Location: T 55 R 25 W

Location comments: At Grand Rapids (1-3); along the banks of a small creek at the northeast edge of town (1,2); (T., R. locations determined from county highway map)

Description: Very sandy laminated clay (1,2)

Physical test data: See Refs. 1 and 2 for test data

Uses of commodity: Bricks (1,2)

References: 1) Grout. 1919, p. 175, 176
2) Grout; Soper. 1914, p. 113, 114
3) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale

County: Itasca

Status: Inactive

Location: T 56 R 23 W OR
T 56 R 22 W

Location comments: Near Pengilly (1-3); (T., R. locations determined from county highway map)

Description: Sandy phase of modified drift (1,2)

Uses of commodity: Bricks (1-3)

Remarks: A sand-lime brick plant was also located near Pengilly (1,2); at least four brickyard operators were located near Pengilly (3)

References: 1) Grout. 1919, p. 178
2) Grout; Soper. 1914, p. 116
3) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale

County: Jackson

Status: Inactive

Location: T 102 R 35 W OR
T 102 R 34 W

Location comments: Near the town of Jackson (1-3); by the Chicago, Milwaukee and St. Paul Railway (1); by the west side of the Des Moines River about 1/4 mile south of town (4); (T., R. locations determined by county highway map)

Description: Gray drift (1,2)

Uses of commodity: Bricks, tile (1,2)

Remarks: At least four brickyard operators were located near the town of Jackson (3)

References: 1) Grout. 1919, p. 178, 179
2) Grout; Soper. 1914, p. 116, 117
3) MN Business Gazette. referenced data compiled by NRRI
4) Winchell and others. 1884, p. 514

Main commodity: Clay/Shale
County: Jackson
Status: Inactive
Location: T 103 R 37 W
Location comments: At Okabena (1,2); (T., R. locations determined from county highway map)
Description: Gray drift (1,2)
Uses of commodity: Hand molded brick (1,2)
Remarks: Two small plants operated at Okabena (1,2)
References: 1) Grout. 1919, p. 178
2) Grout; Soper. 1914, p. 116

Main commodity: Clay/Shale
County: Jackson
Status: Inactive
Past operator/owner: Chapman, Drake, and Heron Lake Brick and Tile Co. (3)
Location: T 104 R 37 W
Location comments: At Heron Lake (1,2); along the shore of Heron Lake (3); (T., R. locations determined from county highway map)
Description: Glacial drift (3)
Chemical analyses: See Ref. 4 for chemical analyses
Uses of commodity: Hollow brick, tile (1,2)
Remarks: The clay is more suitable for hollow brick and tile than any other products (1,2)
References: 1) Grout. 1919, p. 180
2) Grout; Soper. 1914, p. 117
3) MN Business Gazette. referenced data compiled by NRRI
4) Grout. 1925, p. 300

Main commodity: Clay/Shale
County: Kanabec
Status: Inactive
Location: T 38 R 23 W
Location comments: One plant was installed east of Rice Creek on the road from Brunswick, to Grasston. (1,2); (T., R. locations determined from county highway map)
Description: Laminated lake clays (1)
Physical test data: See Refs. 1 and 2 for test data
Uses of commodity: Bricks (1,2)
References: 1) Grout. 1919, p. 180, 181
2) Grout; Soper. 1914, p. 118

Main commodity: Clay/Shale

County: Kanabec
Status: Inactive
Past operator/owner: John Peterson (1888) (1)
Township name: Brunswick (1)
Location: T 38 R 24 W Sec 4 (1)
Description: Glacial till (1)
Uses of commodity: Bricks (1)
Remarks: Red bricks of fair quality (1)
References: 1) Winchell; Upham. 1888, p. 628

Main commodity: Clay/Shale
County: Kanabec
Status: Inactive
Past operator/owner: Andrew Olson (1888) (1)
Township name: Brunswick (1)
Location: T 38 R 24 W Sec 10 (1)
Description: Glacial till (1)
Uses of commodity: Bricks (1)
Remarks: Red bricks of fair quality (1)
References: 1) Winchell; Upham. 1888, p. 628

Main commodity: Clay/Shale
County: Kanabec
Status: Inactive
Past operator/owner: Olaf Borg and F. K. Nilson (1888) (1)
Township name: Brunswick (1)
Location: T 38 R 24 W Sec 26 (1)
Description: Glacial till (1)
Uses of commodity: Bricks (1)
Remarks: Red bricks of fair quality (1)
References: 1) Winchell; Upham. 1888, p. 628, plate 54

Main commodity: Clay/Shale
County: Kanabec
Status: Inactive
Location: T 39 R 24 W Sec 1 (1)
Location comments: At Mora (1,2)
Description: Shale of the red clastic series (1,2)
Physical test data: See Refs. 1 and 2 for test data
Remarks: An attempt was made to use the shale of the red clastic series for terra cotta (1,2)
References: 1) Grout; Soper. 1914, p. 118
2) Grout. 1919, p. 180

Main commodity: Clay/Shale
County: Kandiyohi
Status: Inactive
Past operator/owner: Willmar Brick Co. (1)

Location: T 119 R 35 W
Location comments: A little over a mile west of Willmar (1); near Willmar (2); (T., R. locations determined from county highway map)
Description: Laminated clay (1)
Remarks: At least three brickyard operators were located near Willmar (2)
References: 1) Grout. 1919, p. 181
 2) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Kandiyohi
Date opened: 1875 (1)
Status: Inactive
Past operator/owner: Peter Larson (1)
Township name: New London (1)
Location: T 121 R 34 W Sec 29 (1)
Location comments: Northwest side of Nest Lake (1,2)
Description: Laminated clay (1,2)
Uses of commodity: Bricks (1)
Remarks: Two pits at this location (1)
References: 1) Winchell; Upham. 1888, p. 240
 2) Grout. 1919, p. 181

Main commodity: Clay/Shale
County: Kandiyohi
Date opened: 1880 (1)
Status: Inactive
Past operator/owner: P. Larson (1)
Location: T 121 R 35 W
Location comments: Near Lake Andrew (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
Remarks: Brickyard (1)
References: 1) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Le Sueur
Status: Inactive
Location comments: About halfway between Chalk Run and the farm house on the Le Sueur River bank, a short distance above the bluff at the railroad crossing (1884) (1); (exact location undetermined)
Description: White (kaolinic) clay with small concretions of silica (1)
Uses of commodity: Pottery clay (1)
Remarks: Clay pit (1)
References: 1) Winchell. 1885, p. 143, 144

Main commodity: Clay/Shale
County: Le Sueur
Date opened: 1878 (1)
Status: Inactive
Location: T 109 R 23 W Sec 35 (1)
Location comments: One mile south of Waterville (1); at the east side of the railroad (1)
Description: Clay (1,2)
Uses of commodity: Bricks (1,2)
References: 1) Winchell and others. 1884, p. 647
 2) Grout; Soper. 1914, p. 125

Main commodity: Clay/Shale
County: Le Sueur
Status: Inactive
Location: T 110 R 26 W
Location comments: At Kasota (1,2); (T., R. locations determined from county highway map)
Physical test data: See Refs. 1 and 2 for test data
Uses of commodity: Bricks (1,2)
References: 1) Grout. 1919, p. 203, 204
 2) Grout; Soper. 1914, p. 136, 137

Main commodity: Clay/Shale
County: Le Sueur
Status: Inactive
Location: T 111 R 26 W
Location comments: Near Ottawa, a little over half a mile up Cherry Creek and half a mile from the Northwestern Railroad (1,2); (T., R. locations determined from county highway map)
Geologic age: Cretaceous
Description: Shale (1-3)
Chemical analyses: See Refs. 1-3 for chemical analyses
Physical test data: See Refs. 1 and 2 for test data
Uses of commodity: Refractory clay (1,2)
References: 1) Grout. 1919, p. 107, 187-190
 2) Grout; Soper. 1914, p. 45, 124
 3) Knapp. 1923, p. 23, 24, 80

Main commodity: Clay/Shale
County: Le Sueur
Date opened: 1882 (3)
Status: Inactive
Location: T 112 R 26 W AND
 T 111 R 26 W
Location comments: At least four brickyard operators were located near the town of Le Sueur (4,5); (T., R. locations determined from county highway map)
Description: Recent alluvium of the Minnesota River (1-3) and modified drift (1)

Chemical analyses: See Ref. 6 for chemical analyses
Physical test data: See Refs. 2 and 3 for test data
Uses of commodity: Red bricks (3)
References: 1) Winchell and others. 1884, p. 646, 647
 2) Grout. 1919, p. 103, 190, 191
 3) Grout; Soper. 1914, p. 125
 4) MN Business Gazette. referenced data compiled by NRRRI
 5) MN Census. referenced data compiled by NRRRI
 6) Grout. 1925, p. 401

Main commodity: Clay/Shale
County: Lincoln
Date opened: 1880 (1)
Status: Inactive
Township name: Verdi (1)
Location: T 109 R 46 W Sec 22 (1)
Location comments: Five miles southwest of Lake Benton (1)
Uses of commodity: Bricks (1)
References: 1) Winchell and others. 1884, p. 612

Main commodity: Clay/Shale
County: Lyon
Status: Inactive
Location: T 111 R 41 W
Location comments: Brickyards located at the southwest and at the northeast edge of Marshall (1884) (1); (T., R. locations determined from Ref. 1, plate 27)
Description: Alluvium or lake bottom clay (1)
Uses of commodity: Bricks (1)
References: 1) Winchell and others. 1884, p. 612

Main commodity: Clay/Shale
County: Lyon
Date opened: 1880 (1)
Status: Inactive
Township name: Eidsvold (1)
Location: T 113 R 43 W Sec 28 (1)
Description: Clay (1)
Uses of commodity: Red bricks (1)
References: 1) Winchell and others. 1884, p. 612

Main commodity: Clay/Shale
County: Marshall
Status: Inactive
Location: T 155 R 48 W OR
 T 155 R 47 W
Location comments: North of Warren (1-3); (T., R. locations determined from county highway map)

Description: Clay along river (1,2); sandy yellowish-gray clay (3)
Physical test data: See Ref. 3, p. 18 for test data
Uses of commodity: Cream-colored bricks (1,2)
Remarks: At least four brickyard operators were located near Warren (4)
References: 1) Grout. 1919, p. 193, 194
 2) Grout; Soper. 1914, p. 128
 3) Grosh; Hamlin. 1963, p. 9, 18
 4) MN Business Gazette. referenced data compiled by NRRRI
 5) Grout. 1947, p. 4

Main commodity: Clay/Shale
County: Martin
Status: Inactive
Past operator/owner: Fairmont Drain Tile and Brick Co. (1,2)
Location: T 102 R 30 W
Location comments: Fairmont (1); (T., R. locations determined from county highway map)
Remarks: "A plant at Fairmont formerly used clay from Blue Earth, Faribault County." (1); (see Faribault County for further information)
References: 1) Grout. 1919, p. 156, 157, 194
 2) Grout; Soper. 1914, p. 98, 99

Main commodity: Clay/Shale
County: Martin
Status: Inactive
Location: T 104 R 33 W
Location comments: South side of Buffalo Lake (1,2); (T., R. locations determined from county highway map)
Description: Surface loam (1,2)
Uses of commodity: Bricks (1,2)
Remarks: Bricks were not of good quality (1,2)
References: 1) Grout. 1919, p. 194
 2) Grout; Soper. 1914, p. 128, 129

Main commodity: Clay/Shale
County: McLeod
Status: Inactive
Location: T 117 R 29 W OR
 T 117 R 30 W OR
 T 116 R 29 W OR
 T 116 R 30 W
Location comments: At Hutchinson (1-6); (T., R. locations determined from county highway map)
Description: Gray drift clay (1-5)
Chemical analyses: See Refs. 2-4 for chemical analyses
Physical test data: See Ref. 3, p. 192 and Ref. 4, p. 126-128 for test data
Uses of commodity: Drain tile (2); bricks (1-5)

Remarks: A special washing process was used at Hutchinson to remove limestone pebbles from the gray drift (1,3-5); at least five brickyard operators were located near Hutchinson (6)

References: 1) Emmons; Grout. 1943, p. 95
2) Grout. 1925, p. 396
3) Grout. 1919, p. 55, 56, 192, 193
4) Grout; Soper. 1914, p. 25, 26, 126-128
5) Grout. 1916, p. 186
6) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: McLeod
Date opened: 1878 (1)
Status: Inactive
Township name: Hutchinson (1)
Location: T 117 R 29 Sec 20 SW1/4 (1)
Location comments: About 2 miles north of Hutchinson (1); (T., R. locations determined from county highway map)
Description: Hard, light gray clay (1)
Uses of commodity: Light red bricks (1)
Remarks: The clay is from a two acre marsh (1)
References: 1) Winchell; Upham. 1888, p. 188, 189

Main commodity: Clay/Shale
County: Meeker
Date opened: 1875 (1)
Status: Inactive
Location: T 120 R 30 W AND
T 119 R 31 W
Location comments: Three miles northeast of Litchfield on the way to Forest City (1); and other brickyards located near Litchfield (2-5); (T., R. locations determined from county highway map)
Description: Laminated clays (2,3); limy concretions occur in certain layers. (1-3)
Uses of commodity: Bricks (1-4)
Remarks: At least three brickyard operators were located near Litchfield (4,5)
References: 1) Winchell; Upham. 1888, p. 240, 241
2) Grout. 1919, p. 194
3) Grout; Soper. 1914, p. 129
4) MN Business Gazette. referenced data compiled by NRRI
5) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Meeker
Date opened: 1879 (1)
Status: Inactive
Past operator/owner: Adam Brower (1)

Location: T 120 R 29 W
Location comments: One mile west of Kingston on the north side of the river (1); (T., R. locations determined from county highway map)
Description: Laminated clays (2,3); limy concretions occur in certain layers (1-3)
Uses of commodity: Bricks (1-3)
References: 1) Winchell; Upham. 1888, p. 241
2) Grout. 1919, p. 194
3) Grout; Soper. 1914, p. 129

Main commodity: Clay/Shale
County: Meeker
Date opened: 1900 (1)
Status: Inactive since 1910 (1)
Past operator/owner: Anton Riedele (1)
Location: T 121 R 30 W
Location comments: Brickyard located near Watkins (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
References: 1) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Mille Lacs
Status: Inactive
Location: T 36 R 26 W
Location comments: At Brickton, north of Princeton (1-3); (T., R. locations determined from county highway map)
Physical test data: See Refs. 1 and 2 for test data
Uses of commodity: Bricks (3)
Remarks: At least eight brickyard operators were located near Brickton (3)
References: 1) Grout. 1919, p. 194, 195
2) Grout; Soper. 1914, p. 129, 130
3) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Mille Lacs
Date opened: 1879 (1)
Status: Inactive
Past operator/owner: J. Scott and Son (1)
Township name: Princeton (1)
Location: T 36 R 26 W Sec 7 SW1/4 (1)
Location comments: Near the west branch of the Rum River (1)
Uses of commodity: Bricks (1)
Remarks: Dull reddish bricks, hard and durable (1)
References: 1) Winchell; Upham. 1888, p. 628, plate 54

Main commodity: Clay/Shale
County: Mille Lacs
Date opened: 1876 (1)
Status: Inactive
Past operator/owner: G. W. Dunton (1888) (1)
Township name: Princeton (1)
Location: T 36 R 26 W Sec 21 NE1/4 (1) AND
 T 36 R 26 W
Location comments: Two miles north of Princeton (1); and other
 brickyards located near Princeton (2-5)
Description: Laminated clay (1)
Uses of commodity: Bricks (1-4)
Remarks: Red bricks of good quality (1); at least three
 brickyard operators were located near
 Princeton (3,4)
References: 1) Winchell; Upham. 1888, p. 627
 2) Burchard. 1910, p. 290
 3) MN Business Gazette. referenced data
 compiled by NRRI
 4) MN Census. referenced data compiled by
 NRRI
 5) Berkey. 1902, p. 174

Main commodity: Clay/Shale
County: Mille Lacs
Status: Inactive
Location: T 42 R 25 W
Location comments: At Wahkon, on the Minneapolis, St. Paul and
 Sault Ste. Marie Railway (1919) (1); (T., R.
 locations determined from county highway
 map)
Physical test data: See Refs. 1 and 2 for test data
References: 1) Grout. 1919, p. 195-197
 2) Grout; Soper. 1914, p. 129-131

Main commodity: Clay/Shale
County: Morrison
Status: Inactive
Past operator/owner: Bowlus Brick and Tile Co. (1,2); Chas Gwenser
 Brick and Tile Manufacturing Co. (3)
Location: T 127 R 30 W
Location comments: (Two brickyards operated at Bowlus); (T., R.
 locations determined from county highway
 map)
Uses of commodity: Bricks (1-3)
References: 1) Grout. 1919, p. 197
 2) Grout; Soper. 1914, p. 131, 132
 3) MN Business Gazette. referenced data
 compiled by NRRI

Main commodity: Clay/Shale
County: Morrison
Status: Inactive

Location: T 128 R 29 W
Location comments: (T., R. locations determined from county
 highway map)
Geologic age: Pleistocene
Description: Pit worked for Pleistocene cream-burning clays
 (1)
References: 1) Minnesota State Planning Board. 1937

Main commodity: Clay/Shale
County: Morrison
Status: Inactive
Location: T 129 R 30 W
Location comments: Two or three miles west of Little Falls, by Pike
 Creek (1-4); (T., R. locations determined from
 county highway map)
Description: Laminated clay (3)
Physical test data: See Refs. 1-3 for test data
Uses of commodity: Cream-colored bricks (1-3)
Remarks: At least three brickyard operators were located
 in this area (4)
References: 1) Grout. 1919, p. 197
 2) Grout; Soper. 1914, p. 131, 132
 3) MN Dept. of Conservation. 1964b, p. 78, 79
 4) MN Business Gazette. referenced data
 compiled by NRRI

Main commodity: Clay/Shale
County: Morrison
Status: Inactive
Location: T 129 R 30 W Sec 22 SW1/4 NW1/4 (1)
Remarks: Clay pit (1)
References: 1) NRRI. clay sample site

Main commodity: Clay/Shale
County: Morrison
Status: Inactive
Location: T 129 R 30 W Sec 24 NW1/4 (1)
Location comments: West of Little Falls (1)
Uses of commodity: Brick (1)
References: 1) Morrison County Engineer. 1989, personal
 communication

Main commodity: Clay/Shale
County: Morrison
Status: Inactive
Location: T 131 R 29 W
Location comments: West side of the Mississippi River, near Fort
 Ripley (1); (T., R. locations determined from
 county highway map)
Uses of commodity: Red bricks (1)

Remarks: Red bricks of good quality, used to build Fort Ripley (1)

References: 1) Winchell; Upham. 1888, p. 609

Main commodity: Clay/Shale

County: Mower

Status: Inactive

Location comments: High Forest (1); (location undetermined)

Description: Glacial drift and loess (1)

Uses of commodity: Red bricks (1)

References: 1) Grout. 1919, p. 203
2) Grout; Soper. 1914, p. 135

Main commodity: Clay/Shale

County: Mower

Status: Inactive

Location: T 101 R 14 W

Location comments: Near Le Roy (1-3); (T., R. locations determined from Ref. 1, plate 12)

Uses of commodity: Bricks (1-3)

References: 1) Winchell and others. 1884, p. 366, plate 12
2) Grout. 1919, p. 203
3) Grout; Soper. 1914, p. 135

Main commodity: Clay/Shale

County: Mower

Status: Inactive

Location: T 102 R 18 W

Location comments: At Austin, a quarter of a mile northwest of the Chicago, Milwaukee and St. Paul station (1919) (1); (T., R. locations determined from Ref. 1, plate 12)

Geologic age: Cretaceous (1-4)

Description: Clay (1,2,4,5)

Physical test data: See Refs. 1 and 2 for test data

Uses of commodity: Bricks (1-5)

Remarks: At least seven brickyard operators have been located near Austin (6); (it has not been determined if they all used creataceous clay)

References: 1) Grout. 1919, p. 200-202
2) Grout; Soper. 1914, p. 134, 135
3) Winchell and others. 1884, p. 366
4) Stauffer. [1948?], p. 15
5) Stauffer. 1940, p. 417, 431
6) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale

County: Mower

Status: Inactive

Location: T 102 R 18 W OR
T 103 R 18 W

Location comments: At the Rosenberry and Miner's Quarry, near Austin (1); (T., R. locations determined from county highway map)

Uses of commodity: Boiled linseed oil was mixed with the clay to make putty (1)

References: 1) Winchell. 1873, p. 117

Main commodity: Clay/Shale

County: Mower

Status: Inactive

Location: T 103 R 14 W

Location comments: Near Frankford (2-4); about three miles above Frankford (1); (T., R. locations determined from Ref. 2, plate 12)

Description: Glacial drift and loess (3,4)

Uses of commodity: Bricks (1-4)

References: 1) Winchell. 1875, p. 186
2) Winchell and others. 1884, p. 366, plate 12
3) Grout. 1919, p. 203
4) Grout; Soper. 1914, p. 135

Main commodity: Clay/Shale

County: Mower

Status: Inactive

Township name: Red Rock

Location: T 103 R 17 W

Location comments: Near Brownsdale (1); (T., R. locations determined from county highway map)

Uses of commodity: Bricks (1)

Remarks: Brickyard (1); other brickyards have existed in Red Rock township (1)

References: 1) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale

County: Mower

Status: Inactive

Location: T 104 R 18 W OR
T 103 R 18 W

Location comments: At Lansing (1); three miles north of Lansing (2); (T., R. locations determined from Ref. 1, plate 12)

Uses of commodity: Bricks (1,2)

References: 1) Winchell and others. 1884, p. 366, plate 12
2) Winchell. 1875, p. 186

Main commodity: Clay/Shale

County: Nicollet

Status: Inactive

Location: T 108 R 27 W

Location comments: In Nicollet County, opposite Mankato (1,2); (T., R. locations determined from county highway map)

Description: Clay (1,2)

Uses of commodity: Bricks (1,2)

References: 1) Grout. 1919, p. 203
2) Grout; Soper. 1914, p. 136

Main commodity: Clay/Shale

County: Nicollet

Status: Inactive

Past operator/owner: Mathias Davidson (1888) (1)

Location: T 110 R 26 W

Location comments: In Oshawa, about one mile southwest from St. Peter (1); (T., R. locations determined from county highway map)

Description: Recent alluvium, levelly stratified, fine clayey silt (1)

Uses of commodity: Bricks (1)

References: 1) Winchell; Upham. 1888, p. 178

Main commodity: Clay/Shale

County: Nicollet

Status: Inactive (1,2)

Location: T 110 R 26 W

Location comments: At St. Peter, where the Chicago and Northern Railway crosses the Minnesota River (1,2); (T., R. locations determined from county highway map)

Uses of commodity: Bricks (1,2)

Remarks: Used in the construction of the asylum at St. Peter (1,2)

References: 1) Grout. 1919, p. 203
2) Grout; Soper. 1914, p. 136

Main commodity: Clay/Shale

County: Nicollet

Status: Inactive

Past operator/owner: John McCurdy (1888) (1)

Township name: Traverse (1)

Location: T 110 R 26 W Sec 5 NE1/4 (1)

Location comments: "At the north end of the 'sand prairie'..." (1)

Description: Clay with limy concretions mainly in the upper 6 inches of clay (1)

Uses of commodity: Bricks (1)

Remarks: Red bricks of good quality, chiefly used in construction of asylum (1)

References: 1) Winchell; Upham. 1888, p. 178, plate 36

Main commodity: Clay/Shale

County: Nicollet

Status: Inactive

Location: T 110 R 30 W Sec 9 SW1/4 (1)

Uses of commodity: Fill (1)

Remarks: Borrow pit used as fill material (1)

References: 1) Nicollet County Engineer. 1989, personal communication

Main commodity: Clay/Shale

County: Nicollet

Status: Inactive

Location: T 110 R 30 W Sec 16 NW1/4 (1)

Uses of commodity: Fill (1)

Remarks: Borrow pit used as fill material (1)

References: 1) Nicollet County Engineer. 1989, personal communication

Main commodity: Clay/Shale

County: Nicollet

Status: Inactive

Location: T 111 R 32 W

Location comments: At Fort Ridgely, 1/4 mile northeast of the fort, in the west bluff of Fork Creek (1); (T., R. locations determined from Ref. 1, plate 36)

Geologic age: Possibly Cretaceous (1); (Cretaceous)

Description: Clay (1)

Uses of commodity: Bricks (1)

References: 1) Winchell; Upham. 1888, p. 179, plate 36

Main commodity: Clay/Shale

County: Nobles

Status: Inactive

Location: T 102 R 40 W

Location comments: At Worthington (1,2); (T., R. locations determined from county highway map)

Description: Gray drift contains pebbles (1)

Uses of commodity: Brick, tile (1,2)

References: 1) Grout, 1919, p. 204
2) Grout; Soper. 1914, p. 137

Main commodity: Clay/Shale

County: Norman

Status: Inactive since 1906 (1,2)

Location: T 144 R 46 W Sec.16 SE1/4 NW1/4 (3)

Location comments: Half a mile from Ada (1,2)

Description: Laminated clay of the Red River Valley (1,2)

Physical test data: See Refs. 1 and 2 for test data

Uses of commodity: Bricks (1,2)

References: 1) Grout. 1919, p. 205
2) Grout; Soper. 1914, p. 137, 138
3) NRRI. clay sample site

Main commodity: Clay/Shale
County: Olmsted
Status: Inactive
Location: T 105 R 11 W
Location comments: Near Chatfield (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
References: 1) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Olmsted
Status: Inactive
Location: T 105 R 13 W
Location comments: At Pleasant Grove (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
References: 1) Grout. 1919, p. 206

Main commodity: Clay/Shale
County: Olmsted
Status: Inactive
Location: T 105 R 13 W
Location comments: At Simpson (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
References: 1) Grout. 1919, p. 206

Main commodity: Clay/Shale
County: Olmsted
Status: Inactive
Location: T 106 R 12 W
Location comments: At Eyota (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
References: 1) Grout. 1919, p. 206

Main commodity: Clay/Shale
County: Olmsted
Status: Inactive
Location: T 107 R 14 W
Location comments: Near Rochester (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
Remarks: At least two brickyard operators were located near Rochester (1)
References: 1) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Olmsted
Status: Inactive
Location: T 107 R 15 W
Location comments: Near Byron (1-3); (T., R. locations determined from county highway map)
Description: Yellowish sandy loess (1,2)
Uses of commodity: Bricks (1,2)
Remarks: At least three brickyard operators were located near Byron (3)
References: 1) Grout. 1919, p. 206, 208
 2) Grout; Soper. 1914, p. 140
 3) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Olmsted
Status: Inactive
Location: T 108 R 14 W
Location comments: At Oronoco (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
References: 1) Grout. 1919, p. 206

Main commodity: Clay/Shale
County: Otter Tail
Date opened: 1878 (1)
Status: Inactive
Past operator/owner: Henry Asseln (1888) (1)
Township name: Parker's Prairie (1)
Location: T 131 R 37 W Sec 19 (1)
Location comments: Near Fish Lake (1)
Description: Yellowish clay (1)
Uses of commodity: Bricks (1)
Remarks: Fair quality (1)
References: 1) Winchell; Upham. 1888, p. 558, plate 51

Main commodity: Clay/Shale
County: Otter Tail
Date opened: 1872 (1)
Status: Inactive
Location: T 132 R 43 W
Location comments: At Fergus Falls (1); (T., R. locations determined from Ref. 1, plate 51)
Description: Stratified clay (1)
Uses of commodity: Bricks (1)
Remarks: Cream-colored bricks of good quality (1); bricks of a poor grade have also been produced at Fergus Falls (2,3)

References: 1) Winchell; Upham. 1888, p. 558, plate 51
2) Grout. 1919, p. 208
3) Grout; Soper. 1914, p. 140

Main commodity: Clay/Shale
County: Otter Tail
Status: Inactive
Past operator/owner: A. C. Hatch (1914) (1,2)
Location: T 133 R 40 W

Location comments: Near the town of Battle Lake (1,2); (T., R. locations determined from county highway map); (possibly located in township 132)

Description: Laminated clay (1,2)

Uses of commodity: Bricks (1,2)

Remarks: The pit is located at the opposite end of town from the brickyard (1,2)

References: 1) Grout. 1919, p. 209
2) Grout; Soper. 1914, p. 141

Main commodity: Clay/Shale

County: Otter Tail

Date opened: 1879 (1)

Status: Inactive

Location: T 133 R 43 W

Location comments: A brickyard was located beside the Red River three miles west of Fergus Falls, a short distance south from the mouth of the Pelican River (1); (T., R. locations determined from Ref. 1, plate 51); (possibly located in township 132)

Uses of commodity: Bricks (1)

References: 1) Winchell; Upham. 1888, p. 558, plate 51

Main commodity: Clay/Shale

County: Otter Tail

Status: Inactive

Past operator/owner: Deer Creek Brick Co. (1914) (1,2)

Location: T 134 R 37 W

Location comments: Four miles northwest of the town of Deer Creek (1,2); (T., R. locations determined from county highway map)

Description: Laminated clay (1,2)

Physical test data: It burns hard and buff-colored at cone 2 and reaches viscosity at cone 6 (1,2)

Uses of commodity: Bricks (1,2)

References: 1) Grout. 1919, p. 209
2) Grout; Soper. 1914, p. 140, 141

Main commodity: Clay/Shale

County: Otter Tail

Status: Inactive

Past operator/owner: Northwest Brick Co. (1)

Location: T 136 R 39 W

Location comments: Two miles west of Perham station (1); two miles north of the railroad station at Perham (2); (T., R. locations determined from county highway map)

Description: Laminated clay (1,2)

Physical test data: See Refs. 1 and 2 for test data

Uses of commodity: Yellow bricks (1)

References: 1) Grout. 1919, p. 208, 209
2) Grout; Soper. 1914, p. 140

Main commodity: Clay/Shale

County: Otter Tail

Status: Inactive since 1905 (1)

Location: T 136 R 43 W Sec 22 (1)

Location comments: At Pelican Rapids (1)

Description: Clay pit (1)

Physical test data: See Ref. 1 for test data

References: 1) Grout. 1919, p. 209, 210

Main commodity: Clay/Shale

County: Pennington

Status: Inactive

Location: T 154 R 43 W

Location comments: At Thief River Falls (1,2); (T., R. locations determined from county highway map)

Description: Alluvial clay (1,2)

Uses of commodity: Bricks (1)

Remarks: Excellent bricks were made (1,2)

References: 1) Grout. 1919, p. 210
2) Grout; Soper. 1914, p. 141

Main commodity: Clay/Shale

County: Pine

Status: Inactive

Location: T 38 R 21 W

Location comments: By the narrows between Cross and Devil Lakes (1); along the railroad, just south of Pine City (2,3); (T., R. locations determined from county highway map)

Description: Outwash (2,3)

Physical test data: See Ref. 2 for test data

Uses of commodity: Bricks (1)

References: 1) Joe Newbouer, Local Historian. 1989, personal communication
2) Grout. 1919, p. 210
3) Grout; Soper. 1914, p. 142

Main commodity: Clay/Shale

County: Pipestone

Quarry/pit name: Pipestone Quarry (7)

Status: Inactive

Location: T 106 R 46 W Sec 1 NE1/4 SW1/4 (7) AND
T 106 R 46 W Sec 1 W1/2 (9)

Location comments: (One-half mile north of Pipestone is a cluster of small quarries located at Pipestone National Monument); see Ref. 4, p. 64 for location map; (Ref. 8 states range as 41, this appears to be a typographical error)

Geologic age: Middle Proterozoic

Description: "Pipestone, or 'catlinite' is a low-metamorphic-grade claystone to clayey shale, which is very compact, fine-grained, and smooth in texture. It occurs in thin layers interbedded within the Sioux quartzite..." (1)

Uses of commodity: (Ceremonial pipes and other carvings)

References: 1) Broughton. 1973, p. 126-131
2) Austin. 1972, p. 452
3) Winchell and others. 1884, p. 538-543
4) Morey. 1984, p. 59-74
5) Morey. 1983, p. 1-48
6) Berg. 1938, p. 259
7) USBM. [1979], MILS
8) Prokopovich; Schwartz. 1957, p. 58
9) USGS. 1967, Pipestone North quadrangle

Main commodity: Clay/Shale

County: Polk

Status: Inactive

Location: T 147 R 39 W

Location comments: Near Lengby (1,2); (T., R. locations determined from county highway map)

Description: Lake clay (1,2)

Uses of commodity: Bricks (1,2)

References: 1) Grout. 1919, p. 211
2) Grout; Soper. 1914, p. 144

Main commodity: Clay/Shale

County: Polk

Status: Inactive

Location: T 147 R 44 W

Location comments: At Fertile (1-3); (T., R. locations determined from county highway map)

Description: Deposit resembles a river delta (1,2)

Physical test data: See Ref. 1, p. 211 and 212 for test data

Uses of commodity: Cream-colored bricks, hollow blocks, drain tile (1,2)

References: 1) Grout. 1919, p. 211
2) Grout. 1947, p. 4
3) Grout; Soper. 1914, p. 142

Main commodity: Clay/Shale

County: Polk

Status: Inactive

Location: T 147 R 44 W Sec 20 SW1/4 SE1/4 (2)

Location comments: North pit at Fertile brickyard (1)

Description: Glacial lake clay (1)

Physical test data: See Ref. 1, p. 18 for test data

Uses of commodity: Bricks (1)

References: 1) Grosh; Hamlin. 1963, p. 10, 18
2) NRRI. clay sample sites

Main commodity: Clay/Shale

County: Polk

Status: Inactive (1)

Location: T 150 R 46 W OR

T 150 R 47 W

Location comments: 0.6 miles SE of bridge on Red Lake River on East Roberts St., Crookston (1); (T., R. locations determined from county highway map)

Description: Glacial lake clay (1)

Uses of commodity: Bricks (1)

Remarks: Abandoned brickyard pit (1)

References: 1) Grosh; Hamlin. 1963, p. 10

Main commodity: Clay/Shale

County: Polk

Status: Inactive

Past operator/owner: Crookston Tile and Brick Co. (1)

Location: T 150 R 46 W Sec 31 SW1/4 SW1/4 (1)

Description: Glacial till (1)

Uses of commodity: Tile, bricks (1)

References: 1) NRRI. clay sample site

Main commodity: Clay/Shale

County: Polk

Status: Inactive

Location: T 150 R 47 W

Location comments: At Crookston (1,2); (T., R. locations determined from county highway map); (location possibly in range 46)

Description: Laminated clays (1,2)

Physical test data: See Ref. 1, p. 211-213 and Ref. 2, p. 142, 143 for test data

Uses of commodity: Bricks (1,2)

Remarks: Several brickyard operators have been located near Crookston (3)

References: 1) Grout. 1919, p. 212, 213
2) Grout; Soper. 1914, p. 142, 143
3) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale

County: Polk

Status: Inactive

Location: T 151 R 50 W

Location comments: At East Grand Forks (1,2); (T., R. locations determined from county highway map); (location possibly in township 152)

Description: Silts of the Red River (1,2)

Physical test data: See Ref. 1, p. 212, 213 and Ref. 2, p. 143, 144 for test data

Uses of commodity: Cream-colored bricks (1,2)

References: 1) Grout. 1919, p. 212, 213
2) Grout; Soper. 1914, p. 142, 143

Main commodity: Clay/Shale

County: Pope

Date opened: 1876 (1)

Quarry/pit name: 76 (1)

Status: Inactive

Past operator/owner: John Aiton (1888) (1)

Location: T 125 R 37

Location comments: At Glenwood (1-3); northeast part of village (1888) (1); (T., R. locations determined from county highway map)

Description: Gray drift (1,2)

Uses of commodity: Bricks (1-3)

Remarks: Site has been subdivided into city lots (1914) (3)

References: 1) Winchell; Upham. 1888, p. 497
2) Grout. 1919, p. 214
3) Grout; Soper. 1914, p. 144, 145

Main commodity: Clay/Shale

County: Ramsey

Date opened: 1892 (3)

Status: Inactive (8)

Past operator/owner: Twin City Brick Co. (1,2)

Location: T 28 R 23 W Sec 7 (1,2,5)

Location comments: St. Paul (1-4,6-8); (Ref. 5 states range as 28, this appears to be a typographical error)

Geologic age: Ordovician

Geologic formation: Decorah shale (1,2)

Description: Blue clay-shale (4); see Ref. 6, p. 4 and 5 for lithologic section description

Physical test data: See Refs. 1, 2, and 5 for test data

Uses of commodity: Bricks (4,7)

References: 1) Riley. 1950a, p. 3, 7, 10, 14-16, 18
2) Riley. 1950b, p. 5, 8, 12, 13, 18, 21
3) Emmons; Grout. 1943, p. 94-96
4) Burchard. 1910, p. 290
5) Prokopovich; Schwartz. 1957, p. 9, 54
6) Hanson. 1951, p. 4, 5
7) Grout. 1947, p. 2
8) USDL. MSHA mine reference list

Main commodity: Clay/Shale

County: Ramsey

Quarry/pit name: Old Twin City Brick and Tile Pit (1)

Date opened: 1890 (3)

Status: Inactive since 1973 (3)

Location: T 28 R 23 W Sec 12 SE1/4 SE1/4 (2-7) AND
T 28 R 23 W Sec 12 SW1/4 SW1/4 (2)

Location comments: Cherokee Heights, St. Paul (4,8-14); now Lilydale Park (1,3,7)

Geologic age: Ordovician

Geologic formation: Decorah shale (1-4,7,8,10-14)

Description: Greenish-gray shale (3); see Refs. 8, 11, 12, and 14 for section descriptions

Uses of commodity: Face brick, other heavy clay products (5,6)

References: 1) Sloan and others. 1987, p. 66, 67
2) Mossler. 1971
3) Rice. 1987, p. 137
4) Sweet. 1987, p. 167
5) Hogberg. 1969, p. 3
6) Hogberg. 1966, p. 4
7) Rice. 1985, p. 8, 9
8) Karklins. 1966, p. 14, 92
9) Stauffer; Thiel. 1914, p. 187
10) Sloan. 19667, p. 8
11) Swain; Cornell. 1987, p. 102, 103
12) Thomes. 1937, p. 4
13) Cornell. 1956, p. 2, 3
14) Karklins. 1969, p. 4, 5

Main commodity: Clay/Shale

County: Ramsey

Status: Inactive

Location: T 29 R 22 W Sec 33 SW1/4 (1)

Location comments: Daytons Bluff (1-3); (T., R. locations determined from county highway map)

Description: Red laminated clay (1-3)

Uses of commodity: Red bricks (1)

References: 1) Winchell; Upham. 1888, p. 373
2) Grout. 1919, p. 215
3) Schwartz. 1936, p. 124

Main commodity: Clay/Shale

County: Ramsey

Status: Inactive

Location: T 29 R 23 W

Location comments: Near the northern limits of St. Paul (1-3); on Rice St. by St. Germain (1); (T., R. locations determined from county highway map); (location possibly in range 22)

Description: Yellow, surface loam (1)

Uses of commodity: Red brick (1)

Remarks: At least seven brickyard operators were located near St. Paul (1-5)

References: 1) Winchell; Upham. 1888, p. 373
2) Grout. 1919, p. 215
3) Grout; Soper. 1914, p. 145
4) Schwartz. 1936, p. 124
5) MN Business Gazette. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Ramsey
Status: Inactive
Township name: White Bear (1)
Location: T 30 R 22 W Sec 32 (1)
Location comments: At the eastern extremity of Lake Vadnais (1)
Uses of commodity: Red bricks (1)
Remarks: Good common red brick, 2 small yards (1)
References: 1) Winchell; Upham. 1888, p. 373, plate 43

Main commodity: Clay/Shale
County: Red Lake
Status: Inactive (1,2)
Location: T 151 R 44 W
Location comments: Half a mile from the station of Red Lake Falls (1,2); (T., R. locations determined from county highway map)
Description: Lake washed gray drift (1,2)
Uses of commodity: Bricks (1,2)
References: 1) Grout. 1919, p. 216
 2) Grout; Soper. 1914, p. 146

Main commodity: Clay/Shale
County: Redwood
Status: Inactive
Past operator/owner: A. C. Ochs Brick and Tile Co. (1)
Location: T 112 R 35 W Sec 2 NW1/4 (1)
Geologic age: Cretaceous
Remarks: Clay pit (1)
References: 1) Sloan. 1964, p. 48

Main commodity: Clay/Shale
County: Redwood
Quarry/pit name: Ochs Clay Pit (1)
Status: Inactive
Location: T 112 R 35 W Sec 3 NE1/4 (1)
Location comments: Between Redwood Falls and Morton (1)
Remarks: Clay pit (1)
References: 1) Parham. 1966?, p. 14

Main commodity: Clay/Shale
County: Redwood
Date opened: 1878 (1)
Status: Inactive
Location: T 112 R 36 W
Location comments: Near the top of west bluff of the Redwood River at Redwood Falls (1); (T., R. locations determined from county highway map)
Description: Modified drift (1)

Uses of commodity: Red bricks (1)
References: 1) Winchell and others. 1884, p. 587, 588

Main commodity: Clay/Shale
County: Redwood
Status: Inactive
Past operator/owner: Minnesota Clay Works (2,3); Morton Brick and Tile Co. (4,5); Minneapolis Fire Brick Co. (4)
Location: T 113 R 35 W OR
 T 112 R 34 W
Location comments: Near Morton (1); south bank of the Minnesota River (2,3); (T., R. locations determined from county highway map)
Description: Clay (1); for section description see Refs. 1 and 2
Physical test data: See Refs. 4 and 5 for test data
References: 1) Renville County Assessor. 1989, personal communication
 2) Stauffer; Thiel. 1914, p. 189
 3) Thiel. 1944, p. 369
 4) Grout. 1919, p. 216-220
 5) Grout; Soper. 1914, p. 146-149

Main commodity: Clay/Shale
County: Redwood
Status: Inactive
Location: T 113 R 35 W Sec 33 SW1/4 SW1/4 NW1/4 (1,2)
Physical test data: See Ref. 1 for test data
Remarks: Old clay pit (1,2)
References: 1) Parham; Hogberg. 1964, p. 7, 10, 23
 2) Parham. 1970, p. 74

Main commodity: Clay/Shale
County: Redwood
Status: Inactive
Location: T 113 R 35 W Sec 34 SE1/4 (1)
Location comments: South side of State Hwy. 19, 1.5 miles west of the bridge at Morton (1)
Remarks: Old clay pit (1)
References: 1) Bickford; Price. 1947, p. 6

Main commodity: Clay/Shale
County: Renville
Status: Inactive (1)
Township name: Wellington (1)
Location: T 113 R 32
Location comments: Northwest part of Wellington (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
References: 1) Winchell; Upham. 1888, p. 204

Main commodity: Clay/Shale
County: Renville
Status: Inactive (1)
Location: T 113 R 35 W
Location comments: A half mile west of Beaver Falls (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
References: 1) Winchell; Upham. 1888, p. 204

Main commodity: Clay/Shale
County: Renville
Status: Inactive
Past operator/owner: Rainbow Brickette Co. (1)
Location: T 113 R 35 W Sec 27 NW1/4 SW1/4 NE1/4 (1)
Remarks: Brickyard (1)
References: 1) NRRI. compiled referenced data

Main commodity: Clay/Shale
County: Rice
Status: Inactive
Location: T 109 R 20 W Sec 6 (1,2)
Geologic age: Ordovician
Geologic formation: Decorah Shale
Physical test data: See Refs. 1 and 2 for test data
Uses of commodity: Bricks (3)
Remarks: Old clay pit (1,2); bricks have been made at numerous places in Rice County (3)
References: 1) Riley. 1950a, p. 3
 2) Riley. 1950b, p. 5
 3) Winchell and others. 1884, p. 672

Main commodity: Clay/Shale
County: Rice
Status: Inactive
Location: T 109 R 22 W
Location comments: Morristown (1,2); (T., R. locations determined from county highway map)
Description: Gray drift (1,2)
Uses of commodity: Bricks (1,2)
References: 1) Grout. 1919, p. 222
 2) Grout; Soper. 1914, p. 150

Main commodity: Clay/Shale
County: Rice
Status: Inactive
Location: T 110 R 20 W
Location comments: At Faribault (1-4); (T., R. locations determined from county highway map)

Description: Leached gray drift (2,3)
Uses of commodity: Bricks (1-3)
Remarks: Bricks have been made at numerous places in Rice County (1); at least three brickyard operators were located near Faribault (4)
References: 1) Winchell and others. 1884, p. 672
 2) Grout. 1919, p. 222
 3) Grout; Soper. 1914, p. 150
 4) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Rice
Status: Inactive
Location: T 111 R 20 W OR
 T 111 R 19 W
Location comments: Northfield (1,2); (T., R. locations determined from county highway map)
Description: Gray drift (1,2)
Uses of commodity: Red bricks (1,2)
References: 1) Grout. 1919, p. 222
 2) Grout; Soper. 1914, p. 150

Main commodity: Clay/Shale
County: Rock
Status: Inactive
Location: T 102 R 45 W
Location comments: At Luverne (1,2); (T., R. locations determined from county highway map)
Description: Gray drift (1)
Uses of commodity: Bricks, tile, sand-lime bricks (1,2)
Remarks: Produced excellent brick and tile, the plant was bought out by a company making sand-lime brick, which was unsuccessful (2)
References: 1) Grout. 1919, p. 223, 224
 2) Grout; Soper. 1914, p. 151, 152

Main commodity: Clay/Shale
County: Roseau
Status: Inactive
Location: T 161 R 42 W
Location comments: A quarter of a mile from the station at Badger (1,2); (T., R. locations determined from county highway map)
Description: Lake modified gray drift, contains a rather high proportion of limestone pebbles (1,2)
Uses of commodity: Bricks (1,2)
Remarks: The bricks are not of high grade (1,2)
References: 1) Grout. 1919, p. 224
 2) Grout; Soper. 1914, p. 152

Main commodity: Clay/Shale

County: Roseau
Status: Inactive
Location: T 162 R 40 W
Location comments: At Roseau (1,2); (T., R. locations determined from county highway map)
Description: Lake modified drift (1,2)
Uses of commodity: Yellow bricks (1,2)
References: 1) Grout. 1919, p. 224
 2) Grout; Soper. 1914, p. 152

Main commodity: Clay/Shale
County: Scott
Status: Inactive
Location: T 113 R 24 W OR
 T 113 R 25 W
Location comments: At Belle Plaine, about an eighth of a mile east of the depot (1888) (1); (T., R. locations determined from Ref. 1, plate 35)
Description: Recent alluvium (1)
Uses of commodity: Red bricks (1)
References: 1) Winchell; Upham. 1888, p. 146, plate 35

Main commodity: Clay/Shale
County: Scott
Quarry/pit name: Minnesota Ceramic Pits (1)
Status: Inactive
Location: T 113 R 24 W Sec 26 NW1/4 NE1/4 (1)
Description: Glacial lake clay (1)
References: 1) NRRI. clay sample site

Main commodity: Clay/Shale
County: Scott
Status: Inactive
Location: T 113 R 25 W OR
 T 113 R 24 W
Location comments: A mile south of Belle Plaine (1,2); (T., R. locations determined from county highway map)
Description: Clay (1,2)
Physical test data: See Ref. 1 for test data
Uses of commodity: Cream-colored bricks (1)
References: 1) Grout. 1919, p. 231, 232
 2) Grout; Soper. 1914, p. 155, 156
 3) Schwartz. 1936, p. 125

Main commodity: Clay/Shale
County: Scott
Status: Inactive
Location: T 113 R 25

Location comments: At Blakeley (1,2); (T., R. locations determined from county highway map)
Description: Laminated clay (1,2)
Physical test data: See Ref. 1, p. 231 and Ref. 2, p. 155 for test data
Uses of commodity: Common brick, hollow ware (1,2)
Remarks: Cream-colored bricks (1,2)
References: 1) Grout. 1919, p. 231
 2) Grout; Soper. 1914, p. 155

Main commodity: Clay/Shale
County: Scott
Status: Inactive
Location: T 114 R 23 W
Location comments: At Jordan (1,2); at Spirit Hill (1); (T., R. locations determined from Ref. 1, plate 35)
Description: Laminated glacial clay (1)
Uses of commodity: Bricks, fire bricks (1)
References: 1) Winchell; Upham. 1888, p. 131, 146, plate 35
 2) Schwartz; Thiel. 1954, p. 183

Main commodity: Clay/Shale
County: Scott
Status: Inactive
Location: T 115 R 23 W
Location comments: East edge of the town of Shakopee (3); (T., R. locations determined from Ref. 4, plate 35); (possibly located in range 22)
Description: Gray laminated clay (3); alluvium (1-3)
Physical test data: See Refs. 1-3 for test data
Uses of commodity: Red bricks (1,2)
References: 1) Grout. 1919, p. 230, 231
 2) Grout; Soper. 1914, p. 154, 155
 3) Schwartz. 1936, p. 124, 125
 4) Winchell; Upham. 1888, p. 141

Main commodity: Clay/Shale
County: Scott
Status: Inactive
Location: T 115 R 23 W
Location comments: Near Chaska (1,2); (T., R. locations determined from county highway map); (possibly located in Carver County)
Uses of commodity: Bricks (1,2)
References: 1) Hogberg. 1964, p. 2
 2) Knapp. 1923, p. 79

Main commodity: Clay/Shale
County: Sherburne
Date opened: 1875 (1)
Status: Inactive
Township name: Orrock (1)

Location: T 34 R 27 W Sec 30 (1)
Location comments: North end of Eagle Lake (1)
Uses of commodity: Bricks (1)
Remarks: Red bricks of inferior quality (1)
References: 1) Winchell; Upham. 1888, p. 443, plate 46

Main commodity: Clay/Shale
County: Sherburne
Status: Inactive
Township name: Baldwin (1)
Location: T 35 R 26 W
Location comments: East part of Baldwin (1); (T., R. locations determined from Ref. 1, plate 46)
Uses of commodity: Bricks (1)
Remarks: Red bricks of good quality (1)
References: 1) Winchell; Upham. 1888, p. 443, plate 46

Main commodity: Clay/Shale
County: Sherburne
Status: Inactive (1,2)
Location: T 35 R 31 W Sec 13 (3)
Location comments: Two miles south of East St. Cloud, just across the river from some brickyards in Stearns County (1); Ref. 2 states location at two miles south of Sauk Rapids
Description: Yellowish laminated clay (1,2)
Uses of commodity: Cream-colored bricks (1)
References: 1) Grout. 1919, p. 232, 233
 2) Grout; Soper. 1914, p. 156
 3) Sherburne County Zoning. 1989, personal communication

Main commodity: Clay/Shale
County: Sibley
Status: Inactive
Location: T 112 R 26 W
Location comments: At Henderson (1-4); (T., R. locations determined from Ref. 1, plate 36)
Description: Recent alluvium of the Minnesota River (1,2)
Uses of commodity: Bricks (1-3)
Remarks: Produced bricks varying in color from reddish to yellow brown on cream-color, depending on temperatures in kilns (1); at least four brickyard operators were located near Henderson (3)
References: 1) Winchell; Upham. 1888, p. 177, 178, plate 36
 2) Grout; Soper. 1914, p. 156
 3) MN Census. referenced data compiled by NRRI
 4) Grout. 1919, p. 233

Main commodity: Clay/Shale
County: Sibley

Status: Inactive
Township name: Washington Lake (1)
Location: T 114 R 26 W
Location comments: Near the west end of Lake Erin (1); (T., R. locations determined from Ref. 1, plate 36)
Uses of commodity: Bricks (1)
Remarks: Brick making attempt unsuccessful because of limestone particles (1)
References: 1) Winchell; Upham. 1888, p. 179, plate 36

Main commodity: Clay/Shale
County: St. Louis
Status: Inactive
Location: T 49 R 15 W
Location comments: West Duluth (1,2); (T., R. locations determined from county highway map)
Description: Red clay (1,2)
Uses of commodity: Bricks (1,2)
References: 1) Grout. 1919, p. 225
 2) Grout; Soper. 1914, p. 98

Main commodity: Clay/Shale
County: St. Louis
Status: Inactive
Location: T 61 R 15 W
Location comments: Just south of Tower (1); (T., R. locations determined from county highway map)
Description: Swamp clay (2)
Physical test data: See Ref. 1 for test data
Uses of commodity: Brick, tile (1)
Remarks: Experienced difficulty in drying the ware (1)
References: 1) Grout. 1919, p. 225, 226
 2) Grout. 1925, p. 401

Main commodity: Clay/Shale
County: Stearns
Status: Inactive
Location: T 122 R 31 W
Location comments: Near Paynesville, on the shore of Eden Lake, near the mouth of the incoming creek (1,2); (T., R. locations determined from county highway map)
Description: Delta deposit (1,2)
Physical test data: See Ref. 1, p. 237 and Ref. 2, p. 159 for test data
Uses of commodity: Red bricks (1,2)
References: 1) Grout. 1919, p. 237
 2) Grout; Soper. 1914, p. 159

Main commodity: Clay/Shale
County: Stearns

Status: Inactive (1963) (1)
Location: T 122 R 32 W Sec 24 (1)
Location comments: Abandoned brickyard pit in marsh at west end of Rice Lake (1)
Description: Glacial lake clay (1)
Physical test data: See Ref. 1, table 3 for test data
Uses of commodity: Bricks (1)
References: 1) Grosh; Hamlin. 1963, p. 11, 13, 18

Main commodity: Clay/Shale
County: Stearns
Date opened: 1890 (1,2)
Status: Inactive since 1910 (1,2)
Location: T 123 R 28 W
Location comments: At St. Augusta (1,2); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1,2)
References: 1) Grout. 1919, p. 236
 2) Grout; Soper. 1914, p. 158

Main commodity: Clay/Shale
County: Stearns
Quarry/pit name: Beutler Clay Pit (1)
Status: Inactive
Location comments: Southeast of St. Cloud, west of Hwy. 152 (1); (exact location undetermined)
Description: Glacial clay ? (1)
Physical test data: See Ref. 1, p. 61 for test data
Remarks: Clay pit (1)
References: 1) Prokopovich; Schwartz. 1957, p. 61

Main commodity: Clay/Shale
County: Stearns
Quarry/pit name: Hiss Clay Pit (1)
Status: Inactive
Location comments: Near St. Cloud east of Hwy. 152 (1); (exact location undetermined)
Description: Glacial clay ? (1)
Physical test data: See Ref. 1, p. 61 for test data
References: 1) Prokopovich; Schwartz. 1957, p. 61

Main commodity: Clay/Shale
County: Stearns
Status: Inactive
Location: T 124 R 28 W
Location comments: Three miles south of St. Cloud, along the west bank of the Mississippi River (1,2); (T., R. locations determined from county highway map)
Description: Laminated clays (1,2)

Physical test data: See Ref. 1, p. 235 and Ref. 2, p. 158 for test data
Uses of commodity: Bricks (2)
Remarks: Two brickyards used this material (2)
References: 1) Grout. 1919, p. 235
 2) Grout; Soper. 1914, p. 158

Main commodity: Clay/Shale
County: Stearns
Date opened: 1861 (1)
Status: Inactive
Township name: St. Cloud (1)
Location: T 124 R 28 W Sec 22 S1/2 (1)
Description: Yellow clay (1)
Uses of commodity: Red bricks of good quality (1)
References: 1) Winchell; Upham. 1888, p. 469

Main commodity: Clay/Shale
County: Stearns
Status: Inactive
Township name: St. Cloud (1)
Location: T 124 R 28 W Sec 26 SE1/4 (1)
Description: Yellowish clay, levelly stratified (1)
Uses of commodity: Bricks (1)
Remarks: Generally cream-colored bricks (1)
References: 1) Winchell; Upham. 1888, p. 469

Main commodity: Clay/Shale
County: Stearns
Status: Inactive
Township name: Collegeville (1)
Location: T 124 R 30 W Sec 1 N1/2 (1)
Description: Glacial till or boulder clay (1)
Uses of commodity: Red bricks (1)
Remarks: Red bricks used in buildings at St. Johns College (1)
References: 1) Winchell; Upham. 1888, p. 469, 470

Main commodity: Clay/Shale
County: Stearns
Date opened: 1879 (1)
Status: Inactive
Township name: Collegeville (1)
Location: T 124 R 30 W Sec 2 NE1/4 (1)
Location comments: South end of St. Louis Lake, about a mile south of St. John's College (1); (this site may possibly be in Sec. 12)
Uses of commodity: Bricks (1)
Remarks: Used in buildings at St. Johns College (1)
References: 1) Winchell; Upham. 1888, p. 470

Main commodity: Clay/Shale
County: Stearns
Date opened: 1870 (1)
Status: Inactive
Township name: Le Sauk (1)
Location: T 125 R 28 W Sec 21 (1)
Location comments: South side of Watab River (1)
Uses of commodity: Red bricks (1)
References: 1) Winchell; Upham. 1888, p. 470, plate 47

Main commodity: Clay/Shale
County: Stearns
Status: Inactive
Location: T 125 R 29 W
Location comments: At Collegeville (1,2); (T., R. locations determined from county highway map)
Description: Yellowish laminated clay (1,2)
Physical test data: See Ref. 1, p. 236 and Ref. 2, p. 158 for test data
Uses of commodity: Bricks (1,2)
Remarks: Used in the buildings at St. John's College (1,2)
References: 1) Grout. 1919, p. 236
 2) Grout; Soper. 1914, p. 158

Main commodity: Clay/Shale
County: Stearns
Status: Inactive
Location: T 125 R 31 W
Location comments: Bricks have been made at Albany from clay obtained in the banks of a stream at the southwest side of town (1,2); (T., R. locations determined from county highway map)
Description: Clay from stream bank (1,2)
Uses of commodity: Bricks (1,2)
References: 1) Grout. 1919, p. 236
 2) Grout; Soper. 1914, p. 158

Main commodity: Clay/Shale
County: Stearns
Date opened: 1870's (1)
Status: Inactive
Township name: Oak (1)
Location: T 125 R 32 W Sec 21
Location comments: Southeast side of Rice Lake, two miles southeast of New Munich (1); (T., R., Sec. locations determined from Ref. 1, plate 47)
Uses of commodity: Bricks (1)
References: 1) Winchell; Upham. 1888, p. 470, plate 47

Main commodity: Clay/Shale

County: Stearns
Status: Inactive
Location: T 125 R 33 W
Location comments: North of Miers Grove (Meire Grove) (1,2); (T., R. locations determined from county highway map)
Physical test data: See Ref. 1, p. 236 and Ref. 2, p. 158, 159
Uses of commodity: Red bricks (1,2)
Remarks: Very weak red brick (1,2)
References: 1) Grout. 1919, p. 236, 237
 2) Grout; Soper. 1914, p. 158, 159

Main commodity: Clay/Shale
County: Stearns
Status: Inactive
Location: T 126 R 33 W
Location comments: Brickyard at Melrose (1); (T., R. locations determined from county highway map)
Description: Drift clay (1)
Uses of commodity: Bricks (1)
References: 1) NRRI. compiled referenced data

Main commodity: Clay/Shale
County: Stearns
Status: Inactive
Location: T 126 R 34 W
Location comments: Near Sauk Centre, two miles north of intersection on U.S. Hwy. 71 and 28 at Sauk Lake (1); (T., R. locations determined from county highway map)
Description: Glacial lake clays (1)
Remarks: Clay pit (1)
References: 1) NRRI. compiled referenced data

Main commodity: Clay/Shale
County: Stearns
Date opened: 1875 (1)
Status: Inactive
Township name: Sauk Center (1)
Location: T 126 R 34 W Sec 34 N1/2 (1)
Location comments: 3.5 miles south of Sauk Center and about half a mile SW from the Sauk River (1)
Description: Yellow clay, levelly stratified (1)
Uses of commodity: Bricks (1)
References: 1) Winchell; Upham. 1888, p. 470

Main commodity: Clay/Shale
County: Steele
Status: Inactive
Location: T 105 R 19 W

Location comments: Near Blooming Prairie (1); (T., R. locations determined from Ref. 1, plate 15)
Uses of commodity: Bricks (1)
References: 1) Winchell and others. 1884, p. 403, plate 15

Main commodity: Clay/Shale
County: Steele
Status: Inactive
Location: T 107 R 20 W
Location comments: Near Owatonna (1); (T., R. locations determined from Ref. 1, plate 15)
Description: Bluish, yellow washed clay (1)
Uses of commodity: Common brick, unglazed red ware (1)
Remarks: Bricks were not first class (1)
References: 1) Winchell and others. 1884, p. 403, plate 15

Main commodity: Clay/Shale
County: Steele
Status: Inactive
Location: T 107 R 20 W
Location comments: One mile east of Owatonna (1,2); (T., R. locations determined from Ref. 1, plate 15)
Uses of commodity: Stoneware, fire-brick (1)
References: 1) Winchell and others. 1884, p. 402, 403, plate 15
 2) Schrader and others. 1917, p. 169

Main commodity: Clay/Shale
County: Stevens
Status: Inactive
Location: T 124 R 42 W OR
 T 125 R 42 W
Location comments: Morris (1,2); (T., R. locations determined from county highway map)
Description: Lake modified drift (1)
Uses of commodity: Bricks (1)
Remarks: Bricks have also been made from the till in Stevens County, limestone pebbles in the till caused the bricks to crack by the slacking of particles of lime (2)
References: 1) Grout. 1919, p. 238
 2) Grout; Soper. 1914, p. 160

Main commodity: Clay/Shale
County: Swift
Date opened: 1877 (1)
Status: Inactive
Location: T 121 R 38 W
Location comments: At DeGraff, 1/4 mile west of depot (1); (T., R. locations determined from county highway map)

Description: Yellow clay (1)
Uses of commodity: Bricks (1)
Remarks: Cream-colored bricks of good quality (1)
References: 1) Winchell; Upham. 1888, p. 219

Main commodity: Clay/Shale
County: Swift
Status: Inactive
Location: T 121 R 39 W
Location comments: At Benson (1,2); (T., R. locations determined from county highway map)
Description: Sandy surface clays in the nature of outwash or loess and surface wash were used for making red bricks (2)
Uses of commodity: Red bricks (1,2)
References: 1) Grout. 1919, p. 238
 2) Grout; Soper. 1914, p. 160

Main commodity: Clay/Shale
County: Swift
Status: Inactive
Township name: Camp Lake
Location: T 122 R 38 W Sec 31 AND
 T 122 R 38 W Sec 32 (1)
Location comments: Along Trunk Highway 9 (1)
Uses of commodity: Used for road stabilization (1)
Remarks: Clay pits (1)
References: 1) Swift County Engineer. 1989, personal communication

Main commodity: Clay/Shale
County: Todd
Status: Inactive
Location: T 127 R 33 W
Location comments: Along the north shore of Birch Lake, about one mile east of the town of Birch Lake (Ward Springs) (1,2); (T., R. locations determined from county highway map)
Description: Laminated clay (1,2)
Uses of commodity: Bricks (1,2)
References: 1) Grout. 1919, p. 240
 2) Grout; Soper. 1914, p. 162

Main commodity: Clay/Shale
County: Todd
Date opened: 1878 (1)
Status: Inactive
Township name: Birchdale (1)
Location: T 127 R 33 W Sec 9 NW1/4 (1)
Uses of commodity: Red bricks (1)

References: 1) Winchell; Upham. 1888, p. 578

Main commodity: Clay/Shale
County: Todd
Status: Inactive
Township name: Brichdale (1)
Location: T 127 R 33 W Sec 23 SE1/4 NE1/4 (1)
Location comments: North of the Middle Birch Bark Lake (1)
Uses of commodity: Dark red bricks (1)
References: 1) Winchell; Upham. 1888, p. 578

Main commodity: Clay/Shale
County: Todd
Status: Inactive
Location: T 127 R 34 W OR
 T 128 R 34 W
Location comments: On the banks of Fardens Lake, three miles from Little Sauk (1); (T., R. locations determined from county highway map)
Physical test data: See Ref. 1, p. 239 and 240 for test data
Uses of commodity: Bricks (1)
References: 1) Grout. 1919, p. 239, 240

Main commodity: Clay/Shale
County: Todd
Date opened: 1881 (1)
Status: Inactive
Township name: Kandota (1)
Location: T 127 R 34 W Sec 26 S1/2 (1)
Location comments: East shore of Sauk Lake, three miles NE of Sauk Center (1)
Description: Laminated clay (1-3)
Physical test data: See Ref. 2, p. 239 and Ref. 3, p. 161 for test data
Uses of commodity: Cream-colored bricks (1); brick, terra cotta, flower pots (2,3)
Remarks: Pits have been opened at numerous points along the shore (2,3)
References: 1) Winchell; Upham. 1888, p. 470, 578
 2) Grout. 1919, p. 238, 239
 3) Grout; Soper. 1914, p. 160, 161

Main commodity: Clay/Shale
County: Todd
Status: Inactive
Location: T 128 R 32 W
Location comments: Just southwest of Burtrum (1,2); (T., R. locations determined from county highway map)
Description: Red drift (1,2)
Physical test data: See Ref. 1, p. 240 and Ref. 2, p. 162 for test data

Uses of commodity: Bricks (1,2)
Remarks: Fairly good common brick (1,2)
References: 1) Grout. 1919, p. 240
 2) Grout; Soper. 1914, p. 162

Main commodity: Clay/Shale
County: Todd
Status: Inactive
Township name: Long Prairie (1)
Location: T 129 R 33 W Sec 19 SW1/4 NE1/4 (1)
Location comments: Bricks were made about a mile west of Long Prairie, and also about two miles southeast (1); and two miles west of Long Prairie (2,3); (T., R. locations determined from county highway map)
Description: Till (1)
Uses of commodity: Bricks (1-3)
Remarks: Poor quality bricks (1)
References: 1) Winchell; Upham. 1888, p. 577, 578
 2) Grout. 1919, p. 241
 3) Grout; Soper. 1914, p. 162

Main commodity: Clay/Shale
County: Todd
Status: Inactive
Location: T 131 R 33 W
Location comments: Three miles east and 1/2 mile south of Clarissa (1); (T., R. locations determined from county highway map)
Description: Yellowish gray clay (1)
Physical test data: See Ref. 1, p. 61 for test data
Remarks: Old clay pit (1)
References: 1) Prokopovich; Schwartz. 1957, p. 81

Main commodity: Clay/Shale
County: Todd
Date opened: 1880 (1)
Status: Inactive
Township name: Eagle Valley (1)
Location: T 131 R 34 W Sec 35 NW1/4 SE1/4 (2)
Location comments: Two miles SE of Clarissa, near the center of Sec. 35 (1); at Clarissa spur (3,4) (this location may possibly represent a different pit)
Description: Gray levelly stratified clay, contains some carbonate concretions (1); glacial lake clay (2)
Physical test data: See Ref. 3, p. 240, 241 and Ref. 4, p. 161, 162 for test data
Uses of commodity: Cream-colored bricks of good quality (1)
References: 1) Winchell; Upham. 1888, p. 577
 2) NRRI. clay sample site
 3) Grout. 1919, p. 240, 241
 4) Grout; Soper. 1914, p. 161, 162

Main commodity: Clay/Shale
County: Todd
Status: Inactive
Location: T 131 R 35 W
Location comments: About a half mile east of Eagle Bend (1); (T., R. locations determined from county highway map)
Description: Contained many limestone pebbles (1)
Uses of commodity: Bricks (1)
References: 1) Grout; Soper. 1914, p. 163

Main commodity: Clay/Shale
County: Todd
Status: Inactive
Location: T 133 R 32 W
Location comments: From one to two miles east of Staples along the Northern Pacific Railroad (1); (T., R. locations determined from county highway map)
Description: Laminated clay, limestone concretions found at depth (1)
Physical test data: See Ref. 1, p. 161, 162 and Ref. 2, p. 240 for test data
Uses of commodity: Bricks (1)
Remarks: Two brick plants made common red bricks (1)
References: 1) Grout; Soper. 1914, p. 161, 162
 2) Grout. 1919, p. 240

Main commodity: Clay/Shale
County: Todd
Date opened: 1880 (1)
Status: Inactive
Location: T 133 R 32 W
Location comments: North part of Moran township on the south side of the railroad about a 1/2 mile east of Hayden Brook and Lake, or nearly two miles east of Stables depot (1888) (1); (T., R. locations determined from Ref. 1, plate 52); (Ref. 1 location comments put this site in T 133 R 32 W which is in Villard township)
Uses of commodity: Red bricks of fair quality (1)
References: 1) Winchell; Upham. 1888, p. 577

Main commodity: Clay/Shale
County: Todd
Date opened: 1881 (1)
Status: Inactive
Location: T 133 R 32 W Sec 18 (1)
Location comments: Near middle of section 18, five miles west of Motley (1); (Ref. 1 states Moran township, but location comments put this site in Villard township)
Description: Yellowish gray, laminated clay (1)

Uses of commodity: Red bricks (1)
Remarks: Excellent bright red bricks (1)
References: 1) Winchell; Upham. 1888, p. 577

Main commodity: Clay/Shale
County: Todd
Date opened: 1881 (1)
Status: Inactive
Township name: Stowe Prairie (1)
Location: T 133 R 35 W Sec 8 SW1/4 (1)
Location comments: 7 miles south of Wadena (1)
Description: Stratified clay (1)
Uses of commodity: Red bricks of fair quality (1)
References: 1) Winchell; Upham. 1888, p. 577

Main commodity: Clay/Shale
County: Todd
Status: Inactive
Township name: Stowe Prairie (1)
Location: T 133 R 35 W Sec 10 SW1/4 (1)
Description: Till with limestone particles (1)
Uses of commodity: Bricks (1)
Remarks: Bricks cracked after burning (1)
References: 1) Winchell; Upham. 1888, p. 577, plate 52

Main commodity: Clay/Shale
County: Wabasha
Status: Inactive
Location: T 108 R 11 W
Location comments: Near the station at Plainview (1,2); (T., R. locations determined from county highway map)
Description: Loess loam (1,2)
Uses of commodity: Bricks (1,2)
Remarks: Hand-mold brick plant (1,2)
References: 1) Grout. 1919, p. 242
 2) Grout; Soper. 1914, p. 164

Main commodity: Clay/Shale
County: Wabasha
Status: Inactive
Location: T 108 R 12 W
Location comments: Half a mile from Elgin station (1,2); (T., R. locations determined from county highway map)
Description: Loess loam (1,2)
Uses of commodity: Bricks (1,2)
Remarks: Hand-mold brick plant (1)

References: 1) Grout. 1919, p. 242
2) Grout; Soper. 1914, p. 164
3) Winchell; Upham. 1888, p. 18

Main commodity: Clay/Shale
County: Wabasha
Status: Inactive
Location: T 109 R 9 W
Location comments: Weaver (1); (T., R. locations determined from Ref. 1, plate 32)
Uses of commodity: Red bricks (1)
References: 1) Winchell; Upham. 1888, p. 18, 19, plate 32

Main commodity: Clay/Shale
County: Wabasha
Status: Inactive
Location: T 109 R 9 W
Location comments: Central Point (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
References: 1) Winchell; Upham. 1888, p. 19

Main commodity: Clay/Shale
County: Wabasha
Quarry/pit name: Bellechester/Bellechester Pits (1)
Status: Inactive
Location: T 110 R 14 W Sec 2 (1)
Location comments: (Ref. 1 states location is in Goodhue County, but the given location is actually in Wabasha County)
Description: Common clay (1)
References: 1) USBM. [1980], MILS

Main commodity: Clay/Shale
County: Wabasha
Status: Inactive
Location: T 111 R 10 W
Location comments: At Wabasha (1-3); (T., R. locations determined from county highway map)
Description: Loess loam (1,2)
Uses of commodity: Bricks (1-3)
Remarks: Produced a good red brick (1,2)
References: 1) Grout. 1919, p. 242
2) Grout; Soper. 1914, p. 164
3) Winchell; Upham. 1888, p. 19

Main commodity: Clay/Shale
County: Wabasha
Status: Inactive
Location: T 111 R 11 W

Location comments: Reads Landing (1); (T., R. locations determined from county highway map)

Uses of commodity: Bricks (1)

References: 1) Winchell; Upham. 1888, p. 19

Main commodity: Clay/Shale
County: Wabasha
Status: Inactive
Location: T 111 R 12 W
Location comments: Near Lake City (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
Remarks: Soft, light-colored red bricks (1)
References: 1) Winchell; Upham. 1888, p. 19

Main commodity: Clay/Shale
County: Waseca
Status: Inactive
Township name: Woodville (1)
Location: T 107 R 22 W
Location comments: Woodville, beside railroad tracks, 1.5 miles east of Waseca (1); (T., R. locations determined from Ref. 1, plate 13)
Uses of commodity: Bricks (1)
Remarks: Poor quality bricks, contained limestone particles (1)
References: 1) Winchell and others. 1884, p. 414, plate 13

Main commodity: Clay/Shale
County: Waseca
Status: Inactive
Township name: Iosco (1)
Location: T 108 R 23 W Sec 2 NW1/4 (1)
Location comments: Northern part of Waseca County, 1.5 miles south of Waterville (Le Sueur County) (1-3)
Description: Stratified clay (1)
Physical test data: See Ref. 2 for test data
Uses of commodity: Bricks (1-3)
References: 1) Winchell and others. 1884, p. 413, 414
2) Grout. 1919, p. 242, 243
3) Grout; Soper. 1914, p. 164

Main commodity: Clay/Shale
County: Waseca
Status: Inactive
Location: T 108 R 24 W
Location comments: One-third mile northwest of Janesville (1); (T., R. locations determined from Ref. 1, plate 15)
Description: Stratified yellow and gray clay (1)
Uses of commodity: Bricks (1)

References: 1) Winchell and others. 1884, p. 413, plate 15

Main commodity: Clay/Shale
County: Washington
Status: Inactive
Location: T 30 R 20 W OR
 T 29 R 20 W
Location comments: Near Stillwater (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
Remarks: At least three brickyard operators were located near Stillwater (1)
References: 1) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Washington
Status: Inactive
Past operator/owner: Forest Lake Brick and Tile Co. (1919) (1)
Location: T 32 R 21 W
Location comments: South of Forest Lake in gray drift and across the lake in red drift (1-3); (T., R. locations determined from county highway map)
Physical test data: See Refs. 1 and 2 for test data
Uses of commodity: Red bricks (1,2)
References: 1) Grout. 1919, p. 243, 244
 2) Grout; Soper. 1914, p. 164, 165
 3) Schwartz. 1936, p. 125

Main commodity: Clay/Shale
County: Watonwan
Status: Inactive
Location: T 106 R 32 W
Location comments: At St. James (1); (T., R. locations determined from county highway map)
Uses of commodity: Light reddish bricks (1)
References: 1) Winchell and others. 1884, p. 489

Main commodity: Clay/Shale
County: Watonwan
Status: Inactive
Location: T 107 R 30 W
Location comments: North side of Watonwan River, a little east of the bridge close southwest of Madelia (1884) (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
Remarks: Red bricks of good quality (1)
References: 1) Winchell and others. 1884, p. 489

Main commodity: Clay/Shale
County: Watonwan
Date opened: About 1900 (1)
Status: Inactive
Location: T 107 R 30 W
Location comments: At Low Lake, two miles northeast of Madelia (1); (T., R. locations determined from county highway map)
Uses of commodity: Light-red bricks (1)
References: 1) Grout. 1919, p. 246
 2) Grout; Soper. 1914, p. 167

Main commodity: Clay/Shale
County: Wilkin
Date opened: 1880 (1-3)
Status: Inactive
Township name: Breckenridge (1)
Location: T 132 R 47 W Sec 5 N1/2 (1)
Location comments: On the east bank of the Red River, about one mile north of Breckenridge (1-3)
Description: Fluvial clay (1)
Physical test data: See Refs. 2 and 3 for test data
Uses of commodity: Pinkish bricks (1)
References: 1) Winchell; Upham. 1888, p. 533, plate 50
 2) Grout. 1919, p. 246
 3) Grout; Soper. 1914, p. 167

Main commodity: Clay/Shale
County: Winona
Status: Inactive
Location: T 105 R 4 W
Location comments: At Dresbach (1-3); (T., R. locations determined from county highway map)
Description: Loam (1-3)
Uses of commodity: Red bricks (1,2)
Remarks: Fine quality red bricks (1,2); at least four large brickyards near Dresbach (1,2)
References: 1) Grout. 1919, p. 247
 2) Grout; Soper. 1914, p. 168
 3) Winchell and others. 1884, p. 266

Main commodity: Clay/Shale
County: Winona
Status: Inactive
Location: T 106 R 7 W
Location comments: About three miles southwest of Winona, along Burns Creek (1,2); (T., R. locations determined from county highway map)
Description: Alluvium (1,2)
Physical test data: See Refs. 1 and 2 for test data
Uses of commodity: Bricks (1,2)

References: 1) Grout. 1919, p. 248
2) Grout; Soper. 1914, p. 169

Main commodity: Clay/Shale
County: Winona
Status: Inactive
Location: T 106 R 7 W
Location comments: Three miles southwest of Winona (1-2); three miles south of Winona (3); (T., R. locations determined from county highway map)
Description: Loam (3)
Physical test data: See Refs. 1 and 2 for test data
Uses of commodity: Bricks (1-3)
References: 1) Grout. 1919, p. 248
2) Grout; Soper. 1914, p. 168, 169
3) Winchell and others. 1884, p. 266

Main commodity: Clay/Shale
County: Winona
Status: Inactive
Location: T 106 R 7 W
Location comments: A brickyard was located at Wilson (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
References: 1) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Winona
Status: Inactive
Location: T 106 R 10 W
Location comments: A brickyard was located at St. Charles (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
References: 1) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Winona
Status: Inactive
Location: T 107 R 7 W
Location comments: Four miles northwest of Winona (1,2); (T., R. locations determined from county highway map)
Description: Loess loam (1,2)
Uses of commodity: Red bricks (1,2)
Remarks: Red bricks of good quality (1,2)
References: 1) Grout. 1919, p. 247
2) Grout; Soper. 1914, p. 168, 169

Main commodity: Clay/Shale
County: Winona
Status: Inactive
Past operator/owner: Biesanz Brickyards (1,3)
Location: T 107 R 7 W AND
T 106 R 7 W
Location comments: Near Winona (1-3); (T., R. locations determined from county highway map)
Description: Loam (2)
Uses of commodity: Face brick, common brick (1)
Remarks: At least seven brickyard operators were located near the city of Winona (1-4)
References: 1) Hogberg. 1964, p. 2
2) Winchell and others. 1884, p. 266
3) Sikich. 1956, p. 550
4) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Winona
Status: Inactive
Location: T 107 R 8 W
Location comments: A brickyard was located at Rolling Stone (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
References: 1) MN Census. referenced data compiled by NRRI

Main commodity: Clay/Shale
County: Wright
Status: Inactive (1)
Location: T 118 R 27 W
Location comments: Along the shores of Lake Mary, six miles from the station of Howard Lake (1,2); (T., R. locations determined from county highway map)
Description: Lake clay (1,2)
Uses of commodity: Red brick (1,2)
References: 1) Grout. 1919, p. 251
2) Grout; Soper. 1914, p. 171, 172

Main commodity: Clay/Shale
County: Wright
Status: Inactive (1)
Location: T 118 R 27 W
Location comments: Half a mile west from Howard Lake Station (1); (T., R. locations determined from Ref. 1, plate 41); (possibly located in township 119)
Uses of commodity: Bricks (1)
References: 1) Winchell; Upham. 1888, p. 261, plate 41

Main commodity: Clay/Shale
County: Wright
Status: Inactive
Township name: Middleville (1)
Location: T 119 R 27 W
Location comments: Five miles north of Howard Lake, near the North Branch of the Crow River, about a fourth of a mile northeast from Boam's Bridge in Middleville township (1); (T., R. locations determined from Ref. 1, plate 41)
Uses of commodity: Bricks (1)
References: 1) Winchell; Upham. 1888, p. 261, plate 41

Main commodity: Clay/Shale
County: Wright
Date opened: 1873 (1)
Status: Inactive
Location: T 119 R 28 W
Location comments: At Cokato, just east of Main Street and north of the railroad (1); (T., R. locations determined from Ref. 1, plate 41)
Description: Yellowish gray clay (1)
Uses of commodity: Red bricks (1)
References: 1) Winchell; Upham. 1888, p. 262, plate 41

Main commodity: Clay/Shale
County: Wright
Date opened: 1876 (1)
Status: Inactive
Location: T 120 R 25 W
Location comments: Two miles northeast of the village of Buffalo (1); (T., R. locations determined from Ref. 1, plate 41)
Uses of commodity: Red bricks (1)
References: 1) Winchell; Upham. 1888, p. 261, plate 41
 2) Grout. 1919, p. 249

Main commodity: Clay/Shale
County: Wright
Date opened: 1880 (1,2)
Status: Inactive
Location: T 121 R 23 W
Location comments: At Dayton, near the mouth of Crow River (1,2); (T., R. locations determined from county highway map)
Description: Laminated clays (1,2)
Physical test data: See Refs. 1 and 2 for test data
Uses of commodity: Bricks (1,2)
References: 1) Grout. 1919, p. 249, 250
 2) Grout; Soper. 1914, p. 170

Main commodity: Clay/Shale
County: Wright
Status: Inactive
Location: T 121 R 23 W
Location comments: At Otsego (1,2); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1,2)
Remarks: At Otsego an attempt to use the drift failed because of limestone particles (1,2)
References: 1) Grout. 1919, p. 249
 2) Grout; Soper. 1914, p. 170

Main commodity: Clay/Shale
County: Wright
Date opened: 1876 (1)
Status: Inactive
Township name: Otsego (1)
Location: T 121 R 23 W Sec 13 (1)
Location comments: Center of section 13 (1)
Description: Till (1)
Uses of commodity: Bricks (1)
Remarks: Red bricks of good quality (1)
References: 1) Winchell; Upham. 1888, p. 261

Main commodity: Clay/Shale
County: Wright
Date opened: 1855 (1)
Status: Inactive
Township name: Otsego (1)
Location: T 121 R 23 W Sec 36 S1/2 (1)
Location comments: 1/2 mile west of Dayton (1)
Description: Laminated clay (1)
Uses of commodity: Bricks (1)
Remarks: Mostly cream-colored bricks (1)
References: 1) Winchell; Upham. 1888, p. 260, 261

Main commodity: Clay/Shale
County: Wright
Status: Inactive
Location: T 121 R 25 W
Location comments: At Monticello along the Mississippi River (1,2); (T., R. locations determined from county highway map)
Description: Probably alluvial clay (1,2)
Uses of commodity: Bricks (1,2)
Remarks: Common red brick of poor quality (1,2)
References: 1) Grout. 1919, p. 251
 2) Grout; Soper. 1914, p. 172

Main commodity: Clay/Shale
County: Wright
Status: Inactive
Past operator/owner: Annandale Brick and Tile Co. (1914) (1,2)
Location: T 121 R 27 W
Location comments: A plant was built a mile east of Annandale on the Minneapolis, St. Paul and Sault Ste. Marie Railway (1); (T., R. locations determined from county highway map)
Description: Laminated clay (1,2)
Physical test data: See Ref. 1 for test data
Uses of commodity: Red bricks (1)
References: 1) Grout. 1919, p. 250, 251
 2) Grout; Soper. 1914, p. 171

Main commodity: Clay/Shale
County: Wright
Status: Inactive
Location: T 122 R 26 W
Location comments: A mile or more from Hasty (1,2); (T., R. locations determined from county highway map)
Description: Laminated clay (1,2)
Physical test data: See Refs. 1 and 2 for test data
Uses of commodity: Bricks (1,2)
References: 1) Grout. 1919, p. 250
 2) Grout; Soper. 1914, p. 170, 171

Main commodity: Clay/Shale
County: Yellow Medicine
Status: Inactive since 1862 (1)
Township name: Sioux Agency (1)
Location: T 115 R 38 W Sec 29 SW1/4 (1)
Location comments: Old town of Yellow Medicine on the bottom land of the Yellow Medicine River (1)
Description: Gray drift (2,3)
Uses of commodity: Bricks (1)
References: 1) Winchell and others. 1884, p. 612
 2) Grout. 1919, p. 251
 3) Grout; Soper. 1914, p. 172

Main commodity: Clay/Shale
County: Yellow Medicine
Date opened: 1879 (1)
Status: Inactive
Location: T 115 R 39 W
Location comments: At Minnesota Falls, 25 rods south of mill (1); (T., R. locations determined from Ref. 1, plate 28)
Uses of commodity: Bricks (1)
Remarks: Bricks cracked after burning because of the limestone particles in the sand used for tempering and the small limy concretions in the clay (1)
References: 1) Winchell and others. 1884, p. 612, plate 28

Main commodity: Clay/Shale
County: Yellow Medicine
Date opened: 1878 (1)
Status: Inactive
Location: T 115 R 45 W
Location comments: Two miles northeast from Canby, beside Canby Creek (1); (T., R. locations determined from county highway map)
Uses of commodity: Bricks (1)
Remarks: Dull gray bricks of fair quality (1)
References: 1) Winchell and others. 1884, p. 612

Main commodity: Clay/Shale
County: Yellow Medicine
Status: Inactive
Location: T 116 R 39 W OR
 T 115 R 39 W
Location comments: Near Granite Falls (1); (T., R. locations determined from Ref. 1, plate 28)
Uses of commodity: Bricks (1)
Remarks: Bricks failed due to limy concretions in clay (1)
References: 1) Winchell and others. 1884, p. 612, plate 28

Main commodity: Feldspar
County: Lake
Quarry/pit name: Split Rock Quarry (1,2,4)
Status: Inactive (2,3)
Location: T 54 R 8 W Sec 5 (1,2,4)
Location comments: Split Rock Point (2); Point Corundum (5)
Description: Anorthosite (1-4); "The rock has 95 percent plagioclase, 2 percent primary augite, and secondary zeolite and chlorite." (1,2)
Chemical analyses: See Ref. 1, p. 127 and Ref. 2, table 4, p. 55 for chemical analyses
Remarks: "Some years ago a quarry and crushing plant were established at the west side to produce abrasive, but evidently the discovery that the material was feldspar ended the scheme." (2); when the quarries were opened, the feldspar was apparently mistaken for corundum (3)
References: 1) Emmons; Grout. 1943, p. 127
 2) Grout; Schwartz. 1939, p. 55, 76
 3) Thiel; Schwartz. 1932, p. 28
 4) Green. 1972, p. 326
 5) Schrader and others. 1917, p. 169

Main commodity: Feldspar
County: Lake
Quarry/pit name: Crystal Bay Quarry (1)
Date opened: 1903 (2)
Status: Inactive
Past operator/owner: Minnesota Mining and Manufacturing Co. (3M) (2)
Location: T 56 R 7 W Sec 11
Location comments: Near Illgen City (2); Crystal Bay (3); (T., R., Sec. locations determined from county highway map)
Description: Anorthosite (1,2); bytownite (1)
Chemical analyses: See Ref. 1, p. 127 for chemical analyses
Remarks: Anorthosite was mistaken for corundum resulting in the closing of the quarry (2,3)
References: 1) Emmons; Grout. 1943, p. 127
 2) Ojakangas; Matsch. 1982, p. 153
 3) Thiel; Schwartz. 1932, p. 28

Main commodity: Feldspar
County: Lake of the Woods
Quarry/pit name: NW Angle Feldspar Mine (4)
Date opened: 1930's (3)
Status: Inactive
Past operator/owner: W.C. Rader (2)
USGS quadrangle: Flag Island
Location: T 167 R 33 W Sec 6 (1,2,4)
Location comments: Located in the Northwest Angle of Lake of the Woods County (1-3,5); see Ref. 1, fig. 24 and fig. 25, and Ref. 6 for location maps
Description: "Pegmatite was once mined by W.C. Rader for feldspar which occurs in large crystals, 1 foot or more in length. Feldspar is white albite, but there is also pink microcline-perthite. Both feldspars are intergrown with quartz. Muscovite is in large books, but most is not of commercial grade. Beryl is in well-formed crystals, as much as 8 inches across the hexagonal section. Some garnet occurs in small crystals." (2); for further lithologic description see Ref. 2
Uses of commodity: Ceramics industry (1,2)
Remarks: Minnesota's only pegmatite mine (2); crushing and grinding was done at Warroad (1,3,5)
References: 1) Emmons; Grout. 1943, p. 127-130
 2) Goldich and others. 1961, p. 175
 3) Ojakangas; Matsch. 1982, p. 153
 4) USBM. [1980], MILS
 5) Thiel; Schwartz. 1932, p. 28
 6) USGS. 1967, Flag Island quadrangle

Main commodity: Feldspar
County: St. Louis
Status: Inactive
Location: T 50 R 14 W
Location comments: Rices Point, Duluth (1); (T., R. locations determined from county highway map)
Remarks: Considerable quantity quarried, ground at Duluth (1)
References: 1) Schrader and others. 1917, p. 169

Main commodity: Marl
County: Aitkin
Status: Inactive
Location: T 46 R 27 W Sec 13 SE1/4 (1)
Location comments: At a partially drained embayment of Mud Lake (1); see Ref. 1, fig. 43 for location map
Description: "Six to 8 feet of good marl underlies most of the bay." (1)
Chemical analyses: "...a sample from the stock pile contained 69.20 per cent soluble carbonates." (1)
Remarks: "Some of the marl has been excavated..." (1)
References: 1) Stauffer; Thiel. 1933, p. 111, 112

Main commodity: Marl
County: Aitkin
Status: Inactive
Location: T 49 R 26 W Sec 22 (1)
Location comments: At a small lake south of Waukenabo Lake (1)
Description: The marl bed is 8 to 12 feet thick (1); see Ref. 1 for description
Chemical analyses: "A composite sample composed of samples taken at intervals of 3 feet contained 68.90 per cent soluble carbonates." (1)
Remarks: "Some of the marl has been excavated for local use." (1)
References: 1) Stauffer; Thiel. 1933, p. 114

Main commodity: Marl
County: Anoka
Status: Inactive
Location: T 32 R 23 W
Location comments: Central Avenue, near Ham Lake (1); (T., R. locations determined from county highway map)
Description: Marl (1); see Ref. 1 for description
Chemical analyses: Carbonates 70.66%, organic matter 21.30%, sand 3.72%, clay 4.32% (1)
Uses of commodity: An experimental road was built from this material (1)
References: 1) Dow. 1923, p. 4, 5, 8, 32, 33
 2) Thiel; Schwartz. 1932, p. 28

Main commodity: Marl
County: Anoka
Status: Inactive
Location: T 32 R 24 W
Location comments: Coon Creek (1); (T., R. locations determined from county highway map; possibly located in R. 23)
Description: Marl (1); see Ref. 1 for description

Chemical analyses: Carbonates 69.78%, organic material 17.09%, sand 2.38%, clay 10% (1); see Ref. 1 for further analyses
Uses of commodity: Used as fertilizer on the Coon Creek Experimental Farm (1)
References: 1) Dow. 1923, p. 6, 8, 11-13, 19

Main commodity: Marl
County: Beltrami
Status: Inactive
Location: T 146 R 33 W Sec 8 SE1/4 (1)
Location comments: Northwest bay of Lake Irving, near Bemidji (1); see Ref. 1, fig. 51 for location map
Description: The deposit is over 20 feet thick over an area of at least 20 acres. A thin bed of peat has developed over the marl. (1)
Chemical analyses: "A group of composite samples averaged 86.40 per cent soluble carbonates." (1)
Uses of commodity: "Some of the marl has been excavated by the Department of Agriculture and used as a soil-sweetener for the acid soils of the outwash sands." (1)
Remarks: "It is one of the most extensive and thickest marl beds discovered in the state." (1)
References: 1) Stauffer; Thiel. 1933, p. 123

Main commodity: Marl
County: Benton
Status: Inactive
Location: T 38 R 31 W
Location comments: 2.5 miles east of Rice on the north side of the road (1); (T., R. locations determined from county highway map)
Description: See Ref. 1 for description
Chemical analyses: Carbonates 82.26%, organic matter 1.02%, sand 8.55%, clay 9.07% (1)
Uses of commodity: Used to surface an experimental road east of Rice toward the towns of Gilmen and Foley. (1)
References: 1) Dow. 1923, p. 3-5, 8, 21

Main commodity: Marl
County: Benton
Status: Inactive
Location: T 38 R 31 W
Location comments: Little Rock Lake, east of Rice (1); (T., R. locations determined from county highway map)
Chemical analyses: Carbonates 26.11%, organic matter 2.66%, sand 14.71%, clay 56.52% (1)
Uses of commodity: Marl-silt used for metal polish (1)
References: 1) Dow. 1923, p. 8

Main commodity: Marl

County: Cass
Quarry/pit name: Sorum's Marl Pit (5)
Status: Inactive (5)
Past operator/owner: Sorum's Marl Service (2-5); Oscar Sorum (1,6)
Location: T 141 R 25 W Sec 8 NW1/4 NW1/4 (1)
Location comments: Near Remer (2-4); south shore of Birch Lake (1); see Ref. 1, fig. 5 for location map
Description: 18 feet of marl at shore line includes some blue clay at bottom, 1.5 feet of peat has developed over the marl (1)
Uses of commodity: Soil sweetener (2); agricultural marl (6)
References: 1) Johnson; Waibel. 1959, p. 33, 34
 2) Hogberg. 1969, p. 4
 3) Hogberg. 1966, p. 9
 4) Hogberg. 1964, p. 6
 5) USDL. MSHA mine reference list
 6) Schwartz and others. 1959, p. 10

Main commodity: Marl
County: Chisago
Quarry/pit name: Walter Eng Pit (1)
Status: Inactive
USGS quadrangle: Rush City
Location: T 37 R 21 W
Location comments: Rush City (1); (T., R. locations determined from Rush City quadrangle)
Description: Marl (1)
Chemical analyses: 92.4% calcium carbonate (1)
References: 1) Schwartz and others. 1959, p. 10

Main commodity: Marl
County: Crow Wing
Quarry/pit name: Hayes' Marl Pit (1)
Status: Inactive
Past operator/owner: Hayes (1933) (1)
Location: T 44 R 31 W Sec 8 S1/2 (1)
Description: Locally known as Hayes' marl bed, the deposit is approximately two feet thick lying below nearly three feet of sand. The marl is dry and very hard. (1); for further description see Ref. 1
Chemical analyses: 83% soluble carbonate (1)
Uses of commodity: Agricultural uses (1)
References: 1) Stauffer; Thiel. 1933, p. 143, 144

Main commodity: Marl
County: Crow Wing
Status: Inactive
Location: T 133 R 29 W Sec 13 SE1/4 (1)
Location comments: Perch Lake (1); see Ref. 1, fig. 62 for location map
Description: The marl is from 3 to 5 feet thick under 3 feet of peat. (1)

Remarks: "A small test pit has been opened and a small amount of marl excavated for local use." (1)
References: 1) Stauffer; Thiel. 1933, p. 142, 144

Main commodity: Marl
County: Crow Wing
Status: Inactive
Location: T 134 R 29 W
Location comments: Five miles northwest of Brainard (1); (T., R. locations determined from county highway map)
Description: Marl-clay (1)
Chemical analyses: Carbonates 21.34%, organic matter 3.07%, sand 7.27%, clay 68.32% (1)
Uses of commodity: Road surfacing (1)
References: 1) Dow. 1923, p. 8, 38

Main commodity: Marl
County: Crow Wing
Status: Inactive
Location: T 135 R 27 W Sec 8 (1)
Location comments: Near Mission Lake, along the west shore of the southwest bay, a mile west of the Mississippi River. (1); see Ref. 1, fig. 61 for location map
Description: "Along the west shore of the southwest bay, an old lake terrace is covered with about a foot of dry hard marl. Locally the marl is covered with ferruginous clay that is weathered red." (1)
Chemical analyses: "A composite sample contained 40 per cent soluble carbonates." (1)
Uses of commodity: Road construction (1)
References: 1) Stauffer; Thiel. 1933, p. 139, 140

Main commodity: Marl
County: Crow Wing
Status: Inactive
Location: T 136 R 28 W Sec 3 SE1/4 (1,2)
Location comments: Near the south shore of Long Lake (1,2); see Ref. 2, plate x for location map
Description: The deposit is less than a foot thick at its outer margin but is 5 feet thick near the present waterline of Long Lake (1); see Refs. 1 and 2 for further descriptions
Chemical analyses: 94% soluble carbonates (1)
Uses of commodity: Road construction (1)
References: 1) Stauffer; Thiel. 1933, p. 137
 2) Dow. 1923, p. 27-29

Main commodity: Marl
County: Crow Wing
Date opened: 1947 (1)
Status: Inactive

Past operator/owner: Tweed Brothers (1-3)
Location: T 136 R 28 W Sec 4 N1/2 (1)
Location comments: Shallow pit near Long Lake (3); south shore of Long Lake (1)
Description: "One foot peat, 9-12 feet marl over blue clay, smooth bottom." (1)
Extraction method: Dragline (1)
Uses of commodity: Agricultural marl (2,3)
References: 1) Johnson; Waibel. 1959, p. 33, 34
 2) Schwartz and others. 1959, p. 10
 3) Sikich. 1959, p. 536

Main commodity: Marl
County: Crow Wing
Status: Inactive
Location: T 136 R 28 W Sec 31 N1/2 (1)
Location comments: The marl is west of the junction of Upper and Middle Cullen Lakes. (1)
Description: An area of 10 to 15 acres of marl of undetermined depth. "A sounding rod 20 feet long failed to reach the bottom of the marl." The marl is covered by 3 feet of peat. (1)
Uses of commodity: Local use (1)
References: 1) Stauffer; Thiel. 1933, p. 137, 138

Main commodity: Marl
County: Crow Wing
Status: Inactive
Location: T 136 R 29 W Sec 22 (1)
Location comments: Near the southeast bay of Sibley Lake (1); near Pequot (1)
Description: An area of about 30 acres is underlaid by a thick marl bed covered by 8 to 10 feet of peat. (1)
Chemical analyses: A composite sample contained 59.10 per cent soluble carbonates (1)
Uses of commodity: "The County Highway Department has dredged some of the marl for road construction." (1)
References: 1) Stauffer; Thiel. 1933, p. 136

Main commodity: Marl
County: Crow Wing
Status: Inactive
Location: T 137 R 28 W Sec 23 SE1/4 (1)
Location comments: Northeast end of Bass Lake (1)
Description: A filled embayment covers about 50 acres, here the marl is from 4 to 8 feet thick. (1)
Uses of commodity: Road construction (1)
References: 1) Stauffer; Thiel. 1933, p. 135

Main commodity: Marl
County: Hubbard

Status: Inactive
Location: T 139 R 33 W Sec 28 (1)
Location comments: West of First Crow Wing Lake (1); the marl is confined to a narrow zone along a stream (1)
Description: See Ref. 1 for description
Uses of commodity: "Some of the marl has been excavated for highway construction purposes." (1)
References: 1) Stauffer; Thiel. 1933, p. 156

Main commodity: Marl
County: Hubbard
Status: Inactive
Past operator/owner: Minnesota Agricultural Department (1)
Location: T 140 R 33 W Sec 15 (1)
Location comments: South of Nevis, between Sixth and Seventh Lakes (1); see Ref. 1, fig. 72 for location map
Description: The marl bed is from 8 to 12 feet thick and is covered with 2 feet of peat. About 40 acres are underlaid by marl. (1); see Ref. 1 for description
Chemical analyses: A composite sample from the stock pile contained 88 per cent soluble carbonates (1)
Uses of commodity: Hauled by truck for local use (1)
References: 1) Stauffer; Thiel. 1933, p. 165, 166

Main commodity: Marl
County: Lake of the Woods
Quarry/pit name: Henderson Pit (1,2)
Status: Inactive
Location: T 160 R 31 W Sec 2 (1)
Location comments: Near Baudette (1); (typographical error assumed in Ref. 1 which lists T 60 instead of T 160)
Description: Low-grade marl (1)
Chemical analyses: 30% soluble carbonates (1); insoluble in acid 68.25%, organic 1.84%, carbonates 29.91% (2)
References: 1) Stauffer; Thiel. 1933, p. 159
 2) Kirk. 1926, p. 57

Main commodity: Marl
County: Morrison
Status: Inactive
Location comments: Morrison County (1); (location undetermined)
Uses of commodity: Marl has been used by highway engineers as a binder for sandy soils (1)
References: 1) Thiel; Schwartz. 1932, p. 28

Main commodity: Marl
County: Stearns
Status: Inactive (1)
Location comments: Midway between St. Cloud and Clearwater (1,2)
Description: Marl (1,2)

Uses of commodity: Used for making lime (1)
Remarks: "The marl was moulded somewhat like bricks and then burned." (to produce lime) (2)
References: 1) Froelich. 1961, p. 18
 2) Winchell; Upham. 1888, p. 469

Main commodity: Marl
County: Stearns
Status: Inactive
Location: T 123 R 27 W Sec 33 (1)
Location comments: On the east side of a lake about a mile and a half west of the village of Clearwater (1); see Ref. 1, fig. 89 for location map
Description: Marl (1,2)
Chemical analyses: 70-95 per cent soluble carbonates (1)
Uses of commodity: Agricultural purposes (1,2)
References: 1) Stauffer; Thiel. 1933, p. 180
 2) Thiel; Schwartz. 1932, p. 28

Main commodity: Marl
County: Stearns
Status: Inactive
Past operator/owner: Laurence Gertken (1)
USGS quadrangle: Cold Spring
Location: T 123 R 30 W
Location comments: Three miles south of Cold Spring (1); (location may possibly be in T. 122; T., R. locations determined from Cold Spring quadrangle)
Description: Marl (1)
Remarks: A news item in a St. Cloud paper on June 3, 1959 reported marl was being produced at the Gertken Farm. (1)
References: 1) Johnson; Waibel. 1959, p. 35

Main commodity: Marl
County: Stearns
Status: Inactive
Location: T 123 R 30 W Sec 34 N1/2 NW1/4 (1)
Location comments: South of Cold Spring, three pits shown at this location (1)
Description: Marl pits (1)
References: 1) USGS. 1967, Cold Spring quadrangle

Main commodity: Marl
County: Stearns
Status: Inactive
Location: T 124 R 28 W
Location comments: One pit, located on the south edge of St. Cloud (1); and another pit just west of St. Cloud (2); (T., R. locations determined from county highway map)

Description: Marl (1,2)
Uses of commodity: Used for making lime (1); quick lime (2)
Remarks: "The marl was moulded somewhat like bricks and then burned." (to produce lime) (1)
References: 1) Winchell; Upham. 1888, p. 469
 2) Winchell; Peckman. 1874, p. 105

Main commodity: Marl
County: Todd
Status: Inactive
Location: T 128 R 34 W Sec 36 W1/2 (1)
Location comments: About a mile southeast of the village of Little Sauk (1)
Description: The marl is over 20 feet thick (1); see Ref. 1 for description
Chemical analyses: "A group of samples averaged 80 per cent soluble carbonates." (1)
Uses of commodity: "A few carloads of marl have been excavated and shipped for agricultural purposes." (1)
References: 1) Stauffer; Thiel. 1933, p. 182

Main commodity: Marl
County: Wadena
Status: Inactive
Past operator/owner: R. Nanik (1)
Location: T 135 R 33 W Sec 13 NW1/4 SE1/4 (1)
Location comments: Near Staples (2,3); along west shore of Farnum Lake (1); see Ref. 1, fig. 4 for location map
Description: 4 to 5 acres underlain by marl, 4 feet peat, 10-12 feet marl (1); see Ref. 1 for further description
Uses of commodity: Soil sweetener (2,3); agricultural marl (4)
References: 1) Johnson; Waibel. 1959, p. 31
 2) Hogberg. 1969, p. 4
 3) Hogberg. 1966, p. 9
 4) Schwartz and others. 1959, p. 10

Main commodity: Marl
County: Wadena
Status: Inactive
Past operator/owner: August Larson (1933) (1)
Location: T 135 R 33 W Sec 33 (1)
Description: "It varies from 2 to 6 feet in thickness over about 20 acres." (1); see Ref. 1 for further description
Chemical analyses: "A composite sample contained 86 per cent soluble carbonates." (1)
Uses of commodity: "Some of the marl has been excavated and sold for agricultural purposes." (1)
References: 1) Stauffer; Thiel. 1933, p. 184

Main commodity: Marl

County: Washington
Status: Inactive
Location: T 29 R 21 W Sec 26 (1)
Location comments: "Along the west side of the south end of the lake in Section 26..." (1)

Chemical analyses: "A group of typical samples averaged 78 per cent soluble carbonates." (1)
Uses of commodity: Used as fertilizer on local farms (1)
References: 1) Stauffer; Thiel. 1933, p. 185

Main commodity: Mica
County: St. Louis
Status: Inactive
USGS Quadrangle: Namakan Island
Location: T 69 R 18 W Sec. 6 (2)

Location comments: Near Kettle Falls, St. Louis Co. (1); Ref. 2 shows a mine on an island (Mica Island?) in Namakan Lake
Description: "...a mica mine has been reported as started near Kettle Falls in St. Louis County." (1)
References:
1) Winchell and others. 1899, p. 191
2) USGS. 1983, Namakan Island quadrangle

Main commodity: Mineral Pigments (Natural)
County: Redwood
Date opened: 1868 or 1869 (1)
Status: Inactive
Past operator/owner: Grant and Brusseau (1,2)
Township name: Delhi
Location: T 113 R 36 W Sec 36 N1/2 NE1/4 (1)
Location comments: At Redwood Falls (1,2,4); in the northwest bank of the Redwood River (1)
Description: "A good and durable paint was manufactured in 1868 or 1869 from ferruginous portions of the kaolinized gneiss and granite...the kaolin which

has resulted from the decomposition of the granitic rock, has become stained with iron, and has a brownish or greenish-brown color. It contains, generally, some silica. From this stained kaolin a good mineral paint has been manufactured." (1); see Refs. 1 and 2 for further descriptions

References:

- 1) Winchell and others. 1884, p. 571, 588
- 2) Winchell; Peckham. 1874, p. 167, 168, 203
- 3) Emmons; Grout. 1943, p. 133, 134
- 4) Schrader and others. 1917, p. 170
- 5) Grout. 1919, p. 219
- 6) Grout; Soper. 1914, p. 147

Main commodity: Natural Cement
County: Blue Earth
Date opened: 1882 (2)
Status: Inactive (1933) (3); active (1932) (2)
Past operator/owner: Standard Cement Co. (1884) (1,2)
USGS quadrangle: Mankato West
Location: T 108 R 27 W
Location comments: Near Mankato, located in the east bank of the Blue Earth River about a third of a mile south of the railroad bridge (1884) (1); in the southern part of Mankato (3); (T., R. locations determined from Mankato West quadrangle)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1,2)
Description: Shakopee dolomite (2); "...the Shakopee limestone is separated from the Jordan sandstone by a course of light green or often nearly white shale or clay, highly siliceous and aluminous, having a thickness of about three feet. The hydraulic qualities of the Shakopee limestone seem to be associated with the occurrence of this bed of shale, and to be altogether an accidental and local character." (1)
Remarks: Valuable source of hydraulic lime (1); hydraulic cement (2)
References: 1) Winchell and others. 1884, p. 434
 2) Thiel; Schwartz. 1932, p. 28
 3) Stauffer; Thiel. 1933, p. 42

Main commodity: Natural Cement
County: Blue Earth
Date opened: 1883 (1)
Status: Inactive; active (1943) (1)
Past operator/owner: Carney Cement Co. 1915-1943 +, Mankato Cement Works 1903-1915, Standard Cement Works 1883-1903 (1)
Location: T 109 R 26 W OR

Location comments: T 108 R 26 W
 Two miles north of Mankato city limits, near Pilgrims Rest Cemetery (1,2); (T., R. locations determined from county highway map; exact location undetermined)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,2)
Description: Oneota dolomite, 28 ft face, stripping 2 ft of drift (2); see Ref. 2 for stratigraphic section
Chemical analyses: See Ref. 2, Sample Nos. 77-83 and 88-90 for chemical analyses
Uses of commodity: Used in mortar for laying brick, stone, and tile (1)
Trade names: "Carney Cement" (1,2)
References: 1) Emmons; Grout. 1943, p. 105
 2) Stauffer; Thiel. 1933, p. 42, 64, 68, 69, 73

Main commodity: Natural Cement
County: Mower
Quarry/pit name: Fowler & Pay Cement Quarry (2)
Status: Inactive since about 1940 (1)
Past operator/owner: Austin Cement Co. (1943) (1); Fowler & Pay (1933) (2)
Township name: Austin
Location: T 102 R 18 W
Location comments: Quarry along Rose Creek, 3 miles south of Austin (2); (T., R. locations determined from county highway map)
Geologic age: Devonian
Geologic formation: Cedar Valley Fm. (2)
Description: Limestone, 25 ft face (2); clayey limestone (1); see Ref. 2 for brief section description
Uses of commodity: Mortar for laying brick and stone (1)
References: 1) Emmons; Grout. 1943, p. 105
 2) Stauffer; Thiel. 1933, p. 54, 55
 3) Thiel; Schwartz. 1932, p. 28

Main commodity: Salt

County: Kittson

Status: Inactive

Location: T 163 R 50 W (1,2)

Location comments: Near St. Vincent, five miles east of the Red River of the North and four and a half miles south of the international boundary (1,2); exact location undetermined, Ref. 1 states S1/2 of section 23 and Ref. 2 states S1/2 of section 35

Description: See Ref. 1, p. 45, 46 and Ref. 2, p. 128 for section descriptions of salt well

Chemical analyses: See Ref. 1, p. 43 and Ref. 2, p. 129 for chemical analyses of brine

Remarks: This well produced the first salt ever made from a brine native to the state of Minnesota (1)

References:
 1) Winchell. 1885, p. 8, 41-47
 2) Winchell and others. 1899, p. 128-130

Main commodity: Salt

County: Scott

Quarry/pit name: Belle Plaine Salt Well (1,2)

Status: Inactive

Location: T 113 R 24 W

Location comments: At Belle Plaine, on the bottom land near the depot (1888) (1); (exact location undetermined, possibly in T. 113 or T. 114, R. 24 or 25; T., R. location determined from county highway map)

Description: "A well was drilled in 1870 and 1872 at Belle Plaine,...to a depth of 710 feet, with the view of obtaining brine suitable for the manufacture of salt." (1); see Ref. 1 and 2 for section description of well

Remarks: (It was undetermined from the references if salt was ever made from this well)

References:
 1) Winchell; Upham. 1888, p. 117, 118
 2) Thiel. 1944, p. 410

Main commodity: Silica Sand
County: Anoka
Quarry/pit name: Minnesota Silica Sand Pit (1,2)
Alternate name: Helm Quarry (3,7)
Status: Inactive
Past operator/owner: Minnesota Silica Sand Co. (1,3-5,7,8)
Location: T 30 R 24 W Sec 34 NW1/4 SE1/4 (1,4,5)
 T 30 R 24 W Sec 34 NE1/4 SE1/4 (2)
Location comments: Columbia Heights (2,3,6); (possibly more than one quarry at this location)
Geologic age: Ordovician
Geologic formation: St. Peter Sandstone (2,3,6)
Description: "Here the St. Peter sandstone is characterized by an extremely white color, with a complete lack of any buff coloring or iron staining toward the top of the formation. The sandstone is fine-grained and loosely consolidated, while the bedding is massive throughout most of the formation, becoming thinner bedded toward the top. There appears to be no cross-bedding." (3)
 "Sandstone, white, friable, showing some cross-bedding to bottom of quarry" (6); see Refs. 3 and 6 for stratigraphic section descriptions
Physical test data: See Ref. 7, p. 30, table 27 for screen analyses and p. 31, fig. 16 for grain size distribution
Uses of commodity: Molding and foundry sands (4,5,7)
References: 1) USBM. [1980], MILS
 2) Mossler. 1971
 3) Hoeft. 1959, p. 51-53
 4) Hogberg. 1969, p. 4
 5) Hogberg. 1966, p. 5
 6) Stauffer; Thiel. 1941, p. 123
 7) Thiel. 1957, p. 30, 31
 8) Payne. 1967, p. 9, 22

Main commodity: Silica Sand
County: Dakota
Status: Inactive
Past operator/owner: C. H. Klein Brick Co. (1)
Location: T 28 R 22 W
Location comments: South St. Paul (1); (T., R. locations determined from county highway map)
Uses of commodity: Sand for brick manufacturing (1)
References: 1) Hogberg. 1966, p. 4

Main commodity: Silica Sand
County: Dakota
Quarry/pit name: Peter's Pit (1)
Status: Inactive
Location: T 28 R 23 W
Location comments: Fort Snelling (1); (T., R. locations determined from county highway map); (exact location

undetermined, possibly located in Hennepin Co.)
Physical test data: See Ref. 1, p. 66, 68 and 69 for test data
Uses of commodity: Foundry sand, brass sand (1)
References: 1) Knapp. 1923, p. 66-69

Main commodity: Silica Sand
County: Goodhue
Status: Inactive
Location: T 112 R 15 W Sec 26 (1)
Location comments: Near Hay Creek (1)
Geologic age: Cambrian
Geologic formation: Jordan Sandstone (1)
Description: "...clean, medium- to coarse-grained, generally cross-bedded sandstone." (1)
Uses of commodity: Glass sand (1)
Remarks: "Near Hay Creek, the sandstone in the upper 15 feet of the formation is so clean that it is easily mistaken for the younger St. Peter Sandstone..." (1)
References: 1) Austin. 1963, p. 6

Main commodity: Silica Sand
County: Le Sueur
Status: Inactive
Past operator/owner: Benjamin (1)
Location: T 109 R 26 W
Location comments: "It is located on the Benjamin farm southwest of Kasota on the east bank of the Minnesota River." (1958) (1); (T., R. locations determined from county highway map)
Geologic age: Cambrian
Geologic formation: Jordan Sandstone (1)
References: 1) Humphrey. 1958, p. 9

Main commodity: Silica Sand
County: Le Sueur
Status: Inactive
Past operator/owner: Babcock Co. (1,2)
Location: T 110 R 26 W
Location comments: Near Kasota (1,2); (exact location undetermined); (T., R. locations determined from county highway map)
Uses of commodity: Abrasive and polishing sand (1,2)
References: 1) Hogberg. 1964, p. 3
 2) Hogberg. 1966, p. 4

Main commodity: Silica Sand
County: Le Sueur
Quarry/pit name: Holverson's Pit (1)
Status: Inactive

Location: T 110 R 26 W
Location comments: At Kasota, 1/2 to 1 mile from the railroad station, between the railroad and the Minnesota River. (1923) (1); (possibly located in township 109); (T., R. locations determined from county highway map)
Geologic age: Cambrian
Geologic formation: Jordan Sandstone (1)
Physical test data: See Ref. 1, p. 65 for screen analyses
References: 1) Knapp. 1923, p. 19, 20, 65

Main commodity: Silica Sand
County: Le Sueur
Quarry/pit name: Gopher State Sandstone Quarry No. 1 (2)
Alternate name: Ottawa Pit No. 1 (2)
Status: Inactive (1)
Past operator/owner: Unimin Corp. (see Producer Directory) (1,2); Gopher State Silica, Inc. (3-7)
Township name: Ottawa
Location: T 110 R 26 W Sec 3 NW1/4 (2-4)
Location comments: Near Ottawa (3-5,7)
Geologic age: Cambrian
Geologic formation: Jordan Sandstone (5-7)
Physical test data: See Ref. 7, page 16, table 12 for screen analyses and fig. 6 for grain size distribution
Uses of commodity: Glass, molding, oilfield fracturing, filter, building sands, pottery (4)
References: 1) Unimin Corp. 1989, personal communication
 2) USBM. [1980], MILS
 3) Hogberg. 1969, p. 4
 4) Hogberg. 1966, p. 4
 5) Thiel. 1958, p. 81
 6) Sikich. 1959, p. 539
 7) Thiel. 1957, p. 15, 16

Main commodity: Silica Sand
County: Le Sueur
Quarry/pit name: Gopher State Sandstone Quarry No. 2 (2)
Alternate name: Ottawa Pit No. 2 (2)
Status: Inactive (1)
Past operator/owner: Unimin Corp. (see Producer Directory) (1,2); Gopher State Silica, Inc. (3-7)
Township name: Ottawa
Location: T 110 R 26 W Sec 4 NE1/4 (2-4)
Location comments: Near Ottawa (3-5,7)
Geologic age: Cambrian
Geologic formation: Jordan Sandstone (5-7)
Physical test data: See Ref. 7, p. 16, table 12 for screen analyses and fig. 6 for grain size distribution
Uses of commodity: Glass, molding, oilfield fracturing, filter, building sand, pottery (4)
References: 1) Unimin Corp. 1989, personal communication
 2) USBM. [1980], MILS
 3) Hogberg. 1969, p. 4

4) Hogberg. 1966, p. 4
 5) Thiel. 1958, p. 81
 6) Sikich. 1959, p. 539
 7) Thiel. 1957, p. 15, 16

Main commodity: Silica Sand
County: Le Sueur
Quarry/pit name: Hayes' Pit and Rayners' Pit (1)
Status: Inactive
Location: T 111 R 26 W
Location comments: Two pits located near Ottawa, 1/2 to 1 mile from the railroad station, between the railroad and the Minnesota River. (1923) (1); (exact locations undetermined); (T., R. locations determined from county highway map)
Geologic age: Cambrian
Geologic formation: Jordan Sandstone (1,2)
Description: "Jordan sandstone is a white, well-rounded quartz sand....Much of the sand is incoherent and can be extracted by shoveling without blasting." (2)
Physical test data: See Ref. 1, p. 65 for screen analyses
Uses of commodity: Refractory sand (2)
References: 1) Knapp. 1923, p. 19, 20, 65
 2) Emmons; Grout. 1943, p. 88

Main commodity: Silica Sand
County: Pine
Quarry/pit name: Holtgren Sand Pit (1)
Status: Inactive
Past operator/owner: Louis Holtgren (or Hultgren) and Sons (1-4)
Location: T 45 R 18 W Sec 14 SE1/4 SE1/4 (1)
Location comments: Near Kerrick (2-5)
Uses of commodity: Molding sand (2-5); foundry sand (1); building sand (3)
Remarks: Excavated from open pits (5)
References: 1) USBM. [1980], MILS
 2) Hogberg. 1969, p. 4
 3) Hogberg. 1966, p. 4
 4) Hogberg. 1964, p. 3
 5) Vach, A. H., Local Historian. 1989, personal communication

Main commodity: Silica Sand
County: Ramsey
Status: Inactive
Past operator/owner: Ford Motor Co. (1,2)
Location: T 28 R 23 W Sec 17
Location comments: At the Ford plant in St. Paul (1,2); (T., R., Sec. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: St. Peter Sandstone (1)

Extraction method: Underground mine (2)
Uses of commodity: Manufacturing of glass (1,2)
References: 1) Sikich. 1959, p. 540
 2) Hogberg. 1964, p. 3

Main commodity: Silica Sand
County: Scott
Quarry/pit name: Minnesota Quartz Co. Pit (1)
Status: Inactive
Past operator/owner: Minnesota Quartz Co. (1,2)
Location: T 115 R 23 W Sec 29 NE1/4 NE1/4 (2,3)
Location comments: 4 miles north of Jordan on the west side of Hwy. No. 169 (1); (typographical error assumed in Refs. 2 and 3 which list T 114 instead of T 115)
Geologic age: Cambrian
Geologic formation: Jordan Sandstone (1)
Physical test data: See Ref. 1, p. 17, table 13 for screen analyses and fig. 7 for grain size distribution
References: 1) Thiel. 1957, p. 17
 2) Hogberg. 1969, p. 4
 3) Hogberg. 1966, p. 5
 4) Emmons; Grout. 1943, p. 88

Main commodity: Silica Sand
County: Scott
Quarry/pit name: Jordan Pit (1)
Date opened: 1981 (1)
Status: Inactive; abandoned in 1986 (1)
Past operator/owner: Unimin Corp. (see Producer Directory) (1); (Minnesota FracSand Co., Division of J. L. Shiely Co.)
Location: T 115 R 23 W Sec 33 (1)
Location comments: Near Jordan (1)
Geologic age: Cambrian
Geologic formation: (Jordan Sandstone)
Processing plant: Jordan Plant currently (1989) being dismantled (2)
Processing method: Drying and screening (1)
Uses of commodity: Construction industry (1)
Marketing area: Local (1)
References: 1) Unimin Corp. 1989, MN/DNR questionnaire
 2) Unimin Corp. 1989, personal communication
 3) Hill; West. 1985, p. 11

Main commodity: Crushed Carbonate Rock
Other commodities: Dimension Carbonate Rock
County: Anoka
Status: Abandoned (1918) (1)
Past operator/owner: H. T. Welles and Wilcox & Hempel each owned quarries on the Hennepin-Anoka county line (2)
Location: T 30 R 24 W Sec 34 SE1/4 (1,2)
Location comments: Outcrops are just east of the railway, quarries on the Hennepin-Anoka line (2)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1); Trenton (2)
Description: "The Platteville limestone outcrops at the extreme south of Anoka County in Fridley Township. This outcrop represents the most northerly exposure of the Platteville on Mississippi River. Some of it was quarried in Sec. 34 many years ago." (1)

"The continuation of the St. Peter sandstone and Trenton limestone...outcrops in the S.E. 1/4 section 34, Fridley, close east of the railroad. The limestone here is weathered to a buff color. Two exposures of it occur about a quarter of a mile apart, each having a thickness of about ten feet and lying between 40 and 50 feet above the river. Below the limestone at its more northern exposure, two or three feet of the underlying St. Peter sandstone are seen. These are the most northwestern outcrops of the Trenton and St. Peter formations in this state." (2)

Uses of commodity: Quicklime, building stone (2)
Remarks: Slightly quarried (2)
References: 1) Bowles. 1918, p. 153
 2) Winchell; Upham. 1888, p. 409, 422, 423

Main commodity: Crushed Carbonate Rock
County: Blue Earth
Status: Inactive
Past operator/owner: Mankato Crushed Stone, McCree (1921) (1)
MN/DOT source no: 7-1
Location: T 108 R 26 W
Location comments: Mankato (1); (T., R. locations determined from county highway map)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Blue Earth
Status: Inactive
Past operator/owner: Alex Bashaw (1911) (1)
Location: T 108 R 26 W
Location comments: Mankato (1); (T., R. locations determined from county highway map)
Description: Limestone, 2 acres (1)

Uses of commodity: Macadam, concrete work, general municipal purposes (1)
References: 1) Cooley. 1911, p. 12

Main commodity: Crushed Carbonate Rock
County: Blue Earth
Status: Inactive
Past operator/owner: M. C. Johnson (1911) (1)
Location: T 108 R 26 W
Location comments: Mankato (1); (T., R. locations determined from county highway map)
Description: Limestone (1)
Uses of commodity: General purposes and roads (1)
References: 1) Cooley. 1911, p. 12

Main commodity: Crushed Carbonate Rock
County: Blue Earth
Quarry/pit name: Lundin 8th Ave. Quarry (1-3)
Status: Inactive since 1979 (3)
Past operator/owner: Lundin Construction Co. (now Southern Minnesota Construction Co., see Producer Directory) (1-3)
Location: T 108 R 26 W Sec 6 SW1/4 SW1/4 (1)
 T 108 R 26 W Sec 6 SE1/4 NW1/4 SW1/4 AND
 T 108 R 26 W Sec 6 SW1/4 NE1/4 SW1/4 (4)
Location comments: Quarry approximately 3/4 to 1 mile south of junction of U.S. Hwy. 14 and Third Ave., on west side of Third Ave. (2)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (4)
Remarks: New Oneota quarry (1975) (4)
References: 1) USBM. [1978], MILS
 2) MN/DOT Aggregate Unit files
 3) USDL. MSHA mine reference list
 4) Mossler. 1975, Blue Earth station 306

Main commodity: Crushed Carbonate Rock
County: Blue Earth
Quarry/pit name: McClure Quarry (1)
Status: Inactive
Past operator/owner: Mankato Aglime & Rock Co. (see Producer Directory) (1)
Location: T 109 R 26 W Sec 31 SE1/4 NW1/4 (1)
Geologic age: Ordovician
Geologic formation: Shakopee-Oneota Fms. (1)
Description: Dolomitic limestone (1)
Physical test data: Available from U.S. Army Corps of Engineers (1)
Remarks: (This quarry is possibly part of or adjoining the active Mankato Aglime & Rock Co. Quarry in Secs. 30 and 31)
References: 1) U.S. Army Corps of Engineers files

Main commodity: Crushed Carbonate Rock
County: **Blue Earth**
Quarry/pit name: Lundin Quarry (1-4)
Status: Inactive
Past operator/owner: Lundin Construction Co. (now Southern Minnesota Construction Co., see Producer Directory) (1-5)
Township name: Lime
Location: T 109 R 26 W Sec 31 SW1/4 (1,2,4)
 T 109 R 26 W Sec 31 SW1/4 SW1/4 NW1/4 (3)
Location comments: Quarry 1/4 mile north of T.H. 14, on west side of County Rd. 5 (4)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,2)
Description: Dolomitic limestone (1,2,4); see Ref. 4 for stratigraphic section
Physical test data: Available from U.S. Army Corps of Engineers (2) and MN/DOT Aggregate Unit (4)
Uses of commodity: Road aggregate, agricultural lime, riprap (5)
References: 1) Mossler. 1975, station 305
 2) U.S. Army Corps of Engineers files
 3) USBM. [1980], MILS
 4) MN/DOT Aggregate Unit files
 5) Sikich. 1959, p. 534

Location comments: Chaska (1); (exact location undetermined; T., R. locations determined from county highway map)
Description: Limestone (1)
Physical test data: Available from MN/DOT Aggregate Unit - COPEs files (1)
Remarks: (Is this possibly a sand/gravel pit?)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: **Brown**
Quarry/pit name: Winklemann Quarry (1-5)
Status: Inactive
Past operator/owner: William Winklemann (1-5)
Township name: Cottonwood
Location: T 109 R 30 W Sec 2 (2-4)
 T 109 R 30 W Sec 3 NE1/4 (1)
Location comments: Three miles southeast from New Ulm, beside the Minnesota River in Sec. 2 (4); on south bank of river (3); see Ref. 5 for location map
Geologic age: Cretaceous
Geologic formation: Dakota Fm. (2,3)
Description: Red and green shales and nodular limestone (1); see Refs. 3 and 4 for section descriptions
Uses of commodity: Quicklime (4,5)
References: 1) Sloan. 1964, p. 51
 2) Thiel. 1944, p. 118
 3) Stauffer; Thiel. 1914, p. 130
 4) Winchell and others. 1884, p. 575, 587
 5) Winchell; Peckham. 1874, p. 157, 184, 204-206

Main commodity: Crushed Carbonate Rock
County: **Chippewa**
Status: Inactive
Past operator/owner: Harkness (1888) (1)
Township name: Tungsburg
Location: T 118 R 41 W Sec 26 NE1/4 (1)
Description: A deposit of travertine or "petrified moss", it forms a nearly level layer 2 to 3 ft thick, extending fully a half mile (1)
Uses of commodity: Considerably burned for lime, yields a nearly pure, white lime (1)
References: 1) Winchell; Upham. 1888, p. 219, plate 39

Main commodity: Crushed Carbonate Rock
County: **Chisago**
Status: Inactive
Location: T 33 R 19 W
Location comments: A quarter to a half of a mile south of Goll's Mill in Franconia (1); (T., R. locations determined from Ref. 1, plate 45)
Description: "Travertine, a limestone deposited from the water of springs, occurs in large deposits on the face of the bluffs of the St. Croix sandstone..." (1)
Uses of commodity: Extensively burned for lime (1)
References: 1) Winchell; Upham. 1888, p. 422, plate 45

Main commodity: Crushed Carbonate Rock
County: **Dakota**
Status: Inactive
USGS quadrangle: Coates
Township name: Vermillion
Location: T 114 R 18 W Sec 29 NW1/4 SW1/4 (1)
Geologic age: Ordovician
Geologic formation: Prairie du Chien Gp. (1)
Remarks: Large quarry (1)
References: 1) Mossler. 1974a, Dakota County station 65

Main commodity: Crushed Carbonate Rock
County: **Carver**
Status: Inactive
MN/DOT source no: 10004
Location: T 115 R 23 W

Main commodity: Crushed Carbonate Rock
County: **Dakota**
Status: Inactive
Location: T 114 R 20 W OR

T 114 R 21 W

Location comments: Lakeville (1); (T., R. locations determined from county highway map)

Description: Limestone (1)

Uses of commodity: Crushed stone (1)

References: 1) Schrader and others. 1917, p. 170

Main commodity: Crushed Carbonate Rock

County: **Dakota**

Status: Inactive

Location: T 115 R 17 W Sec 18 AND
T 115 R 18 W Sec 13

Location comments: "...the bluff face for over a half mile near Nininger..." (1); the quarries in the bluff of Spring Lake, a short distance above Nininger (2); (T., R., Sec. location determined from highway map)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1); Shakopee and Oneota Fms. (3); Lower Magnesian (2)

Description: "Northwest of Hastings between Nininger and Spring Lake there is a continuous bluff along the Mississippi River. The bluff ranges in height from 50 to 150 feet, of which the lower 20 to 30 feet are Jordan sandstone and the remainder Oneota dolomite. The rock is a porous, light gray to buff dolomite. In most places the formation has a well-defined bedding that is generally spaced at intervals of from 2 to 5 feet. Some joints are present and are locally so spaced as to make the face undesirable as a dimension-stone prospect." (1)

Uses of commodity: Riprap in river improvement (1,3)

Remarks: "Quarry-operations in former years removed a width of 10 to 25 feet from the bluff face for over a half mile near Nininger, but later work has been confined to three quarries. These are located in NE1/4 NE1/4 and SW1/4 NW1/4 Sec. 13 and in NE1/4 NE1/4 Sec. 23, T. 115 N., R. 18 W." (1); (the quarries in these localities are listed separately)

References: 1) Thiel; Dutton. 1935, p. 141
2) Winchell; Upham. 1888, p. 72
3) Schwartz. 1936, p. 121

Main commodity: Crushed Carbonate Rock

County: **Dakota**

Quarry/pit name: Solberg Quarry (1,3,4)

Alternate name: Jacobs Ave./St. Pit (4)

Status: Inactive

Past operator/owner: Solberg Aggregate/Construction Co. (1,3,4)

Location: T 115 R 17 W Sec 31 NE1/4 SW1/4 (1-4)

Location comments: Four miles west of Hastings on west side of Jacobs Ave. Rd. (4)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (4)

Description: Oneota dolomite (4)

Physical test data: Available from MN/DOT Aggregate Unit (4) and U.S. Army Corps of Engineers (3)

Uses of commodity: Crushed aggregate, riprap, filling in gabion baskets (4)

Remarks: Solberg Aggregate Co., owner (1989), "believe entire forty is mined out" (1)

References: 1) Dakota County Assessor. 1989, personal communication
2) Mossler. 1974a, Dakota County station 51
3) U.S. Army Corps of Engineers files
4) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: **Dakota**

Quarry/pit name: Pederson Quarry (2)

Status: Inactive; active 1954 (2)

Past operator/owner: Elmer Pederson (1,2)

Location: T 115 R 17 W Sec 35 SE1/4 NE1/4 (1,2)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1)

Physical test data: Available at U.S. Army Corps of Engineers (1)

References: 1) U.S. Army Corps of Engineers files
2) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: **Dakota**

Quarry/pit name: Hastings Stone Co. Quarry (1,6,7)

Alternate name: Hastings Crushed Stone (5)

Status: Inactive

Past operator/owner: Hastings Stone Co. (1,3,4,6,7)

MN/DOT source no: 19-2

Township name: Ravenna

Location: T 115 R 17 W Sec 36 NW1/4 (2)

Location comments: Quarry 3 miles southeast of Hastings (2-4); about 300 yds from the Milwaukee railroad (1)

Geologic age: Ordovician

Geologic formation: Shakopee and Oneota Fms. (1-4)

Description: See Ref. 1 for detailed stratigraphic section, summary follows:
Overburden 40 ft
Shakopee Fm. 40 ft, gray to drab dolomitic limestone
Root Valley Bed 10 ft, gray dolomite and dolomitic sand
Oneota Fm. 50 ft, gray to brown dolomite

See Refs. 2, 4, and 6 for brief stratigraphic descriptions

Chemical analyses: See Ref. 1, Sample Nos. 4A-4J for individual sample results by depth, summary follows:
Oneota horizon: (5 samples)
MgO 19.99% avg, 18.89%-20.72% r.
SiO₂ 3.93% avg, 2.16%-8.56% r.
R₂O₃ 1.71% avg, 1.12%-2.12% r.

Shakopee horizon: (4samples)
 MgO 18.11% avg, 14.51%-20.12% r.
 SiO₂ 11.43% avg, 1.88%-27.86% r.
 R₂O₃ 1.94% avg, 1.74%-2.20% r.

One sample in Oneota horizon yielded total insolubles 3.26%, CaCO₃ 56.82%, MgCO₃ 40.02% (4,6,7)

Physical test data: One sample from lower part of the Oneota yielded the following data: specific gravity 2.73, weight 171 lbs/cu ft, absorption 0.84%, wear 3.4%, avg toughness 12.5 (4)

Uses of commodity: Crushed rock for roads and ballast (4)

References:

- 1) Stauffer. 1950, p. 5, 24
- 2) Schwartz. 1936, p. 149
- 3) Thiel; Dutton. 1935, p. 141
- 4) Stauffer; Thiel. 1933, p. 32, 71, 74
- 5) MN/DOT Aggregate Unit files (1921 report)
- 6) Stauffer; Thiel. 1914, p. 116, 119, 137
- 7) Kirk. 1926, table 13

Main commodity: Crushed Carbonate Rock
County: Dakota
Quarry/pit name: Gentzgrow & Mogren Quarry (1)
Alternate name: Gentzkow & Mogreen Quarry (2)
Date opened: Originally in mid 1860's (2)
Status: Inactive
Past operator/owner: Gentzgrow/Gentzkow and Mogren/Mogreen began operations in 1913 (2,1)
Township name: Nininger
Location: T 115 R 18 W Sec 13 NW1/4 (1,4)
 T 115 R 18 W Sec 13 SW1/4 NW1/4 (?) (3)
Location comments: About three-fourths of a mile west of Nininger (2); several quarries in the NW1/4 (4); the high bluff excavated is close to river (2); (information suggests that probably this is the quarry located in the SW1/4 of the NW1/4 as given in Ref. 3)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,3,4)
Description: Oneota Fm. 35 ft exposed, massive buff dolomite overlies Jordan sandstone, thickness unknown; elevation of Oneota-Jordan contact 722 ft (1)
 "The rock is a yellow to white limestone, for the most part too porous to make a desirable building stone, but it is suitable for riprap...A 10 ft ledge near the top, however, is fairly free from pores and excessive jointing and is well adapted for building blocks. The stripping consists of 4 to 10 ft of soil. Open bedding planes are 8 to 14 ft apart." (2)
Uses of commodity: Riprap for river improvement (2,3)
Remarks: Extensive quarrying being carried on (1918) (2)
References:

- 1) Schwartz. 1936, p. 145
- 2) Bowles. 1918, p. 159
- 3) Thiel; Dutton. 1935, p. 141
- 4) Thiel. 1944, p. 150

Main commodity: Crushed Carbonate Rock
County: Dakota
Quarry/pit name: Bloomstrand & Olson Quarry (1)
Alternate name: Blomstrand & Olson Quarry (2)
Status: Inactive
Past operator/owner: Bloomstrand/Blomstrand and Olson (operators in 1913) (2)
Township name: Nininger
Location: T 115 R 18 W Sec 13 NW1/4 (1)
Location comments: At Nininger (2); several quarries in the NW1/4 corner of section 13 (4)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,3,4)
Description: Oneota Fm. 45 ft of buff dolomite, elevation of Oneota-Jordan contact 707 ft, contact well exposed at east end of quarry, at about 20 ft above water level, quarry 400 ft long (1)
 "Most of the rock is yellow and very porous." (2)
Uses of commodity: Riprap (2,3)
Remarks: Quarry similar to that of Gentzkow & Mogreen (2)
References:

- 1) Schwartz. 1936, p. 145
- 2) Bowles. 1918, p. 159
- 3) Thiel; Dutton. 1935, p. 141
- 4) Thiel. 1944, p. 150

Main commodity: Crushed Carbonate Rock
County: Dakota
Status: Inactive; active (1935) (1)
Location: T 115 R 18 W Sec 13 NE1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: Oneota dolomite, porous, light gray to buff dolomite, "In most places the formation has a well-defined bedding that is generally spaced at intervals of from 2-5 ft. Some joints are present and are locally so spaced as to make the face undesirable as a dimension-stone prospect." (1)
Uses of commodity: Riprap for river improvement (1)
References:

- 1) Thiel; Dutton. 1935, p. 141

Main commodity: Crushed Carbonate Rock
County: Dakota
Status: Inactive
Location: T 115 R 18 W Sec 23 NE1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: Oneota dolomite, porous, light gray to buff dolomite, "In most places the formation has a well-defined bedding that is generally spaced at intervals of from 2-5 ft. Some joints are present and are locally so spaced as to make

the face undesirable as a dimension-stone prospect." (1)

Uses of commodity: Riprap for river protection (1)

References: 1) Thiel; Dutton. 1935, p. 141

Main commodity: Crushed Carbonate Rock

County: Dakota

Quarry/pit name: Skelton Quarry (1)

Status: Inactive

USGS quadrangle: Bloomington

Location: T 115 R 21 W Sec 13 SE1/4 SW1/4 (1)

Location comments: One mile south on U.S. Hwy. 65 from the intersection of Hwy. 65 and State Hwy. 13 (1)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1)

Description: See Ref. 1 for stratigraphic section description, summary follows:
Drift cover
Platteville Fm. 18.85 ft total exposed
Unidentified Mbr. 4.2 ft
Magnolia Mbr. 8.75 ft, limestone
Hidden Falls Mbr.? 4.0 ft, dolomitic
Pecatonica Mbr.? 1.9 ft, argillaceous sandstone
Glenwood Fm. 4.1 ft, not seen
St. Peter Fm. below

Uses of commodity: Crushed aggregates (1)

References: 1) Ford. 1958, p. 128-130

Main commodity: Crushed Carbonate Rock

County: Dodge

Quarry/pit name: Severtson Quarry (1)

Status: Inactive; active 1972 (1)

MN/DOT source no: 20-13

Location: T 105

Location comments: (Ref. 1 did not indicate the range location; map shows that in Dodge County T. 105 lies in R. 16, 17 or 18)

Physical test data: Available from MN/DOT Aggregate Unit (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Dodge

Quarry/pit name: Himle Quarry (1)

Status: Inactive since 1930's (1)

Past operator/owner: Anoy Himle (1969), Larson (1921) (1)

MN/DOT source no: 20048

Township name: Canisteo

Location: T 106 R 16 W Sec 15 NW1/4 SW1/4 (1)

Geologic age: Ordovician

Geologic formation: Galena Gp., Stewartville Fm. (1)

Description: Medium and thick bedded, buff dolomite, pitted highly weathered surfaces, limited quantity, 10 ft face (1)

Remarks: Very small quarry, vegetation and small stream in quarry floor (1969) (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Dodge

Status: Abandoned (1966) (1)

Past operator/owner: Renvick (1921) (1)

MN/DOT source no: 20-6

Township name: Canisteo

Location: T 106 R 16 W Sec 23 NW1/4 (1)

Location comments: "Dead, could not locate" (1966) (1)

Geologic age: (Ordovician)

Geologic formation: (Galena Gp.)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Dodge

Status: Abandoned (1966) (1)

Past operator/owner: Peterson (1921) (1)

MN/DOT source no: 20-7

Township name: Canisteo

Location: T 106 R 16 W Sec 26 N1/2 (1)

Location comments: "Dead, could not locate" (1966) (1)

Geologic age: (Ordovician)

Geologic formation: (Galena Gp.)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Dodge

Quarry/pit name: Himle Quarry (1)

Status: Inactive since 1940's (1969) (1)

Past operator/owner: Arthur Himle (1969) (1)

MN/DOT source no: 20053

Township name: Canisteo

Location: T 106 R 16 W Sec 27 NW1/4 NW1/4 (1)

Geologic age: Ordovician

Geologic formation: Galena Gp., Stewartville Fm. (1)

Description: Medium bedded, buff dolomite, weathered to brown, stripping 5 ft soil, etc. (1)

Remarks: Quarry filled with water and junk (1969) (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

Other commodities: Dimension Carbonate Rock

County: Dodge

Status: Inactive
Past operator/owner: W. A. Sparrow (1911) (1)
Township name: Mantorville
Location: T 107 R 16 W Sec 14 (1)
Location comments: Near Mantorville, 1-1/2 miles from railroad (1)
Geologic age: (Ordovician)
Geologic formation: (Galena Gp.)
Description: Limestone, unlimited quantity (1)
Uses of commodity: Valuable for foundations, walls, riprap, roads (1)
Remarks: "Quarry not yet opened" (1911); (unknown whether quarry was opened)
References: 1) Cooley. 1911, p. 9, 10

Main commodity: Crushed Carbonate Rock
County: Dodge
Quarry/pit name: Fairbanks Quarry (1,2)
Status: Inactive (1,2)
Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1,2)
USGS quadrangle: Bryon
Township name: Mantorville
Location: T 107 R 16 W Sec 21 SW1/4 SW1/4 (1)
Geologic age: (Ordovician)
Geologic formation: (Galena Gp.)
Description: Limestone (1,2)
References: 1) USBM. [1980], MILS
 2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Dodge
Status: Inactive since 1930's (1)
Past operator/owner: Kasson Golf Club (1969) (1)
MN/DOT source no: 20052
Township name: Mantorville
Location: T 107 R 16 W Sec 22 SE1/4 NE1/4 (1969) (1)
 T 107 R 16 W Sec 22 SE1/4 (1921) (1)
Location comments: "Could not locate quarry, but found quarries on each side of it. Local people said it was small and not active." (1969) (1)
Geologic age: Ordovician
Geologic formation: Galena Gp. ? (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Dodge
Status: Inactive since 1930's (1)
Past operator/owner: Village of Mantorville (1969), Dodge County (1921) (1)
MN/DOT source no: 20046
Township name: Mantorville

Location: T 107 R 16 W Sec 22 SW1/4 NE1/4 OR
 T 107 R 16 W Sec 22 SE1/4 NE1/4 ? (1)
Location comments: Just north off County Rd. 15, to the west of a small bridge (1)
Geologic age: Ordovician
Geologic formation: Galena Gp., Stewartville Fm. (1)
Description: Buff, thick to thin bedded limestone, face weathered to tan, stripping 5-10 ft, poor quality, thin beds weathered out (1)
Remarks: Small quarry (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Dodge
Status: Inactive
Past operator/owner: Dean Suhr (1969) (1)
MN/DOT source no: 20054
Township name: Mantorville
Location: T 107 R 16 W Sec 23 SE1/4 NW1/4 (1)
Location comments: Just northwest off County Rd. 15 (1)
Geologic age: Ordovician
Geologic formation: Galena Gp., Stewartville Fm. (1)
Description: Buff, thin and medium bedded limestone, crinkly and thin bedded near top, stripping 5 ft, face height 16 ft (1)
Remarks: Another quarry located 1/2 mile to the west of this quarry, floor overgrown with vegetation, typical of many small local quarries in the area (1969) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Dodge
Quarry/pit name: Wasioja Stone Co. Quarry (1)
Status: Inactive
Past operator/owner: Wasioja Stone Co. (1)
Township name: Wasioja
Location: T 107 R 17 W Sec 13 AND
 T 107 R 17 W Sec 14 (1)
Location comments: Near Dodge Center (1)
Description: Limestone (1)
Uses of commodity: Good road materials, macadam (1)
References: 1) Cooley. 1911, p. 9

Main commodity: Crushed Carbonate Rock
County: Dodge
Status: Inactive
Past operator/owner: James Paul (1884) (1)
Township name: Wasioja
Location: T 107 R 17 W Sec 13

Location comments: In the village of Wasioja, in section 13 (1); (T., R. locations determined from Ref. 1, plate 13)

Geologic age: Ordovician

Geologic formation: Galena Gp. (1)

Description: The rock, of which 8 or 10 ft is exposed, is yellow and in thin, rather irregular fragments. (1)

Uses of commodity: Lime (1)

Remarks: Lime good for laying stone, however, generally said to be slow in slacking, and not strong (1)

References: 1) Winchell and others. 1884, p. 372, plate 13

Main commodity: Crushed Carbonate Rock

Other commodities: Dimension Carbonate Rock

County: Dodge

Quarry/pit name: Bielenberg Quarry (1-6)

Alternate name: Dodge County Quarry (1,2); Klemmer Quarry (1)

Status: Inactive since 1975 (2)

Past operator/owner: Wm. and Claus Bielenberg (1); B. H. Bielenberg (4); Dodge County (2)

MN/DOT source no: 20047

Location: T 107 R 17 W Sec 14 NE1/4 SE1/4 AND
T 107 R 17 W Sec 14 SE1/4 NE1/4 (1969) (1)
T 107 R 17 W Sec 13 SW1/4 (1921) (1)
T 107 R 17 W Sec 13 NW1/4 SW1/4 (6)

Location comments: Located one half mile west of the village of Wasioja on the banks of the Zumbro River (1); just off east side of County Rd. 9 (1)

Geologic age: Ordovician

Geologic formation: Galena Gp., Prossa Fm. ? and Maquoketa Fm. (1); Prosser Fm. (6)

Description: See Refs. 3-5 for complete stratigraphic section, summary follows:
Drift and soil 5ft
Maquoketa Fm.
Dubuque Mbr. 12 ft, limestone, thin-bedded, shaly, gray
Galena Fm.
Stewartville Mbr. 26.4 ft, dolomite, massive, gray to buff

Light buff, medium to thick bedded limestone, pitted brown and buff, weathering surface, fossiliferous, easily weathered, fine sandy texture, porous (1)

Extraction method: Benched (1)

Uses of commodity: Riprap (1); building and agricultural purposes (4); beds of Maquoketa Shale were formerly burned for lime (4)

Remarks: Quarry badly overgrown (4)

References: 1) MN/DOT Aggregate Unit files
2) USDL. MSHA mine reference list
3) Thiel. 1944, p. 161
4) Stauffer; Thiel. 1933, p. 45
5) Stauffer; Thiel. 1914, p. 142
6) Niles. [1988a], table 1

Main commodity: Crushed Carbonate Rock

County: Dodge

Status: Inactive

Past operator/owner: W. E. Osborn (1911) (1)

Township name: Wasioja

Location: T 107 R 17 W

Location comments: Wasioja (1); railroad distant one-third mile (1); (railroad passes through sections 31-36; T., R. locations determined from county highway map)

Description: Limestone (1)

Uses of commodity: General purposes and roads (1)

References: 1) Cooley. 1911, p. 12

Main commodity: Crushed Carbonate Rock

County: Dodge

Status: Inactive

Past operator/owner: Dodge County Highway Dept. (1966) (1,2)

Township name: Wasioja

Location: T 107 R 17 W

Location comments: Near Dodge Center (1,2); (T., R. locations determined from county highway map, possibly in section 33 or 34)

References: 1) Hogberg. 1969, p. 40
2) Hogberg. 1966, p. 32

Main commodity: Crushed Carbonate Rock

County: Fillmore

Quarry/pit name: Loughery Quarry (1)

Status: Inactive; active 1965 (1)

Past operator/owner: K. Thor Kjome (1965), Iverson and Tangedahl (1921) (1)

MN/DOT source no: 23108

Location: T 101 R 8 W Sec 3 SE1/4 NE1/4 AND
T 101 R 8 W Sec 3 NE1/4 SE1/4 (1)

Location comments: Quarry located 3.5 miles north of Mabel (1)

Geologic age: Ordovician

Geologic formation: Shakopee Fm. (1)

Description: Shakopee dolomite, 26 ft exposed (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Fillmore

Status: Abandoned (1965) (1)

Past operator/owner: C. G. Austin (1965) (1)

MN/DOT source no: 23-63

Location: T 101 R 8 W Sec 5 NW1/4 NW1/4 (1)

Remarks: Quarry depleted (1965) (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Newberg Quarry (1,2)
Status: Inactive since 1985 (2)
Past operator/owner: Roverud Construction Co. (see Producer Directory) (1978) (1,2)
Location: T 101 R 8 W Sec 8 SW1/4 NE1/4 (1)
References: 1) USBM. [1979], MILS
 2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Eides Quarry (1)
Status: Inactive; active (1965) (1)
Past operator/owner: James Eide (1965) (1)
MN/DOT source no: 23106
Location: T 101 R 8 W Sec 8 NW1/4 NE1/4 (1988) (1)
 T 101 R 8 W Sec 5 S1/2 (1921) (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Otterness Quarry (2)
Status: Inactive
Past operator/owner: Roverud Construction Co. (see Producer Directory) (1978) (2); Otterness (1,2); Ford Brothers (1921) (1)
MN/DOT source no: 23111
Location: T 101 R 8 W Sec 11 SE1/4 SE1/4 (1)
 T 101 R 8 W Sec 11 NW1/4 SE1/4 (2)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Description: Shakopee dolomite (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Large quarry (1)
References: 1) MN/DOT Aggregate Unit files
 2) USBM. [1979], MILS

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Gunderson (1965) (1)
MN/DOT source no: 23107
Location: T 101 R 8 W Sec 12 SE1/4 SE1/4 (1)
Remarks: Small quarry (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Fillmore
Quarry/pit name: Sherburne Quarry (1)
Status: Inactive; active in 1955 (1)
Past operator/owner: Marvin Sherburne (1965) (1)
MN/DOT source no: 23112
Location: T 101 R 8 W Sec 13 NW1/4 NW1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Forde Quarry (1-3)
Alternate name: Mabel Quarry (5-8)
Status: Inactive since 1975 (3)
Past operator/owner: Roverud Construction Co. (see Producer Directory) (2,3); Albert Forde Estate (1965) (1)
MN/DOT source no: 23116
Location: T 101 R 8 W Sec 15 SE1/4 SE1/4 (1,4-8)
 T 101 R 8 W Sec 15 SW1/4 SE1/4 (2,4)
Location comments: Quarry along State Hwy. 43, 1-1/2 miles north of Mabel (5-8)

Geologic age: Ordovician
Geologic formation: Platteville Fm. (1,4,5,7,9,10)
Description: See Refs. 5 and 7 for detailed stratigraphic sections, summary of Ref. 5 follows:
 Decorah Fm. 1 ft exposed
 Platteville Fm. 28.5 ft exposed
 Carimona Mbr. 3.3 ft, limestone
 McGregor Mbr. 19.2 ft, limestone
 Pecatonica Mbr. 5.6 ft, arenaceous limestone
 Glenwood Fm. 0.6 ft exposed, argillaceous sandstone
 See Ref. 4 for trace fossil distribution; see Ref. 7 for detailed stratigraphic paleontology; Ref. 9 describes the Decorah shale layer

Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) USBM. [1979], MILS
 3) USDL. MSHA mine reference list
 4) Dokken. 1987; p. 194
 5) Rassam. 1967, p. 114-117
 6) Hoelt. 1959, p. 277
 7) Weiss. 1953, p. 398-403
 8) Weiss. 1957, p. 1053
 9) Prokopovich; Schwartz. 1957, p. 37
 10) Niles. [1988c], table 3

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Abandoned (1965) (1)
Past operator/owner: Andren Olson (1921) (1)
MN/DOT source no: 23-76
Location: T 101 R 8 W Sec 21 NW1/4 SW1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)

Remarks: Quarry filled in (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Abandoned (1965) (1)
Past operator/owner: Forde (1941) (1)
MN/DOT source no: 23-77
Location: T 101 R 8 W Sec 23 NW1/4 NW1/4 (1)
Remarks: Quarry abandoned, too close to buildings (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive
Past operator/owner: Roverud Construction Co. (see Producer Directory) (1969) (1)
Location: T 101 R 8 W Sec 27 SW1/4 SE1/4 (1)
Location comments: Near Mabel (1)
References: 1) Hogberg, 1969, p. 46

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Julius Peterson (1965), First National Bank of Mabel (1921) (1)
MN/DOT source no: 23109
Location: T 101 R 8 W Sec 29 NW1/4 SW1/4 (1)
Location comments: Just north of the creek crossing on the eastern side of the road (2)
Geologic age: Ordovician
Geologic formation: Galena Gp. (1); Prosser Fm. (2)
Description: Thick-bedded, somewhat cherty, shaly limestone which becomes thin-bedded where weathered (2)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Small quarry (1)
References: 1) MN/DOT Aggregate Unit files
 2) Prokopovich; Schwartz. 1956, p. 36

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Hoag Quarry (1,2)
Status: Inactive since 1985 (2)
Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1,2)
Location: T 101 R 9 W Sec 4 SW1/4 NW1/4 (1)
References: 1) USBM. [1979], MILS
 2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Lustikow Quarry (2)
Alternate name: Leistinow Quarry (3)
Status: Inactive since 1975 (3)
Past operator/owner: Roverud Construction Co. (see Producer Directory) (2,3); Ervin Leistikow (1965) (1)
MN/DOT source no: 23099
Location: T 101 R 9 W Sec 15 SE1/4 SW1/4 (1,2)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) USBM. [1979], MILS
 3) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Canton Quarry (4)
Status: Inactive (1965) (1)
Past operator/owner: Cohrs (1965) (1)
MN/DOT source no: 23098
Location: T 101 R 9 W Sec 15 SW1/4 SE1/4 (1)
 T 101 R 9 W Sec 15 S1/2 (2,4)
 T 101 R 9 W Sec 15 SE1/4 (3)
 T 101 R 9 W Sec 15 SW1/4 (1921) (1)
Location comments: North of S.A.R. 6 (2); west side of S.A.R. 6 about 1.5 miles NE of Canton in the middle of the S1/2 of section 15 (4)
Geologic age: Ordovician
Geologic formation: Prosser Fm. (2,3); Cummingsville Fm. (4)
Description: "The quarry face is 55-60 feet high. The rock is mostly very thick-bedded (3 to 5 ft), gray limestone with few shaly layers. In the uppermost part of the wall it is bleached and thin-bedded because of the weathering." (2)
 See Ref. 4 for detailed stratigraphic section and paleontology; Ref. 3 has brief section description
Chemical analyses: Samples yielded CaCO₃ of 91.61%, 94.53%, and 91.58% (3); see Refs. 2 and 3 for complete chemical analyses
References: 1) MN/DOT Aggregate Unit files
 2) Prokopovich; Schwartz. 1956, p. 35, 36
 3) Thiel; Stauffer. 1947, p. 6, 12, 13
 4) Weiss. 1953, p. 513-516

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive
Past operator/owner: Simon Houck (1884) (1)
Township name: Canton
Location: T 101 R 9 W Sec 25 (1)
Geologic age: Ordovician

Geologic formation: Trenton (1); (Platteville)
Description: Trenton limestone (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell and others. 1884, p. 321

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Alfred Dahl (1965) (1)
MN/DOT source no: 23097
Location: T 101 R 10 W Sec 11 NE1/4 NE1/4 (1)
Remarks: Small quarry (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive
Location: T 101 R 10 W Sec 12 NW1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Prosser Fm. (1,2)
Description: High-grade Prosser limestone, 20 ft, hard, gray, very fossiliferous, overburden 8 ft (1,2)
Chemical analyses: See Refs. 1 and 2 for complete chemical analyses, summary follows: CaCO₃ 94.80% and 93.37%, SiO₂ 4.06% and 3.88% (2)
References: 1) Prokopovich; Schwartz. 1956, p. 35
 2) Thiel; Stauffer. 1947, p. 5, 12, 13

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Thacher Quarry (1,2)
Status: Inactive since 1985 (3)
Past operator/owner: Ed Thacher (1965) (1); Seegmiller Construction Co. (3); Pederson (4)
MN/DOT source no: 23092
Location: T 101 R 11 W Sec 2 SW1/4 NW1/4 (1)
 T 101 R 11 W Sec 2 W1/2 NW1/4 (2)
Location comments: East of S.A.R. 10 (2)
Geologic age: Ordovician
Geologic formation: Prosser Fm. (2,4) and Stewartville Fm. (4)
Description: "The exposed rock is a very thick-bedded, gray, argillaceous limestone. Single beds range from 1-1/2 to 3 feet in thickness." (2)
Chemical analyses: Samples from lowest 25 ft of the quarry: CaO 50.81%, MgO 1.25%, insoluble 6.08% (2); see Ref. 2 for further analyses
Remarks: Large active quarry (1956) (2)
References: 1) MN/DOT Aggregate Unit files
 2) Prokopovich; Schwartz. 1956, p. 34
 3) USDL. MSHA mine reference list
 4) Niles. [1988c], table 3

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Hallisy Quarry (1)
Status: Inactive
Past operator/owner: Earl Hallisy (1)
MN/DOT source no: 23125
Location: T 101 R 11 W Sec 12 SW1/4 NW1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Fred Sick (1965), Schultz (1921) (1)
MN/DOT source no: 23093
Location: T 101 R 11 W Sec 36 NW1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: Prosser Fm. (1)
Description: Prosser limestone, 53 ft exposed, massive, 2 ft stripping (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Roverud Quarry (2)
Status: Inactive
Past operator/owner: Roverud Construction Co. (see Producer Directory) (2)
Location: T 101 R 11 W Sec 36 NE1/4 NW1/4 (1,2)
Location comments: At the junction on S.A.R. 6, north of the road (1); situated 4-1/2 miles west and 2 miles south of Harmony (2)
Geologic age: Ordovician
Geologic formation: Prosser Fm. (1); Stewartville and Dubuque Fms. (2)
Description: Prosser limestone, face about 55 ft high (1); Stewartville Fm. in contact with the Dubuque Fm. (2)
Chemical analyses: Samples from middle and lower horizons respectively: CaO 51.44% and 47.46%; MgO 2.46% and 5.62%; insoluble 2.64% and 2.18% (1); see Ref. 1 for further analyses
Uses of commodity: Concrete aggregate (2)
Remarks: Old large quarry (1956) (1)
References: 1) Prokopovich; Schwartz. 1956, p. 37
 2) Levenson; Gerk. undated, locality M-109

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive
Past operator/owner: Roverud (1941) (1)

Location: T 102 R 8 W Sec 3 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: County Highway Quarry (2)
Alternate name: Pit No. 2469 (1921) (1)
Status: Inactive (1965) (1)
Past operator/owner: Henry Vitse (1965) (1)
MN/DOT source no: 23101
Township name: Pebble
Location: T 102 R 8 W Sec 9 SE1/4 NE1/4 (1)
Location comments: One-half mile south of Choice (2)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (2)
Description: Oneota dolomite (2)
Chemical analyses: Sample No. 112 from the lower Oneota yielded: CaCO₃ 56.1%, MgCO₃ 39.9%, insoluble silica 4.1%, oxides 0.3% (2)
References: 1) MN/DOT Aggregate Unit files
 2) Stauffer; Thiel. 1933, p. 70, 74

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Choice Quarry (1941) (1)
Status: Abandoned (1965) (1)
Past operator/owner: Selmer Johnson (1)
MN/DOT source no: 23-80
Location: T 102 R 8 W Sec 10 SW1/4 SW1/4 (1)
Geologic age: Ordovician
Geologic formation: Shakopee and Oneota Fms. (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Abandoned, too close to buildings (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Mark Minnie (1965) (1)
MN/DOT source no: 23102
Location: T 102 R 8 W Sec 20 SW1/4 NE1/4 (1988) (1)
 T 102 R 8 W Sec 20 NW1/4 (1921) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive
MN/DOT source no: 23-43
Location: T 102 R 8 W Sec 22 NW1/4 (1921) (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Earl Stennes (1965) (1)
MN/DOT source no: 23103
Location: T 102 R 8 W Sec 24 NW1/4 SE1/4 (1965) (1)
 T 102 R 8 W Sec 24 E1/2 (1921) (1)
Remarks: Small quarry (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Perlon Olson (1965) (1)
MN/DOT source no: 23104
Location: T 102 R 8 W Sec 25 NW1/4 NE1/4 (1)
Remarks: Small quarry (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Roverud Quarry (1,2)
Status: Inactive since 1975 (2)
Past operator/owner: Roverud Construction Co. (see Producer Directory) (1,2)
Location: T 102 R 8 W Sec 33 NW1/4 NE1/4 NE1/4 (1)
References: 1) USBM. [1980], MILS
 2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Elmer Folstad (1965) (1)
MN/DOT source no: 23105
Location: T 102 R 8 W Sec 35 SE1/4 NE1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive
Location: T 102 R 9 W Sec 18 E1/2 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
References: 1) Niles. [1988c], table 3

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Rosheim Quarry (1)
Status: Inactive; active in 1965 (1)
Past operator/owner: Rosheim Estate (1965) (1)
MN/DOT source no: 23121
Location: T 102 R 9 W Sec 24 NW1/4 NW1/4 (1)
 T 102 R 9 W Sec 13 (1941) (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Amherst Quarry (1,2)
Status: Inactive (1965) (1)
Past operator/owner: Peter Anderson (1965), Amherst (1921) (1)
MN/DOT source no: 23100
Location: T 102 R 9 W Sec 27 SW1/4 NE1/4 (1)
 T 102 R 9 W Sec 27 SE1/4 NE1/4 (2)
Location comments: Near hamlet of Amherst (2); (I've assumed a typographical error in Ref. 2 which lists Sec. 7 instead of Sec. 27)
Geologic age: Ordovician
Geologic formation: Platteville and Glenwood Fms. (2)
Description: Platteville Fm., 24.2 ft exposed and Glenwood Fm. 5.4 ft exposed (2)
Remarks: Two small quarries (1965) (1)
References: 1) MN/DOT Aggregate Unit files
 2) Hoelt. 1959, p. 104, 105, 277

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Larson Quarry (2)
Status: Inactive (1965) (1)
Past operator/owner: Clarence Larson (1,2)
MN/DOT source no: 23094
Location: T 102 R 10 W Sec 11 NE1/4 NW1/4 (1)
 T 102 R 10 W Sec 11 NW1/4 (2)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Large quarry (1); (this possibly is the active quarry in NW1/4 operated by Patterson Quarries, Div. of Mathy Construction Co.)
References: 1) MN/DOT Aggregate Unit files
 2) USBM. [1980], MILS

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Alvin Larson (1)
MN/DOT source no: 23095

Location: T 102 R 10 W Sec 36 NW1/4 NW1/4 (1)
Remarks: Small quarry (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Kenneth Kramer (1965), Art Kruegel (1941) (1)
MN/DOT source no: 23117
Location: T 102 R 11 W Sec 1 SW1/4 SE1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Nueman Quarry (1)
Status: Inactive (1965) (1)
Past operator/owner: Francis Shanahan (1965), Neuman and Preston (1921) (1)
MN/DOT source no: 23090
Location: T 102 R 11 W Sec 1 NW1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Description: Shakopee dolomite (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Large quarry (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive
Past operator/owner: Wm. Renslow (1884) (1)
Township name: Carimona
Location: T 102 R 11 W Sec 9 OR
 T 102 R 11 W Sec 4
Location comments: At Carimona (1); (T., R., Sec. locations determined from Ref. 1, plate 10)
Geologic age: Ordovician
Geologic formation: Trenton (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell and others. 1884, p. 321, plate 10

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive
Past operator/owner: Lyle Frank (1)
MN/DOT source no: 23130
Location: T 102 R 11 W Sec 34 SW1/4 SW1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity:	Crushed Carbonate Rock
County:	Fillmore
Status:	Inactive
Past operator/owner:	Rollins (1884) (1)
Township name:	Carimona
Location:	T 102 R 11 W Sec 35 (1)
Location comments:	(T., R. locations determined from Ref. 1, plate 10)
Geologic age:	Ordovician
Geologic formation:	Trenton (1); (Platteville Fm.)
Uses of commodity:	Quicklime (1)
References:	1) Winchell and others. 1884, p. 321, plate 10
Main commodity:	Crushed Carbonate Rock
County:	Fillmore
Status:	Inactive
Past operator/owner:	John Hipes (1884) (1)
Township name:	Forestville
Location:	T 102 R 12 W Sec 6 SE1/4 (1)
Location comments:	Along a little ravine (1)
Geologic age:	Ordovician
Geologic formation:	Galena Gp. (1)
Uses of commodity:	Quicklime (1)
Remarks:	Slightly opened (1)
References:	1) Winchell and others. 1884, p. 297
Main commodity:	Crushed Carbonate Rock
County:	Fillmore
Quarry/pit name:	Henry Vreeman Quarry (2)
Status:	Abandoned (1953) (2)
Past operator/owner:	John Ureeman (1965) (1)
MN/DOT source no:	23086
Township name:	Forestville
Location:	T 102 R 12 W Sec 14 SE1/4 SW1/4 (1,2)
Location comments:	On County Road D (2)
Geologic age:	Ordovician
Geologic formation:	Galena Gp. (2)
Description:	Galena limestone, 42.5 ft (2); see Ref. 2 for detailed stratigraphic section and paleontology
Remarks:	Small quarry (1)
References:	1) MN/DOT Aggregate Unit files 2) Weiss. 1953, p. 520, 521
Main commodity:	Crushed Carbonate Rock
County:	Fillmore
Quarry/pit name:	Grabau Quarry (1,2)
Status:	Inactive
Past operator/owner:	Kappers Construction Co. (see Producers Directory) (1,2)

Location:	T 102 R 12 W Sec 17 NE1/4 NE1/4 (1)
Remarks:	(Possibly this is the active quarry in the SE1/4 of SE1/4 of Sec. 17, currently operated by Patterson Quarries)
References:	1) USBM. [1979], MILS 2) USDL. MSHA mine reference list
Main commodity:	Crushed Carbonate Rock
County:	Fillmore
Status:	Abandoned (1965) (1)
Past operator/owner:	John Riddle (1965) (1)
MN/DOT source no:	23-73
Location:	T 102 R 12 W Sec 20 SW1/4 NW1/4 (1965) (1) T 102 R 12 W Sec 20 NE1/4 (1921) (1)
Physical test data:	Available from MN/DOT Aggregate Unit (1)
Remarks:	"Dead - iron mine" (1965) (1)
References:	1) MN/DOT Aggregate Unit files
Main commodity:	Crushed Carbonate Rock
County:	Fillmore
Status:	Inactive
Past operator/owner:	Frank Turner (1884) (1)
Township name:	Forestville
Location:	T 102 R 12 W
Location comments:	Forestville (1); (T., R. locations determined from Ref. 1, plate 10)
Geologic age:	Ordovician
Geologic formation:	Trenton (1)
Uses of commodity:	Quicklime (1)
References:	1) Winchell and others. 1884, p. 321, plate 10
Main commodity:	Crushed Carbonate Rock
County:	Fillmore
Quarry/pit name:	Root River Quarry (1,2)
Status:	Inactive
Location:	T 102 R 12 W Sec 22 SW1/4 (1,2)
Location comments:	Old quarry about 200 yards downstream from the stone arch bridge, on the west bank of the South Branch of the Root River, this quarry is directly across the river from Nash's Quarry (1)
Geologic age:	Ordovician
Geologic formation:	Prosser Fm. (1-4)
Description:	High-grade Prosser limestone (3); see Ref. 1 for detailed stratigraphic section
Chemical analyses:	Samples from lower 20 ft yielded: CaO 48.28% and 50.12%, MgO 3.66% and 2.31% (3,4); see Refs. 3 and 4 for further analyses
References:	1) Weiss. 1953, p. 308-310 2) Weiss. 1955, p. 767 3) Prokopovich; Schwartz. 1956, p. 33 4) Thiel; Stauffer. 1947, p. 7, 11, 13

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Nash's Quarry (1,2)
Status: Inactive; active (1965) (1)
Past operator/owner: Melvin Nash (1965) (1)
MN/DOT source no: 23087
Location: T 102 R 12 W Sec 22 NW1/4 SW1/4 (1)
 T 102 R 12 W Sec 22 S1/2 (3,4)
Location comments: Old quarry on the east bank of the South Branch of the Root River, just south of the stone arch bridge, this quarry is directly across the river from the Root River Quarry (2)
Geologic age: Ordovician
Geologic formation: Prosser and Stewartville Fms. (2)
Description: High-grade Prosser limestone (4); see Ref. 2 for detailed stratigraphic section
Chemical analyses: Samples from lower 20 ft yielded: CaO 48.28% and 50.12%, MgO 3.66% and 2.31% (3,4); see Refs. 3 and 4 for further analyses
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) Weiss. 1953, p. 541-543
 3) Prokopovich; Schwartz. 1956, p. 33
 4) Thiel; Stauffer. 1947, p. 7, 11, 13

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Richard Kerns (1965), Roy Richardson (1921) (1)
MN/DOT source no: 23088
Location: T 102 R 12 W Sec 30 SE1/4 SW1/4 (1)
Location comments: Quarry 0.4 miles east of the SW1/4 of Sec. 30 (2)
Geologic age: Devonian
Geologic formation: Solon Mbr. (2); (Spillville Fm.)
Description: About 15 ft of buff, solution-pitted, fossiliferous Solon dolomite (2)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) Kohls. 1961, p. 196

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive
Past operator/owner: S. S. Belding (1884) (1)
Location: T 102 R 13 W Sec 25 OR
 T 102 R 13 W Sec 36
Location comments: At Etna (1); (exact location undetermined; T., R., Sec. locations determined from Ref. 1, plate 10)
Geologic age: Devonian (1)

Description: "This is a soft, porous stone, in heavy beds, which once held fossils, but which have been lost by absorption, leaving the rock porous, and finely vesicular.", 18 to 20 ft exposed (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell and others. 1884, p. 306, plate 10

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1935) (2)
Past operator/owner: George Hoy and De For (1884) (1)
Township name: Bloomfield
Location: T 102 R 13 W Sec 25 NE1/4 (1)
Geologic age: Devonian (1)
Geologic formation: Cedar Valley Fm. (2)
Description: Fine and even-grained, in heavy beds of about 18 in. and also holds a coarse coralline form, below this is a bed of shale (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell and others. 1884, p. 306
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Etna Quarry (1)
Status: Inactive (1935) (4)
Location: T 102 R 13 W Sec 26 NW1/4 (1,4)
 T 102 R 13 W Sec 26 SE1/4 NW1/4 (2)
Location comments: Quarry in the center of the NW1/4 (2); near Etna (3)
Geologic age: Devonian
Geologic formation: Cedar Valley Fm., Solon Mbr. (1-4); (Spillville Fm.)
Description: Dolomite, 22 ft exposed, buff-gray, fine-grained, abundant fossils (3); see Ref. 1 for lithologic data; see Ref. 2 for detailed stratigraphic section
Chemical analyses: Analyses of 12 samples ranged from 98.2% to 99.2% carbonate and 0.8% to 1.8% insolubles (2); see Ref. 2 for complete analyses
References: 1) Mossler. 1978, p. 34, fig. A3
 2) Kohls. 1961, p. 117-119, 195
 3) Webers; Austin. 1972, p. 82
 4) Thiel; Dutton. 1935, p. 152

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Dahl (1965,1921) (1)
MN/DOT source no: 23110
Location: T 103 R 8 W Sec 2 SW1/4 NW1/4 (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)

Description: Shakopee dolomite (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Mervin Olson (1965) (1)
MN/DOT source no: 23084
Location: T 103 R 8 W Sec 6 N1/2 NE1/4 (1)
Remarks: Small quarry (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Braatzburg Quarry (1941) (1)
Status: Inactive (1965) (1)
Past operator/owner: Theron Glenna (1965), Bertha Kopperud (1941) (1)
MN/DOT source no: 23118
Location: T 103 R 8 W Sec 12 SW1/4 SW1/4 (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Description: Shakopee dolomite (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: County Quarry (1)
Status: Inactive
Location: T 103 R 8 W Sec 22 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: Oneota dolomite (1)
Chemical analyses: Sample No. 111 from top of the Oneota: CaCO₃ 57.1%, MgCO₃ 41.8%, insoluble silica 1.0%, oxides 0.2% (1)
References: 1) Stauffer; Thiel. 1933, p. 69, 74

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Grebin Quarry (1,2)
Status: Inactive since 1978 (2)
Past operator/owner: Hans Torgerson Construction Co. (1978) (1,2)
Location: T 103 R 9 W Sec 7 NW1/4 SW1/4 (1)
References: 1) USBM. [1979], MILS
 2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Baiers Quarry (1,2)
Status: Inactive since 1985 (2)
Past operator/owner: Seegmiller Construction Co. (1,2)
Township name: Holt
Location: T 103 R 9 W Sec 8 N1/2 NE1/4 NW1/4 (1)
References: 1) USBM. [1979], MILS
 2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
Other commodities: Dimension Carbonate Rock
County: Fillmore
Quarry/pit name: Judy Quarry (1-3)
Alternate name: Quarve & Anderson Pit (4)
Status: Inactive since 1976 (2)
Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (2,3); George Judy (1965) (1,3)
MN/DOT source no: 23124
Township name: Holt
Location: T 103 R 9 W Sec 8 SW1/4 SE1/4 (1)
 T 103 R 9 W Sec 8 NE1/4 SW1/4 (3)
 T 103 R 9 W Sec 8 NW1/4 SE1/4 (4)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,4)
Description: Dolomitic limestone (4)
Physical test data: Available from MN/DOT Aggregate Unit (1) and U.S. Army Corps of Engineers (4)
References: 1) MN/DOT Aggregate Unit files
 2) USDL. MSHA mine reference list
 3) USBM. [1980], MILS
 4) U.S. Army Corps of Engineers files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive
Past operator/owner: Harris Anderson (1)
MN/DOT source no: 23131
Location: T 103 R 9 W Sec 15 SE1/4 NW1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Anderson Quarry (1)
Status: Inactive since 1982 (2)
Past operator/owner: Torgenson Quarries, operator (1,2); Anderson, owner (1)
Location: T 103 R 9 W Sec 16 NE1/4 NE1/4 NE1/4 (1)
References: 1) USBM. [1980], MILS
 2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive; active 1966 (1)
Past operator/owner: Hector Construction Co. (1966) (1)
Location: T 103 R 9 W Sec 17 NW1/4 NE1/4 (1)
Location comments: Near Lanesboro (1)
References: 1) Hogberg. 1966, p. 33

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive for 20 years (1965) (1)
Past operator/owner: Erickson and Edwardson Bros. (1965) (1)
MN/DOT source no: 23081
Location: T 103 R 9 W Sec 22 SE1/4 NE1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Lanesboro Quarry (1,2)
Status: Inactive since 1979 (2)
Past operator/owner: Hans Torgerson Construction Co. (1979) (1,2);
 Roverud Construction, Inc. (see Producer
 Directory) (1975) (2)
Location: T 103 R 9 W Sec 32 NE1/4 NE1/4 (1)
References: 1) USBM. [1979], MILS
 2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Donald Lawstven (1)
MN/DOT source no: 23073
Location: T 103 R 10 W Sec 10 NW1/4 NE1/4 (1)
Remarks: Small quarry (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Tri-Lane Stone Quarry (2)
Status: Inactive
Past operator/owner: Torgerson Sand & Gravel (1975) (2); Tri-Lane
 Stone Co. (1969) (1,3)
Location: T 103 R 10 W Sec 13 SW1/4 SW1/4 (1)
 T 103 R 10 W Sec 13 SW1/4 NW1/4 (3)
Location comments: Near Lanesboro (1); town of Lanesboro (3);
 (I've assumed a typographical error in Ref. 3
 which lists Sec. 18 instead of Sec. 13 for the
 town of Lanesboro)
Geologic age: Ordovician

Geologic formation: Oneota Fm. (3)
Description: Dolomitic limestone (3)
Physical test data: Available from U.S. Army Corps of Engineers (3)
References: 1) Hogberg. 1969, p. 47
 2) USDL. MSHA mine reference list
 3) U.S. Army Corps of Engineers files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1935) (2)
Past operator/owner: In 1874 three lime-kilns were owned by Butler,
 Mosses Greer, and B. Sherman (1)
Location: T 103 R 10 W OR
 T 103 R 9 W
Location comments: At Lanesboro (1); (exact location
 undetermined; T., R. locations determined from
 Ref. 1, plate 10)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1,2)
Uses of commodity: Quicklime (1)
References: 1) Winchell and others. 1884, p. 321, plate 10
 2) Thiel; Dutton. 1935, p. 151

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Amdahl Quarry (1)
Status: Inactive; active (1965) (1)
Past operator/owner: G. Amdahl (1)
MN/DOT source no: 23080
Location: T 103 R 10 W Sec 13 SE1/4 NE1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: John Quinn, H. C. McCoy (1965) (1)
MN/DOT source no: 23074
Location: T 103 R 10 W Sec 15 SW1/4 (1)
Remarks: Prospect (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Ruen Quarry (1,2)
Status: Inactive since 1982 (2)
Past operator/owner: Torgerson Quarries, operator (1982) (1,2); John
 Ruen, owner (1)
Location: T 103 R 10 W Sec 16 NW1/4 NW1/4 (1)

References: 1) USBM. [1980], MILS
2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Wendt Quarry (1)
Status: Inactive; active 1979 (1)
Past operator/owner: Reuben Wendt (1980) (1)
Location: T 103 R 10 W Sec 17 NE1/4 NE1/4 (1)
References: 1) USBM. [1980], MILS

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Rissman Quarry (1)
Status: Inactive; active 1979 (1)
Past operator/owner: Wm. Rissman (1980) (1)
Location: T 103 R 10 W Sec 21 NE1/4 SE1/4 (1)
References: 1) USBM. [1980], MILS

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Alfred Ehler (1965) (1)
MN/DOT source no: 23075
Location: T 103 R 10 W Sec 24 SE1/4 SE1/4 (1)
Remarks: Abrasive (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive; active (1966) (1)
Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1966) (1)
Location: T 103 R 10 W Sec 24 NE1/4 NW1/4 (1)
Location comments: At Lanesboro (1)
References: 1) Hogberg. 1966, p. 35

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Holmen Quarry (1)
Status: Inactive; active 1965 (1)
Past operator/owner: Norman Holmen (1965) (1)
MN/DOT source no: 23123
Location: T 103 R 10 W Sec 35 SE1/4 NW1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Jung Quarry (1941) (1)
Status: Inactive for 30 years (1965) (1)
Past operator/owner: Ingval Nelson (1965), Kappers (1941) (1)
MN/DOT source no: 23066
Location: T 103 R 11 W Sec 4 NE1/4 NE1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Cummings' Quarry (1)
Status: Inactive (1935) (3)
Past operator/owner: T. D. Cummings (1953) (1); Joseph Taylor (1884) (1,2)
Location: T 103 R 11 W Sec 11 SW1/4 SE1/4 (1)
Location comments: In farmyard, along the railroad tracks (1); near Fountain (2); (Ref. 1 states that the section 13 location given in Ref. 2 is in error and should be Sec. 11)

Geologic age: Ordovician
Geologic formation: Cummingsville Fm. (1); Trenton (2); Platteville Fm. (3)
Description: See Ref. 1 for detailed stratigraphic section and paleontology, summary follows:
Cummingsville Fm. 26 ft 10 in., alternating cherty limestone/limestone beds overlying 36 ft of alternating shale/limestone beds overlying 5 ft of limestone

Chemical analyses: See Ref. 2, Sample No. 26 for chemical analyses
Physical test data: See Ref. 2, Sample No. 26 for physical test data
Uses of commodity: Quicklime, etc. (1)
References: 1) Weiss. 1953, p. 371-376
2) Winchell and others. 1884, p. 200-204, 288, 292
3) Thiel; Dutton. 1935, p. 151

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Pit No. 1400 (1965) (1)
Status: Inactive (1965) (1)
Past operator/owner: Ray Jeske (1965) (1)
MN/DOT source no: 23061
Location: T 103 R 12 W Sec 9 NW1/4 SE1/4 (1965) (1)
T 103 R 12 W Sec 9 E1/2 SE1/4 (1921) (1)
Geologic age: Ordovician
Geologic formation: Galena Gp. (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1935) (2)
Past operator/owner: Charles Shultz (1918) (1)
Location: T 103 R 12 W
Location comments: Near the town of Fillmore (1,2); (T., R. locations determined from county highway map)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (2)
Uses of commodity: Much rock was taken in 1912 for road construction (1)
References: 1) Bowles. 1918, p. 164
 2) Thiel; Dutton. 1935, p. 151

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive for 20 years (1965) (1)
Past operator/owner: Kenneth Neimeyer (1965) (1); S. C. Pettit (1884) (2)
MN/DOT source no: 23060
Location: T 103 R 12 W Sec 10 SE1/4 NE1/4 (1)
 T 103 R 12 W Sec 10 NE1/4 (2)
Geologic age: Ordovician
Geologic formation: Trenton (2); Platteville Fm. (3)
Description: Trenton limestone with much shale layers (2)
References: 1) MN/DOT Aggregate Unit files
 2) Winchell and others. 1884, p. 292
 3) Thiel; Dutton. 1935, p. 151

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Hugh Walker (1965) (1)
MN/DOT source no: 23062
Location: T 103 R 12 W Sec 15 NE1/4 NE1/4 (1)
Remarks: Small quarry (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Stender's Quarry (3)
Status: Inactive for 20 years (1965) (1)
Past operator/owner: Donald Nash (1965), Stender (1941) (1)
MN/DOT source no: 23063
Location: T 103 R 12 W Sec 25 SE1/4 NW1/4 (1-3)
Location comments: North of C.A.R. C about 1-1/2 miles south of the railroad line (2); in a creek valley about 2.5 miles east of Wykoff (3)
Geologic age: Ordovician
Geologic formation: Prosser Fm. (2,3)

Description: Prosser limestone, beds of gray limestone 1 to 2 feet thick, toward the top it weathers into thin-bedded, buff limestone (2); limestone with some beds of cherty limestone, 39 ft to floor of eastern quarry (3); see Ref. 3 for detailed stratigraphic section and paleontology
Chemical analyses: Three samples from upper, middle and bottom respectively yielded: CaO 52.52%, 50.48%, and 50.60%; MgO 0.57%, 0.70%, and 0.98%; insolubles 4.75%, 7.21%, and 6.82% (2); see Ref. 2 for further analyses
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: "Most of the section is duplicated in an older quarry across the creek." (3)
References: 1) MN/DOT Aggregate Unit files
 2) Prokopovich; Schwartz. 1956, p. 33
 3) Weiss. 1953, p. 535-537

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive
Past operator/owner: Kappers Construction Co. (2)
Location: T 103 R 12 W Sec 25 NE1/4 SW1/4 (1,2)
Location comments: Quarry 2 miles east and 1 mile south of Wykoff (1)
Geologic age: Ordovician
Geologic formation: Galena Gp. (2); Dunleith Fm. (1,2)
Description: See Refs. 1 and 2 for detailed stratigraphic sections
References: 1) Stone. 1980, p. A-2, A-3
 2) Levenson; Gerk. undated, locality M-101

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive
Past operator/owner: Owners of lime kilns in 1874 were Charles Gordon, L. G. Odell, Lem. Stout, Isaac Kegley, J. Finely, T. J. Hammer, Cyrus Young, N. E. Fetterly, and Harvey McQuillan (1)
Township name: Spring Valley
Location: T 103 R 13 W AND
 T 104 R 13 W
Location comments: Numerous quarries along Bear Creek in Spring Valley and Sumner townships (1); (T., R. locations determined from Ref. 1, plate 10)
Geologic age: Ordovician
Geologic formation: Galena Gp. (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell and others. 1884, p. 297, 320, plate 10

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Bly Quarry (1)

Status: Inactive
Past operator/owner: Kappers Aggregates, Inc. (see Producer Directory) (1,2)
Location: T 103 R 13 W Sec 3 NW1/4 NW1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Stewartville Fm. (2)
Description: "It exposes a total of 49 feet of Stewartville dolomite, 32 feet of Dubuque Formation and 5 feet of basal Maquoketa." (2)
References: 1) USBM. MSHA mine reference list
 2) Sloan; Kolata. 1987, p. 84

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Kappers Quarry (1-3,5)
Alternate name: Tunnel Mill Quarry (4)
Status: Inactive
Past operator/owner: Kappers Construction Co. (1-3,5,6)
Location: T 103 R 13 W Sec 3 NW1/4 SW1/4 (1-4)
 T 103 R 13 W Sec 3 W1/2 (6)
Geologic age: Ordovician
Geologic formation: Stewartville Fm. (1,2,5,6)
Description: Sinsinawa 10 ft, Stewartville dolomite 39 ft, and Dubuque 32 ft, is underlying 4 ft of Maquoketa (1,2); see Refs. 3 and 5 for descriptions; see Ref. 1 for detailed section
References: 1) Levenson; Gerk. undated, locality M-118
 2) Levenson and others. 1979, p. 59, 65
 3) Levenson; Gerk. 1983, p. C3, C5
 4) Bleifuss. 1966, p. 116
 5) Webers; Austin. 1972, p. 79
 6) Niles. [1988b], table 2

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Roverud Quarry (1)
Alternate name: Spring Valley Quarry (1)
Status: Inactive
Past operator/owner: G. A. Roverud (1965), Bly (1921) (1)
MN/DOT source no: 23052
Location: T 103 R 13 W Sec 3 SE1/4 NW1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Abandoned (1965) (1)
Past operator/owner: Thomas (1921) (1)
MN/DOT source no: 23-5
Location: T 103 R 13 W Sec 4 NW1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)

Remarks: "Dead - same as quarry (MN/DOT Source) No. 23-75" (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Ballinger Quarry (1)
Status: Inactive (1965) (1)
Past operator/owner: Earl Ballinger (1965) (1)
MN/DOT source no: 23115
Location: T 103 R 13 W Sec 4 SW1/4 NW1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Lime City Quarry (1-6)
Status: Inactive
Past operator/owner: Olds & Brakery (1884) (7); W. H. Carey (1911) (3,8)
Township name: Spring Valley
Location: T 103 R 13 W Sec 9 NE1/4 SE1/4 (1-3)
 T 103 R 13 W Sec 9 (7,8)
Location comments: Quarry 2.5 to 3 miles north of Spring Valley (1-6); at the crossing of S.A.R. 8 and Deer Creek (3)
Geologic age: Ordovician
Geologic formation: Galena Gp., Stewartville Fm. and Dubuque or Maquoketa Fms. (3,5,6)
Description: See Ref. 3 for detailed stratigraphic section and paleontology, summary follows: Dubuque Fm. 20 ft, alternating limestone and shale beds overlies Galena Gp. with 11.5 ft of limestone above 50 ft of dolomitic limestone; see Refs. 4-6 for additional section descriptions
Chemical analyses: Three samples from the Stewartville yielded: CaCO₃ 74.4%, 81.5%, and 85.2%; MgCO₃ 23.0%, 15.7%, and 12.7%, total insoluble 2.60%, 2.70%, and 2.10% (5); see Ref. 5 for complete chemical analyses with sample depths
Uses of commodity: Crushed rock (5,8); quicklime (5,7,8)
Remarks: Famous lime kiln at this location, it bore the name "Lime City" (5)
References: 1) Weiss. 1957, p. 1053
 2) Weiss. 1955, p. 767
 3) Weiss. 1953, p. 294-299
 4) Thiel. 1944, p. 75
 5) Stauffer; Thiel. 1933, p. 60, 67, 68, 73
 6) Stauffer; Thiel. 1914, p. 91, 92
 7) Winchell and others. 1884, p. 299, 320
 8) Cooley. 1911, p. 10

Main commodity: Crushed Carbonate Rock

County: Fillmore
Quarry/pit name: Hardscrabble Quarry (1)
Status: Inactive (1965) (1)
Past operator/owner: Darrel Rathbun (1965) (1)
MN/DOT source no: 23055
Location: T 103 R 13 W Sec 10 SE1/4 NE1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive
Past operator/owner: J. N. Cummings (1884) (1)
Township name: Spring Valley
Location: T 103 R 13 W Sec 11 (1)
Geologic age: Ordovician
Geologic formation: Galena Gp. (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell and others. 1884, p. 320

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Masonic Park Quarry (1)
Status: Inactive; active (1965) (1)
Past operator/owner: Ray Fluegel (1965), Mary Kingsley (1921) (1); J. N. Cummings (1884) (4)
MN/DOT source no: 23054
Township name: Spring Valley
Location: T 103 R 13 W Sec 11 SE1/4 SE1/4 AND
T 103 R 13 W Sec 12 SW1/4 SW1/4 (1,2)
Location comments: On the section line between the above locations (2); at the Masonic picnic grounds, south of the park (3)
Geologic age: Ordovician
Geologic formation: Prosser Fm. (1,3); Stewartville Fm. (3)
Description: See Ref. 3 for detailed stratigraphic section and paleontology, summary follows: Galena Gp. 124 ft, consists of 74 ft of Stewartville dolomitic limestone overlying 39 ft of Prosser limestone with alternating beds of shale
Physical test data: Available from MN/DOT Aggregate Unit (1)
Uses of commodity: Crushed aggregate (1); quicklime (4)
References: 1) MN/DOT Aggregate Unit files
2) Weiss. 1957, p. 1053
3) Weiss. 1953, p. 527-534
4) Winchell and others. 1884, p. 320

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Orville Miland (1965) (1); J. H. Hall (1884) (2)

MN/DOT source no: 23119
Location: T 103 R 13 W Sec 12 NE1/4 SW1/4 (1)
T 103 R 13 W Sec 12 (2)
Location comments: North of Masonic Park (1)
Geologic age: Ordovician
Geologic formation: Galena Gp. (1,2); Prosser Fm. (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Uses of commodity: Crushed rock (1); quicklime (2)
Remarks: Large quarry (1)
References: 1) MN/DOT Aggregate Unit files
2) Winchell and others. 1884, p. 320

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Wilbur Rathbun (1965), Perry Richardson (1921) (1)
MN/DOT source no: 23113
Location: T 103 R 13 W Sec 15 NW1/4 NE1/4 (1965) (1)
T 103 R 13 W Sec 15 NW1/4 (1921) (1)
Geologic age: Ordovician
Geologic formation: Galena Gp. (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Small quarry (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Lena Vanderbosch (1965) (1)
MN/DOT source no: 23056
Location: T 103 R 13 W Sec 32 NW1/4 NE1/4 (1)
Remarks: Small quarry (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Peterson Quarry (1)
Status: Inactive
Past operator/owner: John R. Peterson Co. (1980) (1)
Location: T 104 R 8 W Sec 20 NW1/4 SW1/4 (1)
References: 1) USBM. [1980], MILS

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Boyum Quarry (2)
Alternate name: Pit No. 2210 (1)
Status: Inactive since 1985 (2)

Past operator/owner: Roverud Construction, Inc. (see Producer Directory) (until 1985) (2); Hans Torgenson Construction (until 1982) (2); Lee (1965), Anne Boyum Estate (1921) (1)

MN/DOT source no: 23076

Location: T 104 R 9 W Sec 2 NW1/4 SW1/4 (1)

Geologic age: Ordovician

Geologic formation: Shakopee Fm. (1)

Description: Shakopee dolomite, massive, buff colored, 60 ft exposed (1)

Physical test data: Available from MN/DOT Aggregate Unit (1)

References: 1) MN/DOT Aggregate Unit files
2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock

County: Fillmore

Quarry/pit name: Big Springs Creek Quarry (1)

Status: Inactive; active in 1965 (1)

Past operator/owner: Melvin Anderson (1965) (1)

MN/DOT source no: 23078

Location: T 104 R 9 W Sec 15 SW1/4 SW1/4 (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Fillmore

Quarry/pit name: Thorne Quarry (1)

Status: Inactive

Past operator/owner: Roverud Construction Co. (see Producer Directory) (1979) (1)

Location: T 104 R 9 W Sec 15 NW1/4 SW1/4 (1)

References: 1) USBM. [1979], MILS

Main commodity: Crushed Carbonate Rock

County: Fillmore

Status: Inactive (1965) (1)

Past operator/owner: Harold Jensen (1965), Melvin Brown (1941) (1)

MN/DOT source no: 23077

Location: T 104 R 9 W Sec 16 NE1/4 SE1/4 (1)

T 104 R 9 W Sec 16 NE1/4 (1921) (1)

Geologic age: Ordovician

Geologic formation: Shakopee Fm. (1)

Physical test data: Available from MN/DOT Aggregate Unit (1)

Remarks: Small quarry (1965) (1); (this possibly is the active quarry in section 16, operated by Roverud Construction Co.)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Fillmore

Status: Abandoned (1965) (1)

MN/DOT source no: 23-35

Location: T 104 R 9 W Sec 28 (1)

Remarks: "Dead - lack of information" (1965) (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Fillmore

Status: Inactive for 20 years (1965) (1)

Past operator/owner: Alvin Gilbertson (1965) (1)

MN/DOT source no: 23079

Location: T 104 R 9 W Sec 31 SE1/4 NE1/4 (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Fillmore

Quarry/pit name: McConicky Quarry (1)

Alternate name: Pilot Mound Quarry, Pit No. 2105 (1)

Status: Inactive (1965) (1)

Past operator/owner: Melvin Erickson (1)

MN/DOT source no: 23068

Location: T 104 R 10 W Sec 9 SW1/4 SE1/4 (1)

Geologic age: Ordovician

Geologic formation: Shakopee Fm. (1)

Description: Shakopee dolomite, 20 ft (1)

Physical test data: Available from MN/DOT Aggregate Unit (1)

Remarks: Large quarry (1965) (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Fillmore

Status: Inactive (1965) (1)

Past operator/owner: Fred Crowsen (1965) (1)

MN/DOT source no: 23069

Location: T 104 R 10 W Sec 16 NW1/4 NW1/4 (1)

Remarks: Small quarry (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Fillmore

Status: Inactive (1965) (1)

Past operator/owner: Lloyd Allen (1965) (1); Allen Bros. (1884) (2)

MN/DOT source no: 23070

Location: T 104 R 10 W Sec 19 SW1/4 NE1/4 (1)

Geologic age: Ordovician

Geologic formation: Galena Gp. (2)

Uses of commodity: In 1874, used in lime kilns (2)

Remarks: Small quarry (1)

References: 1) MN/DOT Aggregate Unit files
2) Winchell and others. 1884, p. 320

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Huntington Quarry (1)
Status: Inactive; active 1979 (1)
Past operator/owner: Robert Huntington (1979) (1)
Location: T 104 R 10 W Sec 19 S1/2 SE1/4 NE1/4 (1)
References: 1) USBM. [1980], MILS

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: E. A. Danielson (1)
MN/DOT source no: 23071
Location: T 104 R 10 W Sec 28 SW1/4 NW1/4 (1)
Remarks: Small quarry (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
Other commodities: Dimension Carbonate Rock
County: Fillmore
Status: Inactive (1935) (2)
Past operator/owner: Dennis Jacobs (1884) (1)
Location: T 104 R 11 W (2)
Location comments: At Chatfield (1,2); the Trenton appears in the highest bluffs on the north side of the Village of Chatfield (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2); Trenton (1)
Description: Seven feet of limestone and shale, crumbling away, underlain by about eight feet of limestone (1)
Uses of commodity: Quicklime, building stone (1)
References: 1) Winchell and others. 1884, p. 292, 321, plate 10
2) Thiel; Dutton. 1935, p. 151

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Fillmore Quarry (1)
Status: Inactive; active (1979) (1)
Past operator/owner: Seegmiller Construction Co. (1980) (1)
Township name: Chatfield
Location: T 104 R 11 W Sec 14 SW1/4 NE1/4 (1)
References: 1) USBM. [1980], MILS

Main commodity: Crushed Carbonate Rock

County: Fillmore
Status: Inactive
Past operator/owner: Alleu Skjeue (1966) (1)
MN/DOT source no: 23127
Location: T 104 R 11 W Sec 18 SE1/4 SE1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Carl Amundson (1965), Stender (1941) (1)
MN/DOT source no: 23065
Location: T 104 R 11 W Sec 23 SE1/4 NW1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Ferguson Quarry (1)
Status: Inactive; active (1965) (1)
Past operator/owner: John Ferguson (1965), Ed Crowson (1921) (1); County Highway Department (1947) (4)

MN/DOT source no: 23057
Township name: Jordon
Location: T 104 R 12 W Sec 9 SW1/4 SE1/4 (1)
T 104 R 12 W Sec 9 S1/2 (2,3)
T 104 R 12 W Sec 9 SW1/4 (4)

Location comments: Near the south line in the middle of section 9 (4); middle of the S1/2 of Sec. 9 (3); there are two large quarries in the S1/2 of section 9, along State Hwy. 74 north of Lost Creek (2); (typographical error assumed in Ref. 2 which lists T. 106 instead of T. 104)

Geologic age: Ordovician
Geologic formation: Prosser Fm. (1-4)
Description: Prosser limestone, 34 ft face, grayish-blue to bluish-gray, hard, brittle, fossiliferous, beds 1 to 2 ft thick (1); rather thick-bedded and gray but it weathers to a light buff and becomes thin-bedded towards the top of the quarry (2); drift cover of 10 ft overlies Stewartville dolomite 33 ft which overlies Prosser limestone 35 ft (4); see Ref. 3 for detailed stratigraphic section and paleontology; see Ref. 4 for section description

Chemical analyses: Analyses of five samples from bottom to top of formation yielded: CaCO₃ 87.92%, 88.63%, 83.83%, 76.71%, and 79.64%; SiO₂ 5.06%, 4.90%, 8.04%, 7.60% and 7.22%; MgO 2.63%, 2.82%, 3.09%, 6.72%, and 5.77% (4); see Refs. 2 and 4 for further analyses

Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Two quarries at this location (1,2)
References: 1) MN/DOT Aggregate Unit files
2) Prokopovich; Schwartz. 1956, p. 28-30

- 3) Weiss. 1953, p. 300-303
4) Thiel; Stauffer. 1947, p. 3, 12, 13

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive (1965) (1)
Past operator/owner: Wm. Pease (1965) (1)
MN/DOT source no: 23058
Location: T 104 R 12 W Sec 23 NE1/4 NE1/4 (1)
Remarks: Small quarry (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Christensen Quarry (1,2)
Alternate name: Shaw's Quarry (4)
Status: Inactive since 1985 (2)
Past operator/owner: Seegmiller Construction Co. (1985) (2); Targe Christenson (1965), Shaw Williams (1921) (1); V. O. Groby, owner (1953) (4)

MN/DOT source no: 23059
Township name: Jordon
Location: T 104 R 12 W Sec 36 NE1/4 NE1/4 (1)
T 104 R 12 W Sec 36 SE1/4 NE1/4 NE1/4 (4)
Location comments: Quarry 50 yards west of County Rd. C, just south of the creek and across from schoolhouse (4); large quarry on the south bank of the Middle Branch on the Root River in the NE1/4 (3); (typographical error assumed in Ref. 3, which lists T. 106 instead of T. 104)

Geologic age: Ordovician
Geologic formation: Prosser Fm. (3,4)
Description: High-grade Prosser limestone, "The rock is thick-bedded, light gray limestone but becomes thin-bedded and buff colored toward the top. In its upper part it is somewhat cherty." (3); see Ref. 4 for detailed stratigraphic section
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
2) USDL. MSHA mine reference list
3) Prokopovich; Schwartz. 1956, p. 30
4) Weiss. 1953, p. 544, 545

Main commodity: Crushed Carbonate Rock
County: Fillmore
Status: Inactive for 20 years (1965) (1)
Past operator/owner: Emmet Comstock (1965) (1)
MN/DOT source no: 23049
Location: T 104 R 13 W Sec 22 NW1/4 NE1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Fillmore
Quarry/pit name: Washington Quarry (1)
Status: Inactive; active (1965) (1)
Past operator/owner: Earl Ellenberg (1965) (1)
MN/DOT source no: 23050
Location: T 104 R 13 W Sec 26 SW1/4 SE1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Silker Quarry (1)
Status: Inactive; active (1965) (1)
Past operator/owner: Wm. Silker (1965) (1)
MN/DOT source no: 23120
Location: T 104 R 13 W Sec 27 NE1/4 NW1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Blahnik's Quarry (1,2)
Status: Inactive since 1980 (2)
Past operator/owner: Seegmiller Construction Co., operator (1,2); Mary Blahnik, owner (1980) (1)
Location: T 104 R 13 W Sec 27 NW1/4 NW1/4 (1)
References: 1) USBM. [1980], MILS
2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Washington Quarry (1)
Status: Inactive (1965) (1)
Past operator/owner: Eva Keck (1965), Washington (1921) (1)
MN/DOT source no: 23051
Location: T 104 R 13 W Sec 36 SE1/4 NE1/4 (1)
Remarks: Small quarry (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Goodhue
Quarry/pit name: Berg Quarry (1)
Status: Inactive
Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1964), Albert Berg-owner (1968) (1)
MN/DOT source no: 25104
Township name: Roscoe

Location: T 109 R 16 W Sec 28 SE1/4 NW1/4 (1)
T 109 R 16 W Sec 28 NW1/4 (2)

Location comments: Two miles east of Roscoe (2)

Geologic age: Ordovician

Geologic formation: Prosser and Cummingsville Fms. (1); Dunleith Fm. (2)

Description: Limestone, thin to thick beds, gray, weathers to buff, bottom 5 ft thick argillaceous beds, next 5 ft interbedded limestone and limy shale, rest thin to thick beds of Prosser, face 30 ft with 10 ft of Prosser Fm. and 20 ft of Cummingsville Fm., stripping 0-2 ft (1); see Ref. 2 for section description

References: 1) MN/DOT Aggregate Unit files
2) Stone. 1980, p. A-37

Main commodity: Crushed Carbonate Rock

County: Goodhue

Status: Inactive

Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1969) (2)

MN/DOT source no: 25113

Township name: Roscoe

Location: T 109 R 16 W Sec 28 NW1/4 SW1/4 (1,2)

Location comments: Near Wanamingo (2)

Geologic age: Ordovician

Geologic formation: Prosser Fm. and Stewartville Fm. ? (1)

Description: Thin to thick beds, thin top half - thick bottom half, bottom half gray, weathers to buff, top half is buff, face 36 ft, stripping 15-20 ft S. face, less on E. and W. face (1)

Uses of commodity: Crushed rock (1,2)

References: 1) MN/DOT Aggregate Unit files
2) Hogberg. 1969, p. 45

Main commodity: Crushed Carbonate Rock

County: Goodhue

Quarry/pit name: Syverson Quarry (1,2)

Status: Inactive since 1975 (2)

Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (2,3); Charles Syverson, owner (1968) (1)

MN/DOT source no: 25097

Township name: Roscoe

Location: T 109 R 16 W Sec 31 SE1/4 SW1/4 (1)
T 109 R 16 W Sec 31 SW1/4 SW1/4 (1,3)

Geologic age: Ordovician

Geologic formation: Prosser Fm. (1)

Description: Limestone, thin to thick beds, gray weathering to buff, argillaceous, face 39 ft, stripping 10 to 12 ft (1)

Physical test data: Available from MN/DOT Aggregate Unit (1)

Uses of commodity: Crushed rock (3)

References: 1) MN/DOT Aggregate Unit files
2) USDL. MSHA mine reference list
3) Hogberg. 1969, p. 45

Main commodity: Crushed Carbonate Rock

County: Goodhue

Status: Inactive

Past operator/owner: C. K. Hamlin (1911) (1)

Township name: Roscoe

Location: T 109 R 16 W (1)

Location comments: Near Pine Island, 2 railroads are each one mile away (1)

Geologic age: Ordovician

Geologic formation: Trenton (1)

Description: Trenton limestone (1)

Uses of commodity: Available for all purposes, but at present (1911) used only for roads (1)

References: 1) Cooley. 1911, p. 10

Main commodity: Crushed Carbonate Rock

County: Goodhue

Quarry/pit name: Fairbanks Quarry (1)

Status: Inactive

Past operator/owner: Fairbanks (1968) (1)

MN/DOT source no: 25106

Township name: Cherry Grove

Location: T 109 R 17 W Sec 34 NE1/4 NW1/4 (1)

Location comments: Quarry to the east of MN/DOT Source No. 25105 (1)

Geologic age: Ordovician

Geologic formation: Prosser and Stewartville Fms. (1)

Description: Thin to medium beds, lower 20 ft is gray, weathers to buff, upper 5 ft looks pitted, stripping 15 ft over east face (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Goodhue

Quarry/pit name: Fairbanks Quarry (1)

Status: Inactive (1965) (1)

Past operator/owner: Fairbanks (1965) (1)

MN/DOT source no: 25105

Township name: Cherry Grove (1)

Location: T 109 R 17 W Sec 34 NE1/4 NW1/4 (1)

Location comments: Quarry to the west of MN/DOT Source No. 25106 (1)

Geologic age: Ordovician

Geologic formation: Prosser Fm. (1)

Description: Limestone, thin, bedded, gray, weathers to buff, face 18 ft, stripping 8 to 15 ft on west side (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Goodhue
Status: Inactive; active (1956) (1)
Location: T 109 R 18 W Sec 8 SE1/4 SW1/4 (1)
Location comments: On the right bank of a short, but deep valley in about the SE1/4, SW1/4 of Sec. 8, southwest of Kenyon (1)
Geologic age: Ordovician
Geologic formation: Prosser Fm. (1)
Description: Prosser limestone. "The rock face is about 18 feet high and is covered by 5 to 25 feet of drift. The upper part of the face is somewhat weathered but the main part of the rock is rather fresh, grayish blue and thick-bedded (4 to 8 inches). Some of the beds have an oxidized crust showing a slight increase in magnesia caused by the selective leaching of calcium carbonate." (1)
Chemical analyses: CaO 32.14%, MgO 7.08%, insolubles 24.31% (1); see Ref. 1 for further analyses
References: 1) Prokopovich; Schwartz. 1956, p. 15

Main commodity: Crushed Carbonate Rock
County: Goodhue
Quarry/pit name: Grose Quarry (1,2)
Status: Inactive
Past operator/owner: Kielmeyer Construction Co. (see Producer Directory) (2); Grose (1968) (1,2)
MN/DOT source no: 25096
Township name: Kenyon
Location: T 109 R 18 W Sec 8 SW1/4 SW1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Prosser Fm. (1)
Description: Limestone, thin to medium beds, gray, weathers to buff, argillaceous, face about 20 ft, stripping 12 to 15 ft (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) USBM. [1979], MILS

Main commodity: Crushed Carbonate Rock
County: Goodhue
Quarry/pit name: Kylo Quarry (1)
Status: Inactive
Past operator/owner: Quarve & Anderson Co. (see Producer Directory), Ray Kylo (1968) (1)
MN/DOT source no: 25009
Township name: Zumbrota
Location: T 110 R 15 W Sec 34 SW1/4 NW1/4 (1)
Location comments: Three miles east of Zumbrota (1)
Geologic age: Ordovician

Geologic formation: Shakopee Fm. (1)
Description: Dolomite, face 43 ft, upper 8 ft is sandy dolomite to sandstone, dolomite below (1); see Ref. 1 for detailed section description
Physical test data: Available from MN/DOT Aggregate Unit - ASIS and COPES files (1)
Remarks: Two quarries in this area (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Goodhue
Status: Inactive
Past operator/owner: Clarence Aaland (1968) (1)
MN/DOT source no: 25083
Township name: Zumbrota
Location: T 110 R 15 W Sec 34 NW1/4 NW1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Prospective quarry across from Kylo Quarry (1968) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Goodhue
Quarry/pit name: Kylo Quarry (1)
Status: Inactive
Past operator/owner: Kielmeyer Construction Co. (see Producer Directory) (1978) (1)
Township name: Zumbrota
Location: T 110 R 15 W Sec 34 SW1/4 SW1/4 (1)
References: 1) USBM. [1979], MILS

Main commodity: Crushed Carbonate Rock
County: Goodhue
Status: Inactive
Township name: Minneola
Location: T 110 R 16 W Sec 15 (1)
Location comments: Quarry near Hwy. 52 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm., McGregor Mbr. (1)
Description: Platteville limestone, 14.9 ft. (1)
References: 1) Cowie. 1941, p. 90, 91

Main commodity: Crushed Carbonate Rock
County: Goodhue
Status: Inactive
Past operator/owner: Budensick (1)
MN/DOT source no: 25124
Township name: Minneola
Location: T 110 R 16 W Sec 15 SW1/4 (1,2)

T 110 R 16 W Sec 15 SE1/4 SW1/4 (3)

Location comments: South of U.S. Hwy. 52 (2)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (3)

Description: "The quarry walls expose 12 to 13 feet of grayish, thick-bedded limestone weathered at the top into bleached beds of moderate thickness. The overburden is 2 to 10 feet." (2)

Chemical analyses: CaO 40.52%, MgO 6.51%, insolubles 11.00% (2); see Ref. 2 for further analyses

References: 1) MN/DOT Aggregate Unit files
2) Prokopovich; Schwartz. 1956, p. 15
3) Niles. [1988a], table 1

Main commodity: Crushed Carbonate Rock

County: Goodhue

Status: Abandoned (1965) (1)

Past operator/owner: Grant Fredrickson (1965) (1)

MN/DOT source no: 25084

Township name: Minneola

Location: T 110 R 16 W Sec 16 SE1/4 SE1/4 (1)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1)

Description: Limestone, thin to medium beds, shale seams, argillaceous, face 6 ft, stripping 15 ft (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Goodhue

Quarry/pit name: Haders Quarry (1)

Status: Inactive

Past operator/owner: Valley Limestone Co. (see Producer Directory) (1969) (2); George Rustad (1968) (1)

MN/DOT source no: 25088

Township name: Wanimingo

Location: T 110 R 17 W Sec 1 NW1/4 NE1/4 (1,2)

Geologic age: Ordovician

Geologic formation: Prosser Fm. (1)

Description: Limestone, thin to medium beds, weathers buff, east face looks quite argillaceous, face 21 ft, stripping 15 to 20 ft on south face (1)

References: 1) MN/DOT Aggregate Unit files
2) Hogberg. 1969, p. 47

Main commodity: Crushed Carbonate Rock

County: Goodhue

Status: Inactive

Past operator/owner: Anderson ? (1)

Township name: Wanimingo

Location: T 110 R 17 W Sec 30 (1)

Physical test data: Available from MN/DOT Aggregate Unit (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Goodhue

Quarry/pit name: Schaffer Quarry (1)

Status: Inactive (1968), active (1965) (1)

Past operator/owner: Louis Schaffer (1968) (1)

MN/DOT source no: 25092

Township name: Belvidere

Location: T 111 R 14 W Sec 9 SE1/4 NW1/4 AND
T 111 R 14 W Sec 9 SW1/4 NE1/4 (1)
T 111 R 14 W Sec 9 SE1/4 SE1/4 NW1/4 (2)

Geologic age: Ordovician

Geologic formation: Prairie du Chien Gp. (1,2)

Description: Dolomite, thin to medium beds, rubbly appearance, buff to reddish, some chert present, face 15 ft upper portion and 22 ft lower portion, stripping 12 ft or less (1)

References: 1) MN/DOT Aggregate Unit files
2) Austin. 1963, p. 9

Main commodity: Crushed Carbonate Rock

County: Goodhue

Quarry/pit name: Baringer Quarry (1,2)

Status: Inactive since 1977 (2)

Past operator/owner: Holm Brothers Construction Co. (see Producer Directory) (1,2); Baringer, owner (1)

Township name: Belle Creek

Location: T 111 R 16 W Sec 21 SW1/4 SE1/4 SE1/4 (1)

References: 1) USBM. [1980], MILS
2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock

County: Goodhue

Status: Inactive

Past operator/owner: Mann Construction Co. (1969) (1)

Township name: Belle Creek

Location: T 111 R 16 W Sec 21 SW1/4 SE1/4 (1)

References: 1) Hogberg. 1969, p. 44

Main commodity: Crushed Carbonate Rock

County: Goodhue

Quarry/pit name: Tongen Quarry (1)

Status: Inactive

Past operator/owner: Oscar Tongen (1968) (1); Quarve & Anderson Co. (see Producer Directory) (1965) (1)

MN/DOT source no: 25082

Township name: Belle Creek

Location: T 111 R 16 W Sec 28 NE1/4 NW1/4 (1)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1)
Description: Limestone, argillaceous, thin to thick beds (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Goodhue
Status: Inactive
MN/DOT source no: 25112
Location: T 111 R 17 W Sec 5 SE1/4 SW1/4 (1)
Geologic age: Ordovician
Geologic formation: Prosser Fm. (1)
Description: Limestone, stripping 10 to 12 ft (1)
Uses of commodity: Crushed rock (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Goodhue
Quarry/pit name: Wagner Hill Quarry (1)
Status: Inactive
MN/DOT source no: 25118
Township name: Leon
Location: T 111 R 17 W Sec 8 NW1/4 NW1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Goodhue
Quarry/pit name: Sogn Quarry (1)
Status: Inactive (1968), active (1965) (1)
Past operator/owner: Arnold Wiberg (1968) (1); Quarve & Anderson Co. ? (see Producer Directory) (1965) (1)
MN/DOT source no: 25093
Township name: Leon
Location: T 111 R 17 W Sec 19 NW1/4 SW1/4, LOT 9 (1)
Geologic age: Ordovician
Geologic formation: Prosser Fm. and Stewartville Fm. ? (1)
Description: Medium to massive beds separated by thin shale seams, weathers to buff, face 45 ft on east face, stripping 6 to 12 ft (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Goodhue
Quarry/pit name: Faith Quarry (1)
Status: Inactive
Past operator/owner: Kilmeyer Construction Co. (see Producer Directory) (1978) (1)
Township name: Warsaw

Location: T 111 R 18 W Sec 5 NW1/4 (1)
References: 1) USBM. [1979], MILS

Main commodity: Crushed Carbonate Rock
County: Goodhue
Quarry/pit name: Fundanet Quarry (1)
Alternate name: Wangs Quarry (2)
Status: Inactive
Past operator/owner: Kilmeyer Construction Co. - operator (see Producer Directory), Albert Fundanet - owner (1968) (1)
MN/DOT source no: 25102
Township name: Warsaw
Location: T 111 R 18 W Sec 5 SE1/4 NE1/4 (1-3)
Location comments: Quarry near Wangs (3)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1-3)
Description: Limestone, thin and medium bedded, argillaceous, with shale seams, face 9.5 ft, stripping 1 to 2 ft on south face to 10 ft on north face (1); see Ref. 3 for brief section description
Uses of commodity: Crushed rock (1)
Remarks: Quarry is shallow, but extensive, runs generally E-W (1)
References: 1) MN/DOT Aggregate Unit files
 2) Dokken. 1987, p. 194
 3) Mossler. 1971

Main commodity: Crushed Carbonate Rock
County: Goodhue
Quarry/pit name: Hedein Quarry (1)
Status: Inactive
MN/DOT source no: 25121
Township name: Warsaw
Location: T 111 R 18 W Sec 16 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Goodhue
Quarry/pit name: Svien Quarry (1)
Status: Inactive (1968), active (1965) (1)
Past operator/owner: Quarve & Anderson Co. ? (see Producer Directory), Svien (1965) (1)
MN/DOT source no: 25091
Township name: Warsaw
Location: T 111 R 18 W Sec 17 NE1/4 SE1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)

Description: Limestone, thin to medium beds, argillaceous, 8 ft exposed, stripping 1 ft on west face to 25 ft shale on east face (1)

Physical test data: Available from MN/DOT Aggregate Unit (1)

Uses of commodity: Crushed rock (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Goodhue

Status: Inactive (1968) (1)

MN/DOT source no: 25114

Location: T 112 R 13 W Sec 32 SE1/4 NW1/4 (1)

Geologic age: Ordovician

Geologic formation: Shakopee-Oneota Fms. (1)

Description: Dolomite, medium to thick beds, rubbly, buff, 18 ft face, stripping mostly under 5 ft (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Goodhue

Quarry/pit name: Fluegers Quarry (2,3)

Alternate name: Zignego Quarry (1)

Status: Inactive since 1985 (3)

Past operator/owner: R & C Trucking, Inc. (3); Joseph Zignego (1968) (1)

MN/DOT source no: 25100

Township name: Hay Creek

Location: T 112 R 14 W Sec 5 SW1/4 SE1/4 (1)
T 112 R 14 W Sec 5 SE1/4 (2)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1,2)

Description: Dolomitic limestone (2); thin to medium beds, looks arenaceous, poorly exposed, buff to reddish in color, rubbly, face 15 to 22 ft, stripping 5-15 ft (1)

Physical test data: Available from U.S. Army Corps of Engineers (2)

References: 1) MN/DOT Aggregate Unit files
2) U.S. Army Corps of Engineers files
3) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock

County: Goodhue

Quarry/pit name: Satren Quarry (1)

Status: Inactive

Past operator/owner: Mann Construction Co. (1964) (1,2); Dressen, owner (1968), Fred Buck (1921) (1)

MN/DOT source no: 25080

Township name: Featherstone

Location: T 112 R 15 W Sec 36 SW1/4 NE1/4 (1,2)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1)

Description: Dolomite, 35 ft face; lower 10 ft, dolomitic sandstone and sandy dolomite; middle 16 ft, medium to thin bedded, mainly a medium, hard silty dolomite; upper 4 ft, medium to thick bedded, sandy or silty dolomite (1)

Physical test data: Available from MN/DOT Aggregate Unit (1)

References: 1) MN/DOT Aggregate Unit files
2) Hogberg, 1969, p. 44

Main commodity: Crushed Carbonate Rock

County: Goodhue

Quarry/pit name: Martinson Quarry (1,2)

Status: Inactive

Past operator/owner: Kilmeyer Construction Co. (see Producer Directory) (1978) (2); Mann Construction Co. (1969) (1,3); Martinson and Nelson, owners (1968) (1)

MN/DOT source no: 25111

Township name: Vasa

Location: T 112 R 16 W Sec 22 SE1/4 SW1/4 (1-3)
T 112 R 16 W Sec 22 SW1/4 SW1/4 (3)

Geologic age: Ordovician

Geologic formation: Shakopee and Oneota Fms. (1)

Description: Dolomite, thin to thick beds, shale bed about half way up face, thick beds near top, looks shaly, buff colored, face 45 ft, stripping varies 10 to 18 ft (1)

Physical test data: Available from MN/DOT Aggregate Unit (1)

References: 1) MN/DOT Aggregate Unit files
2) USBM. [1979], MILS
3) Hogberg, 1969, p. 44

Main commodity: Crushed Carbonate Rock

County: Goodhue

Quarry/pit name: Cannon Falls Quarry (1)

Status: Inactive

Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1979) (1)

Township name: Cannon Falls

Location: T 112 R 17 W Sec 8 SE1/4 NE1/4 (1)

References: 1) USBM. [1980], MILS

Main commodity: Crushed Carbonate Rock

County: Goodhue

Quarry/pit name: Sande Quarry (1,2)

Status: Inactive since 1977 (2)

Past operator/owner: Kilmeyer Construction Co. (see Producer Directory) (1,2)

Location: T 112 R 17 W Sec 15 NW1/4 NE1/4 (1,3)

Geologic age: Ordovician

Geologic formation: Shakopee Fm. (3)

References: 1) USBM. [1979], MILS
2) USDL. MSHA mine reference list

3) Mossler. Field notes on Goodhue County highway map

Main commodity: Crushed Carbonate Rock
County: Goodhue
Quarry/pit name: Johnson Quarry (1,2)
Status: Inactive
Past operator/owner: Mann Construction Co. (1964, 1975) (1,2); Leonard Johnson (1968) (1)
MN/DOT source no: 25110
Township name: Cannon Falls
Location: T 112 R 17 W Sec 15 NE1/4 NW1/4 (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: Dolomite, 33 ft face, mostly medium beds, gray to buff, slightly pinkish, all of face looks very weathered and rubbly, some very thin green shale beds, many sand seams, stripping 8 ft of red drift (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Goodhue
Quarry/pit name: Schweich Quarry (1)
Status: Inactive (1965) (1)
Past operator/owner: Wm. Schweich, owner (1968) (1)
MN/DOT source no: 25103
Township name: Cannon Falls
Location: T 112 R 17 W Sec 18 SW1/4 SE1/4 (1,2)
T 112 R 17 W Sec 18 S1/2 SE1/4 (3,4)
Location comments: Quarry 0.25 miles east of old U.S. Hwy. 52, at south edge of Cannon Falls (2,6)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1-5,7)
Description: Limestone, 12 ft from floor to overlying Carimona bentonite, 3.5 ft of interbedded limestone and shale above, limestone argillaceous, thin to medium beds, gray weathers to buff, stripping 6 to 12 ft shale and soil (1); see Refs. 4 and 7 for section descriptions
References: 1) MN/DOT Aggregate Unit files
2) Swain; Cornell. 1987, p. 102, 103
3) Dokken. 1987, p. 194
4) Mossler. 1971
5) Prokopovich; Schwartz. 1957, p. 52
6) Cornell. 1956, p. 3
7) Ford. 1958, p. 98-100

Main commodity: Crushed Carbonate Rock

County: Goodhue
Quarry/pit name: Langsdorf Quarry (1)
Status: Inactive
Past operator/owner: David Langsdorf (1967) (1)
MN/DOT source no: 25117
Township name: Cannon Falls
Location: T 112 R 17 W Sec 36 SW1/4 NE1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Goodhue
Quarry/pit name: Barn Bluff Quarry (1)
Status: Abandoned (1965) (1)
MN/DOT source no: 25079
Location: T 113 R 14 W Sec 29 NE1/4 NE1/4 (1)
Location comments: In Red Wing city limits (1965) (1)
Geologic age: Ordovician
Geologic formation: Prairie du Chien Gp. (1)
Description: Dolomite, medium to massive bedded, buff colored, face 40 to 50 ft, stripping 1 to 2 ft (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Goodhue
Status: Inactive
Past operator/owner: Oleson & Company (1888) (1)
Location: T 113 R 14 W
Location comments: Red Wing (1); (T., R. locations determined from Ref. 1, plate 33)
Description: Magnesian lime, has only a small percent of insolubles (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell; Upham. 1888, p. 54, plate 33

Main commodity: Crushed Carbonate Rock
County: Goodhue
Quarry/pit name: Bjork Quarry (1)
Status: Inactive
Past operator/owner: Johannes Johnson, owner and A. Bjork, operator (1918) (1)
Location: T 113 R 14 W
Location comments: Near east Seventh St., Red Wing, quarry is about a half mile from the Chicago, Milwaukee, & St. Paul Railway track (1); (T., R. locations determined from Ref. 2, plate 33)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: Fine-grained, even textured dolomite, containing a few quartz grains (1)

Chemical analyses: CaCO₃ 50%, MgCO₃ 39.79%, insoluble in HCl 6.02% (1)
Uses of commodity: Riprap, range rock, lime (1)
References: 1) Bowles. 1918, p. 167
 2) Winchell; Upham. 1888, plate 33

Main commodity: Crushed Carbonate Rock
Other commodities: Dimension Carbonate Rock
County: Goodhue
Status: Inactive
Past operator/owner: Danielson and Betcher (1884) (1)
Location: T 113 R 14 W
Location comments: At Red Wing, in the upper part of the bluffs (1); (T., R. locations determined from Ref. 1, plate 33)
Description: Lower magnesian limestone (1)
Uses of commodity: Quicklime, building stone (1)
References: 1) Winchell; Upham. 1888, p. 53, 54, plate 33

Main commodity: Crushed Carbonate Rock
Other commodities: Dimension Carbonate Rock
County: Goodhue
Quarry/pit name: Lillyblad Quarry (1)
Status: Inactive
Past operator/owner: Fred Glover, owner and Gust Lillyblad, operator (1918) (1)
Location: T 113 R 14 W
Location comments: Close to the Dahl Quarry (1); (T., R. locations determined from Ref. 2, plate 33)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Uses of commodity: Quarried extensively for lime, with a small production of riprap and building stone (1)
References: 1) Bowles. 1918, p. 167
 2) Winchell; Upham. 1888, plate 33

Main commodity: Crushed Carbonate Rock
Other commodities: Dimension Carbonate Rock
County: Goodhue
Status: Inactive
Past operator/owner: G. A. Carlson (1884) (1)
Location: T 113 R 14 W
Location comments: In Soren Bluff near river at Red Wing, in the upper part of the bluffs (1); (T., R. locations determined from Ref. 1, plate 33)
Description: Lower Magnesian limestone (1)
Uses of commodity: Quicklime, building stone (1)
References: 1) Winchell; Upham. 1888, p. 36, 53, 54, plate 33

Main commodity: Crushed Carbonate Rock

County: Goodhue
Quarry/pit name: Mann Quarries (3)
Alternate name: Mann Construction Co. Quarry (2)
Status: Inactive since 1975 (3)
Past operator/owner: Mann Construction Co. (2,3)
MN/DOT source no: 25115
Township name: Welch
Location: T 113 R 16 W Sec 11 N1/2 NE1/4 (1,2)
 T 113 R 16 W Sec 11 NE1/4 (4,5)
Location comments: Quarry located at the base of a hill (5)
Geologic age: Ordovician
Geologic formation: Shakopee and Oneota Fms. (1,4,5)
Description: Shakopee Fm., New Richmond Mbr. 21 ft overlies Oneota dolomite 4 ft (4,5); thin to massive beds, light gray to buff (1)
Physical test data: Available from U.S. Army Corps of Engineers (2)
Uses of commodity: Riprap (1)
References: 1) MN/DOT Aggregate Unit files
 2) U.S. Army Corps of Engineers files
 3) USDL. MSHA mine reference list
 4) Webers; Austin. 1972, p. 70, 71
 5) Squillace. 1979, p. A-31

Main commodity: Crushed Carbonate Rock
County: Hennepin
Quarry/pit name: United States Government Quarry (1)
Date opened: 1907 (1)
Status: Inactive (1935) (2)
Past operator/owner: United States Government (1918) (1)
Location: T 28 R 23 W
Location comments: Quarry near Minnehaha Park on the Mississippi River bluff (1,2); (T., R. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2)
Description: "The rock is covered with 18 feet of glacial till. Its upper 6 feet consists of thin-bedded, alternating layers of limestone and shale, resting upon blue limestone beds that have a total thickness of about 30 feet. The rock contains many calcite-filled cavities and many fossils." (1)
Uses of commodity: Crushed stone (1)
References: 1) Bowles. 1918, p. 173
 2) Thiel; Dutton. 1935, p. 142

Main commodity: Crushed Carbonate Rock
Other commodities: Dimension Carbonate Rock
County: Hennepin
Status: Inactive; active (1936) (2)
Past operator/owner: Gopher Stone Co. (1921,1936) (1,2)
MN/DOT source no: 27-2
Location: T 29 R 24 W

Location comments: Johnson St. NE, Minneapolis (1,2); (exact location undetermined; T., R. locations determined from Mpls./St. Paul street map and county highway map)

Description: About 25 ft of limestone exposed in quarry (2)

Uses of commodity: Crushed rock, some used for exterior work on buildings (2)

References: 1) MN/DOT Aggregate Unit files
2) Schwartz. 1936, p. 121

Main commodity: Crushed Carbonate Rock

Other commodities: Dimension Carbonate Rock

County: Hennepin

Quarry/pit name: Minnesota Crushed Stone Co. Quarry (1-5)

Status: Inactive

Past operator/owner: Minnesota Crushed Stone Co. (1910) (1-5)

Location: T 29 R 24 W Sec 13

Location comments: Quarry at 1500 Johnson St. NE, Minneapolis (1-4); (T., R., Sec. locations determined from Mpls./St. Paul street map and county highway map)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1-4)

Description: Overburden 6 to 10 ft removed, "The upper 4 feet is thin-bedded yellow limestone, followed by 6 feet of blue gray and 14 to 18 feet of hard blue limestone." (3); see Refs. 1 and 2 for stratigraphic section descriptions

Chemical analyses: See Refs. 2-4 for chemical analyses

Physical test data: See Refs. 1 and 2 for physical test data

Uses of commodity: Main product is crushed rock for concrete and ballast, some ground rock, some unusually fine building stone (1,2)

References: 1) Thiel; Dutton. 1935, p. 139, 140
2) Stauffer; Thiel. 1933, p. 24, 25, 71, 74
3) Bowles. 1918, p. 171
4) Stauffer; Thiel. 1914, p. 116, 119
5) Burchard. 1910, p. 283, 287

Main commodity: Crushed Carbonate Rock

County: Hennepin

Quarry/pit name: Landers-Norblom-Christenson Quarry (1,2)

Status: Inactive

Past operator/owner: Landers-Norblom-Christenson Co. (1914) (1,2)

Location: T 29 R 24 W Sec 13

Location comments: Quarry at 1501 Johnson St. NE, Minneapolis (1,2); (T., R., Sec. locations determined from Mpls./St. Paul street map and county highway map)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1)

Description: See Refs. 1 and 2 for stratigraphic section descriptions

References: 1) Thiel. 1944, p. 211
2) Stauffer; Thiel. 1914, p. 165

Main commodity: Crushed Carbonate Rock

Other commodities: Dimension Carbonate Rock

County: Hennepin

Quarry/pit name: Minneapolis Stone Co. Quarry (1,2)

Status: Inactive

Past operator/owner: Minneapolis Stone Co. (1910) (1,2); Minneapolis Crushed Stone Co. (3)

Location: T 29 R 24 W Sec 13 NW1/4

Location comments: In the vicinity of 15th Ave. NE, between Central Ave. and Johnson St. (1,3); (T., R., Sec. locations determined from Mpls./St. Paul street map and county highway map)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1)

Description: "About 10 feet of sandy soil is stripped. At the east side the upper 3 to 4 feet of the rock is yellow, but at the west all of it is blue. The total thickness of the beds is 14 to 18 feet." (1)

Chemical analyses: CaCO₃ 80.0%, MgCO₃ 6.10%, Al₂O₃ 1.32%, Fe₂O₃ 1.95%, insoluble 9.00% (1)

Uses of commodity: Crushed stone for concrete and roads was whole output in 1918 (1); extensively used for foundations, walls, riprap, roads (2)

References: 1) Bowles. 1918, p. 171, 172
2) Cooley. 1911, p. 9
3) Burchard. 1910, p. 283, 287

Main commodity: Crushed Carbonate Rock

County: Hennepin

Quarry/pit name: Blue Limestone Co. Quarry (1-4)

Status: Inactive

Past operator/owner: Blue Limestone Co. (1911) (1-4)

Location: T 29 R 24 W Sec 14 OR
T 29 R 24 W Sec 13

Location comments: Near the corner of Central Ave. and 15th Ave. NE, the Blue Limestone Co. owns 10 acres, most of which is now worked out (2); (T., R., Sec. locations determined from Mpls./St. Paul street map and county highway map)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1,2)

Description: "Ten feet of soil and 3 feet of thin-bedded yellow limestone overlies 11 feet of the dense blue limestone." (2); "The beds quarried by the Blue Limestone Company consist of a bluish-gray, fine-grained, thin, wavy-bedded limestone, much broken by joints and containing some argillaceous shaly material on the bedding planes. The rock weathers to a grayish-buff color. The material is so badly broken by nature that it is adapted only to being crushed." (4)

Chemical analyses: CaCO₃ 82.06%, MgCO₃ 3.72%, Al₂O₃ 1.04%, Fe₂O₃ 0.71%, insoluble 11.90% (2)

Uses of commodity: Crushed rock for general purposes and roads (2,3)

References: 1) Schwartz. 1936, p. 206
2) Bowles. 1918, p. 172
3) Cooley. 1911, p. 11
4) Burchard. 1910, p. 283, 287

Main commodity: Crushed Carbonate Rock
County: Hennepin
Status: Inactive
Past operator/owner: McCrossman (1)
MN/DOT source no: 27005
Location: T 119 R 21 W OR
T 119 R 22 W Sec 13
Location comments: Osseo (1); (T., R., Sec. locations determined from county highway map)
Physical test data: Available from MN/DOT Aggregate Unit - COPES files (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Meyers Quarry (1)
Status: Inactive (1965) (1)
Past operator/owner: Peter Meyers (1965) (1)
MN/DOT source no: 28061
Township name: Winnebago
Location: T 101 R 5 W Sec 3 SW1/4 NW1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Inactive (1965) (1)
Past operator/owner: Pete Lager, Hector Construction Co. ? (1965) (1)
MN/DOT source no: 28060
Township name: Winnebago
Location: T 101 R 5 W Sec 5 SW1/4 SW1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Inactive
Past operator/owner: Hector Construction Co., Kate Shulz (1965), Stoltz Estate (1921) (1)
MN/DOT source no: 28033
Township name: Winnebago
Location: T 101 R 5 W Sec 5 NW1/4 SW1/4 (1965) (1)
T 101 R 5 W Sec 5 NW1/4 NW1/4 (1921) (1)
Location comments: Caledonia (1)
Physical test data: Available from MN/DOT Aggregate Unit - ASIS and COPES files (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Lang Quarry (1,2)
Status: Inactive; active (1983) (2)
Past operator/owner: Hector Construction Co. (1,2)
MN/DOT source no: 28084
Township name: Winnebago
Location: T 101 R 5 W Sec 8 NW1/4 NW1/4 (1,2)
References: 1) MN/DOT Aggregate Unit files
2) Houston County Highway Dept. 1983, quarry list

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Thiele Quarry (1,2)
Status: Inactive since 1980 (2)
Past operator/owner: Roverud Construction Co. (see Producer Directory) (1-3)
Township name: Winnebago
Location: T 101 R 5 W Sec 20 SW1/4 SE1/4 (1,3)
Location comments: Near Eitzen (3)
References: 1) USBM. [1979], MILS
2) USDL. MSHA mine reference list
3) Hogberg. 1969, p. 46

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Abandoned (1965) (1)
Past operator/owner: Margaret Burmester (1965), Burnmaster (1921) (1)
MN/DOT source no: 28-31
Township name: Winnebago
Location: T 101 R 5 W Sec 20 SE1/4 (1)
Remarks: "Dead - near Deters Quarry" (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Abandoned (1965) (1)
Past operator/owner: Edward Beneke (1965), Thiele (1921) (1)
MN/DOT source no: 28-30
Township name: Winnebago
Location: T 101 R 5 W Sec 20 SW1/4 (1)
Remarks: "Dead - near Deters Quarry" (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Deters Quarry (1)

Status: Inactive; active (1965) (1)
Past operator/owner: G. A. Roverud (1965), Otto Voight (1921) (1)
MN/DOT source no: 28058
Township name: Winnebago
Location: T 101 R 5 W Sec 29 NW1/4 NE1/4 (1)
 T 101 R 5 W Sec 29 NE1/4 NW1/4 (2)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (2)
Description: Oneota dolomite, 80-100 ft face (2)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) Mossler. Field notes on Houston County highway map

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Inactive
Past operator/owner: Tom Graff (1921) (1)
MN/DOT source no: 28-29
Location: T 101 R 6 W Sec 2 NE1/4 NE1/4 (1)
Remarks: "T.H. No. 76 eliminated this quarry" (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Inactive
Location: T 101 R 6 W Sec 4 NW1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
References: 1) Niles. [1988c], table 3

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Guberud Quarry (2-4)
Alternate name: Pit No. 2207 (2)
Status: Inactive since 1984 (4)
Past operator/owner: Hector Construction Co. (3-5); Guberud (2)
MN/DOT source no: 28021
Location: T 101 R 6 W Sec 5 SE1/4 NE1/4 (1,2,5)
 T 101 R 6 W Sec 5 E1/2 NE1/4 (2)
 T 101 R 6 W Sec 5 NE1/4 SE1/4 (3)
Location comments: East of Spring Grove (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Description: See Ref. 1, table 19.1 for fossil distribution
Physical test data: Available from MN/DOT Aggregate Unit (2)
References: 1) Dokken. 1987, p. 194
 2) MN/DOT Aggregate Unit files
 3) USBM. [1979], MILS

4) USDL. MSHA mine reference list
 5) Hogberg. 1969, p. 42

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Inactive
Location: T 101 R 6 W Sec 7 NW1/4 NW1/4 (1,2)
Location comments: North of Hwy. 44 (2)
Geologic age: Ordovician
Geologic formation: Prosser Fm. (1,2)
Description: "...(quarry) located on the northern margin of the main ridge capped by the Prosser limestone. The rock exposed is badly weathered basal, thick-bedded shaly Prosser limestone (10-12 ft). The overburden is 1 to 2 feet thick. Somewhat lower on the slope there is a terrace on the Decorah shale." (1)
Chemical analyses: CaO 47.01%, MgO 0.64%, insoluble 9.38% (1)
Remarks: "Old small quarry" (1956) (1)
References: 1) Prokopovich; Schwartz. 1956, p. 37, 38
 2) Prokopovich; Schwartz. 1957, p. 36

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Rask Quarry (1)
Alternate name: Pit No. 2426 (1)
Status: Inactive (1965) (1)
Past operator/owner: Wm. Shisler, Olaf Rask (1965) (1)
MN/DOT source no: 28024
Location: T 101 R 6 W Sec 11 N1/2 SE1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Abandoned (1965) (1)
Past operator/owner: Elmer Morey (1965), Ole Rask (1921) (1)
MN/DOT source no: 28-28
Location: T 101 R 6 W Sec 22 NE1/4 NW1/4 (1)
Remarks: "Dead - used as a water pond" (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Fruechte Quarry (1,2)
Status: Inactive; active (1982) (2)
Past operator/owner: Louis Fruechte (1965) (1)
MN/DOT source no: 28071
Location: T 101 R 6 W Sec 23 SE1/4 NE1/4 (1,2)
Location comments: Across the road from Kruger Quarry (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)

References: 1) MN/DOT Aggregate Unit files
2) Houston County Highway Dept. 1982, quarry list

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Kruger Quarry (1)
Status: Inactive (1965) (1)
Past operator/owner: Leon Schmoll (1965) (1)
MN/DOT source no: 28072
Location: T 101 R 6 W Sec 23 NE1/4 SE1/4 (1)
Location comments: Across the road from Fruechte Quarry (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Bangs Quarry (1)
Status: Inactive (1965) (1)
Past operator/owner: Glenn Bangs (1965), Johnsrud (1921) (1)
MN/DOT source no: 28056
Location: T 101 R 6 W Sec 29 NE1/4 SW1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Nierling's Quarry (1,2)
Status: Inactive (1965) (1)
Past operator/owner: Carl J. Nierling (1965), Gunder Kleyseth (1921) (1)
MN/DOT source no: 28055
Location: T 101 R 6 W Sec 31 SW1/4 SW1/4 (1,2)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Arnston Quarry (1)
Status: Inactive (1965) (1)
Past operator/owner: Ester Buxengard (1965), G. P. Arnston (1921) (1)
MN/DOT source no: 28049
Location: T 101 R 7 W Sec 3 SW1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Description: Shakopee dolomite, 26.5 ft face, 5 ft stripping (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Vick Quarry (1)
Status: Inactive (1965) (1)
Past operator/owner: Gustav Vick (1)
MN/DOT source no: 28051
Location: T 101 R 7 W Sec 7 SW1/4 NE1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Armstrong Quarry (1)
Status: Inactive
Past operator/owner: G. P. Armstrong (1950) (1)
Township name: Spring Grove
Location: T 101 R 7 W
Location comments: Spring Grove (1); (T., R. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Description: Shakopee dolomitic limestone, 25 ft exposed, overlain by 11 ft of St. Peter sandstone (1); see Ref. 1 for section description
References: 1) Stauffer. 1950, p. 15, 16, location 18

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Roverud Quarry (1-3)
Status: Inactive; active (1983) (3)
Past operator/owner: Roverud Construction Co. (see Producer Directory) (2); G. A. Roverud (1965) (1)
MN/DOT source no: 28073
Location: T 101 R 7 W Sec 12 NW1/4 NW1/4 (1,3)
T 101 R 7 W Sec 12 NE1/4 NW1/4 (2)
Location comments: North of Spring Grove (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
2) USBM. [1979], MILS
3) Houston County Highway Dept. 1983, quarry list

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Myrah Quarry (1,4-6)
Status: Inactive (1965) (1)
Past operator/owner: Gilman Myrah (1965) (1)
MN/DOT source no: 28068
Township name: Spring Grove
Location: T 101 R 7 W Sec 12 SE1/4 SW1/4 (1-6)

Location comments: Quarry along the north side of County Rd. 6, 1 mile southeast of the center of Spring Grove (6); north of C.S.A.H. 27, 0.5 miles east of Spring Grove (7)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (2,6,7)

Description: Thick-bedded, gray, Platteville limestone overlain by 15 ft of greenish-gray Decorah shale (2); see Ref. 6 for detailed stratigraphic section; Platteville limestone, 23 ft exposed (6); Ref. 7-9 contain descriptions of the fauna of the Decorah shale

Chemical analyses: CaO 41.80% and 43.61%, MgO 2.98% and 2.57%, insoluble 11.03% and 11.95% (2); see Ref. 2 for further analyses

References: 1) MN/DOT Aggregate Unit files
2) Prokopovich; Schwartz. 1956, p. 38
3) Prokopovich; Schwartz. 1957, p. 36
4) Weiss. 1955, p. 767
5) Weiss. 1957, p. 1053
6) Weiss. 1953, p. 225-232
7) Karklins. 1966, p. 15, 92
8) Karklins. 1969, p. 5, 6
9) Swain; Cornell. 1987, p. 102, 103

Main commodity: Crushed Carbonate Rock

County: Houston

Status: Inactive

Past operator/owner: Roverud Bros. (1)

Location: T 101 R 7 W Sec 17 NW1/4 NW1/4 (1)

References: 1) Hogberg. 1969, p. 46

Main commodity: Crushed Carbonate Rock

County: Houston

Quarry/pit name: Olsgard Quarry (1)

Alternate name: Olson Quarry (1)

Status: Inactive (1965) (1)

Past operator/owner: Clarence Olson (1965) (1)

MN/DOT source no: 28067

Location: T 101 R 7 W Sec 19 NW1/4 NW1/4 (1)

Physical test data: Available from MN/DOT Aggregate Unit (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Houston

Quarry/pit name: Underpass Quarry (1)

Alternate name: Harry Lommen Quarry (2); Pit No. 2243 (1)

Status: Inactive

Past operator/owner: Harry Lommen (1965); Horihan (1921) (1)

MN/DOT source no: 28052

Location: T 101 R 7 W Sec 20 N1/2 NE1/4 (1)
T 101 R 7 W Sec 20 NW1/4 NE1/4 (2)
T 101 R 7 W Sec 20 NW1/4 NE1/4 NE1/4 (3)

Location comments: See Ref. 4, fig. 15 for location map

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1,3)

Description: Platteville limestone (1); see Ref. 3 for trace fossil distribution

Physical test data: Available from MN/DOT Aggregate Unit (1) and U.S. Army Corps of Engineers (2)

Remarks: "Inactive as it is against the railroad right of way" (1965) (1)

References: 1) MN/DOT Aggregate Unit files
2) U.S. Army Corps of Engineers files
3) Dokken. 1987, p. 194
4) Sloan; Kolata. 1987, p. 93

Main commodity: Crushed Carbonate Rock

County: Houston

Quarry/pit name: Nelson Quarry (1)

Status: Inactive (1965) (1)

Past operator/owner: Wm. Nelson (1965), Hasemoen (1921) (1)

MN/DOT source no: 28054

Location: T 101 R 7 W Sec 28 NE1/4 NE1/4 (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Houston

Status: Inactive

Location: T 101 R 7 W Sec 36 SW1/4 SE1/4 (1)

Location comments: South of Spring Grove (1)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1)

Description: Ref. 1 describes the trace fossil distribution in the Platteville limestone

References: 1) Dokken. 1987, p. 194, locality 1

Main commodity: Crushed Carbonate Rock

County: Houston

Quarry/pit name: Hurley Quarry (1,3)

Status: Inactive; active (1983) (3)

Past operator/owner: Hector Construction Co., Inc. (1969) (2); Joe and Lloyd Hurley (1965) (1)

MN/DOT source no: 28077

Township name: Crooked Creek

Location: T 102 R 4 W Sec 11 NE1/4 NW1/4 (1-3)

Location comments: Near Brownsville (2)

References: 1) MN/DOT Aggregate Unit files
2) Hogberg. 1969, p. 41
3) Houston County Highway Dept. 1983, quarry list

Main commodity: Crushed Carbonate Rock

County: Houston

Quarry/pit name: Reno Quarry (1)
Status: Abandoned (1965) (1)
Past operator/owner: Bill Richards (1965) (1)
MN/DOT source no: 28-41
Township name: Crooked Creek
Location: T 102 R 4 W Sec 26 NE1/4 NE1/4 (1)
Remarks: Depleted (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Inactive (1965) (1)
Past operator/owner: Gerherd Bayer (1965), Houston County (1921) (1)
MN/DOT source no: 28062
Township name: Mayville
Location: T 102 R 5 W Sec 8 NW1/4 SE1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Inactive (1965) (1)
Past operator/owner: Village of Caledonia (1965), Caledonia State Bank (1921) (1)
MN/DOT source no: 28063
Township name: Mayville
Location: T 102 R 5 W Sec 17 SW1/4 NE1/4 (1)
Remarks: "Inactive - next to city dump" (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Heintz & Smith Quarry (1)
Status: Inactive (1965) (1)
Past operator/owner: Virgil Smith (1965) (1)
MN/DOT source no: 28064
Township name: Mayville
Location: T 102 R 5 W Sec 17 E1/2 SW1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Gengler Quarry (1)
Status: Inactive
Township name: Mayville
Location: T 102 R 5 W Sec 20 (1)
Geologic age: Ordovician

Geologic formation: Oneota Fm. (1)
Description: Dolomitic limestone (1)
Physical test data: Available from U.S. Army Corps of Engineers (1)
References: 1) U.S. Army Corps of Engineers files

Main commodity: Crushed Carbonate Rock
Other commodities: Dimension Carbonate Rock
County: Houston
Quarry/pit name: Gengler Quarry (1-4)
Status: Inactive; active (1979) (2)
Past operator/owner: Hector Construction Co. (2); Leonard Gengler (1965) (1); J. P. Gengler (1918) (4)
MN/DOT source no: 28078
Township name: Mayville
Location: T 102 R 5 W Sec 21 NW1/4 NE1/4 (1,2)
Location comments: Quarry 3-1/2 miles east of Caledonia (3)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (3)
Description: Oneota dolomite, 18.5 ft exposed, gray to buff (3); see Ref. 3 for section description
Physical test data: Available from MN/DOT Aggregate Unit (1)
Uses of commodity: Crushed aggregate (2); a good building stone (3); riprap (4)
References: 1) MN/DOT Aggregate Unit files
 2) USBM. [1979], MILS
 3) Stauffer; Thiel. 1914, p. 166
 4) Bowles. 1918, p. 173-175

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Abandoned (1965) (1)
Past operator/owner: Wm. Murphy (1965) (1)
MN/DOT source no: 28-35
Township name: Mayville
Location: T 102 R 5 W Sec 21 SE1/4 SE1/4 (1)
Remarks: Depleted (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Inactive
Past operator/owner: Peter Kreer (1884) (1)
Township name: Mayville
Location: T 102 R 5 W Sec 29 NE1/4 (1)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell and others. 1884, p. 235

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Inactive
Past operator/owner: Michael Blasen (1884) (1)
Location: T 102 R 6 W Sec 14
Location comments: 1.5 miles west of Caledonia (1); (T., R., Sec. locations determined from Ref. 1, plate 8)
Geologic age: Ordovician
Geologic formation: Trenton (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell and others. 1884, p. 235, plate 8

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Inactive (1965) (1)
Past operator/owner: Carl Oseth (1965), Mike Schmidt (1921) (1)
MN/DOT source no: 28057
Location: T 102 R 6 W Sec 17 SE1/4 SE1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Skitton Quarry (2)
Status: Inactive; active (1982) (2)
Past operator/owner: Skitton (1966) (1)
MN/DOT source no: 28082
Location: T 102 R 7 W Sec 14 NW1/4 SE1/4 (1988) (1)
T 102 R 7 W Sec 14 NE1/4 SE1/4 (1966) (1)
T 102 R 7 W Sec 13 NW1/4 SW1/4 (1966,1982) (1,2)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (3)
References: 1) MN/DOT Aggregate Unit files
2) Houston County Highway Dept. 1982, quarry list
3) Niles. [1988b], table 2

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Inactive
Past operator/owner: Olin Thompson (1965), Oscar Staupe (1921) (1)
MN/DOT source no: 28-18
Location: T 102 R 7 W Sec 16 SE1/4 NE1/4 (1)
Remarks: "Inactive quarry - a quarry possible anyplace" (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Houston
Status: Abandoned (1965) (1)
Past operator/owner: Peter Hegge (1965), Ed. Solum (1921) (1)
MN/DOT source no: 28-16
Location: T 102 R 7 W Sec 27 NE1/4 NW1/4 (1)
Remarks: Depleted (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Storlie Quarry (1)
Status: Inactive (1965) (1)
Past operator/owner: Alfred Storlie (1965), Alfred Starley (1921) (1)
MN/DOT source no: 28-17
Location: T 102 R 7 W Sec 28 SE1/4 SW1/4 (1)
Remarks: "Inactive quarry used as a water pond" (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Karlsbraaten Quarry (1,2)
Status: Inactive; active (1982) (2)
Past operator/owner: Martin Karlsbraaten (1965) (1)
MN/DOT source no: 28076
Location: T 102 R 7 W Sec 36 SW1/4 NE1/4 (1,2)
References: 1) MN/DOT Aggregate Unit files
2) Houston County Highway Dept. 1982, quarry list

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Abandoned (1965) (1)
Past operator/owner: Ambrosse McCormick (1965), Herman Miller (1921) (1)
MN/DOT source no: 28-39
Township name: Brownsville
Location: T 103 R 4 W Sec 3 NW1/4 NE1/4 (1)
Remarks: "Dead" (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
Other commodities: Dimension Carbonate Rock
County: Houston
Quarry/pit name: Baldwin Quarry (1,3)
Alternate name: Tippery Quarry (2)
Status: Inactive; active 1980 (2)
Past operator/owner: Hector Construction Co. until 1980 (2); Ivan Tippery (1965) (1); Charles Baldwin (1,3)

MN/DOT source no: 28041
Township name: Brownsville
Location: T 103 R 4 W Sec 6 SE1/4 SW1/4 (1)
Location comments: Near Hokah (1,3); a mile southwest of town (3)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: Soil 2-3 ft overlies 18.5 ft of yellow limestone which overlies 7 ft of gray limestone, "Of the two grades of stone the gray is somewhat sandy and friable and is of poorer quality than the yellow, though it may be used for foundation work. Under the microscope the gray rock is somewhat crystalline and contains a few grains of quartz. Where observed in foundation walls it is durable and attractive." (3)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Uses of commodity: Crushed rock (1,2); foundation stone (3)
References: 1) MN/DOT Aggregate Unit files
 2) USDL. MSHA mine reference list
 3) Bowles. 1918, p. 174

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Debold Quarry (1)
Status: Inactive
USGS quadrangle: La Crescent
Township name: Brownsville
Location: T 103 R 4 W Sec 6 SE1/4 (1)
 T 103 R 4 W Sec 6 NW1/4 SE1/4 (2)
Location comments: 1.7 miles westerly on Hwy. 44 from downtown Hokah, turning left off Hwy. 44 less than 1/2 mile on first gravel road (1)
Physical test data: Available from U.S. Army Corps of Engineers (1)
References: 1) U.S. Army Corps of Engineers files
 2) USGS. 1973, La Crescent quadrangle

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Sennes Quarry (1,2)
Status: Inactive; active (1982) (3)
Past operator/owner: Arthur Sennes (1965) (1)
MN/DOT source no: 28069
Township name: Brownsville
Location: T 103 R 4 W Sec 7 SW1/4 NW1/4 (1,2)
Location comments: Near Hokah (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) Houston County Highway Dept. 1982, quarry list

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Conniff Quarry (1)
Status: Inactive
Past operator/owner: Botcher Construction Co. (see Producer Directory) (1979) (1)
Township name: Hokah
Location: T 103 R 4 W Sec 10 NW1/4 (1)
References: 1) USBM. [1980], MILS

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Inactive
Past operator/owner: Samuel Pound (1884) (1)
Location: T 103 R 4 W Sec 12 (1)
Location comments: Sec. 12, Hokah (1); (T., R. locations determined from Ref. 1, plate 8)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell and others. 1884, p. 235

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Inactive
Past operator/owner: John Gross (1884) (1)
Location: T 103 R 4 W Sec 22 OR
 T 103 R 4 W Sec 23
Location comments: One mile northwest from Brownsville (1); (exact location undetermined; T., R., Sec. locations determined from Ref. 1, plate 8)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell and others. 1884, p. 235, plate 8

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Hanke Quarry (1)
Status: Inactive (1965) (1)
Past operator/owner: Glen Jostad (1965), Roy Hanke (1921) (1)
MN/DOT source no: 28065
Township name: Brownsville
Location: T 103 R 4 W Sec 26 NE1/4 NE1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston

Quarry/pit name: T.H. No. 44 RW Quarry (1)
Status: Inactive
Past operator/owner: State of Minnesota (1965) (1)
MN/DOT source no: 28042
Township name: Union
Location: T 103 R 5 W Sec 21 SW1/4 NW1/4 (1965) (1)
 T 103 R 5 W Sec 21 NW1/4 NW1/4 (1921) (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Scanlon Quarry (1)
Alternate name: Pit No. 1832 (1)
Status: Inactive (1965) (1)
Past operator/owner: M. W. Scanlon (1965) (1)
MN/DOT source no: 28019
Township name: Union
Location: T 103 R 5 W Sec 26 SE1/4 NW1/4 (1965) (1)
 T 103 R 5 W Sec 26 SE1/4 NE1/4 (1921) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Oak Ridge Quarry (1-3)
Alternate name: Pit No. 2420 (1)
Status: Inactive since 1975 (3)
Past operator/owner: Roverud Construction Co. (see Producer Directory) (2,3); Tenius Olson (1965) (1)
MN/DOT source no: 28023
Location: T 103 R 6 W Sec 6 SE1/4 NW1/4 (1,2)
 T 103 R 6 W Sec 6 NW1/4 (4)
Location comments: Near Houston (4)
Physical test data: Available from MN/DOT Aggregate Unit (1) and U.S. Army Corps of Engineers (4)
References: 1) MN/DOT Aggregate Unit files
 2) USBM. [1979], MILS
 3) USDL. MSHA mine reference list
 4) U.S. Army Corps of Engineers files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Holte Quarry (1)
Alternate name: Holty-Badger Quarry (2,3)
Status: Inactive since 1984 (3)
Past operator/owner: Hector Construction Co. (2,3); Holte (1965, 1921) (1)
MN/DOT source no: 28044
Location: T 103 R 6 W Sec 27 SW1/4 SE1/4 (1,2)
Physical test data: Available from MN/DOT Aggregate Unit (1)

References: 1) MN/DOT Aggregate Unit files
 2) USBM. [1979], MILS
 3) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Badger Hill Quarry (1,2)
Status: Inactive; active 1983 (3)
Past operator/owner: Hector Construction Co. (2); Anthony Lybeck (1965) (1)
MN/DOT source no: 28043
Township name: Sheldon
Location: T 103 R 6 W Sec 34 NE1/4 NE1/4 (1-3)
Physical test data: Available at MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) USBM. [1979], MILS
 3) Houston County Highway Dept. 1983, quarry list

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: McManiman Quarry (1,2)
Status: Inactive; active (1982) (2)
MN/DOT source no: 28087
Township name: Yucatan
Location: T 103 R 7 W Sec 8 W1/2 SW1/4 SE1/4 (2,3)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) Houston County Highway Dept. 1982, quarry list
 3) Houston County Planning and Zoning. 1989, personal communication

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Muhly Quarry (1-3)
Status: Inactive
Past operator/owner: Roverud Construction Co. (see Producer Directory) (1,2)
Location: T 103 R 7 W Sec 16 NW1/4 NE1/4 (1)
 T 103 R 7 W Sec 16 SE1/4 NE1/4 (3)
Location comments: Both east and west of road (3)
References: 1) USBM. [1979], MILS
 2) USDL. MSHA mine reference list
 3) Houston County Highway Dept. 1983, quarry list

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Overby Quarry (1,2)
Status: Inactive; active (1983) (2)
MN/DOT source no: 28089

Location: T 103 R 7 W Sec 16 N1/2 NE1/4 (2)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) Houston County Highway Dept. 1983, quarry list

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Abandoned (1963) (1)
Past operator/owner: Charles Dufield (1965), Erickson (1921) (1)
MN/DOT source no: 28-14
Location: T 103 R 7 W Sec 18 NE1/4 NW1/4 (1)
Remarks: "Dead - quarry filled in" (1963) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Inactive (1965) (1)
Past operator/owner: Harold Rostvold (1965), T. T. Brevig (1921) (1)
MN/DOT source no: 28046
Location: T 103 R 7 W Sec 28 SE1/4 NE1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Inactive
Past operator/owner: Henrietta Vollenwider (1965), Volraner (1921) (1)
MN/DOT source no: 28-6
Township name: La Crescent
Location: T 104 R 4 W Sec 4 NE1/4 SE1/4 (1965) (1)
 T 104 R 4 W Sec 4 NE1/4 (1921) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Inactive
Township name: La Crescent
Location: T 104 R 4 W Sec 22 NE1/4 SE1/4 (1,2)
Location comments: Near Mound Prairie (1,2)
References: 1) Hogberg. 1969, p. 39
 2) Hogberg. 1966, p. 31

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: South Ridge Quarry (1)
Status: Abandoned (1965) (1)
Past operator/owner: Houston County RW (1965) (1)
MN/DOT source no: 28-5

Location: T 104 R 5 W Sec 17 NW1/4 NW1/4 (1)
Remarks: Quarry adjacent to MN/DOT Source No. 28079, quarry not active as proposed county road will pass through it (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Chicken Ridge Quarry (1)
Status: Inactive; active (1965) (1)
Past operator/owner: Wm. Goede (1965), Adolph Crummrie (1921) (1)
MN/DOT source no: 28040
Township name: Mound Prairie
Location: T 104 R 5 W Sec 22 NE1/4 SE1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Gap Hill Quarry (1,2)
Status: Inactive since 1985 (1)
Past operator/owner: Botcher Construction Co. (see Producer Directory) (1,2)
Township name: Mound Prairie
Location: T 104 R 5 W Sec 34 NW1/4 SE1/4 (1)
 T 104 R 5 W Sec 34 NE1/4 SW1/4 (3)
Location comments: Quarry 3-1/4 miles west of Hokah, to the west of Hwy. 16 (3)
Geologic formation: Stockton Hill Fm. (3)
Description: Argillaceous dolostone (3); see Ref. 3 for stratigraphic section description
Chemical analyses: See Ref. 3, table 26 for chemical analyses
References: 1) USBM. [1979], MILS
 2) USDL. MSHA mine reference list
 3) McGannon. 1960, p. 238-243

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Eyler Quarry (1)
Status: Inactive; active (1965) (1)
Past operator/owner: Carl Eyler (1965) (1)
MN/DOT source no: 28074
Township name: Mound Prairie
Location: T 104 R 5 W Sec 34 SE1/4 SE1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Sprague Quarry (1)

Status: Inactive (1965) (1)
Past operator/owner: Robert Sprague (1965) (1)
MN/DOT source no: 28075
Township name: Mound Prairie
Location: T 104 R 5 W Sec 34 SE1/4 NW1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Vehrenkamp Quarry (1,2)
Status: Inactive since 1975 (2)
Past operator/owner: Hector Construction Co. (1965) (2)
MN/DOT source no: 28083
Location: T 104 R 6 W Sec 1 NE1/4 NE1/4 (1)
References: 1) MN/DOT Aggregate Unit files
 2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Anderson Quarry (1)
Alternate name: Two by Four Quarry (1,2)
Status: Inactive since 1984 (2)
Past operator/owner: Hector Construction Co. (2); Arthur Anderson (1965) (1)
MN/DOT source no: 28039
Location: T 104 R 6 W Sec 21 NE1/4 SE1/4 (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: Oneota dolomite (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Kelly Bros. Quarry (1,2)
Status: Inactive
MN/DOT source no: 28085
Location: T 104 R 6 W Sec 27 (1)
 T 104 R 6 W Sec 27 SW1/4 SW1/4 (2)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) Houston County Highway Dept. 1983, quarry list

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Peterson Quarry (1)

Status: Inactive
Location: T 104 R 6 W Sec 32 SW1/4 (1)
Location comments: One mile SW of Houston (1); (if given location is correct this quarry is actually NW of Houston)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Vineger Hill Quarry (1,2)
Alternate name: Pit No. 2445 (1)
Status: Inactive; active (1982) (2)
Past operator/owner: Hector Construction Co. (1,2); Archie Dobler (1921) (1)
MN/DOT source no: 28025
Location: T 104 R 7 W Sec 11 NW1/4 SE1/4 (1,2)
 T 104 R 7 W Sec 11 N1/2 NW1/4 SE1/4 (1921) (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) Houston County Highway Dept. 1982, quarry list

Main commodity: Crushed Carbonate Rock
County: Houston
Quarry/pit name: O'Donnell Quarry (1)
Status: Inactive
Past operator/owner: O'Donnell Bros. (1965) (1)
MN/DOT source no: 28081
Location: T 104 R 7 W Sec 17 NE1/4 SE1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Houston
Status: Inactive
Past operator/owner: Ole Timro (1884) (1)
Township name: Money Creek
Location: T 104 R 7 W Sec 24 (1)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell and others. 1884, p. 235

Main commodity: Crushed Carbonate Rock
County: Le Sueur
Quarry/pit name: Henry Komstz Pit (1)
Status: Inactive
Past operator/owner: Komstz Construction Co. (1978) (1)

Location: T 109 R 26 W Sec 5 SE1/4 SE1/4 (1)
Geologic age: Ordovician
Geologic formation: (Oneota Fm. ?)
References: 1) USBM. [1979], MILS

Main commodity: Crushed Carbonate Rock
County: Le Sueur
Date opened: 1876 (1)
Status: Inactive
Past operator/owner: Conrad Smith (1884) (1)
Township name: Kasota
Location: T 109 R 26 W Sec 17 (1)
Location comments: At Caroline Station, near the center of section 17 (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell and others. 1884, p. 646

Main commodity: Crushed Carbonate Rock
County: Le Sueur
Status: Inactive
Past operator/owner: George Clapp (1874) (1-3)
Township name: Kasota
Location: T 109 R 26 W Sec 17 (1,3)
Location comments: Lime kiln and quarry are 5 miles below Mankato, on section 17, Kasota township, about a mile from the Minnesota River (3); a third of a mile southeast of Caroline Station (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1,3)
Description: A fine, gray limestone, very firm, little porous (3); see Refs. 1 and 3 for further description
Chemical analyses: See Ref. 1 for chemical analyses
Uses of commodity: Quicklime (1-3)
Remarks: "...the finest and purest limestone hitherto seen in the Shakopee stone." (3)
References: 1) Winchell and others. 1884, p. 167, 638, 646
 2) Winchell. 1880, p. 22
 3) Winchell; Peckham. 1874, p. 144, 205, 206

Main commodity: Crushed Carbonate Rock
County: Le Sueur
Status: Inactive
Location: T 110 R 26 W Sec 28
Location comments: Quarry and lime kiln beside railroad, about one mile south of East St. Peter (1); (T., R., Sec. locations determined from Ref. 1, plate 30)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1); (Oneota Fm. ?)

Description: The upper 2 to 5 ft of the terraces of Shakopee limestone, yields excellent magnesian lime, of dark or yellowish brown color (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell and others. 1884, p. 646, plate 30

Main commodity: Crushed Carbonate Rock
County: Le Sueur
Status: Inactive
Location: T 110 R 26 W Sec 29
Location comments: About a mile above Kasota (1); (T., R., Sec. locations determined from Ref. 2, plate 30)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1); (Oneota Fm.)
Uses of commodity: Quicklime (1)
References: 1) Winchell; Peckham. 1874, p. 205
 2) Winchell and others. 1884, plate 30

Main commodity: Crushed Carbonate Rock
County: Le Sueur
Quarry/pit name: Swarthout/Swartout Pit (1)
Status: Inactive
Past operator/owner: Ed Swarthout, Inc. (1979) (1); Ed Swartout (1959) (2,3)
Location: T 110 R 26 W Sec 33 S1/2 SW1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: (Oneota Fm.)
Uses of commodity: Crushed rock for road use (3)
References: 1) USBM. [1979], MILS
 2) Hogberg. 1964, p. 30
 3) Sikich. 1959, p. 533

Main commodity: Crushed Carbonate Rock
County: Le Sueur
Quarry/pit name: Babcock Quarry (1)
Status: Inactive
Past operator/owner: Babcock Stone Co., Ed Swarthout (1978) (1)
Location: T 110 R 26 W Sec 33 NE1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: (Oneota Fm.)
References: 1) USBM. [1979], MILS

Main commodity: Crushed Carbonate Rock
County: Le Sueur
Status: Inactive
Past operator/owner: Charles Schwartz (1884) (1)
Township name: Ottawa
Location: T 111 R 26 W Sec 27 NW1/4 (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1); (Oneota Fm. ?)

Uses of commodity: Quicklime (1)
References: 1) Winchell and others. 1884, p. 639, 646, plate 30

Main commodity: Crushed Carbonate Rock
County: Le Sueur
Status: Inactive
Past operator/owner: John Rinshed (1875) (1)
Location: T 111 R 26 W
Location comments: At Ottawa (1); (T., R. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: (Oneota Fm.)
Description: Magnesian limestone, very much like the Shakopee stone, 8 ft exposed (1); see Ref. 1 for further description
Uses of commodity: Quicklime (1,2)
Remarks: Several lime kilns operated at Ottawa (2)
References: 1) Winchell; Peckham. 1874, p. 141-143
 2) Froelich. 1961, p. 147

Main commodity: Crushed Carbonate Rock
County: Mower
Quarry/pit name: Hickok Quarry (1-3,5)
Status: Inactive
Past operator/owner: E. H. Hickok (1965), Osmundson Brothers Contractors, Inc. (see Producer Directory) (1941), Leroy Hickok (1921) (1)
MN/DOT source no: 50070
Location: T 101 R 14 W Sec 27 SW1/4 SE1/4 (1)
 T 101 R 14 W Sec 27 SE1/4 (2-4)
Geologic age: Devonian
Geologic formation: Cedar Valley Fm. (1-5)
Description: High-grade Cedar Valley limestone (2,5); see Ref. 3 for section description
Chemical analyses: See Refs. 2 and 3 for chemical analyses; high calcium carbonate content (5)
Remarks: More than one quarry in the SE 1/4 (2-4)
References: 1) MN/DOT Aggregate Unit files
 2) Prokopovich; Schwartz. 1956, p. 27
 3) Thiel; Stauffer. 1947, p. 7, 8, 11, 13
 4) Kohls. 1961, p. 191
 5) Stauffer; Thiel. 1933, p. 54

Main commodity: Crushed Carbonate Rock
County: Mower
Quarry/pit name: Hickok Calcium White Rock Quarry (3)
Status: Inactive since 1975 (3)
Past operator/owner: Hickok Calcium White Rock Co. (1-3,6)
Location: T 101 R 14 W Sec 27 NW1/4 SW1/4 (1)
 T 101 R 14 W Sec 27 SW1/4 (2,4,5)
Geologic age: Devonian

Geologic formation: Cedar Valley Fm. (4,5)
Description: Hard dense white limestone (4)
Chemical analyses: CaO 54.38, MgO 0.35, insolubles 1.44, Fe 0.32 (4); see Ref. 4 for further analyses
Uses of commodity: Flux, mineral food, poultry grit, rubble (6)
References: 1) Hogberg. 1969, p. 42
 2) Hogberg. 1966, p. 33
 3) USDL. MSHA mine reference list
 4) Prokopovich; Schwartz. 1956, p. 27, 28
 5) Prokopovich; Schwartz. 1957, p. 41
 6) Sikich. 1959, p. 531

Main commodity: Crushed Carbonate Rock
County: Mower
Status: Inactive (1961) (2)
Past operator/owner: Ethel Hanson Estate (1966) (1)
MN/DOT source no: 50071
Location: T 101 R 14 W Sec 28 NE1/4 NE1/4 (1,2)
Geologic age: Devonian
Geologic formation: Cedar Valley Fm. (2)
Description: Quarry exposes about 20 ft of white lithographic and buff, fine-grained Coralville limestone, the quarry wall shows a definite monoclinical structure (2)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Quarry partially water-filled (1961) (2)
References: 1) MN/DOT Aggregate Unit files
 2) Kohls. 1961, p. 190, station 49

Main commodity: Crushed Carbonate Rock
County: Mower
Status: Inactive
Past operator/owner: Judson A. Palmer (1884) (1)
Location: T 101 R 14 W
Location comments: Near Le Roy, in the river bluff (1); (T., R. locations determined from Ref. 1, plate 12)
Geologic age: Devonian (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell; Upham. 1888, p. 357, plate 12

Main commodity: Crushed Carbonate Rock
County: Mower
Quarry/pit name: Fowler and Pay Quarry (1-5)
Alternate name: Roverud Quarry (1)
Status: Inactive (1966) (1)
Past operator/owner: G. A. Roverud (1966), Fowler & Pay (1921) (1)
MN/DOT source no: 50065
Location: T 101 R 14 W Sec 35 SW1/4 SW1/4 (1)
Location comments: Quarry 1 mile east of Le Roy (5)
Geologic age: Devonian
Geologic formation: Cedar Valley Fm. (1-5)

Description: High-grade Cedar Valley limestone (2); 11 ft exposed (3,4); see Refs. 3-5 for section descriptions

Chemical analyses: CaO 55.54%, MgO 0.35% (2,3); samples yielded: CaCO₃ 60.69%, 98.15%, and 97.76%; MgCO₃ 38.56%, 1.25%, and 1.38%; total insolubles 2.60%, 0.66%, and 1.01% (4,5); see Refs. 2-5 for further analyses

Physical test data: Available from MN/DOT Aggregate Unit (1)

Uses of commodity: Quicklime (1933) (4)

References: 1) MN/DOT Aggregate Unit files
2) Prokopovich; Schwartz. 1956, p. 27
3) Thiel; Stauffer. 1947, p. 9, 11, 13
4) Stauffer; Thiel. 1933, p. 54, 66, 67, 72
5) Stauffer; Thiel. 1914, p. 115, 117, 177

Main commodity: Crushed Carbonate Rock

County: Mower

Quarry/pit name: Roverud Quarry (1)

Alternate name: Le Roy Quarry (1)

Status: Inactive (1966) (1)

Past operator/owner: G. A. Roverud (1966), Roverud, Leroy (1941) (1)

MN/DOT source no: 50072

Location: T 101 R 14 W Sec 35 NW1/4 SW1/4 (1,2)

Geologic age: Devonian

Geologic formation: Cedar Valley Fm. (1,2)

Description: "...about 22 feet of white, lithographic and buff, fine-grained Coralville limestone. The limestone is overlain by about five feet of ferruginous Cretaceous quartzite." (2)

Physical test data: Available from MN/DOT Aggregate Unit (1)

References: 1) MN/DOT Aggregate Unit files
2) Kohls. 1961, p. 191

Main commodity: Crushed Carbonate Rock

County: Mower

Status: Inactive

Past operator/owner: Ray Reuter (1966), Lerud (1921) (1)

MN/DOT source no: 50-3

Location: T 101 R 17 W Sec 28 SE1/4 NE1/4 (1)

Location comments: Small picket next to farm buildings (1966) (1)

Geologic age: Devonian

Geologic formation: Cedar Valley Fm. (1)

Physical test data: Available from MN/DOT Aggregate Unit (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Mower

Status: Inactive (1966) (1)

Past operator/owner: Newell Nelson (1966), Peterson (1921) (1)

MN/DOT source no: 50067

Location: T 101 R 17 W Sec 31 NW1/4 SE1/4 (1)

Geologic age: Devonian

Geologic formation: Cedar Valley Fm., Coralville Mbr. (1,2)

Description: "...about 12 feet of highly weathered, buff, fossiliferous dolomite and greenish-gray, shaly dolomite. These beds are part of the Coralville member of the Cedar Valley formation." (2)

References: 1) MN/DOT Aggregate Unit files
2) Kohls. 1961, p. 186

Main commodity: Crushed Carbonate Rock

County: Mower

Quarry/pit name: Lyle Quarry (1,2)

Alternate name: Beach Quarry (1)

Status: Inactive; active (1966) (1)

Past operator/owner: Osmundson Brothers Contractors, Inc. (see Producer Directory) (1961) (3); Z. C. Beach (1966) (1)

MN/DOT source no: 50068

Location: T 101 R 18 W Sec 33 NW1/4 SW1/4 (1-3)
T 101 R 18 W Sec 33 SW1/4 NW1/4 (1)

Location comments: Near Lyle (2)

Geologic age: Devonian

Geologic formation: Cedar Valley Fm. (1-3)

Description: About 20 ft of highly fossiliferous, buff, fine-grained Coralville dolomite (3); see Ref. 3 for stratigraphic section; see Ref. 2, fig. A9 for lithologic data

Chemical analyses: See Ref. 3 for percentage of carbonates and insolubles in each unit

Physical test data: Available from MN/DOT Aggregate Unit (1)

References: 1) MN/DOT Aggregate Unit files
2) Mossler. 1987, p. 27, 39
3) Kohls. 1961, p. 139-141, 186

Main commodity: Crushed Carbonate Rock

County: Mower

Quarry/pit name: Klemmer Quarry (1)

Status: Inactive (1966) (1)

Past operator/owner: Glen Lowe (1966), Klemmer (1921), Thompson (1921) (1)

MN/DOT source no: 50063

Location: T 102 R 17 W Sec 26 NE1/4 NE1/4 (1)
T 102 R 17 W Sec 26 NE1/4 AND
T 102 R 17 W Sec 25 W1/2 NW1/4 (1921) (1)

Geologic age: Devonian

Geologic formation: Coralville Mbr. (1); (Cedar Valley Fm.)

Physical test data: Available from MN/DOT Aggregate Unit (1)

Remarks: Quarry now (1966) filled with water (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Mower
Quarry/pit name: Bustad Quarry (3)
Alternate name: Varco Quarry (1)
Status: Inactive
Past operator/owner: Ulland Bros. (1979) (1,6,7); Martin Bustad & Son (1966) (2-5); Bustad and Falk (1941), Benfield Corp (1921) (3)
MN/DOT source no: 50066
Location: T 102 R 18 W Sec 27 S1/2 NE1/4 (1-4)
T 102 R 18 W Sec 27 NW1/4 SE1/4 (3,6)
T 102 R 18 W Sec 27 N1/2 SW1/4 (1921) (3)
T 102 R 18 W Sec 27 W1/2 E1/2 (7)
Location comments: Quarry located in the center of the S1/2 of NE1/4, Sec. 27 (2)
Geologic age: Devonian
Geologic formation: Cedar Valley Fm. (1-3)
Description: About 40 ft of Rapid dolomite (2); see Ref. 1 for lithologic data; see Ref. 2 for detailed stratigraphic section
Chemical analyses: See Ref. 2 for percentages of carbonates and insolubles for each unit
References: 1) Mossler. 1978, p. 26, 27, 35
2) Kohls. 1961, p. 131-134, 186
3) MN/DOT Aggregate Unit files
4) Hogberg. 1969, p. 40
5) Hogberg. 1966, p. 31
6) USBM. [1979], MILS
7) Niles. [1988a], table 1

Main commodity: Crushed Carbonate Rock
County: Mower
Status: Inactive
Past operator/owner: Ag Lime (1941) (1)
Location: T 102 R 18 W Sec 27 NW1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Mower
Status: Inactive
Township name: Austin
Location: T 102 R 18 W Sec 29 (1)
Location comments: Where the terrace is crossed by Orchard Creek (1)
Geologic age: Devonian (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell and others. 1884, p. 358

Main commodity: Crushed Carbonate Rock
County: Mower
Status: Inactive
Past operator/owner: Clifford and Art Olson (1966), Ole Olson (1921) (1)

MN/DOT source no: 55062
Township name: Frankford
Location: T 103 R 14 W Sec 3 SW1/4 SW1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Mower
Status: Inactive
Township name: Frankford
Location: T 103 R 14 W Sec 8 NW1/4 (1) OR
T 103 R 14 W Sec 8 NE1/4 (1)
Location comments: Quarry directly west of the Hovda Quarry (1); (quarry is in either the NW1/4 or NE1/4, not in both, one of these is a typographical error in Ref. 1)
Geologic age: Devonian
Geologic formation: Cedar Valley Fm. (1)
Description: Limestone, 17 ft exposed, stripping 3 ft (1); see Ref. 1 for brief section
Chemical analyses: Samples yielded: CaCO₃ 62.85%, 90.25% and 89.42%; MgO 16.68% 4.56% and 4.90% (1); see Ref. 1 for further analyses
References: 1) Thiel; Stauffer. 1947, p. 10, 11, 13

Main commodity: Crushed Carbonate Rock
County: Mower
Quarry/pit name: Hovde Quarry (1,2)
Alternate name: Wyhe Quarry (1); Osmundson Quarry (1)
Status: Inactive; active (1966) (1)
Past operator/owner: Osmundson Brothers Contractors, Inc. (see Producer Directory), Elgar Hovde-owner (1966); John Hovde (1921) (1)

MN/DOT source no: 50074
Location: T 103 R 14 W Sec 9 W1/2 NE1/4 (1)
Geologic age: Devonian
Geologic formation: Cedar Valley Fm. (1,2)
Description: See Refs. 1 and 2 for section descriptions
Physical test data: Available from MN/DOT Aggregate Unit (1)
Uses of commodity: Crushed rock (1)
References: 1) MN/DOT Aggregate Unit files
2) Thiel; Stauffer. 1947, p. 9-11, 13

Main commodity: Crushed Carbonate Rock
County: Mower
Status: Abandoned (1961) (1)
Location: T 103 R 14 W Sec 10 NW1/4 NW1/4 (1)
Location comments: Quarry located 0.1 of a mile east of the northwest corner of Sec. 10 (1)
Geologic age: Devonian
Geologic formation: Solon Mbr. (1); (Spillville Fm.)

Description: Exposes about 3 ft of unfossiliferous, irregularly-bedded Solon limestone (1)
References: 1) Kohls. 1961, p. 188

Main commodity: Crushed Carbonate Rock
County: Mower
Status: Inactive
Past operator/owner: Quarry owners include: E. W. Elder, L. Patchin (1875) (1)
Township name: Frankford
Location: T 103 R 14 W
Location comments: Elder's quarry is on Deer Creek, Patchin's quarry is on the brow of a small valley tributary to Deer Creek (1); (T., R. locations determined from county highway map)
Geologic age: Silurian (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell. 1875, p. 183

Main commodity: Crushed Carbonate Rock
County: Nicollet
Quarry/pit name: Heiman's Quarry (1)
Alternate name: Heimmann's Quarry (2,3)
Status: Inactive
Past operator/owner: John Heiman (1874) (4,5)
Township name: Courtland
Location: T 110 R 30 W Sec 34 NE1/4 (1)
Location comments: North of the Minnesota River, in Courtland about a half mile north of the Redstone railroad-bridge (4)
Geologic age: Cretaceous
Description: Nodular cretaceous limestone (4); see Refs. 2-5 for further descriptions
Uses of commodity: Quicklime (2-5)
References: 1) Sloan. 1964, p. 51
 2) Stauffer; Thiel. 1933, p. 33, 34
 3) Stauffer; Thiel. 1941, p. 128
 4) Winchell; Upham. 1888, p. 177, plate 36
 5) Winchell; Peckham. 1874, p. 185, 206

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Pieper Quarry (1)
Alternate name: Chase Quarry (1)
Status: Inactive since 1940 (1965) (1)
Past operator/owner: Alfred Pieper (1969), Dan Lynch (1921) (1)
MN/DOT source no: 55061
Location: T 105 R 11 W Sec 11 NW1/4 NW1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm., McGregor Mbr. (1)

Description: Gray limestone, 10 ft face, 5 ft stripping, quantity is somewhat limited, quality is good to poor (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Floor overgrown with trees and grass, wet, soft (1969) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Olmsted
Status: Inactive
Location: T 105 R 11 W Sec 32 S1/2 SE1/4 (2)
Location comments: South of State Hwy. 74 (2)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1,2)
Description: Platteville limestone quarried, lower part of the Decorah shale is exposed in the overburden (1,2)
Uses of commodity: Crushed rock (2)
References: 1) Prokopovich; Schwartz. 1957, station no. 37
 2) Prokopovich; Schwartz. 1956, p. 24, 25

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Manahan Quarry (1)
Status: Inactive (1969), active 1965 (1)
Past operator/owner: Alice Manahan (1969) (1); Quarve & Anderson Co. (see Producer Directory) (2)
MN/DOT source no: 55095
Location: T 105 R 11 W Sec 33 SW1/4 SW1/4 (1-3)
Location comments: See Ref. 3, plate 9 for location map
Geologic age: Ordovician
Geologic formation: Platteville Fm. (3), McGregor and Carimona Mbrs. (1)
Description: Medium and thin crinkly bedded gray limestone, very fossiliferous in places, shaly limestone near top, stripping 5 ft, face 15 ft, good to poor quality, unlimited quantity (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) Niles. [1988a], table 1
 3) Kuhns. 1988, plate 9

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Cummingsville Quarry (1)
Alternate name: Prigge Quarry, Pit 2521 (1)
Status: Inactive since 1957 (1)
Past operator/owner: Alfred Prigge (1969), Peter Svendsun (1921) (1)
MN/DOT source no: 55075
Location: T 105 R 12 W Sec 22 NW1/4 SW1/4 (1,7,10) AND

Location comments: T 105 R 12 W Sec 21 SE1/4 (2-5,7,8,10)
1/2 mile north of Cummingsville on County Rd. 7 (5); east edge of SE1/4 section 21 (5,6); there are two quarries close to the top of the slope (3); see Ref. 4, fig. 20.6 and Ref. 2, fig. 7 for location map

Geologic age: Ordovician

Geologic formation: Galena Gp., Prosser and Cummingsville Fms. (1,3,8); Cummingsville Fm. (2-7,9,10)

Description: Gray, medium bedded limestone, lower 15 ft has small shaly limestone beds, face 25 ft, stripping 2 ft, good to poor quality, quarry at top of hill so quantity limited (1)

"The best section of the Prosser limestone is that along S.A.R. 7 on the north side of the Root river north of Cummingsville in the SE1/4 Sec. 21 and SW1/4 Sec. 22: T.105, R.12W. There are two quarries close to the top of the slope with good exposures of moderate to thick-bedded, gray Prosser limestone. Toward the top of the quarry the rock is weathered, thin-bedded and a light buff color. Several limestone slabs are also scattered on the surface of the slope higher than the quarry, while three road cuts on the slope below the quarries show an excellent exposure of the basal shaly Prosser limestone overlying the Decorah shale. At this location over 80 feet of limestone contains less than one per cent magnesia..." (3)

The Cummingsville type locality is a quarry and roadcut exposure, with quarries at top (6); quarries in Prosser Fm., 30 ft exposed, yellowish-gray or yellowish-brown microgranular thin-bedded limestone with thin shaly partings (8)

See Ref. 10 for detailed stratigraphic section and paleontology of the Prosser and Cummingsville Fms.; see Refs. 7 and 8 for detailed section of Cummingsville Fms.; see Refs. 2, 4, and 6 for additional descriptions of site

Chemical analyses: See Ref. 3, p. 8 and 23 for detailed chemical analyses

Physical test data: Available from MN/DOT Aggregate Unit (1)

References: 1) MN/DOT Aggregate Unit files
2) Sloan; Kolata. 1987, p. 80, 81
3) Prokopovich; Schwartz. 1956, p. 8, 23
4) Sloan and others. 1987, p. 202
5) Mossler. 1987, p. 22
6) Levenson; Gerk. undated, locality M-103
7) Webers. 1966, p. 116, 117
8) Weiss. 1955, p. 765, 766
9) Weiss. 1957, p. 1053
10) Weiss. 1953, p. 418-429

Main commodity: Crushed Carbonate Rock

County: Olmsted

Quarry/pit name: Fluegels Mill Quarry (1)

Alternate name: Fuegels Mill Quarry (2)

Status: Inactive since 1984 (2)

Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (2); Alvin Hanson (1969) (1)

MN/DOT source no: 55048

Location: T 105 R 13 W Sec 17 SE1/4 SW1/4 (1)

Geologic age: Ordovician

Geologic formation: Galena Gp., Stewartville ? and Prosser Fms. (1)

Description: Gray, thin to medium bedded limestone, some thin shale layers, face 60-65 ft, stripping 3 ft, good quality, quantity unlimited (1)

Physical test data: Available from MN/DOT Aggregate Unit (2)

Remarks: Floor wet, overgrown, soft (1965) (1)

References: 1) MN/DOT Aggregate Unit files
2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock

County: Olmsted

Quarry/pit name: Chase Quarry (1,3)

Alternate name: J. P. Chase Quarry (4,5); Fluegels Mill Quarry (1921) (1)

Status: Inactive since 1947 (1)

Past operator/owner: Joe Chase (1969) (1)

MN/DOT source no: 55047

Location: T 105 R 13 W Sec 20 NE1/4 NW1/4 (1)

Location comments: Along County Rd. 1, one mile west and one mile north of Pleasant Grove (4); about two miles south of Simpson (3)

Geologic age: Ordovician

Geologic formation: Galena Gp., Prosser Fm. (1-5)

Description: Gray, weathered to buff limestone, medium bedded, face 40 ft, stripping 5-10 ft, unlimited quantity (1); see Refs. 3-5 for stratigraphic sections of quarry and roadcut showing Prosser and Stewartville Fms.

Chemical analyses: See Refs. 2-4 for complete chemical analyses

Physical test data: Available from MN/DOT Aggregate Unit (1)

Remarks: Floor overgrown with trees (1969) (1)

References: 1) MN/DOT Aggregate Unit files
2) Prokopovich; Schwartz. 1956, p. 20, 21
3) Thiel; Stauffer. 1947, p. 6, 12, 13
4) Stauffer; Thiel. 1933, p. 49, 50, 70, 74
5) Stauffer; Thiel. 1914, p. 182

Main commodity: Crushed Carbonate Rock

County: Olmsted

Status: Inactive; active 1969 (1)

Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1)

Location: T 105 R 14 W Sec 2 SW1/4 SW1/4 (1)

Location comments: Near Rochester (1)

Geologic age: Ordovician

Geologic formation: Stewartville Fm. (2)

References: 1) Hogberg. 1969, p. 45
2) Kuhns. 1988, plate 9

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Stewartville Quarry (1,2)
Status: Inactive since 1983 (2)
Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1,2)
USGS quadrangle: Salem Corners
Location: T 105 R 14 W Sec 5 NW1/4 NE1/4 (1)
Location comments: Center of NW1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: Stewartville Fm. (3)
References: 1) USBM. [1979], MILS
 2) USDL. MSHA mine reference list
 3) Kuhns. 1988, plate 9

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Welch Quarry (1,2)
Status: Inactive since 1983 (2)
Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1,2)
USGS quadrangle: Simpson
Location: T 105 R 14 W Sec 13 NW1/4 SW1/4 (1)
References: 1) USBM. [1980], MILS
 2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Bentley Quarry (1)
Status: Inactive since 1950 (1)
Past operator/owner: Walter Bentley (1969) (1)
MN/DOT source no: 55084
Location: T 105 R 14 W Sec 23 SE1/4 SW1/4 (1)
Geologic age: Ordovician
Geologic formation: Galena Gp. (1,2); Prosser Fm.? (1)
Description: Buff weathering, gray crinkly bedded arenaceous limestone, mottled appearance, corrosion zones, face 10 ft, stripping 5 ft of till, poor quality, easily weathered (1); "The rock is weathered, bleached and rather thin-bedded. The drift cover is only a few feet, but the upper part of the rock is dolomitic." (2)
Chemical analyses: See Ref. 2, station 9 for complete data, summary of four samples of the Galena listed from upper to lower part follows:
 CaO 38.88%, 40.81%, 47.91%, 47.09%
 MgO 12.79%, 8.38%, 1.61%, 0.94%
 Insolubles 3.97%, 9.12%, 11.14%, 5.50%
Uses of commodity: Agricultural lime (1)
Remarks: Floor overgrown (1)
References: 1) MN/DOT Aggregate Unit files
 2) Prokopovich; Schwartz. 1956, p. 20

Main commodity: Crushed Carbonate Rock
County: Olmsted
Status: Inactive (1935) (2)
Past operator/owner: R. Williams (1884) (1)
Township name: High Forest
Location: T 105 R 14 W Sec 31
Location comments: Quarry on the north bank of Root River (1); (T., R. locations determined from Ref. 1, plate 11)
Geologic age: Ordovician
Geologic formation: Galena Gp. (1,2)
Description: "This rock is exposed for twenty-five feet, and is dolomitic, more or less concretionary, with small, spar-lined cavities. It is sparingly fossiliferous. The upper six feet are much broken up. The remainder is compact and unevenly bedded. The concretionary structure is not visible on fresh surfaces. It is brought out by weathering and especially by burning, and then appears in the form of fine rusty lines." (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell and others. 1884, p. 341
 2) Thiel; Dutton. 1935, p. 153

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: New Stewartville Quarry (1)
Alternate name: Stewartville Quarry (1); Quarve, Morse and Ganrude Quarry (2)
Status: Inactive; active in 1980 (2)
Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1,2)
MN/DOT source no: 55051
Location: T 105 R 14 W Sec 32 NE1/4 SW1/4 (1,2,4)
 T 105 R 14 W Sec 32 NW1/4 NW1/4 SE1/4 (3,4)
Location comments: See Ref. 3, fig. 13 for location map; Ref. 4 shows a quarry symbol between the above locations
Geologic age: Ordovician
Geologic formation: Galena Gp., Stewartville Fm. (1)
Description: "Lower level or production face is generally a medium to thick (mostly thick) bedded buff to gray dolomite or limestone. Weathered areas display a pitted weathering surface. The upper level is thin to medium beds, with some thick beds, becoming highly weathered towards top and rubbly." (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Uses of commodity: Concrete aggregate (1)
References: 1) MN/DOT Aggregate Unit files
 2) USBM. [1980], MILS
 3) Hobbs. 1987, p. 179
 4) USGS. 1974, High Forest quadrangle

Main commodity: Crushed Carbonate Rock

County: Olmsted
Quarry/pit name: Rock Dell Quarry (1)
Status: Abandoned (1)
Past operator/owner: Paulson (1)
MN/DOT source no: 55073
Location: T 105 R 15 W Sec 4 SW1/4 SE1/4 (1)
Location comments: One mile east of Rock Dell (1); located on north side of County Rd. 126 (2)
Geologic age: Ordovician
Geologic formation: Galena Gp., Stewartville Fm. (1,2)
Chemical analyses: See Ref. 2 for chemical analyses
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Large quarry (2); quarry taken out by county road (1965) (1)
References: 1) MN/DOT Aggregate Unit files
 2) Prokopovich; Schwartz. 1956, p. 20

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Green Quarry (1)
Alternate name: Hanson Quarry (1)
Status: Inactive; active 1965 (1)
Past operator/owner: Green (1)
MN/DOT source no: 55091
Location: T 105 R 15 W Sec 12 NW1/4 NW1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Prosser Fm. (1,2)
Description: Medium and thick bedded limestone, gray weathers to buff, pitted brown surface on old joints, prominent bedding planes, very fossiliferous, face 30 ft, stripping 2-3 ft soil, unlimited quantity, good to poor quality (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Floor flat, slightly soft weathered rock (1969) (1)
References: 1) MN/DOT Aggregate Unit files
 2) Kuhns. 1988, plate 9

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Kreidermacher Quarry (1)
Status: Inactive since 1956 (1)
Past operator/owner: Andrew Kreidermacher (1969) (1)
MN/DOT source no: 55059
Location: T 106 R 11 W Sec 5 SW1/4 SW1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm., McGregor Mbr. (1)
Description: Gray and mottled gray and buff, thin crinkly bedded limestone, stripping 5-15 ft and greater, face 10-15 ft, quantity limited due to stripping, good to poor quality (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)

Remarks: Floor soft, overgrown with grass, trees, and cattails (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Kreidermacher Quarry (1)
Status: Inactive since 1956 (1)
Past operator/owner: Andrew Kreidermacher (1969), Hagen (1921) (1)
MN/DOT source no: 55058
Location: T 106 R 11 W Sec 6 SE1/4 SE1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm., McGregor Mbr. (1)
Description: Gray, thin crinkly bedded limestone, stripping 3 ft, face 10-15 ft, limited quantity - most of hill depleted, good to poor quality (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Floor filled with water (1969) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Melbo Quarry (1)
Status: Inactive
Past operator/owner: Bjorne Melbo (1965) (1)
MN/DOT source no: 55100
Location: T 106 R 11 W Sec 25 NE1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: (Prosser Fm.)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Anderson Quarry (1)
Alternate name: Lowden Quarry (1)
Status: Inactive (1969), active 1965 (1)
Past operator/owner: Floyd Anderson (1969), Wm. Lowden (1921) (1)
MN/DOT source no: 55060
Location: T 106 R 11 W Sec 33 NW1/4 SE1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Prosser Fm. (2); Platteville Fm. ? or Prosser Fm.? (1)
Description: Gray limestone, medium to thick and thin bedded, weathering to brown, face 22-24 ft, stripping 5-15 ft, unlimited quantity, good to poor quality (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Floor flat, hard, except west and SW corner (1969) (1)
References: 1) MN/DOT Aggregate Unit files
 2) Kuhns. 1988, plate 9

Main commodity: Crushed Carbonate Rock
County: Olmsted
Status: Inactive
Past operator/owner: Patterson Quarries (see Producer Directory) (1)
Location: T 106 R 12 W Sec 9 SW1/4 NE1/4 (1)
Location comments: Near Eyota (1)
Geologic age: Ordovician
Geologic formation: Prosser Fm. (2)
Description: Limestone (1)
Uses of commodity: Crushed and broken stone (1)
References: 1) Hogberg, 1966, p. 35
 2) Kuhns, 1988, plate 9

Main commodity: Crushed Carbonate Rock
County: Olmsted
Status: Inactive since mid 1940's (1)
Past operator/owner: Universal Atlas Cement Co. (1969), Orville Hurning (1921) (1)
MN/DOT source no: 55050
Location: T 106 R 12 W Sec 35 SE1/4 SW1/4 (1,2)
Location comments: On the eastern slope of a steep valley (2)
Geologic age: Ordovician
Geologic formation: Galena Gp., Prosser Fm. (1,2)
Description: Gray, medium and thick bedded limestone, face 25 ft, stripping 5 ft, good quality, unlimited quantity (1); "The rock is moderate to thick-bedded rather than fresh, light gray limestone." (2)
Chemical analyses: See Ref. 2 for complete chemical analyses, summary follows:
 Top 30 ft:
 CaO 50.32%, MgO 0.86%, insolubles 8.52%
 Bottom 10 ft:
 CaO 38.13%, MgO 9.45%, insolubles 10.77%
References: 1) MN/DOT Aggregate Unit files
 2) Prokopovich; Schwartz. 1956, p. 24

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Green Lantern Quarry (1)
Status: Inactive (1965) (1)
Past operator/owner: Fabian Stoppel (1969), Corwin Stoppel (1941), Holte Estate (1921) (1)
MN/DOT source no: 55062
Location: T 106 R 13 W Sec 6 SW1/4 SW1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm., McGregor and Carimona Mbrs. (1)
Description: Gray, weathered buff, medium and thin bedded limestone, 2 in. orange shaly "bentonite" bed 4 ft from top, 1 in. gray shale and clay 1 ft from top, face 13 ft, stripping 3 ft,

Remarks: good to poor quality, quantity limited because of residential area (1)
 Floor overgrown (1969) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Pit No. 317 (1921) (1)
Status: Abandoned, urban area (1965) (1)
Past operator/owner: Grandview Cemetery (1969), J. F. Vols (1921) (1)
MN/DOT source no: 55078
Location: T 106 R 13 W Sec 7 NW1/4 NW1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm., McGregor and Carimona Mbrs. (1)
Description: Gray, thin and crinkly bedded limestone and medium bedded limestone, "bentonite" layer 2 ft from top, face 12 ft, stripping 3-5 ft (1)
Remarks: Floor overgrown (1969) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Olmsted
Status: Inactive; active in 1969 (1)
Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1)
Location: T 106 R 13 W Sec 21 NW1/4 NW1/4 (1)
Location comments: Near Rochester (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2)
Description: Limestone (1)
References: 1) Hogberg, 1969, p. 45
 2) Kuhns, 1988, plate 9

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Shop Quarry (1,2)
Status: Inactive; active in 1965 (1)
MN/DOT source no: 55094
Location: T 106 R 13 W Sec 21 SE1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm., McGregor and Carimona Mbrs. (1,2)
Description: Thin and medium bedded gray limestone, "bentonite" and brown shale layers near top, crinkly buff limestone on weathered faces, face 15 ft, stripping 5-30 ft of Decorah shale (1)
 See Ref. 2 for brief section and description of fossils, summary follows:
 Decorah Fm. 20 ft, green shale
 Platteville Fm. 22 ft

Carimona Mbr. 7.3 ft, limestone
McGregor Mbr. 11.5 ft, limestone

Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
2) Austin. 1968, p. 19, 28, 29

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Hwy. 82 South Quarry (1,2)
Status: Inactive since 1980 (2)
Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1,2)
Location: T 106 R 13 W Sec 21 SW1/4 NE1/4 (1)
Location comments: Near the center of section 21 (1,3)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (3)
Description: Platteville limestone quarry, basal part of Decorah shale is also exposed (3)
Chemical analyses: See Ref. 3 for chemical analyses
Uses of commodity: Crushed rock (3)
References: 1) USBM. [1979], MILS
2) USDL. MSHA mine reference list
3) Prokopovich; Schwartz. 1956, p. 22

Main commodity: Crushed Carbonate Rock
County: Olmsted
Status: Inactive; active 1966 (1)
Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1)
Location: T 106 R 13 W Sec 25 E1/2 (1)
Location comments: Near Rochester (1)
Description: Limestone (1)
References: 1) Hogberg. 1966, p. 36

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Rabehl Quarry (1)
Alternate name: Rochester South Quarry (2)
Status: Inactive (1965) (1)
Past operator/owner: Ed Rabehl (1969) (1)
MN/DOT source no: 55096
Location: T 106 R 14 W Sec 24 E1/2 NE1/4 (1)
Location comments: On east side of U.S. Hwy. 52, 3.2 miles south of intersection of U.S. Hwy. 52 and U.S. Hwy. 14, south of Rochester (2)
Geologic age: Ordovician
Geologic formation: Platteville Fm., McGregor and Carimona Mbrs. (1,2)
Description: Thin bedded gray fossiliferous limestone, weathering to buff, mottled, face 10-15 ft, stripping 5-10 ft, good to poor quality, unlimited quantity (1)

* See Ref. 2 for detailed stratigraphic section, summary follows:

Decorah Fm. 5.5 ft, shale
Platteville Fm. 20.7 ft
Carimona Mbr. 8.6 ft, alternating limestone/shale beds
McGregor Mbr. 12.1 ft, limestone
Pecatonica Mbr. 0.9 ft

Remarks: Floor overgrown (1969) (1)
References: 1) MN/DOT Aggregate Unit files
2) Ford. 1958, p. 106-108

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Quarve & Anderson Quarry (1,2)
Status: Inactive
Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1,2)
Location: T 106 R 14 W Sec 35 SW1/4 NE1/4 (1,2)
T 106 R 14 W Sec 35 SW1/4 SE1/4 (3)
Location comments: Situated on east side of U.S. Hwy. 63, 3.9 mi north of Jct. U.S. 63 and I90, about 2 mi south of Rochester (1); Ref. 3 quadrangle does not show a quarry in the NE1/4, but shows a quarry symbol in the SE1/4
Geologic age: Ordovician
Geologic formation: Wise Lake and Dunleith Fms. (1,2)
Description: See Refs. 1 and 2 for detailed stratigraphic section, summary of Ref. 2 (which also contains fossil assemblages) follows:
Wise Lake Fm.
Sinsinawa Mbr. 14 ft, dolomite
Dunleith Fm. 64 ft, biomicrite
References: 1) Leverson; Gerk. undated, locality M-115
2) Stone. 1980, p. A-17, A-18
3) USGS. 1974, Simpson quadrangle

Main commodity: Crushed Carbonate Rock
County: Olmsted
Status: Inactive since 1935 (1)
Past operator/owner: Vermilya Bros. (1969) (1)
MN/DOT source no: 55056
Location: T 107 R 11 W Sec 5 SE1/4 SE1/4 (1)
Geologic age: Ordovician
Geologic formation: (Platteville Fm.)
Remarks: Could not locate quarry (1969), probably a small Platteville limestone quarry (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Reisdorf Quarry (1)
Status: Inactive since early 1950's (1)
Past operator/owner: John Reisdorf Estate (1969) (1)

MN/DOT source no: 55057
Location: T 107 R 11 W Sec 26 SE1/4 NE1/4 (1)
 T 107 R 11 W Sec 26 SW1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: Prairie du Chien Gp., Shakopee Mbr. ? (1)
Description: Light brown and gray, medium and thick bedded dolomite, vugs of calcite and some chert, face 20 ft, stripping 10-15 ft, unlimited quantity, good ? quality (1)
Remarks: Floor firm, uneven, covered with grass, some small trees (1969) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Papenfus Quarry (1)
Status: Inactive (1969), active 1965 (1)
Past operator/owner: Lloyd Papenfus (1969) (1)
MN/DOT source no: 55090
Location: T 107 R 11 W Sec 30 NW1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm., McGregor and Carimona Mbrs. (1)
Description: Gray, thin to thick bedded limestone, some pyrite, 6 in. shaly limestone between 7-8 ft from top, face 18 ft, stripping 10-15 ft of Decorah shale and limestone, quantity probably limited due to stripping, good to poor quality (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Floor overgrown (1969) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Mullholland Quarry (1)
Status: Inactive (1965) (1)
Past operator/owner: Mulholland Estate (1)
MN/DOT source no: 55089
Location: T 107 R 12 W Sec 10 SW1/4 SE1/4 (1969) (1)
 T 107 R 12 W Sec 10 NW1/4 SE1/4 SE1/4 (1921) (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm., McGregor Mbr. (1)
Description: Gray limestone, medium and thin bedded, face 10-12 ft, stripping 5-10 ft, quality good to poor, quantity mostly depleted (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Olmsted

Quarry/pit name: Richardson Quarry (1)
Status: Inactive (1965) (1)
Past operator/owner: Richardson (1969) (1)
MN/DOT source no: 55083
Location: T 107 R 12 W Sec 21 SW1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm., McGregor Mbr. (1)
Description: Gray, thin crinkly bedded limestone with small shale beds near top, face 10-12 ft, stripping 3-4 ft, good to poor quality, quantity unlimited in some directions (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Floor soft, wet and swampy (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Schoenfelder Quarry (1,2)
Status: Inactive since 1980 (2)
Past operator/owner: Quarve & Anderson Co., operator (see Producer Directory), Robert Schoenfelder, owner (1980) (1)
Location: T 107 R 12 W Sec 35 NE1/4 SW1/4 (1)
References: 1) USBM. [1980], MILS
 2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Olmsted
Status: Inactive (1969) (1)
Past operator/owner: Paul Hammel (1969) (1)
MN/DOT source no: 55054
Location: T 107 R 12 W Sec 36 S1/2 SE1/4 (1)
 T 107 R 12 W Sec 36 SE1/4 SE1/4 (2)
Location comments: On north side of County Rd. 9, two miles north and 1-1/2 miles east of Eyota (2); this quarry located east of MN/DOT Source No. 55053 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1,2); McGregor Mbr. (1)
Description: Gray, thin and medium bedded limestone, face 10 ft, stripping 5 ft, quality good to poor, limited quantity, mostly depleted, very small quarry (1)
Remarks: Floor covered with vegetation (1969) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Olmsted
Status: Inactive
Past operator/owner: Paul Hammel (1969) (1)
MN/DOT source no: 55053
Location: T 107 R 12 W Sec 36 S1/2 SE1/4 (1)

Location comments: T 107 R 12 W Sec 36 SE1/4 SE1/4 (2)
On north side of County Rd. 9, two miles north and 1-1/2 miles east of Eyota (2)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1,2); McGregor and Carimona Mbrs. (1)

Description: Gray, thin and medium bedded limestone, 2 in. "bentonite" and 4 in. dark gray shaly limestone layer in middle of formation, face 12-14 ft, stripping 10-15 ft, good to poor quality, quantity limited due to stripping (1)

Remarks: "Dead - depleted", floor overgrown with heavy vegetation (1)

References: 1) MN/DOT Aggregate Unit files
2) Hoeft. 1959, p. 281, location 6

Main commodity: Crushed Carbonate Rock

County: Olmsted

Quarry/pit name: Lawler Quarry (1)

Status: Inactive (1965) (1)

Past operator/owner: Clair Lawler (1969), Jeromia Lawler (1921) (1)

MN/DOT source no: 55063

Location: T 107 R 13 W Sec 25 NW1/4 SW1/4 (1)
T 107 R 13 W Sec 25 W1/2 (2)

Location comments: On east side of county road (1); located on the north bank of Silver Creek in the middle part of W1/2 of section 25 (2)

Geologic age: Ordovician

Geologic formation: Prosser Fm. (1,2); Cummingsville ? Fm. (1)

Description: Gray, medium and thick bedded limestone, weathered to buff, thin shaly limestone partings at 2-3 ft intervals, face 30 ft, stripping 5-10 ft (1); "The rock is gray, moderate to thick bedded, with some shaly layers but is thin-bedded and buff where weathered." (2)

Chemical analyses: See Ref. 2 for complete chemical analyses, summary follows: CaO 40.98% and 45.12%, MgO 1.46% and 1.24%, insolubles 20.26% and 13.74% (2)

Physical test data: Available from MN/DOT Aggregate Unit (1)

Remarks: Old quarry (1956) (2)

References: 1) MN/DOT Aggregate Unit files
2) Prokopovich; Schwartz. 1956, p. 25

Main commodity: Crushed Carbonate Rock

Other commodities: Dimension Carbonate Rock

County: Olmsted

Quarry/pit name: State Hospital Quarry (1-3,5)

Alternate name: Rochester State Hospital Quarry (4); Pit No. 337 (1921) (1)

Date opened: 1878 (4)

Status: Inactive

Past operator/owner: State of Minnesota (1969) (1)

MN/DOT source no: 55076

Location: T 107 R 13 W Sec 31 SE1/4 NW1/4 (1)

Location comments: About a mile from Rochester (4)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1-3,6); McGregor and Carimona Mbrs. (1)

Description: Gray, medium and thin crinkly bedded limestone, face 10-12 ft, stripping 1-2 ft, floor flat and overgrown (1); 21 ft face (2); see Refs. 3 and 5 for stratigraphic section descriptions

"The rock is blue at depth but is yellow along joints and near the surface. Beds are 3 inches to 2 feet thick, and joints are 10 to 20 feet apart. About 2 feet of soil is stripped, and the quarry is worked to a depth of about 30 feet. The quarry is situated on a high bluff and the crusher is placed at a lower level than the quarry floor." (4)

Chemical analyses: See Refs. 3 and 5, Sample Nos. 69-71, for complete chemical analyses, summary of three samples follows: CaCO₃ 53.0%, 70.1%, and 54.1%; MgCO₃ 32.2%, 19.7%, and 30.6%; total insolubles 14.4%, 10.2%, and 14.9%

Physical test data: Available from MN/DOT Aggregate Unit (1); specific gravity 2.60, weight 163 lbs/cu ft, absorption 1.86%, wear 3.3%, French coefficient 12.1, average toughness 13.0 (3)

Uses of commodity: Used locally in various buildings (3); in 1912 the entire output was crushed rock for concrete work (4)

Remarks: This area is now in a park (1)

References: 1) MN/DOT Aggregate Unit files
2) Thiel; Dutton. 1935, p. 136
3) Stauffer; Thiel. 1933, p. 47, 68, 73
4) Bowles. 1918, p. 183
5) Stauffer; Thiel. 1914, p. 116, 118, 184
6) Thiel; Dutton. 1935, p. 153

Main commodity: Crushed Carbonate Rock

County: Olmsted

Status: Inactive

Past operator/owner: Herman Kuehn (1969) (1)

MN/DOT source no: 55070

Location: T 107 R 14 W Sec 2 NE1/4 NW1/4 (1)

Geologic age: Ordovician

Geologic formation: Platteville Fm., Pecatonica and McGregor Mbrs. (1)

Description: Gray crinkly bedded limestone, weathered brown, face 10 ft, stripping 2-3 ft topsoil, limited quantity, outcrop mostly removed (1)

Physical test data: Available from MN/DOT Aggregate Unit (1)

Remarks: Abandoned, mostly depleted (1965) (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Olmsted

Quarry/pit name: Paulson Quarry (1,2)

Status: Inactive; active 1969 (1)
Past operator/owner: R. D. Owens (1969) (1)
MN/DOT source no: 55088
Location: T 107 R 14 W Sec 3 NW1/4 SE1/4 (1,2)
Location comments: Quarry on east side of township road, 5 miles north of Rochester (2)
Geologic age: Ordovician
Geologic formation: Platteville Fm., McGregor and Carimona Mbrs. (1,2); Glenwood Fm. (2)
Description: Thin and medium bedded, gray weathering to buff limestone, crinkly bedded and also fossiliferous in places, 2 in. bentonite layer 3 ft from top of measured face, shale partings about 1 ft below that, face 15-19 ft, stripping 3-5 ft soil, good to poor quality (1)
 See Ref. 2 for detailed stratigraphic section, summary follows:
 Decorah Fm. 3.0 ft exposed
 Platteville Fm. 20.65 ft exposed
 Carimona Mbr. 8.05 ft, alternating limestone/shale beds
 McGregor Mbr. 10.8 ft, alternating limestone/dolomite beds
 Pecatonica Mbr. 1.8 ft, limestone
 Glenwood Fm. 7.3 ft exposed, siltstone/shale/sandstone beds
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) Hoef. 1959, p. 75-78, 266-268

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Van Schaick Quarry (1)
Alternate name: Patterson Quarry (1)
Status: Inactive; active in 1962 (1)
Past operator/owner: Addie Van Schaick Estate, Patterson Quarries (see Producer Directory) (1)
MN/DOT source no: 55087
Location: T 107 R 14 W Sec 12 SE1/4 NW1/4 (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Description: Shakopee dolomite, 40 ft. exposed (1); see Ref. 1 for detailed stratigraphic section
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: West River Road Quarry (1)
Status: Inactive; active (1979) (1)
Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1)
USGS quadrangle: Rochester
Location: T 107 R 14 W Sec 23 NE1/4 NE1/4 (1)

Location comments: Center of NE1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (2)
References: 1) USBM. [1979], MILS
 2) Kuhns. 1988, plate 9

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Ed Foster Quarry (1)
Status: Inactive
Location: T 107 R 14 W
Location comments: One mile north of Rochester (1); (possibly section 26; T., R., Sec. locations determined from Ref. 2, plate 11)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files (1976)
 2) Winchell and others. 1884, plate 11

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Quarry Products, Inc. Quarry (1)
Status: Inactive (1)
Past operator/owner: Quarry Products, Inc. (1921), Dr. Grindley (1969) (1)
MN/DOT source no: 55069
Location: T 107 R 14 W Sec 26 NE1/4 SW1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Description: Limestone, 17 ft face (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Abandoned, in city limits, could not locate in 1969 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
Other commodities: Dimension Carbonate Rock
County: Olmsted
Quarry/pit name: Donahue Bros. Quarry (1)
Date opened: Mid 1860's (1)
Status: Inactive (1935) (3)
Past operator/owner: Donahue Bros. (1918) (1)
Location: T 107 R 14 W Sec 27 OR
 T 107 R 14 W Sec 26
Location comments: About a mile northwest of Rochester (1,3); in same bluff as the Waldee Quarry (1); (probably in section 26 or 27; T. R., Sec. locations determined from Ref. 2, plate 11)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1-3)
Description: "Beds are 3 inches to 3 feet thick and are horizontal. Open joints 6 to 20 feet apart strike

east, N. 30 deg. E., N. 20 deg. W., and N. 70 deg. E. Joint walls in many places are coated with calcite." (1)

Physical test data: Specific gravity of 2.788, pore space of 3.04%, dry weight 169 lbs/cu ft (1)

Uses of commodity: Crushed rock, some rubble (1)

Remarks: Quarry has been worked extensively, withstands weathering (1)

References: 1) Bowles. 1918, p. 183, 184
2) Winchell and others. 1884, plate 11
3) Thiel; Dutton. 1935, p. 153

Main commodity: Crushed Carbonate Rock

County: Olmsted

Quarry/pit name: Parker Quarry (1,2)

Status: Inactive since 1975 (2)

Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (2,3); Wilbert Parker (1)

MN/DOT source no: 55093

USGS quadrangle: Bryon

Location: T 107 R 15 W Sec 17 SE1/4 SE1/4 (1,3,4)

Location comments: Near Bryon (3); see Ref. 4, plate 9 for location map

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1,4); McGregor Mbr.? (1)

Description: Gray, thin, wavy bedded limestone, weathered to buff and tan, 1-1/2 in. shale layer 4 ft from bottom, face 10-12 ft, stripping 5-20 ft of outwash and till, quantity limited due to stripping (1)

Physical test data: Available from MN/DOT Aggregate Unit (1)

References: 1) MN/DOT Aggregate Unit files
2) USDL. MSHA mine reference list
3) Hogberg. 1969, p. 45
4) Kuhns. 1988, plate 9

Main commodity: Crushed Carbonate Rock

County: Olmsted

Quarry/pit name: Ringe Quarry (1,2)

Alternate name: Haney Quarry (1)

Status: Inactive (1969); active 1965 (1)

Past operator/owner: Roy Haney (1969), Heaney (1921) (1)

MN/DOT source no: 55064

Location: T 108 R 13 W Sec 33 NW1/4 NW1/4 (1)
T 108 R 13 W Sec 33 SW1/4 NW1/4 (2)

Location comments: 3/4 mile north of Ringe and County Rd. 14, on east side of road (2)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1,2); McGregor Mbr. ? (1)

Description: Gray, weathers to buff, limestone, thin bedded, face 15 ft, stripping 3 ft, poor quality, weathers easily (1)

Physical test data: Available from MN/DOT Aggregate Unit (1)

Remarks: Floor flooded with deep water (1969) (1)

References: 1) MN/DOT Aggregate Unit files
2) Hoeft. 1959, p. 281

Main commodity: Crushed Carbonate Rock

County: Olmsted

Quarry/pit name: Webster Quarry (1)

Status: Inactive since 1947 (1)

Past operator/owner: Frank Webster (1969) (1)

MN/DOT source no: 55065

Location: T 108 R 14 W Sec 1 SE1/4 SE1/4 (1988) (1)
T 108 R 14 W Sec 1 SE1/4 SW1/4 OR
T 108 R 14 W Sec 12 SE1/4 SW1/4 (1969) (1)
T 108 R 14 W Sec 1 SW1/4 (1921) (1)

Geologic age: Ordovician

Geologic formation: Prairie du Chien Gp. (1)

Description: Gray, hard, crystalline dolomite, massive, contains some calcite and chert vugs or stingers, face 30 ft, stripping 2 ft, good quality, hard, fine-grained rock (1)

Remarks: Floor overgrown (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Olmsted

Status: Inactive

Past operator/owner: James Barnett (1884) (1)

Township name: Oronoco

Location: T 108 R 14 W

Location comments: Just northeast of the village of Oronoco (1); (T., R. locations determined from Ref. 1, plate 11; possibly in Sec. 8)

Geologic age: Cambrian

Geologic formation: St. Lawrence Fm. (1)

Description: "The lowest layer is employed for making lime.", sandstone at top of section (1)

Uses of commodity: Quicklime (1)

Remarks: "The lime is light buff, slow, and contains considerable cement." (1)

References: 1) Winchell and others. 1884, p. 334, 335, plate 11

Main commodity: Crushed Carbonate Rock

County: Olmsted

Status: Inactive

Past operator/owner: Emil Neitz (1969) (1)

MN/DOT source no: 55079

Location: T 108 R 14 W Sec 12 NE1/4 NW1/4 (1)

Geologic age: Ordovician

Geologic formation: Prairie du Chien Gp. (1)

Remarks: Mostly depleted (1965), could not locate in 1969 (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Olmsted
Status: Inactive (1918) (1)
Location: T 108 R 14 W
Location comments: In the valley of Zumbro River (1); (T., R. locations determined from Ref. 2, plate 11)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1,2)
Uses of commodity: Lime (1)
Remarks: Possibly more than one quarry in this area (1)
References: 1) Bowles. 1918, p. 183
 2) Winchell and others. 1884, plate 11

Main commodity: Crushed Carbonate Rock
County: Olmsted
Status: Inactive
Past operator/owner: Penz (1)
MN/DOT source no: 55105
Location: T 108 R 14 W Sec 28 NE1/4 E1/2 (1)
 T 108 R 14 W Sec 28 NE1/4 NW1/4 AND
 T 108 R 14 W Sec 28 E1/2 SE1/4 NW1/4 AND
 T 108 R 14 W Sec 28 W1/4 NE1/4 (2)
References: 1) MN/DOT Aggregate Unit files
 2) Olmsted County Planning and Zoning. 1989, personal communication

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Northwest Goldberg Quarry (1)
Status: Inactive
Past operator/owner: Quarve & Anderson Co. (see Producer Directory), Dr. Leary (1965) (1)
Location: T 108 R 14 W Sec 36 NE1/4 SW1/4 (1)
Location comments: Just west of the North Goldberg Quarry and north of the original Goldberg Quarry, separated from the "north quarry" by a narrow valley (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Description: Shakopee dolomite (1); see Ref. 1 for detailed stratigraphic section
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: North Goldberg Quarry (1)
Status: Inactive; active (1969) (1)

Past operator/owner: Harold Goldberg, Robert Leary (1969) (1); Quarve & Anderson Co. (see Producer Directory) (2)
MN/DOT source no: 55086
Location: T 108 R 14 W Sec 36 NW1/4 SE1/4 (1,2)
 T 108 R 14 W Sec 36 NW1/4 NE1/4 (1)
Location comments: Lies north of the original Goldberg Quarry and just across the South Branch of the Zumbro River in the NW1/4 of SE1/4 of section 36, about 5 miles north of the north limits of Rochester (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Description: Gray dolomitic limestone, massive thick bedded with thin beds of friable sandstone and hard sandstone, small stringers of calcite and some pyrite, face 90 ft, top ledge 60 ft, bottom ledge 30 ft, stripping 10 ft of St. Peter Sandstone and 0-30 ft of till, hard durable rock, unlimited quantity (1); see Ref. 1 for detailed stratigraphic section
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Floor flat, hard (1969) (1)
References: 1) MN/DOT Aggregate Unit files
 2) Hogberg. 1969, p. 45

Main commodity: Crushed Carbonate Rock
County: Olmsted
Status: Inactive
Past operator/owner: D. Miller (1)
MN/DOT source no: 55107
Location: T 108 R 15 W Sec 7 (1,2)
 T 108 R 15 W Sec 7 SW1/4 NE1/4 (3)
Location comments: Located near center of section 7 (1,2); old quarry on east side of driveway leading into farm 1-1/2 miles southwest of Pine Island (2)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2,3)
Description: Only upper Platteville limestone exposed in quarry (2)
References: 1) MN/DOT Aggregate Unit files
 2) Hoeft. 1959, p. 281
 3) Niles. [1988a], table 1

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Andrist Quarry (1)
Status: Inactive
Past operator/owner: Andrist (1921) (1)
Location: T 108 R 15 W Sec 16 NW1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Spading Quarry (1)
Status: Inactive (3)
Past operator/owner: Harold Spading (1969) (1)
MN/DOT source no: 55066
Location: T 108 R 15 W Sec 26 SE1/4 NW1/4 (1-3)
Location comments: Quarry near Douglas (2); (quarry north side of County Rd. 3)
Geologic age: Ordovician
Geologic formation: Platteville Fm., Carimona and McGregor Mbrs. (2)
Description: Thin to thick bedded gray crystalline and fossiliferous limestone, weathering to buff color, thin somewhat wavy beds or layers, McGregor Mbr. 10-11 ft face, stripping 1-3 ft, poor quality, unlimited quantity (1)
 See Ref. 2 for section description, summary follows:
 Platteville Fm. 15.36 ft exposed
 Carimona Mbr. 4.01 ft, alternating limestone/shale beds
 McGregor Mbr. 11.35 ft, alternating thin platy limestone beds and shale partings
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) Mossler. 1971
 3) Olmsted County Planning and Zoning. 1989, personal communication

Main commodity: Crushed Carbonate Rock
Other commodities: Dimension Carbonate Rock
County: Ramsey
Quarry/pit name: St. Paul Crushed Stone Co. Quarry (1-3)
Status: Inactive
Past operator/owner: St. Paul Crushed Stone Co. (1914) (1-3)
Location: T 28 R 23 W Sec 14 N1/2 OR
 T 28 R 23 W Sec 11 S1/4 SE1/4
Location comments: Along Stewart and Victoria Avenues, St. Paul, the quarry is located on a rock terrace 100+ ft above the Mississippi River (1-3); (T., R., Sec. locations determined from St. Paul West quadrangle and Mpls./St. Paul street map)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1-3)
Description: See Refs. 1-3 for section descriptions, summary follows: lower portion of the Platteville limestone, 10 ft exposed
Physical test data: See Refs. 1 and 2 for physical test data
Uses of commodity: Crushed stone, concrete aggregate, some used as local building stone (1,2)
Remarks: Quarrying operation is on an extensive scale (1933) (1,2)
References: 1) Stauffer; Thiel. 1933, p. 27, 28, 71, 74
 2) Thiel; Dutton. 1935, p. 140, 141

3) Stauffer; Thiel. 1914, p. 187, 189
 4) USGS. 1972, St. Paul West quadrangle

Main commodity: Crushed Carbonate Rock
County: Ramsey
Status: Inactive
Past operator/owner: J. L. Shiely Co. (see Producer Directory) (1921) (1)
MN/DOT source no: 62-1
Location: T 28 R 23 W Sec 15 SE1/4 (2)
Location comments: West 7th Street, St. Paul (1); (T., R., Sec. locations determined from Mpls./St. Paul street map and St. Paul West quadrangle which shows a quarry symbol along West 7th St.)
References: 1) MN/DOT Aggregate Unit files
 2) USGS. 1972, St. Paul West quadrangle

Main commodity: Crushed Carbonate Rock
County: Ramsey
Quarry/pit name: Robbins Quarry (1)
Status: Inactive (1935) (2); active (1918) (1)
Past operator/owner: J. B. Robbins (1918) (1)
Location: T 28 R 23 W Sec 21
Location comments: On the north side of the Mississippi River, not far from the Fort Snelling Bridge (1); (T., R., Sec. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1,2)
Description: "The limestone, whose total thickness is about 10 feet, is blue to yellowish, thin bedded, and inferior for any purpose except crushing. Beneath it are 6 to 10 feet of blue shale overlying the St. Peter sandstone. An area about 60 acres is still available." (1)
Uses of commodity: Crushed rock for street construction, also used in construction of concrete piers of the Fort Snelling Bridge (1)
References: 1) Bowles. 1918, p. 185
 2) Thiel; Dutton. 1935, p. 142

Main commodity: Crushed Carbonate Rock
County: Rice
Quarry/pit name: Nerstrand Quarry (3)
Status: Inactive since 1976 (3)
Past operator/owner: Kielmeyer Construction Co. (see Producer Directory) (1,3)
Location: T 110 R 19 W Sec 3 SE1/4 SW1/4 (1,2)
Location comments: Quarry by Nerstrand (2)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2)
References: 1) USBM. [1979], MILS
 2) Mossler. 1971
 3) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Rice
Quarry/pit name: Kilmeyer Quarry (1)
Status: Inactive
Location: T 110 R 19 W Sec 4 SE1/4 SE1/4 (1)
Location comments: Entrance to quarry approximately one mile west on State Aid Road 29, from the intersection of State Aid Road 29 and State Hwy. 246. (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
References: 1) Ford. 1958, p. 143

Main commodity: Crushed Carbonate Rock
County: Rice
Status: Inactive
Past operator/owner: Faribault Quarries (1)
Location: T 110 R 20 W Sec 23 SW1/4 (1)
Location comments: Near Faribault (1)
References: 1) Hogberg. 1966, p. 32

Main commodity: Crushed Carbonate Rock
County: Rice
Quarry/pit name: Rafdahl Quarry (1,2)
Alternate name: Heselton Quarry (2)
Date opened: 1920 (1)
Status: Inactive since 1980 (1)
Past operator/owner: B. H. Heselton Co. until 1980 (1,4); Faribault Quarry Co. (2,3); Ole Rafdahl, owner (1969) (2)
MN/DOT source no: 66082
Location: T 110 R 20 W Sec 33 NE1/4 SW1/4 AND
T 110 R 20 W Sec 33 NW1/4 SE1/4 (2-4)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2,3)
Description: Medium to thin bedded, gray weathering to buff, face 10+ ft, stripping 2 to 20 ft of Decorah shale and drift (2)
Physical test data: Available from U.S. Army Corps of Engineers (3)
References: 1) B. H. Heselton Co. 1988, MN/DNR questionnaire
2) MN/DOT Aggregate Unit files
3) U.S. Army Corps of Engineers files
4) Hogberg. 1969, p. 42

Main commodity: Crushed Carbonate Rock
County: Rice
Status: Inactive
Past operator/owner: Michael Tramm (1884) (1)
Location: T 111 R 19 W Sec 6
Location comments: One mile north of Northfield (1); (T., R., Sec. locations determined from Ref. 1, plate 31)

Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell and others. 1884, p. 657, 672, plate 31

Main commodity: Crushed Carbonate Rock
County: Rice
Quarry/pit name: Northfield Quarry (1)
Alternate name: Bryan Quarry (1)
Status: Inactive since 1967 (1)
Past operator/owner: Bryan Rock Products, Inc. (see Producer Directory) (2)
MN/DOT source no: 66081
Location: T 111 R 19 W Sec 18 SE1/4 NW1/4 (1,2)
Location comments: Near Northfield (2)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Description: Thin-bedded, light gray limestone (1)
References: 1) MN/DOT Aggregate Unit files
2) Hogberg. 1969, p. 40

Main commodity: Crushed Carbonate Rock
County: Rice
Status: Inactive
Township name: Northfield
Location: T 111 R 20 W Sec 12
Location comments: Along the "river road" below Northfield on the west side of the Cannon River (1); (T., R., Sec. locations determined from Ref. 1, plate 31)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell and others. 1884, p. 657, plate 31

Main commodity: Crushed Carbonate Rock
County: Scott
Date opened: 1858 (1)
Status: Abandoned (1888) (1)
USGS quadrangle: Bloomington
Location: T 27 R 24 W Sec 31 SW1/4
Location comments: At Hamilton (1); (location of Hamilton and the Shakopee limestone outcrops are shown on Ref. 1, plate 35; T., R., Sec. locations were determined from plate 35 and a recent quadrangle which shows this area now as the town of Savage)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Description: Shakopee limestone (1)
Uses of commodity: Quicklime (1)

Remarks: "Two kilns of lime were burned from the Shakopee limestone at Hamilton in 1858..." (1)
References: 1) Winchell; Upham. 1888, p. 141

Main commodity: Crushed Carbonate Rock
County: Scott
Status: Inactive
Past operator/owner: B & R Rock Products Co. (1966) (1,2)
USGS quadrangle: Eden Prairie
Township name: Eagle Creek
Location: T 115 R 22 W Sec 1 SW1/4 (1)
Location comments: 4-1/2 miles east of Shakopee (1); near Savage (2)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Description: Shakopee dolomitic limestone (1)
Physical test data: Available at U.S. Army Corps of Engineers (1)
Uses of commodity: Riprap (1); crushed aggregate for roads (2)
References: 1) U.S. Army Corps of Engineers files
 2) Sikich. 1959, p. 543

Main commodity: Crushed Carbonate Rock
County: Scott
Quarry/pit name: W. G. Pearson Limestone Quarry (1,2)
Status: Inactive since 1981 (2)
Past operator/owner: W. G. Pearson, Inc. (1978) (1,2)
USGS quadrangle: Eden Prairie
Township name: Eagle Creek
Location: T 115 R 22 W Sec 2 NW1/4 SE1/4 (1)
Geologic age: Ordovician
Geologic formation: Prairie du Chien Gp. (3)
Description: Limestone (1); sandy dolomite (3)
References: 1) USBM. [1979], MILS
 2) USDL. MSHA mine reference list
 3) Olsen. 1982, plate 5

Main commodity: Crushed Carbonate Rock
County: Scott
Status: Inactive
Past operator/owner: B & R Rock Products Co. (1-3)
USGS quadrangle: Eden Prairie
Township name: Eagle Creek
Location: T 115 R 22 W Sec 2 NE1/4 SW1/4 (1)
 T 115 R 22 W Sec 2 S1/2 NE1/4 SW1/4 (2)
 T 115 R 22 W Sec 2 SW1/4 (4)
Location comments: Near Shakopee (1-3)
Geologic age: Ordovician
Geologic formation: Prairie du Chien Gp. (4)
Remarks: More than one quarry in the SW1/4 of Sec. 2 (4)

References: 1) Hogberg. 1969, p. 39
 2) Hogberg. 1966, p. 31
 3) Hogberg. 1964, p. 26
 4) Mossler. 1974a, Scott County station 1

Main commodity: Crushed Carbonate Rock
Other commodities: Dimension Sandstone
County: Scott
Quarry/pit name: Schroeder Brick & Lime Manufacturing Co. Quarry (1)
Status: Abandoned (1933) (4,6)
Past operator/owner: Schroeder Brick & Lime Manufacturing Co. (1918) (1)
USGS quadrangle: Shakopee
Location: T 115 R 23 W Sec 1 (2)
Location comments: Quarried in the town of Shakopee (1); several quarries in the neighborhood of Shakopee, along the Minnesota River (4); several quarry pits in a rock terrace adjacent to the railroad (5)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (3-5)
Description: Shakopee dolomite (3-5); "The quarry face, 12 to 15 feet deep, shows a series of distinct but uneven beds 6 to 8 inches thick. Most of the rock is dolomite but is interbedded with layers of sandstone, which are used locally for foundations....Both rocks are very porous and show irregular jointing planes." (1)
Uses of commodity: Most used for lime burning, the interbedded layers of sandstone are used locally for foundations (1,3)
Remarks: Several quarries are located south from old lime kiln in Shakopee for a mile or more (2,5); makes a strong brown lime (1)
References: 1) Bowles. 1918, p. 189
 2) Schwartz. 1936, p. 176
 3) Stauffer; Thiel. 1914, p. 63
 4) Stauffer; Thiel. 1933, p. 31
 5) Stauffer. 1950, p. 19
 6) Froelich. 1961, p. 18

Main commodity: Crushed Carbonate Rock
Other commodities: Dimension Sandstone
County: Scott
Quarry/pit name: J. B. Conter Quarry (4-6)
Alternate name: J. B. Contre Quarry (1)
Date opened: 1852 (6)
Status: Abandoned (1914) (2-5,8)
Past operator/owner: J. B. Conter (4-6); J. B. Contre (1); Baptiste Contre (7)
USGS quadrangle: Shakopee
Location: T 115 R 23 W Sec 1 (2,5)
Location comments: Quarry at J. B. Conter lime-kiln, west edge of Shakopee (4); quarry pits are all adjacent to the railroad (1)
Geologic age: Ordovician

Geologic formation: Shakopee Fm. (1,3-6)

Description: Shakopee dolomitic limestone, 18 ft exposed, hard, rough, gray to pink, with sandy beds near the top (1)

See Refs. 4-6 for stratigraphic sections, summary of Ref. 5 follows:
Shakopee Fm.
Dolomite, 7 ft. pink to brown, all fairly thin bedded and uneven
Sandstone 2 ft, irregular, gray, sandy gray dolomite
Dolomite 10 ft, gray to pink, fairly massive but splits into thinner beds, extends to bottom of quarry

Chemical analyses: Ref. 1 analyses of the Shakopee dolomite horizon yielded (first sample value from upper 8 ft, second from lower 10 ft): MgO 18.42% and 19.21%; SiO₂ 7.82% and 4.78%; R₂O₃ 2.60% and 2.08%

See Ref. 4, Samples Nos. 116-118 for additional chemical analyses

Uses of commodity: Lime (4,6-8), small amount of building stone produced from sandstone layer (6)

Remarks: "This quarry is part of a rock terrace in which other openings have been made within the next half to one mile. The rock is fairly good except for the sandy beds near the top. These quarry pits are all adjacent to the railroad and rock is easily available." (1) "The upper 6 to 8 feet of the section here, above the calcareous sandstone used for building, produce leather-colored lime; while the 12 feet below these beds yield a very dark, blackish lime....The area of the quarry is 240 by 220 feet, and its depth 15 to 20 feet." (6)

References:

- 1) Stauffer. 1950, p. 18, 19, 27
- 2) Schwartz. 1936, p. 176
- 3) Thiel; Dutton. 1935, p. 153
- 4) Stauffer; Thiel. 1933, p. 31, 70, 74
- 5) Stauffer; Thiel. 1914, p. 63, 64, 194
- 6) Winchell; Upham. 1888, p. 125, 140, 141
- 7) Winchell; Peckham. 1874, p. 205
- 8) Froelich. 1961, p. 18

Main commodity: Crushed Carbonate Rock

County: Scott

Quarry/pit name: John Wambach Quarry (1)

Status: Inactive

Past operator/owner: John Wambach (1914) (1)

Location: T 115 R 23 W Sec 2

Location comments: 1-1/4 miles west of Shakopee (1); (T., R., Sec. locations determined from Ref. 1 map, p. 194 and county highway map)

Geologic age: Ordovician

Geologic formation: Shakopee Fm. (1)

Description: Shakopee Fm., 18.4 ft, dolomite, gray to brown to pink, thin-bedded in top 10 ft, compact below, overburden 0.5 ft of soil (1)

References:

- 1) Stauffer; Thiel. 1914, p. 194, 196, 197

Main commodity: Crushed Carbonate Rock

County: Scott

Date opened: 1860's (3)

Status: Inactive

Past operator/owner: Mrs. M. A. Spencer, owner (2,3); Northwest Bituminous Co., Inc., Roy Varner, Mpls. (4)

USGS quadrangle: Shakopee

Township name: Louisville

Location: T 115 R 23 W Sec 21 NW1/4 SW1/4 AND
T 115 R 23 W Sec 20 NE1/4 SE1/4 (1)

Location comments: In Louisville, 1-1/2 miles southeast from Carver (3)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (2,4)

Description: Oneota (dolomite) (2); magnesium limestone, hard and compact, in layers 1 to 3 ft thick, small cavities sometimes occur in it (3)

Physical test data: Available from MN/DOT Aggregate Unit (4)

Uses of commodity: "... used for much of the bridge masonry of Scott and Carver counties, including the railway-bridges at Chaska and Carver." (3)

References:

- 1) Mossier. 1974a, station 11
- 2) Schwartz. 1936, p. 177
- 3) Winchell; Upham. 1888, p. 123, 140
- 4) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Scott

Quarry/pit name: Lindhoff Quarry (4,5)

Alternate name: Louisville Quarry (2)

Date opened: 1860's or before (6)

Status: Inactive or abandoned (1935) (3)

Past operator/owner: Joseph Lindhoff (4,5); later owned by J. B. Conter (4,6); J. Baptist Contre (1874) (7)

USGS quadrangle: Jordan East

Township name: Louisville

Location: T 115 R 23 W Sec 28 NE1/4 NW1/4 AND
T 115 R 23 W Sec 21 SE1/4 SW1/4 (1)

Location comments: At Louisville, about 3/4 mi north of Merriam Junction (3-6); quarry adjacent to the Northwestern Railroad tracks (2)

Geologic age: Ordovician

Geologic formation: Shakopee Fm. (2,3,5,6)

Description: Shakopee dolomitic limestone (2); see Refs. 2, 4 and 5 for stratigraphic section descriptions Arenaceous magnesium limestone (6); this stone described by Winchell as "a bluff facing west,...The rock is very irregularly stratified, and varies much in hardness and color. The prevailing colors are pinkish and buffish....Thirty-six feet are exposed in the quarry..." (6)

Chemical analyses: See Ref. 2, p. 27 for individual sample results by depth on the following data summary: Shakopee dolomite or dolomitic limestone (3)

samples)
 MgO 18.81% avg, 18.65%-19.03% r.
 SiO₂ 4.41% avg, 2.10%-6.46% r.
 R₂O₃ 2.67% avg, 2.52%-2.84% r.

For additional chemical analyses see Ref. 4,
 Sample Nos. 47-53.

Uses of commodity: Lime (2,4,6,7)

Remarks: Old quarry (1); old quarry and lime kiln (2,4);
 quarry was once worked on a rather large scale
 and burned for lime (2)

References: 1) Mossler. 1974a, Scott County station 10
 2) Stauffer. 1950, p. 19, 20, 27
 3) Thiel; Dutton. 1935, p. 153
 4) Stauffer; Thiel. 1933, p. 31, 67, 72
 5) Stauffer; Thiel. 1914, p. 194, 195
 6) Winchell; Upham. 1888, p. 124, 141
 7) Winchell; Peckham. 1874, p. 140, 205

Main commodity: Crushed Carbonate Rock

County: Sibley

Status: Inactive

Past operator/owner: Walter E. Doheny, owner (1888) (1)

Township name: Faxon

Location: T 113 R 25 W

Location comments: Outcrop lies in the southwest corner of Faxon,
 only a short distance from the town line and
 river (1); (T., R. locations determined from
 county highway map and Ref. 1, plate 36; plate
 36 shows St. Lawrence outcrops in sections 7, 8
 and 18).

Geologic age: Cambrian

Geologic formation: St. Lawrence Fm. (1)

Description: "It is a dull red, slightly arenaceous magnesium
 limestone. A quarry seven feet deep shows
 layers one to five inches thick, often separated
 by thin earthy seams." (1)

Uses of commodity: Macadam (1)

References: 1) Winchell; Upham. 1888, p. 160, 161, plate 36

Main commodity: Crushed Carbonate Rock

County: Sibley

Status: Inactive

Past operator/owner: Mr. D. Doheny, owner (1874) (1)

Township name: Jessenland

Location: T 113 R 26 W Sec 12 NE1/4 (1)

Location comments: About three miles above Blakeley and on the
 west side of the Minnesota River (1)

Description: "It is a red, metamorphic limestone, nodular,
 concretionary, and filled with checks and
 planes of separation, the thickest beds being
 not more than four inches, the most of them
 less than two, and more or less contorted....It is
 rough and irregular. It is fine-grained generally,
 rarely porous, and cryptocrystalline. When
 weathered it shows an arenaceous

composition....About six feet of bedding may
 be seen." (1)

Uses of commodity: Macadam (1)

Remarks: "It is almost a worthless stone for any use
 except macadamizing, owing to the ease with
 which the beds are fractured transversely.", a
 little quarry (1)

References: 1) Winchell; Peckham. 1874, p. 155

Main commodity: Crushed Carbonate Rock

County: Sibley

Status: Inactive

Past operator/owner: Herman Matthei, in 1878 (1)

Township name: Jessenland

Location: T 113 R 26 W Sec 13 (1)

Location comments: (T., R. locations determined from Ref. 1, plate
 36)

Geologic age: Cambrian

Geologic formation: St. Lawrence Fm. (1)

Description: St. Lawrence limestone (1)

Uses of commodity: Quicklime (1)

References: 1) Winchell; Upham. 1888, p. 177, plate 36

Main commodity: Crushed Carbonate Rock

County: Sibley

Status: Inactive

Past operator/owner: Henry Young, owner (1888) (1)

Township name: Jessenland

Location: T 113 R 26 W Sec 13 S1/2 (1)

Location comments: Near the Minnesota River and about 25 ft above
 it at its stage of low water (1); (T., R. locations
 determined from Ref. 1, plate 36)

Geologic age: Cambrian

Geologic formation: St. Lawrence Fm. (1)

Description: "The rock is yellowish buff limestone, nearly
 level in stratification, in layers one to four
 inches thick, much divided and broken by
 vertical and oblique seams and cracks." (1)

Uses of commodity: Quicklime (1)

References: 1) Winchell; Upham. 1888, p. 160, plate 36

Main commodity: Crushed Carbonate Rock

County: Steele

Quarry/pit name: Klemmer Quarry (1)

Status: Abandoned (1969) (1)

Past operator/owner: Klemmer Estate (1969) (1)

MN/DOT source no: 74060

Township name: Clinton Falls

Location: T 108 R 20 W Sec 28 SW1/4 SE1/4 (1)

Geologic age: Ordovician

Geologic formation: Galena Gp. (1)

Physical test data: Available from MN/DOT Aggregate Unit (1)
Uses of commodity: Crushed aggregate, riprap (1)
Remarks: Quarry filled with water (1969) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Steele
Status: Inactive
Township name: Clinton Falls
Location: T 108 R 20 W Sec 28
Location comments: A mile south of Clinton Falls, in outcrops on the Straight River (1); (T., R., Sec. locations determined from county highway map)

Geologic age: Ordovician
Geologic formation: Lower Maquoketa Shale (1)
Description: Quarried "...where 6 to 8 ft of shaly blue to brown limestone crops out in the river." (1)
Chemical analyses: See Ref. 1 for additional analyses, summary follows: Sample No. 54, lower part of Maquoketa yields CaCO₃ 62.3%, MgCO₃ 25.3%; Sample No. 55, middle part of Maquoketa yields CaCO₃ 83.0%, MgCO₃ 7.1%
Uses of commodity: Agricultural purposes (1)
Remarks: Quarried to some extent (1)
References: 1) Stauffer; Thiel. 1933, p. 44, 45, 67, 73

Main commodity: Crushed Carbonate Rock
County: Steele
Quarry/pit name: Klemmer & Sullivan Quarry (1-3)
Alternate name: Klemmer Quarry (3); Clinton Falls Quarry (3)
Status: Inactive since 1973 (2)
Past operator/owner: Klemmer Construction Co. (1,4); Klemmer Sullivan Quarry, Inc. (2)

MN/DOT source no: 74061
Township name: Clinton Falls
Location: T 108 R 20 W Sec 33 N1/2 NE1/4 (1)
 T 108 R 20 W Sec 33 NE1/4 (3)
Location comments: A few miles north of Owatonna (3); there are two quarries at this location, the old quarry is adjacent west of the Straight River and has water in it, the new quarry is to the west of old quarry (3)

Geologic age: Ordovician
Geologic formation: Maquoketa Fm. (1,3)
Description: Thin bedded shaly limestone (1)
 "The quarry face is in the Maquoketa Formation, an Ordovician limestone. The bottom 8 feet of the quarry is in the Galena limestone formation." (3)
 "The rock is argillaceous (silty and shaly), thin bedded, medium hard limestone with shale seams and partings. The rock tends to be platy and is very brittle." (3)

Physical test data: Available from MN/DOT Aggregate Unit (3)
Uses of commodity: Agricultural lime, road stone (5)
References: 1) U.S. Army Corps of Engineers files
 2) USDL. MSHA mine reference list
 3) MN/DOT Aggregate Unit files
 4) Hogberg. 1969, p. 43
 5) Sikich. 1959, p. 544

Main commodity: Crushed Carbonate Rock
County: Wabasha
Quarry/pit name: Dickerman Quarry (1)
Status: Inactive
Past operator/owner: Patterson Quarries (see Producer Directory) (1)
MN/DOT source no: 79030
Township name: Plainview
Location: T 108 R 11 W Sec 22 (1)
 T 108 R 11 W Sec 22 NW1/4 (2)
Physical test data: Available from MN/DOT Aggregate Unit - COPES file (1)
References: 1) MN/DOT Aggregate Unit files
 2) Wabasha County Highway Map. 1985

Main commodity: Crushed Carbonate Rock
County: Wabasha
Quarry/pit name: Becker Quarry (1)
Status: Inactive
Past operator/owner: Patterson Quarries (see Producer Directory) (1980) (1)
Location: T 108 R 11 W Sec 26 (1)
Location comments: Center of section 26 (1)
References: 1) USBM. [1980], MILS

Main commodity: Crushed Carbonate Rock
County: Wabasha
Status: Inactive; active (1974) (1)
Township name: Plainview
Location: T 108 R 11 W Sec 28 NE1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Description: Dolomite, 40-50 ft exposed (1)
References: 1) Mossler. 1974b, Plainview station 25

Main commodity: Crushed Carbonate Rock
County: Wabasha
Quarry/pit name: Davis Quarry (1)
Status: Inactive (1965) (1)
Past operator/owner: Paul Schmidt (1965), Alton Davis (1921) (1)
MN/DOT source no: 79055
Township name: Plainview
Location: T 108 R 11 W Sec 32 NW1/4 SE1/4 (1)

Location comments: Center of section 32 (2-4)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (2-4)
Description: Thin, wavy bedded dolomite (2); Willow River Mbr. 48 ft overlies New Richmond Mbr. 8 ft (3,4); see Ref. 4 for detailed stratigraphic section
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Large old quarry (2)
References: 1) MN/DOT Aggregate Unit files
 2) Mossler. 1974b, Plainview station 28
 3) Squillace. 1979, p. A-3
 4) Austin. 1971, p. 140-142

Main commodity: Crushed Carbonate Rock
Other commodities: Dimension Carbonate Rock
County: Wabasha
Quarry/pit name: Burkhardt Quarry (1)
Status: Inactive
Past operator/owner: Alfred Burkhardt (1918) (1)
Township name: Plainview
Location: T 108 R 11 W Sec 32
Location comments: On the bluff of Whitewater River, about 3 miles south of Plainview (1); (possibly in section 32, 31, or 33; T., R., Sec. locations determined from Ref. 2, plate 32)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Description: "The rock is a gray to white crystalline limestone...Beds are 3 inches to 3 feet thick and dip 5 deg. to 10 deg. E. Joints are very irregular, but blocks of fair size may be obtained. The quarry is of the bench type and is easily accessible by road. The rock is covered with 2 to 6 feet of soil." (1)
Physical test data: Specific gravity 2.880, pore space 1.02%, dry weight 178.2 lbs/cu ft (1)
Uses of commodity: Quicklime, building stone, crushed rock (1)
References: 1) Bowles. 1918, p. 190
 2) Winchell; Upham. 1888, plate 32

Main commodity: Crushed Carbonate Rock
County: Wabasha
Quarry/pit name: Tucker Quarry (1,2)
Status: Inactive since 1975 (2)
Past operator/owner: James Paulson (1975) (2); Quarve & Anderson Co. (see Producer Directory) (1969) (3); Donald Tucker (1965), Clayton Woodward (1921) (1)
MN/DOT source no: 79064
Location: T 108 R 12 W Sec 33 SE1/4 SE1/4 (1,3)
Location comments: Near Elgin (3)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)

Description: Limestone 16 ft, stripping 6 ft of shale and loam (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) USDL. MSHA mine reference list
 3) Hogberg. 1969, p. 46

Main commodity: Crushed Carbonate Rock
County: Wabasha
Quarry/pit name: Weaver Quarry (1,2)
Status: Inactive since 1978 (2)
Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1,2)
Township name: Minneiska
Location: T 109 R 9 W Sec 30 NE1/4 NW1/4 (1)
References: 1) USBM. [1980], MILS
 2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Wabasha
Quarry/pit name: Freese Quarry (1,2)
Status: Inactive (1965) (1)
Past operator/owner: Edwin Freese (1,2); Joe Frieze (1941) (1)
MN/DOT source no: 79069
Township name: Watopa
Location: T 109 R 10 W Sec 8 SW1/4 NE1/4 (1,3)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (2,3)
Description: Dolomitic limestone (2)
Physical test data: Available from U.S. Army Corps of Engineers (2) and MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) U.S. Army Corps of Engineers files
 3) Mossler. 1974b, Wabasha station 2

Main commodity: Crushed Carbonate Rock
County: Wabasha
Quarry/pit name: Star Hill Quarry (1)
Alternate name: Johnson Quarry (1)
Status: Inactive; active (1965) (1)
Past operator/owner: Lloyd Johnson (1965), S. A. Arend (1921) (1)
MN/DOT source no: 79065
Township name: Watopa
Location: T 109 R 10 W Sec 21 SW1/4 SW1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Large quarry (2)
References: 1) MN/DOT Aggregate Unit files
 2) Mossler. 1974b, Plainview station 2

Main commodity: Crushed Carbonate Rock
County: **Wabasha**
Quarry/pit name: Maringer Quarry (1)
Status: Inactive; active (1965) (1)
Past operator/owner: Archie Lowe, C. Maringer (1965) (1); Patterson Quarries (see Producer Directory) (3)
MN/DOT source no: 79071
Township name: Watopa
Location: T 109 R 10 W Sec 26 N1/2 SE1/4 (1-3)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (2,3)
Description: Dolomite, 30+ ft exposed (2)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Large quarry (2)
References: 1) MN/DOT Aggregate Unit files
 2) Mossler. 1974b, Alma station 16
 3) Niles. [1988a], table 1

Main commodity: Crushed Carbonate Rock
County: **Wabasha**
Status: Inactive (1965) (1)
Past operator/owner: Quentine Dildine (1965) (1)
MN/DOT source no: 79054
Location: T 109 R 11 W Sec 1 S1/2 SE1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: **Wabasha**
Quarry/pit name: Funke Quarry (1)
Status: Inactive; active (1965) (1)
Past operator/owner: Emil Funke (1965) (1)
MN/DOT source no: 79074
Township name: Highland
Location: T 109 R 11 W Sec 7 NW1/4 NW1/4 (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (2)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Large quarry (2)
References: 1) MN/DOT Aggregate Unit files
 2) Mossler. 1974b, Wabasha station 7

Main commodity: Crushed Carbonate Rock
County: **Wabasha**
Status: Inactive; active (1969) (1)
Past operator/owner: Hector Construction Co. (1969) (1)
Township name: Highland
Location: T 109 R 11 W Sec 17 NW1/4 NW1/4 (1)
Location comments: Near Millville (1)
References: 1) Hogberg. 1969, p. 42

Main commodity: Crushed Carbonate Rock
County: **Wabasha**
Status: Inactive (1965) (1)
Past operator/owner: Ralph Kruger (1965), Charles Kruger and Hector Construction Co. (1941) (1)
MN/DOT source no: 79067
Township name: Highland
Location: T 109 R 11 W Sec 28 SW1/4 SE1/4 (1)
 T 109 R 11 W Sec 28 W1/2 SE1/4 (1921) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: **Wabasha**
Quarry/pit name: Sexton Quarry (1)
Status: Inactive; active (1965) (1)
Past operator/owner: Agnes Sexton (1965) (1)
MN/DOT source no: 79057
Location: T 109 R 12 W Sec 7 SW1/4 NW1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: **Wabasha**
Status: Inactive (1965) (1)
Past operator/owner: Harvey Nass (1965) (1)
MN/DOT source no: 79059
Location: T 109 R 12 W Sec 22 NE1/4 SE1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: **Wabasha**
Status: Inactive (1965) (1)
Past operator/owner: Frank Springer (1965), Thompson (1921) (1)
MN/DOT source no: 79050
Location: T 109 R 12 W Sec 28 SW1/4 NE1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: **Wabasha**
Quarry/pit name: Thiel Quarry (1)
Status: Inactive
Past operator/owner: Holm Brothers Construction Co. (see Producer Directory) (1)
Location: T 109 R 12 W Sec 32 SW1/4 SW1/4 (1)
References: 1) USBM. [1979], MILS

Main commodity: Crushed Carbonate Rock
County: **Wabasha**

Quarry/pit name: Hart Quarry (1,2,4)
Alternate name: Hammond Quarry (1,3)
Status: Inactive since 1980 (4)
Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1-4,7); Donald Hart (1965) (1)
MN/DOT source no: 79078, 79036
Location: T 109 R 13 W Sec 32 NE1/4 NE1/4 (1,2)
 T 109 R 13 W Sec 32 NE1/4 (3,5,6)
Geologic age: Ordovician
Geologic formation: Shakopee and Oneota Fms. (3,5,6)
Description: Dolomite, 99 ft face (5,6); see Ref. 1 for column description; see Refs. 5 and 6 for stratigraphic section descriptions
Physical test data: Available from U.S. Army Corps of Engineers (3) and MN/DOT Aggregate Unit - COPES file (1)
References: 1) MN/DOT Aggregate Unit files
 2) USBM. [1980], MILS
 3) U.S. Army Corps of Engineers files
 4) USDL. MSHA mine reference list
 5) Squillace. 1979, A-6, A-7
 6) Austin. 1971, p. 147-150
 7) Hogberg. 1969, p. 46

Main commodity: Crushed Carbonate Rock
County: Wabasha
Quarry/pit name: Tries Quarry (1)
Alternate name: Pit No. 2523 (1)
Status: Inactive (1965) (1)
Past operator/owner: Norbert Tries (1965), Lena Grossbach (1921) (1)
MN/DOT source no: 79066
Location: T 109 R 14 W Sec 6 SW1/4 SW1/4 (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Description: Dolomite (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
Other commodities: Dimension Carbonate Rock
County: Wabasha
Status: Inactive (1918) (1)
Past operator/owner: One of the quarry owners was E. L. Ford (1888) (2)
Location: T 109 R 14 W
Location comments: Three small quarries were once worked near Mazeppa (1); (T., R., Sec. locations determined from Ref. 2, plate 32; possibly in section 6, 7, or 8)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Uses of commodity: Ford's quarry produced quicklime (2)

References: 1) Bowles. 1918, p. 191
 2) Winchell; Upham. 1888, p. 13, plate 32

Main commodity: Crushed Carbonate Rock
County: Wabasha
Quarry/pit name: Grossbach Quarry (1)
Status: Inactive
Past operator/owner: Grossbach (1965) (1)
MN/DOT source no: 79086
Location: T 109 R 14 W Sec 21 SE1/4 SE1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Wabasha
Quarry/pit name: Roland Quarry (1)
Status: Inactive; active (1965) (1)
Past operator/owner: Elmer Roland (1965) (1)
MN/DOT source no: 79079
Location: T 109 R 14 W Sec 23 SE1/4 SW1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Wabasha
Status: Inactive (1965) (1)
Past operator/owner: Westly F. Moeching (1965) (1)
MN/DOT source no: 79063
Township name: West Albany
Location: T 110 R 12 W Sec 15 SE1/4 SW1/4 (1)
Location comments: South side of T.H. 60, 300 (unit not given) west of MN/DOT Source No. 79062 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Wabasha
Status: Inactive
Past operator/owner: D. Robertson (1)
MN/DOT source no: 79088
Township name: Gillford
Location: T 110 R 13 W Sec 27 SE1/4 SE1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Wabasha
Quarry/pit name: Schwirtz Quarry (1,4)
Alternate name: Robertson Quarry (2,3)
Status: Inactive; active (1988) (3)

Past operator/owner: Roberson Lime & Rock Products (see Producer Directory) (2,3); Lydia Schwirtz (1965), F.L. Schwirtz (1921) (1)

MN/DOT source no: 79051

Location: T 110 R 13 W Sec 36 SW1/4 SW1/4 (1,2)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1,4)

Description: Oneota dolomite, 40 ft exposed, underlies 12 ft of Root Valley sandstone and 5 ft of stripping (4)

Chemical analyses: Four samples yielded MgO 20.33%, 20.45%, 20.42%, and 20.16% (4); see Ref. 4 for further analyses

Physical test data: Available from MN/DOT Aggregate Unit (1)

References: 1) MN/DOT Aggregate Unit files
2) USBM. [1980], MILS
3) USDL. MSHA mine reference list
4) Stauffer. 1950, p. 8, 9, 25

Main commodity: Crushed Carbonate Rock

County: Wabasha

Quarry/pit name: Freiheit Quarry (1)

Status: Inactive

Past operator/owner: Holm Brothers Construction Co. (see Producer Directory) (1978) (1)

Location: T 110 R 14 W Sec 5 (1)

References: 1) USBM. [1978], MILS

Main commodity: Crushed Carbonate Rock

County: Wabasha

Status: Inactive

Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1969) (1)

Location: T 110 R 14 W Sec 14 NW1/4 NE1/4 (1)

Location comments: Near Lake City (1)

References: 1) Hogberg. 1969, p. 46

Main commodity: Crushed Carbonate Rock

County: Wabasha

Quarry/pit name: Ross Quarry (1)

Status: Inactive

Past operator/owner: Ross (1965) (1)

MN/DOT source no: 79082

Township name: Chester

Location: T 110 R 14 W Sec 23 (1)

T 110 R 14 W Sec 23 SE1/4 NE1/4 (2)

Physical test data: Available from MN/DOT Aggregate Unit (1)

References: 1) MN/DOT Aggregate Unit files
2) USGS. 1951, Lake City quadrangle

Main commodity: Crushed Carbonate Rock

County: Wabasha

Quarry/pit name: Betcher Quarry (1)

Status: Inactive (1965) (1)

Past operator/owner: Vern Betcher (1965) (1)

MN/DOT source no: 79068

Location: T 110 R 14 W Sec 30 SE1/4 SE1/4 (1)

Geologic age: Ordovician

Geologic formation: Shakopee Fm. (1)

Description: Shakopee dolomite (1)

Physical test data: Available from MN/DOT Aggregate Unit (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Wabasha

Quarry/pit name: Roemer Quarry (1)

Status: Inactive; active (1965) (1)

Past operator/owner: Elmer and Orville Roemer (1965) (1)

MN/DOT source no: 79072

Township name: Pepin

Location: T 111 R 11 W Sec 27 NE1/4 NE1/4 AND

T 111 R 11 W Sec 22 SE1/4 SE1/4 (1)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (2)

Physical test data: Available from MN/DOT Aggregate Unit (1)

References: 1) MN/DOT Aggregate Unit files
2) Mossler. 1974b, Wabasha station 92

Main commodity: Crushed Carbonate Rock

County: Wabasha

Quarry/pit name: Bruegger Quarry (1)

Status: Inactive

Past operator/owner: Bruegger (1965) (1)

MN/DOT source no: 79084

Location: T 111 R 11 W Sec 36 (1)

Physical test data: Available from MN/DOT Aggregate Unit (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Wabasha

Quarry/pit name: Cliff Quarry (1)

Status: Inactive; active (1965) (1)

Past operator/owner: Ivan Cliff (1965) (1)

MN/DOT source no: 79052

Location: T 111 R 12 W Sec 17 NE1/4 SE1/4 (1,2)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (2)

Remarks: Large quarry (2)

References: 1) MN/DOT Aggregate Unit files
2) Mossler. 1974b, Lake City station 2

Main commodity: Crushed Carbonate Rock
County: Wabasha
Status: Inactive (1965) (1)
Past operator/owner: Glenn Frank (1965) (1)
MN/DOT source no: 79061
Location: T 111 R 13 W Sec 10 NE1/4 SW1/4 (1)
Uses of commodity: Used when pier at Lake City was built (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Wabasha
Quarry/pit name: Moyer Quarry (1-3)
Status: Inactive since 1985 (3)
Past operator/owner: Patterson Quarries (see Producer Directory) (2,3); H. Moyer (1965) (1)
MN/DOT source no: 79081
Location: T 111 R 13 W Sec 23 NE1/4 NE1/4 (1,2) AND
 T 111 R 13 W Sec 24 NW1/4 NW1/4 (1)
Geologic age: Ordovician
Geologic formation: Shakopee-Oneota Fms. (2)
Description: Dolomitic limestone (2)
Physical test data: Available from U.S. Army Corps of Engineers (2) and MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) U.S. Army Corps of Engineers files
 3) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Wabasha
Quarry/pit name: Hazel Coulee Quarry (1)
Status: Inactive; active (1965) (1)
Past operator/owner: Leo Freeze (1965) (1)
MN/DOT source no: 79080
Location: T 111 R 13 W Sec 24 SE1/4 SW1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Wabasha
Quarry/pit name: Freiheit Quarry (1,2)
Status: Inactive since 1975 (2)
Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (2); Harlan Freicheit (1965) (1)
MN/DOT source no: 79075
Location: T 111 R 14 W Sec 14 NW1/4 NE1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock

County: Washington
Status: Inactive
Past operator/owner: W. P. Truax, owner (1911) (1)
Location: T 27 R 20 W
Location comments: Quarry six miles north of Hastings (1); (T., R. locations determined from county highway map)
Description: Limestone and sandstone (1)
Uses of commodity: Quarry opened for building dams and riprap (1)
References: 1) Cooley. 1911, p. 12

Main commodity: Crushed Carbonate Rock
County: Washington
Status: Inactive
Location: T 27 R 21 W Sec 30 (1,2)
Location comments: Quarry along Burlington RR, 2-1/2 miles south of St. Paul Park (2)
Geologic age: Ordovician
Geologic formation: Shakopee-Oneota Fms. (2)
Uses of commodity: Quicklime (1)
References: 1) Mossler. 1974a, St. Paul Park station 180
 2) Schwartz. 1936, p. 200

Main commodity: Crushed Carbonate Rock
County: Washington
Status: Inactive
Location: T 27 R 22 W OR
 T 27 R 21 W
Location comments: Quarry adjacent to the Burlington Railroad, about 2 miles south of St. Paul Park in Washington County (1); (T., R. locations determined from county highway map)
Uses of commodity: Riprap (1)
References: 1) Schwartz. 1936, p. 121

Main commodity: Crushed Carbonate Rock
County: Washington
Status: Inactive
Past operator/owner: J. Holton (1884) (1)
Township name: Newport
Location: T 28 R 22 W Sec 25 (1,2)
Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2)
Uses of commodity: Quicklime (1)
References: 1) Winchell; Upham. 1888, p. 389, plate 44
 2) Thiel; Dutton. 1935, p. 143

Main commodity: Crushed Carbonate Rock
County: Washington
Quarry/pit name: Bryan Smith Quarry (1)

Status: Inactive
Past operator/owner: Bryan Rock Products, Inc. (see Producer Directory) (1979) (1)
Location: T 29 R 20 W Sec 23 SW1/4 SW1/4 (1)
References: 1) USBM. [1980], MILS

Main commodity: Crushed Carbonate Rock
County: Washington
Quarry/pit name: Barton 769 Quarry (1,2)
Status: Inactive since 1980 (2)
Past operator/owner: Barton Contracting Co. (1,2)
Location: T 29 R 20 W Sec 30 SE1/4 NW1/4 NW1/4 (1)
References: 1) USBM. [1980], MILS
 2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Washington
Quarry/pit name: Moelter Quarry (1)
Status: Inactive
Past operator/owner: Moelter Construction Co., Inc. (1979) (1)
Location: T 30 R 20 W Sec 15 (1)
Location comments: Center of section 15 (1)
References: 1) USBM. [1980], MILS

Main commodity: Crushed Carbonate Rock
County: Washington
Quarry/pit name: Moelter Quarry (1)
Status: Inactive
Past operator/owner: Moelter Construction Co. (1978) (1)
Location: T 30 R 20 W Sec 34 (1)
References: 1) USBM. [1978], MILS

Main commodity: Crushed Carbonate Rock
County: Washington
Status: Inactive
Location: T 31 R 19 W Sec 32 (1)
Location comments: Old quarry located 100 yds north of the Soo Line high bridge, Arcola (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: Drift 12 ft overlies 28 ft of Oneota dolomite (1)
Chemical analyses: MgO 19.75%, SiO₂ 3.08% (1)
Uses of commodity: Quicklime (1)
References: 1) Stauffer. 1950, p. 3, 4, 24

Main commodity: Crushed Carbonate Rock
County: Washington
Status: Inactive

Past operator/owner: Bryan Rock Products, Inc. (see Producer Directory) (1)
Location: T 32 R 19 W Sec 18 SW1/4 SW1/4 (1)
Location comments: Near Marine (1)
References: 1) Hogberg. 1969, p. 40

Main commodity: Crushed Carbonate Rock
County: Watonwan
Status: Inactive since 1984 (1)
Past operator/owner: Moelter Construction Co., Inc. (1)
Location comments: Watonwan County (1); location undetermined
Remarks: Limestone quarry in Watonwan County producing crushed/broken stone (1)
References: 1) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive
Location: T 105 R 4 W Sec 20 SE1/4 SE1/4 SW1/4 (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: Lower part of the Oneota Fm. (1)
References: 1) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock
County: Winona
Quarry/pit name: Darling Quarry (1)
Status: Inactive
Township name: Dresbach
Location: T 105 R 4 W Sec 28 SW1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive (1965) (1)
Past operator/owner: Joseph Ready (1965) (1)
MN/DOT source no: 85033
Township name: Dresbach
Location: T 105 R 4 W Sec 29 NW1/4 NE1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Winona
Quarry/pit name: North Ridge Quarry (1,2)
Status: Inactive (1971) (2)
Past operator/owner: Alice Lautz (1965), L. G. Lantz (1921) (1)
MN/DOT source no: 85032

Township name: Dresbach
Location: T 105 R 4 W Sec 33 SE1/4 SW1/4 (1)
 T 105 R 4 W Sec 33 SE1/4 SW1/4 SW1/4 (2)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (2)
Description: Lower part of Oneota Fm. (2)
Physical test data: LAR percent loss: 44.3 average of 12 samples, range 38.5-49.8 (2); test data available from MN/DOT Aggregate Unit (1)
Uses of commodity: Crushed rock (2)
References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive
Past operator/owner: Jake Hessler (1968) (1)
MN/DOT source no: 85078
Township name: New Hartford
Location: T 105 R 5 W Sec 14 NE1/4 NW1/4 (1)
Location comments: (This possibly is the quarry that is 200 ft west on County Rd. 12 from MN/DOT Source No. 85036 which is also in the NE1/4 of NW1/4 of Section 14)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Winona
Quarry/pit name: Gerdes Quarry (1,2)
Alternate name: Nodine Quarry (1,2); Dakota No. 12 Quarry (4)
Status: Inactive; active (1984) (2)
Past operator/owner: A. J. Ostreng, Inc. (4); Fred Gerdes (1965) (1)
MN/DOT source no: 85036
Township name: New Hartford
Location: T 105 R 5 W Sec 14 NE1/4 NW1/4 (1,3,4)
 T 105 R 5 W Sec 14 NE1/4 NE1/4 NW1/4 (2)
Location comments: North of County Rd. 12 (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1-3)
Description: Lower part of Oneota Fm. (2); Oneota dolomite (1-4); approximately 40-45 ft high (3); see Ref. 1 for section description
Physical test data: LAR percent loss: 36.8 average of 43 samples, range 25.9-47.3 (2); test data available from MN/DOT Aggregate Unit (1) and U.S. Army Corps of Engineers (4)
Uses of commodity: Crushed rock (2)
Remarks: Large quarry (3); another quarry 200 ft west up County Rd. 12 (1)
References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984, plate 8

3) Mossler. 1983, station 124
 4) U.S. Army Corps of Engineers files

Main commodity: Crushed Carbonate Rock
County: Winona
Quarry/pit name: Yeadke Quarry (1,2)
Status: Inactive
Past operator/owner: Hector Construction Co. (1975) (1,2); Harold Yeadke, owner (1980) (1)
Township name: Pleasant Hill
Location: T 105 R 6 W Sec 2 SE1/4 SW1/4 (1)
References: 1) USBM. [1980], MILS
 2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Winona
Quarry/pit name: Summers Quarry (1,2)
Status: Inactive; active in 1988 for one job (3)
Past operator/owner: Tom Summers (1965) (1); Botcher Construction Co. (see Producer Directory), Dwayne Zenke-owner (1988) (3)
MN/DOT source no: 85066
Township name: Pleasant Hill
Location: T 105 R 6 W Sec 18 NE1/4 NW1/4 (1-3)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (2)
Description: Lower part of Oneota Fm. (2)
Physical test data: LAR percent loss: average 38.9 of 7 samples, range 35.6-45.2 (2); available from MN/DOT Aggregate Unit (1)
Uses of commodity: Crushed rock (2)
References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984, plate 8
 3) Winona County Planning and Zoning. 1989; personal communication

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive; active (1971) (2)
MN/DOT source no: 85085
Township name: Pleasant Hill
Location: T 105 R 6 W Sec 21 SE1/4 SW1/4 (1,2)
Location comments: On east side on County Rd. 13 (2)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,2)
Description: Lower part of Oneota Fm. (1); Jordan sandstone with Oneota dolomite at top (2)
Uses of commodity: Riprap (1)
References: 1) Jirsa; Meyer. 1984, plate 8
 2) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Abandoned (1965) (1)
Past operator/owner: Clayton Woodward (1965), Catherine McCaffery (1921) (1)
MN/DOT source no: 85-37
Township name: Pleasant Hill
Location: T 105 R 6 W Sec 23 NE1/4 NE1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive (1965) (1)
Past operator/owner: Lindley Smith (1965) (1)
MN/DOT source no: 85059
Township name: Pleasant Hill
Location: T 105 R 6 W Sec 24 NE1/4 SE1/4 (1)
 T 105 R 6 W Sec 24 SE1/4 NE1/4 (2)
References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive (1983) (1)
Location: T 105 R 6 W Sec 26 NW1/4 SE1/4 (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: Lower part of Oneota Fm. (1)
References: 1) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive (1965,1984) (1,2)
Past operator/owner: Harry Nietzsche (1965) (1)
MN/DOT source no: 85058
Township name: Wiscoy
Location: T 105 R 7 W Sec 5 NE1/4 NE1/4 (1,2)
 T 105 R 7 W Sec 4 NW1/4 NW1/4 (1921) (1)
References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive (1965,1984) (1,2)
Past operator/owner: Edwin Greethurst (1965), Herb Murray (1921) (1)
MN/DOT source no: 85088
Location: T 105 R 7 W Sec 20 E1/2 NE1/4 (1)

References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive (1965,1984) (1,2)
Past operator/owner: Frank Maus (1965), Frank Lucas (1921) (1)
MN/DOT source no: 85087
Township name: Hart
Location: T 105 R 8 W Sec 20 SE1/4 NE1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (2)
Description: Lower part of Oneota Fm. (2)
Uses of commodity: Riprap (2)
References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock
County: Winona
Quarry/pit name: Brick Hill Quarry (1,2)
Status: Inactive (1965,1984) (1,2)
Past operator/owner: Carroll Colbenson (1965), Roverud (1921) (1)
MN/DOT source no: 85064
Township name: Hart
Location: T 105 R 8 W Sec 35 SW1/4 NW1/4 (1,2)
References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Abandoned (1965) (1)
Past operator/owner: Wm. Patterson (1921) (1)
MN/DOT source no: 85-29
Township name: Saratoga
Location: T 105 R 10 W Sec 3 W1/2 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Abandoned (1983) (1)
Township name: Saratoga
Location: T 105 R 10 W Sec 6 NE1/4 SW1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
References: 1) Mossler. 1983, station 7

Main commodity: Crushed Carbonate Rock

County: Winona
Quarry/pit name: Hilke Quarry (1,2)
Alternate name: Bailey Quarry (2-4); Pit No. 2143 (1)
Status: inactive; active (1965) (1,2)
Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (3,4); Frank Hilke (1965), F. N. Gerry (1921) (1)
MN/DOT source no: 85053
Township name: Saratoga
Location: T 105 R 10 W Sec 6 SW1/4 SE1/4 (1,3)
 T 105 R 10 W Sec 6 NW1/4 SW1/4 SE1/4 (2,5)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1,2,5)
Physical test data: LAR percent loss 27.8 average of nine samples, range 24.9-32.5 (2)
Uses of commodity: Crushed rock (2)
Remarks: Old abandoned quarry, overgrown (1983) (5)
References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984, plate 8
 3) USBM. [1980], MILS
 4) USDL. MSHA mine reference list
 5) Mossler. 1983, station 6

Main commodity: Crushed Carbonate Rock
County: Winona
Quarry/pit name: Clyde Quarry (1)
Alternate name: CSAH 35 Quarry (3); Thoman Quarry (3)
Status: Inactive (1983,1988) (1,3)
Past operator/owner: Thoman, owner (1988) (3); Clyde (1966) (1)
MN/DOT source no: 85074
Township name: Saratoga
Location: T 105 R 10 W Sec 15 NE1/4 (1)
 T 105 R 10 W Sec 15 NW1/4 NE1/4 NE1/4 (2,3)
Location comments: Clyde nearest town (3)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984, plate 8
 3) Patterson Quarries, Inc. 1988, personal communication

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive (1965,1984) (1,2)
Past operator/owner: Elmer Rupprecht (1965), Mary Cole (1921) (1)
MN/DOT source no: 85054
Township name: Saratoga
Location: T 105 R 10 W Sec 28 SW1/4 NW1/4 (1,2)
Geologic age: Ordovician

Geologic formation: Shakopee Fm. (2)
References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock
County: Winona
Quarry/pit name: Utica Quarry (1,2)
Alternate name: Agrinson Quarry (1,2)
Status: Inactive (1983) (2); active (1965) (1)
Past operator/owner: Agrinson (1965) (1)
MN/DOT source no: 85073
Township name: Saratoga
Location: T 105 R 10 W Sec 36 NE1/4 SE1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (2)
Physical test data: LAR 36.8% loss in 1 sample (2)
Uses of commodity: Crushed rock (2)
References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive (1971) (1)
Past operator/owner: J. R. Watkins Exp. Farm (1,2)
MN/DOT source no: 85068
Township name: Homer
Location: T 106 R 6 W Sec 3 NW1/4 SW1/4 (1)
 T 106 R 6 W Sec 3 NW1/4 NW1/4 SW1/4 (2)
Location comments: One mile SE of Homer (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,2)
Description: Middle part of the Oneota Fm. (2); dolomitic limestone, 50 ft face, thin to very thick bedded, fine, crystalline, hard, gray, weathers to buff, stripping 10 ft (1)
Uses of commodity: Crushed rock (1,2)
Remarks: Small quarry (1)
References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive
Past operator/owner: Lyle Tainter (1971), Martin Smith (1921) (1)
MN/DOT source no: 85038
Township name: Homer
Location: T 106 R 6 W Sec 6 SW1/4 NE1/4 (1,2)
 T 106 R 6 W Sec 6 SE1/4 NE1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,2)

Description: Oneota Fm. above Jordon sandstone, dolomitic limestone (1); middle part of Oneota Fm. (2)

Physical test data: LAR 34.7% loss average of 2 samples (2); available from MN/DOT Aggregate Unit (1)

Uses of commodity: Crushed rock, riprap (2)

References: 1) MN/DOT Aggregate Unit files
2) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock

County: Winona

Quarry/pit name: United States Government Quarry (1)

Date opened: 1899 (1)

Status: Inactive

Past operator/owner: United States Government (1918) (1)

Location: T 106 R 6 W Sec 12 (1)

Location comments: Near Lamoille (1)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1)

Description: Back wall of quarry now 70 ft high, the beds dip 1 deg. to 2 deg. S. (1); see Ref. 1 for section column

Extraction method: Blasting by steam drills and then broken by hand tools (1)

Uses of commodity: Riprap for dams and shore protection (1)

Remarks: Large quantities of rock have been removed, the cliff face having been cut away to a depth of about 100 ft (1918) (1)

References: 1) Bowles. 1918, p. 196, 197

Main commodity: Crushed Carbonate Rock

County: Winona

Status: Inactive (1965, 1984) (1,2)

Past operator/owner: Russell Bublitz (1965), Hansen (1921) (1)

MN/DOT source no: 85063

Location: T 106 R 6 W Sec 33 NW1/4 SW1/4 (1)
T 106 R 6 W Sec 33 NW1/4 NW1/4 SW1/4 (2)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (2)

Description: Lower part of Oneota Fm. (2)

References: 1) MN/DOT Aggregate Unit files
2) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock

County: Winona

Status: Inactive (1965) (1)

Past operator/owner: Nick Erpelding (1,2)

MN/DOT source no: 85041

Location: T 106 R 7 W Sec 6 NW1/4 NW1/4 (1-3)

Geologic age: Ordovician

Geologic formation: Prairie du Chien Gp. (2)

Physical test data: Available from U.S. Army Corps of Engineers (2)

References: 1) MN/DOT Aggregate Unit files
2) U.S. Army Corps of Engineers files
3) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock

County: Winona

Quarry/pit name: West Burns Valley Quarry (1,3)

Alternate name: Roverud Quarry (1,2); Granrude - Quarve Quarry (2,3); Wilson Quarry (1)

Status: Inactive; active (1983) (3)

Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1,2); G. A. Roverud, G & Q Construction Co. (1971) (1,2)

MN/DOT source no: 85007

Township name: Wilson

Location: T 106 R 7 W Sec 16 NE1/4 NW1/4 (1-3)
T 106 R 7 W Sec 16 NW1/4 NE1/4 (2)

Location comments: Two miles NE of Wilson (1)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1-3)

Description: Oneota Fm. with Jordon sandstone at base of quarry, 120-150 ft face, 5-15 ft stripping, lithology from base: sandstone to dolomitic sandstone bottom 30 ft; dolomitic limestone above, crystalline, hard, calcite vugs, thin to thick bedded; top ledge more massive, light-gray weathering to light-brown or buff (1); see Ref. 1 for stratigraphic column description

Physical test data: LAR percent loss 37.8 average of 99 samples, range 28.7-57.3; specific gravity 2.58 average of 6 samples, range 2.49-2.64; absorption 3.06 average of 6 samples, range 2.4-4.2; MgSO4 13.2 average of 6 samples, range 2.8-21.6 (3); available from MN/DOT Aggregate Unit (1) and U.S. Army Corps of Engineers (2)

Uses of commodity: Crushed rock, riprap (1,3)

References: 1) MN/DOT Aggregate Unit files
2) U.S. Army Corps of Engineers files
3) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock

County: Winona

Quarry/pit name: Hanson Quarry (1,2)

Status: Inactive; active (1973) (1,2)

Past operator/owner: Hanson (1965) (1)

MN/DOT source no: 85083

Township name: Wilson

Location: T 106 R 7 W Sec 19 SE1/4 SE1/4 SW1/4 (2,3)

Location comments: Between sections 19 and 24, T. 106, R. 7 (1)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (2,3)

Description: Upper part of Oneota Fm. (2); "Dolomite, gray to light tan, fine to medium grained, mostly massive, but some rubbly zones, no major

bedding planes evident throughout quarry. Chert and calcite common in 'base ledge', but only some chert below. Numerous solution cavities common throughout quarry." (1)

Physical test data: LAR percent loss 30.4 average of 11 samples, range 26.0-33.8 (2); available from MN/DOT Aggregate Unit (1)

Uses of commodity: Crushed rock (1,2)

Remarks: Large quarry, but overgrown (1983) (3)

References: 1) MN/DOT Aggregate Unit files
2) Jirsa; Meyer. 1984, plate 8
3) Mossler; Book. 1981, station 87

Main commodity: Crushed Carbonate Rock

County: Winona

Quarry/pit name: East Burns Valley Quarry (1,2,4,5)

Alternate name: Fakler Quarry (2,5); Hector Construction Quarry (3)

Status: Inactive since around 1984 (1)

Past operator/owner: Patterson Quarries (see Producer Directory) (1); Hector Construction Co. (1,3,4); Fred Fakler and Dale Jenkinson (1971) (2)

MN/DOT source no: 85067

Township name: Wilson

Location: T 106 R 7 W Sec 21 NE1/4 NW1/4 SW1/4 (5,6)

T 106 R 7 W Sec 21 NW1/4 SW1/4 (1-3)

Location comments: Quarry on east side of East Burns Valley Rd. (1,6)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (2,5)

Description: Lower part of Oneota Fm. (5); dolomite and dolomitic limestone, thick bedded grading into medium bedded, crystalline, hard calcite vugs, top ledge massive with chert nodules and large cavities 5 to 10 ft, face 130 to 200 ft, stripping 5 to 10 ft (2)

Physical test data: Available from MN/DOT Aggregate Unit (2); LAR percent loss 37.5 average of 8 samples, range 28.6-43.5 (5)

Uses of commodity: Crushed rock (2,5)

References: 1) Patterson Quarries. 1989, personal communication
2) MN/DOT Aggregate Unit files
3) USBM. [1980], MILS
4) USDL. MSHA mine reference list
5) Jirsa; Meyer. 1984, plate 8
6) Mossler; Book. 1981, station 73

Main commodity: Crushed Carbonate Rock

County: Winona

Status: Inactive

Past operator/owner: Fakler Road Construction, Inc., Fred Fakler (1,2)

Location: T 106 R 7 W Sec 21 NE1/4 SW1/4 (1,2)

Uses of commodity: Crushed rock (1,2)

References: 1) Hogberg. 1969, p. 41
2) Hogberg. 1966, p. 32

Main commodity: Crushed Carbonate Rock

County: Winona

Status: Inactive

Past operator/owner: Quarve, Gundrud, and Roverud (1)

Township name: Wilson

Location: T 106 R 7 W Sec 21 NW1/4 (1)

Location comments: Located right off Hwy. 43 (1)

Physical test data: Available from U.S. Army Corps of Engineers (1)

References: 1) U.S. Army Corps of Engineers files

Main commodity: Crushed Carbonate Rock

County: Winona

Status: Inactive

Township name: Wilson

Location: T 106 R 7 W Sec 21 NW1/4 NW1/4 SW1/4 (1)

Location comments: (Quarry on west side of East Burns Valley road; T., R., Sec. locations taken from Ref. 1 field map)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1)

Description: Quarry face approximately 110 ft, vuggy, calcite spar rich dolomite, tan, numerous chert nodules (1)

Remarks: Large quarry (1)

References: 1) Mossler; Book. 1981, station 73

Main commodity: Crushed Carbonate Rock

County: Winona

Status: Inactive (1971) (1)

MN/DOT source no: 85086

Township name: Wilson

Location: T 106 R 7 W Sec 36 SW1/4 SE1/4 (1)

T 106 R 7 W Sec 36 SW1/4 SW1/4 SE1/4 (2,3)

Location comments: Quarry on north side of County Rd. 9 (1)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1,2)

Description: Lower part of Oneota Fm. (2); dolomitic limestone, light gray brown, weathers buff, fine grained, crystalline, hard, thin to thick bedded, face 25-50 ft, stripping 10 ft?, good quality, quantity limited to top of hill (1)

Uses of commodity: Crushed rock (1)

Remarks: Small quarry (1,3); floor overgrown with vegetation (1971) (1)

References: 1) MN/DOT Aggregate Unit files
2) Jirsa; Meyer. 1984, plate 8
3) Mossler. 1983, station 120

Main commodity: Crushed Carbonate Rock
Other commodities: Dimension Carbonate Rock
County: Winona
Quarry/pit name: Boots Quarry (1-3)
Alternate name: Pit No. 2447 (1)
Status: Inactive (1965,1971) (1,3)
Past operator/owner: G. N. Sebo (1971) (1,2); W. E. Boots (1921)
MN/DOT source no: 85039
Township name: Wilson
Location: T 106 R 7 W Sec 36 SW1/4 NW1/4 (1,2)
 T 106 R 7 W Sec 36 SW1/4 NW1/4 NW1/4 (3)
Location comments: See Ref. 1 for location map
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,3)
Description: Lower part of Oneota Fm. (3); dolomitic limestone, fine crystalline and arenaceous, thin to very thick bedded, light gray brown, weathers to buff and dark gray, chert and calcite vugs near top of quarry, face 60 ft at most, stripping 5-10 ft, good quality (1)
Physical test data: Available from U.S. Army Corps of Engineers (2)
Uses of commodity: Riprap (2); once used for farm building stone (1)
References: 1) MN/DOT Aggregate Unit files
 2) U.S. Army Corps of Engineers files
 3) Jirsa; Meyer. 1984, plate 3

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive (1984) (1)
MN/DOT source no: 85-60
Township name: Warren
Location: T 106 R 8 W Sec 1 SE1/4 SE1/4 SE1/4 (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: Lower part of Oneota Fm. (1)
Uses of commodity: Crushed rock, agricultural lime (1)
References: 1) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Abandoned (1965) (1)
Past operator/owner: Alois Wessel (1965), John Foell (1921) (1)
MN/DOT source no: 85-26
Location: T 106 R 8 W Sec 10 NW1/4 SE1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive; active (1968) (1)
MN/DOT source no: 85077

Township name: Warren
Location: T 106 R 8 W Sec 12 NE1/4 NE1/4 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Winona
Quarry/pit name: Chicago-Northwestern RR Quarry (1,4-6)
Status: Inactive
Past operator/owner: Norman Luchman (1965), Benjamin Luchman (1921) (2); Chicago & Northwestern Railway (4-7); Windell Co., operator 1907-1918 (6)
MN/DOT source no: 85-25
Township name: Warren
Location: T 106 R 8 W Sec 17 SE1/4 NE1/4 NW1/4 (1,3)
Location comments: About 2 miles east of Lewiston (4); midway between Stockton and Lewiston (6)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,3-6)
Description: Middle part of Oneota Fm. (1); approximately 80 ft. cliff of Oneota (3); total thickness of Oneota at this place is 150 ft (4); see Ref. 5 for section description; "The rock is gray to white and is similar to the stone at Winona. Beds may be obtained up to 3 feet in thickness. Major joints strike N. 25 deg. E. and secondary joints N. 75 deg. W. They are vertical and are 4 to 5 feet apart." (6)
Uses of commodity: Riprap (1); crushed stone, railway ballast, concrete, bridge construction (6)
References: 1) Jirsa; Meyer. 1984, plate 8
 2) MN/DOT Aggregate Unit files
 3) Mossler; Book. 1981, station 7
 4) Stauffer; Thiel. 1933, p. 52
 5) Stauffer; Thiel. 1914, p. 57, 58, 216
 6) Bowles. 1918, p. 198
 7) Winchell and others. 1884, p. 162, 255

Main commodity: Crushed Carbonate Rock
County: Winona
Quarry/pit name: Agrimson Quarry (1)
Status: Inactive; active (1978) (2)
MN/DOT source no: 85072
Township name: Utica
Location: T 106 R 9 W Sec 35 NW1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (2)
Description: Middle part of Oneota Fm. (2)
Physical test data: LAR percent loss 30.6 average of 6 samples, range 28.5-32.2 (2); also available from MN/DOT Aggregate Unit (1)
Uses of commodity: Crushed rock (2)
References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive
Past operator/owner: Fakler Road Construction, Inc. (1969) (1)
Township name: Utica and Fremont
Location: T 106 R 9 W Sec 35 SW1/4 SE1/4 AND
 T 105 R 9 W Sec 2 NW1/4 NE1/4 (1)
Location comments: Near Lewiston (1)
References: 1) Hogberg. 1969, p. 40

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive (1965,1984) (1,2)
Past operator/owner: Howard Every (1965) (1)
MN/DOT source no: 85051
Township name: Utica
Location: T 106 R 9 W Sec 36 SW1/4 SW1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (2)
Description: Middle part of Oneota Fm. (2)
References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock
County: Winona
Quarry/pit name: Wiskow Quarry (1,2)
Status: Inactive (1984) (2); active (1967) (1,2)
Past operator/owner: Emmanuel Wiskow (1967) (1)
MN/DOT source no: 85075
Township name: St. Charles
Location: T 106 R 10 W Sec 3 SE1/4 SE1/4 NE1/4 (2)
 T 106 R 10 W Sec 3 NE1/4 SE1/4 (1)
 T 106 R 10 W Sec 3 SE1/4 NE1/4 (1965) (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (2)
Physical test data: LAR 37.0% loss average of 2 samples (2)
Uses of commodity: Crushed rock (2)
References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock
County: Winona
Quarry/pit name: Spitzer Quarry (1,2)
Status: Inactive; active (1965) (1)
Past operator/owner: Adolph Spitzer (1965) (1); Patterson Quarries
 (see Producer Directory) (1969) (3)
MN/DOT source no: 85069
Township name: St. Charles
Location: T 106 R 10 W Sec 10 SE1/4 SW1/4 (1-3)

Location comments: Near St. Charles (3)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (2)
Physical test data: LAR percent loss 41.3 average of 7 samples,
 range 39.1-42.1 (2)
Uses of commodity: Crushed rock (2)
References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984, plate 8
 3) Hogberg. 1969, p. 45

Main commodity: Crushed Carbonate Rock
County: Winona
Quarry/pit name: McGrath Quarry (1)
Date opened: 1908 (1)
Status: Inactive
Past operator/owner: M. G. McGrath, owner and Peter Kramer,
 operator (1918) (1)
Township name: St. Charles
Location: T 106 R 10 W Sec 20
Location comments: Near the St. Charles City Quarry (which is
 located in Sec. 20) (1); (T., R., Sec. locations
 determined from county highway map; exact
 location undetermined)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Uses of commodity: Paving stones, crushed rock (1)
References: 1) Bowles. 1918, p. 201

Main commodity: Crushed Carbonate Rock
County: Winona
Quarry/pit name: St. Charles City Quarry (2)
Status: Abandoned (1,3)
Past operator/owner: City of St. Charles (1,2); Martha Kiese (1921) (1)
MN/DOT source no: 85-23
Township name: St. Charles
Location: T 106 R 10 W Sec 20 S1/2 NW1/4 (1965) (1)
 T 106 R 10 W Sec 20 NE1/4 (1921) (1)
 T 106 R 10 W Sec 20 NW1/4 SE1/4 NW1/4 (3)
Location comments: One-fourth of a mile south of St. Charles station
 (2)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2,3)
Uses of commodity: Paving stones, crushed rock (2)
References: 1) MN/DOT Aggregate Unit files
 2) Bowles. 1918, p. 201
 3) Mossler. 1983, station 56

Main commodity: Crushed Carbonate Rock
County: Winona
Quarry/pit name: Woodward Quarry (1,2)
Status: Inactive since 1975 (2)

Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1,2); Woodward, owner (1979) (1)

Township name: St. Charles

Location: T 106 R 10 W Sec 24 NE1/4 SE1/4 (1)

Location comments: (Possibly this is a wrong location and this is actually the active Woodward Quarry located in the SW1/4 of section 24)

References: 1) USBM. [1980], MILS
2) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock

County: Winona

Status: Inactive

Township name: St. Charles

Location: T 106 R 10 W Sec 31 NW1/4 SE1/4 AND
T 106 R 10 W Sec 31 SW1/4 NE1/4 (1)

Location comments: (Above location shown on Ref. 1 field map)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1,2)

Description: See Ref. 1 for section description, summary follows:
Decorah Shale 8-10 ft
Platteville Fm.
Carimona Mbr. 5.3 ft, limestone
McGregor Mbr. 12 ft, limestone
Glenwood Fm. 7 ft
St. Peter Sandstone 16 ft

References: 1) Mossler. 1971, station 2
2) Mossler. 1983, station 2

Main commodity: Crushed Carbonate Rock

County: Winona

Status: Inactive; active (1970) (2)

MN/DOT source no: 85081

Township name: St. Charles

Location: T 106 R 10 W Sec 31 NW1/4 SE1/4 SE1/4 (1)
T 106 R 10 W Sec 31 E1/2 SE1/4 (2)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1-3)

Description: See Ref. 3, table 19.1, locality 12 for trace fossil distribution

Physical test data: LAR percent loss 25.6 average of 7 samples, range 18.3-37.5 (1)

Uses of commodity: Crushed rock (1)

References: 1) Jirsa; Meyer. 1984, plate 8
2) MN/DOT Aggregate Unit files
3) Dokken. 1987, p. 194

Main commodity: Crushed Carbonate Rock

County: Winona

Quarry/pit name: 43 Quarry (1)

Alternate name: Roverud Quarry (1)

Status: Inactive

Past operator/owner: Quarve & Anderson Co. (see Producer Directory) (1)

Township name: Winona

Location: T 107 R 7 W Sec 26 NE1/4 SW1/4 (1)

References: 1) USBM. [1980], MILS

Main commodity: Crushed Carbonate Rock

County: Winona

Status: Inactive since 1910 (1)

Past operator/owner: City of Winona (1918) (1)

Township name: Winona

Location: T 107 R 7 W Sec 34 OR
T 106 R 7 W Sec 3

Location comments: One-fourth of a mile beyond the Abell Quarry (1); (Abell Quarry located in Sec. 34 of T. 107, R. 7 W, along highway); (T., R., Sec. locations determined from county highway map)

Uses of commodity: Crushed stone for street construction (1)

References: 1) Bowles. 1918, p. 196

Main commodity: Crushed Carbonate Rock

County: Winona

Quarry/pit name: Mathy Quarry (1)

Status: Inactive

Past operator/owner: Mathy Construction Co. (see Patterson Quarries in Producer Directory) (1979) (1)

Township name: Hillsdale

Location: T 107 R 8 W Sec 2 SE1/4 NW1/4 (1)

References: 1) USBM. [1980], MILS

Main commodity: Crushed Carbonate Rock

County: Winona

Quarry/pit name: Kohner Quarry (1,2)

Status: Inactive

Past operator/owner: Kohner Realty Co. (1980) (1)

Township name: Hillsdale

Location: T 107 R 8 W Sec 2 SW1/4 SW1/4 (1)

Location comments: Minnesota City (2)

Physical test data: Available from MN/DOT Aggregate Unit (2)

References: 1) USBM. [1980], MILS
2) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock

County: Winona

Status: Inactive (1965) (1)

Past operator/owner: Wm. Saeheler (1965), Harry Suehler (1921) (1)

MN/DOT source no: 85043

Township name: Hillsdale

Location: T 107 R 8 W Sec 12 SW1/4 SW1/4 (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive (1965) (1)
Past operator/owner: Darwin Ellinghuysen (1965), John Ellinghuysen (1921) (1)
MN/DOT source no: 85052
Township name: Hillsdale
Location: T 107 R 8 W Sec 29 SE1/4 NW1/4 (1,2)
T 107 R 8 W Sec 29 SW1/4 NW1/4 (1921) (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (2)
Description: Upper part of Oneota Fm. (2)
References: 1) MN/DOT Aggregate Unit files
2) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock
County: Winona
Quarry/pit name: Stockton Hill Quarry (1,2,6)
Alternate name: Bronk Quarry (4,5); Pit No. 3752 (1)
Status: Inactive
Past operator/owner: Winona Excavating Co., operator (1979) (2,5); George Bronk, owner (5); Ostreng Construction Co. (1976) (6); Harold Fort (1965), P & M Fort (1921) (1)
MN/DOT source no: 85010
Location: T 107 R 8 W Sec 36 NE1/4 NE1/4 (1,2)
T 107 R 8 W Sec 36 NE1/4 NE1/4 NE1/4 (3,4)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,3,4)
Description: Middle part of Oneota Fm. (4)
Physical test data: LAR percent loss 38.3 average of 14 samples, range 33.0-46.5; MgSO₄ 29.9% (4); test data available from U.S. Army Corps of Engineers (2) and MN/DOT Aggregate Unit (1)
Uses of commodity: Crushed rock (4)
References: 1) MN/DOT Aggregate Unit files
2) U.S. Army Corps of Engineers files
3) Mossler; Book. 1981, station 133
4) Jirsa; Meyer. 1984, plate 8
5) USBM. [1980], MILS
6) USDL. MSHA mine reference list

Main commodity: Crushed Carbonate Rock
County: Winona
Quarry/pit name: Steiger Quarry (1,2)
Status: Inactive; active (1965) (1,2)
Past operator/owner: Severin Steiger (1965), Paul Kiefer (1921) (1)
MN/DOT source no: 85046
Township name: Norton
Location: T 107 R 9 W Sec 7 SE1/4 SE1/4 (1)

Location comments: T 107 R 9 W Sec 7 NE1/4 SW1/4 SE1/4 (2,3)
Ref. 3 shows two quarries in this area, one north of the road and one south of the road
Geologic age: Ordovician
Geologic formation: Oneota Fm. (2)
Description: Lower part of Oneota Fm. (2)
Physical test data: LAR percent loss 36.7 average of 6 samples, range 33.1-39.5 (2); also available from MN/DOT Aggregate Unit (1)
Uses of commodity: Crushed rock (2)
References: 1) MN/DOT Aggregate Unit files
2) Jirsa; Meyer. 1984, plate 8
3) USGS. 1972, Altura quadrangle

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive (1965,1984) (1,2)
Past operator/owner: Herwynen/Herwyne (1965,1921) (1)
MN/DOT source no: 85047
Township name: Norton
Location: T 107 R 9 W Sec 35 NW1/4 NW1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (2)
Description: Middle part of Oneota Fm. (2)
References: 1) MN/DOT Aggregate Unit files
2) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive
Past operator/owner: John Diedrich (1884) (1)
Township name: Elba
Location: T 107 R 10 W Sec 8 (1)
Location comments: West of Elba (1)
Description: Dolomitic limestone (1)
Uses of commodity: Quicklime (1)
References: 1) Winchell and others. 1884, p. 265, 266

Main commodity: Crushed Carbonate Rock
County: Winona
Quarry/pit name: Kieffer Quarry (1)
Status: Inactive
Past operator/owner: Paul Kieffer, owner-operator (1979) (1)
Township name: Elba
Location: T 107 R 10 W Sec 11 SE1/4 NE1/4 (1)
References: 1) USBM. [1980], MILS

Main commodity: Crushed Carbonate Rock
County: Winona

Quarry/pit name: Kramer Quarry (1,2)
Status: Inactive (1984) (2); active (1965) (1)
Past operator/owner: Gregory Kramer (1965) (1)
MN/DOT source no: 85070
Township name: Elba
Location: T 107 R 10 W Sec 18 NW1/4 NE1/4 (1)
 T 107 R 10 W Sec 18 NW1/4 NE1/4 NW1/4 (2)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: Upper part of Oneota Fm. (2)
Physical test data: LAR percent loss 33.1 average of 2 samples (2)
Uses of commodity: Crushed rock, riprap (2)
References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock
County: Winona
Quarry/pit name: W. P. A. Quarry (3)
Status: Inactive since 1950 (1965) (1)
Past operator/owner: Bole (1965,1921) (1)
MN/DOT source no: 85048
Township name: Elba
Location: T 107 R 10 W Sec 23 SW1/4 NW1/4 (1,2)
 T 107 R 10 W Sec 22 NE1/4 (1921) (1)
Location comments: Four miles southeast of Elba (3)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (2,3)
Description: Large amount of stripping (1); middle part of Oneota Fm. (2); covered drift 40+ ft overlies 50 ft of hard, gray Oneota dolomite (3)
Chemical analyses: See Ref. 3, Sample Nos. 11A-11G for further analyses, summary follows: six samples range from 19.40 to 20.62 percent MgO (2)
References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984, plate 8
 3) Stauffer. 1950, p. 9, 25

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive (1965,1984) (1,2)
Past operator/owner: Leona Lehnertz (1965), Joe Hoffman (1921) (1)
MN/DOT source no: 85044
Location: T 108 R 8 W Sec 30 SW1/4 SE1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (2)
Description: Upper part of the Oneota Fm. (2)
References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Carbonate Rock

County: Winona
Quarry/pit name: Gentzkow & Mogreen Quarry (1)
Status: Inactive
Past operator/owner: Gentzkow & Mogreen owners since 1908, John Gage operated before 1908 (1)
Township name: Mount Vernon
Location: T 108 R 9 W Sec 1
Location comments: About two miles southeast of Minnesiska station, in the NE corner of Winona County (1); (T., R., Sec. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: Oneota dolomite, 104 ft face (1); see Ref. 1 for brief column description
Uses of commodity: Riprap for river protection (1)
References: 1) Bowles. 1918, p. 197, 198

Main commodity: Crushed Carbonate Rock
County: Winona
Quarry/pit name: Schell Quarry (1,5)
Alternate name: Gordon Fakler Quarry (2)
Status: Inactive; active (1961) (5)
Past operator/owner: John Kroer-Macher Farm (2); Neola Schell (1965) (1)
MN/DOT source no: 85065
Township name: Mount Vernon
Location: T 108 R 9 W Sec 11 SE1/4 NE1/4 NE1/4 (1,3,4)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1-3)
Description: Upper part of Oneota Fm. (1); dolomitic limestone (2); 60+ ft of Oneota exposed capped by 10 ft of New Richmond sandstone (3)
Physical test data: LAR 39.4% loss average of 2 samples (1); test data available from U.S. Army Corps of Engineers (2) and MN/DOT Aggregate Unit (5)
Uses of commodity: Crushed rock (1)
Remarks: Quarry being filled with garbage (1983) (3)
References: 1) Jirsa; Meyer. 1984, plate 8
 2) U.S. Army Corps of Engineers files
 3) Book. 1983, station C6
 4) USGS. 1972, Beaver quadrangle
 5) MN/DOT Aggregate Unit files

Main commodity: Crushed Carbonate Rock
County: Winona
Status: Inactive (1965,1984) (1,2)
Past operator/owner: Alvin Dorn (1965), Otto Benck (1921) (1)
MN/DOT source no: 85050
Township name: Whitewater
Location: T 108 R 10 W Sec 7 SW1/4 SE1/4 (1)

T 108 R 10 W Sec 7 NE1/4 NW1/4 SE1/4 (2,3)

Geologic age:

Ordovician

Geologic formation:

Oneota Fm. (2,3)

Description:

Upper part of Oneota dolomite (2)

Uses of commodity:

Riprap (2)

References:

- 1) MN/DOT Aggregate Unit files
- 2) Jirsa; Meyer. 1984, plate 8
- 3) Book. 1983, station B9

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Date opened: 1875 (1)
Status: Inactive (1935) (2)
Past operator/owner: Mathew Ryan, owner (1884) (1)
USGS quadrangle: Beauford
Township name: Decoria
Location: T 107 R 26 W Sec 18 SE1/4 (1,2)
Location comments: On the Big Cobb River, is slightly quarried 3/4 of a mile above its mouth (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1,2)
Description: Dolomite (2)
References: 1) Winchell and others. 1884, p. 431, 448
 2) Thiel; Dutton. 1935, p. 128

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Quarry/pit name: White and Curtis Quarry (1)
Status: Inactive (1935) (3)
Past operator/owner: White and Curtis (1884) (1)
USGS quadrangle: Beauford
Township name: Decoria
Location: T 107 R 26 W Sec 19 SE1/4 NE1/4 NE1/4 (1)
 T 107 R 26 W Sec 19 NE1/4 (2)
Geologic age: Ordovician
Geologic formation: Prairie du Chien Gp. (1); Shakopee Fm. (2,3)
Description: Prairie du Chien dolomite, approximately 30 ft exposed (1); see Ref. 2 for section description
Uses of commodity: Foundation stone (1)
References: 1) Mossler. 1975, station 261
 2) Winchell and others. 1884, p. 438
 3) Thiel; Dutton. 1935, p. 128

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Status: Inactive (1935) (2)
Past operator/owner: Andrew Algren (1884) (1)
USGS quadrangle: Good Thunder
Township name: Rapidan
Location: T 107 R 27 W Sec 11 NE1/4 (1)
Location comments: At outcrop on Algren's farm (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (2)
References: 1) Winchell and others. 1884, p. 448
 2) Thiel; Dutton. 1935, p. 128

Main commodity: Dimension Carbonate Rock
County: Blue Earth

Status: Inactive
Past operator/owner: Columbus Ballard, owner and John Roland, operator (1884) (1)
Township name: Rapidan
Location: T 107 R 27 W Sec 12 NE1/4 SW1/4 (1,2)
Location comments: On the west side of Maple River (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1,2)
Uses of commodity: Bridge stone, house building, etc. (1)
References: 1) Winchell and others. 1884, p. 448, plate 16
 2) Thiel; Dutton. 1935, p. 128

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Status: Inactive (1935) (2)
Past operator/owner: A. C. Wood (1884) (1)
USGS quadrangle: Good Thunder
Township name: Rapidan
Location: T 107 R 27 W Sec 12 SE1/4 SW1/4 (1)
Location comments: East of Maple River (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (2)
Remarks: Excellent stone and considerably quarried (1)
References: 1) Winchell and others. 1884, p. 448
 2) Thiel; Dutton. 1935, p. 128

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Status: Inactive
Past operator/owner: Swan Larson (1884) (1)
Township name: Rapidan
Location: T 107 R 27 W Sec 12 SW1/4 SW1/4 (1,2)
Location comments: West side of Maple River (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1,2)
References: 1) Winchell and others. 1884, p. 448, plate 16
 2) Thiel; Dutton. 1935, p. 128

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Status: Inactive (1884) (1)
Past operator/owner: P. H. Kelly (1884) (1)
Township name: Rapidan
Location: T 107 R 27 W Sec 13 N1/2 NW1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1,2)
Uses of commodity: Bridge stone (1)
Remarks: Good quality stone (1)
References: 1) Winchell and others. 1884, p. 448, plate 16
 2) Thiel; Dutton. 1935, p. 128

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Status: Inactive
Past operator/owner: S. M. Folsom Estate (1874) (1,2)
Township name: Garden City
Location: T 107 R 28 W Sec 26
Location comments: Quarry beside the Watonwan River, just below Garden City (1); (T., R., Sec. locations determined from Ref. 1, plate 16)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1,2)
Description: See Ref. 2 for description
Remarks: Small amount quarried (1)
References: 1) Winchell and others. 1884, p. 448, plate 16
 2) Winchell; Peckham. 1874, p. 146, 147

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Status: Inactive
Past operator/owner: Nathan Brooks (1884) (1)
Township name: Mankato
Location: T 108 R 26 W Sec 6 NW1/4 (1)
Location comments: About a quarter mile north of Adam Jefferson's quarry in the NW1/4 of Sec. 6 in Mankato (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Remarks: Small quarry (1)
References: 1) Winchell and others. 1884, p. 447, plate 16

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Status: Inactive
Past operator/owner: Stephen Lamm & Co., Chicago & Northwestern Railway Co. (1884) (1)
Location: T 108 R 26 W Sec 6 SW1/4 (1,2)
Location comments: A third of a mile north of Beatty's West Quarry (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1,2)
Uses of commodity: Bridge stone (1)
References: 1) Winchell and others. 1884, p. 447, plate 16
 2) Thiel; Dutton. 1935, p. 128

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Quarry/pit name: Chicago & Northwestern Railway Quarry (1)
Status: Inactive in 1912 (1)
Past operator/owner: Chicago & Northwestern Railway (1918) (1)
Township name: Lime
Location: T 108 R 26 W Sec 6 SW1/4

Location comments: "About 1-1/2 miles northeast of Mankato a stream tributary to Minnesota River has cut a steep-walled ravine in a perpendicular limestone bluff. On the northeast side of this ravine and on the neighboring bluff of Minnesota River are quarries owned by A. Jefferson & Son and by M. G. Willard, and on the southwest side is a quarry owned by the Chicago & Northwestern Railway.", quarry on the part of the bluff nearest the river (1); (T., R., Sec. locations determined from given location of Jefferson's Quarry)

Geologic age: Ordovician
Geologic formation: Oneota Fm. (2)
Description: "The upper ledges contain numerous cavities filled with calcite and quartz crystals." (1)
Remarks: Extensively quarried (1)
References: 1) Bowles. 1918, p. 156, 157
 2) Thiel; Dutton. 1935, p. 128

Main commodity: Dimension Carbonate Rock
Other commodities: Natural Cement
County: Blue Earth
Quarry/pit name: Willard Quarry (1)
Status: Inactive in 1912 (1)
Past operator/owner: M. G. Willard (1918) (1)
Location: T 108 R 26 W Sec 6 NW1/4
Location comments: "About 1-1/2 miles northeast of Mankato a stream tributary to Minnesota River has cut a steep-walled ravine in a perpendicular limestone bluff. On the northeast side of this ravine and on the neighboring bluff of Minnesota River are quarries owned by A. Jefferson & Son and by M. G. Willard..." (1); (T., R., Sec. locations determined from given location of Jefferson's Quarry)

Geologic age: Ordovician
Geologic formation: Oneota Fm. (2)
Description: "The upper ledges contain numerous cavities filled with calcite and quartz crystals." (1)
Uses of commodity: Building stone, flagging stone, natural cement (1)
References: 1) Bowles. 1918, p. 156
 2) Thiel; Dutton. 1935, p. 128

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Blue Earth
Quarry/pit name: Maxfield's Quarry (1,2)
Status: Inactive
Past operator/owner: George Maxfield, owner and O. R. Mather, operator (1884) (1); Maxfield & Sons 1873 (2)
Location: T 108 R 26 W Sec 7
Location comments: A quarter of a mile west of J. R. Beatty's east quarry (1); (T., R., Sec. locations determined from Ref. 1, plate 16)

Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Description: See Ref. 1 for description; see Ref. 2 for section description
Uses of commodity: Bridge masonry, cut stone, building stone, quicklime (1,2)
References: 1) Winchell and others. 1884, p. 429, 447, 449, plate 16
 2) Winchell. 1873, p. 83

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Blue Earth
Quarry/pit name: Fowler & Pay Quarry (1-5)
Date opened: 1887 (3)
Status: Inactive
Past operator/owner: Fowler and Pay (1,3-5); Fowler, Pay, and Coughlin (1921) (2); Mankato Stone Co. (1933) (1)

MN/DOT source no: 7-3

Location: T 108 R 26 W Sec 7 N1/2 OR
 T 109 R 26 W Sec 6 SW1/4

Location comments: Near Bradley's crossing, the second section of the bluff adjacent to the Chicago & Northwestern Railway Quarry (3); in the northern end of Mankato adjacent to Coughlin's Quarry (1); (T., R., Sec. locations determined from given Coughlan and Chicago & Northwestern Railway quarry locations)

Geologic age: Ordovician
Geologic formation: Oneota and Shakopee Fms. (1,4)
Description: Dolomite, 30 ft thick, 20 acres (5); see Ref. 4 for section description
Chemical analyses: See Ref. 1 for chemical analyses of Shakopee horizon
Uses of commodity: Building stone, bridge rock, some riprap, crushed rock, lime (3)
References: 1) Stauffer; Thiel. 1933, p. 42, 43, 70, 74
 2) MN/DOT Aggregate Unit files
 3) Bowles. 1918, p. 154, 157
 4) Stauffer; Thiel. 1914, p. 127
 5) Cooley. 1911, p. 10

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Quarry/pit name: Mankato Limestone & Fuel Co. Quarry (1)
Status: Inactive
Past operator/owner: Mankato Limestone & Fuel Co. (1918) (1)
Township name: Mankato
Location: T 108 R 26 W Sec 7 NE1/4
Location comments: Two blocks east of the Coughlan Co. quarry, is an excavation in the same bluff (1); (T., R., Sec. locations determined from given Coughlan quarry location)
Geologic age: Ordovician

Geologic formation: Oneota Fm. (1)
Uses of commodity: Building stone, foundation stone (1)
References: 1) Bowles. 1918, p. 158

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Quarry/pit name: Beatty's West Quarry (1)
Status: Inactive
Past operator/owner: J. R. Beatty (1884) (1)
Location: T 108 R 26 W Sec 7 OR
 T 108 R 26 W Sec 6 SW1/4
Location comments: Adjoining George Maxfield's quarry and continuing northwesterly is J. R. Beatty's west quarry (1); (T., R., Sec. locations determined from Ref. 1, plate 16)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
References: 1) Winchell and others. 1884, p. 447, plate 16

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Blue Earth
Quarry/pit name: Beatty's East Quarry (1)
Date opened: Late 1860's (1)
Status: Inactive; active 1883 (1)
Past operator/owner: J. R. Beatty (1884) (1)
Location: T 108 R 26 W Sec 7
Location comments: J. R. Beatty's east quarry reaches about 30 rods west from the north end of Front St. in North Mankato (1,2); (T., R., Sec. locations determined from Ref. 1, plate 16)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1,2)
Description: "In the bottom of the quarry the stone is blue" (1); Shakopee dolomite (2)
Uses of commodity: Building stone, quicklime (1)
References: 1) Winchell and others. 1884, p. 447, plate 16
 2) Thiel; Dutton. 1935, p. 128

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Status: Inactive
Township name: South Bend
Location: T 108 R 27 W Sec 27 NW1/4 (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
References: 1) Winchell and others. 1884, p. 447

Main commodity: Dimension Carbonate Rock
County: Blue Earth

Status: Inactive
Past operator/owner: St. Paul & Sioux City Railroad Co. (1884) (1)
Township name: South Bend
Location: T 108 R 27 W Sec 27 (1)
Location comments: Quarried on both sides of the Blue Earth River near the railroad bridge in section 27, South Bend (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Uses of commodity: Bridge stone (1)
References: 1) Winchell and others. 1884, p. 448, plate 16

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Status: Inactive
Location: T 108 R 28 W Sec 2
Location comments: Several quarries at Judson (1); along the Minnesota River in the vicinity of Judson, quarried at several localities (3); (T., R., Sec. locations determined from Ref. 2, plate 16)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1); Nicollet Creek Mbr. (3)
Description: "It is a buff to gray or brown dolomite, and in many places carries a large amount of glauconite, which makes some beds quite green." (1); see Ref. 1 for section description; see Ref. 3 for further description
Uses of commodity: Building stone (1)
References: 1) Stauffer; Thiel. 1933, p. 41
 2) Winchell and others. 1884, plate 16
 3) Stauffer; Thiel. 1914, p. 45

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Quarry/pit name: Goodwin's Quarry (1,2)
Status: Inactive (1884) (1)
Past operator/owner: John Goodwin (1875) (1,2)
Location: T 108 R 28 W Sec 3 (3)
Location comments: John Goodwin's quarry is about a half mile farther southeast from C. G. Swanson's quarry (which is in the NW1/4 of Sec. 3) (1); near the ferry, about a mile east of Judson, lying 25 ft above the water (1)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1,2)
Description: A thickness of 8 ft of limestone, "The beds are four to eight inches, although the uppermost three or four feet of the quarry are very much weathered and in thinner beds. The bedding planes are usually entirely covered with a green coating, and the body of the whole is specked thickly, and sometimes largely made up of green particles." (1,2)

References: 1) Winchell and others. 1884, p. 425, 426, 446
 2) Winchell; Peckham. 1874, p. 154, 155
 3) Thiel; Dutton. 1935, p. 128

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Quarry/pit name: Swanson's Quarry (1)
Status: Inactive
Past operator/owner: C. G. Swanson (1884) (1)
Township name: Judson
Location: T 108 R 28 W Sec 3 NW1/4 (2)
Location comments: A half mile southeast of Mrs. Wolf's quarry near Judson post office (1); southeast of Judson post office (2)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1,2)
Description: The excavation is 20 rods long and exposes a vertical thickness of 4 or 5 ft (1)
References: 1) Winchell and others. 1884, p. 446
 2) Thiel; Dutton. 1935, p. 128

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Status: Inactive
Past operator/owner: Joseph Kunz (1884) (1)
Township name: Lime
Location: T 109 R 26 W Sec 19 SE1/4 (1,2)
Location comments: Several quarries on Kunz's farm (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (2)
References: 1) Winchell and others. 1884, p. 448
 2) Thiel; Dutton. 1935, p. 128

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Blue Earth
Date opened: 1878 (1)
Status: Inactive (1918) (2)
Past operator/owner: J. R. Beatty & Co. (1884) (1,2)
Township name: Lime
Location: T 109 R 26 W Sec 20 SW1/4 (1,3)
Location comments: On the south side of a little creek (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (3)
Description: Bluff exposes 20 to 25 ft, in beds 1 to 3 or 4 ft thick (1)
Uses of commodity: Bridge stone, quicklime (1)
References: 1) Winchell and others. 1884, p. 447-449
 2) Bowles. 1918, p. 154
 3) Thiel; Dutton. 1935, p. 128

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Blue Earth
Quarry/pit name: Windell Quarry (1)
Status: Inactive
Past operator/owner: Windell Co. (1911) (1,2)
Location: T 109 R 26 W Sec 20 (1)
Location comments: About 3 miles northeast of Mankato are extensive quarries (1,2); (T., R., Sec. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (2)
Description: Buff colored dolomitic limestone (1); see Ref. 1 for further description
Chemical analyses: CaCO₃ 48.26%, MgCO₃ 38.67% (1); see Ref. 1 for further analyses
Uses of commodity: Heavy masonry, bridge abutments, culverts, building stone (1); general building purposes and roads (3)
References: 1) Bowles. 1918, p. 155
 2) Thiel; Dutton. 1935, p. 128
 3) Cooley. 1911, p. 11

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Quarry/pit name: McClure Quarry (1)
Status: Inactive
Past operator/owner: James McClure (1918) (1)
Location: T 109 R 26 W Sec 20
Location comments: About 3 miles northeast of Mankato there are extensive quarries (1,2); (T., R., Sec. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (2)
Description: Buff colored dolomitic limestone (1); see Ref. 1 for further description
Chemical analyses: CaCO₃ 48.26%, MgCO₃ 38.67% (1); see Ref. 1 for further analyses
Uses of commodity: Heavy masonry, bridge abutments, culverts, building stone (1)
References: 1) Bowles. 1918, p. 155
 2) Thiel; Dutton. 1935, p. 128

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Quarry/pit name: Bradley Quarry (1)
Status: Inactive
Past operator/owner: G. R. Bradley (1918) (1)
Location: T 109 R 26 W Sec 20 NW1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,2)
Description: See Ref. 1 for description

Chemical analyses: Average of three samples: CaCO₃ 52.62%, MgCO₃ 38.78% (1)
References: 1) Bowles. 1918, p. 154, 155
 2) Thiel; Dutton. 1935, p. 128

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Quarry/pit name: Coughlan North Quarry (1)
Status: Inactive
Past operator/owner: Coughlan (1950) (1)
Location: T 109 R 26 W Sec 20 (1)
Location comments: Four miles north of Mankato, north bluff of Wita Creek (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: Oneota dolomite, 27 ft exposed (1); see Ref. 1 for brief section description
Chemical analyses: MgO 17.68%, 15.64%, and 19.51%; SiO₂ 10.04%, 14.90%, and 4.46% (1); see Ref. 2, Sample Nos. 35A-35C for further analyses
References: 1) Stauffer. 1950, p. 22, 27

Main commodity: Dimension Carbonate Rock
County: Blue Earth
Quarry/pit name: Wolf's Quarry (1-3)
Date opened: 1860's (2)
Status: Inactive
Past operator/owner: Mrs. G. W. Wolf (1875) (1-3)
Location: T 109 R 28 W Sec 33 SE1/4 (1,2)
Location comments: At Judson (3); quarried both at the south and north sides of a small lake which is just northeast of Mrs. Wolf's house (Judson post office) and also about sixty rods farther southeast (2)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1-3)
Description: Limestone has been quarried along an extent of about 20 rods, exposing a vertical thickness of 4 to 8 ft (1); see Refs. 1 and 2 for further description of these quarries
Uses of commodity: Rough stone of small dimension (2)
References: 1) Thiel; Dutton. 1935, p. 113-115, 128
 2) Winchell and others. 1884, p. 425, 446
 3) Winchell; Peckham. 1874, p. 153-155

Main commodity: Dimension Carbonate Rock
County: Dakota
Status: Inactive or abandoned (1935) (1)
Location: T 27 R 24 W Sec 23 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Uses of commodity: Building stone (1)

References: 1) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock
County: Dakota
Status: Inactive
Past operator/owner: A. Rau (1884) (1)
Location: T 28 R 22 W
Location comments: West St. Paul (1); (T., R. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Trenton (1); (Platteville Fm.)
Description: Argillaceous limestone (1)
Chemical analyses: See Ref. 1 for chemical analyses
Physical test data: See Ref. 1 for physical test data
References: 1) Winchell and others. 1884, p. 200-204

Main commodity: Dimension Carbonate Rock
County: Dakota
Status: inactive
Past operator/owner: Wm. Dawson (1884) (1)
Location: T 28 R 22 W
Location comments: West St. Paul (1); (T., R. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Trenton (1); (Platteville Fm.)
References: 1) Winchell and others. 1884, p. 173

Main commodity: Dimension Carbonate Rock
County: Dakota
Quarry/pit name: Mendota Quarry (1,3)
Date opened: Early 1820's (2)
Status: Abandoned (1918) (1)
MN/DOT source no: 19-1
Location: T 28 R 23 W Sec 27 OR
 T 28 R 23 W Sec 28
Location comments: Quarry in Mendota on the bluff where St. Peter's Church stands, on property now (1918) owned by the church (1); (T., R., Sec. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1,4)
Description: "...highly dolomitic limestone. A thickness of only 8 ft of rock can be used, but the area available is very extensive. The beds near the top are 1 to 4 inches thick, but lower ones are progressively thicker, the lowest measuring 8 to 14 inches. Joints are irregular, but blocks 1 to 2-1/2 feet long are obtainable. The rock is blue, becoming yellow upon exposure. Fossils are present but do not appreciably affect the quality. Some shale layers occur but are not so prominent as in the rock quarried at St. Paul.", St. Peter sandstone below quarry floor (1)

Chemical analyses: CaCO₃ 45.77%, MgCO₃ 24.75%, insolubles in HCl 26.66% (1,4)
Uses of commodity: Building stone (1,2)
Remarks: Probably the second limestone quarry opened in the state, this stone was used in Gen. Sibley's house in Mendota in 1835 and is probably the oldest stone building in Minnesota (1)
References: 1) Bowles. 1918, p. 159, 160
 2) Froelich. 1961, p. 2
 3) MN/DOT Aggregates Unit files (1921 report)
 4) Kirk. 1926, table 13

Main commodity: Dimension Carbonate Rock
County: Dakota
Quarry/pit name: W.P.A. Quarry (1)
Status: Inactive
MN/DOT source no: 19-3
Location: T 28 R 23 W Sec 28 OR
 T 28 R 23 W Sec 27
Location comments: Quarry in Mendota (1,2); (T., R., Sec. locations determined from quadrangle)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2)
Description: Dolomitic limestone (2)
Uses of commodity: Building stone (2)
References: 1) MN/DOT Aggregate Unit files (1921 report)
 2) Bowles. 1918, p. 159, 160

Main commodity: Dimension Carbonate Rock
County: Dakota
Status: Inactive (1918) (2)
Past operator/owner: Quarries owned by T. Denny and by Charles Meggs (1888) (1)
Township name: Sciota
Location: T 112 R 19 W Sec 24
Location comments: Quarries at the top of the bluff near the east line of Sec. 24 (1); (T., R. locations determined from quadrangle)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2); Trenton (1)
Description: Platteville dolomitic limestone (2); bluish-gray or yellowish, dirty gray limestone (from a general comment on the Trenton in this area) (1)
Uses of commodity: Building stone (2); slabs for foundations, bridge-piers (from general comment on quarries in area) (1)
Remarks: More than one quarry at this location (1)
References: 1) Winchell; Upham. 1888, p. 83
 2) Bowles. 1918, p. 160

Main commodity: Dimension Carbonate Rock

County: Dakota
Status: Inactive or abandoned (1935) (2)
Past operator/owner: William Fall (1888) (1)
Township name: Castle Rock
Location: T 113 R 19 W Sec 13 AND
 T 113 R 19 W Sec 24 (1)
Location comments: On the section line between Sec. 13 and Sec. 24 (1); (T., R. locations from quadrangle)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (3); Trenton (1)
Description: Platteville limestone, bluish-gray or yellowish, dirty gray limestone (taken from a general comment on the Trenton in this area) (1)
Uses of commodity: Building stone (3); slabs for foundations, bridge-piers (from general comment on quarries in area) (1)
References: 1) Winchell; Upham. 1888, p. 83
 2) Thiel; Dutton. 1935, p. 142
 3) Bowles. 1918, p. 160

Main commodity: Dimension Carbonate Rock
County: Dakota
Status: Inactive or abandoned (1935) (2)
Past operator/owner: Mr. Roder (1888) (1)
Township name: Castle Rock
Location: T 113 R 19 W Sec 22 SE1/4 (1)
Location comments: Southeast from M. D. Green's quarry (1); (T., R. locations determined from quadrangle)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2); Trenton (1)
Description: Platteville, bluish-gray or yellowish, dirty gray limestone (taken from a general comment on the Trenton in this area) (1)
Uses of commodity: Building stone, slabs for foundations, bridge-piers (from general comments on quarries in this area) (1)
References: 1) Winchell; Upham. 1888, p. 83
 2) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock
County: Dakota
Status: Inactive or abandoned (1935) (2)
Past operator/owner: M. D. Green (1888) (1)
Township name: Castle Rock
Location: T 113 R 19 W Sec 22 SE1/4 (1)
Location comments: Southwest of Mr. Roder's quarry (1); (T., R. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2); Trenton (1)
Description: Platteville, bluish-gray or yellowish, dirty gray limestone (taken from a general comment on the Trenton in this area) (1)

Uses of commodity: Building stone, slabs for foundations, bridge-piers (from general comments on quarries in this area) (1)
Remarks: "...good and much worked quarry..." (1)
References: 1) Winchell; Upham. 1888, p. 83
 2) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock
County: Dakota
Status: Inactive or abandoned (1935) (2)
Past operator/owner: Jos. Batson (1888) (1)
Township name: Castle Rock
Location: T 113 R 19 W Sec 26 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2); Trenton (1)
Description: Platteville, bluish-gray or yellowish, dirty gray, limestone (taken from a general comment on the Trenton in this area) (1)
Uses of commodity: Building stone, slabs for foundations, bridge-piers (taken from general comments for quarries in this area) (1)
Remarks: Al. Martin and several others also have quarries in this same vicinity (1)
References: 1) Winchell; Upham. 1888, p. 83
 2) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock
County: Dakota
Status: Inactive or abandoned (1935) (2)
Past operator/owner: Anun Torgesson (1888) (1)
Township name: Eureka
Location: T 113 R 20 W Sec 27 (1)
Location comments: Near center of section 27 (1); (T., R. locations determined from quadrangle)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2,3); Trenton (1)
Description: Platteville limestone (3); "The stone is all affected by decay and is yellowish throughout, the bedding being separated by rust scales and limy incrustations." (1)
Uses of commodity: Building stone (1,3)
References: 1) Winchell; Upham. 1888, p. 83
 2) Thiel; Dutton. 1935, p. 142
 3) Bowles. 1918, p. 160

Main commodity: Dimension Carbonate Rock
County: Dakota
Status: Abandoned (1936) (2); active (1888) (1)
Past operator/owner: Mr. Garvey (1888) (1)
Township name: Empire
Location: T 114 R 19 W Sec 7 SW1/4 (1)

Location comments: Quarry on Chicago and Milwaukee RR, center of Sec. 7 (2); (T., R. locations determined from quadrangle)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (2,3); Trenton (1)

Description: Platteville limestone 5+ ft thick (2); the overlying drift is red till (1)

Uses of commodity: Building stone (1,3)

Remarks: "...(quarry) supplies a great deal of stone." (1)

References: 1) Winchell; Upham. 1888, p. 83
2) Schwartz. 1936, p. 150
3) Bowles. 1918, p. 160

Main commodity: Dimension Carbonate Rock

County: Dakota

Date opened: Early to mid 1860's (2)

Status: Inactive or abandoned (1935) (5)

Past operator/owner: Daniel F. Arthur (1936) (1); Daniel F. Aiken (1888, 1874) (2-4)

Township name: Lakeville

Location: T 114 R 20 W Sec 24 SE1/4 (1)
T 114 R 20 W Sec 24 (2-5)

Location comments: 1-1/2 miles northwest of Farmington (1,3)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1,5)

Description: Platteville limestone, 6 ft exposed (1); shattered, loose beds of limestone 5 ft thick overlies 6 ft of shale above the good quarry stone (3); the full thickness of the exposed strata here is about 17 ft, showing considerable disturbance by being undermined (4)

The rock is yellow by surface weathering, but was originally blue, close bedding planes in upper part, increasing to 6-14 in. at depth of 12-14 ft; some beds claylike and disintegrate readily (2)

Remarks: Ref. 2 (1918) states that quarry has been worked intermittently for about 30 years

References: 1) Schwartz. 1936, p. 149
2) Bowles. 1918, p. 160
3) Winchell; Peckham. 1874, p. 131, 132
4) Winchell; Upham. 1888, p. 83, 84
5) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock

County: Dakota

Quarry/pit name: O. Carlson Quarry (1)

Date opened: About 1905 (1)

Status: Abandoned (1)

Past operator/owner: O. Carlson (1918) (1)

Location: T 115 R 17 W

Location comments: At Hastings (1); "The railway station is about half a mile distant." (1); (T., R. locations from county highway map)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1)

Description: Oneota dolomite, gray, "...though the pores are large it is apparently durable." (1)

"Joints strike N. 70 deg. E. but are indistinct and far apart. Open beds are 3 to 6 feet apart and dip 5 deg. E. Stripping requires the removal of 1 to 2 feet of soil and 6 to 8 feet of broken rock. Rock could be quarried without pumping only to a depth of about 10 feet, for greater depth would bring the excavation below the level of the river." (1)

Physical test data: Specific gravity 2.626, pore space 9.31%, weighs 148.8 lbs/cu ft (1)

Uses of commodity: Building foundations (1)

Remarks: Small excavation (1); "Work was carried on but a short time and the excavation is scarcely large enough to show the quality of the unaltered stone." (1)

References: 1) Bowles. 1918, p. 158, 159

Main commodity: Dimension Carbonate Rock

County: Dakota

Status: Inactive; active (1888) (2)

Past operator/owner: Timothy Haynes (1888) (2)

Township name: Burnsville

Location: T 115 R 21 W Sec 23 (1,2)

Location comments: Near center of section 23 (1,2); near Hamilton, in high bluffs on a level with the undulating terrace at Berrisford (2)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1,3); Trenton (2)

Description: Platteville dolomite, exposure of unknown thickness (1)

Uses of commodity: Building stone (2,3)

Remarks: Wm. Rice also has a quarry in this general location, "They (quarries) furnish a useful stone, but one which is not yet appreciated by the residents in that part of the county, and the quarries are feebly sustained." (2)

References: 1) Schwartz. 1936, p. 142
2) Winchell; Upham. 1888, p. 81, 83
3) Bowles. 1918, p. 160

Main commodity: Dimension Carbonate Rock

County: Dakota

Status: Inactive; active (1888) (2)

Past operator/owner: Wm. Rice (1888) (2)

Township name: Burnsville

Location: T 115 R 21 W Sec 23 (1,2)

Location comments: Near center of section 23 (1,2); near Hamilton, in high bluffs on a level with the undulating terrace at Berrisford (2)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1,3); Trenton (2)

Description: Platteville dolomite, exposure of unknown thickness (1)

Uses of commodity: Building stone (2,3)

Remarks: Timothy Haynes also has a quarry in this general location, "They (quarries) furnish a useful stone, but one which is not yet appreciated by the residents in that part of the county, and the quarries are feebly sustained." (2)

References: 1) Schwartz. 1936, p. 142
2) Winchell; Upham. 1888, p. 81, 83
3) Bowles. 1918, p. 160

Main commodity: Dimension Carbonate Rock

County: Dodge

Quarry/pit name: Hook's Quarry (1)

Status: Abandoned (1918) (2)

Past operator/owner: H. Hook (1884) (1); Samuel Wilson (1873) (3)

Township name: Mantorville

Location: T 107 R 16 W

Location comments: Just below the village of Mantorville (1); (T., R. locations determined from Ref. 1, plate 13; possibly in section 16 or 21)

Geologic age: Ordovician

Geologic formation: Galena Gp. (1)

Description: Vesicular magnesian limestone, 73 ft exposed (1,3); see Ref. 1 and 3 for brief section descriptions; "The rock is a yellow to buff dolomitic limestone, though blue where not exposed to weathering agencies. It is pitted in places." (2); see Ref. 2, p. 162 for brief section description

Physical test data: See Ref. 1, p. 196-199 for detailed test data

Uses of commodity: Building stone (1,3)

Remarks: "The stone taken from the quarries at Mantorville is highly prized (for building purposes)..." (1)

References: 1) Winchell and others. 1884, p. 167, 196-199, 372, plate 13
2) Bowles. 1918, p. 161, 162
3) Winchell. 1873, p. 99, 108

Main commodity: Dimension Carbonate Rock

County: Dodge

Quarry/pit name: Pierson Stone Co. Quarry (1-3)

Status: Inactive

Past operator/owner: Pierson Stone Co. (1914) (1-3)

Township name: Mantorville

Location: T 107 R 16 W

Location comments: In the village of Mantorville (1-3); (T., R. locations determined from county highway map; possibly in section 16 or 21)

Geologic age: Ordovician

Geologic formation: Galena Gp., Stewartville Fm. (1-3)

Description: "The rock is a yellow to buff dolomitic limestone. Where it is not exposed to weathering agencies it is bluish gray in color. Because of the numerous solution pits it has a vesicular texture. For this reason the finished stone is marketed as travertine." (1)

See Refs. 1-3 for stratigraphic section, summary follows: drift 15 ft, Galena Gp., Stewartville Fm., 38 ft exposed, dolomite, top 20 ft massive, below is thin to medium beds (1-3)

Uses of commodity: Heavy construction beds, sawed stone for trimming (2); building stones (1)

References: 1) Thiel; Dutton. 1935, p. 135
2) Stauffer; Thiel. 1933, p. 45, 46
3) Stauffer; Thiel. 1914, p. 142

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock

County: Dodge

Quarry/pit name: McDonough Quarry (1,2,4)

Alternate name: M'Donough Quarry (3)

Status: Inactive since 1925 (1969) (1)

Past operator/owner: Walter Stussy (1969) (1); McDonough (1914) (4)

MN/DOT source no: 20050

Township name: Mantorville

Location: T 107 R 16 W Sec 20 NW1/4 NW1/4 (1)

Location comments: One mile west of the village of Mantorville, along the Great Western Railroad (4)

Geologic age: Ordovician

Geologic formation: Galena Gp., Stewartville Fm. (1,2,4)

Description: Buff, thick bedded dolomitic limestone, weathering to brown surface, slightly pitted, beds up to 4 ft thick, stripping 10 ft of till (1)

"In general the beds are 2-1/2 to 3 feet thick, and in consequence massive blocks suitable for heavy bridge work may be obtained. Major joints strike N. 56 deg. E. and are 2 to 3 feet apart. Secondary joints strike N. 25 deg. W. and are 5 feet or more apart." (3)

Brief section description given in Ref. 4, summary follows: dolomite, porous in top 36 ft, compact in 10 ft above quarry floor, overburden 8 ft

Chemical analyses: Sample No. 138, from lower 10 ft of quarry yields CaCO₃ 49.38%, MgCO₃ 31.12%; Sample No. 139, from upper part of quarry yields CaCO₃ 52.93%, MgCO₃ 32.58% (2)

Physical test data: Specific gravity 2.31 and 2.34, weight lbs/cu ft 144 and 146 (1); see Ref. 2, p. 46 for additional test data

Uses of commodity: Crushed rock (2); local structural purposes, mainly foundation work, heavy bridge work (3)

Remarks: "It (the rock) is strong, durable, and attractive." (3)

References: 1) MN/DOT Aggregate Unit files
2) Stauffer; Thiel. 1933, p. 45, 46, 71, 74

- 3) Bowles. 1918, p. 162
4) Stauffer; Thiel. 1914, p. 141

Main commodity: Dimension Carbonate Rock
County: Dodge
Status: Inactive
Past operator/owner: Charles Ginsberg (1873) (1)
Township name: Mantorville
Location: T 107 R 16 W
Location comments: At Mantorville (1); (T., R. locations determined from county highway map, possibly in section 16 or 21)
Description: "The Mantorville quarries show the horizon of the junction of the Trenton with overlying Galena.", magnesian buff limestone, 34 ft exposed, "At this quarry the buff or cream colored stone shows a light blue color in deep quarrying." (1)
Uses of commodity: Good building stone (1)
References: 1) Winchell. 1873, p. 99, 108

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Dodge
Quarry/pit name: Mantorville Stone Co. Quarry (1,2)
Status: Inactive
Past operator/owner: Mantorville Stone Co., Frank P. McDonough-owner (1,2)
Township name: Mantorville
Location: T 107 R 16 W Sec 21 (1)
Location comments: Near Mantorville (1)
Geologic age: (Ordovician)
Geologic formation: (Galena Gp.)
Description: "The rock is a yellow to buff dolomitic limestone. Where it is not exposed to weathering agencies it is bluish gray in color. Because of the numerous solution pits it has a vesicular texture. For this reason the finished stone is marketed as travertine." (2)
Chemical analyses: Two samples analyzed, first value given is from lower 10 ft, second value is from upper 35 ft of quarry; CaCO₃ 49.38% and 52.93%, MgCO₃ 31.12% and 32.58%, total insolubles 18.05% and 11.58% (2)
Physical test data: Specific gravity 2.31 and 2.34, weight lbs/cu ft 144 and 146 (2); see Ref. 2, p. 136 for additional test data
Uses of commodity: High-grade building stone, crushed stone (2)
Trade names: "Blue Mantorville Travertine" and "Cream Mantorville Travertine" (2)
Remarks: Unlimited quantity (1911) (1)
References: 1) Cooley. 1911, p. 10
2) Thiel; Dutton. 1935, p. 135, 136

Main commodity: Dimension Carbonate Rock
County: Dodge
Status: Abandoned (1918) (2)
Past operator/owner: A. Doig and others (1884) (1)
Township name: Mantorville
Location: T 107 R 16 W
Location comments: Just below the village of Mantorville (1); (T., R. locations determined from Ref. 1, plate 13; possibly in section 16 or 21)
Geologic age: Ordovician
Geologic formation: Galena Gp. (1)
Uses of commodity: Buildings (1)
Remarks: Several quarries in this area (1)
References: 1) Winchell and others. 1884, p. 372, 373, plate 13
2) Bowles. 1918, p. 161, 162

Main commodity: Dimension Carbonate Rock
County: Dodge
Quarry/pit name: Mantor's Quarry (1)
Status: Abandoned (1918) (2)
Past operator/owner: P. Mantor (1884) (1)
Township name: Mantorville
Location: T 107 R 16 W
Location comments: Just below the village of Mantorville (1); (T., R. locations determined from Ref. 1, plate 13; possibly in section 16 or 21)
Geologic age: Ordovician
Geologic formation: Galena Gp. (1)
Description: Light yellow to yellow dolomitic rock in thick beds, 12 ft exposed (1)
Uses of commodity: Buildings (1)
References: 1) Winchell and others. 1884, p. 371-373, plate 13
2) Bowles. 1918, p. 161, 162

Main commodity: Dimension Carbonate Rock
County: Dodge
Status: Inactive
Past operator/owner: Thomas Arnold (1884) (1)
Township name: Wasioja
Location: T 107 R 17 W Sec 13 (1)
Location comments: On the north bank of the south Middle Branch of the Zumbro River (1); (T., R. locations determined from Ref. 1, plate 13)
Geologic age: Ordovician
Geologic formation: Galena Gp. (1)
Description: "At the top of the exposed wall is a layer of five feet of rubble stone. Below this are thirty feet of dolomitic, sparry stone, yellow when weathered, but blue within. It is in evenly bedded layers from six inches to three feet

thick. It works smoothly and is soft, without flint. Near the bottom the rock is gray when weathered." (1)

Uses of commodity: Rubble stone, etc. (1)
References: 1) Winchell and others. 1884, p. 371, 372, plate 13

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: **Dodge**
Status: Inactive
Township name: Wasioja
Location: T 107 R 17 W Sec 13 (1)
Location comments: At Blake's Mill, on the eastern edge of section 13 (1); (T., R. locations determined from Ref. 1, plate 13)
Geologic age: Ordovician
Geologic formation: Galena Gp. (1)
Description: "...an exposure of about thirty feet of rock...The upper five feet are of broken rubble stones. The remainder is in solid, even beds, six inches to three feet thick. The stone is a limestone, yellow, dolomitic, compact, coarse-grained." (1)
Uses of commodity: Used in constructing the mill and dam (1)
References: 1) Winchell and others. 1884, p. 371, 372, plate 13

Main commodity: Dimension Carbonate Rock
County: **Dodge**
Status: Abandoned (1918) (2)
Township name: Concord
Location: T 108 R 17 W Sec 15 (1,3)
Location comments: In the vicinity of Eagle Valley mills, section 15, Concord township, on North Branch of the Zumbro River (1); (T., R. locations determined from Ref. 1, plate 13)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2,3); Trenton (1)
Description: Platteville limestone (2); Trenton limestone, rather thin layers (1)
Uses of commodity: Building stone, foundations (1)
References: 1) Winchell and others. 1884, p. 370, 374, plate 13
 2) Bowles. 1918, p. 161, 162
 3) Thiel; Dutton. 1935, p. 151

Main commodity: Dimension Carbonate Rock
County: **Dodge**
Status: Abandoned (1918) (2)
Township name: Concord
Location: T 108 R 17 W Sec 23 NW1/4 (1,3)

Location comments: At Concord, quarry in the south bank of the North Branch of the Zumbro River (1); (T., R. locations determined from Ref. 1, plate 13)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2,3); Trenton (1)
Description: Platteville limestone (2); Trenton limestone (1); see Ref. 1 for brief section description
Uses of commodity: Building stone, foundations (1)
References: 1) Winchell and others. 1884, p. 370, 374, plate 13
 2) Bowles. 1918, p. 161, 162
 3) Thiel; Dutton. 1935, p. 151

Main commodity: Dimension Carbonate Rock
County: **Fillmore**
Status: Inactive (1935) (2)
Past operator/owner: Ole Oleson (1884) (1)
Township name: Harmony
Location: T 101 R 10 W Sec 36 NE1/2 (1)
Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2)
Description: Trenton limestone (1)
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 323
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: **Fillmore**
Status: Inactive
Past operator/owner: Hiram Andrews (1884) (1)
Township name: Bristol
Location: T 101 R 11 W Sec 36 NW1/2 (1)
Location comments: In the river banks (1)
Geologic age: Ordovician
Geologic formation: Galena Gp. (1)
Description: Thick layers, somewhat vesicular (1)
Uses of commodity: Building stone for stone barn and stable (1)
References: 1) Winchell and others. 1884, p. 297, 298

Main commodity: Dimension Carbonate Rock
County: **Fillmore**
Status: Inactive (1935) (2)
Past operator/owner: Wm. Willbright and Martin Quinn (1884) (1)
Township name: Forestville
Location: T 102 R 12 W Sec 15 (1)
Geologic formation: Trenton (1); St. Lawrence Fm. (2)
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 323, plate 10
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Fillmore
Status: Inactive (1935) (1)
Past operator/owner: Garret Mensing (1884) (1)
Township name: Forestville
Location: T 102 R 12 W Sec 27 SW1/4 (1)
Geologic age: Ordovician
Geologic formation: Trenton (1); Cedar Valley Fm. (2)
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 323, plate 10
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Fillmore
Status: Inactive (1935) (2)
Past operator/owner: Wm. McNee (1884) (1)
Township name: Bloomfield
Location: T 102 R 13 W Sec 14 NW1/4 (1)
Geologic age: Devonian (1)
Geologic formation: Cedar Valley Fm. (2)
Description: Holds considerable calcite (1)
Uses of commodity: Building stone for barn foundations (1)
References: 1) Winchell and others. 1884, p. 306
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Fillmore
Status: Inactive (1935) (2)
Past operator/owner: Dora Wright (1884) (1)
Township name: Bloomfield
Location: T 102 R 13 W Sec 14 (1)
Location comments: Center of section 14, by the roadside (1)
Geologic age: Devonian (1)
Geologic formation: Cedar Valley Fm. (2)
Uses of commodity: Building stone (1)
Remarks: Slightly quarried (1)
References: 1) Winchell and others. 1884, p. 306
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Fillmore
Status: Inactive
Township name: Holt
Location: T 103 R 9 W Sec 9 OR
 T 103 R 9 W Sec 16
Location comments: At Whalen, in Valley about 1/2 mile below village (1); (T., R., Sec. locations determined from Ref. 1, plate 10)
Geologic age: Cambrian

Geologic formation: St. Lawrence Fm. (1)
Description: St. Lawrence limestone, "It lies in even layers which are easily broken into desirable size and shape, furnishing a good cut-stone of close grain, without openings." (1)
Uses of commodity: Building stone (1)
Remarks: Considerably quarried, and furnishes a very good stone for buildings (1)
References: 1) Winchell and others. 1884, p. 284, plate 10

Main commodity: Dimension Carbonate Rock
County: Fillmore
Status: Inactive
Past operator/owner: O. E. Tew (1918) (1)
Location: T 103 R 9 W Sec 9
Location comments: Quarry in cliff along the river bluff at Whalen (1); (T., R., Sec. locations determined from Ref. 2, plate 10; exact location undetermined, village of Whalen in section 9)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: Oneota dolomite (1)
Uses of commodity: Barn and house foundations (1)
References: 1) Bowles. 1918, p. 165
 2) Winchell and others. 1884, plate 10

Main commodity: Dimension Carbonate Rock
County: Fillmore
Status: Inactive (1935) (2)
Past operator/owner: Quarries owned by George Ness, Ole Ensrud, and the village of Lanesboro (1918) (1)
Location: T 103 R 10 W (2) OR
 T 103 R 9 W
Location comments: At Lanesboro (1); (T., R. locations determined from county highway map; exact location undetermined)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,2)
Uses of commodity: Foundations, culverts, bridges, etc. (1)
References: 1) Bowles. 1918, p. 165
 2) Thiel; Dutton. 1935, p. 151

Main commodity: Dimension Carbonate Rock
County: Fillmore
Status: Inactive
Past operator/owner: Lanesboro Mill Company (1884) (1)
Location: T 103 R 10 W OR
 T 103 R 9 W
Location comments: Lanesboro (1); (T., R. locations determined from Ref. 1, plate 10; exact location undetermined)
Geologic age: Cambrian

Geologic formation: St. Lawrence Fm. (1)
Description: Dolomitic vesicular and compact limestone (1)
Chemical analyses: See Ref. 1, Sample Nos. 16 and 21 for chemical analyses
Physical test data: See Ref. 1, Sample Nos. 16 and 21 for physical test data
Uses of commodity: Building construction (1)
References: 1) Winchell and others. 1884, p. 196-199, 284, plate 10

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Carey Quarry (1)
Status: Inactive (1935) (1)
Past operator/owner: W. H. Carey (1918) (1)
Location: T 103 R 13 W Sec 9 OR
 T 103 R 13 W Sec 10
Location comments: Four miles north of Spring Valley (1,2); in the bluff of Deer Creek (1); (exact location undetermined; T., R., Sec. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1,2)
Description: 40 ft face, beds 2 to 4 ft thick, open vertical joints meet nearly at right angles and are far apart, in one place 25 ft apart, and large blocks of good solid stone is available, fine-grained and uniform though somewhat porous (1)
Chemical analyses: CaCO₃ 76.44%, MgCO₃ 20.45%, insoluble in HCl 1.96% (1)
Uses of commodity: Building blocks, quicklime (1)
Remarks: Quarried extensively many years ago (1918) (1)
References: 1) Bowles. 1918, p. 163, 164
 2) Thiel; Dutton. 1935, p. 151

Main commodity: Dimension Carbonate Rock
County: Fillmore
Status: Inactive
Past operator/owner: George Wilbrecht (1918) (1)
Location: T 103 R 13 W
Location comments: A mile upstream from the Carey Quarry (1); (Carey Quarry is located about four miles north of Spring Valley in the bluff of Deer Creek, possibly in Sec. 9 or 10); (T., R. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Remarks: Has not been worked for several years (1918) (1)
References: 1) Bowles. 1918, p. 163, 164

Main commodity: Dimension Carbonate Rock

County: Fillmore
Status: Inactive (1935) (2)
Past operator/owner: Henry Prosser (1884) (1)
Township name: Spring Valley
Location: T 103 R 13 W Sec 14 SE1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2); Trenton (1)
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 291
 2) Thiel; Dutton. 1935, p. 151

Main commodity: Dimension Carbonate Rock
County: Fillmore
Status: Inactive (1935) (1)
Past operator/owner: Quarries of John Kleckler and Jos. Lester (1884) (1)
Township name: Spring Valley
Location: T 103 R 13 W Sec 23 SE1/4 (1,2)
Location comments: Both quarries in SE1/4 (1); Jos. Lester's quarry is in the valley of the middle branch (1)
Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2)
Description: A gray limestone, with interlaminae of shale, compact, with the exception of the thin laminae of shale it consists entirely of limestone, about 10 ft exposed (1)
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 291, plate 10
 2) Thiel; Dutton. 1935, p. 151

Main commodity: Dimension Carbonate Rock
County: Fillmore
Status: Inactive (1935) (2)
Past operator/owner: H. Perkins (1884) (1)
Township name: Spring Valley
Location: T 103 R 13 W Sec 25 N1/2 (1,2)
Location comments: North part of Sec. 25 (1)
Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2)
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 291, 292
 2) Thiel; Dutton. 1935, p. 151

Main commodity: Dimension Carbonate Rock
County: Fillmore
Status: Inactive (1935) (2)
Location: T 103 R 13 W Sec 35 OR
 T 103 R 13 W Sec 26
Location comments: "Quarries" a mile or two east of Spring Valley (1); 1 mile east of Spring Valley (2); (exact

location undetermined; T., R., Sec. locations determined from Ref. 1, plate 10)

Geologic age: Ordovician

Geologic formation: Galena Gp. (1,2)

Uses of commodity: Ornamental cut stone (1)

References: 1) Winchell and others. 1884, p. 299, plate 10
2) Thiel; Dutton. 1935, p. 151

Main commodity: Dimension Carbonate Rock

County: Fillmore

Quarry/pit name: Akre & Dahl Quarry (1)

Alternate name: Old Highland Quarry (1)

Status: Inactive (1935) (2)

Past operator/owner: Akre & Dahl (1918) (1)

Location: T 104 R 8 W Sec 12 (2)

Location comments: About a mile northeast of Rushford station, the quarry floor is approx. 225 ft above the railroad tracks, at the top of a steep and winding road (1)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (2)

Description: Oneota dolomite (2); "Open joints filled with clay are spaced irregularly but at considerable distances apart, and blocks of any desired size may be obtained. The fine-grained uniform texture of the stone, combined with its pale yellow to milk-white color, make it exceedingly attractive. A few reddish streaks run parallel with the bedding, and occasionally a small cavity appears; these, however, are rare.", quarry face approx. 45 ft (1)

Chemical analyses: CaCO₃ 51.50%, MgCO₃ 38.98%, insoluble in HCl 6.3% (1)

Remarks: "On a neighboring bluff a similar quarry owned by Charles Green is operated at times by Martin Nelson." (1918) (1)

References: 1) Bowles. 1918, p. 165, 166
2) Thiel; Dutton. 1935, p. 151

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock

County: Fillmore

Status: Inactive (1935) (2)

Past operator/owner: Three quarries owned in 1874 by Hiram Walker, Jos. Otis, and Wm. Crampton (1)

Location: T 104 R 8 W Sec 14

Location comments: At Rushford (1,2); (exact location undetermined; T., R., Sec. locations determined from Ref. 1, plate 10; possibly in Sec. 14 or surrounding sections)

Geologic age: Cambrian

Geologic formation: St. Lawrence Fm. (1,2)

Uses of commodity: Building stone, quicklime (1)

References: 1) Winchell and others. 1884, p. 321, 323, plate 10
2) Thiel; Dutton. 1935, p. 151

Main commodity: Dimension Carbonate Rock

County: Fillmore

Status: Inactive

Past operator/owner: O. E. Tew (1918) (1)

Location: T 104 R 8 W Sec 19

Location comments: Quarry in cliff along river bluff at Peterson (1); (T., R., Sec. locations determined from Ref. 2, plate 1; exact location undetermined; village of Peterson located in section 19)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1)

Description: Oneota dolomite (1)

References: 1) Bowles. 1918, p. 165
2) Weiss. 1957, plate 1

Main commodity: Dimension Carbonate Rock

County: Fillmore

Date opened: Around 1870 (1)

Status: Inactive (1935) (2)

Past operator/owner: E. L. Clayton (1918) (1)

Location: T 104 R 11 W (2)

Location comments: About half a mile from the Chicago & Northwestern Railway Station at Chatfield (in W1/2 of Sec. 5) (1); 1/2 mile from Chatfield (2)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1,2)

Description: "The rock is a dense, fine-grained, bluish-yellow limestone. Major joints strike N. 63 deg. E. and are vertical and 4 to 5 feet apart. Secondary joints strike north and N. 70 deg. W. and are 2 to 3 feet apart. Beds are distinct and 4 to 18 inches in thickness. The rock splits easily. There is considerable variation in the color and texture of the rock in different beds. Interbedded shales, fossils, and cherty or limy concretions appear in places. Stripping requires the removal of 4 to 5 feet of soil." (1)

Uses of commodity: Range rock, foundation stone (1)

Remarks: "It is attractive in color and quite durable." (1)

References: 1) Bowles. 1918, p. 164, 165
2) Thiel; Dutton. 1935, p. 151

Main commodity: Dimension Carbonate Rock

County: Fillmore

Status: Inactive

Past operator/owner: Doyle (1884) (1)

Township name: Chatfield

Location: T 104 R 11 W Sec 15 (1)

Location comments: Near Parsley's ford, center of section 15 (1)

Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Uses of commodity: Bridge abutments (1)
References: 1) Winchell and others. 1884, p. 287

Main commodity: Dimension Carbonate Rock
County: Fillmore
Quarry/pit name: Reynolds Quarry (1)
Date opened: 1912 (1)
Status: Inactive (1935) (2)
Past operator/owner: W. W. Reynolds (1918) (1)
Township name: Sumner
Location: T 104 R 13 W Sec 36 (1,2)
Description: Limestone (1); sandy limestone (2)
Uses of commodity: Bridge, culvert, and foundation construction (1)
Remarks: "Further east, is a quarry owned by Edward Rath in the same formation, the rock is similar and is quarried for local purposes only." (1)
References: 1) Bowles. 1918, p. 164
 2) Thiel; Dutton. 1935, p. 151

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Fillmore
Quarry/pit name: Palmer Quarry (1)
Status: Inactive
Past operator/owner: H. A. Palmer (1918) (1); Palmer & Miller (1884) (2)
Township name: Sumner
Location: T 104 R 13 W Sec 36 (1)
Location comments: Close to Washington, along the bluffs of Bear Creek (1); Bear Creek (2)
Geologic age: Ordovician
Geologic formation: Galena Gp. (2)
Description: A sandy limestone of good building quality (1)
Uses of commodity: Building stone (1); quicklime, three kilns in 1874 (2)
References: 1) Bowles. 1918, p. 164
 2) Winchell and others. 1884, p. 320

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Goodhue
Status: Inactive (1935) (2)
Past operator/owner: Three quarries in area, one owned by John Chance, another by Peter Townsend (1888) (1), and another by D. L. Dutcher (1918) (2)
Township name: Pine Island
Location: T 109 R 15 W Sec 29 OR
 T 109 R 15 W Sec 32

Location comments: Northeast of Pine Island (1,2); several quarries in this area (2); (exact locations undetermined); T., R. locations determined from Ref. 1, plate 33)

Geologic age: Ordovician
Geologic formation: Lower Trenton (1); Platteville Fm. (2)
Uses of commodity: Building stone (1); concrete for foundations (2)
References: 1) Winchell; Upham. 1888, p. 43, plate 33
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Goodhue
Status: Inactive (1935) (2)
Past operator/owner: Anderson and Peterson (1888) (1)
Township name: Roscoe
Location: T 109 R 16 W Sec 27 SE1/4 (1,2)
Location comments: By the roadside (1)
Geologic age: Ordovician
Geologic formation: Lower Trenton (1); Platteville Fm. (2)
Description: Limestone, 10 to 12 ft thick (1)
Uses of commodity: Building stone (1)
Remarks: J. Bringald has a quarry in the same beds near here (1)
References: 1) Winchell; Upham. 1888, p. 43
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Goodhue
Status: Inactive
Past operator/owner: John and Charles Peterson (1888) (1)
Township name: Roscoe
Location: T 109 R 16 W Sec 32 NE1/4 (1)
Location comments: In bluff of the Middle Branch of the Zumbro River (1)
Geologic age: Ordovician
Geologic formation: Upper Trenton (1)
Uses of commodity: Building stone (1)
References: 1) Winchell; Upham. 1888, p. 43

Main commodity: Dimension Carbonate Rock
County: Goodhue
Status: Inactive (1935) (2)
Past operator/owner: Emmanuel Andrist (1888) (1)
Township name: Roscoe
Location: T 109 R 16 W Sec 32 NE1/4 (2)
Geologic age: Ordovician
Geologic formation: Galena Gp. (1,2)
Description: Light buff stone like the Galena Gp. (1)
Uses of commodity: Building stone (1)

References: 1) Winchell; Upham. 1888, p. 43, plate 33
2) Thiel; Dutton. 1835, p. 152

Main commodity: Dimension Carbonate Rock
County: Goodhue
Status: Inactive (1935) (2)
Past operator/owner: Two quarries, one owned by Andrew Everby and one by Arne Arneson (1888) (1)
Township name: Cherry Grove
Location: T 109 R 17 W Sec 1 (1,2)
Location comments: Both quarries are on a tributary of the North Branch of the Zumbro River (1)
Geologic age: Ordovician
Geologic formation: Upper Trenton (1); Galena Gp. (2)
Description: Rock is compact, firm, light blue color, weathering to a light buff, beds rarely exceeding 4 inches in thickness (1)
References: 1) Winchell; Upham. 1888, p. 42
2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Goodhue
Status: Inactive
Township name: Cherry Grove
Location: T 109 R 17 W Sec 33
Location comments: Near Fair Point, in Cherry Grove, are quarries along the Zumbro River (1); (exact location undetermined; T., R., Sec. locations determined from Ref. 1, plate 33)
Geologic age: Ordovician
Geologic formation: Upper Trenton (1)
Description: Light-colored, or buff rock, in regular layers sometimes 2 ft thick in deep quarrying, which weather into thin beds of an inch or less (1)
Uses of commodity: Building stone (1)
References: 1) Winchell; Upham. 1888, p. 42, plate 33

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Goodhue
Status: Inactive (1935) (2)
Past operator/owner: Three quarries in area, owned by George Devlin, Edward Winston, and O. Kan (1888) (1)
Township name: Cherry Grove
Location: T 109 R 17 W Sec 34 (1,2)
Location comments: On the Zumbro River, three quarries in area (1)
Geologic age: Ordovician
Geologic formation: Upper Trenton (1); Galena Gp. (2)
Uses of commodity: Building stone, quicklime (1)
References: 1) Winchell; Upham. 1888, p. 42
2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Goodhue
Status: Inactive
Township name: Kenyon
Location: T 109 R 18 W Sec 7 SE1/4 (1)
Geologic age: Ordovician
Geologic formation: Upper Trenton (1)
Description: Rock is firm and blue on deep quarrying, but along the creek bank it crumbles; argillaceous, 25 ft exposed (1)
Uses of commodity: Building stone (1)
Remarks: Large quarry (1888) (1)
References: 1) Winchell; Upham. 1888, p. 41, 42

Main commodity: Dimension Carbonate Rock
County: Goodhue
Status: Inactive (1935) (2)
Past operator/owner: P. P. Scott (1888) (1)
Township name: Minneola
Location: T 110 R 16 W Sec 14 (1,2)
Location comments: Near Zumbrota (1)
Geologic age: Ordovician
Geologic formation: Lower Trenton (1); Platteville Fm. (2)
Description: (Limestone)
References: 1) Winchell; Upham. 1888, p. 43
2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Goodhue
Status: Inactive
Past operator/owner: Christopher Johnson (1888) (1)
Township name: Minneola
Location: T 110 R 16 W Sec 15 (1)
Geologic age: Ordovician
Geologic formation: Lower Trenton (1); (Platteville Fm.)
Description: (Limestone)
References: 1) Winchell; Upham. 1888, p. 43

Main commodity: Dimension Carbonate Rock
County: Goodhue
Status: Inactive
Past operator/owner: John Anderson (1888) (1)
Township name: Minneola
Location: T 110 R 16 W Sec 15 (1)
Geologic age: Ordovician
Geologic formation: Lower Trenton (1); (Platteville Fm.)
Description: (Limestone)

References: 1) Winchell; Upham. 1888, p. 43

Main commodity: Dimension Carbonate Rock
County: Goodhue
Status: Inactive (1935) (2)
Past operator/owner: Erick Erickson (1888) (1)
Township name: Minneola
Location: T 110 R 16 W Sec 15 (1,2)
Geologic age: Ordovician
Geologic formation: Lower Trenton (1); Platteville Fm. (2)
Description: (Limestone)
References: 1) Winchell; Upham. 1888, p. 43
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Goodhue
Status: Inactive (1935) (2)
Past operator/owner: Elling Oleson (1888) (1)
Township name: Wanamingo
Location: T 110 R 17 W Sec 8 (1,2)
Location comments: On the section line between Secs. 8 and 9, Wanamingo township (1)
Geologic age: Ordovician
Geologic formation: Upper Trenton (1); Galena Gp. (2)
Description: Gray, 22 to 23 ft of fine building stone, in beds from 3 to 8 inches thick, "They show no shale, and no characteristics that pertain to the Galena." (1)
Uses of commodity: Building stone (1)
Remarks: Fine large quarry (1)
References: 1) Winchell; Upham. 1888, p. 42, 43
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Goodhue
Status: Inactive
Township name: Wanamingo
Location: T 110 R 17 W Sec 9
Location comments: Across the road from Oleson's quarry which is on the section line between sections 8 and 9 (1); (T., R. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Upper Trenton (1)
Description: Gray, 22 to 23 ft of fine building stone, in beds 3 to 8 inches thick, no shale, no characteristics that pertain to the Galena (1)
Uses of commodity: Building stone (1)
References: 1) Winchell; Upham. 1888, p. 42, 43

Main commodity: Dimension Carbonate Rock

County: Goodhue
Status: Inactive (1935) (2)
Past operator/owner: Peter Oleson and Peter Peterson have quarries near each other (1888) (1)
Township name: Wanamingo
Location: T 110 R 17 W Sec 33 (1,2)
Location comments: Two quarries in this area (1)
Geologic age: Ordovician
Geologic formation: Upper Trenton (1); Galena Gp. (2)
Uses of commodity: Building stone (1)
References: 1) Winchell; Upham. 1888, p. 42, 43
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Goodhue
Status: Inactive
Township name: Holden
Location: T 110 R 18 W
Location comments: Holden township (1); (T., R. locations determined from Ref. 1, plate 33)
Geologic age: Ordovician
Geologic formation: Upper Trenton (1)
Uses of commodity: Building stone (1)
References: 1) Winchell; Upham. 1888, p. 41, plate 33

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Goodhue
Status: Inactive
Township name: Belvidere
Location: T 111 R 14 W
Location comments: Belvidere (1); (T., R. locations determined from Ref. 1, plate 33; exact location undetermined)
Description: Lower magnesium limestone (1)
Uses of commodity: Building stone, quicklime for local demand (1)
References: 1) Winchell; Upham. 1888, p. 53, 54, plate 33

Main commodity: Dimension Carbonate Rock
County: Goodhue
Quarry/pit name: East Wagner Quarry (1,2)
Status: Inactive
Past operator/owner: Lawrence Wagner (1973) (1,2)
Township name: Leon
Location: T 111 R 17 W Sec 8 NE1/4 NW1/4 (1)
Location comments: See location map Ref. 1, fig. 9.1 (1); about 1/4 mile to the east of Wagner's farm house (2)
Geologic age: Ordovician
Geologic formation: Prosser Fm. (1); Dunleith Fm. (2)
Description: See Refs. 1 and 2 for description
Uses of commodity: Building stone (1)

Remarks: There is another quarry "North Wagner Quarry", located 1/4 mile north of Mr. Wagner's farm house (1,2)

References: 1) Sloan; DesAutels. 1987, p. 60, 61
2) Levenson; Gerk. undated, locality M-110

Geologic age: Ordovician

Geologic formation: Galena Gp. (1,2)

References: 1) Winchell; Upham. 1888, p. 43
2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock

County: Goodhue

Quarry/pit name: Lawrence Wagner Quarry (1,2)

Status: Inactive

Past operator/owner: Lawrence Wagner (1,2)

Township name: Leon

Location: T 111 R 17 W Sec 8 W1/2 SE1/4 (1,2)

Geologic age: Ordovician

Geologic formation: Prosser Fm. (1,2)

Description: Dolomitic limestone, buff colored (1); the entire Ref. 1 thesis is a description of the paleoecology of this quarry

Uses of commodity: Building stone (3)

References: 1) DesAutels. 1978
2) Sloan; Kolata. 1987, p. 76
3) Levenson; Gerk. undated, locality M-110

Main commodity: Dimension Carbonate Rock

County: Goodhue

Status: Inactive (1935) (2)

Past operator/owner: Davis Miller (1888) (1)

Township name: Leon

Location: T 111 R 17 W Sec 22 (1,2)

Geologic age: Ordovician

Geologic formation: Upper Trenton (1); Galena Gp. (2)

References: 1) Winchell; Upham. 1888, p. 43
2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock

County: Goodhue

Status: Inactive (1935) (2)

Past operator/owner: John Haggstrom and John Bank (1888) (1)

Township name: Leon

Location: T 111 R 17 W Sec 9 (1,2)

Geologic formation: Upper Trenton (1); Galena Gp. (2)

References: 1) Winchell; Upham. 1888, p. 43
2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock

County: Goodhue

Status: Inactive (1935) (2)

Past operator/owner: Peter Swenson (1888) (1)

Township name: Leon

Location: T 111 R 17 W Sec 23 (1,2)

Geologic age: Ordovician

Geologic formation: Upper Trenton (1); Galena Gp. (2)

References: 1) Winchell; Upham. 1888, p. 43
2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock

County: Goodhue

Status: Inactive (1935) (2)

Past operator/owner: E. M. Edstrom (1888) (1)

Township name: Leon

Location: T 111 R 17 W Sec 20 (1,2)

Geologic age: Ordovician

Geologic formation: Galena Gp. (1,2)

References: 1) Winchell; Upham. 1888, p. 43
2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock

County: Goodhue

Status: Inactive (1935) (2)

Township name: Warsaw

Location: T 111 R 18 W Sec 32 NW1/4 (1,2)

Geologic formation: Lower Trenton (1); Platteville Fm. (2)

References: 1) Winchell; Upham. 1888, p. 42
2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock

County: Goodhue

Status: Inactive (1935) (2)

Past operator/owner: Swanty Anderson (1888) (1)

Township name: Leon

Location: T 111 R 17 W Sec 20 (1,2)

Main commodity: Dimension Carbonate Rock

County: Goodhue

Status: Inactive

Past operator/owner: Baker Harrison (1884) (1)

Location: T 112 R 12 W Sec 31

Location comments: Central Point (1,2); (T., R., Sec. locations determined from Ref. 2, plate 33)

Geologic formation: St. Croix (1,2)

Description: Dolomitic and aluminous limestone (1)

Chemical analyses: See Ref. 1, Sample No. 25 for chemical analyses

Physical test data: See Ref. 1, Sample No. 25 for physical test data

Uses of commodity: Building stone (1)

References: 1) Winchell and others. 1884, p. 200-204
2) Winchell; Upham. 1888, p. 13, plate 33

Main commodity: Dimension Carbonate Rock
County: Goodhue
Status: Inactive
Location: T 112 R 13 W
Location comments: Near Lake Pepin at Frontenac (1); (T., R. locations determined from Ref. 2, plate 33)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1)
References: 1) Winchell and others. 1884, p. 160
2) Winchell; Upham. 1888, plate 33

Main commodity: Dimension Carbonate Rock
County: Goodhue
Quarry/pit name: Frontenac Quarry (1-3,5)
Alternate name: Frontenac Stone Co. Quarry (4)
Status: Inactive
Past operator/owner: Frontenac Stone Company (1918, 1888) (4,6); State of Minnesota (1965) (1)
MN/DOT source no: 25086
Township name: Florence
Location: T 112 R 13 W. Sec 2 SW1/4 SE1/4 (1)
T 112 R 13 W Sec 2 (3)
Location comments: At Old Frontenac (2); appears to be in or a part of Frontenac State Park (1965) (1); near Lake Pepin, at Frontenac (3,6)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1-6)
Description: Oneota dolomite, 51 ft face (2); medium to massive beds, grayish, quite sandy and silty (1); see Refs. 2-5 for section descriptions
Chemical analyses: See Refs. 2-5 for chemical analyses
Physical test data: See Ref. 4 for physical test data
Uses of commodity: Building stone, carved stone (3); interior and exterior structural work and trimming (4)
Trade names: "Frontenac Stone" (3)
References: 1) MN/DOT Aggregate Unit files
2) Stauffer. 1950, p. 6, 24
3) Stauffer; Thiel. 1933, p. 39, 40, 68, 73
4) Bowles. 1918, p. 168
5) Stauffer; Thiel. 1914, p. 116, 119, 156, 159, 160
6) Winchell; Upham. 1888, p. 53

Main commodity: Dimension Carbonate Rock
County: Goodhue
Quarry/pit name: Tostevin's Quarry (1)
Status: Inactive
Past operator/owner: Tostevin (1884) (1)
Township name: Florence

Location: T 112 R 13 W
Location comments: At Frontenac (1); (T., R. locations determined from Ref. 2, plate 33)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1)
Description: Vesicular dolomite (1)
Chemical analyses: See Ref. 1, Sample No. 13 for chemical analyses
Physical test data: See Ref. 1, Sample No. 13 for physical test data
References: 1) Winchell and others. 1884, p. 196-199
2) Winchell; Upham. 1888, plate 33

Main commodity: Dimension Carbonate Rock
County: Goodhue
Quarry/pit name: Frontenac Stone Co. Quarry (1)
Status: Inactive
Past operator/owner: Frontenac Stone Co. (1888) (1)
Location: T 112 R 13 W
Location comments: Quarry 2-1/2 miles south of Frontenac (1); (T., R. locations determined from Ref. 1, plate 33)
Description: Lower Magnesium limestone, light-buff, evenly and finely vesicular, in heavy beds of 5 ft and less, uniformly grained, massive (1)
Uses of commodity: Cut stone, building stone (1)
References: 1) Winchell; Upham. 1888, p. 53, plate 33

Main commodity: Dimension Carbonate Rock
County: Goodhue
Status: Inactive
Township name: Florence
Location: T 112 R 13 W Sec 21 NW1/4 (1)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1)
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 160

Main commodity: Dimension Carbonate Rock
County: Goodhue
Quarry/pit name: Beckman Quarries (1)
Status: Abandoned (1918) (1)
Location: T 112 R 13 W
Location comments: In Goodhue County near the Wabasha County line (1); (exact location undetermined; T., R. locations determined from county highway map)
Uses of commodity: Supplied most of the structural stone used in Lake City (1)
References: 1) Bowles. 1918, p. 192

Main commodity: Dimension Carbonate Rock

County: Goodhue
Status: Inactive
Township name: Hay Creek
Location: T 112 R 14 W
Location comments: Hay Creek (1); (T., R. locations determined from Ref. 1, plate 33)
Geologic age: Ordovician
Description: Lower magnesian limestone (1)
Uses of commodity: Supplies local demand for building stone (1)
References: 1) Winchell; Upham. 1888, p. 54, plate 33

Main commodity: Dimension Carbonate Rock
County: Goodhue
Status: Inactive
Township name: Featherstone
Location: T 112 R 15 W
Location comments: Featherstone (1); (T., R. locations determined from Ref. 1, plate 33)
Description: Lower Magnesium limestone (1)
References: 1) Winchell; Upham. 1888, p. 54, plate 33

Main commodity: Dimension Carbonate Rock
County: Goodhue
Status: Inactive
Township name: Vasa
Location: T 112 R 16 W
Location comments: Vasa (1); (T., R. locations determined from Ref. 1, plate 33)
Description: Lower Magnesium limestone (1)
References: 1) Winchell; Upham. 1888, p. 54, plate 33

Main commodity: Dimension Carbonate Rock
County: Goodhue
Quarry/pit name: Bert Johnson Quarry (1)
Status: Inactive; active 1912 (1)
Past operator/owner: Bert Johnson (1918) (1)
Township name: Cannon Falls
Location: T 112 R 17 W
Location comments: Quarry south of Cannon Falls (1); (T., R. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Uses of commodity: Building stone (1)
References: 1) Bowles. 1918, p. 169

Main commodity: Dimension Carbonate Rock
County: Goodhue
Quarry/pit name: G. P. Johnson Quarry (1)

Status: Inactive
Past operator/owner: G. P. Johnson bought quarry in 1891 (1)
Township name: Cannon Falls
Location: T 112 R 17 W
Location comments: On a high bluff about a mile from the Chicago Great Western Railway tracks (1); (T., R. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Description: "About 2 feet of stripping is required, below which the quarry face is about 10 feet high. The color is at first blue but weathers yellow. Beds are 3 to 10 inches thick and have no apparent dip. Joints are very irregular and meet in places at acute angles; the most prominent are N. 45 deg. W. and N. 70 deg. E. Shale beds are confined to spaces between the solid thick beds of limestone and are easily disposed of as waste material." (1)
Uses of commodity: Building stone (1)
References: 1) Bowles. 1918, p. 168, 169

Main commodity: Dimension Carbonate Rock
County: Goodhue
Status: Inactive
Past operator/owner: John Shantz, owner (1888) (1)
Township name: Stanton
Location: T 112 R 18 W Sec 19 (1,2)
Geologic age: Ordovician
Geologic formation: Lower Trenton (1); Platteville Fm. (2)
Description: Beds 6 ft thick, layers from 4 to 8 inches, blue at center, but mostly faded to a light drab, beds overlain by 10 ft of loam, etc. (1)
Remarks: Other small quarries in Stanton township (1)
References: 1) Winchell; Upham. 1888, p. 42, plate 33
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Goodhue
Quarry/pit name: Lillyblad Quarry (1,2)
Date opened: 1868 (2,3)
Status: inactive
Past operator/owner: Gust Lillyblad, owner (1918) (2); Berglund (2,3)
MN/DOT source no: 25095
Location: T 113 R 14 W Sec 32 NE1/4 SE1/4 (1)
Location comments: Near residential area (1968) (1); on Bond St., about 2 miles south of the Chicago, Milwaukee & St. Paul station (2)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1-3)
Description: Dolomite, medium to massive beds, generally buff, stained gray, some beds look arenaceous,

sandy portions more of a rust color, face 50 ft, stripping 10 ft (1); "Some ledges are almost pure white and the rest is yellow....The rock is porous, especially in the upper layers, where many geodes of calcite and quartz occur." (2)

Uses of commodity: Range rock for foundations, riprap (2); building stone, quicklime (3)

Trade names: "Red Wing" stone (2)

References: 1) MN/DOT Aggregate Unit files
2) Bowles. 1918, p. 166-168
3) Winchell; Upham. 1888, p. 53
4) Winchell and others. 1884, p. 160

Main commodity: Dimension Carbonate Rock

County: Goodhue

Quarry/pit name: Sweeney's Quarry (1)

Status: Inactive

Past operator/owner: W. W. Sweeney (1884) (1)

Location: T 113 R 14 W

Location comments: Red Wing, in Barn Bluff (1); (T., R. locations determined from Ref. 2, plate 33)

Geologic age: Cambrian

Geologic formation: St. Lawrence Fm. (1)

Description: Compact dolomitic limestone (1)

Chemical analyses: See Ref. 1, Sample No. 17 for chemical analyses

Physical test data: See Ref. 1, Sample No. 17 for physical test data

Uses of commodity: Building stone (1)

References: 1) Winchell and others. 1884, p. 160, 196-199
2) Winchell; Upham. 1888, plate 33

Main commodity: Dimension Carbonate Rock

County: Goodhue

Quarry/pit name: Dahl Quarry (1)

Date opened: 1904 (1)

Status: Inactive

Past operator/owner: A. M. Dahl (1918) (1)

Location: T 113 R 14 W

Location comments: In east Red Wing (1); (T., R. locations determined from Ref. 2, plate 33)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1)

Uses of commodity: Building stone (1)

References: 1) Bowles. 1918, p. 167
2) Winchell; Upham. 1888, plate 33

Main commodity: Dimension Carbonate Rock

County: Goodhue

Quarry/pit name: Haglund Quarry (1)

Date opened: 1870's (1)

Status: Inactive

Past operator/owner: Andrew Haglund, owner (1918), Andrew Donaldson (1870's) (1)

Location: T 113 R 14 W

Location comments: Across the road from the Lillyblad Quarry (1); (T., R. locations determined from Ref. 2, plate 33)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1)

Uses of commodity: Chief product is building stone, some riprap (1)

References: 1) Bowles. 1918, p. 168
2) Winchell; Upham. 1888, plate 33

Main commodity: Dimension Carbonate Rock

County: Hennepin

Status: Inactive

Location: T 28 R 23 W Sec 32 (1)

Location comments: Fort Snelling Reservation (1)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1)

References: 1) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock

County: Hennepin

Status: Inactive since 1911 (2)

Past operator/owner: Cook Brothers, operators (1910) (1)

Location: T 29 R 23 W Sec 31

Location comments: On the southwest bluff of the Mississippi River, near the Milwaukee, St. Paul & Sault Ste. Marie Railway bridge (1-3); (T., R., Sec. locations determined from county highway map)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (2,3)

Description: "The upper half is of argillaceous magnesian limestone, which is very soft in places and is termed 'soapstone' by the quarrymen. The lower half, generally 12 to 14 feet thick, consists of hard, dense, fine-grained bluish limestone with wavy laminations." (1)

Uses of commodity: Rubble, range rock (1,2)

References: 1) Burchard. 1910, p. 284
2) Bowles. 1918, p. 170
3) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock

County: Hennepin

Quarry/pit name: Hortenbach Quarry (1)

Date opened: 1911 (1)

Status: Inactive (1935) (3)

Past operator/owner: R. Hortenbach (1918) (1)

Location: T 29 R 24 W Sec 14 E1/2 SW1/4

Location comments: Quarry at the corner of Fifth Ave. and Fifth St. NE, Minneapolis, on about half an acre (1-3); (T., R., Sec. locations determined from

Mpls./St. Paul street map and county highway map)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1,3)

Description: "After stripping 7 feet of soil 13 feet of good rock is available. The upper beds are thin, but from the lower part blocks as much as 10 inches thick may be obtained. Major joints strike N. 30 deg. W. and N. 21 deg. E. and are 10 to 20 feet apart. A minor system strikes N. 75 deg. W." (1)

Uses of commodity: Rubble (1)

Remarks: Small abandoned quarry (1936) (2)

References: 1) Bowles. 1918, p. 173
2) Schwartz. 1936, p. 215
3) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock

County: Hennepin

Quarry/pit name: Johnson Quarry (1)

Status: Inactive (1935) (2)

Past operator/owner: L. P. Johnson (1918) (1)

Location: T 29 R 24 W Sec 14 S1/2 NW1/4

Location comments: Quarry at 1131 Fourth St. NE, Minneapolis, about a mile west of the Anderson Quarry (1,2); (T., R., Sec. locations determined from Mpls./St. Paul street map and county highway map)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1,2)

Description: "The rock is covered by 2 feet of soil. The upper 3 feet is thin bedded and used only for filling, but the remaining 6 feet is of good quality. It is blue when fresh but stains buff along joints. Three joint systems are equally prominent. One system strikes N. 74 deg. E., a second N. 17 deg. E., and a third N. 30 deg. W. They are straight, vertical, and spaced 15 to 20 feet apart." (1)

Uses of commodity: Rubble for house foundations (1)

Remarks: Quarry is a city lot 40 ft on front and 100 ft deep, about half of which is worked out (1918) (1)

References: 1) Bowles. 1918, p. 172
2) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock

County: Hennepin

Quarry/pit name: Rogers Quarry (1,2)

Status: Inactive (1935) (3)

Past operator/owner: Andrew Rogers (1918) (1)

Location: T 29 R 24 W Sec 14

Location comments: Quarry near the corner of Third St. and Thirteenth Ave. NE, Minneapolis (1-3); (T., R., Sec. locations determined from Mpls./St. Paul street map and county highway map)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1-3)

Description: "Joints strike N. 37 deg. W., N. 18 deg. E., and N. 73 deg. E. and are 10 to 20 feet apart. The best beds are 6 inches to 1 foot thick. Available stone covers an area of about half a city block." (1)

Uses of commodity: Rubble (1)

References: 1) Bowles. 1918, p. 172
2) Schwartz. 1936, p. 215
3) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock

County: Hennepin

Quarry/pit name: Anderson Quarry (1)

Status: Inactive

Past operator/owner: A. P. Anderson (1918) (1); A. P. Anderson Stone Co. (1910) (2)

Location: T 29 R 24 W Sec 14 OR
T 29 R 24 W Sec 13

Location comments: Quarry north of the excavation made by the Blue Limestone Co. (1); adjoining the opening of the Minnesota Stone Co. (2); (T., R., Sec. locations determined by Mpls./St. Paul street map and county highway map)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1)

Description: "The best material lies at a depth of 18 or 20 feet from the top of the rock and is 8 to 10 feet thick above the base of the quarry. The rock is hard, fine-grained to subcrystalline, wavy bedded, blue-gray limestone. Stone 6 to 15 inches thick and 5 to 6 feet in length are commonly obtained and blocks 3 feet thick are available." (2)

Uses of commodity: Rubble for foundations (1); rubble, heavy blocks, riprap (2)

References: 1) Bowles. 1918, p. 172
2) Burchard. 1910, p. 284

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock

County: Hennepin

Status: Inactive

Past operator/owner: J. A. McLeod (1910) (1)

Location: T 29 R 24 W

Location comments: Quarry at Second Ave. NE and the Great Northern Railway tracks (1); (T., R. locations determined from county highway map)

Geologic age: Ordovician

Geologic formation: Trenton (1); (Platteville Fm.)

Description: "Very high-grade limestone...About 10 feet of glacial sand and clay overlie the stone, which is

Uses of commodity: fresh, light-gray, fine-grained to subcrystalline, high-calcium limestone." (1)
Rubble for foundations, crushed rock (1)

References: 1) Burchard. 1910, p. 284

Main commodity: Dimension Carbonate Rock
County: Hennepin
Date opened: 1873 (1)
Status: Inactive

Past operator/owner: W. M. Eastman, 1873 (1)
Location: T 29 R 24 W Sec 23 NW1/4
Location comments: Quarry on Nicollet Island (1,2); (T., R., Sec. locations determined from county highway map)

Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2)
Description: Aluminous limestone (1)
Chemical analyses: See Ref. 1, Sample No. 27 for chemical analyses
Physical test data: See Ref. 1, Sample No. 27 for physical test data
References: 1) Winchell and others. 1884, p. 175, 200-204
2) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock
County: Hennepin
Date opened: 1880's (1)
Status: Inactive
Past operator/owner: In 1873 owners of quarries below St. Anthony Falls included: Mullen, Reulstertz, Wacks, Evison (4)

Location: T 29 R 24 W
Location comments: Near the foot of St. Anthony Falls (1); below St. Anthony Falls are numerous quarries (3); several quarries situated on the west side of the river bluffs, about 1/4 mile below St. Anthony Falls (4); (T., R. locations determined from county highway map)

Geologic age: Ordovician
Geologic formation: Platteville Fm. (1,2)
Description: See Ref. 4 for section description
Uses of commodity: Used for part of the Great Northern Railway stone-arch bridge (1); foundations (3); blue flagging used in University building (4)

References: 1) Bowles. 1918, p. 170, 171
2) Thiel; Dutton. 1935, p. 142
3) Winchell; Upham. 1888, p. 341
4) Winchell. 1873, p. 96, 97, 101, 102

Main commodity: Dimension Carbonate Rock
County: Hennepin
Date opened: 1865 (1)
Status: Inactive
Past operator/owner: Franklin Cook, 1865 (1)

Location: T 29 R 24 W Sec 23 NW1/4
Location comments: Quarry on Nicollet Island (1,2); (T., R., Sec. locations determined from county highway map)

Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2)
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 175
2) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock
County: Hennepin
Quarry/pit name: Foley & Herbert's Quarry (1)
Status: Inactive
Past operator/owner: Foley & Herbert (1884) (1)
Location: T 29 R 24 W
Location comments: East Minneapolis (1); (exact location undetermined; T., R., locations determined from county highway map)

Geologic age: Ordovician
Geologic formation: Lower Trenton (1)
Description: Dolomitic limestone (1)
Chemical analyses: See Ref. 1, Sample No. 24 for chemical analyses
Physical test data: See Ref. 1, Sample No. 24 for physical test data
References: 1) Winchell and others. 1884, p. 200-204

Main commodity: Dimension Carbonate Rock
County: Hennepin
Quarry/pit name: Weeks & Holscher's Quarry (1)
Date opened: 1864 (1)
Status: Inactive (1935) (2)
Past operator/owner: Weeks & Holscher (1884) (1)
Location: T 29 R 24 W Sec 25
Location comments: West side of Mississippi River, west Minneapolis (1); west bluff of the Mississippi River opposite the University of Minnesota (2); (T., R., Sec. locations determined from county highway map)

Geologic age: Ordovician
Geologic formation: Upper Trenton (1)
Description: Dolomitic limestone (1)
Chemical analyses: See Ref. 1, Sample No. 22 for chemical analyses
Physical test data: See Ref. 1, Sample No. 22 for physical test data
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 175, 200-204
2) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock
County: Hennepin

Quarry/pit name: University of Minnesota Campus Quarry (1)
Status: Inactive (1935) (2)
Location: T 29 R 24 W Sec 25
Location comments: Near the University, in southeast Minneapolis (1); University of Minnesota campus below Washington Ave. bridge (2); (T., R., Sec. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1,2)
Description: See Ref. 1 for a description
Uses of commodity: Structural stone for basements, retaining walls, and entire structures (1)
References: 1) Bowles. 1918, p. 170
 2) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock
County: Hennepin
Status: Inactive since 1911 (2)
Past operator/owner: Riverside Stone Co. (1910) (1)
Location: T 29 R 24 W Sec 36
Location comments: Quarry on the southwest bluff of the Mississippi River in the Twenty-ninth Ave. locality (1-3); (T., R., Sec. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2,3)
Description: "The upper half is of argillaceous magnesian limestone, which is very soft in places and is termed 'soapstone' by the quarrymen. The lower half, generally 12 to 14 feet thick, consists of hard, dense, fine-grained bluish limestone with wavy laminations." (1)
Uses of commodity: Rubble, range rock (1,2)
References: 1) Burchard. 1910, p. 284
 2) Bowles. 1918, p. 170
 3) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock
County: Hennepin
Status: Inactive since 1911 (2)
Past operator/owner: Twin City Stone Co. (1910) (1)
Location: T 29 R 24 W Sec 36
Location comments: Quarry on the southwest bluff of the Mississippi River in the Twenty-ninth Ave. locality (1-3); (T., R., Sec. locations determined from county highway map; exact location undetermined)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2,3)
Description: "The upper half is of argillaceous magnesian limestone, which is very soft in places and is termed 'soapstone' by the quarrymen. The lower half, generally 12 to 14 feet thick, consists of hard, dense, fine-grained bluish limestone with wavy laminations." (1)

Uses of commodity: Rubble, range rock (1,2)
References: 1) Burchard. 1910, p. 284
 2) Bowles. 1918, p. 170
 3) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock
County: Hennepin
Status: Inactive
Location: T 119 R 21 W OR
 T 29 R 24 W
Location comments: Quarries opposite Boom Island and on the Anoka County line (1); (exact locations undetermined; T., R. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Trenton (1)
References: 1) Winchell; Upham. 1888, p. 342

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Houston
Status: Inactive
Past operator/owner: Quarries owned by George Timanson, Ole Tostenson and Gilbert Nelson (1884) (1)
Township name: Spring Grove
Location: T 101 R 7 W
Location comments: Spring Grove (1); (exact location undetermined; Spring Grove is in Sec. 11; T., R., Sec. locations determined from Ref. 1, plate 8)
Geologic age: Ordovician
Geologic formation: Trenton (1)
Uses of commodity: Building stone, quicklime (1)
References: 1) Winchell and others. 1884, p. 231, 235, plate 8

Main commodity: Dimension Carbonate Rock
County: Houston
Status: Inactive
Past operator/owner: K. Gilbertson (1884) (1)
Township name: Spring Grove
Location: T 101 R 7 W Sec 11 (1)
Location comments: Section 11, Spring Grove (1)
Geologic age: Ordovician
Geologic formation: Trenton (1)
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 231

Main commodity: Dimension Carbonate Rock
County: Houston

Quarry/pit name: Duffy Quarry (1)
Date opened: 1875 (1)
Status: Inactive (1,2)
Past operator/owner: James Duffy (1918) (1)
Township name: Mayville
Location: T 102 R 5 W (2)
Location comments: Two miles east of Caledonia (1,2); close to and almost at the level of the track
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: "Beds and joints are sufficiently far apart to allow blocks of good size. Sandy beds and flinty layers occur, and also lines of cavities filled in places with flint, crystalline quartz, or with calcite." (1)
Uses of commodity: Building stone (1)
References: 1) Bowles. 1918, p. 175
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Houston
Quarry/pit name: Hoscheit Quarry (1)
Date opened: 1873 (1)
Status: Inactive (1,2)
Past operator/owner: John Hoscheit (1918) (1)
Township name: Mayville
Location: T 102 R 5 W
Location comments: Three miles east of Caledonia (1,2); close to the railroad track, almost at the level of the track (1); (T., R. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: "Beds are 6 inches to 2 feet thick...The rock contains sandy and flinty knots and a few friable beds one-eighth to one-fourth inch thick which weather out, leaving grooves. Some beds are porous and others free of pores." (1)
Uses of commodity: Building stone (1)
References: 1) Bowles. 1918, p. 175
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Houston
Status: Inactive
Past operator/owner: Quarries owned by John Molitor, Anton Moliter, John Aiken, Mrs. Cunningham, John Dorch (1884) (1)
Township name: Mayville
Location: T 102 R 5 W Sec 17 AND
 T 102 R 5 W Sec 18
Location comments: About a mile east of the village of Caledonia (1,2); John Dorch Quarry is located in Sec. 17

Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1,2)
References: 1) Winchell and others. 1884, p. 212, 221, 231, 235, plate 8
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Houston
Status: Inactive (1935) (2)
Past operator/owner: Quarries owned by Lars Hange and Wm. Henslin (1918) (1)
Township name: Mayville
Location: T 102 R 5 W (2)
Location comments: Six miles east of Caledonia (1,2)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Uses of commodity: Building stone (1)
Remarks: These quarries supply a small amount of stone for local use (1)
References: 1) Bowles. 1918, p. 175
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Houston
Status: Inactive
Past operator/owner: Mrs. M. Brown (1884) (1)
Township name: Caledonia
Location: T 102 R 6 W Sec 11 NE1/4 (1)
Location comments: Caledonia (1)
Description: Magnesian limestone (1)
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 231, plate 8

Main commodity: Dimension Carbonate Rock
County: Houston
Quarry/pit name: Whitman's Quarry (1)
Status: Inactive
Past operator/owner: Whitman (1884) (1)
Location: T 103 R 4 W OR
 T 104 R 4 W
Location comments: At Hokah (1); (exact location undetermined; T., R. locations determined from Ref. 1, plate 8)
Description: See Ref. 1, p. 224 for brief section description
Remarks: There are other quarries to the east of Hokah (1)
References: 1) Winchell and others. 1884, p. 224, 226, plate 8

Main commodity: Dimension Carbonate Rock

County: Houston
Quarry/pit name: Pilger Quarry (1)
Status: Inactive (1918) (1)
Past operator/owner: Louis Pilger (1918) (1)
Location: T 103 R 4 W Sec 7 (2)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,2)
Uses of commodity: Building stone for foundations (1)
References: 1) Bowles. 1918, p. 174
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Houston
Status: Inactive (1935) (2)
Past operator/owner: Quarries owned by O. T. West and Job Brown (1884) (1)
Location: T 103 R 4 W Sec 26
Location comments: At Brownsville (1,2); (exact location undetermined; Brownsville is in Sec. 26; T., R., Sec. locations determined from Ref. 1, plate 8)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1,2)
Uses of commodity: Heavy stone for the railroad, building foundations, etc. (1)
Remarks: More than one quarry in area around Brownsville (1)
References: 1) Winchell and others. 1884, p. 232, plate 8
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Houston
Status: Inactive (1935) (2)
Past operator/owner: Quarries owned by J. Kline and Henry Snure (1884) (1)
Township name: Union
Location: T 103 R 5 W Sec 19 (2)
Location comments: Section 19, Union (1)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1,2)
Uses of commodity: Building stone (1)
Remarks: More than one quarry in section 19 (1)
References: 1) Winchell and others. 1884, p. 231, 232
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Houston
Status: Inactive (1935) (2)
Past operator/owner: Michael Wilhelm (1884) (1)
Township name: Union
Location: T 103 R 5 W Sec 29 (1,2)
Location comments: Section 29, Union (1)

Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1,2)
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 232
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Houston
Status: Inactive (1935) (2)
Township name: La Crescent
Location: T 104 R 4 W Sec 5 (1,2)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1,2)
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 231
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Houston
Quarry/pit name: Potter & Taylor's Quarry (1)
Status: Inactive
Past operator/owner: Wm. Potter (1884) (1)
Location: T 104 R 4 W
Location comments: North of La Crescent (1); (T., R. locations determined from Ref. 1, plate 8)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1)
Uses of commodity: Building stone, quicklime (1)
References: 1) Winchell and others. 1884, p. 232, 235, plate 8

Main commodity: Dimension Carbonate Rock
County: Houston
Status: Inactive (1935) (2)
Past operator/owner: Wm. Splitter (1884) (1)
Township name: La Crescent
Location: T 104 R 4 W Sec 21 (1,2)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1,2)
Uses of commodity: Building stone for stone farm house (1)
References: 1) Winchell and others. 1884, p. 232
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: Houston
Status: Inactive
Past operator/owner: Langs Brewery (1884) (1)
Location: T 104 R 4 W Sec 28 (1)

Location comments: Section 28, Hokah, near the river, limestone from near the top of the bluff (1)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1)
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 232

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: **Houston**
Status: Inactive (1935) (2)
Township name: La Crescent
Location: T 104 R 4 W Sec 28 (1,2)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1,2)
Uses of commodity: Building stone, quicklime (1)
References: 1) Winchell and others. 1884, p. 232
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: **Houston**
Status: Inactive
Past operator/owner: Southern Minnesota Railroad Co. (1884) (1)
Location: T 104 R 4 W OR
 T 103 R 4 W
Location comments: Near Hokah at Mt. Tom (1); (exact location undetermined; T., R. locations determined from Ref. 1, plate 8)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1)
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 232, plate 8

Main commodity: Dimension Carbonate Rock
County: **Houston**
Status: Inactive
Past operator/owner: L. Svenson (1884) (1)
Township name: Houston
Location: T 104 R 6 W Sec 2 (1,2)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1,2)
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 231, 232
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: **Houston**
Status: Inactive
Past operator/owner: Harvey Chapel (1884) (1)

Location: T 104 R 7 W Sec 12 (2)
Location comments: At Money Creek (1)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1,2)
Uses of commodity: "Good building stone" (1)
Remarks: Much of what is taken is from the surface near the tops of the bluffs (1884) (1)
References: 1) Winchell and others. 1884, p. 231
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Carbonate Rock
County: **Le Sueur**
Quarry/pit name: Hugunin Estate Co. Quarry (2)
Date opened: 1911 (2)
Status: Inactive; active 1935 (1)
Past operator/owner: Kasota Stone Quarries Corporation, operator (1); Hugunin Estate, owner since 1911 (1,2)
Location: T 109 R 26 W Sec 5 NE1/4 (1,3)
Location comments: On Hugunin Estate (1); see Ref. 1 for location map
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,2)
Description: "The ledges are similar to those at Kasota, and excellent quarry stock has been excavated." (1); see Ref. 2 for further description
Chemical analyses: See Ref. 2 for chemical analyses
Uses of commodity: Structural and ornamental stone (1)
References: 1) Thiel; Dutton. 1935, p. 114, 123
 2) Bowles. 1918, p. 175-180
 3) USGS. 1979, St. Peter quadrangle

Main commodity: Dimension Carbonate Rock
County: **Le Sueur**
Status: Inactive
Past operator/owner: Babcock Stone Company (1)
Location: T 109 R 26 W Sec 8 SW1/4 NW1/4 NE1/4 (1)
Location comments: Two quarries at this location, 1000 yards east-west of each other, along local road no. 5 (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: See Ref. 1 for stratigraphic section, summary follows: west quarry 9 ft Oneota dolomite, east quarry 8 ft, both expose pink buff and Kasota cream stone (1)
References: 1) Stubblefield. 1971, p. 136, 137

Main commodity: Dimension Carbonate Rock
County: **Le Sueur**
Quarry/pit name: Livingstone Quarry (1)
Date opened: 1890's (1)
Status: Inactive (1935) (2)

Past operator/owner: Fred Livingstone, owner (1)
Location: T 110 R 26 W Sec 21 (1)
Location comments: On Livingstone's farm, close to the Chicago, St. Paul, Minneapolis & Omaha Railway, about half a mile south of St. Peter station (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,2)
Description: Excavation is now (1918) 12 to 15 ft deep, "Most of it is buff to yellow in color, but one bed, 14 in. thick, near the bottom of the pit is an attractive pink rock of good quality. Further excavation might uncover a larger supply of this rock." (1)
Uses of commodity: Structural and ornamental stones (1)
References: 1) Bowles. 1918, p. 181, 182
 2) Thiel; Dutton. 1935, p. 128

Main commodity: Dimension Carbonate Rock
County: Le Sueur
Quarry/pit name: Plumb Valley Quarry (1)
Status: Inactive
Location: T 110 R 26 W
Location comments: See Ref. 1 for location map which shows quarry northeast of Kasota; (T., R. locations determined from county highway map)

Geologic age: Ordovician
Geologic formation: (Oneota Fm.)
Description: Thin ledges (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Dimension Carbonate Rock
County: Le Sueur
Status: Inactive
Past operator/owner: Babcock Stone Co. (1)
Location: T 110 R 26 W
Location comments: See Ref. 1 for location map which shows Babcock's plant and "old quarry" north of Kasota; (T., R. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: (Oneota Fm.)
Remarks: Babcock's "old quarry" (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Dimension Carbonate Rock
County: Le Sueur
Status: Inactive (1971) (1)
Past operator/owner: Babcock Stone Company (1)
Location: T 110 R 26 W Sec 32 NE1/4 NE1/4 NE1/4 (1)
Location comments: On the western edge of Kasota (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)

Description: See Ref. 1 for lithologic section description, summary follows: Oneota dolomite 24.5 ft face
Uses of commodity: (Building stone)
References: 1) Stubblefield. 1971, p. 136

Main commodity: Dimension Carbonate Rock
County: Le Sueur
Quarry/pit name: Malgren, Roseen & Downs Quarry (1)
Date opened: 1872 (1)
Status: Inactive
Past operator/owner: Malgren, Roseen & Downs 1872-1976 (1)
Location: T 110 R 26 W Sec 32 E1/2
Location comments: Between Breen & Young and Babcock quarries and the railroad bridge crossing the Minnesota River at Kasota (1); (T., R., Sec. locations determined from St. Peter quadrangle)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1); (Oneota Fm. ?)
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 646, plate 30
 2) USGS. 1979, St. Peter quadrangle

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Le Sueur
Quarry/pit name: Babcock & Willcox Quarry (1)
Status: Inactive
Past operator/owner: J. W. Babcock (1884) (1,3); Babcock & Willcox (1911) (2)
Location: T 110 R 26 W Sec 32
Location comments: Adjoining Breen & Young's Quarry at west end of Kasota (3); (T., R., Sec. locations determined from Ref. 4, fig. 61)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,4)
Description: See Ref. 1 for description
Extraction method: Wardwell channeling machines (1)
Uses of commodity: Building stone, cut stone, some riprap and crushed stone (1,2)
Remarks: One of the first quarries opened in the county (1)
References: 1) Bowles. 1918, p. 175-180
 2) Cooley. 1911, p. 12
 3) Winchell and others. 1884, p. 646
 4) Thiel; Dutton. 1935, p. 114

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Le Sueur
Quarry/pit name: Breen Stone Co. Quarries (1-7)
Alternate name: Brackenridge, Stewart & Buttars' Quarry (8)
Date opened: 1868 (5)

Status: Inactive

Past operator/owner: Breen Stone Co. (1911) (1,5,7); Breen Stone and Marble Co. (2-4,6); Breen & Young (5,8); Brackenridge, Stewart & Butters' (1884) (5,8)

Location: T 110 R 26 W Sec 32

Location comments: Beside railroad, close west of village of Kasota, about 1 mile south of St. Peter (8); (T., R., Sec. locations determined from Ref. 3, fig. 61)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1,3-6)

Description: Oneota dolomite, mostly thick bedded, pink to buff (1); see Refs. 3-5 for stratigraphic sections and further descriptions of quarries

Chemical analyses: See Refs. 1, 3-6, and 8 for chemical analyses

Physical test data: See Refs. 4, 5, and 8 for physical test data

Extraction method: Wardwell channeling machines (5)

Uses of commodity: Building stone, some crushed rock (4); flagging squares, large slabs for wainscoting, both polished and unpolished, carved work and trimming for interior decoration, some cut stone, riprap, crushed stone (5)

References:

- 1) Stauffer. 1950, p. 20, 27
- 2) MN/DOT Aggregate Unit files
- 3) Thiel; Dutton. 1935, p. 114, 117-120
- 4) Stauffer; Thiel. 1933, p. 35, 36, 65, 71, 72, 74
- 5) Bowles. 1918, p. 175-179
- 6) Stauffer; Thiel. 1914, p. 116, 119
- 7) Cooley. 1911, p. 9
- 8) Winchell and others. 1884, p. 196-204, 638, 646

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock

County: Le Sueur

Quarry/pit name: Lundin Quarry (1,2)

Status: Inactive

Past operator/owner: Lundin Construction Co. (now Southern Minnesota Construction Co., Inc., see Producer Directory) (1)

Location: T 110 R 26 W Sec 33 N1/2 SW1/4 NE1/4 (1)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (2)

Description: Dolomite, 28 ft face (2); see Ref. 2 for section description

Uses of commodity: Building stone from below floor, crushed rock and riprap from face (2)

References:

- 1) USBM. [1979], MILS
- 2) MN/DOT Aggregate Unit files

Main commodity: Dimension Carbonate Rock

County: Le Sueur

Status: Inactive

Past operator/owner: At Ottawa, many different quarry operators including: John Randall, Robert Todd, Levi Chase, John Clark, Robert Wineger, and Casper Mader (1884) (1)

Township name: Ottawa

Location: T 111 R 26 W

Location comments: At Ottawa (1); (T., R. locations determined from Ref. 1, plate 30)

Geologic age: Ordovician

Geologic formation: Shakopee Fm. (1); (Oneota Fm. ?)

Description: Used to wall cellars and wells (1)

Remarks: Many quarries have operated at Ottawa, some for 25 years (1884) (1)

References:

- 1) Winchell and others. 1884, p. 639, 646, plate 30

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock

County: Le Sueur

Quarry/pit name: Hix Quarry (1)

Status: Inactive

Past operator/owner: Charles Hix, owner (1918) (1)

Township name: Ottawa

Location: T 111 R 26 W (2)

Location comments: At Ottawa (1)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1,2)

Description: "The bedding is variable, planes being 1 inch to 3 feet apart. A ledge may appear firm in one plane and a few feet away it may split up into numerous beds 1 to 2 inches thick. The rock shows numerous lime pits at all levels....All the quarries are shallow, and it is possible that deeper excavation would uncover better rock." (1)

Physical test data: Specific gravity 2.836, pore space 9.75%, dry weight 160 lbs/cu ft (1)

Uses of commodity: Foundation stone, quicklime (1)

Remarks: Several small quarries around Ottawa (1)

References:

- 1) Bowles. 1918, p. 180
- 2) Thiel; Dutton. 1935, p. 128

Main commodity: Dimension Carbonate Rock

County: Mower

Date opened: 1875 (1)

Status: Inactive

Past operator/owner: Alice Plummer, owner (1875) (1)

Township name: Le Roy

Location: T 101 R 14 W Sec 16 (1)

Location comments: Near the Little Iowa River (1)

Geologic age: Devonian (1)

References:

- 1) Winchell. 1875, p. 183

Main commodity: Dimension Carbonate Rock

County: Mower

Status: Inactive
Past operator/owner: Cady Palmer (1884) (1)
Township name: Le Roy
Location: T 101 R 14 W Sec 21 (1)
Location comments: Quarry is at the road-crossing of the north fork of the Upper Iowa river (1)
Geologic age: Devonian (1)
References: 1) Winchell; Upham. 1888, p. 357, plate 12

Main commodity: Dimension Carbonate Rock
County: Mower
Status: Inactive
Past operator/owner: Levi Alsdorfs (1884) (1)
Township name: Le Roy
Location: T 101 R 14 W Sec 21 SE1/4 (1)
Geologic age: Devonian (1)
Description: About 10 ft of beds, parted by layers of 1 to 3 in. of shale, with a slight dip to the southeast (1)
References: 1) Winchell; Upham. 1888, p. 357, plate 12

Main commodity: Dimension Carbonate Rock
County: Mower
Status: Inactive
Past operator/owner: Judson A. Palmer (1884) (1)
Township name: Le Roy
Location: T 101 R 14 W
Location comments: Near Le Roy, a hundred rods from the river (1); (T., R. locations determined from Ref. 1, plate 12)
Geologic age: Devonian (1)
Description: Three feet of badly weathered beds exposed, overlain by 6 in. of soil (1)
References: 1) Winchell; Upham. 1888, p. 357, plate 12

Main commodity: Dimension Carbonate Rock
County: Mower
Status: Inactive
Past operator/owner: Stephen Drowne (1875) (1,2)
Location: T 101 R 14 W
Location comments: Near Le Roy, in the bank of the Upper Iowa River (1); (T., R. locations determined from Ref. 1, plate 12)
Geologic age: Devonian (1)
Description: Limestone, 6 ft exposed (1)
References: 1) Winchell; Upham. 1888, p. 357, plate 12
 2) Winchell. 1875, p. 182, 183

Main commodity: Dimension Carbonate Rock
County: Mower
Status: Inactive

Past operator/owner: Thomas Kough (1884) (1)
Township name: Le Roy
Location: T 101 R 14 W Sec 35
Location comments: Quarry 3/4 of a mile east of Le Roy (1); (T., R., Sec. locations determined from Ref. 1, plate 12)
Geologic age: Devonian (1)
Description: Exposes 6 ft of fine-grained beds that have a perceptible dip toward the northeast (1)
References: 1) Winchell; Upham. 1888, p. 357, plate 12

Main commodity: Dimension Carbonate Rock
County: Mower
Status: Inactive
Past operator/owner: Heirs of L. Johnson (1884) (1)
Township name: Le Roy
Location: T 101 R 14 W Sec 35 (1)
Location comments: Quarry about 40 rods from the State line (1)
Geologic age: Devonian (1)
Description: Light colored, nearly white, hard and fine, uniform in texture, not porous, 12 ft exposed (1)
Remarks: "It would make a beautiful white marble." (1)
References: 1) Winchell; Upham. 1888, p. 357, plate 12

Main commodity: Dimension Carbonate Rock
County: Mower
Status: Inactive
Past operator/owner: Joseph Brevier (1875) (1,2)
Township name: Le Roy
Location: T 101 R 14 W
Location comments: Two quarries, near Le Roy in the left bank of the Upper Iowa River (1,2); (T., R. locations determined from Ref. 1, plate 12)
Geologic age: Devonian (1,2)
Description: The rock here is fine-grained, and in beds from 3 to 6 in. thick (1)
References: 1) Winchell and others. 1884, p. 357, plate 12
 2) Winchell. 1875, p. 182

Main commodity: Dimension Carbonate Rock
County: Mower
Status: Inactive
Past operator/owner: Mrs. John Nile, owner (1884) (1)
Township name: Lyle
Location: T 101 R 18 W Sec 4 (1)
Geologic age: Devonian (1)
Description: The rock verges more toward a sandstone in this quarry (1)
Uses of commodity: Foundations (1)
References: 1) Winchell; Upham. 1888, p. 361, plate 12

Main commodity: Dimension Carbonate Rock
County: Mower
Status: Inactive
Past operator/owner: R. B. Fosters, owner (1884) (1)
Location: T 101 R 18 W Sec 4 (1)
Location comments: Two miles below W. H. Officers mill on the Cedar River (1)
Geologic age: Devonian (1)
References: 1) Winchell; Upham. 1888, p. 361, plate 12

Main commodity: Dimension Carbonate Rock
County: Mower
Status: Inactive (1918) (2)
Past operator/owner: John Beech (1884) (1)
Township name: Lyle
Location: T 101 R 18 W Sec 33 (1)
Location comments: Quarry on south side of Woodbury Creek, east of the north and south road (1); (this would be in the W1/2 of Sec. 33)
Geologic age: Devonian (1)
Description: A rough, cavernous, magnesian limestone outcrops along Woodbury Creek in beds aggregating about 18 ft in thickness, with a gentle southward dip (2)
Uses of commodity: Rough masonry (2)
References: 1) Winchell and others. 1884, p. 358
 2) Bowles. 1918, p. 181

Main commodity: Dimension Carbonate Rock
County: Mower
Status: Inactive (1918) (1)
Past operator/owner: John Beech (1884) (1)
Township name: Lyle
Location: T 101 R 18 W Sec 33 (1)
Location comments: Quarry on the river bank about 20 rods south of the mouth of Woodbury Creek (1); (this would be in the S1/2 of Sec. 33)
Geologic age: Devonian (1)
Description: A rough, cavernous, magnesium limestone outcrops along Woodbury Creek in beds aggregating about 18 ft in thickness, with a gentle southward dip (2)
Uses of commodity: Rough masonry (2)
References: 1) Winchell and others. 1884, p. 358
 2) Bowles. 1918, p. 181

Main commodity: Dimension Carbonate Rock
County: Mower
Status: Inactive (1884) (1)
Past operator/owner: Judge Ormanzo Allen (1884) (1)
Township name: Austin

Location: T 102 R 18 W
Location comments: Quarry located below Austin, above Barn's Quarry which is 1-1/2 miles below Austin (1); (T., R. locations determined from Ref. 1, plate 12)
Geologic age: Devonian (1)
Remarks: Quarry flooded by dam (1884) (1)
References: 1) Winchell and others. 1884, p. 361, plate 12

Main commodity: Dimension Carbonate Rock
County: Mower
Status: Inactive (1884) (1)
Past operator/owner: M. J. Woodson (1884) (1)
Township name: Austin
Location: T 102 R 18 W
Location comments: The chief quarry was just above the present site of J. Gregson's mill and near the dam, about 2 miles below Austin (1); (T., R. locations determined from Ref. 1, plate 12)
Geologic age: Devonian (1)
Remarks: Entire area under water, flooded from the dam (1884) (1)
References: 1) Winchell and others. 1884, p. 360, 361, plate 12

Main commodity: Dimension Carbonate Rock
County: Mower
Status: Inactive (1884) (1)
Past operator/owner: Dr. Barns (1884) (1)
Township name: Austin
Location: T 102 R 18 W
Location comments: About 1-1/2 miles below Austin, about 1/2 mile above Gregson's mill (1); (T., R. locations determined from Ref. 1, plate 12)
Geologic age: Devonian (1)
Uses of commodity: Bridge abutments (1)
Remarks: Quarry almost entirely flooded by the dam (1884) (1)
References: 1) Winchell and others. 1884, p. 361, plate 12

Main commodity: Dimension Carbonate Rock
County: Mower
Status: Inactive
Past operator/owner: Several quarry owners: Coin, Huffdaw, Fryer, and J. Hawkins (1875) (1)
Township name: Frankford
Location: T 103 R 14 W AND
 T 103 R 15 W
Location comments: Coin's quarry located 2 miles NW of Grand Meadow on Bear Creek, Huffdaw's quarry is 2-1/2 miles east of Coin's, Fryer's and Hawkins' quarries are on Deer Creek (1); (T., R. locations determined from county highway map)

Geologic age: Silurian (1)
References: 1) Winchell. 1875, p. 183

Main commodity: Dimension Carbonate Rock
County: Mower
Status: Inactive
Past operator/owner: Aaron Bush (1884) (1)
Township name: Frankford
Location: T 103 R 14 W Sec 20 SW1/4 (1)
Location comments: Quarries in the valley of Deer Creek (1)
Geologic age: Devonian (1)
Description: Limestone beds are from 6 in. to 2 ft thick, with 10 ft exposed, yellowish-buff color, easily dressed, 4 ft of loam overlies (1)
Uses of commodity: Bridge abutments, foundations (1,2)
Remarks: There is another quarry just below the iron bridge in section 20, in the banks of the creek (1)
References: 1) Winchell and others. 1884, p. 359
 2) Bowles. 1918, p. 181

Main commodity: Dimension Carbonate Rock
County: Mower
Status: Inactive
Township name: Austin
Location: T 103 R 18 W Sec 36
Location comments: Quarry in left bank of Dobbin's Creek to the northeast of Austin (1); (T., R., Sec. locations determined from Ref. 1, plate 12; exact location undetermined)
Geologic age: Devonian (1)
References: 1) Winchell and others. 1884, p. 361, plate 12

Main commodity: Dimension Carbonate Rock
County: Nicollet
Date opened: 1878 (1)
Status: Inactive
Past operator/owner: Andrew Weimar (1884) (1)
Township name: Belgrade
Location: T 108 R 27 W
Location comments: A little west of Mankato in Belgrade township (1); (T., R. locations determined from Ref. 1, plate 36)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (2)
Description: "The rock is evenly colored and compact, in thick beds, and can supply blocks 5x4x2 ft, or slabs 8 ft long." (1)
Uses of commodity: Rough and hammered dimension stone (1)
References: 1) Winchell; Upham. 1888, p. 176, 177, plate 36
 2) Thiel; Dutton. 1935, p. 129

Main commodity: Dimension Carbonate Rock
County: Nicollet
Quarry/pit name: North Mankato Stone Quarry (1)
Date opened: 1907 (1)
Status: Inactive; active (1918) (1)
Past operator/owner: North Mankato Stone Quarry Co. (1918) (1)
Location: T 108 R 27 W
Location comments: In North Mankato (1,2); (T., R. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,2)
Description: "The rock is a buff-colored dolomite similar to the stone at Mankato.", quarry floor about 20 ft above river flats (1)
Uses of commodity: Rubble, some crushed rock (1)
References: 1) Bowles. 1918, p. 182
 2) Thiel; Dutton. 1935, p. 128

Main commodity: Dimension Carbonate Rock
County: Nicollet
Status: Inactive
Past operator/owner: John Marsh and brothers own 3 quarries operated by Dennis Sullivan and John Duffee (1888) (1)
Township name: Belgrade
Location: T 108 R 27 W
Location comments: Three quarries in Belgrade township, opposite Mankato (1,2); (T., R. locations determined from Ref. 1, plate 36)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (2)
Description: "The rock of these quarries is evenly colored and compact, in thick beds, and can supply blocks 5x4x2 ft, or slabs 8 ft long." (1)
Uses of commodity: Building stone (1)
Remarks: Extensively quarried (1)
References: 1) Winchell; Upham. 1888, p. 176, 177, plate 36
 2) Thiel; Dutton. 1935, p. 129

Main commodity: Dimension Carbonate Rock
County: Nicollet
Status: Inactive (1918) (3)
Past operator/owner: Quarry owners include: Dunham, Wm. Thurston, Wm. Phillips, Abel Keen (1888) (1,2)
Township name: Nicollet
Location: T 109 R 28 W
Location comments: Four quarries at Hebron, in the south part of Nicollet township (1); south boundary of Nicollet township (4); (T., R. locations determined from Ref. 1, plate 36)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1-3)

References: 1) Winchell; Upham. 1888, p. 176, plate 36
2) Winchell; Peckham. 1874, p. 154
3) Bowles. 1918, p. 182
4) Thiel; Dutton. 1935, p. 129

Main commodity: Dimension Carbonate Rock

County: Nicollet

Status: Inactive (1918) (3)

Past operator/owner: Quarry owners include: Henry Miller, John Malgren, Ubalt Drenttel, Hugh Brogan, Jacob Bauer (1888) (1)

Location: T 110 R 26 W

Location comments: Group of many quarries in the city of St. Peter along the valley (2); within the city of St. Peter along the river bank (3); (T., R. locations determined from Ref. 1, plate 36)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (2,3)

Uses of commodity: Structural purposes (3)

References: 1) Winchell; Upham. 1888, p. 177, plate 36
2) Thiel; Dutton. 1935, p. 129
3) Bowles. 1918, p. 182

Main commodity: Dimension Carbonate Rock

County: Nicollet

Quarry/pit name: Asylum Quarry (1,2)

Status: Inactive

Location: T 110 R 26 W Sec 29

Location comments: Near the asylum, about 2 miles southwest of St. Peter (3); (exact location undetermined; T., R., Sec. locations determined from Ref. 1, plate 36)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (3,4)

Description: Compact and massive beds one to four feet thick (1)

Uses of commodity: Building stone, principally for the asylum buildings (1,2)

References: 1) Winchell; Upham. 1888, p. 162, 177, plate 36
2) Winchell; Peckham. 1874, p. 132, 143
3) Bowles. 1918, p. 182
4) Thiel; Dutton. 1935, p. 129

Main commodity: Dimension Carbonate Rock

County: Olmsted

Status: Inactive

Past operator/owner: Russel Williams (1884) (1)

Location: T 104 R 14 W Sec 5 OR
T 104 R 14 W Sec 6

Location comments: At High Forest (1); (T., R., Sec. locations determined from Ref. 1, plate 11)

Geologic age: Ordovician

Geologic formation: Galena Gp. (1)

Description: Limestone bluffs to 40 ft high, heavily bedded, very firm, buff color, with cloudings of gray and even blue on deeply quarried beds, a magnesian aspect, non-fossiliferous, 15 ft of shale overlying the limestone (1)

Uses of commodity: Extensively quarried for building purposes (1)

References: 1) Winchell and others. 1884, p. 339, 340, plate 11

Main commodity: Dimension Carbonate Rock

County: Olmsted

Status: Inactive (1935) (2)

Township name: Rockdell

Location: T 105 R 15 W

Location comments: Ravines of Rock Dell; (T., R. locations determined from Ref. 1, plate 11)

Geologic age: Ordovician

Geologic formation: Galena Gp. (1); Platteville Fm. (2)

Description: Yellow thin-bedded, broken, uneven, dolomitic limestone, 8-10 ft thick (1)

Uses of commodity: Building stone (1)

References: 1) Winchell and others. 1884, p. 340, 341, plate 11
2) Thiel; Dutton. 1935, p. 153

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock

County: Olmsted

Quarry/pit name: Kirkwood Quarry (1)

Status: Inactive (1965) (1)

Past operator/owner: Bryce Tottingham (1969) (1)

MN/DOT source no: 55082

Location: T 106 R 12 W Sec 21 NW1/4 NW1/4 (1969) (1)
T 106 R 12 W Sec 21 NE1/4 (1921) (1)

Geologic age: Ordovician

Geologic formation: Platteville Fm., McGregor Mbr. (1)

Description: Mottled gray and buff weathered, thin-bedded limestone, face 10-12 ft, stripping 5 ft, probably poor quality, limited area (1)

Physical test data: Available from MN/DOT Aggregate Unit (1)

Uses of commodity: Used as building stone in the 1930's (1)

Remarks: Floor overgrown with vegetation (1969) (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Dimension Carbonate Rock

County: Olmsted

Status: Inactive

Past operator/owner: Thomas Garrick (1,2)

Township name: Rochester

Location: T 106 R 14 W Sec 18 (1-3)

T 106 R 14 W Sec 18 NE1/4 (4)

Location comments: Ref. 4, plate 9 shows a quarry symbol in the NE1/4 of section 18

Geologic age: Ordovician

Geologic formation: Galena Gp. (1,2); Platteville Fm. (3,4)

Description: Platteville limestone (3); "The floor of this quarry is about thirty feet above the Trenton. To the top of the quarry is about thirty-five feet. The rock is a sparry, magnesian and more or less arenaceous limestone. It is in beds one to three feet thick, separated by very thin layers of light blue shale. The beds are massive and yellowish, somewhat stained with iron arising from the decay of iron pyrites. The upper portions are most arenaceous and fossiliferous. In the crevices is found abundance of satin spar, and in the largest ones stalactites may be found." (1)

Uses of commodity: General building purposes (2)

References: 1) Winchell and others. 1884, p. 341, plate 11
2) Winchell. 1873, p. 105-108
3) Thiel; Dutton. 1935, p. 153
4) Kuhns. 1988, plate 9

Main commodity: Dimension Carbonate Rock

County: Olmsted

Status: Inactive (1965) (1)

Past operator/owner: Frank Sanders (1969), Sheldon (1921) (1)

MN/DOT source no: 55072

Location: T 106 R 14 W Sec 32 SW1/4 NW1/4 (1)

Geologic age: Ordovician

Geologic formation: Galena Gp., Prosser Fm.? (1)

Description: Medium-bedded gray limestone, fossiliferous, top layers thin-bedded and weathered brown, face 15 ft, stripping 3 ft, good? quality (1)

Uses of commodity: Building barns, building stone in 1930's (1)

Remarks: Floor overgrown (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Dimension Carbonate Rock

County: Olmsted

Status: Inactive

Location: T 106 R 15 W

Location comments: In the ravines of Salem (1); (T., R. locations determined from Ref. 1, plate 11)

Geologic age: Ordovician

Geologic formation: Galena Gp. (1)

Description: Yellow thin-bedded, broken, uneven, dolomitic limestone, 8-10 ft thick (1)

Uses of commodity: Building stone (1)

References: 1) Winchell and others. 1884, p. 340, 341, plate 11

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock

County: Olmsted

Status: Inactive (1965) (1)

Past operator/owner: Robert and Clarence Jech (1969), R. J. Dickerman (1921) (1)

MN/DOT source no: 55055

Location: T 107 R 12 W Sec 4 NE1/4 NE1/4 (1)

Geologic age: Ordovician

Geologic formation: Platteville Fm., McGregor Mbr.? (1)

Description: Gray limestone, face 10 ft, stripping 5-10 ft, quantity limited due to stripping, good to poor quality for building stone (1)

Uses of commodity: Building stone (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Dimension Carbonate Rock

County: Olmsted

Quarry/pit name: Harmon Quarry (1)

Status: Inactive

Past operator/owner: Harmon (1873) (1)

Location: T 107 R 13 W OR
T 107 R 14 W

Location comments: At Rochester (1); (T., R. locations determined from Ref. 2, plate 11)

Geologic age: Ordovician

Geologic formation: Lower Trenton (1)

Description: Limestone with shale partings, blue color, 10 ft, total Trenton seen here is 16-1/2 ft (1); see Ref. 1 for brief section description

Uses of commodity: Building stone, foundations (1)

Remarks: "Old Harmon Quarry" (1873) (1)

References: 1) Winchell. 1873, p. 97, 98
2) Winchell and others. 1884, plate 11

Main commodity: Dimension Carbonate Rock

County: Olmsted

Quarry/pit name: Whitcomb's Quarry (1,2)

Status: Inactive

Past operator/owner: O. P. Whitcomb (1873) (1)

Location: T 107 R 14 W OR
T 107 R 13 W

Location comments: At Rochester (1); (T., R. locations determined from Ref. 1, plate 11)

Geologic age: Ordovician

Geologic formation: Trenton (1); (Platteville Fm.)

Description: Compact limestone, 17 ft, blue color, comparatively free from shale, shale is exposed above and below this limestone, St. Peter sandstone underlying (1)

Uses of commodity: Building stone (1)

References: 1) Winchell. 1873, p. 98
2) Winchell and others. 1884, p. 338, plate 11

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Olmsted
Quarry/pit name: Waldee Quarry (1)
Status: Inactive
Past operator/owner: George Waldee (1918) (1)
Location: T 107 R 14 W Sec 27 OR
 T 107 R 14 W Sec 26
Location comments: (Probably in section 26 or 27; T., R., Sec. locations determined from Ref. 2, plate 11); 1 mile northwest of Rochester (1,3); in same bluff as Donahue Bros. quarry (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1-3)
Description: "The rock is the characteristic yellow-buff limestone which caps the low hills around Rochester. Bedding planes are 2 inches to 3 feet apart, averaging about 10 inches. Joints striking N. 50 deg. E. are 12 to 15 feet apart; those striking N. 25 deg. W. are 10 to 20 feet apart; and a few minor joints strike N. 25 deg. E. Fossils and cherty or limy concretions are of common occurrence. Some beds crack into thin slabs when exposed to the weather. Quarry conditions are good as regards drainage, and bench excavation makes quarrying easy." (1)
References: 1) Bowles. 1918, p. 183, 184
 2) Winchell and others. 1884, plate 11
 3) Thiel; Dutton. 1935, p. 153

Main commodity: Dimension Carbonate Rock
County: Olmsted
Quarry/pit name: Jenkin's Quarry (1)
Status: Inactive
Past operator/owner: W. Jenkins (1884) (1)
Location: T 107 R 14 W
Location comments: Just within the city limits of Rochester (1); (T., R. locations determined from Ref. 1, plate 11)
Geologic age: Ordovician
Geologic formation: Lower Trenton (1)
Description: Limestone, compact, heavy, very firm, in beds 4-6 in. thick (1)
Uses of commodity: Building stone, foundations (1)
Remarks: This quarry has furnished a large amount of stone (1)
References: 1) Winchell and others. 1884, p. 338, 343, plate 11

Main commodity: Dimension Carbonate Rock
County: Olmsted
Quarry/pit name: Pit No. 2320 (1921) (1)
Status: Inactive (1965) (1)
Past operator/owner: James Blake (1969) (1)
MN/DOT source no: 55067

Location: T 108 R 15 W Sec 32 SW1/4 SE1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm., McGregor Mbr. (1)
Description: Buff, medium bedded limestone, face 10 ft, stripping 5-10 ft of till, limited quantity (1)
Uses of commodity: Building stone (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Dimension Carbonate Rock
County: Ramsey
Date opened: 1870 (1)
Status: Inactive
Location: T 28 R 22 W Sec 4
Location comments: Dayton's bluff, St. Paul (1,2); (T., R., Sec. locations determined from St. Paul East quadrangle)
Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2)
References: 1) Winchell and others. 1884, p. 173
 2) Thiel; Dutton. 1935, p. 142
 3) USGS. 1972, St. Paul East quadrangle

Main commodity: Dimension Carbonate Rock
County: Ramsey
Status: Inactive
Location: T 28 R 22 W AND
 T 28 R 23 W
Location comments: Many quarries along the Mississippi River bluffs in the southern part of Ramsey County (1); at St. Paul, the quarries are on both sides of the river (1,2); (T., R. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Trenton (1,2); (Platteville Fm.)
Description: See Refs. 1 and 2 for descriptions
References: 1) Winchell; Upham. 1888, p. 356, 373
 2) Winchell and others. 1884, p. 172, 173

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Ramsey
Quarry/pit name: Bielenberg Quarry (1-3)
Date opened: 1904 (2)
Status: Inactive (1935) (4)
Past operator/owner: C. Bielenberg (1-3); an adjoining quarry is owned by John Fischer (2)
Location: T 28 R 22 W Sec 8
Location comments: Quarry in South St. Paul, near East George Street (1,2); (T., R., Sec. locations determined from Mpls./St. Paul street map and St. Paul East quadrangle)
Geologic age: Ordovician

Geologic formation: Platteville Fm. (2,4)

Description: "The rock is variable in its different beds. Two distinct types of stone, an upper yellow and a lower blue bed, are quarried. The 3-foot bed of porous yellow rock is used for structural purposes. Immediately below this are two contiguous beds, 5-1/2 and 6 inches thick, which are of high quality. The rock is a uniform, fine-grained, yellow limestone, containing many small grains of crystalline calcite....The rock is a beautiful structural stone and it is a matter of regret that only about half an acre of it is now available. In the quarry from which the yellow stone is obtained, argillaceous limestone, called 'soap rock', is so thick that no attempt is made to quarry the underlying blue limestone, which is now excavated from an adjacent quarry, where a thickness of 12 to 14 feet is available. There are three beds, each 17 inches thick, and others 6 to 14 inches. Joints are so spaced that blocks 6 feet in length may be obtained." (2); about 5 acres in size (3)

Chemical analyses: CaCO₃ 55.57%, MgCO₃ 29.11%, insoluble in HCl 13.54% (2)

Uses of commodity: Basement foundations (2); buildings, foundations, roads (3)

Remarks: "An adjoining quarry of similar rock, owned by John Fischer, is now (1918) nearly worked out." (2)

References: 1) Kirk. 1926, p. 87
2) Bowles. 1918, p. 184, 185
3) Cooley. 1911, p. 11
4) Thiel; Dutton. 1935, p. 142
5) USGS. 1972, St. Paul East quadrangle

Main commodity: Dimension Carbonate Rock

County: Ramsey

Date opened: 1870 (1)

Status: Inactive

Location: T 28 R 23 W

Location comments: Quarries along the Fort Street Rd., St. Paul (1,2); (T., R. locations determined from county highway map)

Geologic age: Ordovician

Geologic formation: Trenton (1); Platteville Fm. (2)

Uses of commodity: Building stone, etc. (1)

References: 1) Winchell and others. 1884, p. 172, 173
2) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock

County: Ramsey

Status: Inactive

Location: T 28 R 23 W Sec 14 NW1/4

Location comments: Adrian and Hathaway Streets to Mississippi River, St. Paul (1); (T., R., Sec. locations determined from Mpls./St. Paul street map and St. Paul West quadrangle)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1)

References: 1) Thiel; Dutton. 1935, p. 142
2) USGS. 1972, St. Paul West quadrangle

Main commodity: Dimension Carbonate Rock

County: Ramsey

Status: Inactive

Location: T 28 R 23 W

Location comments: Along the Mississippi River near Fort Snelling (1); (T., R. locations determined from county highway map)

Geologic age: Ordovician

Geologic formation: Trenton (1); Platteville Fm. (2)

References: 1) Winchell; Upham. 1888, p. 373
2) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock

County: Ramsey

Status: Inactive

Past operator/owner: Sebesta Stone Co. (1966) (1)

Location: T 28 R 23 W Sec 22 NW1/4 NE1/4 (1)

References: 1) Hogberg. 1966, p. 40

Main commodity: Dimension Carbonate Rock

County: Ramsey

Status: Inactive (1935) (2)

Location: T 29 R 22 W Sec 31 S1/2

Location comments: "Formerly important quarries were worked a few blocks southeast from the State Capitol." (1888) (1); (T., R., Sec. locations determined from St. Paul East quadrangle)

Geologic age: Ordovician

Geologic formation: Trenton (1); Platteville Fm. (2)

References: 1) Winchell; Upham. 1888, p. 373, plate 43
2) Thiel; Dutton. 1935, p. 142
3) USGS. 1972, St. Paul East quadrangle

Main commodity: Dimension Carbonate Rock

County: Ramsey

Date opened: 1856 (1)

Status: Inactive (1935) (3); active (1884) (1)

Past operator/owner: Quarry owners include: Breen & Young, M. Roche, Wm. Zollman (1884) (1)

Location: T 29 R 22 W OR
T 28 R 22 W

Location comments: Several quarries near the State Capitol (1); (T., R. locations determined from St. Paul East quadrangle; exact locations undetermined)

Geologic age: Ordovician

Geologic formation: Trenton (1); Platteville Fm. (3)

Description: See Ref. 1 for description

Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 173, 174
 2) USGS. 1972, St. Paul East quadrangle
 3) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock
County: Rice
Status: Inactive
Past operator/owner: Peter Halverson (1884) (1)
Township name: Richland
Location: T 109 R 19 W
Location comments: In Richland township, bordering on Goodhue County (1); (T., R. locations determined from Ref. 1, plate 31)
Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2)
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 671, 672, plate 31
 2) Thiel; Dutton. 1935, p. 153

Main commodity: Dimension Carbonate Rock
County: Rice
Status: Inactive
Past operator/owner: Halver Johnson (1884) (1)
Township name: Richland
Location: T 109 R 19 W
Location comments: In Richland township, bordering Goodhue County; (T., R. locations determined from Ref. 1, plate 31)
Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2)
Description: Limestone (1,2)
References: 1) Winchell and others. 1884, p. 671, 672, plate 31
 2) Thiel; Dutton. 1935, p. 153

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Rice
Quarry/pit name: Lieb Quarry (1-8)
Date opened: 1907 (5)
Status: Inactive since 1930's (1966) (8)
Past operator/owner: George Lieb (1,5,8); St. Olaf College (1966) (8)
MN/DOT source no: 66084
Location: T 109 R 20 W Sec 4 SW1/4 NW1/4 AND
 T 109 R 20 W Sec 4 NE1/4 SW1/4 (8)
 T 109 R 20 W Sec 4 NW1/4 NE1/4 (7)
 T 109 R 20 W Sec 3 (1)

Location comments: Quarry in the bluff on the east side of the Straight River, about 3/4 of a mile southeast of Faribault (1)

Geologic age: Ordovician
Geologic formation: Platteville Fm. (1-8)

Description: See Refs. 1-7 for stratigraphic section descriptions, summary of Ref. 1 follows: drift full of boulders 50 ft thick overlies Decorah shale 16 ft thick, Platteville limestone 13 ft thick, Glenwood Fm. 10 ft thick and St. Peter sandstone 12 ft thick

Uses of commodity: Cut stone, building blocks (1); building stone, rubble, and occasionally crushed rock (3)

References: 1) Thiel; Dutton. 1935, p. 137, 138
 2) Hoeft. 1959, p. 260, 261
 3) Stauffer; Thiel. 1933, p. 38
 4) Johnson. 1933, p. 25-36
 5) Bowles. 1918, p. 186
 6) Stauffer; Thiel. 1914, p. 191, 192
 7) Ford. 1958, p. 117-119
 8) MN/DOT Aggregate Unit files

Main commodity: Dimension Carbonate Rock

County: Rice
Status: Inactive
Location: T 109 R 20 W Sec 4 OR
 T 109 R 20 W Sec 3

Location comments: Old quarry across the river from Lieb's Quarry and about 1000 ft to the west (1); (Liebs Quarry is on the east side of the Straight River, in Sec. 3, 3/4 mile SE of Faribault)

Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
References: 1) Johnson. 1933, p. 28

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Rice
Quarry/pit name: State Quarry (2,3)
Status: Inactive since 1930's (1,2)
Past operator/owner: State (1-3); Faribault Deaf School (1); Seims, Helmers, and Schaffner (1,2)
MN/DOT source no: 66083
Location: T 109 R 20 W Sec 4 W1/2 NW1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1-3)
Description: Limestone, 10 ft exposed (2,3)
Chemical analyses: CaCO₃ 67.43%, MgCO₃ 14.87%, total insoluble 16.91% (2,3)
Uses of commodity: Building stone, later some crushed stone was produced (2)
References: 1) MN/DOT Aggregate Unit files
 2) Stauffer; Thiel. 1933, p. 37, 71, 74
 3) Thiel; Dutton. 1935, p. 136

Main commodity: Dimension Carbonate Rock
County: Rice
Status: Inactive
Past operator/owner: Frank Berry (1884) (1)
Township name: Walcott
Location: T 109 R 20 W
Location comments: Two miles south of Faribault on the west side of the Straight River (1); (T., R. locations determined from Ref. 1, plate 31)
Geologic age: Ordovician
Geologic formation: Trenton (1); (Platteville Fm)
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 671, 672, plate 31

Main commodity: Dimension Carbonate Rock
County: Rice
Status: Inactive
Past operator/owner: Three separate quarries owned by J. Thompson, A. Knapp, and S. Aslagson (1884) (1)
Township name: Wheeling
Location: T 110 R 19 W (2)
Location comments: Three quarries in Wheeling township in the valley of Prairie Creek (1)
Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2)
Description: Limestone (1,2)
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 671, 672
 2) Thiel; Dutton. 1935, p. 153

Main commodity: Dimension Carbonate Rock
County: Rice
Quarry/pit name: Doyle Quarry (1)
Date opened: 1856 (1)
Status: Inactive
Past operator/owner: Michael Doyle (1884) (1)
Township name: Faribault
Location: T 110 R 20 W Sec 31 (1,2)
Location comments: Quarry in the west bank of the Straight River near the center of section 31 (1)
Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2)
Description: Yellowish drab, durable stone (1)
Uses of commodity: Building stone (1)
References: 1) Winchell and others. 1884, p. 671, 672
 2) Thiel; Dutton. 1935, p. 153

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock
County: Rice
Quarry/pit name: Kaul Quarry (1)
Status: Inactive
Past operator/owner: Eberhart Kaul purchased quarry in 1901 (1)
Location: T 110 R 20 W Sec 33 (1,2)
Location comments: A short distance north of the Lieb Quarry in section 33, on the same ledge (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1,2)
Description: "The rock is blue to drab in color in the lower beds and nearly white in the upper part. Under the microscope it appears to be a fairly even grained fossiliferous limestone. A few grains of pyrite are associated with the fossils and may be of organic origin....The vertical section is similar to that in the Lieb quarry except that little of the stripping exceeds 12 feet. Drainage is perfect, as the stone is worked as a bench quarry with the floor higher than the river bed." (1)
Physical test data: Specific gravity 2.788, pore space 3.59%, dry weight 168 lbs/cu ft (1)
Uses of commodity: Quarried extensively for structural work, some used for riprap and sugar refining (1)
References: 1) Bowles. 1918, p. 186-188
 2) Thiel; Dutton. 1935, p. 153

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Rice
Quarry/pit name: Cromer/Comer Quarry (1-3)
Alternate name: Jaeger Quarry (2)
Date opened: 1865 (1)
Status: Inactive (1933) (2)
Past operator/owner: Jaeger (1933) (2,3); Philip Cromer opened quarry in 1865 (1,4)
Location: T 110 R 20 W Sec 33 (1)
Location comments: Quarry on Fall Creek, 2 miles east of Faribault (2,3)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1-3)
Description: "The workable ledge is 11 feet thick and the stream flows over the quarry face. Below the stripping of 6 inches to 6 feet of soil four beds, 12, 8, 10, and 9 inches in thickness, may be used for the manufacture of lime, being reported to contain 97 per cent of the combined calcium and magnesium carbonates. The remaining 8 feet of the ledge is a good building stone, blue to drab in color, free from imperfections, and attractive. Joints striking N. 62 deg. W., N. 80 deg. W., N. 70 deg. E., and N. 5 deg. E. are vertical and 6 to 10 feet apart. A little iron stain observed originates in the bedding planes of the upper

strata." (1); see Ref. 2 for stratigraphic section description

Chemical analyses: See Ref. 2 for chemical analyses of "marble layer"

Uses of commodity: Building stone (1-4); quicklime (1,4)

References:

- 1) Bowles. 1918, p. 186
- 2) Stauffer; Thiel. 1933, p. 37, 66, 72
- 3) Thiel; Dutton. 1935, p. 136, 137
- 4) Winchell and others. 1884, p. 671, 672

Main commodity: Dimension Carbonate Rock

County: Rice

Status: Inactive (1935) (1)

Location: T 111 R 20 W OR
T 111 R 19 W

Location comments: At Northfield (1); (T., R. locations determined from Ref. 2, plate 31)

Geologic age: Ordovician

Geologic formation: Shakopee Fm. (1,2)

Remarks: Several quarries in the Shakopee dolomite at Northfield (1)

References:

- 1) Thiel; Dutton. 1935, p. 136
- 2) Winchell and others. 1884, plate 31

Main commodity: Dimension Carbonate Rock

County: Rice

Status: Inactive

Past operator/owner: Quarries owned by J. Leonhart, D. Ferguson, and A. Revere (1884) (1)

Location: T 111 R 20 W (2)

Location comments: Many quarries in the vicinity of Northfield (1)

Geologic age: Ordovician

Geologic formation: Trenton (1); Platteville Fm. (2)

Uses of commodity: Building stone (1)

References:

- 1) Winchell and others. 1884, p. 671, 672, plate 31
- 2) Thiel; Dutton. 1935, p. 153

Main commodity: Dimension Carbonate Rock

County: Rice

Status: Inactive

Past operator/owner: Quarries owned by Saul Stewart, John Lanpher and H. H. White (1884) (1)

Location: T 111 R 20 W (3)

Location comments: Several quarries in the vicinity of Northfield, near St. Olaf College (1); one quarry is on a hilltop near St. Olaf's College (2)

Geologic age: Ordovician

Geologic formation: Trenton (1); Platteville Fm. (2,3)

Uses of commodity: Building stone (1); foundation work (2)

References:

- 1) Winchell and others. 1884, p. 671, 672, plate 31

2) Bowles. 1918, p. 188
3) Thiel; Dutton. 1935, p. 153

Main commodity: Dimension Carbonate Rock

County: Rice

Status: Inactive

Past operator/owner: Quarries owned by Larkins, Kuntz, Mills, Lemont, and others (1884) (1)

Location: T 111 R 20 W (2)

Location comments: Many quarries located in the valley of the Cannon River, east of Dundas (1)

Geologic age: Ordovician

Geologic formation: Trenton (1); Platteville Fm. (2)

Uses of commodity: Building stone (1)

References:

- 1) Winchell and others. 1884, p. 671, plate 31
- 2) Thiel; Dutton. 1935, p. 153

Main commodity: Dimension Carbonate Rock

County: Rice

Status: Inactive

Past operator/owner: Quarries of Archie Stetson and Peter Oleson (1884) (1)

Township name: Bridgewater

Location: T 111 R 20 W Sec 25 (1,2)

Location comments: Both quarries on east side of Sec. 25 (1)

Geologic age: Ordovician

Geologic formation: Trenton (1); Platteville Fm. (2)

Uses of commodity: Building stone (1)

References:

- 1) Winchell and others. 1884, p. 671
- 2) Thiel; Dutton. 1935, p. 153

Main commodity: Dimension Carbonate Rock

County: Rice

Status: Inactive (1935) (2)

Past operator/owner: Quarries owned by C. A. Reeds and Porter Grays (1884) (1)

Township name: Bridgewater

Location: T 111 R 20 W Sec 34 NW1/4 (1,2)

Location comments: Both quarries located on west side of the Cannon River (1)

Geologic age: Ordovician

Geologic formation: Trenton (1); Platteville Fm. (2)

Uses of commodity: Building stone (1)

References:

- 1) Winchell and others. 1884, p. 671
- 2) Thiel; Dutton. 1935, p. 153

Main commodity: Dimension Carbonate Rock

County: Rice

Status: Inactive

Past operator/owner: Quarries owned by Wm. Ciellands and Charles Sandord (1884) (1)

Township name: Bridgewater

Location: T 111 R 20 W Sec 34 NW1/4 (1,2)

Location comments: Both quarries in NW1/4 (1); (probably on east side of the Cannon River)

Geologic age: Ordovician

Geologic formation: Trenton (1); Platteville Fm. (2)

Uses of commodity: Building stone (1)

References: 1) Winchell and others. 1884, p. 671
2) Thiel; Dutton. 1935, p. 153

Main commodity: Dimension Carbonate Rock

County: Scott

Status: Inactive

Past operator/owner: Abraham Bisson and Philip Corbel, owners of separate quarries at St. Lawrence (1888) (1)

Township name: St. Lawrence

Location: T 114 R 24 W Sec 22 OR
T 114 R 24 W Sec 28 OR
T 114 R 24 W Sec 21

Location comments: At St. Lawrence (1); the limestone outcrops occasionally along a distance of some two miles, from the SW1/4 of Sec. 28, northeasterly to the east part of Sec. 22 (Ref. 1, plate 35 shows this also includes the SE1/4 of Sec. 21), the quarries are in this area (1)

Geologic age: Cambrian

Geologic formation: St. Lawrence Fm. (1)

Description: St. Lawrence limestone, "It is nearly level in stratification, in beds 2 to 18 inches thick. The color is buff, reddish, or yellowish gray, usually with frequently green (glauconite) specks. In composition it is a siliceous magnesian limestone. A vertical thickness of about 15 ft is seen in quarries..." (1)

Uses of commodity: Building stone (1)

Remarks: Considerably quarried and supplies a good building stone (1)

References: 1) Winchell; Upham. 1888, p. 120, 139

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock

County: Scott

Quarry/pit name: Hewitt & Beason Quarry (1-4,9,10)

Alternate name: St. Lawrence Quarry (6)

Date opened: About 1865 (7)

Status: Abandoned (1935) (5)

Past operator/owner: Hewitt, Beason (1874) (1-4,9,10)

Township name: St. Lawrence

Location: T 114 R 24 W Sec 28 NE1/4 (1,2,7,8)

Location comments: Between St. Lawrence and Belle Plaine (5); about a mile from St. Lawrence, midway between Jordon and Belle Plaine (6); (an error

Geologic age: Cambrian

Geologic formation: St. Lawrence Fm. (1-10)

Description: See Refs. 2, 4, and 7-9 for stratigraphic section descriptions; "The dolomite here is seen to be slightly sandy. This sand is actually predominantly glauconite." (2)

St. Lawrence Fm., "It is a reddish dolomite with green specks....It is flat, lying in beds 4 to 10 in. thick. Joints are irregular and 3 in. to 2 ft apart. The quarry has been worked to a depth of 6-7 ft over an area of about an acre." (6)

"Winchell described the quarry rock as a buff to reddish or yellowish gray arenaceous dolomite sprinkled with grains of glauconite..." (7)

Refs. 4, 7-9 described beds as 2 to 18 in. thick; siliceous, magnesium limestone, evenly bedded (8)

Chemical analyses: Composite sample yielded 78.7% carbonate, 11.7% sand, 9.6% shale (2); see Ref. 2, table 13 for sample analysis showing lithologic variations within the St. Lawrence Fm.; one sample from an 8 ft wall of the Nicollet Creek Mbr. yielded 4.96% R2O3 (chiefly Fe2O3), 9.28% SiO2, and 17.74% MgO (3)

Physical test data: Specific gravity 2.814, pore space 9.99%, dry weight 158.3 lbs/cu ft (6)

Uses of commodity: Building stone (6-8); "Recently it has been exploited for the manufacturing of rock wool." (1914) (7)

Remarks: Considerably quarried, and supplies good building stone (8)

References: 1) McGannon. 1960, p. 322, 322a
2) McGannon. 1957, p. 10, 52-54, 62, 70
3) Stauffer. 1950, p. 22, 23, 27
4) Thiel. 1944, p. 406
5) Thiel; Dutton. 1935, p. 153
6) Bowles. 1918, p. 189
7) Stauffer; Thiel. 1914, p. 42, 43
8) Winchell; Upham. 1888, p. 120
9) Winchell; Peckham. 1874, p. 152, 153
10) Schwartz; Thiel. 1954, p. 276, 277

Main commodity: Dimension Carbonate Rock

County: Steele

Quarry/pit name: Lindersmith's Quarry (2)

Status: Abandoned (1918) (1)

Past operator/owner: D. R. Lindersmith (1)

Township name: Clinton Falls

Location: T 108 R 20 W Sec 28 (2)

Location comments: "The quarry is close to the Chicago, Milwaukee & St. Paul track and is 3-1/2 miles from Owatonna station." (1); two to three miles north

of Owatonna (2); (T., R. locations determined from Ref. 2, plate 15)

Geologic age: Ordovician

Geologic formation: Galena Gp. (1); Hudson River (2)

Description: Impure dolomitic limestone (2); "...2 to 6 feet of drift and 1 to 10 feet of thin-bedded limestone, the bottom of which is at normal water level. Below the water level 4 feet of thick-bedded limestone is reported, and below this a useless shaly limestone. Near the surface the beds are 1 to 3 inches thick, but lower ones are progressively thicker, reaching a maximum of about 8 inches at water level. Joints are very irregular and closely spaced. Drainage is poor, the best beds occurring below water level. The rock is blue, turning slightly yellow by weathering, is uniform, and free of defects." (1)

Chemical analyses: CaCO₃ 57.08%, MgO 15.9%, insolubles in HCl 25.51%, FeO₂ 1.94% (2)

Physical test data: Specific gravity 2.73 (2); see Ref. 2, p. 200-204 for additional test data

Uses of commodity: Foundation work, well curbing, flagging (1,2); walls, buildings (3)

Remarks: Considered a good stone (2); present (1918) preservation shows that it is durable (1)

References: 1) Bowles. 1918, p. 189, 190
2) Winchell and others. 1884, p. 200-204, 397, 398, plate 15
3) Merrill. 1884, p. 254

Main commodity: Dimension Carbonate Rock

County: Steele

Quarry/pit name: Abbott's Quarry (1)

Status: Inactive

Past operator/owner: John Abbott (1884) (1)

Township name: Clinton Falls

Location: T 108 R 20 W Sec 33 (1)

Location comments: "It is in the bed and on the low banks of Straight River." (1); (T., R. locations determined from Ref. 1, plate 15)

Geologic age: Ordovician

Geologic formation: (Galena Gp.)

Description: Argillaceous and dolomitic limestone, "The rock is in horizontal layers, two to six inches thick. It is blue on fresh fracture, yellow when weathered, compact, sparry, and contains many minute fragments of blue shale." (1)

Uses of commodity: Flagging, etc. (1)

References: 1) Winchell and others. 1884, p. 397, 398

Main commodity: Dimension Carbonate Rock

County: Wabasha

Status: Inactive (1918) (1)

Location: T 109 R 12 W Sec 18

Location comments: Small quarry near Millville (1); (T., R., Sec. locations determined from Ref. 2, plate 32)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1)

Uses of commodity: Building stone, bridge piers (2)

References: 1) Bowles. 1918, p. 191
2) Winchell; Upham. 1888, p. 13, plate 32

Main commodity: Dimension Carbonate Rock

County: Wabasha

Status: Inactive (1965) (1)

Past operator/owner: Delbert Behrns (1965) (1)

MN/DOT source no: 79060

Township name: Glasgow

Location: T 110 R 11 W Sec 6 N1/2 NE1/4 (1)

Uses of commodity: Building stone (1)

Remarks: Small quarry (1)

References: 1) MN/DOT Aggregate Unit files

Main commodity: Dimension Carbonate Rock

County: Wabasha

Quarry/pit name: Baker Quarry (1)

Status: Inactive (1918) (1)

Past operator/owner: Joseph Baker (1884) (2)

Location: T 111 R 10 W

Location comments: Near Wabasha (1,2); (T., R. locations determined from Ref. 2, plate 32)

Geologic age: Cambrian

Geologic formation: St. Lawrence Fm. (1)

Description: Buff to bluish sandy dolomite (1)

Uses of commodity: Foundation stone (1)

References: 1) Bowles. 1918, p. 192
2) Winchell; Upham. 1888, p. 13, plate 32

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock

County: Wabasha

Quarry/pit name: First National Bank Quarry (1)

Date opened: 1888 (1)

Status: Inactive

Past operator/owner: First National Bank of Wabasha, owner (1918) (1)

Township name: Pepin

Location: T 111 R 11 W Sec 24 (1)

Location comments: Near Reads Landing (1)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1)

Description: "The rock is a fine-grained, though somewhat porous, buff Oneota dolomite, similar to the 'Frontenac' stone of Goodhue County. Some

ledges of excellent quality are obtainable. Distinct bedding planes are 6 inches to 3 feet apart and are horizontal. Vertical joints 2 to 3 feet apart strike N. 80 deg. E. and N. 5 deg. W. The upper 15 feet contains many cavities, but the lower 40 feet is of good quality. About half the rock is suitable for building stone. As a rule the thicker beds are more uniform. The rock is bare in places; elsewhere the maximum overburden is about 20 feet of soil and broken rock." (1)

Uses of commodity: Building stone, waste rock used for shore protection (1)

References: 1) Bowles. 1918, p. 191

Main commodity: Dimension Carbonate Rock
County: Wabasha
Quarry/pit name: Beaver Quarry (1)
Status: Inactive (1918) (1)
Past operator/owner: John Beaver, owner (1918) (1)
Township name: Pepin
Location: T 111 R 11 W Sec 24 (1)
Location comments: A small quarry near the First National Bank Quarry (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Uses of commodity: Building stone (1)
References: 1) Bowles. 1918, p. 191

Main commodity: Dimension Carbonate Rock
County: Wabasha
Quarry/pit name: Baker-Harrison Quarry (1)
Status: Inactive
Past operator/owner: Baker-Harrison (1918) (1)
Township name: Pepin
Location: T 111 R 12 W (1)
Location comments: Lake City (1); see Ref. 1 for location map
Geologic formation: Oneota and St. Lawrence Fms., Jordan Sandstone (1)
Description: See Ref. 1 for brief section description, summary follows: Oneota dolomite 54 ft and Jordan sandstone 111 ft overlie St. Lawrence dolomite 61 ft
References: 1) Stauffer; Thiel. 1914, p. 199, 200

Main commodity: Dimension Carbonate Rock
County: Wabasha
Date opened: 1912 (1)
Status: Inactive (1918) (1)
Past operator/owner: Claus Bremer (1918) (1)
Township name: Lake
Location: T 111 R 12 W Sec 6 (1,2)
Location comments: About 3 miles from Lake City (1)

Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,2)
Description: "The rock is a dense, fine-grained, buff Oneota dolomite, of better quality than most of the rock seen in Wabasha County....Bedding planes are 6 inches to 1 foot apart. The overburden is variable, the minimum being 3 or 4 feet of soil." (1)
Remarks: Very little work has been done here (1)
References: 1) Bowles. 1918, p. 191, 192
 2) Thiel; Dutton. 1935, p. 135

Main commodity: Dimension Carbonate Rock
County: Wabasha
Quarry/pit name: Jewell Nursery Co. Quarry (1)
Date opened: 1909 (1)
Status: Inactive
Past operator/owner: Jewell Nursery Co. (1918) (1)
Location: T 111 R 12 W Sec 9
Location comments: Quarry 1-1/2 miles from Lake City station on the Chicago, Milwaukee & St. Paul Railway (1); (T., R., Sec. locations determined from Ref. 2, plate 32)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: "The rock, which is of Oneota age, is a buff sandy dolomite, locally known as sandstone. Bedding planes are distinct and 4 inches to 3 feet apart, averaging about 1 foot. Major joints striking north-south and secondary joints east-west are about 4 feet apart and are vertical. The vertical quarry wall of about 30 feet shows an alternation of hard and soft beds, the latter being of inferior grade. Calcite-filled vugs and cherty inclusions are common, and some beds are too thin to be of use. The overburden so far is about 6 feet but will increase greatly with wider excavation. The rock is suitable for foundation construction." (1)
Uses of commodity: Foundation stone (1)
References: 1) Bowles. 1918, p. 191
 2) Winchell; Upham. 1888, plate 32

Main commodity: Dimension Carbonate Rock
County: Washington
Status: Inactive
Past operator/owner: Norris (1888) (1)
Township name: Cottage Grove
Location: T 27 R 21 W Sec 1 SW1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2)
References: 1) Winchell; Upham. 1888, p. 389, plate 44
 2) Thiel; Dutton. 1935, p. 143

Main commodity: Dimension Carbonate Rock

County: Washington
Status: Inactive
Past operator/owner: Quarry owners are Robert Watson and L. Holman (1888) (1)
Township name: Cottage Grove
Location: T 27 R 21 W Sec 2 SE1/4 (1,2)
Location comments: Two adjoining quarries in the SE1/4 (1)
Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2)
References: 1) Winchell; Upham. 1888, p. 389, plate 44
 2) Thiel; Dutton. 1935, p. 143

Main commodity: Dimension Carbonate Rock
County: Washington
Status: Inactive
Past operator/owner: Mrs. Cowell (1884) (1); Mrs. Cornell (1936) (2)
Township name: Cottage Grove
Location: T 27 R 21 W Sec 6 NE1/4 (1-3)
Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (3)
Remarks: Could not locate quarry (1936) (2)
References: 1) Winchell; Upham. 1888, p. 389, plate 44
 2) Schwartz. 1936, p. 199
 3) Thiel; Dutton. 1935, p. 143

Main commodity: Dimension Carbonate Rock
County: Washington
Status: Inactive
Past operator/owner: John Willoughby (1884) (1)
Township name: Newport
Location: T 27 R 22 W Sec 1 NE1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2)
References: 1) Winchell; Upham. 1888, p. 389, plate 44
 2) Thiel; Dutton. 1935, p. 143

Main commodity: Dimension Carbonate Rock
County: Washington
Status: Inactive
Past operator/owner: E. M. Cox (1884) (1)
Township name: Afton
Location: T 28 R 20 W Sec 30 NW1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2)
References: 1) Winchell; Upham. 1888, p. 383, 389, plate 44
 2) Thiel; Dutton. 1935, p. 143

Main commodity: Dimension Carbonate Rock
County: Washington

Status: Inactive (1936) (1)
Township name: Afton
Location: T 28 R 20 W Sec 31 NE1/4 NW1/4 (1)
 T 28 R 20 W Sec 31 E1/2 NW1/4 (2)
Location comments: Near the center of the E1/2 NW1/4 Sec. 31, Afton township (2)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1-3)
Description: Limestone, 10 ft exposed (1)
References: 1) Schwartz. 1936, p. 196
 2) Kohls. 1958, p. 119, station 74
 3) Thiel; Dutton. 1935, p. 143

Main commodity: Dimension Carbonate Rock
County: Washington
Status: Inactive
Past operator/owner: Charles Metcher (1888) (1,2)
Township name: Woodbury
Location: T 28 R 21 W Sec 33 (1-3)
Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2,3)
Uses of commodity: Building stone (1)
Remarks: Could not locate quarry (1936) (2)
References: 1) Winchell; Upham. 1888, p. 389, plate 44
 2) Schwartz. 1936, p. 193
 3) Thiel; Dutton. 1935, p. 143

Main commodity: Dimension Carbonate Rock
County: Washington
Status: Inactive
Past operator/owner: C. A. Parker (1888) (1)
Township name: Newport
Location: T 28 R 22 W Sec 36 SE1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2)
References: 1) Winchell; Upham. 1888, p. 389, plate 44
 2) Thiel; Dutton. 1935, p. 143

Main commodity: Dimension Carbonate Rock
County: Washington
Status: Inactive
Past operator/owner: Christian Leverer (1884) (1)
Township name: Lakeland
Location: T 29 R 20 W Sec 9 SW1/4 (1,2)
Location comments: Quarry near the top of a mound, nearly a hundred ft above the adjoining valley toward the south (1)
Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2)
Description: The beds are mostly yellowish, but have a blue central portion (1)

References: 1) Winchell and others. 1884, p. 389, plate 44
2) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock
County: Washington
Date opened: 1845 (1,3)
Status: Inactive
Past operator/owner: E. M. Keene (1936) (1); E. McKean (1888) (3)
Township name: Lakeland
Location: T 29 R 20 W Sec 22 SW1/4 SW1/4 (1-3)
Geologic age: Ordovician
Geologic formation: Trenton (3); Platteville Fm. (1,2)
Description: Limestone, 8 ft exposed (1)
References: 1) Schwartz. 1936, p. 191
2) Thiel; Dutton. 1935, p. 143
3) Winchell; Upham. 1888, p. 389, plate 44

Main commodity: Dimension Carbonate Rock
County: Washington
Date opened: 1854 (1)
Status: Inactive
Past operator/owner: Fayette Marsh, 1854 (1)
Location: T 30 R 20 W
Location comments: Near Stillwater (1); (T., R. locations determined from Ref. 1, plate 44)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1)
Description: Dolomite (1)
Uses of commodity: Building stone, etc. (1)
References: 1) Winchell and others. 1884, p. 159, plate 44

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Washington
Quarry/pit name: Carli Quarry (1-5)
Alternate name: Stillwater City Quarry (2)
Date opened: 1847 (2,7)
Status: Inactive
Past operator/owner: City of Stillwater purchased quarry in 1913 (1,2) from C. H. Carli (2-4,6,7)
Location: T 30 R 20 W Sec 21 SE1/4 (5)
Location comments: See Ref. 5, fig. 1A location map; in North Stillwater, near Wilkin St., close to the St. Croix River bluff (2)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (3,4)
Description: Dolomitic limestone (2-7); "The rock is very porous, cavities of one-fourth to one-half or even 1 inch in diameter being abundant. Some holes are open and some filled with sand." (2);

see Refs. 3-5 for stratigraphic section descriptions

Uses of commodity: Building stone (6,7); crushed rock for road construction (2,6)

References: 1) Froelich. 1961, p. 131
2) Bowles. 1918, p. 193, 194
3) Schwartz. 1936, p. 187
4) Stauffer; Thiel. 1914, p. 212
5) Brown. 1956, p. 32, 33, 114, 119, 120, 122, fig. 1A
6) Cooley. 1911, p. 10
7) Winchell and others. 1884, p. 159, plate 44

Main commodity: Dimension Carbonate Rock
County: Washington
Quarry/pit name: Hersey, Staples & Hall Quarry (1)
Date opened: 1854 (1)
Status: Inactive
Past operator/owner: Hersey, Staples & Hall (1854) (1)
Location: T 30 R 20 W
Location comments: Near Stillwater (1); (T., R. locations determined from Ref. 1, plate 44)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1)
Description: Vesicular dolomitic limestone and compact dolomitic limestone (1); see Ref. 1 for further description
Chemical analyses: See Ref. 1, Sample Nos. 14 and 18 for chemical analyses
Physical test data: See Ref. 1, Sample Nos. 14 and 18 for physical test data
Uses of commodity: Building stone, bases for marble tombstones, ashlers, pilasters, copings, all common trimmings (1)
References: 1) Winchell and others. 1884, p. 159, 196-199

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Washington
Quarry/pit name: Bean Quarry and McGee Quarry (1)
Date opened: 1854 (1)
Status: Inactive
Past operator/owner: Two quarries, one owned by Bean and another by McGee (1918) (1)
Location: T 30 R 20 W
Location comments: In the bluff between Stillwater and South Stillwater, near the corner of Fourth Avenue and Burlington Street, the Bean and McGee Quarries are separated only by a roadway and are similar (1); (T., R. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Shakoeppe Fm. (1,2)
Description: "The quarry face is about 30 feet high and has been worked back into the bluff as a shelf

quarry for about 100 yards....The 6-foot bed at the bottom of the quarries is much the best, the upper beds being porous. It is fine grained, dense, uniform in color, and very attractive in appearance, being pale yellow to white....Prominent north-south and east-west jointing systems were noted, the planes being 2 to 6 feet apart." (1); see Ref. 1 for column description

Chemical analyses: CaCO₃ 50.0%, MgCO₃ 40.21%, insoluble in HCl 9.26% (1)

Uses of commodity: Building stone, basements, steps, retaining walls, macadam, concrete aggregate (1)

Remarks: A great quantity of rock has been removed from an excavation of about one-fourth mile long (1)

References: 1) Bowles. 1918, p. 192, 193
2) Thiel; Dutton. 1935, p. 143

Main commodity: Dimension Carbonate Rock

County: Washington

Status: Inactive

Township name: Grant

Location: T 30 R 21 W Sec 32 (1)

Location comments: Along the south side of White Bear Lake are exposures of the Trenton, and some of them have been worked for building stone (1)

Geologic age: Ordovician

Geologic formation: Trenton (1)

Uses of commodity: Building stone (1)

References: 1) Winchell; Upham. 1888, p. 373, plate 44

Main commodity: Dimension Carbonate Rock

County: Washington

Status: Inactive

Past operator/owner: John Weber (1888) (1); another adjoining quarry is owned by Mike Wilder (1888) (1)

Location: T 30 R 21 W Sec 32 SW1/4 (1,2)

Location comments: On the west shore of Long Lake (1,2)

Geologic age: Ordovician

Geologic formation: Trenton (1); Platteville Fm. (2)

Description: Quarry about 6 ft above lake level and shows the beds of the Lower Trenton, covered by a heavy stratum of 20 ft of red till and gravel; the rock is weathered and yellowish, with a blue interior (1)

Remarks: Also another quarry on the west shore of a small lake about a quarter of a mile further north (1)

References: 1) Winchell; Upham. 1888, p. 389, plate 44
2) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Carbonate Rock

County: Winona

Quarry/pit name: Browns Quarry (1)

Status: Inactive

Past operator/owner: S. V. Brown (1884) (1)

Township name: Dresbach

Location: T 105 R 4 W

Location comments: At Dresbach (1); (T., R. locations determined from Ref. 1, plate 9)

Geologic age: Cambrian

Geologic formation: St. Lawrence Fm. (1)

Uses of commodity: Building stone (1)

References: 1) Winchell and others. 1884, p. 252, 265, plate 9

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock

County: Winona

Status: Inactive (1965) (2)

Past operator/owner: Nathian Kirumrie (1965), Ed Hussman (1921) (1)

MN/DOT source no: 85060

Township name: New Hartford

Location: T 105 R 5 W Sec 19 SW1/4 NE1/4 (1,2)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (2)

Uses of commodity: Dimension Stone (2)

References: 1) MN/DOT Aggregate Unit files
2) Jirsa; Meyer. 1984, plate 8

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock

County: Winona

Quarry/pit name: Pier Ridge Quarry (1)

Alternate name: Pea Ridge Quarry (2)

Status: Inactive (1984) (2)

Township name: New Hartford

Location: T 105 R 5 W Sec 23 SW1/4 SE1/4 (1)
T 105 R 5 W Sec 23 NW1/4 SW1/4 SE1/4 (2)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (2)

Description: Lower part of Oneota Fm. (2)

Physical test data: Available from MN/DOT Aggregate Unit (1)

Uses of commodity: Dimension stone, crushed rock (2)

References: 1) MN/DOT Aggregate Unit files
2) Jirsa; Meyer. 1984, plate 8

Main commodity: Dimension Carbonate Rock

County: Winona

Status: Inactive

Township name: Saratoga

Location: T 105 R 10 W Sec 30

Location comments: At Troy, along the creek on each side of the dam (1); (T., R. Sec. locations determined from Ref. 1, plate 9)

Geologic age: Ordovician

Geologic formation: Shakopee Fm. (1)

Description: Shakopee dolomite, thickness of 25 ft (1)

Uses of commodity: Building stone (1)

References: 1) Winchell and others. 1884, p. 252, 265, plate 9

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock

County: Winona

Quarry/pit name: Hector Quarry (1-4)

Status: Inactive

Past operator/owner: Hector Construction Co. (2,3); Vern Thomas (1971), George Gelsdorf (1921) (1)

MN/DOT source no: 85061

Township name: Homer

Location: T 106 R 6 W Sec 9 SW1/4 SE1/4 (1,2)
T 106 R 6 W Sec 9 SW1/4 SE1/4 SE1/4 (4)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1,4)

Description: Dolomitic limestone, medium-grained, light-gray, weathers to buff, hard, thin to thick bedded, sandy towards base, 20 ft face (1); lower part of Oneota Fm. (4)

Physical test data: LAR 49.6% loss of one sample tested (4); available from MN/DOT Aggregate Unit (1) and U.S. Army Corps of Engineers (2)

Uses of commodity: Building stone (1,4); riprap (4)

Remarks: Small quarry (1971) (1)

References: 1) MN/DOT Aggregate Unit files
2) U.S. Army Corps of Engineers files
3) USDL. MSHA mine reference list
4) Jirsa; Meyer. 1984, plate 8

Main commodity: Dimension Carbonate Rock

County: Winona

Status: Inactive

Past operator/owner: Pickwick Flouring Mill Co. (1884) (1)

Location: T 106 R 6 W Sec 13

Location comments: At Pickwick on land owned by the mill company (1); (T., R., Sec. locations determined from Ref. 1, plate 9)

Uses of commodity: Building stone (1)

References: 1) Winchell and others. 1884, p. 265, plate 9

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock

County: Winona

Status: Inactive

Past operator/owner: Hossfeld & Simon (1911) (1); Charles and Alvin Hossfeld (1918) (2)

Township name: Utica

Location: T 106 R 9 W

Location comments: Near Lewiston (1,2); (T., R. locations determined from county highway map)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (2)

Description: Gray limestone (1); Oneota dolomite (2)

Uses of commodity: Foundation stone (2); buildings and roads (1)

Remarks: "Two small quarries near Lewiston" (2)

References: 1) Coley. 1911, p. 11
2) Bowles. 1918, p. 199

Main commodity: Dimension Carbonate Rock

County: Winona

Quarry/pit name: Wolter Quarry (1)

Status: Inactive

Past operator/owner: Fred Wolter, owner (1918) (1)

Township name: St. Charles

Location: T 106 R 10 W Sec 17 OR
T 106 R 10 W Sec 20

Location comments: Half a mile northeast of St. Charles station (1); (T., R., Sec. locations determined from Ref. 2, plate 9; exact location undetermined)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1)

Description: "...open joints, which are 6 to 8 inches wide and are partly filled with clay. Three joint systems trend east, N. 10 deg. E., and N. 60 deg. E. With the microscope the rock appears as a fine-grained aggregate of calcite or dolomite grains. The yellow ferruginous stain is not uniformly distributed...The thickness of the rock down to the St. Peter sandstone is about 15 feet, and the lower 7 or 8 feet is of good quality." (1)

Physical test data: Specific gravity 2.608, pore space 8.29%, dry weight 149.5 lbs/cu ft (1)

Uses of commodity: Building stone for farm buildings (1)

References: 1) Bowles. 1918, p. 200, 201
2) Winchell and others. 1884, p. 265, plate 9

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock

County: Winona

Quarry/pit name: Thompson Quarry (1)

Date opened: Around 1900 (1)

Status: Inactive

Past operator/owner: Kate Conway, owner and John Thompson, operator (1918) (1)

Township name: St. Charles

Location: T 106 R 10 W Sec 20

Location comments: About a mile east of St. Charles (1); (T., R., Sec. locations determined from Ref. 2, plate 9)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1)

Description: "The rock is blue but weathers yellow near seams and joints....Beds are 3 to 14 inches thick, the thinner beds being near the surface. Major joints strike N. 30 deg. E. and secondary joints N. 60 deg. W. They are open seams in places, dissolved out into open spaces 6 or 8 inches wide. Minor joints strike north and south and are closed seams." (1)

Uses of commodity: Rubble for foundations and bridges, crushed rock (1)

Remarks: Small quarry (1)

References: 1) Bowles. 1918, p. 200
2) Winchell and others. 1884, p. 265, plate 9

Main commodity: Dimension Carbonate Rock

County: Winona

Quarry/pit name: Palmer Quarry (1)

Date opened: 1876 (1)

Status: Inactive

Past operator/owner: Mrs. Hart Palmer (1918) (1)

Township name: St. Charles

Location: T 106 R 10 W Sec 30 OR
T 106 R 10 W Sec 19

Location comments: In southwestern St. Charles; (exact location undetermined; T., R., Sec. locations determined from Ref. 2, plate 9)

Geologic age: Ordovician

Geologic formation: Platteville Fm. (1)

Description: "The rock contains many characteristic Platteville fossils and a few cavities lined with pyrite crystals." (1)

References: 1) Bowles. 1918, p. 201
2) Winchell and others. 1884, p. 265, plate 9

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock

County: Winona

Quarry/pit name: Haun Quarry (1)

Status: Inactive

Past operator/owner: John Schultz, owner and George Haun, operator (1918) (1)

Township name: Winona

Location: T 107 R 7 W

Location comments: Three miles northwest of Winona, near Gilmour Valley, reached by a winding and precipitous road which mounts about 450 ft above the river flats (1); (T., R. locations determined from county highway map)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1)

Description: "Joints are in four systems, north, east, N. 30 deg. W., and N. 60 deg. E. The joints are far apart, 40 feet in places, which adds to the difficulty of quarrying. Bedding planes are closed seams but split with ease at intervals of 6 inches to 3 feet. The rock is very porous with small cavities, many of which contain white friable sand and are known as 'sand pits'.", stripping 6 ft overlies approximately 50 ft of Oneota dolomite (1)

Uses of commodity: Foundation stone for new capital at St. Paul, rock well adapted for dressed stone in window sills and steps, also crushed stone, rubble (1)

References: 1) Bowles. 1918, p. 195, 196

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock

County: Winona

Quarry/pit name: Abell Quarry (1)

Status: Inactive since 1907 (1918) (1)

Past operator/owner: Otis Abell (1918) (1)

Township name: Winona

Location: T 107 R 7 W Sec 34 (1)

Location comments: West of Winona 1-1/2 miles, situated close to a main highway leading to Winona (1)

Description: "The rock is similar to that in the Biesanz Stone Co. Quarry (at Minnesota City)." (1)

References: 1) Bowles. 1918, p. 196

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock

County: Winona

Status: Inactive

Past operator/owner: E. O. Wallace (1884) (1)

Township name: Winona

Location: T 107 R 7 W

Location comments: At Winona (1); (T., R. locations determined from Ref. 1, plate 9)

Geologic age: Cambrian

Geologic formation: St. Lawrence Fm. (1)

Uses of commodity: Building stone, quicklime (1)

Remarks: Quarried from same bluff as O'Dae and Porter quarries (1)

References: 1) Winchell and others. 1884, p. 161, 265, plate 9

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock

County: Winona

Date opened: 1870 (1)

Status: Inactive

Past operator/owner: Charles H. Porter (1884) (1)

Township name: Winona

Location: T 107 R 7 W
Location comments: At Winona (1); (T., R. locations determined from Ref. 1, plate 9)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1)
Description: Compact dolomite (1)
Chemical analyses: See Ref. 1, Sample No. 15 for chemical analyses
Physical test data: See Ref. 1, Sample No. 15 for physical test data
Uses of commodity: Building stone, quicklime (1)
Remarks: Quarried from same bluff as O'Dae and E. O. Wallace quarries (1)
References: 1) Winchell and others. 1884, p. 161, 196-199, 265, 266, plate 9

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Winona
Status: Inactive
Past operator/owner: John O'Dae (1884) (1)
Township name: Winona
Location: T 107 R 7 W
Location comments: At Winona (1); (T., R. locations determined from Ref. 1, plate 9)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1)
Uses of commodity: Building stone, quicklime (1)
Remarks: Quarried from same bluff as E. O. Wallace and C. H. Porter quarries (1)
References: 1) Winchell and others. 1884, p. 161, 265, 266, plate 9

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Winona
Quarry/pit name: Sugar Loaf Quarry (1,2)
Status: Inactive
Township name: Winona
Location: T 107 R 7 W Sec 35 SE1/4 SW1/4 NE1/4 (1)
Location comments: South T.H. 61 at Winona (3)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,2)
Description: Lower part of Oneota Fm. (1); see Ref. 2 for section description
Chemical analyses: See Refs. 1 and 2, Sample Nos. 59, 60, 84-86 for chemical analyses
References: 1) Jirsa; Meyer. 1984, plate 8
 2) Stauffer; Thiel. 1933, p. 51, 52, 67-69, 72, 73
 3) MN/DOT Aggregate Unit files

Main commodity: Dimension Carbonate Rock

Other commodities: Crushed Carbonate Rock
County: Winona
Quarry/pit name: Biesanz Stone Co. Quarry (1)
Date opened: About 1903 (1)
Status: Inactive
Past operator/owner: Biesanz Stone Co. (see Producer Directory) (1,2)
Location: T 107 R 8 W
Location comments: Quarry at Minnesota City (1,2); six miles northeast of Winona (1); (T., R. locations determined from county highway map)
Description: Dolomitic limestone (2); broken rock and soil 6-8 ft thick overlies 10 ft of the "best" rock used for rubble, cut stone and fertilizer which overlies 8 ft of "inferior" rock used for riprap (1)
Uses of commodity: Cut stone, rubble, riprap, crushed stone, ground stone for fertilizer (1)
References: 1) Bowles. 1918, p. 196
 2) Cooley. 1911, p. 11

Main commodity: Dimension Carbonate Rock
County: Winona
Quarry/pit name: Skunk Hollow Quarry (1)
Status: Inactive
Past operator/owner: Irke (1965), Albert Matzke (1921) (1)
MN/DOT source no: 85-14
Township name: Norton
Location: T 107 R 9 W Sec 17 SE1/4 SE1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Uses of commodity: Once used for building stone (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Dimension Carbonate Rock
County: Winona
Quarry/pit name: Leatherman Quarry (1)
Date opened: 1900 (1)
Status: Inactive
Past operator/owner: Abe Leatherman (1918) (1)
Township name: Elba
Location: T 107 R 10 W (1)
Location comments: Northwest quarter of Elba township (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: "The rock is gray to yellow, the best bed being cream-colored. Beds are 3 inches to 2 feet thick, and dip southward at a low angle. Jointing is irregular, and no definite systems were observable." (1)
Chemical analyses: CaCO₃ 54.5%, MgCO₃ 37.75%, insoluble 2.92% (1)
Physical test data: Specific gravity 2.885, pore space 9.96%, dry weight 162.3 lbs/cu ft (1)

References: 1) Bowles. 1918, p. 199, 200

Main commodity: Dimension Carbonate Rock
County: Winona
Quarry/pit name: Kramer Quarry (1)
Status: Inactive; active 1918 (1)
Past operator/owner: Zastrel, owner and John Kramer, operator (1918) (1)
Township name: Elba
Location: T 107 R 10 W Sec 11 (1,2)
Location comments: In the vicinity of Elba, in a ravine on the east side of the river (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,2)
Description: "The rock is buff in color, somewhat porous, and contains sand pits and some iron stain. It closely resembles the rock near Winona. Jointing planes are vertical and 3 to 10 feet apart. Three systems were observed, N. 20 deg. W., N. 45 deg. W., and S. 45 deg. W." (1)
Uses of commodity: Range rock for building stone (1)
References: 1) Bowles. 1918, p. 199
 2) Thiel; Dutton. 1935, p. 134

Main commodity: Dimension Carbonate Rock
Other commodities: Crushed Carbonate Rock
County: Winona
Quarry/pit name: Benedict Quarry (2)
Alternate name: Pit No. 2524 (1)
Status: Inactive since 1940 (1965) (1)

Past operator/owner: Walter Benedict (1965), Carl Benedict (1921) (1)
MN/DOT source no: 85049
Township name: Elba
Location: T 107 R 10 W Sec 16 NE1/4 SW1/4 (1,2)
 T 107 R 10 W Sec 16 SW1/4 NE1/4 (1921) (1)
 T 107 R 10 W Sec 16 SE1/4 NW1/4 (1921) (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1,2)
Description: Middle part of Oneota Fm. (2); Oneota dolomite (1)
Physical test data: LAR percent loss 41.4 average of nine samples, range 34.6-47.3 (2)
Uses of commodity: Building stone, crushed rock (1,2)
References: 1) MN/DOT Aggregate Unit files
 2) Jirsa; Meyer. 1984, plate 8

Main commodity: Dimension Carbonate Rock
County: Winona
Status: Inactive
Past operator/owner: Whitewater State Park, State of Minnesota (1965) (1)
MN/DOT source no: 85-21
Township name: Elba
Location: T 107 R 10 W Sec 20 SW1/4 (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: Used in W.P.A. days, for old arch bridge at Whitewater (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity:	Undifferentiated Carbonate Rock	Status:	Abandoned (1933) (1)
County:	Blue Earth	Township name:	Randolph
Status:	Inactive	Location:	T 112 R 18 W Sec 12 OR T 112 R 18 W Sec 1 (2)
Past operator/owner:	Quarry owners include: Barney Simmons, Samuel Michael, Averill, Culver, Wood, and Allgrain (1874) (1)	Location comments:	Quarry in Randolph Township (1); (T., R. locations determined from county highway map)
Township name:	Rapidan	Geologic age:	Ordovician
Location:	T 107 R 27 W Sec 11 AND T 107 R 27 W Sec 12 AND T 107 R 27 W Sec 13 (1)	Geologic formation:	Shakopee Fm. (1)
Location comments:	On the Maple River, near its union with Le Sueur River, there are several quarries in sections 11, 12, and 13, Rapidan township (1)	Description:	Shakopee dolomite (1)
Geologic age:	Ordovician	Remarks:	"...the industry never assumed sizable proportions (in this general area)." (1)
Geologic formation:	Shakopee Fm. (1)	References:	1) Stauffer; Thiel. 1933, p. 40 2) Schwartz; Prokopovich. 1956
Description:	"These quarries reach about two miles above the mouth of the Maple, and are in the same horizon as the Mankato quarries. The stone occurs in horizontal, heavy beds, along the low banks of the river, exposing 25 or 30 ft." (1)		
References:	1) Winchell; Peckham. 1874, p. 132, 133, 146, 147		
Main commodity:	Undifferentiated Carbonate Rock	Main commodity:	Undifferentiated Carbonate Rock
County:	Blue Earth	County:	Dakota
Status:	Inactive	Status:	Inactive
Location:	T 107 R 27 W Sec 13 NE1/4 NW1/4 NW1/4 (1)	USGS quadrangle:	Cannon Falls
Geologic age:	Ordovician	Township name:	Hampton
Geologic formation:	Prairie du Chien Gp., Oneota Fm. (1)	Location:	T 113 R 18 W Sec 1 NW1/4 SE1/4 (1)
Description:	Dolomite, 15 to 20 ft exposed in quarry, massive bedded, fine, crystalline, probably Oneota Fm. (1)	Geologic age:	Ordovician
Remarks:	Old quarry (1)	Geologic formation:	Platteville Fm. (1)
References:	1) Mossler. 1975, Blue Earth station 72	Remarks:	1) Mossler. 1974a, Dakota County station 20
Main commodity:	Undifferentiated Carbonate Rock	Main commodity:	Undifferentiated Carbonate Rock
County:	Dakota	County:	Dakota
Status:	Inactive	Status:	Inactive
Location:	T 28 R 23 W Sec 28	Township name:	Randolph
Location comments:	Quarry at east end of the Mendota Bridge over the Minnesota River at Ft. Snelling (1); (T., R., Sec. locations determined from quad)	Location:	T 113 R 19 W Sec 14 SE1/4 SE1/4 (1)
Geologic age:	Ordovician	Geologic age:	Ordovician
Geologic formation:	Platteville Fm. (1)	Geologic formation:	Platteville Fm. (1)
Description:	Platteville dolomitic limestone (1)	Remarks:	Old roadside quarry (1)
Chemical analyses:	Ignition loss 35.50%, SiO ₂ 13.18%, Fe ₂ O ₃ 2.24%, Al ₂ O ₃ 4.60%, CaO 31.40%, MgO 9.91% (1)	References:	1) Mossler. 1974a, Dakota County station 79
References:	1) Thiel. 1941, p. 69		
Main commodity:	Undifferentiated Carbonate Rock	Main commodity:	Undifferentiated Carbonate Rock
County:	Dakota	County:	Dakota
Status:	Inactive	Status:	Abandoned (1935) (2,3)
Location:	T 28 R 23 W Sec 28	Past operator/owner:	Thomas Redican (1888) (1)
Location comments:	Quarry at east end of the Mendota Bridge over the Minnesota River at Ft. Snelling (1); (T., R., Sec. locations determined from quad)	Township name:	Vermillion
Geologic age:	Ordovician	Location:	T 114 R 18 W Sec 21 (1,3) T 114 R 18 W Sec 21 E1/4 (2)
Geologic formation:	Platteville Fm. (1)	Location comments:	Near E1/4 corner (2); 1/2 mile southwest of village of Vermillion and 500 ft west of outcrop on road (2)
Description:	Platteville dolomitic limestone (1)	Geologic age:	Ordovician
Chemical analyses:	Ignition loss 35.50%, SiO ₂ 13.18%, Fe ₂ O ₃ 2.24%, Al ₂ O ₃ 4.60%, CaO 31.40%, MgO 9.91% (1)	Geologic formation:	Shakopee-Oneota Fms. (2); Shakopee Fm. ? (1,3)
References:	1) Thiel. 1941, p. 69	Description:	Shakopee-Oneota dolomite, 26 ft exposed (2); magnesium limestone layers (1)

Remarks: Small quarry (1)
References: 1) Winchell; Upham. 1888, p. 74, 75
 2) Schwartz. 1936, p. 151
 3) Thiel; Dutton. 1935, p. 142

Main commodity: Undifferentiated Carbonate Rock
County: Dakota
Status: Inactive
Township name: Lakeville
Location: T 114 R 18 W Sec 24 NE1/4 NW1/4 (1)
Location comments: Old quarry on Aitken farm (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Description: Platteville limestone, about 15 ft exposed (1)
References: 1) Schwartz. 1936, p. 149

Main commodity: Undifferentiated Carbonate Rock
County: Dakota
Status: Inactive or abandoned (1935) (2)
Location: T 114 R 20 W Sec 13 S1/2 SW1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Description: Platteville limestone, several poor exposures (1)
Remarks: Old quarry (1936) (1)
References: 1) Schwartz. 1936, p. 149
 2) Thiel; Dutton. 1935, p. 142

Main commodity: Undifferentiated Carbonate Rock
County: Dakota
Status: Abandoned (1)
USGS quadrangle: Hastings, 15 min.
Location: T 115 R 17 W Sec 36 SE1/4 NW1/4 AND
 T 115 R 17 W Sec 36 SW1/4 NW1/4 (1)
Geologic age: Ordovician
Geologic formation: Prairie du Chien Gp. (1)
Remarks: Hillside, probably old quarry (1)
References: 1) Mossler. 1974a, Dakota County station 1

Main commodity: Undifferentiated Carbonate Rock
County: Dakota
Status: Inactive
Township name: Nininger
Location: T 115 R 18 W Sec 20 AND
 T 115 R 18 W Sec 21 (1)
Location comments: Quarries situated on the section line between
 Secs. 20 and 21, in the bluff of Spring Lake,
 near Rosemount (1); (T., R. locations
 determined from county highway map)
Geologic age: Ordovician

Geologic formation: Lower Magnesium (1)
Description: Lower Magnesium limestone, the visible beds
 are horizontal, heavy, vesicular, and rise only
 about 15 ft above Spring Lake (1)
Remarks: Ref. 1 uses the word "quarries" at this location
References: 1) Winchell; Upham. 1888, p. 72

Main commodity: Undifferentiated Carbonate Rock
County: Dakota
Status: Inactive
USGS quadrangle: Vermillion
Township name: Nininger
Location: T 115 R 18 W Sec 25 NE1/4 SE1/4 OR
 T 115 R 18 W Sec 25 SE1/4 NE1/4 (1)
Location comments: (One of these locations is for a quarry and one
 is for a road cut, Ref. 1 did not specify which;
 these two locations are on opposite sides of
 State Hwy. 55)
Geologic age: Ordovician
Geologic formation: Prairie du Chien Gp. (1)
Remarks: Small quarry (1)
References: 1) Mossler. 1974a, Dakota County station 50

Main commodity: Undifferentiated Carbonate Rock
County: Dakota
Status: Inactive or abandoned (1935) (1)
Township name: Burnsville
Location: T 115 R 21 W Sec 23 NW1/4 (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Description: Oneota dolomite (1)
References: 1) Thiel; Dutton. 1935, p. 142

Main commodity: Undifferentiated Carbonate Rock
County: Dodge
Status: Inactive
Township name: Canisteo
Location: T 106 R 16 W
Location comments: In Canisteo township, due south from Kasson
 (1); (T., R. locations determined from Ref. 1,
 plate 13)
Geologic age: Ordovician
Geologic formation: Galena Gp. (1)
Description: "...is an exposure of the Galena limestone at
 the crossing of one of the branches of the
 Zumbro, and along the stream for some
 distance below. It appears in heavy, coarse,
 cavernous layers eight to sixteen inches thick,
 of a buff color, and without apparent fossils,
 and has been slightly opened by quarrying." (1)
References: 1) Winchell and others. 1884, p. 374, plate 13

Main commodity: Undifferentiated Carbonate Rock
County: Dodge
Status: Inactive
Township name: Concord
Location: T 108 R 17 W Sec 23 NE1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: Prosser Fm. (1)
References: 1) Niles. [1988c], table 3

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Quarry/pit name: Camp Creek Quarry (1)
Status: Abandoned (1953) (1)
Township name: Harmony
Location: T 101 R 10 W Sec 5 (1)
Location comments: On the east side of County Road F, 0.2 miles south of the north edge of Sec. 5 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. and Decorah Shale (1)
Description: Decorah shale beds, 4 ft overlies Platteville Fm., 2.5 ft of alternating limestone and shale beds (1); see Ref. 1 for detailed stratigraphic section and paleontology
Remarks: Small quarry (1)
References: 1) Weiss. 1953, p. 468, 469

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Quarry/pit name: Scheevel Quarry (1,2)
Status: Inactive
Past operator/owner: Alton Scheevel (1973) (1)
Location: T 101 R 11 W Sec 2 SE1/4 NW1/4 (1,2)
Location comments: Situated 2-3 miles north and 6 miles west of Harmony (1,2)
Geologic formation: Dunleith and Wise Lake Fms. (1,2)
Description: See Refs. 1 and 2 for detailed stratigraphic sections, summary follows:
Wise Lake Fm.
Sinsinawa Mbr. 10 ft, dolomite
Dunleith Fm.
Wyota Mbr. 19 ft, limestone, massive beds
Wall Mbr. 13 ft
Sherwood Mbr. 15 ft
Rivoli Mbr. 7 ft
References: 1) Levenson; Gerk. undated, locality M-108
2) Stone. 1980, p. A-5, A-6

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Abandoned (1965) (1)
Past operator/owner: Nosek Farms (1965), W. F. Gray (1921) (1)

MN/DOT source no: 23-74
Location: T 101 R 13 W Sec 25 NE1/4 SW1/4 (1)
Geologic age: Devonian
Geologic formation: Cedar Valley Fm. (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
Remarks: "Dead - gravel pit" (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Inactive
Location: T 102 R 9 W Sec 8 SW1/4 NW1/4 (1)
Location comments: On north side of County Hwy. 12 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
References: 1) Levenson; Gerk. undated, locality M-105A

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Abandoned (1953) (1)
Location: T 102 R 11 W Sec 9 SE1/4 (1)
Location comments: Quarry 250 yds SE of the Harum farmyard, nearly in the SE corner of Sec. 9 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. and Decorah Shale (1)
Description: See Ref. 1 for detailed stratigraphic section and paleontology, summary follows:
Decorah Shale 5 ft 7 in.
Platteville Fm. 24 ft
Fillmore Mbr. 5 ft 5 in., limestone
McGregor Mbr. 18 ft 7 in., limestone
References: 1) Weiss. 1953, p. 249-252

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Quarry/pit name: Schmidt's Quarry (1)
Status: Inactive
Township name: Carimona
Location: T 102 R 11 W Sec 21 NW1/4 NW1/4 NW1/4 (1)
Location comments: Old quarry on west side of town road (1)
Geologic age: Ordovician
Geologic formation: Galena Gp. (1)
Description: See Ref. 1 for detailed stratigraphic section, summary follows: Cummingsville Fm. 46 ft, alternating beds of limestone, cherty limestone, and shaly limestone
References: 1) Weiss. 1953, p. 538-540

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore

Quarry/pit name: Gatzke Quarry (1)
Status: Abandoned (1953) (1)
Location: T 102 R 11 W Sec 25 NW1/4 (1,2)
Location comments: Quarry in a farmyard, near the center of the NW1/4 of Sec. 25 (1,2)
Geologic age: Ordovician
Geologic formation: Platteville Fm. and Decorah Shale (1)
Description: See Ref. 1 for detailed stratigraphic section and paleontology, summary follows:
Decorah Shale 5 ft 9 in.
Platteville Fm.
Fillmore Mbr. 5 ft 5 in., limestone
References: 1) Weiss. 1953, p. 239-242
2) Weiss. 1955, p. 767

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Quarry/pit name: Thundale Quarry (1)
Status: Abandoned (1953) (1)
Township name: Carimona
Location: T 102 R 11 W Sec 25 NE1/4 (1)
Location comments: Quarry near the middle of the NE1/4 of Sec. 25 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. and Decorah Shale (1)
Description: See Ref. 1 for detailed stratigraphic section and paleontology, summary follows:
Decorah Shale 5 ft 9 in.
Platteville Fm. 14 ft 8 in.
Fillmore Mbr. 5 ft 2 in.
References: 1) Weiss. 1953, p. 243, 244

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Quarry/pit name: Fjelstad's Quarry (1)
Status: Inactive
Township name: Forestville
Location: T 102 R 12 W Sec 10 SE1/4 NE1/4 (1,2)
Location comments: Small quarry on north side of road near SE corner of NE1/4, Sec. 10 (1)
Geologic age: Ordovician
Geologic formation: Prosser Fm. (1,2)
Description: Prosser Fm., 26 ft exposed, 6 ft of cherty limestone over 20 ft of limestone (1); "The rock exposed is a thick-bedded, light gray limestone but thin-bedded, and light buff when weathered. There are some thin cherty layers and nodules in the upper part of the section." (2); see Ref. 1 for stratigraphic description
Chemical analyses: Samples of upper and lower 10 ft respectively: CaO 51.45% and 51.19%; MgO 0.57% and 1.29%; insoluble 5.89% and 5.43% (2); see Ref. 2 for complete analyses
References: 1) Weiss. 1953, p. 556
2) Prokopovich; Schwartz. 1956, p. 33

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Quarry/pit name: E. Vanderbosch Quarry (2)
Status: Abandoned (1961) (1)
Location: T 102 R 12 W Sec 30 NE1/4 SW1/4 (1)
T 102 R 12 W Sec 30 (2)
Location comments: East of Etna (2)
Geologic age: Devonian
Geologic formation: Solon Mbr. (Spillville Fm.) (1); Cedar Valley Fm. (2)
Description: About 25 ft of buff, solution-pitted, fossiliferous Solon dolomite, the base of this quarry is near the Maquoketa-Cedar Valley contact (1); Cedar Valley limestone 27 ft overlies Maquoketa shale 33 ft (2)
References: 1) Kohls. 1961, p. 196
2) Stauffer. 1950, p. 16, 26

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Inactive (1935) (2)
Past operator/owner: Mrs. Scarrie (1884) (1)
Township name: Bloomfield
Location: T 102 R 13 W Sec 28 SE1/4 (1,2)
Geologic age: Lower Devonian ? (1)
Geologic formation: Cedar Valley Fm. (2)
Description: Yellowish, fine-grained rock almost non-fossiliferous (1)
Remarks: Small quarry (1)
References: 1) Winchell and others. 1884, p. 305
2) Thiel; Dutton. 1935, p. 152

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Inactive (1935) (1)
Past operator/owner: H. T. Odell (1884) (1)
Township name: Bloomfield
Location: T 102 R 13 W Sec 36 SE1/4 (1)
Geologic age: Devonian (1)
Geologic formation: Cedar Valley Fm. (2)
References: 1) Winchell and others. 1884, p. 306
2) Thiel; Dutton. 1935, p. 151

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Inactive (1935) (2)
Past operator/owner: O. M. Postle (1884) (1)
Township name: Bloomfield
Location: T 102 R 13 W Sec 36 NW1/4 (1)
Geologic age: Devonian (1)

Geologic formation: Cedar Valley Fm. (2)
References: 1) Winchell and others. 1884, p. 306
 2) Thiel; Dutton. 1935, p. 151

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Inactive
Location: T 103 R 10 W Sec 22
Location comments: At Clear Grit Mill in the valley of the Root River, quarry is near the mill dam, railway nearby (1); (T., R., Sec. locations determined from Ref. 1, plate 10; village of Clear Grit is in Sec. 22)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1)
Description: About 15 ft of even layers (1)
References: 1) Winchell and others. 1884, p. 283, plate 10

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Abandoned (1965) (1)
Past operator/owner: State of Minnesota (1965) (1)
MN/DOT source no: 23-32
Location: T 103 R 10 W Sec 26 (1)
Remarks: "Dead - could not locate any information on this quarry" (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Quarry/pit name: Big Spring Quarry (1)
Status: Abandoned (1953) (1)
Township name: Fountain
Location: T 103 R 11 W Sec 3 N1/2 SW1/4 (1)
Location comments: "The spring itself is at the foot of the ravine on the east side of the town road. Just by the spring is an abandoned quarry ..." (1)
Geologic age: Ordovician
Geologic formation: Prosser and Cummingsville Fms. (1)
Description: Alternating limestone and shaly limestone beds (1); see Ref. 1 for detailed stratigraphic section and paleontology
References: 1) Weiss. 1953, p. 478-483

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Inactive (1935) (2)
Past operator/owner: Enoch Winslow (1884) (1)
Township name: Fountain
Location: T 103 R 11 W Sec 4 SW1/4 (1,2)
Location comments: Quarry situated on the bank of Sugar Creek (1)

Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (3)
References: 1) Winchell and others. 1884, p. 293
 2) Thiel; Dutton. 1935, p. 151
 3) Kirk. 1926, p. 87

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Inactive
Township name: Fountain
Location: T 103 R 11 W Sec 9 NW1/4 (1)
Location comments: North edge of NW1/4 of Sec. 9, on County Rd. E, 1.5 miles west of Fountain (1-3)
Geologic age: Ordovician
Geologic formation: Galena Gp. (1)
Description: See Ref. 1 for detailed stratigraphic section and paleontology; Ref. 2 contains a detailed description of the ostracode fauna of the Decorah shale
Remarks: Small old quarries on both sides of County Rd. E (1)
References: 1) Weiss. 1953, p. 332-344
 2) Cornell. 1956, p. 4
 3) Weiss. 1957, p. 1053, 1054

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Abandoned (1965) (1)
Past operator/owner: Bryon Strom (1965) (1)
MN/DOT source no: 23-22
Location: T 103 R 11 W Sec 12 NE1/4 (1)
Remarks: "Dead - no quarry at this location" (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Quarry/pit name: Paulson's Quarry (1)
Status: Inactive
Location: T 103 R 11 W Sec 13 NW1/4 (1)
 T 103 R 11 W Sec 12 W1/4 AND
 T 103 R 11 W Sec 13 W1/4 (2)
Location comments: Old small quarry at the W1/4 corner of the section line between Secs. 12 and 13, west of the county road (2)
Geologic age: Ordovician
Geologic formation: Galena Gp., Cummingsville Fm. (1)
Description: Limestone and cherty limestone (1); see Ref. 1 for detailed stratigraphic section and paleontology, quarry forms the top of the section
References: 1) Weiss. 1953, p. 367-370
 2) Prokopovich; Schwartz. 1956, p. 33

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Inactive
Past operator/owner: John Johnson (1884) (1)
Township name: Fountain
Location: T 103 R 11 W Sec 22
Location comments: Two miles south of Fountain (1); (exact location undetermined; T., R., Sec. locations determined from Ref. 1, plate 10)
Geologic age: Ordovician
Geologic formation: Trenton (1)
References: 1) Winchell and others. 1884, p. 293, plate 10

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Inactive (1935) (1)
Past operator/owner: John Johnson (1884) (1)
Township name: Fountain
Location: T 103 R 11 W
Location comments: Two miles south of Fountain (1,3); (T., R. locations determined from Ref. 1, plate 10)
Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2,3)
References: 1) Winchell and others. 1884, p. 293, plate 10
 2) Kirk. 1926, p. 87
 3) Thiel; Dutton. 1935, p. 151

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Inactive
Location: T 103 R 12 W Sec 3 SE1/4 SW1/4 (1)
Location comments: In the vicinity of Fillmore, north of C.A.R. E (1)
Geologic age: Ordovician
Geologic formation: Prosser Fm. (1)
Description: Prosser limestone, "The rock is light-gray and thick-bedded but weathers to a buff color and becomes thin-bedded toward the top." (1)
Chemical analyses: Samples from the middle and lower horizons respectively yielded: CaO 50.82% and 49.68%, MgO 0.62% and 0.70%, insoluble 7.08% and 8.12% (1); see Ref. 1 for further analyses
Remarks: Old quarry (1956) (1)
References: 1) Prokopovich; Schwartz. 1956, p. 30, 31

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Quarry/pit name: Quinn's Quarry (2,3)
Status: Abandoned (1965) (1)
MN/DOT source no: 23-17
Township name: Fillmore

Location: T 103 R 12 W Sec 8 SE1/4 (1-3)
Location comments: An old quarry at about the center of the south edge of the SE1/4 of Sec. 8 (2,3)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2)
Description: See Ref. 2 for detailed stratigraphic section of area
Remarks: "Dead - no potential" (1965) (1)
References: 1) MN/DOT Aggregate Unit files
 2) Weiss. 1957, p. 1054, 1060, 1061, plate 3
 3) Weiss. 1953, p. 488-490

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Inactive (1935) (2)
Past operator/owner: Geo. Shepard (1884) (1)
Township name: Fillmore
Location: T 103 R 12 W Sec 9 NE1/4 (1,2)
Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2)
Description: Trenton limestone, consists of isolated even layers in the shale, uniformity of layers but alot of shale (1)
References: 1) Winchell and others. 1884, p. 292, plate 10
 2) Thiel; Dutton. 1935, p. 151

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Inactive (1935) (2)
Past operator/owner: G. W. Knights (1884) (1)
Township name: Fillmore
Location: T 103 R 12 W Sec 10 (1,2)
Location comments: Quarry is situated along the ravine, near Fillmore (1)
Geologic age: Ordovician
Geologic formation: Trenton (1); Platteville Fm. (2)
Description: Trenton limestone, hard, gray, compact, brittle and fossiliferous, in beds of all thicknesses depending on the weathering and exposure, up to eight or more inches (1)
References: 1) Winchell and others. 1884, p. 292, plate 10
 2) Thiel; Dutton. 1935, p. 151

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Abandoned (1953) (1)
Township name: Fillmore
Location: T 103 R 12 W Sec 20 SW1/4 SE1/4 (1)
Location comments: The quarry is about 75 yards south of the point where the old road grade turns west out of Mahoods' Ravine, on west bank of ravine (1); at the center of the south edge of the SW1/4 of SE1/4 (1)

Geologic age: Ordovician
Geologic formation: Galena Gp. (1)
Description: See Ref. 1 for stratigraphic section description
References: 1) Weiss. 1953, p. 493-?

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Inactive
MN/DOT source no: 23-10
Location: T 103 R 13 W Sec 28 SW1/4 (1965) (1)
 T 103 R 12 W Sec 28 SW1/4 (1921) (1)
Remarks: "Dead - no information" (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Abandoned (1961) (1)
Location: T 103 R 13 W Sec 29 SE1/4 SE1/4 SE1/4 (1)
Geologic age: Devonian
Geologic formation: Solon Mbr. (1); (Spillville Fm.)
Description: About 5 ft of buff, fossiliferous Solon dolomite is exposed (1)
References: 1) Kohls. 1961, p. 193, station 75

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Abandoned (1961) (1)
Location: T 103 R 13 W Sec 32 NE1/4 NW1/4 (1)
Geologic age: Devonian
Geologic formation: Solon Mbr. (1); (Spillville Fm.)
Description: About 20 ft of buff, fossiliferous Solon dolomite exposed (1)
References: 1) Kohls. 1961, p. 193, station 74

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Abandoned (1965) (1)
Past operator/owner: Albert Thompson (1965) (1)
MN/DOT source no: 23-11
Location: T 103 R 13 W Sec 32 SE1/4 SE1/4 (1965) (1)
 T 103 R 13 W Sec 33 SW1/4 (1921) (1)
Remarks: "Dead - farm land" (1965) (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Inactive
Location: T 103 R 13 W Sec 33 NW1/4 NW1/4 (1)

Location comments: In Spring Valley (1)
Geologic age: Devonian
Geologic formation: Spillville Fm. (1)
References: 1) Mossler. 1987, p. 26

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Inactive (1965) (3)
Location: T 103 R 13 W Sec 33 SW1/4 NW1/4 (1)
 T 103 R 13 W Sec 33 NW1/4 (2)
Location comments: Abandoned quarry located 1/2 mile west of Spring Valley (3)
Geologic age: Devonian
Geologic formation: Solon Mbr. (1-3); (Spillville Fm.)
Description: Solon Mbr., 13.7 ft exposed, dolomite (1-3); see Ref. 2 for detailed stratigraphic section
Chemical analyses: Analyses of nine samples ranged from 95.3% to 98.5% carbonate (2); see Ref. 2 for further chemical analyses
References: 1) Mossler. 1978, p. 45
 2) Kohls. 1961, p. 114-116, 193, station 76
 3) Bayer. 1965, p. 37

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Quarry/pit name: Larson Quarry (2-5)
Status: Abandoned (1961) (1)
Location: T 103 R 13 W Sec 33 NE1/4 SW1/4 (1)
Location comments: In the southwest part of Spring Valley (1,2,4,5)
Geologic age: Devonian
Geologic formation: Cedar Valley Fm. (2-5); Solon Mbr. (Spillville Fm.) (1)
Description: About 12 ft of buff, fossiliferous Solon dolomite exposed (1); soil
 and drift 1 ft, overlies 11.3 ft of Cedar Valley limestone (2-4); see Refs. 2-5 for section descriptions
Chemical analyses: Refs. 3 and 4 analyses: CaCO₃ 54.48%, MgCO₃ 43.58%, and total insoluble 2.02%; see Ref. 5 for further analyses
Remarks: "About 500 ft due west another quarry exposes about 10 ft of Solon dolomite." (1)
References: 1) Kohls. 1961, p. 193, station 80
 2) Thiel. 1944, p. 179, 180
 3) Stauffer; Thiel. 1933, p. 61, 66
 4) Stauffer; Thiel. 1914, p. 115, 117, 151
 5) Stauffer; Thiel. 1950, p. 16, 17, 26

Main commodity: Undifferentiated Carbonate Rock
County: Fillmore
Status: Inactive (1935) (1)

Past operator/owner: Quarries worked by Willard Allen, Thomas Thayer, Eurylas Parsons, and Nelson Smith (1884) (1)

Location: T 103 R 13 W Sec 33 OR
T 103 R 13 W Sec 34

Location comments: At Spring Valley, along the south side of the valley (1); (T., R. locations determined from Ref. 1, plate 10)

Geologic age: Devonian (1,2)

Remarks: Four quarries in this area (1884) (1)

References: 1) Winchell and others. 1884, p. 306, plate 10
2) Thiel; Dutton. 1935, p. 151

Main commodity: Undifferentiated Carbonate Rock

County: Fillmore

Status: Inactive

Location: T 103 R 13 W Sec 34 (1)

Location comments: Quarry 3/4 mile east of Spring Valley (1); (section location determined from Ref. 2, plate 10)

Geologic age: Devonian (1)

Description: Devonian limestone (1)

References: 1) Thiel; Dutton. 1935, p. 151
2) Winchell and others. 1884, p. 306, plate 10

Main commodity: Undifferentiated Carbonate Rock

County: Fillmore

Quarry/pit name: Waterworks Hill Quarry (1-3)

Status: Inactive

Location: T 104 R 11 W Sec 5 N1/2 NW1/4 (1-3)

Location comments: On south side of Waterworks Hill at the east edge of Chatfield on State Hwy. 74 (1-3)

Geologic age: Ordovician

Geologic formation: Platteville Fm. and Decorah Shale (1)

Description: Alternating limestone/shaly limestone/shale beds (1); see Ref. 1 for detailed stratigraphic section and paleontology, summary follows:
Decorah Shale 6 ft 11 in.
Platteville Fm.
Fillmore Mbr. 5 ft 7 in.
McGregor Mbr. 17 ft 4 in.

References: 1) Weiss. 1953, p. 347-353
2) Weiss. 1955, p. 767
3) Weiss. 1957, p. 1054

Main commodity: Undifferentiated Carbonate Rock

County: Fillmore

Status: Inactive

Township name: Jordon

Location: T 104 R 12 W Sec 9 NE1/4 SE1/4 (1)

Location comments: On Lost Creek (1)

Geologic age: Ordovician

Geologic formation: Prosser Fm. (1)

Description: Prosser limestone (1)

References: 1) Bleifuss. 1966, p. 115

Main commodity: Undifferentiated Carbonate Rock

County: Fillmore

Quarry/pit name: Bear Creek Quarry (1)

Status: Inactive

Township name: Jordon

Location: T 104 R 12 W Sec 9 NW1/4 SE1/4 (1)

Location comments: Quarry 5.5 miles west of Chatfield (1)

Geologic age: Ordovician

Geologic formation: Dunleith and Wise Lake Fms. (1)

Description: See Ref. 1 for detailed stratigraphic section, summary follows:
Wise Lake Fm.
Sinsinawa Mbr. 15 ft, dolomite
Dunleith Fm.
Wyota Mbr. 14.2 ft, dolomite
Wall Mbr. 9 ft
Sherwood Mbr. 19.2 ft
Rivoli Mbr. 12.1 ft

References: 1) Stone. 1980, p. A-11, A-12

Main commodity: Undifferentiated Carbonate Rock

County: Fillmore

Quarry/pit name: Morse's Quarry (1)

Status: Abandoned (1953) (1)

Township name: Jordan

Location: T 104 R 12 W Sec 13 SW1/4 (1)

Location comments: Extreme SW corner of Sec. 13, on the west side of the town road, about 0.2 miles north of the brick schoolhouse on the county road (1)

Geologic age: Ordovician

Geologic formation: Cummingsville Fm. (1)

Description: Alternating limestone and shaly limestone beds (1); see Ref. 1 for detailed stratigraphic section and paleontology

References: 1) Weiss. 1953, p. 379-384

Main commodity: Undifferentiated Carbonate Rock

County: Fillmore

Status: Inactive

Past operator/owner: Hague and Priebe (1921) (2)

Township name: Sumner

Location: T 104 R 13 W Sec 35 N1/2 (1)
T 104 R 13 W Sec 35 NW1/4 NE1/4 (2)

Geologic age: Ordovician

Geologic formation: Galena Gp. (1)

Description: "...light-colored limestone, in beds of about 3 in., of a fine grained and compact texture, not much crystalline and evidently impure with argillaceous and siliceous qualities." (1)

References: 1) Winchell and others. 1884, p. 297, plate 10
2) MN/DOT Aggregate Unit files

Main commodity: Undifferentiated Carbonate Rock
County: Goodhue
Status: Inactive
Township name: Pine Island
Location: T 109 R 15 W Sec 1 SE1/4 (1)
Location comments: Located 1/4 mile west of Mazeppa, on the west bank of the North Branch of the Zumbro River and south of MN Hwy. 60 (1)
Geologic age: Ordovician
Geologic formation: Prairie du Chien Gp. (1)
Description: See Ref. 1 for detailed stratigraphic section, summary follows:
Shakopee Fm.
Willow River Mbr. 35 ft, dolomite
New Richmond Mbr. 15 ft, dolomite and sandstone
Oneota Fm. 37 ft, dolomite
References: 1) Austin. 1971, p. 177-179

Main commodity: Undifferentiated Carbonate Rock
County: Goodhue
Status: Inactive
Township name: Pine Island
Location: T 109 R 15 W Sec 18 SW1/4 NW1/4 (1-3)
Location comments: Two miles north, one mile west, and 1/2 mile north of Pine Island (2)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1-3)
Description: Grayish limestone (3); see Ref. 1 for trace fossil distribution
Chemical analyses: CaO 28.89% and 26.22%, MgO 2.50% and 11.36% (3); see Ref. 3, for further analyses
Remarks: Old quarry (1956) (3)
References: 1) Dokken. 1987, p. 194
2) Hoeft. 1959, p. 281
3) Prokopovich; Schwartz. 1956, p. 15

Main commodity: Undifferentiated Carbonate Rock
County: Goodhue
Status: Inactive
Township name: Pine Island
Location: T 109 R 15 W Sec 29 S1/2 SW1/4 SE1/4 (1)
T 109 R 15 W Sec 29 SW1/4 SE1/4 (2,3)
Location comments: Abandoned quarry on east side of County Road 11 about 1/4 mile north of Pine Island (2)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1-3)
Description: Platteville limestone, 15.8 ft exposed (2,3); see Refs. 2 and 3 for

References: detailed stratigraphic sections
1) Mossler. 1971
2) Rassam. 1967, p. 101-103
3) Hoeft. 1959, p. 250, 251, 262, 263

Main commodity: Undifferentiated Carbonate Rock
County: Goodhue
Status: Inactive
Township name: Cherry Grove
Location: T 109 R 17 W Sec 34 SW1/4 SE1/4 (1)
Location comments: Four miles SW of Roscoe (1)
Geologic age: Ordovician
Geologic formation: Dunleith Fm. (1)
Description: Dolomite, 23.9 ft exposed (1)
References: 1) Stone. 1980, p. A-43

Main commodity: Undifferentiated Carbonate Rock
County: Goodhue
Status: Abandoned (1958) (1)
Township name: Minneola
Location: T 110 R 16 W Sec 21 NW1/4 SW1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Description: Interbedded shale and limestone (1); see Ref. 1 for stratigraphic section description
References: 1) Ford. 1958, p. 124-126

Main commodity: Undifferentiated Carbonate Rock
County: Goodhue
Status: Inactive
Township name: Belle Creek
Location: T 110 R 16 W Sec 21 W1/2 (1)
Location comments: Large old quarry on the north bank of the Zumbro River (1); (this would be the NW 1/4 of Sec. 21)
References: 1) Prokopovich; Schwartz. 1956, p. 15

Main commodity: Undifferentiated Carbonate Rock
County: Goodhue
Quarry/pit name: Wanamingo Quarry (3)
Status: Inactive
Township name: Minneola
Location: T 110 R 16 W Sec 29 NW1/4 SE1/4 (1-3)
Location comments: One mile east of Wanamingo and three tenths of a mile north, on the east side of the road (3)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1-3)

Description: Carimona Mbr. 4.6 ft overlies McGregor Mbr. 7 ft (2); see Ref. 3 for stratigraphic section description; see Ref. 1 for trace fossil distribution

References: 1) Dokken. 1987, p. 194
2) Mossler. 1971
3) Ford. 1958, p. 124-126

Main commodity: Undifferentiated Carbonate Rock
County: Goodhue
Status: Inactive
Township name: Wanamingo
Location: T 110 R 17 W Sec 8 W1/2 (1)
Location comments: Three miles south of Hader (1)
Geologic age: Ordovician
Geologic formation: Dunleith Fm. (1)
Description: See Ref. 1 for stratigraphic section description
References: 1) Stone. 1980, p. A-40

Main commodity: Undifferentiated Carbonate Rock
County: Goodhue
Status: Inactive
MN/DOT source no: 25087
Location: T 112 R 14 W Sec 18 (1)
Location comments: Could not locate quarry in 1965 (1)
Geologic age: Ordovician
Geologic formation: Prairie du Chien Gp. (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Undifferentiated Carbonate Rock
County: Goodhue
Quarry/pit name: White Rock Quarry (1,2)
Status: Inactive
Township name: Vasa
Location: T 112 R 16 W Sec 31 SE1/4 SE1/4 (1,2)
Location comments: Quarry in hill, 1/2 mile northeast of White Rock on State Aid Rd. 8 (2)

Geologic age: Ordovician
Geologic formation: Platteville Fm. (1,2)
Description: See Ref. 2 for detailed stratigraphic section, summary follows:
Drift cover
Decorah Fm. 4.4 ft, shale
Platteville Fm.
Carimona Mbr. 6.25 ft, alternating limestone/shale beds
Magnolia Mbr. 4.75 ft, dolomitic limestone
Hidden Falls Mbr. 3.35 ft to quarry floor, dolomitic limestone

References: 1) Dokken. 1987, p. 194
2) Ford. 1958, p. 103-105

Main commodity: Undifferentiated Carbonate Rock
County: Goodhue
Quarry/pit name: Cannon Falls Quarry (1)
Status: Inactive
Township name: Cannon Falls
Location: T 112 R 17 W Sec 7 NE1/4 NE1/4 (1)
Location comments: At intersection of U.S. 52 and C.A.R. 38, approximately 1/4 mile east on C.A.R. 38 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Description: Platteville limestone, 13.6 ft exposed, Decorah shale and drift cover 3 ft (1); see Ref. 1 for detailed stratigraphic section (1)
References: 1) Rassam. 1967, p. 94-97

Main commodity: Undifferentiated Carbonate Rock
County: Goodhue
Status: Inactive (1956) (1)
Township name: Cannon Falls
Location: T 112 R 17 W Sec 18
Location comments: Abandoned quarry on the north side of County Rd. 19 (1); (T., R., Sec. locations determined from county highway map; exact location undetermined)
References: 1) Cornell. 1956, p. 3

Main commodity: Undifferentiated Carbonate Rock
County: Hennepin
Quarry/pit name: Anoka Quarry (1)
Status: Inactive
MN/DOT source no: 27-1
Location: T 29 R 24 W Sec 1
Location comments: 37-1/2 Ave. and Main St., NE, Minneapolis (1); (exact location undetermined; T., R., Sec. locations determined from county highway map)
References: 1) MN/DOT Aggregate Unit files (1921)

Main commodity: Undifferentiated Carbonate Rock
County: Hennepin
Status: Inactive
Location: T 29 R 24 W Sec 4
Location comments: Crystal Lake Cemetery at James Ave. N. and 41st St., Minneapolis (1); (T., R., Sec. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Description: Platteville exposed in quarry (1)
References: 1) Schwartz. 1936, p. 206

Main commodity: Undifferentiated Carbonate Rock
County: Hennepin
Status: Inactive
Location: T 29 R 24 W Sec 19 OR
 T 29 R 24 W Sec 18
Location comments: Abandoned quarry on east shore of Twin Lake, in village of Golden Valley (1); (T., R., Sec. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Description: Quarry utilized Platteville limestone, now covered with drift (1)
References: 1) Schwartz. 1936, p. 155

Main commodity: Undifferentiated Carbonate Rock
County: Houston
Status: Inactive
Location: T 102 R 6 W Sec 15 SW1/4 (1)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Description: Dolomite with 5 in. shale layer (1)
References: 1) Prokopovich; Schwartz. 1957, p. 36

Main commodity: Undifferentiated Carbonate Rock
County: Houston
Status: Inactive
Location: T 102 R 6 W Sec 33 OR
 T 102 R 6 W Sec 32
Location comments: Quarry on State Hwy. 44, 6-1/2 miles southwest of Caledonia (1,2); (exact location undetermined; T., R., Sec. locations determined from Ref. 1, fig. 47)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1,2); McGregor Mbr. (1)
Description: Platteville limestone, 31 ft exposed (1,2); see Refs. 1 and 2 for brief section descriptions
References: 1) Stauffer; Thiel. 1914, p. 166, 167
 2) Stauffer; Thiel. 1933, p. 63

Main commodity: Undifferentiated Carbonate Rock
County: Houston
Status: Inactive
Township name: La Crescent
Location: T 104 R 4 W (1)
Location comments: Along hill road 1-1/2 miles northwest of La Crescent (1); (Ref. 1 also lists Sec. 15, therefore either the section number or the direction location given (northwest) in Ref. 1 is in error)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)

Description: Covered interval of 28 ft overlies Oneota dolomite 70 ft, which overlies Jordan sandstone 25 ft (1); see Ref. 1 for section description
References: 1) Stauffer. 1950, p. 10, 11

Main commodity: Undifferentiated Carbonate Rock
County: Le Sueur
Status: Inactive
Location: T 109 R 26 W Sec 5 NE1/4 (1)
Location comments: Quarry symbol shown on quadrangle, near center of NE1/4 (1)
Geologic age: Ordovician
Geologic formation: (Oneota Fm.)
References: 1) USGS. 1979, St. Peter quadrangle

Main commodity: Undifferentiated Carbonate Rock
County: Le Sueur
Status: Inactive
Location: T 109 R 26 W Sec 5 SE1/4 NE1/4 (1)
Location comments: Quarry symbol shown on quadrangle (1)
Geologic age: Ordovician
Geologic formation: (Oneota Fm.)
References: 1) USGS. 1979, St. Peter quadrangle

Main commodity: Undifferentiated Carbonate Rock
County: Le Sueur
Status: Inactive
Location: T 109 R 26 W Sec 5 SW1/4 SE1/4 (1)
Location comments: Two quarry symbols shown on quadrangle in SW1/4 SE1/4, one on each side of railway tracks (1).
Geologic age: Ordovician
Geologic formation: (Oneota Fm.)
References: 1) USGS. 1979, St. Peter quadrangle

Main commodity: Undifferentiated Carbonate Rock
County: Le Sueur
Status: Inactive
Location: T 109 R 26 W Sec 8 SE1/4 SW1/4 (1)
Location comments: Quarry symbol shown on quadrangle (1)
Geologic age: Ordovician
Geologic formation: (Oneota Fm.)
References: 1) USGS. 1979, St. Peter quadrangle

Main commodity: Undifferentiated Carbonate Rock
County: Le Sueur
Status: Inactive
Location: T 110 R 26 W Sec 3 W1/2 NW1/4 (1)

Location comments: Quarry symbol shown on quadrangle (1)
References: 1) USGS. 1979, St. Peter quadrangle

Main commodity: Undifferentiated Carbonate Rock
County: Le Sueur
Status: Inactive
Location: T 110 R 26 W Sec 33 W1/2 NW1/4 (1)
Location comments: Quarry symbol shown on quadrangle (1)
Geologic age: Ordovician
Geologic formation: (Oneota Fm.)
References: 1) USGS. 1979, St. Peter quadrangle

Main commodity: Undifferentiated Carbonate Rock
County: Le Sueur
Status: Inactive
Location: T 110 R 26 W Sec 33 SW1/4 SW1/4 (1)
Location comments: Quarry symbol shown on quadrangle (1)
Geologic age: Ordovician
Geologic formation: (Oneota Fm.)
References: 1) USGS. 1979, St. Peter quadrangle

Main commodity: Undifferentiated Carbonate Rock
County: Le Sueur
Status: Inactive
Location: T 111 R 26 W Sec 33 SE1/4 SE1/4 (1)
Location comments: Quarry symbol shown on quadrangle (1)
References: 1) USGS. 1979, St. Peter quadrangle

Main commodity: Undifferentiated Carbonate Rock
County: Mower
Quarry/pit name: Blume Quarry (2)
Status: Abandoned (1961) (1,2)
Past operator/owner: Blume (1921) (2)
MN/DOT source no: 50-4
Township name: Le Roy
Location: T 101 R 14 W Sec 27 SE1/4 NW1/4 (1)
Location comments: Quarry located at the southeast corner of the NW1/4 of Sec. 27 (1)
Geologic age: Devonian
Geologic formation: Cedar Valley Fm. (1)
Description: About 10 ft of white lithographic and buff, fine-grained Coralville limestone (1)
Remarks: Abandoned quarry now used as the Le Roy city dump (1961) (1,2)
References: 1) Kohls. 1961, p. 191
 2) MN/DOT Aggregate Unit files

Main commodity: Undifferentiated Carbonate Rock

County: Mower
Status: Inactive
Location: T 101 R 14 W Sec 33 SW1/4 (1)
Geologic age: Devonian
Geologic formation: Cedar Valley Fm. (1)
References: 1) Prokopovich; Schwartz. 1957, p. 41

Main commodity: Undifferentiated Carbonate Rock
County: Mower
Status: Abandoned (1961) (1)
Location: T 101 R 14 W Sec 34 SE1/4 SE1/4 (1)
Geologic age: Devonian
Geologic formation: Cedar Valley Fm. (1)
Description: Quarry exposes about 12 ft of white, lithographic and buff, fine-grained Coralville limestone (1)
References: 1) Kohls. 1961, p. 191, station 56

Main commodity: Undifferentiated Carbonate Rock
County: Mower
Status: Inactive; active (1961) (1)
Location: T 101 R 14 W Sec 34 SE1/4 SE1/4 (1)
Location comments: Located 400 yds east of an abandoned quarry that is in the SE1/4 SE1/4 of Sec. 34 (1)
Geologic age: Devonian
Geologic formation: Cedar Valley Fm. (1)
Description: Exposes about 15 ft of white, lithographic and buff, fine-grained Coralville limestone (1)
References: 1) Kohls. 1961, p. 191

Main commodity: Undifferentiated Carbonate Rock
County: Mower
Quarry/pit name: Beach Quarry (1)
Status: Inactive
Location: T 101 R 18 W Sec 28 (1)
Location comments: On the west bank of the Cedar River, 3 miles west of Lyle, and one mile north of the State line (1)
Geologic age: Devonian
Geologic formation: Cedar Valley Fm. (1)
Description: Dolomitic limestone, 20 ft exposed (1)
Chemical analyses: MgO 20.10% and 20.73%, SiO₂ 8.72% and 7.24% (1); see Ref. 1 for further analyses
References: 1) Stauffer. 1950, p. 17, 26

Main commodity: Undifferentiated Carbonate Rock
County: Mower
Status: Abandoned (1961) (1)
Location: T 102 R 18 W Sec 26 NW1/4 NW1/4 (1,2)
Geologic age: Devonian

Geologic formation: Rapid Mbr. (1); (Cedar Valley Fm.)
Description: "An abandoned quarry exposes five feet of blue and red Cretaceous clay underlain by 25 feet of shaly, fine-grained Rapid dolomite." (1)
References: 1) Kohls. 1961, p. 186
 2) Prokopovich; Schwartz. 1957, p. 41

Main commodity: Undifferentiated Carbonate Rock
County: Mower
Status: Inactive
Township name: Austin
Location: T 102 R 18 W Sec 26 NW1/4 (1)
Geologic age: Devonian
Geologic formation: Cedar Valley Fm. (1)
Description: See Ref. 1 for brief description
Remarks: Old quarry (1914) (1)
References: 1) Stauffer; Thiel. 1914, p. 178, 179

Main commodity: Undifferentiated Carbonate Rock
County: Mower
Quarry/pit name: Racine Quarry (1)
Status: Inactive
Location: T 104 R 14 W Sec 7 SW1/4 (1)
Geologic age: Devonian
Geologic formation: Spillville Fm. (1)
Description: Dolomite, 15 ft face (1); see Ref. 1 for lithologic data
References: 1) Mossler. 1978, p. 32, plate 1

Main commodity: Undifferentiated Carbonate Rock
County: Mower
Status: Inactive
Location: T 104 R 14 W Sec 17 SW1/4 (1)
Location comments: "Three abandoned quarries are located in the southwest corner of Sec. 17 and the northwest corner of Sec. 20, T. 104 N., R. 14 W." (1)
Geologic age: Devonian
Geologic formation: Solon Mbr. (1,2); (Spillville Fm.)
Description: "The largest of these quarries exposes 13.9 feet of buff, fossiliferous Solon dolomite underlain by 3.4 feet of light gray, shaly and sandy Maquoketa dolomite. The maximum relief on the Maquoketa-Cedar Valley contact is 1.5 feet....The Maquoketa dolomite is not exposed in the other two quarries." (1); see Ref. 1 for detailed stratigraphic section
References: 1) Kohls. 1961, p. 111-113, 187
 2) Bayer. 1965, p. 39, plate 1

Main commodity: Undifferentiated Carbonate Rock
County: Mower
Status: Inactive (1966) (2)

Township name: Racine
Location: T 104 R 14 W Sec 20 NW1/4 NW1/4 (1-3)
Geologic age: Devonian
Geologic formation: Spillville Fm. (1); Solon Mbr. (3)
Description: Solon dolomite (3)
References: 1) Mossler. 1987, p. 26
 2) Bleifuss. 1966, p. 116
 3) Kohls. 1961, p. 187

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Quarry/pit name: Chatfield East Quarry (2)
Status: Inactive (1967) (1)
Location: T 105 R 11 W Sec 32 E1/2 SW1/4 (1,2)
Location comments: On south side of Highway 30, one mile east of Chatfield (1); two miles east of Chatfield (2)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1,2)
Description: Quarry is in the Platteville limestone (2)
 See Refs. 1 and 2 for detailed stratigraphic section, summary of Ref. 1 follows:
 Decorah Fm. 9.8 ft exposed
 Platteville Fm. 19.8 ft exposed
 Carimona Mbr. 5.2 ft, alternating limestone/shale beds
 McGregor Mbr. 13.0 ft, limestone
 Pecatonica Mbr. 1.6 ft, arenaceous dolomitic limestone
 Glenwood Fm. 4.7 ft exposed along nearby roadcut
 St. Peter Fm. 10.2 ft exposed, sandstone
References: 1) Rassam. 1967, p. 107-109
 2) Hoelt. 1959, p. 91-93, 273, 274

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Status: Inactive
Location: T 105 R 12 W Sec 2 NW1/4 NE1/4 (1)
Location comments: 3-1/2 miles south of Eyota (1)
Geologic age: Ordovician
Geologic formation: Dunleith Fm. (1)
Description: See Ref. 1 for detailed stratigraphic section, summary follows:
 Dunleith Fm.
 Wyota Mbr. 4.3 ft, micrite, thin bedded
 Wall Mbr. 9.4 ft, biomicrite, medium bedded
 Sherwood Mbr. 18.7 ft, biomicrite
 Rivoli Mbr. 10.7 ft, micrite and biomicrite
 Mortimer Mbr. 9.9 ft, micrite, thick bedded
 Fairplay Mbr. 1.0 ft, shale
References: 1) Stone. 1980, p. A-25, A-26

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted

Status: Inactive
Past operator/owner: Ried Larson (1941) (1)
Location: T 105 R 14 W Sec 26 NW1/4 (1)
Location comments: Natural outcrop on the north bank of the North Branch of the Root River at the bridge (2)
Geologic age: Ordovician
Geologic formation: Galena Gp. (2)
Description: "The rock is weathered, bleached and rather thin-bedded. The drift cover is only a few feet, but the upper part of the rock is dolomitic." (2)
Chemical analyses: See Ref. 2, station 9 for chemical analyses
References: 1) MN/DOT Aggregate Unit files
 2) Prokopovich; Schwartz. 1956, p. 20

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Status: Inactive
MN/DOT source no: 55074
Location: T 105 R 14 W Sec 32 E1/2 (1969) (1)
 T 105 R 14 W Sec 33 (1921) (1)
Location comments: Could not locate quarry in E1/2 of section 32 in 1965 or 1969 (1); (possible that quarry was actually in section 33 as listed in a Ref. 1, 1921 report)
Geologic age: Ordovician
Geologic formation: Galena Gp., Stewartville Fm. (1)
Description: Stewartville dolomite (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Status: Inactive
Township name: High Forest
Location: T 105 R 14 W Sec 33 SE1/4 NE1/4 (1)
Location comments: Old quarry in the north bank of Lake Florence just northwest of the town of Stewartville (1); north bank of the Root River 1/2 mile above the dam (2)
Geologic age: Ordovician
Geologic formation: Galena Gp., Stewartville Fm. (1,2)
Description: Dolomitic limestone, face 26-28 ft, thin soil above quarry face (1,2); see Ref. 1 and 2 for stratigraphic section descriptions; see Ref. 2 for descriptions of fossils
References: 1) Weiss. 1953, p. 292, 293
 2) Stauffer; Thiel. 1914, p. 88-90

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Status: Inactive
Location: T 105 R 15 W Sec 36 S1/2 NW1/4 (1)

Location comments: Ref. 1, plate 9 shows a quarry symbol on map at above location
Geologic age: Ordovician
Geologic formation: Dubuque/Maquoketa/Stewartville Fms. (1)
References: 1) Kuhns. 1988, plate 9

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Status: Inactive (1983) (1)
USGS quadrangle: St. Charles
Location: T 106 R 11 W Sec 25 W1/2 NE1/4 SE1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: Prosser Fm. (1)
References: 1) Mossler. 1983, station 52

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Status: Inactive
Location: T 106 R 13 W Sec 19 SW1/4 NW1/4 (1)
 T 106 R 13 W Sec 19 NW1/4 (2)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2,3); Prosser Fm. (1)
Description: Prosser limestone is well exposed in an old quarry, "The rock is weathered, thin to moderate-bedded, and light colored. About 20 ft below the floor of the quarry on the slope there is a terrace caused by the presence of the Decorah shale." (1)
References: 1) Prokopovich; Schwartz. 1956, p. 22
 2) Prokopovich; Schwartz. 1957, p. 44, 45, location 50
 3) Kuhns. 1988, plate 9

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Quarry/pit name: Rochester Quarry (1)
Status: Inactive
Location: T 106 R 13 W Sec 21 E1/2 (1,2)
Location comments: On the east side of U.S. Hwy. 52, 3.2 miles south of intersection of U.S. Hwy. 52 and U.S. Hwy. 14, south of Rochester (1,2)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1,2)
Description: See Ref. 1 for detailed stratigraphic section, summary follows:
 Decorah Fm. 5.5 ft, mostly shale
 Platteville Fm. 20.7 ft exposed
 Carimona Mbr. 8.6 ft, limestone
 McGregor Mbr. 11.2 ft, limestone
 Pecatonica Mbr. 0.9 ft, dolomitic limestone
 Glenwood Fm. 4.2 ft, shale
References: 1) Rassam. 1967, p. 98-100
 2) Hoef. 1959, p. 82, 271

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Quarry/pit name: Pit No. 2267 (1921) (1)
Status: Inactive
Past operator/owner: Frank Volz (1969) (1)
MN/DOT source no: 55081
Location: T 106 R 14 W Sec 12 NE1/4 NE1/4 (1)
Location comments: Could not locate quarry at above location in 1965 or 1969 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2)
References: 1) MN/DOT Aggregate Unit files
 2) Kuhns. 1988, plate 9

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Quarry/pit name: Golden Hill Quarry (1)
Status: Abandoned (1965) (1)
MN/DOT source no: 55-41
Location: T 106 R 14 W Sec 14 SE1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (2)
Remarks: Abandoned, urban area, entire hill being leveled (1965) (1)
References: 1) MN/DOT Aggregate Unit files
 2) Kuhns. 1988, plate 9

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Status: Inactive
Location: T 106 R 14 W Sec 16 NE1/4 (1,2)
Location comments: West of S.A.R. "P" (2)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1,2)
Description: Platteville limestone, Decorah shale also exposed in quarry (1)
Remarks: Small abandoned quarry (1956) (1)
References: 1) Prokopovich; Schwartz. 1956, p. 19, 20
 2) Prokopovich; Schwartz. 1957, p. 45

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Status: Inactive
Location: T 106 R 14 W Sec 16 SW1/4 SE1/4 (1)
Location comments: Quarry 2-1/2 miles southwest of Rochester (1)
Geologic age: Ordovician
Geologic formation: Dunleith Fm. (1); Prosser Fm. (2)
Description: See Ref. 1 for detailed stratigraphic section, summary follows:
 Dunleith Fm. 64.7 ft exposed

Wyota Mbr. 10.0 ft, biomicrite
 Wall Mbr. 10.8 ft, biomicrite
 Sherwood Mbr. 17.7 ft, biomicrite with thin clay horizons
 Rivoli Mbr. 13.4 ft, biomicrite with thin clay horizons
 Mortimer Mbr. 12.8 ft, biomicrite and shale beds
References: 1) Stone. 1980, p. A-23, A-24
 2) Kuhns. 1988, plate 9

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Status: Inactive
Location: T 106 R 14 W Sec 16 SE1/4 SW1/4 (1)
Location comments: See Ref. 1, plate 9 for location map
Geologic age: Ordovician
Geologic formation: Prosser Fm. (1)
References: 1) Kuhns. 1988, plate 9

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Status: Inactive
Location: T 106 R 14 W Sec 30 SW1/4 NE1/4 (1)
Location comments: Ref. 1, plate 9 shows a quarry symbol on map at above location
Geologic age: Ordovician
Geologic formation: Prosser Fm. (1)
References: 1) Kuhns. 1988, plate 9

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Status: Inactive
Past operator/owner: Herber (1969) (1)
MN/DOT source no: 55080
Location: T 106 R 14 W Sec 34 SE1/4 (1)
Location comments: Abandoned, could not locate in 1965 or 1969 (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Status: Inactive
Location: T 106 R 14 W Sec 36 SW1/4 SE1/4 (1)
Location comments: Ref. 1, plate 9 shows a quarry symbol on map at above location
Geologic age: Ordovician
Geologic formation: Prosser Fm. (1)
References: 1) Kuhns. 1988, plate 9

Main commodity: Undifferentiated Carbonate Rock

County: Olmsted
Status: Inactive
Location: T 107 R 12 W Sec 3 SE1/4 (1)
Location comments: North side of Hwy. 9, 1.5 miles east of intersection with County 7, south edge of SE1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Remarks: See Ref. 1, table 19.1 for trace fossil distribution
References: 1) Dokken. 1987, p. 194, table 19.1, locality 14

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Status: Inactive
Location: T 107 R 12 W Sec 10 NW1/4 SE1/4 (1)
Location comments: Quarry west side of Hwy. 49/42, 5-3/4 miles north of intersection of Hwys. 49/42 and 14 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm., Carirmona and McGregor Mbrs. (1)
Description: See Ref. 1 for detailed stratigraphic section, summary follows:
 Platteville Fm. 13.3 ft exposed
 Carirmona Mbr. 7.4 ft, limestone with shale partings
 McGregor Mbr. 8.4 ft, limestone
 Pecatonica Mbr. 2.5 ft, limestone
References: 1) MN/DOT Aggregate Unit files

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Status: Inactive; abandoned (1969) (2)
Location: T 107 R 13 W Sec 32 (1)
Location comments: Quarry 1.5 miles east of State Hospital, east of Rochester (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm., Decorah Shale, and Cummingsville Fm. (1,2)
Description: Upper part of Platteville limestone, Decorah shale, and lower part of the Galena dolomite (2); see Refs. 1 and 2 for detailed descriptions of the fauna in the Decorah shale beds
References: 1) Swain; Cornell. 1987, p. 102, 103
 2) Karklins. 1969, p. 6

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Status: Inactive
Location: T 107 R 14 W Sec 29 W1/4 (1)
Location comments: Near W1/4 corner (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)

Description: Platteville limestone, Glenwood Fm. also exposed in quarry (1)
References: 1) Prokopovich; Schwartz. 1957, p. 46

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Quarry/pit name: Daneville Quarry (2)
Status: Inactive
USGS quadrangle: Bryan
Location: T 107 R 15 W Sec 18 S1/2 NE1/4 (1,2)
 T 107 R 15 W Sec 18 SW1/4 SE1/4 NE1/4 (3)
Location comments: Quarry north side of County Rd. 5, 2 miles north and 1 mile west of Bryan (1); quarry in the valley of the South Branch, Middle Fork of the Zumbro River (3)
Geologic age: Ordovician
Geologic formation: Platteville Fm. and Decorah Fm. (1-4)
Description: Quarry in Platteville limestone (1-4); see Ref. 1 for detailed stratigraphic section, summary follows:
 Decorah Fm. 10-15 ft exposed
 Platteville Fm. 16.6 ft exposed
 Carirmona Mbr. 4.2 ft, alternating limestone/shale beds
 McGregor Mbr. 11.1 ft, alternating limestone/dolomite beds
 Pecatonica Mbr. 1.3 ft, dolomite
 See Ref. 2, locality 16 for trace fossil distribution in the Platteville; see Ref. 4 for description of Decorah shale
References: 1) Hoeft. 1959, p. 278, 279
 2) Dokken. 1987, p. 194
 3) Hobbs. 1987, p. 181, 182
 4) Prokopovich; Schwartz. 1957, p. 46

Main commodity: Undifferentiated Carbonate Rock
County: Olmsted
Status: Inactive
Past operator/owner: Barker (1969) (1)
MN/DOT source no: 55068
Location: T 107 R 15 W Sec 21 SW1/4 (1)
Location comments: Could not locate quarry in 1965 or 1969, gravel pit SE of location (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Undifferentiated Carbonate Rock
County: Ramsey
Status: Inactive
Past operator/owner: Fayen Construction Co. (1921) (1)
MN/DOT source no: 62-2
Location: T 28 R 22 W Sec 8 NW1/4
Location comments: Humbolt and George St., St. Paul (1); (T., R., Sec. locations determined from Mpls./St. Paul street map and St. Paul East quadrangle)

References: 1) MN/DOT Aggregate Unit files
2) USGS. 1972, St. Paul East quadrangle

Main commodity: Undifferentiated Carbonate Rock
County: Ramsey
Status: Inactive
Past operator/owner: W.P.A. and City of St. Paul (1921) (1)
Location: T 28 R 22 W Sec 8 NW1/4
Location comments: Humbolt and George St., St. Paul (1); (T., R., Sec. locations determined from Mpls./St. Paul street map and St. Paul East quadrangle)
References: 1) MN/DOT Aggregate Unit files
2) USGS. 1972, St. Paul East quadrangle

Main commodity: Undifferentiated Carbonate Rock
County: Rice
Status: Inactive
Location: T 110 R 20 W Sec 9 SE1/4 SW1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Description: Limestone 8.6 ft overlies 1.8 ft of shale and 2.8 ft of dolomite; see Ref. 1 for section description
Chemical analyses: See Ref. 1 for percentage of dolomite content
References: 1) Mossler. 1971

Main commodity: Undifferentiated Carbonate Rock
County: Rice
Quarry/pit name: Hallet Quarry (3,4)
Status: Inactive
Location: T 110 R 20 W Sec 33 SW1/4 SW1/4 (1-3)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1-4)
Description: Platteville 15.4 ft exposed (2,3); see Refs. 2-4 for stratigraphic section descriptions
Chemical analyses: See Ref. 4 for chemical analyses
References: 1) Dokken. 1987, p. 194
2) Rassam. 1967, p. 88-90
3) Ford. 1958, p. 117-119
4) Stauffer; Thiel. 1914, p. 115, 118, 192

Main commodity: Undifferentiated Carbonate Rock
County: Scott
Status: Abandoned (1888) (1)
Past operator/owner: Thomas Durose (1888) (1)
USGS quadrangle: Eden Prairie
Township name: Eagle Creek
Location: T 115 R 22 W Sec 3 NE1/4 OR
T 115 R 22 W Sec 3 N1/2 SW1/4 (1)
Location comments: Four miles east of Shakopee, beside a little creek, north of the road and near the river (1); location of Shakopee limestone outcrops

Geologic age: Ordovician
Geologic formation: Shakopee Fm. (1)
Description: Shakopee limestone, 10 to 15 ft exposed (1)
Remarks: Slightly quarried (1)
References: 1) Winchell; Upham. 1888, p. 126

Main commodity: Undifferentiated Carbonate Rock
County: Wabasha
Status: Inactive
Township name: Green Field
Location: T 110 R 10 W Sec 33 NW1/4 SE1/4 (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
References: 1) Mossler. 1974b, Wabasha station 41

Main commodity: Undifferentiated Carbonate Rock
County: Wabasha
Status: Inactive
Township name: Glasgow
Location: T 110 R 11 W Sec 12 SE1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
References: 1) Mossler. 1974b, Wabasha station 57

Main commodity: Undifferentiated Carbonate Rock
County: Wabasha
Quarry/pit name: McKeefry Quarry (1)
Status: Inactive
Past operator/owner: McKeefry (1888) (1)
Location: T 111 R 10 W
Location comments: Wabasha (1); (T., R. locations determined from Ref. 1, plate 32)
Geologic formation: St. Croix (1)
References: 1) Winchell; Upham. 1888, p. 13, plate 32

Main commodity: Undifferentiated Carbonate Rock
County: Wabasha
Quarry/pit name: Singer Quarry (1)
Status: Inactive (1918) (1)
Township name: Pepin
Location: T 111 R 11 W Sec 24
Location comments: At Reads Landing (1); (T., R., Sec. locations determined from county highway map)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1)

Description: A buff, thin-bedded, sandy dolomite, with interbedded shales, too friable for structural purposes (1)
References: 1) Bowles. 1918, p. 192

Main commodity: Undifferentiated Carbonate Rock
County: Wabasha
Status: Inactive
Township name: Pepin
Location: T 111 R 11 W Sec 29 SW1/4 SW1/4 (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Remarks: Small quarry (1)
References: 1) Mossler. 1974b, Wabasha station 95

Main commodity: Undifferentiated Carbonate Rock
County: Washington
Status: Abandoned (1958) (1)
Township name: Denmark
Location: T 27 R 20 W Sec 19 NW1/4 NW1/4 (1)
Location comments: Near the center of the NW1/4 NW1/4, Sec. 19 (1)
Geologic age: Ordovician
Geologic formation: Prairie du Chien Gp. (1)
Description: Dolomite float in pit (1)
References: 1) Kohls. 1958, p. 118, station 55

Main commodity: Undifferentiated Carbonate Rock
County: Washington
Status: Abandoned (1958) (1)
Township name: Denmark
Location: T 27 R 20 W Sec 30 NW1/4 SE1/4 (1)
Geologic age: Ordovician
Geologic formation: Prairie du Chien Gp. (1)
Description: Dolomite (1)
References: 1) Kohls. 1958, p. 117, station 44

Main commodity: Undifferentiated Carbonate Rock
County: Washington
Status: Inactive
Location: T 27 R 21 W Sec 2 SE1/4 NE1/4 AND
T 27 R 21 W Sec 1 SW1/4 NW1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
References: 1) Mossler. 1974a, St. Paul Park station 170

Main commodity: Undifferentiated Carbonate Rock
County: Washington
Status: Inactive

Location: T 27 R 21 W Sec 21 NE1/4 SW1/4 (1)
Geologic age: Ordovician
Geologic formation: Prairie du Chien Gp. (1)
References: 1) Mossler. 1974a, St. Paul Park station 191

Main commodity: Undifferentiated Carbonate Rock
County: Washington
Status: Inactive
Location: T 27 R 22 W Sec 1 SE1/4 SE1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Remarks: Old quarry (1)
References: 1) Mossler. 1974a, St. Paul Park station 161

Main commodity: Undifferentiated Carbonate Rock
County: Washington
Status: Inactive
Location: T 27 R 22 W Sec 1 NE1/4 SE1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Remarks: Old quarry (1)
References: 1) Mossler. 1974a, St. Paul Park station 160

Main commodity: Undifferentiated Carbonate Rock
County: Washington
Status: Inactive
Location: T 27 R 22 W Sec 11 SE1/4 NE1/4 (1-3)
Geologic age: Ordovician
Geologic formation: Shakopee Fm. (2,3)
Description: Dolomitic limestone, 25 ft exposed (2); see Refs. 2 and 3 for stratigraphic section descriptions
References: 1) Mossler. 1974a, Inver Grove Heights station 181
2) Squillace. 1979, p. A-16
3) Austin. 1971, p. 199-202

Main commodity: Undifferentiated Carbonate Rock
County: Washington
Status: Inactive
Location: T 28 R 20 W Sec 17 SE1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: Prairie du Chien Gp. (1)
Remarks: Quarry ? (1)
References: 1) Mossler. 1974a, Hudson station 44

Main commodity: Undifferentiated Carbonate Rock
County: Washington
Status: Inactive

Location: T 28 R 20 W
Location comments: "Road cut and abandoned limestone quarry 3.9 miles south of Hwy. 12 on Washington County Rd. 33; 3.4 miles west of the Methodist Church in Afton, Minnesota on Minnesota Hwy. 9." (1); (T., R. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
Description: Dolomitic limestone and limestone, 19 ft exposed (1); see Ref. 1 for stratigraphic section description
References: 1) Majewski. 1953, p. 88, 89

Main commodity: Undifferentiated Carbonate Rock
County: Washington
Status: Inactive
Location: T 28 R 20 W Sec 19 NE1/4 SE1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
References: 1) Mossler. 1974a, Hudson station 19

Main commodity: Undifferentiated Carbonate Rock
County: Washington
Status: Inactive
Location: T 28 R 21 W Sec 1 NW1/4 SW1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
References: 1) Mossler. 1974a, Lake Elmo station 2

Main commodity: Undifferentiated Carbonate Rock
County: Washington
Status: Inactive (1935) (1)
Location: T 29 R 20 W Sec 3 SW1/4 (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
References: 1) Thiel; Dutton. 1935, p. 143

Main commodity: Undifferentiated Carbonate Rock
County: Washington
Status: Inactive
Location: T 29 R 20 W Sec 3 NW1/4 NW1/4 (1)
 T 29 R 20 W Sec 3 (2,3)
Location comments: Small abandoned quarry along Omaha Railway (2,3)
Geologic age: Ordovician
Geologic formation: Shakopee-Oneota Fms. (2,3)
Description: Dolomite, 20 ft exposed (2,3)

References: 1) Mossler. 1974a, Stillwater station 95
 2) Brown. 1956, p. 136
 3) Schwartz. 1936, p. 189

Main commodity: Undifferentiated Carbonate Rock
County: Washington
Quarry/pit name: Neanaber/Neanber Quarry (2,3)
Status: Inactive
Past operator/owner: George Vollmer (1936) (4)
Location: T 29 R 20 W Sec 29 NW1/4 SW1/4 (1,2) AND
 T 29 R 20 W Sec 30 NE1/4 SE1/4 (2)
 T 29 R 20 W Sec 30 SE1/4 (4)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1-4)
Description: Platteville dolomite, 5.8 ft overlies 8 ft of limestone (2); see Refs. 2 and 3 for section descriptions
References: 1) Mossler. 1974a, Hudson station 36
 2) Mossler. 1971
 3) Majewski. 1953, p. 90, 91
 4) Schwartz. 1936, p. 191

Main commodity: Undifferentiated Carbonate Rock
County: Washington
Status: Inactive (1935) (1)
Location: T 29 R 20 W Sec 30 SE1/4 (1)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
References: 1) Thiel; Dutton. 1935, p. 142

Main commodity: Undifferentiated Carbonate Rock
County: Washington
Status: Inactive
Location: T 29 R 21 W
Location comments: Small quarries worked in Oakdale township (1); (T., R. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: Platteville Fm. (1)
References: 1) Bowles. 1918, p. 194

Main commodity: Undifferentiated Carbonate Rock
County: Washington
Status: Inactive
Location: T 30 R 20 W Sec 1 (1,2)
Location comments: Quarry along Soo Line tracks near the bridge at Arcola (1,2)
Geologic age: Ordovician
Geologic formation: Shakopee-Oneota Fms. (1,2)
Description: Dolomite (1,2)

Remarks: Dolomite exposed in exploration quarry on hill (1,2)

References: 1) Schwartz. 1936, p. 185
2) Brown. 1956, p. 133

Main commodity: Undifferentiated Carbonate Rock

County: Washington

Status: Inactive

Location: T 30 R 20 W Sec 20 NE1/4 NE1/4 (1)
T 30 R 20 W Sec 20 NE1/4 (2,3)

Location comments: Old quarry at road bridge over Northern Pacific Railway and Brown's Creek, Stillwater (2,3)

Geologic age: Ordovician

Geologic formation: Shakopee-Oneota Fms. (2)

Description: Dolomite, 20 ft exposed (2)

References: 1) Mossler. 1974a, Stillwater station 97
2) Schwartz. 1936, p. 186
3) Brown. 1956, p. 135

Main commodity: Undifferentiated Carbonate Rock

County: Washington

Status: Inactive (1935) (1)

Location: T 30 R 20 W Sec 20 NW1/4 (1)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1)

References: 1) Thiel; Dutton. 1935, p. 142

Main commodity: Undifferentiated Carbonate Rock

County: Washington

Status: Inactive

Location: T 30 R 20 W Sec 28 NE1/4 NE1/4 AND
T 30 R 20 W Sec 21 SE1/4 SE1/4 (1)

Geologic age: Ordovician

Geologic formation: Prairie du Chien Gp. (1)

References: 1) Mossler. 1974a, Stillwater station 83

Main commodity: Undifferentiated Carbonate Rock

County: Washington

Quarry/pit name: McNaughton Quarry (1-4)

Status: Inactive

Past operator/owner: Henry Radle, owner 1950 (1); Wm. McNaughton (2-4)

Location: T 30 R 20 W

Location comments: In Stillwater (1-4); (T., R. locations determined from county highway map)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1-4)

Description: Oneota dolomite, 53 ft, makes up most of the quarry wall (1-4); see Refs. 1-4 for section descriptions

Chemical analyses: MgO 19.45%, 19.47%, 19.47%, and 19.09%; SiO₂ 5.66%, 7.90%, 3.72%, and 6.28% (1); see Ref. 1 for further analyses

References: 1) Stauffer. 1950, p. 4, 24
2) Schwartz. 1936, p. 188
3) Brown. 1956, p. 27, 28
4) Stauffer; Thiel. 1914, p. 215

Main commodity: Undifferentiated Carbonate Rock

County: Washington

Status: Inactive

Township name: Marine

Location: T 31 R 19 W Sec 19 NW1/4 NW1/4 (1)

Geologic age: Ordovician

Geologic formation: Shakopee-Oneota Fms. (1)

Description: Dolomite, 8 ft exposed (1)

Remarks: Old quarry (1936) (1)

References: 1) Schwartz. 1936, p. 183

Main commodity: Undifferentiated Carbonate Rock

County: Washington

Status: Inactive

Location: T 31 R 19 W Sec 30 NW1/4 SE1/4 (1)

Location comments: Old quarry on hill, back of Arcola Public School (2,3)

Geologic age: Ordovician

Geologic formation: Shakopee-Oneota Fms. (2); Oneota Fm. (3)

Description: Dolomite, 8 ft exposed (3)

References: 1) Mossler. 1974a, Marine station 123
2) Schwartz. 1936, p. 184
3) Stauffer; Thiel. 1914, p. 207

Main commodity: Undifferentiated Carbonate Rock

County: Washington

Status: Inactive

Location: T 31 R 19 W Sec 31 SE1/4 SE1/4 (1)

Geologic age: Ordovician

Geologic formation: Prairie du Chien Gp. (1)

References: 1) Mossler. 1974a, Marine station 114

Main commodity: Undifferentiated Carbonate Rock

County: Winona

Status: Inactive (1984) (1)

Location: T 105 R 7 W Sec 24 NE1/4 SE1/4 SE1/4 (1)

Geologic age: Ordovician

Geologic formation: Oneota Fm. (1)

Description: Lower part of Oneota Fm. (1)

References: 1) Jirsa; Meyer. 1984, plate 8

Main commodity: Undifferentiated Carbonate Rock
County: Winona
Status: Inactive (1983) (1,2)
Township name: Saratoga
Location: T 105 R 10 W Sec 10 NE1/4 NE1/4 NE1/4 (1,2)
Location comments: Quarry in pasture (2)
Geologic age: Ordovician
Geologic formation: Galena Gp. (1); Prosser Fm. (2)
References: 1) Jirsa; Meyer. 1984, plate 8
 2) Mossler. 1983, station 18

Main commodity: Undifferentiated Carbonate Rock
County: Winona
Status: Inactive
Township name: Saratoga
Location: T 105 R 10 W Sec 34 E1/2 (1)
Location comments: Quarry in the middle of the E1/2, some hundreds of feet west from the road in a small valley (1)
Geologic age: Ordovician
Geologic formation: Prosser Fm. (1)
Description: Quarry exposes 7 to 10 ft of thin-bedded, light buff limestone (1)
Chemical analyses: CaO 49.13%, MgO 1.94%, insoluble 8.06% (1); see Ref. 1 for further analyses
Remarks: Small old quarry (1)
References: 1) Prokopovich; Schwartz. 1956, p. 26, 27

Main commodity: Undifferentiated Carbonate Rock
County: Winona

Status: Inactive
USGS quadrangle: Witoka
Township name: Homer
Location: T 106 R 6 W Sec 32 NW1/4 SE1/4 SW1/4 (1)
Geologic age: Cambrian
Geologic formation: St. Lawrence Fm. (1)
Remarks: Small quarried area (1)
References: 1) Mossler. 1983, station 121

Main commodity: Undifferentiated Carbonate Rock
County: Winona
Status: Abandoned (1)
Township name: Warren
Location: T 106 R 8 W Sec 7 SW1/4 SW1/4 NE1/4 (1)
Geologic age: Ordovician
Geologic formation: Oneota Fm. (1)
Remarks: Very old abandoned quarry in nose on ridge (1)
References: 1) Mossler; Book. 1981, station 22

Main commodity: Undifferentiated Carbonate Rock
County: Winona
Status: Inactive
Location: T 107 R 10 W Sec 31 SE1/4 SE1/4 SE1/4 (1)
Geologic age: Ordovician
Geologic formation: Prairie du Chien Gp. (1)
Remarks: Old quarry (1)
References: 1) Mossler. field notes on Elba quadrangle

Main commodity: Crushed Granite
County: Beltrami
Status: Inactive; active 1967 or 1968 (1)
Location: T 153 R 30 W (1)
Location comments: Quarry in section 21 or 22, 1/2 mile west of Hwy. 72 (1)
Extraction method: Blasting (1)
Uses of commodity: Road construction (1)
Remarks: Blasted for construction materials for Hwy. 72 (1)
References: 1) MN/DOT Bemidji District. 1989, personal communication

Main commodity: Crushed Granite
County: Benton
Quarry/pit name: Arnold Quarry (1,2)
Date opened: 1884 (1)
Status: Inactive; active 1884-1911, 1914-? (1,2)
Past operator/owner: Sauk Rapids Granite Co. (1,2); Western Granite Co. (1,2)

Township name: Sauk Rapids
Location: T 36 R 31 W Sec 14 NE1/4 (1-3)
Location comments: See Ref. 1, plate 1 for location map
Description: "Both red and gray rock occur, and the quarry is situated at a contact of the two. The red is a hornblende granite, though somewhat paler in color than the typical 'St. Cloud red' granite. Near the contact of the gray rock the color becomes a paler pink and the texture finer. Though the line of contact is fairly distinct, the rocks are somewhat mixed, both pink and gray feldspars appearing in each type. The age relation of the two rocks was not determined." (1)

"The gray rock is a hornblende granite, somewhat finer grained than the red and containing less quartz. Major joints strike N. 20 deg. E. and dip about 80 deg. W. Several minor joints intersect them at various angles." (1)

"The most serious imperfection is the shattered nature of the rock. Two large diabase dikes 3 to 4 feet across run N. 55 deg. E. through the quarry, and it seems reasonable to suppose that the shattering which accompanied their injection started incipient fractures in the surrounding rock. The faded color of the red granite and the mixing of the two types near the contact also results in considerable waste." (1)

Extraction method: Shelf or bench (1)
Uses of commodity: Crushed rock (2)
Remarks: A few rods to the north a small pit has been made in the red rock, which at this point exhibits a fine deep color. (1)
References: 1) Bowles. 1918, p. 126, 127
 2) Thiel; Dutton. 1935, p. 74
 3) Winchell; Upham. 1888, p. 434

Main commodity: Crushed Granite
County: Big Stone
Status: Inactive (1)
MN/DOT source no: 06002
Location: T 121 R 46 W Sec 4 (1)
Location comments: Ortonville (1)
Physical test data: Available from MN/DOT Aggregate Unit - COPES file (1)
Remarks: Class A quarry stone (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Granite
Other commodities: Dimension Granite
County: Big Stone
Quarry/pit name: Consolidated Granite Co. Quarry (1)
Date opened: 1898 (1)
Status: Inactive since 1911 (1)
Past operator/owner: Consolidated Granite Co. (1)
Location: T 121 R 46 W Sec 22 (1)
Location comments: About 1 1/2 miles from Ortonville (1)
Description: Granite (2)
Uses of commodity: Buildings, roads, monuments, railroad work (2)
Remarks: Produced large blocks of excellent quality monumental stone, later it became more difficult to obtain blocks of such quality. Later produced crushed stone. (1)
References: 1) Bowles. 1918, p. 69
 2) Cooley. 1911, p. 15

Main commodity: Crushed Granite
County: Chippewa
Status: Inactive
Location: T 116 R 39 W Sec 33 NW1/4 NW1/4 (1,2)
Location comments: See Ref. 1, plate 3 and Ref. 2, plate 9 for location map
Geologic age: Archean
Geologic formation: Montevideo Gneiss (1,2)
Description: Granite gneiss (1,2); see Ref. 2, table 9, for modal analyses from site near quarry
References: 1) Lund. 1956, plate 3
 2) Lund. 1950, p. 44, 45, 77

Main commodity: Crushed Granite
County: Chippewa
Status: Inactive
Location: T 117 R 40 W Sec 19 NW1/4 NE1/4 (3)
Location comments: About 1/2 mile south of Montevideo (1); see Ref. 3, plate 10 for location map
Geologic age: Archean
Geologic formation: Montevideo Gneiss (3)

Description: Gray gneiss or banded granite, thin section shows that it consists mainly of quartz in clear small grains, feldspars, both orthoclase and plagioclase, and a little biotite. (1); granite gneiss (2)

Uses of commodity: Crushed rock for road construction (1)

References: 1) Bowles. 1918, p. 69, 70
2) Thiel; Dutton. 1935, p. 101
3) Lund. 1950, plate 10

Main commodity: Crushed Granite

County: Cook

Status: Inactive

USGS quadrangle: Tofte

Location: T 59 R 4 W Sec 20 SE1/4 NE1/4 (3)
T 59 R 4 W Sec 20 NE1/4 (1,3)

Location comments: Near Tofte (1,2); see Ref. 3, p. 83 for location map, two quarries shown in NE quarter section

Description: Massive, dense, coarse grained, green to pink anorthosite. Bedding planes are evident but widely spaced. Joints are 6 to 6-1/2 deg. from normal. Except for minor zeolite dikes, no other intrusions, dikes, sills or faults were noted in the quarry faces. (1)

Physical test data: Available from U.S. Army Corps of Engineers (1)

Uses of commodity: Breakwater construction (1); riprap (2)

Remarks: Currently (1989) owned by 3M Co. (1)

References: 1) U.S. Army Corps of Engineers files
2) Green. 1972, p. 329
3) Green and others. 1977, p. 83
4) Warzyn. 1988, p. 11, 12

Main commodity: Crushed Granite

County: Lake

Quarry/pit name: Silver Cliffs Quarry (1)

Date opened: 1952 (1)

Status: Inactive

Location: T 55 R 7 W Sec 7 NE1/4 NW1/4 (2)
T 55 R 7 W Sec 7 SW1/4 (2)

Location comments: Silver Bay, 100-200 yards from Lake Superior (1)

Geologic age: Middle Proterozoic

Geologic formation: Duluth Gabbro(1); Duluth Complex (2)

Description: Gabbro, dark gray, fine to medium grained; consisting of plagioclase feldspar and pyroxenes (augite and biotite); nearly vertical joints trending east-west, widely spaced; also several randomly oriented joints (1); for further detailed lithologic description see Ref. 1

Physical test data: Available from U.S. Army Corps of Engineers (2)

Uses of commodity: Breakwater (1)

Remarks: Property owned by Reserve Mining Co. (1988) (1,2)

References: 1) Warzyn. 1988, p. 10, 11, appendix D
2) U.S. Army Corps of Engineers files

Main commodity: Crushed Granite

County: Lake

Status: Inactive

Past operator/owner: Wieland Bros. (1)

Location: T 55 R 8 W

Location comments: West side of Beaver Bay (2); (T., R. locations determined from county highway map)

Description: Red syenite, uniformly brownish red color, fine-grained (1); an even grained rock of purplish gray color, not coarse, granite (granophytic) (2); for further lithologic description see Ref. 2, p. 399

Physical test data: For detailed test data see Ref. 1, p. 196-199

Uses of commodity: Filling for cribs of docks (1)

References: 1) Winchell and others. 1884, p. 145, 148, 196-199
2) Winchell; Grant. 1900, p. 399

Main commodity: Crushed Granite

County: Lake

Quarry/pit name: La Bounty Quarry (1)

Status: Inactive

Past operator/owner: La Bounty (1)

Location: T 56 R 8 W Sec 27 NE1/4 SE1/4 (1,2)

Geologic age: Middle Proterozoic

Geologic formation: Duluth Complex (1)

Description: Anorthosite (1,2)

Physical test data: Available from U.S. Army Corps of Engineers (1)

References: 1) U.S. Army Corps of Engineers files
2) Green. 1982, p. 4, 5

Main commodity: Crushed Granite

County: Renville

Status: Inactive

Past operator/owner: Cold Spring Granite Co. (see Producer Directory) (1)

Location: T 113 R 34 W Sec 31 S1/2 NW1/4 NE1/4 (1)

References: 1) USBM. [1978], MILS

Main commodity: Crushed Granite

County: St. Louis

Quarry/pit name: 57th Ave. West Quarry (4)

Status: Inactive

USGS quadrangle: Duluth Heights

Location: T 49 R 14 W Sec 6 (6)

Location comments: Near 57th Ave. and Franklin Street (3); 59th Ave. West and Columbia Ave., Duluth (2); at 59th Ave. West and north of the railroad (1); (possibly SW 1/4 of Sec. 6)

Description: "At the east end very coarse feldspathic gabbro with reddish patches is exposed at the base of

the vertical face. Above the feldspathic gabbro there is a 6-foot layer of black hornfels, and above that is a finer-grained diabase gabbro. Along the top of the main face there is generally a zone of finer-grained gabbro, but at places coarse feldspathic gabbro breaks across to form the top of the cliff. The hornfels seems without much doubt to represent large inclusions of basalt in the gabbro which have been completely recrystallized by the heat of the gabbro." (1); see Ref. 6, table 4, p. 16 for modal analyses

Chemical analyses: See Ref. 5, table V-30, p. 383 for chemical analyses

Uses of commodity: Breakwater facings (3)

References:

- 1) Schwartz. 1949, p. 54, 90, 127
- 2) Schwartz. 1943, p. 1224
- 3) Taylor. 1963, p. 11
- 4) Taylor. 1956, p. 49
- 5) Bonnicksen. 1972, p. 383
- 6) Taylor. 1964, p. 13, 16
- 7) Green and others. 1977, p. 76

Main commodity: Crushed Granite

County: St. Louis

Quarry/pit name: The Duluth City Quarry (1,2)

Date opened: 1913 (1,2)

Status: Inactive

Location: T 50 R 14 W

Location comments: Near 11th Ave. West and Superior St., Duluth (1,2); (T., R. locations determined from county highway map)

Geologic age: Middle Proterozoic

Geologic formation: (Duluth Complex)

Description: Gabbro (1)

Uses of commodity: Improvements on the Superior breakwater (1,2)

References:

- 1) Bowles. 1918, p. 149
- 2) Thiel; Dutton. 1935, p. 107

Main commodity: Crushed Granite

County: St. Louis

Status: Inactive since 1950's (1)

Past operator/owner: USS, Division of USX Corp. - USS currently (1989) owns property (1)

Location: T 59 R 18 W Sec 28 NW1/4 SW1/4 (3) OR
T 59 R 18 W Sec 28 NW1/4 SE1/4 (2)

Location comments: At Minntac (taconite) plant site (1); north of Mountain Iron (2)

Description: Medium-grained pink gneissic granite, containing xenoliths and schlieren (2)

References:

- 1) USS, Division of USX Corp., Lands and Timbers, Minntac Plant. 1989, personal communication
- 2) Goldich and others. 1961, p. 175
- 3) USGS. 1976, Kinney quadrangle

Main commodity: Crushed Granite

County: St. Louis

Status: Inactive

Location: T 61 R 18 W Sec 31 S1/2 (1)

Location comments: Shown as gravel pit on Idington Quad (1)

References:

- 1) USS, Division of USX Corp., Lands and Timbers, Minntac Plant. 1989, personal communication

Main commodity: Crushed Granite

County: Stearns

Status: Inactive; active 1988 (2)

Past operator/owner: Meridian Aggregate Co. (see Producer Directory) (2); J. L. Shiely Co. (see Producer Directory) (1)

Location: T 124 R 28 W Sec 9 (1)

References:

- 1) USBM. [1980], MILS
- 2) USDL. MSHA mine reference list

Main commodity: Dimension Granite
County: Benton
Quarry/pit name: Fischer Co. Quarry (1)
Date opened: 1909 (1)
Status: Inactive
Past operator/owner: Fischer Co. (1)
Township name: Minden
Location: T 36 R 30 W Sec 31 E1/2 SW1/4 (1)
Location comments: See Ref. 1, plate 1 for location map
Description: "The rock is medium to coarse grained hornblende granite of the typical 'St. Cloud red' type. Pink feldspar forms about three-fourths of the rock, and the remaining fourth is about three parts quartz and one part hornblende. The texture is uniform and the color fairly attractive, though much paler than most of the red granites of Stearns County. Under the microscope the feldspar is seen to be microcline. The hornblende is fringed with biotite in some places. Feldspars show considerable alteration to kaolinite. Such alteration affects the rock seriously for structural purposes only where excessive, as along joints or in 'sap rock' near the surface." (1)
 "Major joints strike N. 87 deg. E., and a second system N. 60 deg. E. The joints are nearly vertical and 2 to 15 feet apart. Indistinct horizontal sheeting planes are spaced 2 to 10 feet apart. Some hair lines are present, and two narrow diabase dikes cross the quarry in the direction of the chief joints, N. 87 deg. E." (1)
Uses of commodity: Building stone, curbing (1)
Remarks: Large uniform blocks are easily obtained (1)
References: 1) Bowles. 1918, p. 125

Main commodity: Dimension Granite
County: Benton
Date opened: About 1883 (1)
Status: Inactive
Past operator/owner: J. O. McConnel (1)
Township name: Minden
Location: T 36 R 30 W Sec 31 E1/2 SW1/4 (1)
Location comments: Just east of Fischer Co. Quarry (1); see Ref. 1, plate 1 for location map
Description: Gray rock, similar in texture and color to that farther south, in Sherburne Co. (1)
Uses of commodity: Building stone (1)
References: 1) Bowles. 1918, p. 125

Main commodity: Dimension Granite
County: Benton
Quarry/pit name: Sauk Rapids Quarry (3)
Date opened: 1867 (1)
Status: Inactive

Past operator/owner: Burns, Reeder, and Robinson (1-3); Collins, Mitchell, and Searle (1-3); Fog (1-3)
Township name: Sauk Rapids
Location: T 36 R 31 W
Location comments: Nearly in the center of the village of Sauk Rapids (1,2); (T., R locations determined from Ref. 2, plate 46)
Geologic age: Early Proterozoic
Description: Fine-grained gray syenite (1,2)
Physical test data: For detailed test data see Ref. 5, p. 196-199
Remarks: Especially adapted for ornamental use and for cemetery monuments (1,2)
References: 1) Upham. 1884, p. 112
 2) Winchell; Upham. 1888, p. 433
 3) Bowles. 1918, p. 129
 4) Thiel; Dutton. 1935, p. 63
 5) Winchell and others. 1884, p. 196-199

Main commodity: Dimension Granite
County: Benton
Quarry/pit name: Swanson and Hagstedt Quarry (2)
Date opened: About 1896 (1,2)
Status: Inactive since 1909 (1,2)
Past operator/owner: Swanson and Hagstedt (1,2)
Township name: Sauk Rapids
Location: T 36 R 31 W Sec 1 NW1/4 NE1/4 (2)
Location comments: See Ref. 2, plate 1 for location map
Description: "...very pale pink or almost gray hornblende granite with the texture of the St. Cloud Red. It has a uniform texture. The feldspars are orthoclase, microcline, and plagioclase. They are perthitic and exhibit considerable alteration. The hornblende shows alteration to biotite." (1)
 "Major joints strike N. 80 deg. E. and secondary joints N. 8 deg. E. They are widely spaced. Sheeting planes are horizontal, distinct, and from 2 to 6 feet apart - much closer and more distinct than in most of the quarries of the region. Consequently, slabs of large size may easily be obtained." (1)
 "The rock contains a few small dark knots and a number of larger green patches, probably inclusions, some of which are a foot in diameter. These are easily eliminated at the fabrication plant." (1)
 "No stripping is required. The quarry is worked to a depth of only 8 to 10 feet as a bench quarry. Deeper excavation would require pumping." (1); See Ref. 2 for further lithologic description
Extraction method: Bench (1,2)
Uses of commodity: Paving stone, building blocks, flagging, door sills, steps (1,2)
Remarks: Not recommended for monumental purposes (1,2)

References: 1) Thiel; Dutton. 1935, p. 74, 75
2) Bowles. 1918, p. 128, 129

Main commodity: Dimension Granite
County: Benton
Status: Inactive
Past operator/owner: Sauk Rapids Granite Co. (1); Western Granite Co. (1)
Township name: Sauk Rapids
Location: T 36 R 31 W Sec 11 SE1/4 SE1/4 (1)
Location comments: See Ref. 1, plate 1 for location map
Description: Both red and gray granite occur. The former is a deep-red hornblende granite of uniform texture. "The feldspars, forming about 70 per cent of the rock mass, are red, with the exception of a few scattered grains of greenish color. Quartz, forming about 20 per cent of the rock, is in large transparent grains, and black hornblende forms the remainder. Close to the contact with the gray granite the rock is somewhat lighter in color. Under the microscope the chief feldspar is seen to be orthoclase, intergrown with plagioclase as a microperthite." (1)

"Major joints strike N. 5 deg. W. and secondary joints cross them at right angles. They are all vertical and 3 to 15 feet apart. Three nearly horizontal sheets appear at intervals of 20, 18, and 7 feet. A few dark streaks were noted where the dark minerals were aggregated in lines, giving the rock an indistinct gneissic appearance. A very few hair lines, but no dikes, were seen. A few inclusions of gray rock occur in the red." (1)

"This quarry represents one of the few observed cases where good rock is obtained close to contacts." (1)

"The gray rock, which has been quarried less extensively, is a fine-grained hornblende granite that exhibits streaks and has somewhat uneven texture." (1)

Uses of commodity: Monumental stone, building stone, curbing, paving stone (1)

Remarks: Bowles stated, "...one of the most attractive red granites observed in the St. Cloud region." (1)

References: 1) Bowles. 1918, p. 127, 128

Main commodity: Dimension Granite
County: Benton
Status: Inactive
Past operator/owner: Sauk Rapids Granite Co. (1)
Township name: Sauk Rapids
Location: T 36 R 31 W Sec 11 W1/2 NE1/4 (1)
Location comments: See Ref. 1, plate 1 for location map
Description: "Pink feldspar forms about two-thirds of the rock mass. It is chiefly microcline, though some

orthoclase and plagioclase also appear. The feldspars are microperthitic, as in the red granite of Stearns County. Quartz is abundant in large glassy grains. Hornblende with subordinate biotite and magnetite constitute the remaining portion." (1)

"Joints are very irregular but are widely spaced. Major joints strike N. 2 deg. W. and N. 72 deg. E., and minor joints N. 55 deg. W., N. 82 deg. W., and N. 88 deg. W. One area, 80 by 110 feet, is without open joints. Two narrow diabase dikes follow the major joints N. 72 deg. E., and the rock close to them is intersected by numerous hair lines, which probably are minute dikes." (1)

Extraction method: Bench (1)

Uses of commodity: Monuments, building, curbing, paving stone (1)

References: 1) Bowles. 1918, p. 128

Main commodity: Dimension Granite
County: Benton
Status: Inactive (2)
Past operator/owner: Collins, Mitchell, and Searle (1,3)
Township name: Sauk Rapids
Location: T 36 R 31 W Sec 11 NE1/4 NW1/4 (1-3)
Location comments: North of Sauk Rapids (2)
Geologic age: Early Proterozoic

Description: "...augite-hornblende granite 'St. Cloud red'..." (2); "At the quarry it is distinctly red near the surface, but gradually changes to gray at a depth of three or four feet. It is rather coarse in grain. Feldspar, quartz and hornblende are all present in considerable amount, the feldspar being about half of the whole. This rock is very massive, sometimes extending a hundred feet without a joint." (1); red syenite (3)

References: 1) Upham. 1884, p. 114
2) Keighin and others. 1982, p. 255
3) Winchell; Upham. 1888, p. 434

Main commodity: Dimension Granite
County: Benton
Status: Inactive
Past operator/owner: E. E. Beal (1,2)
Township name: Sauk Rapids
Location: T 36 R 31 W Sec 11 N1/2 NE1/4 (1)
Location comments: 2 1/2 miles from Sauk Rapids (1,2)
Geologic age: Early Proterozoic
Description: Red syenite, "...distinctly red near the surface, but gradually changes to gray at a depth of three or four feet. It is rather coarse in grain. Feldspar, quartz and hornblende are all present in considerable amount, the feldspar being about half of the whole. This rock is very massive, sometimes extending a hundred feet without a joint." (1,2)

References: 1) Upham. 1884, p. 114
2) Winchell; Upham. 1888, p. 434

Main commodity: Dimension Granite
County: Benton
Quarry/pit name: Coats Quarry (1)
Date opened: 1893 (1)
Status: Inactive; active around 1913 (1)
Township name: Sauk Rapids
Location: T 36 R 31 W Sec 13 NE1/4 NW1/4 (1)
Location comments: See Ref. 1, plate 1 for location map
Description: "The rock is pale pinkish gray in color but in texture and constituent minerals is of the 'St. Cloud red' granite type. It is medium to coarse grained and consists of a very pale pink feldspar, quartz, and scattered crystals of hornblende. Microscopically the feldspars were determined as plagioclase, orthoclase, and microcline. Quartz in small grains fills spaces between the other minerals. Both hornblende and biotite are present, and associated with them are scattered grains of magnetite. Sphene is common, and its presence, together with the character of the quartz, places the rock rather with the gray granites, although in the hand specimen it resembles the typical red." (1)
 "Major joints strike N. 84 deg. E. and secondary joints N. 10 deg. E., and are 10 to 20 feet or even farther apart. The joints are all vertical. Indistinct sheeting planes are 5 to 6 feet apart and dip slightly to the north." (1)
 "The rock weathers somewhat more readily than the 'St. Cloud gray' granite and is stained reddish-brown to a depth of several feet. Similar stains extend half an inch to an inch from the few joints. No dikes appear except some narrow aplites in the undeveloped part of the outcrop." (1)
Remarks: Pumping is required at intervals to remove water from the pit (1)
References: 1) Bowles. 1918, p. 125, 126

Main commodity: Dimension Granite
County: Benton
Quarry/pit name: Rocket Granite Co. Quarry (1)
Status: Inactive
Location: T 36 R 31 W Sec 13 (1)
Location comments: NE of Sauk Rapids (1)
Description: "A gray granite and a red granite crop out in an exposure that is approximately 200 feet long and 100 feet wide. The rock that is being marketed is a pink phase of red granite, similar to St. Cloud Red. It shows a gradation from dark red to light red and pink in the quarry walls. Gray granite is present on the east side of the quarry, but it is not being quarried because of numerous seams, intrusions, and

inclusions in the rock. In the pink rock the joint systems trend N. 65 deg. E. and N. 10 deg. W. The joints are widely spaced, occurring at intervals of about 15 feet. Sheeting is moderately well developed. A few ledges, however, must be maintained by lifts." (1)

References: 1) Thiel; Dutton. 1935, p. 73, 74

Main commodity: Dimension Granite
County: Benton
Date opened: 1892 (1)
Status: Inactive
Past operator/owner: Hagquist, Mayo (1)
Location: T 36 R 31 W Sec 24 NW1/4 SW1/4 (1)
Location comments: See Ref. 1, plate 1 for location map
Description: "...medium to fine grained and is fairly uniform in texture. The chief feldspar is orthoclase, with subordinate plagioclase and microcline. Quartz occurs scantily in small grains. The hornblende shows distinct alteration to biotite, and some crystals have cores of augite. Sphene is plentiful and is generally associated with grains of magnetite. A few grains of zircon were observed. The feldspars, especially the orthoclase, show alteration to kaolin." (1)
Physical test data: Specific gravity 2.782, pore space 0.45%, weighs 172.8 pounds per cubic foot (1)
Uses of commodity: Paving stone, base stock, building blocks (1)
Remarks: Pit was full of water in 1918 (1)
References: 1) Bowles. 1918, p. 133, 134

Main commodity: Dimension Granite
County: Benton
Status: Inactive
Location: T 36 R 31 W Sec 25 W1/2 SE1/4 (1)
Location comments: Several abandoned quarry pits at this location (1); see Ref. 1, plate 1 for location map
Description: "...medium-grained hornblende-biotite granite of uniform texture. As determined with the microscope, plagioclase is the most abundant feldspar, and the rock is more properly a quartz diorite than a granite. Quartz, biotite, and hornblende are prominent; magnetite and sphene are accessory in small amount; and some secondary epidote is present. The rock is otherwise fresh and of good quality." (1)
 "Joints are rather irregular. Major joints strike N. 84 deg. E., are nearly vertical, and are 2 to 6 feet apart. A pale-pink granite intrudes the gray, and fragments of the gray are inclosed within it. Four diabase dikes cross the outcrop in direction N. 57 deg. E." (1)
References: 1) Bowles. 1918, p. 134

Main commodity: Dimension Granite
County: Benton

Quarry/pit name: Hollis Putnam Quarry (4)
Date opened: 1874 (1,2)
Status: Inactive; active 1874-1875, 1881-? (1-3)
Past operator/owner: Saulpaugh and Co. (1-3); Gurney (1-3)
Township name: Watab
Location: T 37 R 31 W Sec 35 SW1/4 NE1/4 (7)
Location comments: 170 rods north and 74 rods west of the SE corner (1); see Ref. 1, plate 1 for location map
Geologic age: Early Proterozoic
Description: "An abandoned pit in an outcrop of mixed red and gray granite...A second pit is at the contact of red and gray granite. The red rock becomes finer grained near the contact and is evidently the younger. It underlies the gray, the dip of the contact being about 70 deg. W. and the strike N. 5 deg. W....The gray rock is lighter in color and coarser in texture than the typical 'St. Cloud gray.' With the microscope it appears to be a quartz diorite rather than a granite, plagioclase being more abundant than orthoclase. Quartz is in small scattered grains. Hornblende, biotite, magnetite, and sphene form the dark part. Chief joints strike N. 6 deg. E. and N. 73 deg. E. and are 2 to 10 feet apart. Minor joints strike N. 67 deg. W. 'Hair lines,' composed chiefly of epidote, are numerous. The rock is attractive in appearance." (1)

"The eastern quarry in the red hornblende granite consisting of feldspar (microperthite), quartz in large grains, and hornblende. In texture it is similar to the 'St. Cloud red' granite, the feldspars being one-eighth to one-fourth inch across. It is fair quality, though somewhat pale. Hair lines of epidote are numerous." (1)

"...syenite: gray, coarse-grained, which makes up the greater part of the stone quarried; gray, finer-grained; and reddish, with grains of intermediate size. These kinds of rock (gray and red) lie in contact, showing, at least in some portions of the quarry, no gradual transition but an abrupt change at a definite line." (2); for further lithologic description see Ref. 3 and 5

Chemical analyses: See Ref. 5, p. 554 for chemical analyses
Physical test data: For detailed test data see Ref. 6, p. 196-199; specific gravity of pink granite 2.63, 2.64 (7)
Uses of commodity: Bridge construction (1)
References: 1) Bowles. 1918, p. 135, 136
 2) Upham. 1884, p. 114
 3) Winchell; Upham. 1888, p. 435
 4) MGS. [1978-1979?]
 5) Winchell; Grant. 1900, p. 553-554
 6) Winchell and others. 1884, p. 196-199
 7) Bleiffus. 1952, p. xx, xiii

Main commodity: Dimension Granite
County: Benton
Date opened: 1871 (1-3)
Status: Inactive

Past operator/owner: Talcott, Castle, and Co. (1-3)
Township name: Watab
Location: T 37 R 31 W Sec 35 NW1/4 (1-3)
Location comments: See Ref. 1, plate 1 for location map
Geologic age: Early Proterozoic
Description: "The main type is a light-gray biotite granite, consisting of orthoclase, plagioclase, microcline, quartz, biotite, and hornblende, with accessory zircon and epidote inclusions. It is lighter in color and coarser in texture than the 'St. Cloud gray' granite. It is somewhat porphyritic, with white feldspar crystals about half an inch across. It weathers nearly white. Jointing systems are so diverse that many angular blocks result. Major joints strike N. 12 deg. E. and secondary joints N. 75 deg. W. Minor joints follow diverse directions, among which N. 86 deg. E., N. 70 deg. E., and N. 45 deg. E. were noted. They are nearly vertical and are 1 to 10 feet apart. A green phase of the rock occurs. Inclusions of diorite schist or gneiss are common. The stone is variable, both light and dark gray occurring and grading the one into the other." (1)
Uses of commodity: Building stone, cemetery work, monuments, bases (2,3)
References: 1) Bowles. 1918, p. 136
 2) Upham. 1884, p. 114
 3) Winchell; Upham. 1888, p. 435

Main commodity: Dimension Granite
County: Benton
Status: Inactive
Past operator/owner: Sauk Rapids Granite Co. (1)
Location: T 37 R 31 W Sec 35 NW 1/4 (1)
Location comments: Near center of section 35 (1); see Ref. 1, plate 1 for location map
Description: Light-gray granite (1)
References: 1) Bowles. 1918, p. 128

Main commodity: Dimension Granite
County: Big Stone
Quarry/pit name: Odessa Quarry (1,4)
Alternate name: Delano Quarry (5)
Status: Abandoned since 1983 (1)
Past operator/owner: Field Granite International, Inc. (see Producer Directory) abandoned this quarry in 1983 (1); Delano Granite Works, Inc. abandoned quarry in 1975 (4); Georgia Field, Inc. (4)
Township name: Odessa
Location: T 121 R 45 W Sec 30 SE1/4 NE1/4 (2) OR
 T 121 R 45 W Sec 30 SW1/4 NE1/4 (6,7)
Location comments: Nearest town Odessa (1,6,7); see Ref. 3, fig. 33, p. 145 and Ref. 5, plate 12 for location maps
Geologic age: Archean
Geologic formation: Ortonville Granite (3,5)

Description: "This rock is called 'variegated granite' in reference to a somewhat variable structure with vague darker streaks and zones. The granite from the northern area of this quarry is more uniform coarse-grained." (1); See Ref. 5, for further lithologic description

Extraction method: Drilling, burning, blasting (1)
Uses of commodity: Rough granite, random sized saw blocks (1)
Trade names: Odessa Granite (1)
Marketing area: U.S.A. (1)
References: 1) Field Granite International, Inc. 1988, MN/DNR questionnaire
 2) Big Stone County Assessor. 1989, personal communication
 3) Goldich and others. 1961, p. 145
 4) USDL, MSHA mine reference list
 5) Lund. 1950, p. 52
 6) Hogberg. 1969, p. 50
 7) Hogberg. 1966, p. 39

Main commodity: Dimension Granite
County: Big Stone
Quarry/pit name: Aberdeen Granite Co. Quarry (1)
Alternate name: Baxter Quarry (1)
Status: Inactive (1)
Past operator/owner: Aberdeen Granite Co. (1)
Location: T 121 R 46 W Sec 15 AND
 T 121 R 46 W Sec 16 (1)
Location comments: About 3/4 of a mile from Ortonville (1)
Uses of commodity: "Structural rock" (1)
References: 1) Bowles. 1918, p. 69

Main commodity: Dimension Granite
County: Cass
Status: Inactive
Location: T 134 R 32 W Sec 28 E1/2 NW1/4 (1)
 T 134 R 32 W Sec 21 SE1/4 (1)
Location comments: Extreme SW corner of Cass County (1)
Description: Gray to greenish-gray granite, "...medium-grained, fairly even textured hornblende granite with indistinct gneissic texture. The feldspars are pale red and are somewhat granular. The dark mineral, forming about one-third of the rock, was apparently originally hornblende but is now altered to chlorite and epidote. Quartz is abundant in small glassy grains. Alteration to kaolin and epidote is so extreme that the original minerals are scarcely recognizable with the microscope. The rock is cut by a number of diabase dikes, the largest of which is 60 ft across and runs N. 75 deg. W., parallel with one of the two prominent jointing systems." The second jointing system strikes N. 10 deg. W. Joints are 1 to 5 ft apart. (1)
Remarks: "If the excavation were carried below the zone of surface alteration the rock would probably

be better, though it is improbable that it would be of monument grade. The stone is serviceable for rough masonry." (1)

References: 1) Bowles. 1918, p. 144, 145

Main commodity: Dimension Granite
County: Chippewa
Status: Inactive
Location: T 116 R 39 W Sec 34 SE1/4 (2)
Location comments: Near Granite Falls (1,2); see Ref. 2, plate 3 for location map
Description: Dark diorite, consisting of hornblende, plagioclase, garnet, small grains of magnetite, and some chlorite. "It is not as schistose as the rock at Montevideo, and jointing planes are sufficiently spaced to give blocks 3 ft. in length." (1)
Uses of commodity: Foundations (1)
Remarks: "In color the rock is too dark to be attractive for entire structures, but it appears to be substantial for foundation purposes." (1); "The rock is the best quality that was seen in the district around Granite Falls." (3)
References: 1) Bowles. 1918, p. 70, 71
 2) Lund. 1956, plate 3
 3) Thiel; Dutton. 1935, p. 99

Main commodity: Dimension Granite
Other commodities: Crushed Granite
County: Chippewa
Status: Inactive
Location: T 117 R 40 W Sec 19 SE1/4 (1)
Location comments: North margin of an outcrop that forms a large hill with an elongation in an east-west direction about 1 1/2 miles SE of Montevideo (1)
Description: "The principal color of the rock is red, but there are black bands of biotite which brings out a gneissic structure. Such structures strike N. 75 deg. E. and dip 85 deg. to the south. There is some tendency toward rifting parallel to the gneissic structure, and the major joints also have the same orientation. Sheeting planes are not well developed, but those that were observed dip northward and are spaced from 2 to 3 feet apart. Because of black knots of biotite, stains, quartz and aplite veins, pegmatitic areas, and the marked gneissic texture, only a small percentage of the rock is of uniform texture and grade." (1)
Uses of commodity: Monuments (1)
References: 1) Thiel; Dutton. 1935, p. 94, 95

Main commodity: Dimension Granite
County: Chippewa
Date opened: About 1900 (1)
Status: Inactive since 1909 (1)

Location: T 117 R 40 W Sec 29 NW1/4 (2)
T 117 R 40 W Sec 20 (1)

Location comments: About 2 miles southeast of Montevideo, near Carlton Lake, small quarries in Sec. 20 and 29 were opened. (1)

Geologic age: Archean

Geologic formation: Montevideo Gneiss (2)

Description: Medium-grained red granite gneiss with very little biotite. The chief feldspar is microcline, orthoclase and plagioclase being subordinate. Considerable quartz in present. Black biotite knots, stains, quartz veins, pegmatite areas and a marked gneissic texture are observed. (1)

Uses of commodity: Foundation stone (1)

Remarks: It is not monument grade, it is serviceable for foundations and wall rock and for crushing (1)

References: 1) Bowles, 1918, p. 70
2) Goldich and others. 1980a, p. 41

Main commodity: Dimension Granite

County: Kanabec

Quarry/pit name: Reynolds Granite Co. Quarry (1,4)

Status: Inactive

Past operator/owner: Cold Spring Granite Co. (see Producer Directory) (7,8); Reynolds Granite Co. (1,2)

USGS quadrangle: Warman

Location: T 41 R 23 W Sec 5 SW1/4 SW1/4 (8) OR
T 41 R 23 W Sec 5 SE1/4 (5)

Location comments: Near Warman (1-9)

Geologic age: Early Proterozoic

Geologic formation: Warman Granite (4,6)

Description: "...medium to fine grained biotite granodiorite, which in general appearance closely resembles the granite of Barre, Vt." It consists essentially of quartz, feldspar, and mica. The feldspars are both orthoclase and plagioclase, the later being somewhat more abundant. Quartz and biotite are also abundant. The constitute minerals are uniform in size and distribution. A few inclusions of biotite schist are seen. (1)

There are three joint systems at small angles. The joints strike N. 33 deg. W., N. 32 deg E., and N. 78 deg. E., two sets are vertical and the third dips 70 deg. to the west. (2); see Ref. 1 fig. 16, for sketch showing jointing-patterns.

Quartz monzonite, gray, medium-grained, massive rock that has relatively few inclusions. (5)

Modal Analyses: quartz 31%, oligoclase-andesine 34%, microcline 20%, biotite 14%, accessories, generally less than 0.5%, (apatite, opaque, zircon) (5)

See Refs. 1-3 and 5-7 for additional lithologic descriptions; see Ref. 6 for additional modal analyses

Chemical analyses: See Refs. 1, 2, and 4 for chemical analyses

Remarks: "The chief defect of the rock in the Warman area is the jointing." (2)

References: 1) Bowles. 1918, p. 140-142
2) Theil; Dutton. 1935, p. 104, 105
3) Harder; Johnston. 1918 p. 43
4) Goldich and others. 1961, p. 117
5) Keighin and others. 1982, p. 250, 251, 255
6) Skillman. 1945, p. 74
7) Schwartz; Thiel. 1954, p. 179, 180
8) Hogberg. 1969, p. 48
9) Hogberg. 1966, p. 37

Main commodity: Dimension Granite

County: Kanabec

Quarry/pit name: Warman Creek Granite Co. Quarry (2)

Status: Inactive

Past operator/owner: Warman Creek Granite Co. (1,2,4)

USGS quadrangle: Warman

Location: T 41 R 23 W Sec 6 SE1/4 (3)

Location comments: Near Warman (1-3,5); about 10 miles north of Mora (4)

Geologic age: Early Proterozoic

Geologic formation: (Warman Granite)

Description: "...medium to fine grained light gray or mottled black and white granodiorite that in general appearance resembles the granite of Barre, Vermont." It is composed mainly of quartz, white feldspar and biotite. "The feldspars are both plagioclase and orthoclase, the latter being somewhat more abundant. All the minerals are fairly uniform in size and distribution. A few black knots and inclusions of biotite schist are present." The rock tends to be slightly lighter gray near the surface of the quarry. (1)

The joints are much more regular than in the other quarries in the area, but are closely spaced. Two prominent systems are developed, running N. 30 deg. E. and N. 30 deg. W. These joints are bunched at intervals of 10 or 15 ft. Between such groups they are from 2 to 4 ft apart. (1)

See Refs. 1-3, 5, and 6 for additional lithologic descriptions

Physical test data: Crushing strength, first crack 9,966 psi; final collapse 17,246 psi; modulus of rupture 3,519 psi (2)

Uses of commodity: Monument stone (2)

Trade names: Mora Gray (2)

Remarks: "...gives good satisfaction as a monument stone" (2)

References: 1) Thiel; Dutton. 1935, p. 104, 105
2) Bowles. 1918, p. 142, 143
3) Harder; Johnston. 1918 p. 43
4) Cooley. 1911, p. 14
5) Skillman. 1945, p. 74
6) Schwartz; Thiel. 1954, p. 179, 180

Main commodity: Dimension Granite
County: Kanabec
Quarry/pit name: Royal Granite Co. Quarry (1)
Status: Inactive
Past operator/owner: Royal Granite Co. (1)
Location: T 41 R 23 W Sec 8 NW1/4 NW1/4 (3,4)
Location comments: Near Warman (1,2,5)
Geologic age: Early Proterozoic
Geologic formation: Warman Granite (2)
Description: "...medium - to fine - grained light gray or mottled black and white granodiorite that in general appearance resembles the granite of Barre, Vermont. It is composed of quartz, white feldspar, and mica. The feldspars are plagioclase and orthoclase, the latter being somewhat more abundant. The mica is in the form of small biotite flakes. All the minerals are fairly uniform in size and distribution. A few black knots and inclusions of biotite schist are present." A few coarsely crystalline pegmatite dikes cut the massive granite. The rock tends to be slightly lighter gray near the surface of the quarry. (1)
 Quartz monzonite (2,3); see Refs. 2 and 5 for further lithologic descriptions
 The quarry has three intersecting joint systems, N. 20 deg. E., and N. 65 deg. W., and N 65 deg. E. The first of these systems dips 75 deg. to the west. (1)
Remarks: "The joints are too closely spaced to obtain large stock blocks for monumental work. It seems probable, however, that larger blocks may be obtained at greater depth." (1)
References: 1) Thiel; Dutton. 1935, p. 104, 105
 2) Skillman. 1945, p. 74
 3) Bleiffuss. 1952, p. xx, xii
 4) USGS. 1968, Warman quadrangle
 5) Schwartz; Thiel. 1954, p. 179, 180

Main commodity: Dimension Granite
County: Lac Qui Parle
Status: Inactive
Past operator/owner: Cold Spring Granite Co. (see Producer Directory) (5); North Star Granite Corp. (4)
USGS quadrangle: Bellingham
Location: T 120 R 45 W Sec 4 SW1/4 NE1/4 (1-5)
Location comments: SE of Odessa (1-3); see Ref. 1, fig. 33 and Ref. 3, plate 11 for location maps; Ref. 2 states, "quarries" at this location
Geologic age: Archean
Geologic formation: Ortonville Granite (1,3)
References: 1) Goldich and others. 1961, p.145
 2) USGS. 1971, Bellingham quadrangle
 3) Lund. 1950, plate 11
 4) Hogberg. 1966, p. 39
 5) Hogberg. 1969, p. 48

Company: Dakota Granite Company (1)
Main commodity: Dimension Granite
County: Lac Qui Parle
Quarry/pit name: Dakota Venetian Quarry (1,5)
Alternate name: Dakota Granite Quarry (2)
Status: Inactive since 1983 (1)
Past operator/owner: Dakota Granite Co. (see Producer Directory - active in South Dakota) (1)
USGS quadrangle: Bellingham
Location: T 120 R 45 W Sec 15 NE1/4 SW1/4 (2,6,8)
Location comments: Nearest town Bellingham (1); center of NE1/4 SW1/4 (2); quarry 1780 ft east and 1550 ft north of SW corner (4); see Ref. 6, plate 11 and Ref. 3, fig. 33 for location maps
Geologic age: Archean
Geologic formation: Bellingham Granite (3,4,6,7)
Description: Pink granite (1); porphyritic granite (4); Modal Analyses: potash feldspar 57%, plagioclase 16%, quartz 21%, biotite 5%, accessories (magnetite, apatite, zircon, epidote, muscovite) 1% (3); see Ref. 4 for additional modal analyses
Extraction method: Bench (1)
Processing plant: Dakota Granite Co., located at main office (1)
Processing method: Saw, polish, finish (1)
Uses of commodity: Rough granite blocks, granite slabs, monuments, building stone, granite tiles (1)
Marketing area: International (1)
References: 1) Dakota Granite Co. 1988, MN/DNR questionnaire
 2) USBM. [1979], MILS
 3) Goldich and others. 1961, p. 124, 145, 146, 179
 4) Lund. 1956, p. 1487
 5) USDL. MSHA mine reference list
 6) Lund. 1950, plate 11
 7) Sloan. 1964, p. 15, 47
 8) Hogberg. 1966, p. 39

Main commodity: Dimension Granite
County: Lac Qui Parle
Quarry/pit name: Odessa Quarry (1,5)
Status: Inactive
Past operator/owner: Cold Spring Granite Co. (see Producer Directory) (6,7)
USGS quadrangle: Bellingham
Location: T 121 R 45 W Sec 32 NE1/4 SE1/4 (2,4,6,7)
Location comments: Quarry 1 mile south of Odessa (2); 680 ft west and 2400 ft north of the SE corner (3); see Ref. 2, fig. 33 and Ref. 4, plate 12 for location maps
Geologic age: Archean
Geologic formation: Odessa Granite (1,2); Ortonville Granite (2-4)
Description: Mottled red and gray coarse-grained granite, the usual defects are present in small amounts, but on the whole the rock has good uniformity. Wide spacing of joints and sheets, joints strike

at N. 35 deg. W. and N. 80 deg. W., sheets are steeply inclined 35 deg. N. (1)

Coarse-grained porphyritic granite of a dark-red color (2)

Red medium granitoid facies of leucogranite (3); Modal Analyses: potash feldspar 48%, plagioclase 17%, quartz 31%, biotite 3%, accessories (magnetite, apatite, zircon, muscovite) 1% (3)

- References:**
- 1) Thiel; Dutton. 1935, p. 101
 - 2) Goldich and others. 1961, p. 145
 - 3) Lund. 1956, p. 1487
 - 4) Lund. 1950, plate 12
 - 5) Sloan. 1964, p. 15, 47
 - 6) Hogberg. 1969, p.49
 - 7) Hogberg. 1966, p. 31, 38

Main commodity: Dimension Granite
County: Lake
Status: Inactive
Location: T 55 R 8 W Sec 14 SW1/4 (1)
Location comments: 1 mile SW of Beaver Bay (1,2)
Description: Black foliated gabbro (1); black diabase (2)
Uses of commodity: Bridge abutments and buildings at Gooseberry State Park and other roadside construction by Civilian Conservation Corps. (1,2)
References:

- 1) Green and others. 1977, p. 74, 80
- 2) Grout; Schwartz. 1939, p. 40, 85

Main commodity: Dimension Granite
County: Lake
Quarry/pit name: Arrowhead Granite Co. Quarry (1)
Status: Inactive
Location: T 61 R 10 W Sec 7 (1)
Location comments: 18 miles SE of Ely in the Superior National Forest (1); 20 miles SE of Ely in the Superior National Forest (2)
Geologic age: Middle Proterozoic
Geologic formation: (Duluth Complex)
Description: "The joints trending N. 80 deg. W. are spaced at an average distance of about 8 feet, and those trending N. 10 deg. W. are from 5 to 20 feet apart. The rock shows a uniform texture and color. It is slightly discolored along joints." (1)
 "...coarse-grained gabbro in which the predominant mineral is plagioclase in long striated grains, with augite and some yellowish-green grains of olivine. The normal surface has a gray color with brilliant reflections from the feldspar cleavage faces. When polished the rock has a dark gray color in which the feldspars refract the light, making them appear silvery. The individuality of the olivine and augite is lost in the dark gray background which they form. On the polished surface, which reflects light, the augite and magnetite

grains are apparent because of their lesser polish as compared with the plagioclase." (1)

- Uses of commodity:** Facing, monuments (2)
Trade names: "Arrowhead Black Granite" and "Hibbing Granite" (1)
Remarks: The joint and sheet patterns indicate the possibility of removing large dimensional blocks, a shelf quarry may be developed (1)
References:
- 1) Thiel; Dutton. 1935, p. 108
 - 2) Schwartz; Thiel. 1952, p. 80

Main commodity: Dimension Granite
County: Mille Lacs
Quarry/pit name: Isle Quarry (3)
Alternate name: Cold Spring Granite Co. Quarry (1)
Status: Inactive
Past operator/owner: Cold Spring Granite Co. (see Producer Directory) (1-3)
Location: T 41 R 25 W Sec 2 (1,2)
Location comments: 5 miles south of Isle (1,2)
Geologic age: Early Proterozoic
Geologic formation: Isle Granite (1)
Description: Light gray granite composed of large white feldspar crystals, imbedded in a matrix of colorless quartz, and biotite. The majority of the feldspar grains range from 1/4 to 1/2 an inch in length; the quartz grains are about 1/16 of an inch in diameter; the biotite occurs as small flakes scattered between the other minerals. (1)
 "The major joints trend from due north to 10 deg. West. At some places they are widely spaced (20 +/- ft), although they are somewhat closer toward the west end of the quarry." Three prominent sheets are seen in the quarry, the sheets dip 10-15 deg. westward and are spaced from the top down at 5 ft, 22 ft, and 27 ft. (1)
 See Refs. 1 and 2 for additional lithologic descriptions
Extraction method: Drifters (1)
Uses of commodity: Facing, ashlar, trimmings, sills, steps, floor tile, stairways, columns, fountains, monuments. (1)
Trade names: "Isle", "Cold Spring Pearl White" (1); "Isle Gray", "Diamond Gray" (2)
Remarks: Cut finishes such as sawed, axed, or hammered surfaces leave the stone nearly white. (2)
References:

- 1) Thiel; Dutton. 1935, 102-104
- 2) Schwartz; Thiel. 1952, p. 79
- 3) USDL. MSHA mine reference list
- 4) Schwartz; Thiel. 1954, p. 174, 179, 270

Main commodity: Dimension Granite
County: Morrison
Quarry/pit name: Fish Lake Quarry (1)

Alternate name: Meyer Quarry (6)
Date opened: About 1906 (1,4)
Status: Inactive since 1911 (1)
Past operator/owner: McMeyer and Rausch (1)
Location: T 40 R 31 W Sec 13 SE1/4 (1-4,7)
Location comments: 1/3 mile south of Fish Lake (2,3); 2 miles SW of Pierz (5)

Description: "The rock is an even-grained biotite granite of very light gray color, which becomes almost white on the bush-hammered surface. It consists of light gray to almost white feldspars in grains a thirty-second to a sixteenth of an inch across, forming over half the rock mass; pale-yellow transparent quartz grains, the largest of which are about the size of a pin's head; and flakes of black mica about one-sixteenth of an inch across. The minerals are very evenly distributed, and the resulting speckled 'pepper and salt' effect is very pleasing. The rock is much finer grained and much lighter in color than the 'St. Cloud gray' granite. By microscopic determination the chief feldspar is orthoclase, with some microcline and a very little plagioclase, all slightly kaolinized. A few small grains of hornblende, biotite, and magnetite, with included apatite crystals, constitute the remainder of the rock." (1)

"Joints are 2 to 8 feet apart, and in the quarry excavations are vertical and appear in one system only, striking N. 82 deg. W. On the wall of the excavation there are four sheeting planes, about 2 feet apart, a condition that greatly facilitates quarrying. Near the south side of the outcrop the sheeting planes are 1 to 2 feet apart and dip about 15 deg. S.; and the joints, though following the same compass direction as in the excavation, are not vertical but dip about 75 deg. N. at right angles with the sheeting planes. The rock is free of defects, containing no dikes, streaks, nor hair lines and only a few small black knots, segregations of biotite, one-fourth to one-half of an inch across." (1)

"This is a fine-grained, light gray granite, very uniform in texture, with no veins or masses of other rock visible. It is divided by joints into beds one to two feet thick, dipping about 20 deg. S., but it is not cut by vertical joints." (2); a gray quartz monzonite (5,7)

Modal Analyses: quartz 22%, oligoclase-andesine 47%, microcline 21%, biotite 8%, accessories (apatite, opaque, zircon) generally less than 0.5% (7); for further lithologic description see Ref. 4

Uses of commodity: Bridge abutments, foundations, monuments, bases (1); cellar walls (2)
Remarks: Upham and Winchell stated "The ledge is valuable for quarrying" (2,3); Bowles, stated "It is well adapted for monumental purposes." (1)
References: 1) Bowles. 1918, p. 137, 138
 2) Upham. 1884, p. 91

3) Winchell; Upham. 1888, p. 589, 590
 4) MN Department of Conservation. 1964b, p. 108, 109
 5) Goldich and others. 1961, p. 112
 6) Harder; Johnston. 1918, p. 34
 7) Keighin and others. 1982, p. 251, 254
 8) MGS. [1978-1979?]
 9) Thiel. 1947, p. 180

Main commodity: Dimension Granite
County: Morrison
Status: Inactive
Location: T 41 R 30 W Sec 7 SE1/4 (1)
References: 1) Morrison County Engineer. 1989, personal communication

Main commodity: Dimension Granite
County: Morrison
Quarry/pit name: Whitney Quarry (1,2)
Status: Inactive
Location: T 41 R 30 W (1-3)
Location comments: (Ref. 1 refers to outcrops in sections 17 and 18 and Ref. 3 refers to outcrops in sections 7 and 18. Apparently one reference has a typographical error. Exact location of the Whitney Quarry was undetermined)

Description: "...dark-gray biotite granite. Orthoclase is the most prominent feldspar, though plagioclase is also present in relatively large amount. Quartz is not very plentiful and is in small grains. Apatite, as exceptionally large inclusions, and scattered grains of magnetite are accessory minerals. The presence of sphene in fairly large grains is a respect in which the rock closely resembles the 'St. Cloud gray' granite. The hornblende crystals show in places cores of augite and fringes of biotite, illustrating the progressive alteration, augite to hornblende to biotite. In this respect also the rock is similar to the 'St. Cloud gray' granite, but it contains much more of the dark minerals. The rock is medium grained and is very uniform, both in size of grain and distribution of minerals." It is even grained and uniform throughout the whole quarry. (1)

"At the quarry joints strike N. 53 deg. W. and N. 10 deg. W. and are 4 to 12 feet apart, so that large blocks are available. The systems, however, are not continuous, for a short distance north of the excavation joints appear with direction N. 45 deg. W. and N. 75 deg. E. No sheeting planes appear on the 4 feet of quarry wall above water level. In quality the rock is of exceptional purity, having few black knots and no hair lines or dikes, though it is cut by red granite dikes farther north." (1); see Ref. 3 for further lithologic description

References: 1) Bowles. 1918, p. 139
 2) MN Department of Conservation. 1964b, p.

72, 73
3) Harder; Johnston. 1918, p. 33

6) Cooley. 1911, p. 13
7) Thiel. 1947, p. 179
8) Bleifuss. 1952, p. xx, xiii

Main commodity: Dimension Granite
County: Morrison
Quarry/pit name: Davidson and Davidson Quarry (1,2)
Status: Inactive
Past operator/owner: Davidson and Davidson (1)
USGS quadrangle: Freedhem
Location: T 41 R 31 W Sec 24 SW1/4 (1,5)
T 41 R 31 W Sec 23 SE1/4 SE1/4 (8)
Location comments: 7 miles from Pierz (1)
Geologic age: Early Proterozoic
Geologic formation: Freedhem Granodiorite (3); Freedhem Tonalite (8)
Description: "The rock is a dark-gray, medium-grained, and fairly even grained hornblende-biotite granite that in places shows a distinctly gneissic texture. It consists of light-gray feldspar and bluish-white quartz grains that together form a little more than half the rock mass, the remainder being formed of a mixture of hornblende and biotite. With the microscope the feldspars were determined as orthoclase and subordinate plagioclase. Quartz appears in numerous though small grains. The feldspars appear exceptionally fresh and unaltered." (1)
"Joints are at right angles, their direction at the quarry excavation being N. 35 deg. E. and N. 55 deg. W., and are favorably spaced for quarrying. No sheeting planes appear on the 12-foot quarry wall. Lenses, dikes, and masses of pale-red to white granite are intruded into the gray. A few of these appear in the old quarry excavation, but they are more abundant in other parts of the rock ridge. Those in the quarry wall consist chiefly of quartz, with subordinate amounts of white feldspar, black mica, and scattered red garnets. In places fragments of gray rock are inclosed in the red, which is undoubtedly a later intrusion. The presence of these intrusions in many parts of the ridge indicates that much rock, otherwise of monument grade, is probably marred by injected bands. Areas of considerable size, however, are comparatively free from such intrusions, the old quarry location being one spot where dikes are less numerous. Few black knots were observed, and aside from the later granite injection the rock is free of imperfections." (1); for detailed lithologic description see Refs. 2-4
Remarks: Several quarries on both sides of the north-south road (3)
References: 1) Bowles. 1918, p. 138, 139
2) MN Department of Conservation. 1964b, p. 73, 111, 112
3) Morey. 1979, p. 28
4) Harder; Johnston. 1918, p. 33, 34
5) Morrison County Engineer. 1989, personal communication

Main commodity: Dimension Granite
County: Morrison
Status: inactive
Past operator/owner: Delano Granite Co. (1)
Location: T 42 R 31 W Sec 34 SE1/4 (1)
References: 1) Morrison County Engineer. 1989, personal communication

Main commodity: Dimension Granite
County: Morrison
Date opened: 1888 (2)
Status: Inactive
Location: T 129 R 30 W Sec 13 NE1/4 NE1/4 (2)
Location comments: 2 miles from Little Falls (2)
Description: "The rock varies greatly in texture at different points in the quarry. Some of it is dense and fine-grained and has a uniform dark gray color, while other phases are coarser grained and have a speckled appearance due to intermixed light and dark-colored minerals. The latter vary considerably in size of grain, as well as in color. In some, feldspars predominate; in others, ferromagnesian minerals. The various rocks have a fairly uniform mineral composition, except that the coarser grained varieties have suffered greater alteration." (1)
"Major joints strike N. 82 deg. E. In part of the exposed rock the joints are 6 inches to 2 feet apart, and in other places they attain a maximum spacing of 6 feet. Sheeting planes are 2 to 4 feet apart. Large blocks are obtainable." (2); for detailed lithologic descriptions see Refs. (1-5)
Uses of commodity: Foundations of mills and other structures (2)
References: 1) Harder; Johnston. 1918, p. 50, 51
2) Bowles. 1918, p. 136, 137
3) Woyski. 1949, p. 1010-1014
4) MN Department of Conservation. 1964b, p. 27, 29, 76-78
5) Thiel. 1947, p. 182, 183

Main commodity: Dimension Granite
County: Nicollet
Status: Inactive
USGS quadrangle: Morgan NE
Township name: Ridgely
Location: T 111 R 33 W Sec 2 N1/2 NE1/4 (3)
Location comments: On the bottomland of the Minnesota River, in the west extremity of Ridgely Township, 1 1/2 miles west of Fort Ridgely (2)
Geologic age: Archean

Geologic formation: Granite (2)

Description: The rock is porphyritic and has a gneissic texture (1); Porphyritic granite, contains abundant gray feldspar crystals, 3/4 to 1/2 inches long and 1/3 to 2/3 as wide; also contains occasional masses 6 to 12 inches long and 1/2 as wide, mostly made up of black mica in small grains. The ledge is traversed by several flesh-colored feldspathic veins, 2 to 6 inches wide. Other exposures nearby are not porphyritic. (2)

Uses of commodity: Construction at Fort Ridgely (1) and Fort Ridgely State Park (3)

References: 1) Bowles. 1918, p. 74
2) Winchell; Upham. 1988, p. 156
3) MN/DNR. Division of Parks and Recreation, 1989, personal communication

Main commodity: Dimension Granite

County: Redwood

Quarry/pit name: Odin Sander Quarry (1)

Status: Inactive

Location: T 114 R 37 W Sec 18 (1)

Location comments: At Iverson Lake (1)

Geologic age: Archean

Geologic formation: Sacred Heart Granite (1)

References: 1) Farhat. 1975, p. 172

Main commodity: Dimension Granite

County: Redwood

Quarry/pit name: Hayquist Quarry (1)

Date opened: 1928 (1)

Status: Inactive; active from 1928 to 1930 (1)

Location: T 114 R 37 W Sec 18 (1)

Location comments: (Exact location undetermined); see Ref. 1, fig. 50, Ref. 2, fig. 3, Ref. 3, fig. 29, and Ref. 4, plate 7 for location maps

Geologic age: Archean

Geologic formation: Sacred Heart Granite (2-4)

Description: "Defects of the granite include coarse-grained areas, some pegmatite veins, schist inclusions, dry seams, and, locally, pyrite grains." (1)

"Jointing and sheeting are well developed, but the joints strike N. 80 deg. W. and N. 45 deg. E., which causes the angle of intersection to be such that much of the rock is wasted in trimming the blocks." (1)

References: 1) Theil; Dutton. 1935, p. 95, 96
2) Goldrich and others. 1970, p. 3674
3) Goldrich and others. 1961, p. 128
4) Lund. 1950, plate 7

Main commodity: Dimension Granite

County: Redwood

Quarry/pit name: Delano Granite Future Quarry (1)

Status: Inactive

Past operator/owner: Delano Granite Works Inc. (1,2)

USGS quadrangle: Iverson Lake

Location: T 114 R 37 W Sec 18 SW1/4 SW1/4 (1,2)

Geologic age: Archean

Geologic formation: (Sacred Heart Granite)

References: 1) USBM. [1979], MILS
2) Hogberg. 1969, p. 50

Main commodity: Dimension Granite

County: Redwood

Quarry/pit name: Stam Brothers' Quarry (1)

Date opened: 1929 (1)

Status: Inactive 1931 (1)

Location: T 114 R 37 W Sec 18 (1)

Location comments: (Exact location undetermined); see Ref. 1, fig. 50, Ref. 2, fig. 3, Ref. 3, fig. 29, and Ref. 4, plate 7 for location maps

Geologic age: Archean

Geologic formation: Sacred Heart Granite (2-4)

Description: "The pink and gray phases of the granite are present in about equal amounts. The joints are well spaced, being about 6 to 8 feet apart, and they intersect at almost 90 deg. (N. 45 deg. E., N. 50 deg. W.). Sheeting is inclined 15 deg. to the south, and although the spacing varies from 3 to 15 feet, the average is 8 to 10 feet. The topographic relief is suitable for a shelf quarry to the present depth." (1)

References: 1) Thiel; Dutton. 1935, p. 95, 96
2) Goldrich and others. 1970, p. 3674
3) Goldrich and others. 1961, p. 128
4) Lund. 1950, plate 7

Main commodity: Dimension Granite

County: Redwood

Quarry/pit name: Sacred Heart Quarry (1)

Date opened: 1920's (1)

Status: Inactive since 1986 (1)

Past operator/owner: View Quarry Co., produced at this quarry until 1986, Rex Granite Co. (1)

USGS quadrangle: Iverson Lake

Township name: Swedes Forest

Location: T 114 R 37 W Sec 18 S1/2 NW1/4 (5)
T 114 R 37 W Sec 18 NW1/4 NE1/4 (7,8)
T 114 R 37 W Sec 18 NE1/4 NW1/4 (7,8)

Location comments: For location maps see Ref. 3, fig. 3, Ref. 4, fig. 29 and Ref. 9, plate 7

Geologic age: Archean

Geologic formation: Sacred Heart Granite (3,4)

Description: Brownish pink granite with streaks and faults (1)

Extraction method: Blast and lift with derrick (1)

Uses of commodity: Granite monuments (1)
Trade names: Aburn Mist, Sacred Heart (1)
References: 1) View Quarry Co. 1988, MN/DNR questionnaire
 2) USBM. [1979], MILS
 3) Goldich and others. 1970, p. 3674
 4) Goldich and others. 1961, p. 128
 5) Redwood County Zoning Administrator. 1989, personal communication
 6) USDL. MSHA mine reference list
 7) Hogberg. 1969, p. 51
 8) Hogberg. 1966, p. 40
 9) Lund. 1950, plate 7

Main commodity: Dimension Granite
County: Renville
Quarry/pit name: Anderson Quarry (1)
Status: Inactive
Past operator/owner: Anderson Co. (1)
Location: T 112 R 33 W Sec 9 (1)
Location comments: South of Franklin (1)
Description: "...fine-grained diabase. The outcrop has little relief above the surrounding lowlands, but its general dimensions are 400 by 100 feet. Other outcrops are common near by. The joints and sheets are well developed but spaced much too closely (maximum 2 feet) to permit removal of stone in blocks of marketable size." (1)
Remarks: Called "black granite" (1)
References: 1) Thiel; Dutton. 1935, p. 94

Main commodity: Dimension Granite
Other commodities: Crushed Granite
County: Renville
Quarry/pit name: Rainbow Quarry (1,2)
Status: Inactive (2)
Past operator/owner: Cold Spring Granite Co. (see Producer Directory) (1,2)
USGS quadrangle: Morton
Location: T 112 R 34 W Sec 4 (1)
References: 1) USBM. [1978], MILS
 2) USDL. MSHA mine reference list

Main commodity: Dimension Granite
County: Renville
Status: Inactive
Location: T 113 R 34 W Sec 31 W1/2 NW1/4 (1,2,5-7,10)
Location comments: Location maps in Refs. 1, 5-7 show 3 quarries and Refs. 2 and 10 show 4 quarries within this location
Geologic age: Archean
Geologic formation: Morton Gneiss (1)

Remarks: See references for location maps, detailed lithologic descriptions including modal analyses, and test data of the Morton area.

References: 1) Lund. 1950, p. 16, 66, 73, 74, plate 4
 2) Goldich and others. 1980b, p. 45-56
 3) Suda. 1975
 4) Lund. 1956, p. 1475-1490
 5) Lund. 1953, p. 46-52
 6) Goldich and others. 1970, p. 3671-3695
 7) Goldich and others. 1961, p. 123-146
 8) Thiel; Dutton. 1935, p. 88-94
 9) Bowles. 1918, p. 47-49
 10) Nielsen; Weiblen. 1980, p. 95-103
 11) Wooden and others. 1980 p. 57-75
 12) Ankenbauer. 1975
 13) Farhat. 1975, p. 172

Main commodity: Dimension Granite
County: Renville
Quarry/pit name: Granite City Co. Quarry (1)
Status: Inactive
Location: T 113 R 34 W Sec 31 (1)
Location comments: Near Morton (1); (exact location undetermined, see Ref. 1, fig. 47 for location map of possible sites)

Geologic age: Archean
Geologic formation: Morton Gneiss (1)
Description: "Morton stone is composed of red feldspars and dark minerals which appear mostly in the form of streaks and bands. The feldspars constitute the larger share of the rock, both orthoclase and plagioclase being abundant. Considerable quartz is also present. The chief dark mineral is biotite, with a small amount of hornblende and a few grains of magnetite." (1)

Rock exposed above the water level was badly stained along joints and sheets. Sheets were spaced from 2 to 4 feet apart on the average. The rock contained more biotite and hence was generally somewhat darker than that in the quarries of the area. (1)

Remarks: See references for location maps, detailed lithologic descriptions including modal analyses, and chemical test data of the Morton area.

References: 1) Thiel; Dutton. 1935, p. 88-94
 2) Goldich and others. 1980b, p. 45-56
 3) Suda. 1975
 4) Lund. 1956, p. 1475-1490
 5) Lund. 1953, p. 46-52
 6) Lund. 1950, p. 16, 66, 73, 74, plate 4
 7) Goldich and others. 1970, p. 3671-3695
 8) Goldich and others. 1961, p. 123-146
 9) Bowles. 1918, p. 47-49
 10) Nielsen; Weiblen. 1980 p. 95-103
 11) Wooden and others. 1980, p. 57-75
 12) Ankenbauer. 1975

Main commodity: Dimension Granite
County: Renville

Status: Inactive

Past operator/owner: John Clark Co. (1)

Location: T 113 R 34 W Sec 31 (1)

Location comments: Near Morton (1); (exact location undetermined, see Ref. 1, fig. 47 for location map of possible sites)

Description: "Morton stone is composed of red feldspars and dark minerals which appear mostly in the form of streaks and bands. The feldspars constitute the larger share of the rock, both orthoclase and plagioclase being abundant. Considerable quartz is also present. The chief dark mineral is biotite, with a small amount of hornblende and a few grains of magnetite." (1)

Sheets dip southward, major joints are north-south and east-west (1)

Extraction method: Shelf type (1)

Remarks: See references for location maps, detailed lithologic descriptions including modal analyses, and chemical test data of the Morton area.

References:

- 1) Thiel; Dutton. 1935, p. 88-94
- 2) Goldich and others. 1980b, p. 45-56
- 3) Suda. 1975
- 4) Lund. 1956, p. 1475-1490
- 5) Lund. 1953, p. 46-52
- 6) Lund. 1950, p. 16, 66, 73, 74, plate 4
- 7) Goldich and others. 1970, p. 3671-3695
- 8) Goldich and others. 1961, p. 123-146
- 9) Bowles. 1918, p. 47-49
- 10) Nielsen; Weiblen. 1980, p. 95-103
- 11) Wooden and others. 1980, p. 57-75
- 12) Ankenbauer. 1975

Main commodity: Dimension Granite

County: Renville

Quarry/pit name: Universal Granite Company Quarry (1)

Status: Inactive

Past operator/owner: Universal Granite Co. (1)

Location: T 113 R 34 W Sec 31 NW1/4 (1)

Location comments: NW of Morton (1); 2 quarries were opened by the Universal Granite Co. (1); see Ref. 1, fig. 47 for location map

Geologic age: Archean

Geologic formation: Morton Gneiss (1)

Description: "Morton stone is composed of red feldspars and dark minerals which appear mostly in the form of streaks and bands. The feldspars constitute the larger share of the rock, both orthoclase and plagioclase being abundant. Considerable quartz is also present. The chief dark mineral is biotite, with a small amount of hornblende and a few grains of magnetite." (1)

"Because of the poorly developed joints and sheets, quarry operations have produced many irregular 'shakes', which have caused a rather high percentage of waste rock....The new quarry is similar to the old in all respects except that the contortion effects of the stone are

slightly more pronounced in the new one. The rock in these quarries shows very few schist inclusions or pegmatite veins." (1)

Extraction method: Drifters (1)

Remarks: See references for location maps, detailed lithologic descriptions including modal analyses, and chemical test data of the Morton area.

References:

- 1) Thiel; Dutton. 1935, p. 88-94
- 2) Goldich and others. 1980b, p. 45-56
- 3) Suda. 1975
- 4) Lund. 1956, p. 1475-1490
- 5) Lund. 1953, p. 46-52
- 6) Lund. 1950, p. 16, 66, 73, 74, plate 4
- 7) Goldich and others. 1970, p. 3671-3695
- 8) Goldich and others. 1961, p. 123-146
- 9) Bowles. 1918, p. 47-49
- 10) Nielsen; Weiblen. 1980, p. 95-103
- 11) Wooden and others. 1980, p. 57-75
- 12) Ankenbauer. 1975

Main commodity: Dimension Granite

County: Renville

Quarry/pit name: Anderson Granite Co. Quarry (1)

Date opened: 1884 (1)

Status: Inactive

Past operator/owner: Anderson Granite Co. 1908-? (1); John Anderson until 1908(1); Saulpaugh Co. 1884-1887 (1)

Location: T 113 R 34 W Sec 31 (1)

Location comments: Near Morton (1); (exact location undetermined, see Refs. 2,5,8,9,11-14 for location maps of possible sites)

Geologic age: Archean

Geologic formation: Morton Gneiss (1)

Description: "Morton stone is composed of red feldspars and dark minerals which appear mostly in the form of streaks and bands. The feldspars constitute the larger share of the rock, both orthoclase and plagioclase being abundant. Considerable quartz is also present. The chief dark mineral is biotite, with a small amount of hornblende and a few grains of magnetite." (1)

"The rock is distinctly gneissic (banded) but is very firm and does not permit ready percolation of water. In places it is porphyritic. Sheeting planes are 12 to 20 feet apart and dip 5 deg. to 15 deg., always toward the margin of the area, showing a domal structure....Major joints are 6 to 30 feet apart, and, where observed, meet approximately at right angles, their directions being southwest and southeast. A few minor joints meet the major joints at about 20 deg. Rock masses of great size may be obtained....Rock containing black knots and streaks consisting chiefly of biotite is avoided by quarrymen as much as possible." (1)

Physical test data: "Physical tests obtained at the University of Minnesota showed that under crushing stress the first crack came at 8,600 pounds per square

inch and the rock collapsed at 20,340 pounds. Under transverse stress the modulus of rupture was found to be 3,042 pounds per square inch." (1)

- Uses of commodity:** Monuments, bases, range rock, trimming, curbing, bridge work (1); buildings (3)
- Remarks:** See references for location maps, detailed lithologic descriptions including modal analyses, and chemical test data of the Morton area.
- References:**
- 1) Bowles. 1918, p. 73, 74
 - 2) Thiel; Dutton. 1935, p. 88-94
 - 3) Cooley. 1919, p. 14
 - 4) Goldich and others. 1980b, p. 45-56
 - 5) Suda. 1975
 - 6) Lund. 1956, p. 1475-1490
 - 7) Lund. 1953, p. 46-52
 - 8) Lund. 1950, p. 16, 66, 73, 74, plate 4
 - 9) Goldich and others. 1970, p. 3671-3695
 - 10) Goldich and others. 1961, p. 123-146
 - 11) Nielsen; Weiblen. 1980, p. 95-103
 - 12) Wooden and others. 1980, p. 57-75
 - 13) Ankenbauer. 1975
 - 14) Farhat. 1975, p. 172

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- Main commodity:** Dimension Granite
- County:** Renville
- Quarry/pit name:** Bohmer and Luckemeyer Co. Quarry (1)
- Status:** Inactive
- Location:** T 113 R 34 W Sec 32 NW1/4 SW1/4 (2)
- Location comments:** A short distance to the east of the quarry of Cold Spring Granite Co. (1935) (1); see Ref. 1, fig. 47 for location map
- Geologic age:** Archean
- Geologic formation:** Morton Gneiss (1)
- Description:** "Morton stone is composed of red feldspars and dark minerals which appear mostly in the form of streaks and bands. The feldspars constitute the larger share of the rock, both orthoclase and plagioclase being abundant. Considerable quartz is also present. The chief dark mineral is biotite, with a small amount of hornblende and a few grains of magnetite." (1)
- "In general, the rock is well jointed, although at some places the spacing is too close or too wide. Prominent joints form the north, south, and east faces of the quarry, while operations are continued to the west. Sheeting is moderately well developed and is used as ledge surfaces because the dip is eastward, thereby permitting the blocks to be readily removed." (1935) (1); Quartz-monzonite gneiss (2)
- Physical test data:** Available from U.S. Army Corps of Engineers
- Extraction method:** Blasting and then trimmed into stock blocks (1)
- Remarks:** See Refs. 3-15, for additional information including location maps, detailed lithologic descriptions, modal analyses, and chemical analyses of the Morton area.

- References:**
- 1) Thiel; Dutton. 1935, p. 88-94
 - 2) Hanson. 1968, p. 19
 - 3) Goldich and others. 1980b, p. 45-56
 - 4) Suda. 1975
 - 5) Lund. 1956, p. 1475-1490
 - 6) Lund. 1953, p. 46-52
 - 7) Lund. 1950, p. 16, 73, 74, plate 4
 - 8) Goldich and others. 1970, p. 3671-3695
 - 9) Goldich and others. 1961, p. 123-146
 - 10) Bowles. 1918, p. 47-49
 - 11) Nielsen; Weiblen. 1980, p. 95-103
 - 12) Wooden and others. 1980, p. 57-75
 - 13) Parham and others. [1966?] p. 14
 - 14) Ankenbauer. 1975
 - 15) U.S. Army Corps of Engineers files

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- Main commodity:** Dimension Granite
- County:** Renville
- Date opened:** About 1887 (2,4)
- Status:** Inactive
- Past operator/owner:** North Redwood Granite Works (2,4)
- Location:** T 113 R 35 W Sec 20 S1/2 (1)
- Location comments:** 1980 ft east and 1450 ft north of the SW corner of Sec. 20 (3); see Ref. 1, plate 4 for location map; 1-1/2 miles from North Redwood station (1918) (2)
- Geologic age:** Archean
- Geologic formation:** Morton Gneiss (1)
- Description:** "The rock is pinkish-gray to gray, medium-grained, and gneissic. Granulation has reduced many of the feldspar grains to small-scale augen which the quarry men recognized." (1)
- "On the vertical wall of the largest pit, which is about 15 feet deep, horizontal sheeting planes are spaced about 6 feet apart. Nearly vertical joints are far apart, none appearing on this wall, which is 12 to 15 feet wide, and consequently blocks of very large size many be obtained. The rock has an indistinct gneissic texture. There are two types of rock--a medium-grained biotite gneiss of greenish-gray color and a pale-pink biotite granite." (2); gray facies of tonalite (3)
- Modal Analyses:** potash feldspar 2%, plagioclase 57%, quartz 27%, biotite 11%, accessories (magnetite, apatite, zircon, sphene, epidote, allanite, hornblende, muscovite) 3% (3); see Ref. 1, table 7 for further modal analyses
- Physical test data:** "Physical tests of the pink granite show: True specific gravity, 2.690; pore space, 0.6 per cent; weight per cubic foot, 167.1 pounds. Under crushing stress the first crack developed under 12,308 pounds per square inch, and the rock finally collapsed under 21,236 pounds. Under traverse stress the modulus of rupture proved to be 4,526 pounds per square inch." (2)
- Uses of commodity:** High grade monuments, structural purposes (2)
- Trade names:** "Birds Eye" gray granite (1)

References: 1) Lund. 1950, p. 39, 74
2) Bowles. 1918, p. 72, 73
3) Lund. 1956, p. 1484
4) Thiel; Dutton. 1935, p. 93, 94
5) MGS. [1978-1979?]

Main commodity: Dimension Granite
County: Sherburne
Quarry/pit name: Hilder Granite Co. Quarries (2)
Alternate name: Dodd No. 20 and Horseshoe Quarry (2)
Date opened: 1886 (1)
Status: Inactive
Past operator/owner: Hilder Granite Co. (1,2)
Location: T 35 R 30 W Sec 6 SW1/4 (1)
Location comments: See Ref. 1, plates 1 and 3 for location maps; located in George Friedrich Park, St. Cloud (2)

Description: "The rock is a fine-grained gray hornblende-biotite granite containing a larger proportion of dark minerals than most of the gray granites on the opposite side of the river in Stearns County. Feldspars are mostly gray with a subordinate number of pale-pink crystals. In order of abundance they are orthoclase, plagioclase, and microcline. Quartz is fairly abundant in clear glassy grains. Hornblende and biotite are about equal in amount; both contain numerous inclusions of apatite and zircon, the latter surrounded by pleochroic halos. Sphene and magnetite grains are numerous, but the magnetite, being a stable oxide, is unlikely to cause stains by weathering." (1)

"Major joints strike N. 84 deg. E., secondary joints N. 10 deg. W., and a subordinate system N. 40 deg. W. This would result in the production of undesirable angular blocks if the joints were not so very widely spaced—20, 30, and in some places 40 feet. At the western side of the excavation two parallel joints are 2 1/2 feet apart, and the rock between them is greatly decomposed, showing that close jointing tends to hasten rock decay. Sheeting planes are horizontal and 6 to 16 feet apart." (1)

"Black knots are common in places, but certain large masses are almost free of them. The rock is stained to some extent along joint planes. White aplite stringers half an inch to 2 inches wide and one narrow red dike traverse the rock irregularly." (1)

Uses of commodity: Paving blocks, monument stock, crushed (1)
References: 1) Bowles. 1918, p. 122, 123
2) Knutson. 1969, p. 107
3) Kelley. 1951

Main commodity: Dimension Granite
County: Sherburne
Quarry/pit name: Erickson Quarry (1)
Date opened: 1883 (1)

Status: Inactive
Past operator/owner: Erickson (1); Hilder (1)
Township name: Haven
Location: T 35 R 30 W Sec 6 NE1/4 SW1/4 (1)
Location comments: See Ref. 1, plates 1 and 3 for location maps; 1/2 mile from the reformatory and 1 1/2 miles from East St. Cloud (1)

Description: "The main type is a medium-grained uniform gray hornblende granite. Its determination with the microscope places it rather with the quartz monzonites, for in it orthoclase and microcline together are about equal to plagioclase. Quartz is not very abundant and was evidently the last mineral to crystallize. Hornblende with subordinate biotite, sphene, and magnetite form the darker part of the rock. It is remarkably fresh, showing very slight alteration. A second type, more easily worked, is a finer-grained pinkish-gray granite with a sloping contact, which is exposed in the bottom of the quarry on the north side." (1)

"Chief joints strike N. 6 deg. W. and secondary joints N. 80 deg. E., thus meeting approximately at right angles. Minor joints strike N. 58 deg. E. and N. 42 deg. W., also approximately at right angles. They are 5 to 20 feet apart. Sheets are distinct and 4 to 15 feet apart. Some are horizontal and others oblique, thus wedging out. Black knots are scarcer than in most gray quarries on the east side. White aplite dikes, however, are very numerous and run at all angles." (1)

Physical test data: Compression tests were made on 9 cubes. On the average the first crack came at 11,426 psi and final collapse at 16,996 psi (1)

Uses of commodity: Paving blocks, a little monument stock (1)
Remarks: A short distance to the SE is Erickson's abandoned pit (1)
References: 1) Bowles. 1918, p. 123, 124

Main commodity: Dimension Granite
County: Sherburne
Quarry/pit name: East St. Cloud Granite Quarry (1)
Date opened: About 1900 (1)
Status: Inactive
Past operator/owner: East St. Cloud Granite Co. (1)
Location: T 35 R 30 W Sec 6 S 1/2 (1)
Location comments: About 1/8 mile north of the reformatory grounds and close to the Great Northern and Northern Pacific railways are 3 excavations (1); see Ref. 1, plates 1 and 3 for location maps

Description: "Both red and gray granite are quarried. The red quarry is the second from the railroad, and lies between two gray quarries, whose rock is almost identical with that from the reformatory quarries. The red is a medium to coarse grained hornblende granite similar to the typical 'St. Cloud red' granite of Stearns County. The feldspars are chiefly red, a few

crystals of greenish gray occurring in places. Quartz is abundant in glassy grains and hornblende is subordinate." (1)

"Major joints strike N. 75 deg. E. and secondary joints N. 13 deg. W. All are nearly vertical and 1 to 15 feet apart. In the gray quarry two sheeting planes lie 5 and 12 feet, respectively, from the surface, but with increasing depth the spacing increases considerably. In the red quarry indistinct planes appear near the surface, though none occur in the lower 40 feet of quarry wall. The gray granite contains a number of black knots which are probably segregations. Large masses of the gray rock form inclusions in the red. The red rock turns brown on weathering." (1)

Uses of commodity: Paving blocks, building stone, monument stock, curbing (1)

References: 1) Bowles. 1918, p. 121, 122

Main commodity: Dimension Granite

County: Sherburne

Quarry/pit name: Kellas Quarry (1)

Date opened: 1906 (1)

Status: Inactive

Past operator/owner: John Kellas (1)

Township name: Haven

Location: T 35 R 30 W Sec 6 NW1/4 SW1/4 (1)

Location comments: See Ref. 1, plates 1 and 3 for location maps

Description: "...a fairly uniform dark-gray hornblende granite. Microscopic examination shows some variation in relative amount of the various minerals in different parts of the quarry. Plagioclase and quartz appear to be the most variable constituents. Orthoclase and microcline together form the greater portion of the feldspar mass in most places, though plagioclase is prominent. Hornblende and subordinate biotite form a larger share of the rock than they do in the typical gray granite of Sterns County. A few magnetite grains and abundant apatite inclusions are accessory constituents. The feldspars show a little alteration to kaolin." (1)

"Major joints strike N. 65 deg. W. and secondary joints N. 3 deg. W. They are nearly vertical and are widely spaced. Sheets are distinct, 4 to 20 feet apart, and wedge out in places as in Erickson's quarry. A few black knots occur, and white to pale-pink aplite dikes are numerous. Part of the quarry has no overburden, and the maximum stripping at the present time is about 10 feet." (1918) (1)

Uses of commodity: Paving block, monument stock (1)

References: 1) Bowles. 1918, p. 124

Main commodity: Dimension Granite

Other commodities: Crushed Granite

County: Sherburne

Quarry/pit name: Minnesota State Reformatory Quarries (1,2,6)

Date opened: 1889 (1); 1868 (?)

Status: Inactive

Past operator/owner: State Reformatory (1,2); Breen and Young (1,3,4)

Township name: Haven

Location: T 35 R 30 W Sec 7 NE1/4 (1-4,6)

T 35 R 30 W Sec 6 SE1/4 (1-4,6)

Location comments: Near State Reformatory (1,2,5); see Ref. 1, plates 1 and 3 for location maps; (Ref. 7 states the quarry location to be at the NE1/4 SE1/4 Sec. 6, T. 35, R. 30 W; this location appears to be in error)

Description: "The rock is a medium-grained gray hornblende-quartz monzonite, consisting of gray feldspars, black hornblende, mica, and a little quartz. As observed with the microscope, orthoclase and microcline together are a little in excess of the plagioclase. The remainder of the rock mass consists of hornblende, biotite, and a small amount of quartz, sphene, magnetite, and apatite. The rock shows but slight alteration by weathering." (1)

"In the larger excavation within the walls (see Ref. 1, plate XIV) major joints strike N. 88 deg. E., secondary joints N. 22 deg. E., and a few of minor importance N. 36 deg. W. and N. 86 deg. W. They are 3 to 14 feet apart. In excavations farther north, two of which are outside the walls and three within, major joints strike N. 88 deg. W. and secondary joints N. 5 deg. E. Sheeting planes are very indistinct and far apart, a circumstance which makes quarrying difficult. A number of black knots, most of which are rather small, half an inch to 2 inches across, appear to be segregations of dark minerals; but others are angular and are probably fragments of a dark rock inclosed at the time of consolidation. White to reddish aplite dikes, half an inch to 2 inches in diameter, are common. The rock is fairly uniform and shows little change at depth, though it is said by quarrymen to be a little harder in the bottom of the quarries." (1); for further lithologic descriptions see Refs. 2-5

Uses of commodity: Building blocks and crushed stone, much of the stone was used in the construction of the reformatory buildings and walls (1)

Trade names: Reformatory Gray (1)

Remarks: A number of large pits have been excavated (1,2)

References: 1) Bowles. 1918, p. 120, 121
2) Thiel; Dutton. 1935, p. 86
3) Upham. 1884, p. 111
4) Winchell; Upham. 1888, p. 432
5) Harder; Johnston. 1918, p. 39, 40
6) MGS. [1978-1979?]
7) Högberg; Matsch. 1966, p. 4, 5

Main commodity: Dimension Granite

County: Sherburne

Quarry/pit name: Old Rock Island Quarry (1)

Alternate name: Saulpaugh Quarry (1)

Date opened: 1879 (1-3)

Status: Inactive

Past operator/owner: Saulpaugh (1,3); Burns (1-3)

Township name: Haven

Location: T 35 R 30 W Sec 17 S1/2 SW1/4 (2,3)

Location comments: Ten rods west of the main outcrop (2); see Ref. 1, plates 1 and 3 for location maps

Description: "The main mass is a coarse pinkish-gray quartz monzonite, having about the same texture as the 'St. Cloud red' granite, though not so uniform. The dark minerals, biotite and hornblende, are very abundant. Feldspars are of two kinds, pale pink (orthoclase or microcline) and pale greenish gray (plagioclase) in about equal amounts. The quartz, some of which is smoky, is not plentiful. The rock shows little alteration, even under the microscope." (1)

"In the northwestern part of the outcrop a smaller mass of finer-grained granite contains very few of the pale-pink feldspars. The dark minerals, the chief of which is biotite, are present in fine, scattered particles, whose combined effect deprives the rock of the attractive color that characterizes many of the 'St. Cloud gray' granites." (1)

"A few sheeting planes occur near the surface but none at depth. The chief joints strike N. 65 deg. E. and secondary joints N. 1 deg. E. Joints are spaced far apart, 40 to 50 feet in places. The area is intersected by numerous pale-red and gray aplite dikes trending about N. 70 deg. W. Toward the eastern end of the outcrop several bands of a medium-grained gray granite cut through the coarser rock. Their boundaries are indistinct. A diabase dike 4 feet thick crosses the outcrop in direction N. 70 deg. E." (1); see Refs. 2 and 3 for further lithologic descriptions

Uses of commodity: Building stone (1-3)

Remarks: "On account of the unattractive color and, above all, the varying types within a limited area the rock is not to be recommended for monumental purposes. It is, however, an excellent structural stone, being strong and durable." (1)

References: 1) Bowles. 1918, p. 119, 120
2) Winchell; Upham. 1888, p. 431, 532
3) Upham. 1884, p. 110, 111

Main commodity: Dimension Granite

County: St. Louis

Status: Inactive

Past operator/owner: Hokanson (1)

Location: T 50 R 14 W

Location comments: Near 11th Ave. West and Superior St., Duluth (1); (T., R. locations determined from USGS Duluth quadrangle)

Description: Gabbro (1)

Uses of commodity: Curbing, occasionally for a little monument stone (1)

References: 1) Bowles. 1918, p. 149

Main commodity: Dimension Granite

County: St. Louis

Quarry/pit name: Hindsdale Quarry (1)

Alternate name: Hindsdale Stone Quarry (3)

Date opened: About 1891 (1,2)

Status: Inactive

Location: T 59 R 14 W Sec 17 N1/2 (5)

Location comments: (Center of N1/2 of section, west of railroad tracks)

Description: "The rock is a somewhat porphyritic granite with pink feldspar crystals about half an inch across. The general color effect at some distance is a pinkish gray. Closer observation shows that the feldspars are of two types, large scattered porphyritic pale pink and abundant greenish gray, the latter forming the bulk of the rock. Quartz is in fine grains and is not at all conspicuous. Most of the hornblende is in small grains, with a few larger ones, so lined up as to give the rock an indistinct gneissic texture. Microscopic study proves that the most abundant feldspar is orthoclase, and that microcline and plagioclase are subordinate. Biotite, hornblende, and magnetite form the dark part of the rock. Crystals of sphene, in most places associated with the magnetite grains, are even more abundant than in the 'St. Cloud gray' granite. Apatite inclusions are numerous." (1)

"On the exposed rock surface west of the quarry three joint systems trend N. 20 deg. W., N. 70 deg. W., and N. 55 deg. E. The western edge of the quarry is a prominent open joint running N. 32 deg. W. The joint structure is shown in Ref. 1, fig. 18. Though most of the joints are vertical a system near the north end of the quarry striking N. 5 deg. E. dips about 50 deg. E. Eight such joints 2 to 8 feet apart were observed. The acute angles of intersection of these joints with the vertical systems result in blocks of undesirable shape. Sheeting planes are well spaced. From the top of the quarry downward they appear at approximate intervals of 8, 8, 10, 4, and 10 feet. Near the surface they dip slightly west, the dip increasing with each successively lower plane, the floor of the quarry dipping 20 deg. W." (1)

"Near the north end of the quarry a large number of aplite dikes appear. Some dark knots seem to be inclosed fragments of hornblende schist. The central and southern parts of the quarry are fairly free of defects, though the presence of lenticular masses of

black hornblende 1 inch to 2 feet in length mars considerable rock for monumental purposes. Aside from such knots the rock is even-grained, uniform, and attractive." (1); see Refs. 2, 3, and 4 for further lithologic descriptions

Extraction method: Shelf or bench type (1,2)

Remarks: "It is therefore evident that a serious mistake was made in opening a quarry facing the east, for in it the beds dip toward the back of the pit, resulting not only in poor drainage but in great difficulty in removal of rock." (1)

References: 1) Bowles. 1918, p. 146, 147
2) Thiel; Dutton. 1935, p. 106, 107
3) Winchell; Grant. 1900, p. 734, 735
4) Grout and others. 1951, p. 1040
5) USGS. 1961, Aurora quadrangle

Main commodity: Dimension Granite

County: St. Louis

Quarry/pit name: McDonald Quarry (1)

Status: Inactive

Location: T 61 R 18 W Sec 8 (1)
T 61 R 18 W Sec 8 S1/2 SE1/4 (2)

Location comments: 2 miles west of Angora (1)

Description: "The general environment, type of rock, and joint pattern are similar to those in the Cook region." (1)

Extraction method: Pit quarry type, conditions indicate that a good shelf type quarry could be made (1)

Uses of commodity: Large building blocks (1)

Trade names: Archean Green (1)

References: 1) Thiel; Dutton. 1935, p. 109, 110
2) USGS. 1964, Cook quadrangle

Main commodity: Dimension Granite

County: St. Louis

Quarry/pit name: Winchester Quarry (1)

Status: Inactive

Past operator/owner: Melrose Granite Co. (1)

Location: T 61 R 20 W Sec 14 AND
T 61 R 20 W Sec 23 (1)

Location comments: Near Angora (1); (this possibly is the active quarry in Sec. 23 operated by Ferweda General Contracting - see Producer Directory)

Description: "...medium-to fine-grained light gray granite. In general the rock is similar in color and texture to the 'Rock of Ages' granite quarried at Barre, Vermont. After a prospect pit approximately 120 feet in diameter and from 20 to 30 feet deep had been excavated, the property was abandoned. It was found that the rock has many imperfections, such as black schist inclusions, dark, fine-grained stringers and dikes, and extensive discolorations from iron-bearing solutions along joints. The joints

are closely spaced and strike N. 75 deg. E. and north-south." (1)

Extraction method: Plug and feather (1)

Uses of commodity: Monumental stock blocks (1)

References: 1) Thiel; Dutton. 1935, p. 107

Main commodity: Dimension Granite

County: St. Louis

Quarry/pit name: "Green Granite" Quarry (1)

Status: Inactive

Past operator/owner: Arrowhead Granite Co. (1)

Location: T 62 R 19 W

Location comments: On the west upland slope of the Little Fork River, about 2 miles west of the village of Cook (1,2); on County Road 500 (3); (exact location undetermined, this site is probably in section 13, 14, or 23); (T., R., Sec. locations determined from county highway map)

Description: "...an outcrop of gabbro in which the joint and sheet pattern permits the removal of stone of good dimensions. One set of joints spaced at 3- to 8-foot intervals trends N. 80 deg. E. and another set from 2 to 20 feet apart trends N. 15 deg. W....The colors and texture are fairly uniform although some streaks and black knots (inclusions) are encountered." (1)

"...gabbro that is of medium grained texture and possesses a greenish tint caused by the faint color of the plagioclase. On broken surfaces the black and dark gray minerals appear more abundant than the greenish feldspar, but when polished the green color is intensified and so characterizes the rock. Some of it is a mottled green and black." (2)

"...the rock is composed mostly of hornblende and plagioclase feldspar and lacks visible quartz and more correctly should be called a diorite." (3)

Trade names: Emerald-Tone Green (1); Green Granite (1,2); Emerald-Tone (2); Black Granite (3)

References: 1) Thiel; Dutton. 1935, p. 108, 109
2) Schwartz; Thiel. 1952, p. 80
3) Sims; Morey. [1966?], p. 6

Main commodity: Dimension Granite

County: St. Louis

Quarry/pit name: Hibbing Green Quarry (1,2)

Status: Inactive

Past operator/owner: Cold Spring Granite Co. (see Producer Directory) (1,2)

Location: T 62 R 19 W Sec 13 (1)

References: 1) USBM. [1980], MILS
2) USDL. MSHA mine reference list

Main commodity: Dimension Granite

County: St. Louis
Quarry/pit name: Hibbing Green Quarry (1)
Status: Inactive
Past operator/owner: Cold Spring Granite Co. (see Producer Directory) (1)
Location: T 62 R 19 W Sec 14 S1/2 S1/2 (1)
References: 1) USBM. [1978], MILS

Main commodity: Dimension Granite
County: St. Louis
Quarry/pit name: Green Quarry (1)
Status: Inactive
Past operator/owner: Cold Spring Granite Co. (see Producer Directory) (1)
Location: T 62 R 19 W Sec 23 NW1/4 (1)
Location comments: Center of NW 1/4 (1)
References: 1) USBM. [1979], MILS

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Past operator/owner: Moeller (1)
Township name: Lynden
Location: T 122 R 27 W Sec 19 NW1/4 SE1/4 (1)
Description: "The rock is an even-grained gray granite but differs from the typical 'St. Cloud gray' chiefly in the color of its feldspars, which are a clear greenish gray, much lighter in color than those of the typical 'St. Cloud' stone. They afford a more distinct contrast between dark and light minerals. Both hornblende and biotite are present and form approximately a fourth of the rock mass. Quartz is not abundant. The black and greenish-white mottling is very attractive. In thin section, orthoclase appears to be the most abundant feldspar, with plagioclase nearly equal in amount. Microcline is subordinate. Quartz is present in small scattered grains, and sphene, magnetite, and apatite are accessory constituents." (1)
 "Some granite has been quarried, and in the 5 feet of vertical exposure no sheeting planes appear. Joints strike N. 61 deg. W. and S. 41 deg. W. Very few black knots are visible. The rock is uniform and attractive and is apparently suitable for high-grade monumental work." (1)
Uses of commodity: Barn foundation (1)
References: 1) Bowles. 1918, p. 80, 81

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Location: T 123 R 28 W Sec 19 SE1/4 NW1/4 (1)

Location comments: Near center of section (1); quarried on the eastern side of the ridge (1); see Ref. 1, plate 1 for location map

Description: "The rock is a coarse-grained hornblende biotite granite of the 'Rockville' type, about three-fourths of which is of feldspar in large crystals half an inch to an inch across. Pale-pink feldspar is abundant, and a subordinate amount of pale-green feldspar is present. Biotite and hornblende are about equally abundant, and quartz in small grains is plentiful. As observed under the microscope, orthoclase with subordinate microcline and smaller though numerous quartz crystals form the light portion of the rock. Very little perthitic intergrowth was observed. Scattered grains of hornblende, biotite, and magnetite form the darker part." (1)

"The most prominent joints at the southern end of the outcrop strike N. 22 deg. W. and N. 60 deg. E. and are 4 to 10 feet apart. At the north end of the outcrop joints of three systems, N. 70 deg. W., N. 50 deg. W., and N. 85 deg. W., divide the rock into angular masses. Here also epidote veins are more numerous and when traced for a distance give place to numerous interlacing green hair lines. A few gray knots contain feldspar crystals similar to those in the surrounding rock and hence appear to be segregations." (1)

Remarks: "The rock makes very attractive structural blocks or columns." (1)

References: 1) Bowles. 1918, p. 84

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Rockville Granite Co. Quarry (1)
Date opened: 1891 (1)
Status: Inactive
Past operator/owner: Rockville Granite Co. (1)
Location: T 123 R 29 W Sec 9 SW1/4 (1)
Location comments: "...about one-fourth of a mile north of the Clark and McCormack quarry, on the north side of the railroad track." (1918) (1); see Ref. 1, plate 1 for location map
Description: "Joints are far apart, the most prominent running east and northeast." (1); the stone is the same as that of the Clark and McCormack quarry (1)
Uses of commodity: Structural stone (1)
References: 1) Bowles. 1918, p. 83

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Clark and McCormick Quarry (1,2)
Date opened: 1907 (1,2)
Status: Inactive

Past operator/owner: John Clark Co. (2); Clark and McCormick (1)

Location: T 123 R 29 W Sec 9 SW1/4 (1,3)

Location comments: At Rockville (1); see Ref. 1, plate 1 for location map

Description: "The 'Rockville' stone is uniform and exceptionally coarse grained, the angular feldspar crystals being one-half to three-fourths of an inch in diameter. It consists of pale-pink feldspar, quartz, and black mica, the combined effect on a hammered surface being pinkish gray. No pyrite or other minerals which would cause stain or blemish are present. Observed with the microscope the rock is a biotite granite. The chief feldspar is orthoclase. Considerable microcline, a little plagioclase, and abundant quartz also appear. Small grains of hornblende, magnetite, inclusions of apatite, and fairly large crystals of sphene are accessory constituents." (1)

"Gray knots in the form of lenslike masses occur but are not common. The rock is exceptionally pure and even grained; on the freshly exposed quarry wall the eye can not detect the slightest change in its appearance except where surface stained. Such uniformity of texture and color are properties greatly in demand." (1)

"The rock rises in a great dome which is exposed over at least an acre. On the exposed surface, careful observations of joints could be made. Open joints are far apart and are somewhat irregular in direction; the most prominent strike S. 70 deg. E. and others N. 45 deg. E., S. 55 deg E. and N. 10 deg. W. This irregularity, if joints were closely spaced, would result in much waste rock, but here, where they are spaced 20, 40, and even 100 feet apart, the irregularity is of little consequence. In fact, quarrying would be easier if they were more closely spaced. Sheeting planes are also few in number." (1)

"Weathering has produced a reddish stain in the upper 18 inches of the rock, and similar stains occur 18 inches to 2 feet on each side of the open seams. The rock becomes a little lighter in color at depth." (1)

Chemical analyses: See Ref. 1, p. 53 for chemical analyses

Physical test data: "Physical tests made at the University of Minnesota show that under crushing stress the first crack came at 10,574 pounds per square inch and final collapse at 17,294 pounds. Under transverse breaking strain the modulus of rupture proved to be 2,048 pounds per square inch." (1,2)

Extraction method: Blasting, plug and feather. (1); drifters or channeling machines (2)

Uses of commodity: Building stone (1); architectural stone (2)

Remarks: Adaptable for carving (1); "The finished stone has a tone and individuality that has been recognized by leading architects in all parts of the United States." (2)

References: 1) Bowles. 1918, p. 53, 81-83
2) Thiel; Dutton. 1935, p. 65, 66
3) Bleifuss. 1952, p. xx, xiii

Main commodity: Dimension Granite

County: Stearns

Status: Inactive

Past operator/owner: Delano Granite Co. (1,2)

Location: T 123 R 29 W Sec 16 SE1/4 NW1/4 (1-3)

Location comments: One-half mile south of Rockville (3)

Geologic age: Early Proterozoic

Geologic formation: Rockville Granite (3)

References: 1) Hogberg. 1969, p. 50
2) Hogberg. 1966, p. 39
3) Hanson. 1968, p. 20

Main commodity: Dimension Granite

County: Stearns

Status: Inactive about 1900 (1)

Past operator/owner: H. Tenney (1)

Location: T 123 R 29 W Sec 16 NW1/4 (1)

Location comments: South of Rockville, near the mill pond (1); see Ref. 1, plate 1 for location map

References: 1) Bowles. 1918, p. 83

Main commodity: Dimension Granite

County: Stearns

Status: Inactive

Location: T 123 R 30 W

Location comments: 1-3/4 miles east of Cold Spring (1); (T., R. locations determined from Ref. 1, plate 47)

Description: Fine-grained, reddish syenite, much jointed (1)

Uses of commodity: Foundations, walls, etc. (1)

Remarks: Somewhat quarried (1)

References: 1) Winchell; Upham. 1888, p. 454

Main commodity: Dimension Granite

County: Stearns

Status: Inactive

Location: T 123 R 30 W

Location comments: Within the town of Cold Spring (1); (T., R. locations determined from county highway map)

Description: "...pale-pink hornblende granite, in which the minerals are unequally distributed, the quartz grains occurring massed together in places. Green epidote is common." (1)

Uses of commodity: Foundation stone (1)

Remarks: "Lack of uniformity and pale color make the rock unprofitable to quarry except for crushing and for foundation stone." (1918) (1)

References: 1) Bowles. 1918, p. 117, 118

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Past operator/owner: Cold Spring Granite Co. (see Producer Directory) (1)
Location: T 123 R 30 W Sec 14 SW1/4 SW1/4 (1)
Location comments: Near Cold Spring (1,2)
References: 1) Hogberg. 1969, p. 49
 2) Hogberg. 1966, p. 38

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Location: T 123 R 30 W Sec 19 W1/2 (1)
Location comments: Western part of section 19, south of the main road from Cold Spring to Richmond. This rock has been quarried in two places (1)
Description: "...dark tough diorite, which is medium to coarse grained and greenish gray. With the aid of the microscope it was determined to be an augite diorite, consisting of large crystals of plagioclase and hornblende, many of the latter containing augite cores. This condition suggests that the rock was probably a gabbro originally, and that the augite is gradually changing to hornblende." (1)
Uses of commodity: Barn foundations (1)
Remarks: "Its dark color makes it undesirable for all except the most ordinary structural purposes." (1)
References: 1) Bowles. 1918, p. 117, 119

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Township name: Wakefield
Location: T 123 R 30 W Sec 19 SE1/4 SE1/4 (1)
 T 123 R 30 W Sec 20 SW1/4 SW1/4 (1)
 T 123 R 30 W Sec 29 NW1/4 NW1/4 (1)
 T 123 R 30 W Sec 30 NE1/4 NE1/4 (1)
Location comments: Near the intersection of the common corners of sections 19, 20, 29, and 30 (1); (T., R. locations determined from Ref. 1, plate 47)
Description: Diorite or syenite (1)
Uses of commodity: Bridge abutments (1)
References: 1) Winchell; Upham. 1888, p. 454

Main commodity: Dimension Granite
County: Stearns
Status: Inactive

Past operator/owner: Osendorf (1)
Location: T 123 R 30 W Sec 20 (1)
Location comments: Western end of the outcrop in section 20 (1)
Description: Fine-grained deep red granite, "It is a binary granite, consisting of red feldspars and smoky quartz. It is fine grained, crystals being one-eighth to one-sixteenth of an inch in diameter, and is uniform both in color and texture. It takes a beautiful polish and is deep red, being similar both in color and texture to the 'Montello' granite of Wisconsin. The feldspar is microcline with subordinate orthoclase. Quartz is abundant. A few small grains of biotite, hornblende, and magnetite can be detected with the microscope. The rock shows some effects of surface weathering." (1)
 "As far as could be observed the rock is badly broken by joints, though better conditions may exist at depth." (1)
Uses of commodity: Barn foundation (1)
Remarks: "If blocks of considerable size free from seams could be found, they would undoubtedly be valuable for monumental purposes." (1)
References: 1) Bowles. 1918, p. 117-119

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Opalescent Quarry (1,2)
Status: Inactive (2)
Past operator/owner: Cold Spring Granite Co. (see Producer Directory) (1,2)
Location: T 123 R 30 W Sec 23 NW1/4 (1)
References: 1) USBM. [1979], MILS
 2) USDL. MSHA mine reference list

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Township name: St. Cloud
Location: T 124 R 28 W
Location comments: 15 to 20 rods south from the west end of the Sauk Rapids bridge (1,2); (T., R. locations determined from Ref. 1, plate 47)
Description: "...porphyritic, gray syenite, consisting mostly of feldspar with about a fourth part of quartz, and including some hornblende and rare grains of mica....traversed by nearly vertical joints one to eight feet apart." (1,2)
Remarks: Slightly quarried (1,2)
References: 1) Winchell; Upham. 1888, p. 458
 2) Upham. 1884, p. 109

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Schwab Quarry(1)

Status: Inactive

Past operator/owner: Schwab (1)

Location: T 124 R 28 W Sec 8 W1/2 SW1/4 (1)

Location comments: West of Sauk River (1); see Ref. 1, plates 1 and 2 for location maps

Description: "Both red and gray rock were quarried. The red rock is a hornblende granite, red feldspar forming more than half the mass, the remainder being chiefly quartz and hornblende. Orthoclase and plagioclase are both present and are very much intergrown, forming a microperthite. Small grains of magnetite and inclusions of apatite are common. The rock is medium grained, the crystals being one-half to one-fourth of an inch in diameter." (1)

"The gray rock consists chiefly of greenish gray feldspar, which forms more than half the rock; quartz, roughly estimated at 20 per cent, hornblende, and biotite, the biotite being more abundant than in the red rock. The gray is finer grained than the red, the crystals averaging one-sixteenth to one-eighth of an inch in diameter." (1)

"North-south joints are vertical and 8 to 20 feet apart. East-west joints are similarly spaced and dip about 20 deg. S. The texture is fairly uniform, but a number of cavities and small pegmatite masses are found. Small quantities of pyrite (FeS₂), pyrrhotite (FeS), and fluorite (CaF₂), all of which are uncommon in the St. Cloud region, are mingled with the quartz, feldspar, and mica." (1)

"Throughout a considerable area the red and gray types are mixed. Indistinct dikes of the red occur in the gray, and masses of gray are inclosed in the red. Boundaries between the two are very indistinct, and in places a gradual transition can be traced from one to the other, the mixed zone ranging in width from a few inches to several feet. In consequence of this, masses of rock occur which are neutral in color and can be placed with neither type. At some distance from the contact red rock of good quality may be obtained. A few black hair lines were observed." (1)

References: 1) Bowles. 1918, p. 102, 103

Main commodity: Dimension Granite

County: Stearns

Quarry/pit name: Monarch Granite Co. Quarry (1)

Date opened: 1906 (1)

Status: Inactive

Past operator/owner: Monarch Granite Co. (1); Lilliquist (1)

Location: T 124 R 28 W Sec 8 W1/2 SW1/4 (1)

Location comments: South of the Great Northern tracks and west of Sauk River (1); see Ref. 1, plate 1 and 2 for location maps

Description: "The best rock quarried is a medium-grained red hornblende granite of attractive

appearance. The feldspar is almost all pink in color, showing a few grains of the greenish gray so prominent in some localities. Smoky quartz is abundant." (1)

"Joints are 2 to 8 feet apart and form two prominent systems, north-south and east-west. Horizontal sheeting planes are 3 to 12 feet apart. An open seam dips about 30 deg. to the bottom of the quarry at about 35 feet, where it becomes horizontal. This has permitted water percolation and resulted in extreme weathering of the granite for several inches on each side of the seam. The appearance of granite decayed to kaolin and mixed with loose grains of quartz and feldspar in the bottom of the quarry, with firm rock both above and below is remarkable, and has not been observed elsewhere in the region." (1)

"A mass of gray rock 8 to 10 feet in thickness where observed, and of unknown lateral extent, occurs at the northwest side of the excavation....It is cut by numerous aplite dikes one-fourth to one-half of an inch across." (1)

"Near the contact the red rock is very porphyritic, with reddish-white feldspars and black hornblende embedded in a dense fine-grained matrix." (1)

"Near the contact the shattered nature of the rock and its lack of uniformity make it undesirable. At some distance from the contact, however, the rock is even grained and very attractive, becoming a little darker red at depth. A few dark hair lines were noted, and also some red streaks where the feldspars were crowded together. Part of the rock outcrops, and the maximum stripping is about 5 feet of sand and gravel." (1)

Uses of commodity: Monuments, columns (1)

Trade names: "Monarch red" (1)

Remarks: "Pumping is required to remove accumulated surface water." (1)

References: 1) Bowles. 1918, p. 96, 97

Main commodity: Dimension Granite

County: Stearns

Status: Inactive

Past operator/owner: Melrose Granite Co. (1)

Location: T 124 R 28 W Sec 17 SW1/4 SW1/4 (1,2)

Location comments: Extreme SW of section 17 (1); see Ref. 1, plates 1 and 2 for location maps

Description: Red granite, "Joints in this quarry are northwest and southwest, and sheeting planes, two of which are 15 feet apart, dip 30 deg. SW., the northwest joints dipping to make right angles with them. The rift is horizontal, and therefore when the rock is split on the rift, acute-angled blocks are formed with a consequent high percentage of waste. The rock is stained red along the joints." (1)

References: 1) Bowles. 1918, p. 95
2) MGS. [1978-1979?]

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Simmers and Campbell Quarries (1)
Status: Inactive
Past operator/owner: Simmers and Campbell (1); St. Cloud Granite Manufacturing Co. (2,3)
Location: T 124 R 28 W Sec 17 NW1/4 SW1/4 (1-3)
Location comments: See Ref. 1, plates 1 and 2 for location maps
Description: Red granite, "In thin section microcline is the chief feldspar, with orthoclase and plagioclase subordinate. The latter, from its small extinction angle, appears to be orthoclase. The feldspars show characteristic micro-perthitic intergrowth. Quartz is abundant. A small amount of hornblende, biotite, and a few grains of magnetite form the darker portion of the rock." (1)
"Vertical major joints strike N. 2 deg. W., and a second series dipping 85 deg. to 88 deg. N. strikes N. 85 deg. W. Joints are spaced 6 to 10 feet apart. Sheeting planes are spaced about 20 feet apart and dip about 30 deg. N. A small mass of gray granite occurs near the north side of the pit. A few dark knots appear and are more plentiful near the surface than at depth. Hair lines are numerous, though fortunately they are confined to one band of rock about 20 feet across. They contain, as identified with the microscope, epidote, needle-like crystals of plagioclase, and a very few crystals of olivine. Evidently they are diabase dikes altered almost beyond recognition and are probably offshoots of the larger dikes." (1)
"A dull rusty gray streak several inches in width, known locally as a 'jasper band', passes diagonally through the quarry and appear, from microscopic evidence, to be a band of stained rock due to weathering by water percolating along an oblique incipient seam. A 4-foot dike running N. 85 deg. E. forms the south wall of the pit. A few pyritiferous smoky quartz veins with crushed zones of country rock along their borders appear in places." (1)
"The smaller excavation was opened up... on the north side of the steep rock bluff." (1)
"An unusual occurrence of joints is shown in Ref. 1, figure 13. The eastern half of the quarry wall follows an inclined joint dipping 55 deg. N., and the western half a joint dipping about 88 deg. S. The eastern plane is probably related to the system of inclined sheeting planes in the adjacent quarry. Vertical joints range from N. 4 deg. W. to N. 15 deg. W. and are spaced 15 to 20 feet apart at the east and 2 to 6 feet apart at the west side of the pit. The rock in this quarry is free from dikes and 'jasper bands' and is of good quality." (1); red syenite (2,3)

Remarks: Three large excavations have been made (1); excellent quarry stone (2)

References: 1) Bowles. 1918, p. 103-105
2) Winchell; Upham. 1888, p. 457
3) Upham. 1884, p. 108

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: North Star Granite Co. Quarries (1)
Status: Inactive
Past operator/owner: North Star Granite Co. (1); Simmers and Campbell (1)
Township name: St. Cloud
Location: T 124 R 28 W Sec 17 NW1/4 SW 1/4 (1)
Location comments: See Ref. 1, fig. 39 for location map
Description: "...hornblende-biotite granite, predominantly orthoclase....Vertical major joints strike N. 2 deg. W., and a second series dipping 85 deg. to 88 deg. north strikes N. 85 deg. W. Joints are spaced from 6 to 10 feet apart. Sheeting planes are spaced about 20 feet apart and dip about 30 deg. north. A small mass of gray granite occurs near the north side of the property. A few dark knots, more plentiful near the surface than at depth, are present. Hair lines are numerous, though fortunately they are confined to one band of rock about 20 feet across. Under the microscope the rocks are found to contain epidote, needle-like crystals of plagioclase, and a very few crystals of olivine. They are evidently diabase dikes altered almost beyond recognition, and are probably offshoots of the larger dikes." (1)
References: 1) Thiel; Dutton. 1935, p. 79, 80

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Past operator/owner: Melrose Granite Co. (1)
Location: T 124 R 28 W Sec 17 SW1/4 (1)
Location comments: See Ref. 1, plates 1 and 2 for location maps
Description: Red granite (1)
References: 1) Bowles. 1918, p. 95

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: St. Cloud Granite Works Quarry (1)
Status: Inactive
Past operator/owner: St. Cloud Granite Works (1)
Location: T 124 R 28 W Sec 17 SE1/4 SW1/4 (1,2)
Location comments: See Ref. 1, plates 1 and 2 for location maps
Description: Red granite, "The rock is a medium-grained hornblende-biotite granite, consisting of pink feldspar with a small admixture of pale-green feldspar, black hornblende, and subordinate

biotite, together with both clear and smoky quartz. The chief feldspar is microcline. In places grains of hornblende and quartz form inclusions in the larger feldspar crystals." (1)

"Major joints strike N. 10 deg. W. and N. 80 deg. E. and are widely spaced. A few minor joints cross these obliquely. The first sheeting plane is about 10 feet from the surface, and the rock, except where protected by a covering of soil, has been altered down to this plane. On the other hand, where a depth of 6 feet or more of soil protects the surface the rock is unaltered." (1)

"One band of partly decayed rock runs N. 80 deg. E. through the quarry; and is useless even to the bottom of the quarry, being stained and decayed by water percolation in open joints. Two diabase dikes, the largest of which is 3 feet across, pass N. 55 deg. E. through the quarry. A few hair lines trend generally east and west. At the west end of the quarry a mass of gray granite is in sharp contact with the red. The run is east and west instead of north and south, as it is in most quarries." (1)

Remarks: An abundance of high grade rock is produced (1918) (1)

References: 1) Bowles. 1918, p. 101, 102
2) MGS. [1978-1979?]

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Drake Quarry (1)
Status: Inactive
Location: T 124 R 28 W Sec 18 (1)
Location comments: Northern part of outcrop (1); see Ref. 1, plates 1 and 2 for location maps
Description: "At the pit the rock is a uniform gray granite of good quality, consisting, in descending order of abundance, of orthoclase, plagioclase, quartz, microcline, hornblende, biotite, and magnetite. Feldspars show considerable alteration to kaolin. Joints strike N. 20 deg. W. and N. 65 deg. E. and are 6 to 20 feet apart. A 2-foot diabase dike, running parallel with the second set of joints, forms the southern wall of the excavation. The rock is intruded by a few granite dikes, which are more abundant near the surface than at the bottom of the pit. A few black knots appear." (1)

"The remainder of the outcrop west of the pit is chiefly of red granite, though its northern part contains a little gray rock. The main mass is coarsely even-grained granite of the characteristic 'St. Cloud red' type. Intruded into this are masses and dikes of red granular plagioclase, microcline, quartz, hornblende, biotite, and magnetite. The quartz is granular in rounded grains with distinct boundaries like the quartz of a sandstone. Inclusions of apatite are abundant. There is some evidence of flow structure. The fine-grained aplite is cut by

numerous joints with different trends, so closely spaced that only small diamond-shaped pieces could be obtained. Joints in the coarse red rock are widely spaced, and some of it has been quarried." (1)

References: 1) Bowles. 1918, p. 85, 106, 107

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Black Diamond Quarries (1)
Date opened: 1909 (1)
Status: Inactive
Past operator/owner: Black Diamond Granite Co. (1)
Township name: St. Cloud
Location: T 124 R 28 W Sec 18 SE1/4 NE1/4 (1)
Location comments: See Ref. 1, plates 1 and 2 for location maps; (Maps show quarry location in SE1/4 NE1/4 Sec. 18, this conflicts with Ref. 1, p. 86 which states location as SE1/4 NW1/4 Sec. 18)
Description: "The red granite is of two types, coarse grained and fine grained, the fine grained occurring near the contact of a mass of dark-gray granite at the western side. Both are adapted for monumental use, the fine grained being the more attractive. The red rock consists of microcline graphically intergrown with feldspar and quartz and of orthoclase, plagioclase, quartz, and a very little green hornblende. Joints are approximately at right angles and 3 to 20 feet apart." (1)
"The dark gray is a hornblende granite, the feldspar of which is chiefly orthoclase, with subordinate plagioclase and microcline. Hornblende with a little biotite and magnetite form the dark part of the rock. No sphene is present. The rock differs materially from the typical 'St. Cloud gray' granite." (1)
"Geologic relationships are rather complex in this quarry. (See Ref. 1, fig. 12.) The finer-grained texture of the red granite near the contact and the presence of red dikes in the dark granite prove that the latter is the older. Both rocks are cut by dikes, some of them in the form of minute hair lines, which are shown by microscopic examination to be of granite similar to the larger mass of dark-gray rock." (1)
References: 1) Bowles. 1918, p. 86, 87

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Township name: St. Cloud
Location: T 124 R 28 W Sec 18 NE1/4 (1)
Location comments: 32 rods NW of one of the Black Diamond Quarries (1); see Ref. 1, plates 1 and 2 for location maps

Description: "...dark gray rock....biotite-hornblende granite, somewhat finer grained than the red granite. It is somewhat porphyritic in places with white feldspar crystals one-fourth to one-half inch across. Quartz is abundant in small grains. In places the white feldspar is fine grained and sufficiently abundant to give the rock a light-gray color. The rock is invaded by dikes of red granite, though not so seriously as in the larger quarry. It takes a good polish, presenting a rich blue-black color where free of the porphyritic crystals of light feldspar." (1)

References: 1) Bowles. 1918, p. 87

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: National Quarry Co. Quarry (1)
Date opened: 1913 (1)
Status: Inactive
Past operator/owner: The National Quarry Co. (1)
Location: T 124 R 28 W Sec 18 NE1/4 SE1/4 (1)
Location comments: See Ref. 1, plates 1 and 2 for location maps
Description: "An even-grained red hornblende-biotite granite of good quality is obtained. It consists of pink feldspar, clear to smoky quartz, and a small proportion of hornblende and biotite. With the microscope the chief feldspar was determined as microcline microperthite. Quartz is abundant. Hornblende, biotite, and a few grains of magnetite form the dark part of the rock. Hornblende is shredded in appearance and somewhat altered. A few minute hair lines were found to be veins of smoky quartz. The rock is remarkably fresh, considering the limited depth of the excavation." (1)
 "As the excavation is small, only one sheeting plane appears. It is about 10 feet from the surface. Joints strike N. 30 deg. E. and N. 30 deg. W. Blocks of large size, remarkably free of flaws, are obtainable. The appearance of rock of such good color near the surface is promising." (1)
 "A mass of very dark gray rock appears near the west side of the excavation." (1)

References: 1) Bowles. 1918, p. 97, 98

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Past operator/owner: Granite City Granite Co. (1); Murray (1)
Township name: St. Cloud
Location: T 124 R 28 W Sec 18 NE1/4 SE1/4 (1)
Location comments: See Ref. 1, plates 1 and 2, and Ref. 2, fig. 39 for location maps; (Ref. 2 states R. 23, this conflicts with the location shown on the map, so we have assumed a typographical error)

Description: "...medium to coarse grained red granite, becoming a little deeper red at the bottom of the quarry. Major joints strike north and south. In several places joints occur close together and then for a space of 10 to 20 feet none appear. The only sheeting plane visible at the present stage is about 20 feet from the top and is horizontal, the remaining 35 feet of quarry wall having no natural sheeting planes." (1); see Ref. 2, p. 78 for further description

Uses of commodity: Monuments (1)
References: 1) Bowles. 1918, p. 92
 2) Thiel; Dutton. 1935, p. 78

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Jones Quarry (1)
Alternate name: Emery Quarry (1)
Status: Inactive; active 1913-? (1)
Past operator/owner: Jones (1)
Township name: St. Cloud
Location: T 124 R 28 W Sec 19 SE1/4 NE1/4 (1)
Location comments: See Ref. 1, plates 1 and 2 for location maps
Description: "The rock is a red granite similar to others in this region. Three diabase dikes, each several feet in diameter, pass through the quarry running northeast, and associated with them are numerous hair lines. A mass of gray granite occurs at the southwest end. The contact is very indistinct; many masses of red are inclosed in the gray and some dikes of gray occur in the red. In one spot a pegmatite mass several inches across contains coarsely crystallized brown mica." (1)

Uses of commodity: Monuments (1)
References: 1) Bowles. 1918, p. 93, 94

Main commodity: Dimension Granite
County: Stearns
Date opened: 1913 (1)
Status: Inactive
Past operator/owner: Melrose Granite Co. (1,2)
Location: T 124 R 28 W Sec 19 NW1/4 NE1/4 (1,2)
Location comments: See Ref. 1, plates 1 and 2 for location maps
Description: "The rock is a medium-grained red hornblende granite of excellent quality. Feldspars are mostly pink, with subordinate pale green. Quartz is abundant and hornblende in fairly large grains is uniformly distributed. Most of the feldspar is microcline and is much intergrown with stringers of other feldspars and quartz." (1)
 "Major joints strike north and south, and secondary joints in several directions. All are well spaced for quarrying. Sheeting planes are more abundant than in most quarries of the region, and this facilitates excavation. Two

sheets 8 to 10 feet thick, now visible, dip about 10 deg. NW. The rock ridge rises about 20 feet above the low marshy ground, and at the present stage the quarry is of the shelf type. The northwestward dip of the sheeting planes being toward the front of the excavation greatly assists the removal of blocks. With the exception of one small diabase dike trending N. 51 deg. E., no defects were observed." (1); see Ref. 2, p. 79 for further description

Extraction method: Shelf (1)
References: 1) Bowles. 1918, p. 95, 96
 2) Thiel; Dutton. 1935, p. 78, 79

Main commodity: Dimension Granite
County: Stearns
Status: Inactive (1)
Location: T 124 R 28 W Sec 19 NW1/4 (2)
Location comments: See Ref. 1, plates 1 and 2 for location maps
Physical test data: Specific gravity 2.63 (2)
Remarks: Quarried many years ago (1918) (1)
References: 1) Bowles. 1918, p. 107, 108
 2) Bleifuss. 1952, p. xx, xiii

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Empire Quarry Co. Quarries (1,2)
Date opened: 1912 (1)
Status: Inactive
Past operator/owner: Empire Quarry Co. began operations in 1912 (1,2); Hennessey and Cox before 1912 (1); Clark (1)
Location: T 124 R 28 W Sec 19 NE1/4 SE1/4 (1,2)
Location comments: See Ref. 1, plates 1 and 2, and Ref. 2, fig. 39 for location maps

Description: "The rock is a medium-grained red hornblende granite, a little paler in color than that worked by the same company in an adjacent quarry. Major joints strike north and south and are spaced 10 to 30 feet apart." (1)

"Near the top of the quarry at the south side is a mass of very tough gray biotite granite. The combination of fine-grained light gray feldspar and black mica gives it a speckled pepper and salt appearance. Clear quartz is visible with a hand lens, and is more abundant than in the typical 'St. Cloud gray' granite." (1)

"The rock in thin section exhibits a fine-grained uniform texture. It consists of orthoclase, microcline, quartz, plagioclase, biotite, and a few grains of magnetite. The toughness of the rock is occasioned by the interlocking of the feldspar and quartz grains. Its contact with the red shows in places a gradual transition over an interval of 6 inches or more. Smaller masses of gray are inclosed in the red near the contact." (1)

"A 1-1/2 inch pegmatite dike passes through the red granite." (1); see Ref. 2, p. 77 for further description

Uses of commodity: Building stone (1)
Trade names: Rose Red (2)
References: 1) Bowles. 1918, p. 88, 89
 2) Thiel; Dutton. 1935, p. 77

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Empire Quarry Co. Quarries (1,2)
Date opened: 1912 (1)
Status: Inactive
Past operator/owner: Empire Quarry Co. (1,2)
Location: T 124 R 28 W Sec 19 SE1/4 (1,2)
Location comments: See Ref. 1, plates 1 and 2, and Ref. 2, fig. 39 for location maps; located on the same rock dome, about 60 rods southeast of the other Empire Quarry Co.'s pit (which is located in the NE1/4 SE1/4 of sec. 19) (1)

Description: "The rock located is a medium-grained red hornblende granite. Most of the feldspar is pink with a few scattered greenish-gray grains. It is chiefly microcline, graphically intergrown with quartz and considerably altered to kaolin. Quartz is abundant, part being clear and part smoky. Joints which are rather uneven strike N. 5 deg. W. and N. 87 deg. E., 2 to 12 feet apart. Sheeting planes are uneven and indistinct, the highest being about 8 feet from the surface. The rock is stained and decayed down to the first sheeting plane but not beyond it." (1)

"A peculiar pegmatite area passes northeast through the quarry. It is very irregular and enlarges to a mass 6 to 8 feet across." (1)

"The outcrop is cut by a few small irregular diabase dikes, stained green where exposed at the surface. A zone of 'green lines'—epidote veinlets bearing a little pyrite—passes N. 80 deg. E. through the quarry." (1)

"A few lenticular inclusions of fine-grained gray granite, the largest 18 inches long and 4 inches wide, were observed. Other masses appear to be fine-grained segregations, containing both pink and gray feldspar." (1)

"Fortunately, the imperfections noted are confined to certain definite areas. Uniform attractive rock is obtained in large quantities. The color is somewhat deeper red than in the older quarry and is therefore better adapted to monumental purposes." (1); see Ref. 2, p. 77, 78 for further description

References: 1) Bowles. 1918, p. 89, 90
 2) Thiel; Dutton. 1935, p. 77, 78

Main commodity: Dimension Granite
County: Stearns

Date opened: Before 1906 (1)
Status: Inactive
Past operator/owner: North Star Granite Co. (1); Frick and Borwick Granite Co., began operations in 1906 (1,4); Minnesota Granite Co. before 1906 (1,4)
Location: T 124 R 28 W Sec 19 SE1/4 NE1/4 (2)
Location comments: See Ref. 1, fig. 39, and Ref. 2, plates 1 and 2 for location maps; (Ref. 1, p. 80 states SE1/4, this location conflicts with Ref. 1 and 2 location maps)
Description: "The rock is a red hornblende granite of uniform texture and attractive appearance. It is deeper red in color toward the bottom of the quarry than near the surface." (1)
 "The entire absence of sheeting planes, though the pit is now 60 feet deep, is noteworthy. Joints strike N. 30 deg. E. and N. 80 deg. E., and are so spaced that blocks of large size may be obtained. Epidote occurs as a filling in some open seams." (1)
 "A mass of gray biotite granite which occupies the south end of the quarry near the surface consists of orthoclase (present in abundance), quartz, microcline, biotite, magnetite, and apatite. Quartz is more plentiful than in the St. Cloud Gray granite, though in other respects the two rocks are markedly similar. Several smaller inclusions of the same types of gray rock may be seen in the quarry walls." (1); see Ref. 2 for further lithologic description
Trade names: "Indian Red" (1)
References: 1) Thiel; Dutton. 1935, p. 80
 2) Bowles. 1918, p. 90, 91

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Atwood Quarries (1)
Status: Inactive since 1912 (1)
Past operator/owner: Atwood (1); Agate Granite Co. (1)
Township name: St. Cloud
Location: T 124 R 28 W Sec 20 W1/2 SE1/4 (1)
Location comments: See Ref. 1, plates 1 and 2 for location maps
Description: "The rock in the larger excavation is a red hornblende granite, consisting chiefly of flesh-red feldspars, with subordinate greenish feldspars scattered throughout. Quartz is abundant in medium-sized transparent glassy grains. Hornblende crystals vary in size; in places they are larger than in any other red granite quarry of the region. With the microscope the chief feldspar was identified as orthoclase. Microcline is prominent and plagioclase subordinate. The feldspars are intergrown as in perthite, and all are altered to some extent. Hornblende shows considerable alteration to biotite." (1)
 "Segregations composed largely of hornblende form black knots and gneissic bands....The

bands contain magnetite, biotite, hornblende, and pyrite." (1)
 "Narrow veins of clear or smoky quartz were observed in a few places. Large masses of rock are, however, quite free of these streaks and knots. Joints are somewhat irregular. Two well-defined systems strike S. 45 deg. E. and S. 5 deg. E. and are intersected by minor systems. They are sufficiently spaced to allow excavation of large blocks. Sheeting planes are better developed in this quarry than in most Minnesota occurrences; near the top of the quarry they are 2 to 4 feet apart and the spacing increases at depth. They dip slightly to the north." (1)

"At the southwest side of the quarry near the top is a mass of gray granite which appears to be almost contemporaneous with the red, but which is much finer grained. Feldspars are of two kinds, pale pink and pale green, and quartz is abundant in small grains. As observed with the microscope the minerals present are microcline, orthoclase, quartz, plagioclase, biotite, hornblende, sphene, magnetite, and apatite, in order of abundance. The dark minerals are unevenly distributed, and as a whole the minerals are intimately intergrown and show less clear and definite boundaries than those of the typical 'St. Cloud gray' granite. A 2-foot diabase dike crosses the pit in direction N. 55 deg. E." (1)

Remarks: There is more than one quarry at this location, another quarry is 100 yards to the north, almost on the section line south of Sec. 20 (1); "The rock is attractive in color..." (1)

References: 1) Bowles. 1918, p. 85, 86

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Past operator/owner: Melrose Granite Co. (1)
Location: T 124 R 28 W Sec 20 NW1/4 NW1/4 (1)
Location comments: Two pits in NW 1/4 (1); see Ref. 1, plates 1 and 2 for location maps; (Bowles states that these quarries are in the NE 1/4, but his maps show the sites in the NW 1/4)
Description: "In the southern excavation the rock is a hornblende granite, consisting of pink feldspar, hornblende, subordinate biotite, and abundant quartz, both clear and smoky. The chief feldspar is microcline, with subordinate orthoclase and plagioclase. It is an exceptionally deep red attractive rock." (1)
 "Distinct joints strike north and east. Sheeting planes are few and uneven. One trap dike 3 feet wide trends east and west. In the northwest part of the quarry many black and green lines occur, the latter in interlacing bands 4 or 5 inches wide, running east and west. With the microscope they seem to be epidote veins, filling minute fractures. A few gray knots were

found on examination to be gray granite inclusions." (1)

Physical test data: "Under crushing stress the first crack came at 9,733 pounds per square inch, and final collapse at 19,101 pounds. Under transverse breaking strain the modulus of rupture proved to be 2,291 pounds." (1)

Remarks: The northern quarry was abandoned and filled with water before 1918 (1)

References: 1) Bowles, 1918, p. 95

Main commodity: Dimension Granite
County: Stearns
Status: Inactive (1)
Location: T 124 R 28 W Sec 20 SE1/4 SW1/4 (1)
Location comments: Near the top of the bluff, two quarry pits were worked (1); 40 rods north and 213 rods west of the SE corner (1); see Ref. 1, plate 2 for location map
Description: Red granite (1)
References: 1) Bowles. 1918, p. 109

Main commodity: Dimension Granite
County: Stearns
Date opened: 1913 (1)
Status: Inactive
Past operator/owner: Melrose Granite Co. (1,2)
Township name: St. Cloud
Location: T 124 R 28 W Sec 20 NW1/4 SW1/4 (1,2)
Location comments: See Ref. 1, plates 1 and 2, and Ref. 2, fig. 39 for location maps
Description: "The rock is a red hornblende granite of good color and uniform texture. The feldspars are flesh red with a few scattered grains of greenish gray. The chief feldspar is microcline, with subordinate orthoclase and plagioclase, all the feldspars being perthitic. Clear, transparent quartz is prominent and hornblende is present in small amounts. As this is a new quarry and has attained only slight depth, the feldspars in the rock so far excavated show considerable alteration." (1)
 "Jointing is somewhat irregular. The open joints trend N. 60 deg. E., N. 60 deg. W., and N. 20 deg. W. Blocks 3 to 8 feet across are obtainable between these open seams. Closed seams, however, are present and in places are close together. They permit water percolation with consequent reddish stains. Sheeting planes are also uneven, but so little excavation has yet been accomplished that their general character could not be observed. Unless fewer and more regular joints are found with continued excavation, it is probable that this pit will prove unprofitable." (1); see Ref. 2 for further lithologic description

References: 1) Bowles. 1918, p. 95, 96
 2) Thiel; Dutton. 1935, p. 78, 79

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Location: T 124 R 28 W Sec 20 SE1/4 SW1/4 (1)
Location comments: About 224 rods west of the SE corner (1); see Ref. 1, plate 2 for location map
Description: "The rock is a medium-grained red hornblende granite. Unlike most of the 'St. Cloud red' granite, in which more or less greenish feldspar is present, almost all of the feldspar of this rock is red. The remaining constituents are abundant glassy quartz and black hornblende. The deep-red color and uniform texture are attractive characteristics." (1)
 "Major joints striking N. 10 deg. W. are 3 to 10 feet apart, and secondary joints, striking N. 65 deg. E., are spaced 4 to 18 feet apart. Irregular minor joints were noted. In the eastern part of the outcrop a number of fine-grained red aplite dikes range in width from half an inch to 8 inches." (1)

"Near the north end a small pit was made, but at this point the rock is pale in color. Apparently the rock of fine quality is available in the southern part of the outcrop." (1)

References: 1) Bowles. 1918, p. 108, 109

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Holes Bros.' Quarry (1)
Status: Inactive; active 1885-1912 (1)
Past operator/owner: Holes Bros. (1)
Location: T 124 R 28 W Sec 20 W1/2 (1)
Location comments: West-central part of section 20 (1); see Ref. 1, plates 1 and 2 for location map
Description: "The rock is medium grained and attractive in appearance, becoming a deeper red in the bottom of the quarry." (1)
 "Unfortunately several large trap dikes pass through the quarry, and associated with them are numerous hair lines, or small trap dikes, together with certain bands of bleached or faded rock, known among the quarrymen as 'jasper bands', which greatly mar the polished rock. In consequence of the dikes the expense of removing waste rock became so great that the quarry was abandoned. The old quarry pit is very large." (1)
References: 1) Bowles. 1918, p. 92

Main commodity: Dimension Granite
County: Stearns

Quarry/pit name: Pyramid Granite Co. Quarry (1)
Status: Inactive
Past operator/owner: Pyramid Granite Co. (1)
Location: T 124 R 28 W Sec 20 SW1/4 (1)
Location comments: See Ref. 1, fig. 39 for location map
Description: "Although most of the rock is red granite, abundant gray granite is present along the west side of the quarry. Because of the presence of both red and gray granites, much of the rock contains hair lines and color streaks. The rock with these imperfections is quarried only in order to give access to marketable stock." (1)
 "There are two joint systems, trending north-south and east-west, and rectangular blocks are therefore available. This relation is used to advantage along the east side of the quarry, where by the aid of sheeting, ledge levels are maintained for operation." (1)
Extraction method: Blasting, plugs and feathers (1)
Uses of commodity: Stock blocks, dimensional stock (1)
References: 1) Thiel; Dutton. 1935, p. 80, 81

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Simmers and Sons Quarry (1)
Status: Inactive
Location: T 124 R 28 W Sec 20 W1/2 (1)
Location comments: See Ref. 1, fig. 39 for location map
Description: "Prominent joints trend N. 60-75 deg. W. and show no uniformity of spacing, although usually they are widely separated (approximately 8 feet). Secondary joints, very irregularly spaced, are present in a north-south direction. Sheeting is present at the west end of the present excavation and yields ledges 3 to 5 feet thick. There are a few prominent basalt dikes, all of which are steeply inclined to the south." (1)
 "At one place along the north wall quarrying operations have exposed a mass of gray granite. The contact of the granites is sharp and straight and shows no offshoots that would indicate the age relationships of the two rocks. Both the red and gray granite, however, are cut by a dike of basalt. Glacial drift 2 to 20 feet thick is present as an overburden." (1)
Uses of commodity: Mainly for monumental stock (1)
Remarks: "As in other quarries in which this rock is produced there is much waste due to variation in color" (1)
References: 1) Thiel; Dutton. 1935, p. 81, 82

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Universal Granite Co. Quarry (1)
Status: Inactive

Past operator/owner: Universal Granite Co. (1)
Location: T 124 R 28 W Sec 20 SW1/4 (1)
Location comments: See Ref. 1, fig. 39 for location map
Description: "It (quarry) is unusual in shape, having four walls that are straight and nearly vertical. (see Ref. 1, fig. 44). Quarry operations have extended downward rather than laterally, and consequently the quarry is approximately 100 feet deep. The rock is a red granite, moderately uniform in color and in texture." (1)
 "Prominent joints with an average spacing of 4 to 5 feet trend N. 75-85 deg. E. Other joints are N. 10 deg. E. to N. 10 deg. W. These are spaced about 5 feet apart on the average, although distances of from 2 to 18 inches are not uncommon. A well-developed rift and grain are present, and account for the smooth, straight quarry faces. On the south side operations had been discontinued at the time of observation along a basalt dike about 10 inches thick." (1935) (1)
 "The east end of the quarry is in an outcrop surface, but the glacial drift overburden increases in thickness toward the west to approximately 20 feet." (1)
References: 1) Thiel; Dutton. 1935, p. 82

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Plachecki Brothers Quarry (1)
Alternate name: St. Cloud Granite Works Quarry (2)
Status: Inactive
Past operator/owner: Plachecki Brothers (1); St. Cloud Granite Works (2)
Location: T 124 R 28 W Sec 21 SW1/4 SE1/4 (1,2)
Location comments: See Ref. 1, fig. 39, and Ref. 2, plates 1 and 2 for location maps
Description: Gray granite, "The rock is made up chiefly of gray feldspar crystals, some of which show distinct striations, but it contains a few reddish feldspars, which give it a faint red tinge when observed closely. Scattered grains of blue quartz are a rather unusual feature of the rock. Hornblende and biotite constitute the darker portion." (1)
 "The rock has suffered little alteration. Black knots are numerous and appear to be segregations of hornblende and biotite. 'White knots' in the form of large white feldspars appear in places, but otherwise the rock is even grained and uniform in color." (1); see Ref. 2, for further description
References: 1) Thiel; Dutton. 1935, p. 86
 2) Bowles. 1918, p. 102

Main commodity: Dimension Granite
County: Stearns

Quarry/pit name: Graham Quarry (1,2)
Status: Inactive
Past operator/owner: Robert Graham Co. (1,2)
Location: T 124 R 28 W Sec 21 NE1/4 SE1/4 (1,2)
Location comments: See Ref. 1, plates 1 and 2, and Ref. 2, fig. 39 for location maps
Description: "The rock is a gray, even-grained hornblende-quartz diorite. The feldspars are mostly gray, though some grains are pale pink. Quartz is not prominent, though scattered grains of considerable size appear, some having a blue color. The dark minerals are fine-grained and very evenly distributed, giving the rock a uniform texture. With the microscope the most abundant feldspars were identified as plagioclase with subordinate orthoclase and microcline. Hornblende is prominent and biotite subordinate in amount. A section from the bottom of the quarry exhibits distinct cores of augite in the center of hornblende crystals. Grains of magnetite and sphene are common." (1)
 "Joints strike north and east and are 6 to 20 feet apart. Though the pit is now nearly 60 feet deep no sheeting planes have been reached, a circumstance that makes quarrying difficult. The rock is very uniform and free from blemish. The few black knots present appear under the microscope to be segregations. The rock is well adapted for making paving blocks and curbing on account of its pronounced rift and run." (1); see Ref. 2, for further description
Physical test data: "Physical tests show: True specific gravity, 2.761; pore space, per cent, 0.37; weight per cubic foot, dry, 171.9 pounds. Under crushing strain the first crack came at 15,080 pounds per square inch and final collapse at 21,000 pounds. Under transverse breaking stress the modulus of rupture proved to be 2,979 pounds per square inch." (1)
Uses of commodity: Trimmings, window sills, paving blocks, curbing, monumental stock (1)
Remarks: Quarry turned out large quantities of excellent stone (1)
References: 1) Bowles. 1918, p. 91, 92
 2) Thiel; Dutton. 1935, p. 85

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Melrose Granite Co. Quarry (1)
Date opened: 1910 (1,2)
Status: Inactive
Past operator/owner: Melrose Granite Co. (1,2)
Location: T 124 R 28 W Sec 21 E1/2 SE1/4 (1,2)
Location comments: See Ref. 1, plates 1 and 2 for location maps
Description: Gray granite, "It is hornblende granite, consisting chiefly of gray feldspar, prominent hornblende, and blue quartz in scattered grains. A few grains of pyrite are visible, and

are confined mainly to the walls of seams. Study of a typical specimen with the microscope shows the minerals present in order of abundance to be orthoclase, plagioclase, microcline, quartz, hornblende, mica, magnetite, and sphene. It is a fresh, uniform rock." (1)

"At the south end of the quarry the rock outcrops at the surface, and at the north end the removal of 6 to 10 feet of soil is necessary. A covering of soil protects the rock from decay. Where exposed at the surface, the rock is stained and partly decayed or shattered to a depth of 2 to 6 feet; but where protected by the mantle of soil it is affected to depth of a few inches only. Sheeting planes are 2 to 10 feet apart, and are nearly horizontal, though somewhat undulating. Major joints are 4 to 6 feet apart and strike north and east. A few minor joints cross the major joints at acute angles. The rock is uniform, medium grained, and of attractive color. It splits easily and is well adapted for making paving blocks or curbing." (1)

"Three diabase dikes, each about a foot in diameter, and a few smaller ones were observed. Their trend is northeast and they are nearly vertical. The rock is altered to a reddish color for 1 to 5 inches on each side of the larger dikes. The contact effect of diabase dikes on the granite is very slight. Crystals are fractured and feldspars show evidence of considerable kaolinization for 3 or 4 inches from the contact. Reddish stains occur for about an inch on each side of the major joints. Black knots are scarce." (1); see Ref. 2 for further description

References:

- 1) Bowles. 1918, p. 94, 95
- 2) Thiel; Dutton. 1935, p. 83, 84

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Streitz Bros. Quarry (1)
Status: Inactive
Past operator/owner: Streitz Bros. (1)
Location: T 124 R 28 W Sec 21 SE1/4 SW1/4 (1)
Location comments: See Ref. 1, plates 1 and 2 for location maps
Description: "At the north end the rock outcrops at the surface, but at the south end 4 to 8 feet of soil is removed." (1)
 "The rock is uniform and of attractive appearance. It is a hornblende-biotite-quartz monzonite, consisting of orthoclase and plagioclase, with subordinate microcline; hornblende, biotite, and a few scattered grains of magnetite, and quartz in small amount filling intergranular spaces. Apatite inclusions are common. The feldspars are slightly kaolinized." (1)
 "The chief joints strike north and east and are far apart, 40 or 50 feet in places. One sheeting

plane appears on the 15-foot quarry face. Near the south end of the excavation a number of small parallel aplite dikes strike N. 60 deg. E. Two diabase dikes about 2 feet wide trend N. 60 deg. E." (1)

Remarks: Nearly all the waste rock was sold as rubble (1)
References: 1) Bowles. 1918, p. 85, 105

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Location: T 124 R 28 W Sec 21 S1/2 (1)
Location comments: SW of the Streitz Bros. Quarry, on the south line of Sec. 21 (1); see Ref. 1, plate 2 for location map
Description: Gray granite, "Aplite dikes, black knots, and irregular seams are numerous." (1)
References: 1) Bowles. 1918, p. 85, 105

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Granite City Granite Co. Quarry
Status: Inactive
Past operator/owner: Granite City Granite Co. (1,2)
Location: T 124 R 28 W Sec 27 W1/2 (1)
Location comments: See Ref. 1, fig. 39, and Ref. 2, plate 1 for location maps
Description: Gray granite, "The granite is cut by two vertical joint systems which trend N. 80 deg. E. and N. 10 deg. W., respectively. Sheeting is conspicuously developed and is spaced at 2- to 10-foot intervals. The joints and sheets aid in the quarrying of large symmetrical blocks. Because of the well-developed joints the quarry faces are moderately smooth and regular. The granite is cut by two basalt dikes 4 and 12 inches wide which dip steeply toward the south. These dikes as well as numerous red streaks, hair lines, and color variations are culled out in quarrying." (1)
References: 1) Thiel; Dutton. 1935, p. 85, 86
 2) Bowles. 1918, plate 1

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Black Diamond Quarries (1)
Status: Inactive (1)
Past operator/owner: Black Diamond Granite Co. (1)
Location: T 124 R 28 W Sec 27 SE1/4 SE1/4 (1)
Location comments: See Ref. 1, plate 1 for location map; (Ref. 1 map shows quarry location in the W1/2 of section 27, along the section line. This location conflicts with Ref. 1, p. 87, 88)
Description: Gray granite, "The rock is an even-grained uniform granite, about three-quarters of which

consists of light-colored minerals, chiefly gray feldspar. The presence of some pale-pink feldspars gives the rock a reddish tinge. A few small grains of pyrite were observed. A number of hair lines proved to be quartz veins under the microscope." (1)

"Joints are far apart and strike N. 10 deg. W. and N. 80 deg. E....One diabase dike 3 feet wide trends N. 65 deg. E. Some black knots were seen." (1)

Remarks: The excavation was full of water so sheeting planes were not observed (1918) (1); "The rock splits with ease and is well adapted for monument stock, paving blocks, or curbing" (1)
References: 1) Bowles. 1918, p. 87, 88

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Noreen Quarry (1)
Date opened: Around 1913 (1)
Status: Inactive
Past operator/owner: Noreen (1)
Location: T 124 R 28 W Sec 28 NW1/4 NE1/4 (1)
Location comments: About 4 rods west of the middle point of the north section line of section 28 and immediately south of the line is an excavation (1); several other abandoned quarries are at this location (1); see Ref. 1, plates 1 and 2 for location maps
Description: "The rock in all the excavations is similar. It is a medium-grained even-textured granite of the typical gray color. Approximately three-fourths of the rock is gray feldspar, and the remainder is made up of black hornblende, with a little biotite and fine-grained quartz. A few minute grains of pyrite are visible. Microscopic determination proves the rock to be a hornblende-biotite-quartz monzonite. Orthoclase and plagioclase, which are present in nearly equal amount are the most abundant minerals. Quartz is more prominent than in most gray granites of central Minnesota. Hornblende, biotite, magnetite, sphene, and inclusions of apatite form the remainder. Feldspars are somewhat altered but not sufficiently so to impair the quality of the rock. A few dark-green knots are present and appear to be segregations of biotite and hornblende partly altered to chlorite." (1)

"Open joints are in two prominent systems, north and N. 77 deg. E., and are spaced 10 to 30 feet apart. Sheeting planes are horizontal and 8 to 12 feet apart. The rock is a little rusty near the surface. Two types of dikes appear on the quarry wall; small, straight, nearly vertical white aplites, about one-fourth of an inch wide; and curved, wavy, red dikes, 1 inch to 2 inches wide with very distinct borders. Irregular patches of red granite, 6 inches to 2 feet across, also appear in places. Black knots from the size of a walnut to 6 inches wide are

present but are infrequent. They appear to be segregations composed largely of hornblende." (1)

References: 1) Bowles. 1918, p. 98, 99

Main commodity: Dimension Granite
County: Stearns
Date opened: 1913 (1)
Status: Inactive
Past operator/owner: Noreen (1)
Location: T 124 R 28 W Sec 28 NW1/4 NE1/4 (1)
Location comments: About 32 rods south of the Noreen Quarry is a second excavation, also several other small excavations are located in this area (1); see Ref. 1, plates 1 and 2 for location maps
Description: Gray granite, "Joints strike N. 10 deg. W., N. 10 deg. E., and N. 50 deg. E., and are spaced 10 to 25 feet apart. No sheeting planes appear on the 20-foot quarry face. Some black knots and fine red dikes are present. On a bare outcrop southwest of the quarry the joints are much closer and more irregular. Several other abandoned excavations in the vicinity are of similar type." (1)
 In two other excavations not previously noted, "The rock appears to be of excellent quality and free of blemish. The rift is horizontal and the run north and south. Close observation discloses many acute-angled crystals of hornblende pointing north and south in an indistinct parallelism which may account for the run of the rock." (1)
References: 1) Bowles. 1918, p. 98, 99

Main commodity: Dimension Granite
County: Stearns
Date opened: (Before 1888)
Status: Inactive
Past operator/owner: Streitz (1,2)
Township name: St. Cloud
Location: T 124 R 28 W Sec 28 NW1/4 NE1/4 (1,2)
Location comments: (T., R. locations determined from Ref. 1, plate 47)
Description: Gray syenite (1,2)
Uses of commodity: Masonary (1,2)
References: 1) Winchell; Upham. 1888, p. 455, 456
 2) Upham. 1884, p. 107

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Location: T 124 R 28 W Sec 28 NW1/4 (1)
Location comments: See Ref. 1, plate 1 for location map

Description: Two small outcrops of coarse-grained gray granite, some of the western mass has been quarried (1)

References: 1) Bowles. 1918, p. 85, 110

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Past operator/owner: Hohmann (1,2)
Township name: St. Cloud
Location: T 124 R 28 W Sec 28 N1/2 NW1/4 (1,2)
Location comments: (T., R. locations determined from Ref. 1, plate 47)
Remarks: 2 to 3 acre outcrop (1,2)
References: 1) Winchell; Upham. 1888, p. 455, 456
 2) Upham. 1884, p. 107

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Granite City Granite Co. Quarries (1)
Status: Inactive
Past operator/owner: Granite City Granite Co. (1)
Location: T 124 R 28 W Sec 28 SW1/4 SW1/4 (1)
Location comments: Quarry located about 50 yds from a quarry operated by the Black Diamond Granite Co. (1); see Ref. 1, plate 1 for location map
Description: Gray granite (1)
References: 1) Bowles. 1918, p. 85, 92

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Past operator/owner: Graham (1)
Location: T 124 R 28 W Sec 28 SW1/4 NW1/4 (1)
Location comments: About 208 rods north and 321 rods west of the SE corner (1); two small abandoned quarry pits at this location (1); see Ref. 1, plate 1 for location map; (location may be in error, no outcrop shown in Ref. 1, plate 1 at this location); (SW1/4 NW1/4 determined from Ref. 1 location measurements)
Description: Gray granite, "The rock is somewhat porphyritic, containing many relatively large hornblende crystals. Joints strike north and N. 80 deg. W. and are 3 to 8 feet apart. Sheeting planes are 12 feet or more apart. The rock is intersected by reddish-white aplites. Black knots in the form of hornblende segregations half an inch to an inch wide appear in places." (1)
References: 1) Bowles. 1918, p. 85, 109, plate 1

Main commodity: Dimension Granite

County: Stearns
Status: Inactive
Location: T 124 R 28 W Sec 28 NE 1/4 (1)
Location comments: A smaller outcrop appears in an area 224 rods north and 86 rods west of the SE section corner. A small excavation has been made near the north end of the outcrop. (1); see Ref. 1, plate 1 for location map; (NE1/4 determined from Ref. 1 location measurements)
Description: "This rock is a fairly uniform gray granite cut by a number of aplite dikes." (1)
References: 1) Bowles. 1918, p. 85, 109

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Past operator/owner: Hartmann (1,2)
Township name: St. Cloud
Location: T 124 R 28 W Sec 29 NE1/4 (1,2)
Location comments: Northern edge of NE 1/4 (1,2); (T., R. locations determined from county highway map)
Description: Somewhat coarse-grained, reddish syenite, divided by joints from one to eight feet apart (1,2)
References: 1) Winchell; Upham. 1888, p. 455, 456
 2) Upham. 1884, p. 107

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Location: T 124 R 28 W Sec 29 SE1/4 NW1/4 (1)
Location comments: The center of a large outcrop is approximately 200 rods north and 224 rods west of the SE section corner, quarries are at the SW end of the outcrop (1); see Ref. 1, plate 1 for location map; (SE1/4 NW1/4 determined from Ref. 1 location measurements)
Description: "The rock is an even-textured gray biotite granite, cut by numerous dikes of red granite. It is medium grained, the feldspar crystals being one-eighth to one-fourth of an inch across. Very little quartz is present. Near the north side of the area a red aplite shows curved flow lines....The rock at the abandoned pit is intersected by red granite dikes and quartz epidote veins. In the southwest part of the outcrop two large deserted quarry pits show a gray granite composed of orthoclase, plagioclase, microcline, hornblende, biotite, quartz, magnetite, and sphene. Numerous dikes of red granite mar the rock for monumental purposes. Pegmatites are of common occurrence. They consist of coarse feldspars, quartz, and brown mica in lathlike crystals. Black knots are numerous; most of the smaller ones appear to be biotite segregations, but some of the larger are angular inclusions of garnetiferous biotite schist, caught up by the

gray granite magma which solidified around them." (1)
Physical test data: Specific gravity 2.71 (2)
Uses of commodity: Paving stones (1)
Remarks: "The rock is suitable for paving blocks or building stone but not for monumental purposes" (1)
References: 1) Bowles. 1918, p. 85, 110, 111
 2) Bleifuss. 1952, p. xx, xiii

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Location: T 124 R 28 W Sec 29 SE1/4 SE1/4 (1)
Location comments: "Twenty-four rods north of the southeast corner, the road, which here follows the section line, crosses an outcrop about 32 rods north and south at its widest point and 52 rods long." (1); small quarry pit close to road (1); see Ref. 1, plate 1 for location map; (SE1/4 SE1/4 determined from Ref. 1 location measurements)
Description: "...dark gray in color, medium grained, and uniform texture. A few black knots are present. Numerous dikes of red granite cut through the gray. Some of them are fine grained near their borders and pegmatitic in the center. The dikes range from one-fourth of an inch to 6 inches across and are very irregular both in direction and distribution." (1)
References: 1) Bowles. 1918, p. 85, 110

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Past operator/owner: Frick and Borwick (1)
Location: T 124 R 28 W Sec 30 NW1/4 NE1/4 (1)
Location comments: On the north section line, 92 rods west of the NE corner, quarried in several places (1); see Ref. 1, plate 2 for location map; (NW1/4 NE1/4 determined from Ref. 1 location measurements)
Description: The color is paler red than most of the "St. Cloud" stone (1)
References: 1) Bowles. 1918, p. 85, 113

Main commodity: Dimension Granite
County: Stearns
Date opened: 1912 (1)
Status: Inactive
Past operator/owner: Holes Bros. (1)
Location: T 124 R 28 W Sec 30 NE1/4 NE1/4 (1)
Location comments: See Ref. 1, plates 1 and 2 for location maps
Description: "The rock is a medium-grained red granite of attractive appearance. About three-fourths of the feldspars are red and one-fourth pale green. Quartz is abundant in both clear and

smoky grains. Under the microscope the chief feldspar was identified as microcline showing microperthitic intergrowth with other feldspars. A little orthoclase and plagioclase, abundant quartz, and hornblende in large scattered crystals constitute the remainder of the rock." (1)

"Sheeting planes are 8 to 16 feet apart, some horizontal and others dipping 10 to 15 deg. N. Joints are irregular and in part of the quarry the rock is badly broken up. The rift is horizontal, and the run north and south." (1)

"Two bands of interlacing green lines about 20 feet apart run east and west through the quarry. They consist mainly of epidote and are entirely independent of joints. Other epidote veins follow the joints, some of which, when traced for a distance, gradually become closed seams and finally die out. Green lines that follow joints impair only a little rock, but those that run in interlacing bands obliquely through the blocks cause considerable waste." (1)

Uses of commodity: Monuments, columns, pillars (1)
Trade names: "Red Rock granite" (1)
References: 1) Bowles. 1918, p. 92, 93

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Past operator/owner: Holes Bros. (1)
Township name: St. Cloud
Location: T 124 R 28 W Sec 30 NE1/4 (1)
Location comments: About 35 rods NE of the Holes Bros. other quarry (which is located in the NE 1/4 NE 1/4 of Sec. 30) (1); see Ref. 1, plates 1 and 2 for location maps
Description: Gray biotite granite, "The rock consists of abundant gray feldspar, quartz in small glassy grains, biotite, and a little hornblende. It is even grained and somewhat finer in texture than the typical 'St. Cloud gray' granite. It has a greenish tinge near the surface, due to alteration by weathering. It differs from the typical 'St. Cloud gray' granite in containing more quartz and plagioclase and no sphene." (1)
Remarks: Bowles states, "The quality does not justify further development." (1918) (1)
References: 1) Bowles. 1918, p. 92, 93

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Robinson Bros.' Quarry (1)
Date opened: 1909 (1)
Status: Inactive
Past operator/owner: Keystone Granite Co. (1); Robinson Bros. (1)
Township name: St. Cloud

Location: T 124 R 28 W Sec 31 SE1/4 NE1/4 (1)
Location comments: See Ref. 1, plate 1 for location map
Description: Red granite, "The rock consists chiefly of pink feldspar with a subordinate amount of pale green. Microcline is abundant, constituting fully three-fourths of the total mass, the other fourth being hornblende and clear grains of quartz. The rock is medium grained, of uniform texture, and is fairly free from blemish. The rock quarried in 1913 shows evidence of surface alteration but will probably improve in quality on deeper excavation." (1)
 "Joints trending east-west are prominent and are 10 to 12 feet apart. Few joints in other directions are visible. No sheeting planes have been reached. Two diabase dikes 2 feet wide and 3 feet apart trend N. 60 deg. E. and dip 60 deg. SE. Black hair lines near the dikes are probably fine dikes of diabase. In the vicinity of the dikes the rock is decayed and stained to a much greater depth than in other parts of the excavation. A few dark knots are scattered throughout the quarry." (1)
References: 1) Bowles. 1918, p. 101
 2) MGS. [1978-1979?]

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Location: T 124 R 28 W Sec 32 NE1/4 NE1/4 (1)
Location comments: "About 40 rods south of the NE section corner a ridge of red granite runs from the section line 32 rods east. A small quarry pit was made at the western end." (1); see Ref. 1, plate 1 for location map; (NE1/4 NE1/4 determined from Ref. 1 location measurements)
Description: Red granite, "The rock is of fair quality though rather pale." (1)
References: 1) Bowles. 1918, p. 85, 113, 114

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Location: T 124 R 28 W Sec 32 NE1/4 NW1/4 (1)
Location comments: (NE1/4 NW1/4 determined from Ref. 1 location measurements); quarry is 24 rods south of quarry located about 292 rods north and 220 rods west of the SE corner of section 32 (1)
Description: "A large diabase dike passes N. 70 deg. E. along one side of the pit, and near it are numerous hair lines. The rock is pale-red granite, but it probably improves in color with depth. Microscopic examination exhibits two prominent minerals, microcline and quartz forming nearly all of the rock, with subordinate orthoclase, biotite, and hornblende. The microcline is perthitic." (1)
Remarks: A small outcrop, a little which is excavated (1)

References: 1) Bowles. 1918, p. 85, 113, 114

Main commodity: Dimension Granite
County: Stearns
Status: Inactive (1)
Location: T 124 R 28 W Sec 32 NE1/4 NW1/4 (1)
Location comments: About 292 rods north and 220 rods west of the SE corner is a small ridge which was excavated (1); see Ref. 1, plate 1 for location map; (NE1/4 NW1/4 determined from Ref. 1 location measurements)

Description: "The rock is a medium to coarse grained pale-red hornblende granite. Feldspars form the greater part of the rock and are of two distinct kinds, the most prominent being flesh-red and the other which is present in considerable amount, being pale green." (1)

"Under the microscope the prominent feldspars are orthoclase and microcline with subordinate plagioclase. Quartz is abundant. Hornblende, biotite, and magnetite form a very small portion of the total volume. The presence of the magnetite is not detrimental, for it is a stable oxide, not likely to cause stains." (1)

"The rock is intersected by many irregular open joints. Stains occur along the joint planes, and in places penetrate the rock for several inches. The most serious imperfection is the presence of blind seams, known among quarrymen as 'slick seams', which run obliquely to the main joints and are invisible in the undisturbed rock mass. On blasting, however, they open up, forming many small angular fragments. Some hair lines and a few dark knots occur. In the western part of the outcrop numerous diabase dikes, half an inch to 6 inches across, trend approximately N. 65 deg. E. Eighteen dikes were counted in a distance of 20 feet. They are confined to one band of rock, the southern part of the exposure being free of them." (1)

Remarks: Excavated for a short time and then abandoned (1)

References: 1) Bowles. 1918, p. 113, 114

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Robinson Quarry (1)
Date opened: 1883 (1)
Status: Inactive; active 1883-1909 (1)
Past operator/owner: Robinson (1)
Location: T 124 R 28 W Sec 32 NE1/4 (1)
Location comments: See Ref. 1, plate 1 for location map
Description: "It is a coarse-grained hornblende granite, consisting of pale-pink feldspars, transparent quartz somewhat less abundant than in most St. Cloud red granite, black hornblende, and biotite." (1)

"Under the microscope the feldspars show the effect of weathering by dusty or cloudy surfaces. Both orthoclase and microcline are present and are graphically intergrown with quartz; hornblende with inclusions of magnetite and quartz forms but a small proportion of the rock." (1)

"There are two prominent jointing systems which trend N. 65 deg. E. and N. 25 deg. W. Joint planes are 8 to 20 feet apart. Very distinct open horizontal sheeting planes are 12 to 16 feet apart and are distinctly advantageous both in blasting and in the removal of blocks." (1)

"The effects of weathering below the upper 6 or 8 feet are not sufficient to impair the strength of the stone, but, as in many other places where rock surfaces are exposed, the rock is bleached to considerable depth, and lacks the deep-red color so much desired in 'St. Cloud' granite for monumental purposes. Owing to the open sheeting planes and the domelike nature of the outcrop the quarry is admirably adapted for excavation of building stone." (1)

"The color is probably darker red at depth, as in other red-granite quarries. In a small excavation at the base of the dome, where the rock is protected by soil, the color is deeper red. It seems probable that if deeper quarrying were pursued the upper portion could be employed for building stone and the lower for monumental purposes." (1)

"Two distinct dikes and a few hair lines were observed. The rift is horizontal, the run east and west, and the head grain north and south. The rock takes a fine polish but does not show a good contrast between polished and hammered surfaces." (1)

Physical test data: "Physical tests made at the University of Minnesota geologic laboratory show: True specific gravity, 2.643; pore space, per cent, 0.32; weight per cubic foot, dry, 164.6 pounds." (1)

Extraction method: Bench or shelf (1)

References: 1) Bowles. 1918, p. 100, 101

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Location: T 124 R 28 W Sec 33 NE1/4 NE1/4 (1)
Location comments: In an outcrop 268 rods north and 40 rods west of the SE section corner is a small excavation (1); see Ref. 1, plate 1 for location map; (NE1/4 NE1/4 determined from Ref. 1 location measurements)

Description: Gray hornblende biotite granite. "It consists of orthoclase, subordinate plagioclase, a little blue quartz, hornblende, biotite, and numerous grains of magnetite and sphene. The feldspars are slightly kaolinized and about half of them are pale pink, giving the rock a reddish tinge.

The rock is of good quality as far as could be observed. Some of it has been quarried." (1)

References: 1) Bowles. 1918, p. 85, 114, 115

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Northwestern Granite Co. Quarries (1)
Alternate name: North Star Granite Co. Quarry (2)
Status: Inactive
Past operator/owner: Northwestern Granite Co. (1); North Star Granite Co. (2,3)
Location: T 124 R 28 W Sec 33 SE1/4 NE1/4 (3)
 T 124 R 28 W Sec 33 NE1/4 (1,2)
Location comments: See Ref. 1, plate 1 and Ref. 2, fig. 39 for location maps; (this information may represent two independent quarries)
Description: Gray hornblende biotite granite, "The most prominent joints are N. 65 deg. E.; others are curved and very irregular. An overburden of 4 to 10 feet of soil has protected the rock from weathering. The diabase dike exposed in the quarry in sec. 33 forms the south wall of this quarry, but it impairs the quality of the rock for a few inches only. A few black knots were noted." (1)
 "...north-south jointing system is well developed, but the joints are spaced sufficiently far apart to permit the removal of large blocks of stone. Sheeting planes were observed in the upper 20 feet of the quarry wall. From the top downward they were spaced the following number of feet apart: 5, 1, 1-1/2, 7, 3." (2)
Extraction method: Blasting and drifters (2)
Uses of commodity: Monument stock, curbing, building stone (1)
References: 1) Bowles. 1918, p. 99, 100
 2) Thiel; Dutton. 1935, p. 84
 3) Hogberg. 1966, p. 40

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Doerner Quarry (1)
Status: Inactive
Past operator/owner: Doerner (1)
Township name: St. Cloud
Location: T 124 R 28 W Sec 33 NW1/4 NW1/4 (1)
Location comments: See Ref. 1, plate 1 for location map
Description: Two excavations in a prominent dome of gray granite or quartz monzonite, "The eastern quarry...the rock is a very dark gray, almost black in color, owing partly to an abundance of fine-grained hornblende and biotite and partly to the dark-gray color of the feldspars. It is a hornblende granite, with subordinate biotite and a little quartz. The gray rock is cut by a number of red dikes which appear to be a

fine-grained dike phase of the typical 'St. Cloud red' granite." (1)

Nearer the road at the western end of the outcrop is another quarry. "The rock is a hornblende-biotite granite, which is reddish-gray, owing to the presence of grains of pale-red feldspar along with the more abundant gray type. The microscope reveals orthoclase as the chief feldspar, with subordinate plagioclase and microcline. Quartz is more abundant than in most of the 'St. Cloud gray' rocks. Hornblende, biotite, magnetite, and sphene constitute the remainder of the mass, the latter in many places surrounding magnetite grains. Minute apatite crystals inclosed in the other minerals are common. The feldspars appear dusty by alteration to clay." (1)

"The rock of this quarry is cut by light-colored aplite dikes and contains dark knots, some of which are very angular and appear to be included fragments rather than segregations." (1)

"In the northern undeveloped part of the outcrop red dikes are present. A band of dikes half an inch to an inch wide, scattered over a space 10 feet in width, may be traced N. 10 deg. E. for 8 rods. It is crossed by larger dikes at various angles." (1)

"It is a gray granite intruded by granite porphyry. The porphyry is cut up into small angular blocks by numerous joints. Major joints strike N. 5 deg. E. and secondary joints N. 53 deg. W. and N. 65 deg. E., the three systems thus meeting at about 60 deg." (1)

Remarks: "The rock in this outcrop is probably of little economic value on account of its different textures, close jointing, and intrusion." (1)

References: 1) Bowles. 1918, p. 88, 115

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Flaherty Bros. Quarry (1)
Status: Inactive
Past operator/owner: Flaherty Bros. (1)
Township name: St. Cloud
Location: T 124 R 28 W Sec 33 NW1/4 NW1/4 (1)
Location comments: See Ref. 1, plate 1 for location map
Description: "The rock, which appears to be a gray hornblende granite, is in reality a diorite. The feldspars are gray to very pale pink, and consist of abundant plagioclase with subordinate orthoclase and microcline. Very little quartz is present. The hornblende is unusually fine grained. Magnetite, sphene, and apatite are accessory." (1)
 "The gray rock is cut by a number of pale-red aplite (fine-grained granite) dikes. Some of the gray granite is spotted with red crystals, as

though the two granites were nearly contemporaneous and some what mixed at the contact. This conforms with the general relationship of the red granites and gray granites in the St. Cloud region. A few black knots but no diabase dikes were seen." (1)

Uses of commodity: Monuments (1)
References: 1) Bowles. 1918, p. 90

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Past operator/owner: Cold Spring Granite Co. (see Producer Directory) (1)
Location: T 124 R 28 W Sec 33 NE1/4 SE1/4 (1)
References: 1) Hogberg. 1969, p. 49

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Melrose Granite Co. Quarry (1)
Status: Inactive
Past operator/owner: Melrose Granite Co. (1)
Location: T 124 R 28 W Sec 34 NW1/4 (1)
Location comments: See Ref. 1, fig. 39 for location map
Description: "The major joints in the rocks strike north-south. They extend to varying depths and their spacing is therefore very irregular. Some sheeting occurs to a depth of 25 feet, but below that depth blasting is required to loosen the blocks of rock. The rock is moderately uniform in color and texture. Some hair lines are present, and locally the rock is discolored by alteration along joints. These imperfections result in considerable waste." (1)
Extraction method: Plug and feather (1)
Uses of commodity: Building stone, monument stock (1)
References: 1) Thiel; Dutton. 1935, p. 83

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Royal Granite Co. Quarry (1)
Status: Inactive
Past operator/owner: Royal Granite Co. (1)
Location: T 124 R 28 W Sec 34 SW1/4 NW1/4 (1)
Location comments: See Ref. 1, fig. 39 for location map
Description: Gray granite, "Two joint systems cut the rock at approximately right angles. One trends N. 80 deg. E. and the other nearly north-south. The latter system is poorly developed. Shheeting was observed in the upper part of the quarry wall and yielded ledges from 1 1/2 to 2 feet in thickness." (1)

"The rock is very uniform in color and texture. Scattered imperfections such as segregations,

inclusions, stringers, and a few red granite dikes were noted, but they appear only in a small percentage of the rock." (1)

Uses of commodity: Building stone (1)
References: 1) Thiel; Dutton. 1935, p. 84, 85

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Northwestern Granite Co. Quarries (1)
Date opened: 1890 (1)
Status: Inactive
Past operator/owner: Northwestern Granite Co.(1); Fischer (1)
Location: T 124 R 28 W Sec 34 SW1/4 NW1/4 (2)
Location comments: 3 miles south of St. Cloud on Co. Rd. 136 (2); see Ref. 1, plate 1 for location map
Description: "It is an even-grained gray hornblende-biotite granite, very free from defects. It consists of light-gray feldspar, black hornblende, and mica, and scattered grains of blue quartz. It is uniform in texture and color." (1)

"The overburden of soil varies from 3 to 13 feet. Shheeting planes lie 10 to 16 feet respectively from the surface and dip about 10 deg. S. Open joints trending N. 60 deg. E. are 6 to 20 feet apart; others trending N. 10 deg. W. are farther apart, 30 to 40 feet in places. Blind seams occur at intervals between them. One diabase dike 3 to 4 feet in width runs N. 85 deg. E. through the quarry. A few black knots occur." (1)

Granodiorite, St. Cloud gray (2)
Remarks: Great quantities of rock have been excavated (1918) (1)
References: 1) Bowles. 1918, p. 99
2) Keighin and others. 1982, p. 255

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Past operator/owner: Cold Spring Granite Co. (see Producer Directory) (1)
Location: T 124 R 29 W Sec 23 S1/2 NE1/4 (1)
References: 1) Hogberg. 1966, p. 38

Main commodity: Dimension Granite
County: Stearns
Quarry/pit name: Pioneer Granite Co. Quarry (1)
Alternate name: Old Baxter Quarry (1,2)
Status: Inactive
Past operator/owner: North Star Granite Corp. (2); Pioneer Granite Co. began operations in 1913 (1,2)
Location: T 124 R 29 W Sec 24 NE1/4 SE1/4 (1,2)

Location comments: See Ref. 1, plate 1 and Ref. 2, fig. 39 for location maps; (this information may represent two independent quarries)

Description: "The rock is a coarse-grained red granite, paler than the typical 'St. Cloud red' but deeper red than the 'Rockville' granite. It is of the latter type. A few dark knots consist of both red and greenish feldspar and abundant hornblende and biotite. They are much finer grained than the main quarry rock. Feldspar forming about three-fourths of the rock is mainly pink with a subordinate amount of greenish-white." (1)

"Under the microscope the minerals present in the typical granite are, in order of abundance, microcline, quartz, orthoclase, hornblende, biotite, and plagioclase. The feldspars show considerable micropertitic intergrowth. Hornblende and biotite are in large flakes and grains, which are much broken up and contain many inclusions of quartz and feldspar. Some of the feldspars contain inclusion of dark minerals. The knots are segregations of hornblende and biotite." (1)

"Three prominent jointing systems occur: N. 5 deg. E., N. 60 deg. E., and N. 60 deg. W. Minor joints cross in different directions. The jointing planes are widely spaced and permit the quarrying of large blocks. One diabase dike about 3 inches wide was observed to trend N. 30 deg. E. A few black to greenish hair lines were determined under the microscope to be veins of epidote and chlorite." (1)

Physical test data: "Physical tests showed that under crushing stress the first crack came at 9,395 pounds per square inch and final collapse at 15,712 pounds. Under transverse breaking strain the modulus of rupture proved to be 2,596 pounds per square inch." (1)

Uses of commodity: Architectural stone (2)

Trade names: "Original Minnesota Pink" (2)

Remarks: "It is attractive in color, very strong and durable" (2)

References: 1) Bowles. 1918, p. 115, 116
2) Thiel; Dutton. 1935, p. 72, 73

Main commodity: Dimension Granite

County: Stearns

Quarry/pit name: Pink Quarry (3)

Status: Inactive

Past operator/owner: Cold Spring Granite Co. (see Producer Directory) (1-3)

Location: T 124 R 29 W Sec 26 NE1/4 NE1/4 (1-3)

Location comments: About 5 miles SW of St. Cloud (1); see Ref. 1, fig. 39 for location map

Description: "The rock is somewhat similar to the Rockville type, but of a finer texture and more even color. It is medium to coarse grained and pink in color. It consists of pale pink feldspar, hornblende, biotite in small flakes and masses, and abundant quartz in medium-sized clear,

glassy grains. The feldspars contain many inclusions of quartz, biotite, and hornblende, large enough to be seen with the naked eye. In thin section the largest feldspars are seen to be microcline; orthoclase and plagioclase are present in smaller amounts. Hornblende and biotite are the prominent dark minerals, the latter being associated with magnetite grains. Apatite crystals are common and are of unusually large size." (1)

Extraction method: Drifters or channeling methods (1)

Uses of commodity: Architectural, monument stone (1)

Remarks: "When polished the stone has rich and pleasing color tones consisting of a combination of pink, buff, pearl, white, and black. These colors are artistically blended so that the stone is well suited for any architectural treatment. Machined surfaces that are not polished show a warm pinkish-gray tone that is very desirable for certain exterior and interior uses. Because of the uniformity of its texture and size of grain, the stone lends itself readily to carving and other forms of fine ornamentation." (1)

References: 1) Thiel; Dutton. 1935, p. 70-72
2) Hogberg. 1966, p. 38
3) MGS. [1978-1979?]

Main commodity: Dimension Granite

County: Stearns

Quarry/pit name: Pyramid Granite Co.'s "Crystal Gray" Quarry (1)

Status: Inactive

Past operator/owner: Pyramid Granite Co. (1)

Location: T 124 R 29 W Sec 27 SW1/4 NE1/4 (1)

Location comments: Near the Sauk River, about 8 miles SW of St. Cloud (1); see Ref. 1, fig. 39 for location map; Ref. 1, p. 85 states T 124 as T 214); (T., R., Sec. and quarter section locations determined from Ref. 1, fig. 39)

Description: "The rock is coarse grained and porphyritic in texture, similar to Rockville Pink. It differs from Rockville granite, however, in that its color is dominantly gray. Both phenocrysts and matrix are of the same pinkish-gray color. Some have a greenish-gray tint. A few large blue quartz grains are present also. Because of the large feldspar phenocrysts the stone is sold under the trade name 'Crystal Gray'." (1)

"This quarry, when examined in 1932, was a pit 150 feet long, 125 feet wide, and 40 feet deep. The north face of the quarry showed severe decomposition to a depth of about 20 feet, and elsewhere in the quarry, stains were present along all the joints and sheets. The stains were observed even though the joints and seams are not actually open. Joints are too widely spaced to control operations, although sheets are spaced from 3 to 5 feet apart and may be of considerable aid. Imperfections observed were green stringers and hair lines, coarse feldspar masses, and black and green schist inclusions. These are not abundant, however, and by

careful selection good blocks of considerable size may be obtained." (1)

Trade names: Crystal Gray (1)

Remarks: "Because of its coarse texture it should find a ready market in designs in which variations in texture are desired." (1935) (1)

References: 1) Thiel; Dutton. 1935, p. 85

Main commodity: Dimension Granite

County: Stearns

Quarry/pit name: Crystal Gray Quarry (1,2)

Status: Inactive (2)

Past operator/owner: Cold Spring Granite Co. (see Producer Directory) (1,2)

Location: T 124 R 29 W Sec 27 NW1/4 (1)

References: 1) USBM. [1979], MILS
2) USDL. MSHA mine reference list

Main commodity: Dimension Granite

County: Stearns

Quarry/pit name: "Crystal Gray" Quarry (1)

Status: Inactive

Location: T 124 R 29 W Sec 27 SE1/4 SW1/4 (1)

Description: Light purplish-gray color (1)

Uses of commodity: Building stone (1)

Trade names: "Crystal Gray" (1)

References: 1) Hogberg; Matsch. 1966?, p. 5, 8, 9

Main commodity: Dimension Granite

County: Stearns

Quarry/pit name: Crystal Quarry (2)

Status: Inactive

Past operator/owner: Cold Spring Granite Co. (see Producer Directory) (1,2)

Location: T 124 R 29 W Sec 27 SW1/4 NE1/4 (1) OR
T 124 R 29 W Sec 27 NW1/4 NE1/4 (2)

Location comments: Near St. Joseph (1)

References: 1) Hogberg. 1969, p. 49
2) MGS. [1978-1979?]

Main commodity: Dimension Granite

County: Stearns

Status: Inactive

Past operator/owner: Cold Spring Granite Co. (see Producer Directory) (1)

Location: T 124 R 29 W Sec 34 NW1/4 NW1/4 (1)

References: 1) Hogberg. 1969, p. 49

Main commodity: Dimension Granite

County: Stearns

Status: Inactive

Past operator/owner: Sartell and Sons (1)

Township name: Le Sauk

Location: T 125 R 28 W (1)

Location comments: On the Watab River about a 1/3 of a mile above its mouth (1,2); (T., R. locations determined from Ref. 1, plate 47)

Description: Gray syenite (1,2)

Uses of commodity: Used in construction of grist mill (1,2)

Remarks: Desirable building stone (2)

References: 1) Winchell; Upham. 1888, p. 458
2) Upham. 1884, p. 109

Main commodity: Dimension Granite

County: Stearns

Status: Inactive

Past operator/owner: Searle (1)

Township name: Le Sauk

Location: T 125 R 28 W Sec 7 NE1/4 NE1/4 (1)

Location comments: (T., R. locations determined from Ref. 1, plate 47)

Description: Reddish fine-grained syenite (1)

References: 1) Winchell; Upham. 1888, p. 458

Main commodity: Dimension Granite

County: Stearns

Quarry/pit name: United Granite Co. Quarry (1)

Date opened: Around 1912 (1)

Status: Inactive

Past operator/owner: United Granite Co. (1)

Township name: Le Sauk

Location: T 125 R 28 W Sec 17 E1/2 (1)

Location comments: Near the middle of the east side of section 17 (1); "The main (quarry) opening is at the eastern end and a smaller one (quarry) is near the north side." (1); see Ref. 1, plate 1 for location map

Description: Red granite, "The rock is a medium-grained biotite granite of pleasing color. The texture is not uniform, an uneven distribution of light and dark minerals resulting in an irregular banding. In places, also, the grain is not uniform, pegmatite masses or veins occurring here and there. Both red and gray feldspars are present. Observation with a hand lens shows that the red color is distributed unevenly, but from a distance of 2 feet or more it appears uniform. Quartz is abundant; some is smoky and some colorless. A few grains of pyrite are present. Microscopic examination shows that microcline is the most abundant feldspar, and that many of its crystals are surrounded by bands of secondary feldspar. Quartz is abundant in grains, whose maximum diameter is about

one-fourth of an inch. The dark minerals are biotite and magnetite in small amounts and specks of hematite arranged along cracks and crystal boundaries." (1)

"Joints strike N. 5 deg. E. and N. 80 deg. E. They are unevenly spaced; in one place those striking N. 5 deg. E. are about 2 feet apart and those striking N. 80 deg. E., 6 to 8 feet apart. In other places areas of 15 to 20 feet are without open joints." (1)

"A few gray knots appear, but they are not nearly so numerous as in the smaller quarry. Some reddish inclosed fragments look like fine-grained masses of the same material as the main quarry rock. No hair lines or trap dikes occur. Reddish stains follow seams in places. At one point the characteristic concentric lines of flowage of a viscous magma were very distinct." (1)

"At the smaller excavation inclusions of gray granite are sufficiently abundant to impair much rock. The gray rock is a hornblende-biotite granite made up of fine-grained quartz in abundance, some orthoclase, plagioclase, and hornblende, and a little magnetite and sphene. As sphene is almost invariably present in the 'St. Cloud gray' granite and absent in the red, the inclusions appear to be fragments of the typical gray granite of St. Cloud caught up by the red magma, which solidified before it dissolved them. The excess of quartz may be due to diffusion from the surrounding red granite." (1)

Remarks: No stripping is needed, pumping is required to remove accumulated water in the quarry pit. (1918) (1)

References: 1) Bowles. 1918, p. 75-77

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Past operator/owner: Sartell (1,2)
Location: T 125 R 28 W Sec 17 SE1/4 (1,2)
Location comments: It is in or near the SE 1/4 of section 17 (1,2); (T., R. locations determined from Ref. 2, plate 47)
Description: Reddish tint (1)
References: 1) Upham. 1884, p. 109
 2) Winchell; Upham. 1888, p. 458

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Past operator/owner: Schwab (1)
Township name: Le Sauk
Location: T 125 R 28 W Sec 21 S1/2 SE1/4 NW1/4 (1)
Location comments: See Ref. 1, plate 1 for location map

Description: Red granite, porphyritic with a dense matrix, "It is a hornblende granite in which the hornblende shows considerable alteration to biotite. The phenocrysts are orthoclase or microperthite, and the groundmass is mainly of quartz and orthoclase. A specimen taken at the surface exhibits considerable alteration to kaolin. The red color is due to the presence of numerous fine inclusions of hematite. Though the individual grains show considerable diversity in size, the feldspars being prominent, on the whole the rock is fairly uniform. It has a good red color and is free from knots, hair lines, and, so far as seen, from trap dikes." (1)

"Joints are closely spaced and intersect at right angles. Three systems were noted; one N. 4 deg. E. another N. 40 deg. E., and another N. 45 deg. W." (1); see Ref. 1, fig. 10 for sketch showing jointing pattern of outcrop (1)

Porphyritic with a dense matrix, "The joints are closely spaced and, one system being oblique to the other, dissect the rock into angular blocks. The rock is free of blemishes and is of good color." (1)

References: 1) Bowles. 1918, p. 78-79

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Past operator/owner: Jabs (1)
Location: T 125 R 28 W Sec 21 N1/2 SE1/4 NW1/4 (1)
Location comments: There are two outcrops of gray granite at this location, the eastern and larger outcrop was quarried many years ago (1918) (1); see Ref. 1, plate 1 for location map
Description: Gray granite, two distinct joint systems appear, north-south and N. 87 deg. W. These are spaced 3 to 10 feet apart. (1)

"The rock is a medium-grained biotite granite, the pale-gray feldspars and black mica giving it a mottled appearance. The quartz grains are brown in color and are prominent—a noteworthy fact, for the typical 'St. Cloud gray' granite contains but a small amount of quartz and that in minute clear grains. It differs also from the typical 'St. Cloud gray' granite in being of a lighter gray and in having more abundant biotite. The rock is somewhat weathered near the surface, and what appears to be secondary epidote is prominent in the upper one-fourth of an inch. With the microscope, most of the feldspar was determined as plagioclase, identifying the rock a quartz diorite rather than a granite." (1)

Uses of commodity: Bridge work (1)
References: 1) Bowles. 1918, p. 75, 78, 79

Main commodity: Dimension Granite
County: Stearns

Status: Inactive
Location: T 126 R 33 W (1)
Location comments: (Probably in section 34 or 35); west part of Melrose Village (1); (T., R. locations determined from Ref. 1, plate 47)
Description: Dark unlaminated, rather coarsely crystalline hornblendic rock (1)
Uses of commodity: A well blasted into this rock supplied the stone for the foundation of a Methodist Church (1)
References: 1) Winchell; Upham. 1888, p. 453, 454

Main commodity: Dimension Granite
County: Stearns
Status: Inactive
Township name: Sauk Center

Location: T 126 R 34 W (1)
Location comments: SE of Sauk Center, near the railway (1)
Description: "...pale-pink medium to fine grained biotite granite highly altered by weathering. It contains many inclusions of coarse-grained gneissic granite and patches of pegmatite and is traversed by close and uneven joints." (1)
Uses of commodity: Foundations (1)
Remarks: "...useless for monuments." (1)
References: 1) Bowles. 1918, p. 117

Main commodity: Dimension Granite
County: Yellow Medicine
Quarry/pit name: Clark and Anderson Co. Quarry (1)
Status: Inactive
Past operator/owner: Clark and Anderson Co. (1)
Location: T 113 R 39 W Sec 29 (1)
Location comments: 7 miles south of Wood Lake (1)
Description: "The rock is a medium-grained red granite, moderately uniform in color and texture. The area exposed, about 200 by 200 ft, shows only one system of major joints. These joints trend N. 60 deg. W. and are exceptionally well spaced, the average being about 6 ft. Development in the northwest portion of the outcrop uncovered a sheet at a depth of 15 ft....Areas of biotite concentration, quartz veins, and coarse-grained feldspar are present as defects but not in sufficient amounts to cause a great deal of trouble." (1)
Remarks: The slight rise of the sheet to the SE will facilitate removal of quarry blocks (1)
References: 1) Thiel; Dutton. 1935, p. 97, 98

Main commodity: Dimension Granite
County: Yellow Medicine
Quarry/pit name: Echo Granite Co. Quarry (1)
Status: Inactive
Past operator/owner: Echo Granite Co. (1)

Location: T 113 R 39 W Sec 29
Location comments: 100 yards east of the Clark and Anderson Quarry (1); (T., R., Sec. locations determined from given location of Clark and Anderson Quarry)
Description: Red granite, the joints trend approximately N. 60 deg W. but intersect at angles of approximately 80 deg. "Although joints average from 3 to 5 ft apart, some of them are only 6 to 10 inches apart, and consequently increase the percentage of waste....The sheets are well spaced, being 4 to 6 ft apart, with an inclination to the south." (1)
Remarks: "This rock is carefully examined to avoid defects of color, texture, and seams." (1)
References: 1) Thiel; Dutton. 1935, p. 97, 98

Main commodity: Dimension Granite
County: Yellow Medicine
Quarry/pit name: Rock Valley Granite Co. Quarry (1)
Date opened: 1927 (1)
Status: Inactive
Past operator/owner: Rock Valley Granite Co. (1)
Location: T 114 R 38 W Sec 12 SW1/4 SE1/4 (1)
Location comments: Western most quarry in Ref. 1, fig. 50; (quarter section locations determined from Ref. 1, fig. 50)
Geologic age: Archean
Geologic formation: (Sacred Heart Granite)
Description: "The joints and sheets are spaced in a way that facilitates quarrying. The joints trend N. 55 deg. W. and N. 35 deg. E.; consequently the angle of intersection does not cause excessive waste. The joints are spaced from 2 to 10 ft apart, and the sheets, which dip to the south, are spaced about 7 ft apart. Although the rock seems to be fairly uniform, there is enough variation so that blocks are not sawed for stock material. Both pink and gray varieties are present, but only comparatively small amounts of the gray are used." (1)
References: 1) Thiel; Dutton. 1935, p. 95, 96

Main commodity: Dimension Granite
Other commodities: Crushed Granite
County: Yellow Medicine
Quarry/pit name: Echo Quarry (1)
Status: Inactive
Past operator: Delano Granite Works, Inc. (1)
Location: T 114 R 38 W Sec 13 NE1/4 (1)
Location comments: See Ref. 2, fig. 29 for location map
Geologic age: Archean
Geologic formation: Sacred Heart Granite (2)
References: 1) USBM. [1979], MILS
 2) Goldich and others. 1961, p. 128

Main commodity: Undifferentiated Granite
County: Aitkin
Status: Inactive
Location: T 44 R 23 W Sec 6 NW1/4 NW1/4 (2,3)
Location comments: Small quarry 2 miles west of Dad's Corner (2)
Geologic age: Archean
Geologic formation: McGrath Gneiss (1)
Description: Granite gneiss (1)
Chemical analyses: See Ref. 1, table 23 for chemical analyses
Physical test data: Specific gravity: 2.68, 2.69 (3)
References: 1) Goldich and others. 1961, p. 117
 2) Skillman. 1945, p. 22
 3) Bleifuss. 1952, p. xx, xii

Main commodity: Undifferentiated Granite
County: Benton
Status: Inactive
Location: T 36 R 31 W Sec 13 SW1/4 NW1/4 (1)
Description: Pink granite (1)
Physical test data: Specific gravity 2.66 (1)
References: 1) Bleifuss. 1952, p. xx, xiii

Main commodity: Undifferentiated Granite
County: Benton
Status: Inactive
Location: T 36 R 31 W (1)
Location comments: About 1-1/2 miles north of Sauk Rapids and 2 miles east of the river, a number of quarries are situated (1); (T., R. locations determined from Ref. 1, fig. 11)
Description: "Several different types of granite are taken from these, including medium coarse-grained pink hornblende granite and light to dark gray biotite and hornblende granite." (1)
References: 1) Thiel. 1947, p. 55, 56

Main commodity: Undifferentiated Granite
County: Benton
Quarry/pit name: Rendering Quarry (1)
Status: Inactive
USGS quadrangle: Little Rock Lake
Location: T 37 R 31 W. Sec 27 NW1/4 SE1/4 (1)
Location comments: Near center of section 27 (2,3)
Geologic age: Archean
Geologic Formation: Watab Amphibolite (3)
Description: Granite (1); melanogranodiorite (2)
Physical test data: Specific gravity 2.88 (2)
References: 1) MGS. [1978-1979?]
 2) Bleifuss. 1952, p. xx, xiii
 2) Dacre. 1981, p. 3, 36-38

Main commodity: Undifferentiated Granite
County: Benton
Status: Inactive
Location: T 37 R 31 W Sec 34 NE1/4 (1)
Description: Granodiorite (1)
Physical test data: Specific gravity 2.92 (1)
References: 1) Bleifuss. 1952, p. xx, vii

Main commodity: Undifferentiated Granite
County: Benton
Quarry/pit name: Jack Frost Quarry (1)
Status: Inactive
USGS quadrangle: Little Rock Lake
Location: T 37 R 31 W Sec 35 NW1/4 (1)
Location comments: Center of NW 1/4 (1)
References: 1) MGS. [1978-1979?]

Main commodity: Undifferentiated Granite
County: Big Stone
Status: Inactive (1)
Location: T 120 R 45 W Sec 2 SW1/4 (1)
Location comments: See Ref. 1, fig. 33, p. 145 and Ref. 2, plate 11 for location map
Geologic age: Archean
Geologic formation: Ortonville Granite (1,2)
References: 1) Goldich and others. 1961, p. 145
 2) Lund. 1950, plate 11

Main commodity: Undifferentiated Granite
County: Big Stone
Status: Inactive
Location: T 121 R 46 W Sec 16 SE1/4 SE1/4 (1)
Location comments: See Ref. 1, plate 12 for location map
Geologic age: Archean
Geologic formation: Ortonville Granite (1)
References: 1) Lund. 1950, plate 12

Main commodity: Undifferentiated Granite
County: Big Stone
Status: Inactive
Location: T 121 R 46 W Sec 16 S1/2 (1)
Location comments: Center of S1/2 (1); see Ref. 1, plate 12 for location map
Geologic age: Archean
Geologic formation: Ortonville Granite (1)
References: 1) Lund. 1950, plate 12

Main commodity: Undifferentiated Granite

County: Big Stone
Status: Inactive
Location: T 121 R 46 W Sec 21 NE1/4 SE1/4 (1)
Location comments: See Ref. 1, plate 12 for location map
Geologic age: Archean
Geologic formation: Ortonville Granite (1)
References: 1) Lund. 1950, plate 12

Main commodity: Undifferentiated Granite
County: Big Stone
Status: Inactive
Location: T 121 R 46 W Sec 22 SW1/4 SE1/4 (1)
Location comments: See Ref. 1, plate 12 for location map; two quarries shown at this location
Geologic age: Archean
Geologic formation: Ortonville Granite (1)
References: 1) Lund. 1950, plate 12

Main commodity: Undifferentiated Granite
County: Big Stone
Status: Inactive
Location: T 121 R 46 W Sec 22 (1)
Location comments: West-central part of section 22 (1); (plate 12 does not show a quarry at this location)
Geologic age: Archean
Geologic formation: Ortonville Granite (1)
Description: Red granite (1); Modal Analyses: potash feldspar 48%, plagioclase 17%, quartz 31%, biotite 3%, accessories (magnetite, apatite, zircon, muscovite) 1% (1)
References: 1) Lund. 1950, p. 77, plate 12

Main commodity: Undifferentiated Granite
County: Big Stone
Status: Inactive
Location: T 121 R 46 W Sec 26 NW1/4 NW1/4 (1)
Location comments: See Ref. 1, plate 12 for location map
Geologic age: Archean
Geologic formation: Ortonville Granite (1)
References: 1) Lund. 1950, plate 12

Main commodity: Undifferentiated Granite
County: Chippewa
Status: Inactive
Location: T 115 R 39 W
Location comments: 1/2 mile south of Minnesota Falls on left side of river (1); (T., R., Sec. locations determined from Ref. 1, plate 39)
Geologic age: Archean
Geologic formation: Granite (1)

Description: Gray syenite with white quartz and black hornblende in nearly equal parts, somewhat schistose as to the direction of its grains. (1)
Remarks: Slightly quarried (1)
References: 1) Winchell; Upham. 1888, p.212, 218

Main commodity: Undifferentiated Granite
County: Itasca
Status: Inactive
Location: T 62 R 22 W
Location comments: Ref. 1 and 2 maps show two quarries in the extreme NE corner of Itasca County; (T., R. locations determined from county highway map, exact locations undetermined)
References: 1) Schwartz; Prokopovich. 1956
 2) Schwartz; Prokopovich. 1966

Main commodity: Undifferentiated Granite
County: Lac Qui Parle
Status: Inactive
Past operator/owner: Northern Quarry Corp. (1,2)
Location: T 120 R 44 W
Location comments: Near Louisburg (1,2); (exact location undetermined; T., R. locations determined from county highway map)
References: 1) Hogberg. 1969, p. 50
 2) Hogberg. 1966, p. 40

Main commodity: Undifferentiated Granite
County: Lac Qui Parle
Status: Inactive
Location: T 120 R 45 W Sec 12 (1)
Location comments: (Center of section 12); see Ref. 1, plate 11 for location map
Geologic age: Archean
Geologic formation: Ortonville Granite (1)
References: 1) Lund. 1950, plate 11

Main commodity: Undifferentiated Granite
County: Lac Qui Parle
Status: Inactive
USGS quadrangle: Bellingham
Location: T 120 R 45 W Sec 15 NW1/4 (1-3)
Location comments: Two quarries are shown in the NW1/4 in Ref. 1, fig. 33; see Ref. 3, plate 11 and Ref. 2 for location maps
Geologic age: Archean
Geologic formation: Ortonville Granite (1,3)
References: 1) Goldich and others. 1961, p. 145
 2) USGS. 1971, Bellingham quadrangle
 3) Lund. 1950, p. 50, 51

Main commodity: Undifferentiated Granite
County: Lac Qui Parle
Status: Inactive
Location: T 120 R 45 W Sec 16 SW1/4 (1)
Location comments: Quarry 1780 ft east and 1550 ft north of SW corner (1); west of U.S. Hwy. 75, approximately 4.5 miles southeast of Odessa (2)
Geologic age: Archean
Geologic formation: Ortonville Granite (1)
Description: Porphyritic granite (1); Modal Analyses: potash feldspar 54%, plagioclase 15%, quartz 25%, biotite 5%, accessories (magnetite, apatite, zircon, muscovite) 1% (1)
References: 1) Lund. 1956, p. 1487
 2) Grant and others. 1972, p. 38

Main commodity: Undifferentiated Granite
County: Lac Qui Parle
Status: Inactive
Location: T 120 R 46 W Sec 1 N1/2 (1)
Location comments: See Ref. 1, plate 12 for location map
Geologic age: Archean
Geologic formation: Ortonville Granite (1)
References: 1) Lund. 1950, plate 12

Main commodity: Undifferentiated Granite
County: Lac Qui Parle
Status: Inactive
Location: T 121 R 46 W Sec 25 SW1/4 SW1/4 (1)
Location comments: See Ref. 1, plate 12 for location map
Geologic age: Archean
Geologic formation: Ortonville Granite (1)
References: 1) Lund. 1950, plate 12

Main commodity: Undifferentiated Granite
County: Lac Qui Parle
Status: Inactive
Location: T 121 R 46 W Sec 26 S1/2 SW1/4 (1)
Location comments: See Ref. 1, plate 12 for location map
Geologic age: Archean
Geologic formation: Ortonville Granite (1)
References: 1) Lund. 1950, plate 12

Main commodity: Undifferentiated Granite
County: Lake
Status: Inactive
Past operator/owner: Wieland Bros. (1)
Location: T 55 R 8 W

Location comments: West point of Beaver Bay (1); (T., R. locations determined from county highway map)
Description: Coarse-grained, gray, anorthosite (1)
Physical test data: For detailed test data see Ref. 1, p. 196-199
References: 1) Winchell and others. 1884, p. 185, 196-199, 464

Main commodity: Undifferentiated Granite
County: Lake
Status: Inactive
Location: T 56 R 7 W Sec 32 NE1/4 (1)
Location comments: Silver Bay (1)
Description: Granite (1)
References: 1) Green and others. 1977, p. 81

Main commodity: Undifferentiated Granite
County: Lake
Status: Inactive
USGS quadrangle: Cramer
Location: T 58 R 6 W Sec 3 NW1/4 SE1/4 (1)
Location comments: (South of railroad tunnel)
Geologic age: Middle Proterozoic
Geologic formation: (Duluth Complex)
References: 1) USGS. 1981, Cramer quadrangle

Main commodity: Undifferentiated Granite
County: Lake
Status: Inactive
Location: T 61 R 11 W Sec 11 SE1/4 NW1/4 (1)
Geologic age: Middle Proterozoic
Geologic formation: Duluth Complex (1)
References: 1) U.S. Forest Service. 1989, personal communication

Main commodity: Undifferentiated Granite
County: Lake
Status: Inactive
Location: T 61 R 11 W Sec 13 SE1/4 NE1/4 (1)
Location comments: Approximately 20 miles SE of Ely (1)
Geologic age: Middle Proterozoic
Geologic formation: Duluth Complex (1)
References: 1) U.S. Forest Service. 1989, personal communication

Main commodity: Undifferentiated Granite
County: Morrison
Status: Inactive
Location: T 40 R 29 W Sec 8 NE1/4 (1-3)

Location comments: "The Minneapolis, St. Paul, and Sault Ste. Marie railroad cuts through two of the outcrops and two small quarries occur in them, one to the north and one to the south of the railroad" (1,2)

Description: Fine-grained pink granite consists mainly of pink feldspar and quartz, but biotite and hornblende occur scattered through it. (1,2)

References: 1) Harder; Johnston. 1918, p. 36, 37
2) MN Department of Conservation. 1964b, p. 54, 55
3) Thiel. 1947, p. 181

Main commodity: Undifferentiated Granite

County: Morrison

Status: Inactive

Past operator/owner: Melrose Granite Co. (2)

MN/DOT source no: 49-1

Location: T 40 R 30 W Sec 13 NE1/4 SE1/4 (2-3)

Geologic age: Early Proterozoic

Geologic formation: Pierz Granite (1)

References: 1) Morey. 1979, p. 28
2) MN/DOT Aggregate Unit files
3) MGS. [1978-1979?]

Main commodity: Undifferentiated Granite

County: Morrison

Status: Inactive

Location: T 40 R 30 W Sec 22 S1/2 NE1/4 (1-3)

Location comments: About 3 miles SE of Rich Prairie (Pierz) (1-3); (T., R. locations determined from Ref. 1, plate 53)

Description: Probably granite (1-3)

Remarks: Slightly quarried (1-3)

References: 1) Upham. 1884, p. 91
2) Winchell; Upham. 1888, p. 590
3) MN Department of Conservation. 1964b, p. 71

Main commodity: Undifferentiated Granite

County: Nicollet

Status: Inactive

Location: T 111 R 32 W Sec 22 (NW1/4 NW1/4)

Location comments: See Ref. 1, fig. 2 for location map; (near the intersection of the corners of sections 15, 16, 21, 22, along the Minnesota River); (T., R., Sec. locations determined from Ref. 1, fig. 2 and county highway map)

Description: Granodiorite (1) see Ref. 1 for further description

References: 1) Ankenbauer. 1975, p. 13
2) Farhat. 1975, p. 172

Main commodity: Undifferentiated Granite

County: Nicollet

Status: Inactive

USGS quadrangle: Morgan NE

Location: T 111 R 33 W Sec 2 NE1/4 NE1/4 (1)

Geologic age: Archean

Geologic formation: Fort Ridgely Granite (1)

Description: Pinkish-gray porphyritic granite with aligned phenocrysts two inches or more in length (1)

Modal Analyses: potash feldspar 55%, plagioclase 10%, quartz 30%, biotite 4%, accessories (magnetite, apatite, zircon, epidote) 1% (1)

References: 1) Mangen. 1956, p. 7, 10, 11
2) MGS. [1978-1979?]
3) Lund. 1950, plate 2

Main commodity: Undifferentiated Granite

County: Redwood

Quarry/pit name: Seaforth Quarry (1)

Status: Inactive

Past operator/owner: John Clark Granite Co. (1)

USGS quadrangle: Wabasso

Location: T 111 R 38 W Sec 12 NW1/4 NE1/4 (4,5)
T 111 R 38 W Sec 1 (1)

Location comments: About 3 miles SW of Seaforth (1,2); (these locations may possibly represent two different quarries)

Geologic age: Archean

Geologic formation: Seaforth Gneiss (2)

Description: Light gray granite gneiss (3); "...black and white granite gneiss with contorted bands and laminations. The joints and sheets are poorly developed but the rock has a tendency to split along the gneissic bands." (1)

"Structurally this rock resembles the Morton gneiss, but the feldspar is white rather than pink or red. The banding is the result of concentration of biotite in schlieren or irregular layers. The strike is about N. 50 deg. E., and the dip is approximately 30 deg. S.E. The rock is locally pegmatitic and is cut by gray aplite." (2)

Amphibolite gneiss (4)

Trade names: White Oriental Granite (1)

Remarks: "The tapestry-like pattern is conspicuous on polished surfaces, especially in large panels or on the face of large monuments. It is a very attractive stone and will undoubtedly enjoy a good market for interior and monumental work." (1)

References: 1) Thiel; Dutton. 1935, p. 96-98
2) Goldich and others. 1961, p. 129
3) Thiel; Schwartz. 1932, p. 25
4) MGS. [1978-1979?]
5) USGS. 1967, Wabasso quadrangle

Main commodity: Undifferentiated Granite
County: Redwood
Quarry/pit name: Ellison's Quarry No. 2 (1)
Status: Inactive
USGS quadrangle: Redwood Falls SE
Location: T 113 R 35 W Sec 19 NE1/4 SE1/4 (1)
References: 1) MGS. [1978-1979?]

Main commodity: Undifferentiated Granite
County: Redwood
Status: Inactive
USGS quadrangle: Redwood Falls SE
Location: T 113 R 35 W Sec 20 SW1/4 NW1/4 (1)
Location comments: See Ref. 1, plate 5 for location map
Geologic age: Archean
Geologic formation: Morton Gneiss (1)
Description: Quartz monzonite gneiss (1)
References: 1) Lund. 1950, plate 5

Main commodity: Undifferentiated Granite
County: Redwood
Status: Inactive
Location: T 113 R 35 W Sec 20 SW1/4 (1)
Location comments: North Redwood (1)
Description: "Fine-grained, black and white granite gneiss, much finer in grain and lacking the contorted structure of typical Morton gneiss." (1)
References: 1) Goldich and others. 1961, p. 178

Main commodity: Undifferentiated Granite
County: Redwood
Status: Inactive
Location: T 114 R 37 W Sec 7 S1/2 (1-3)
Location comments: Center of S1/2 (1,2); see Ref. 1, fig. 3 and Ref. 2, fig. 29 for location maps
Geologic age: Archean
Geologic formation: Sacred Heart Granite (1-2)
Description: See Ref. 3, table 8, p. 75 for modal analyses of gray facies
References: 1) Goldich and others. 1970, p. 3674
 2) Goldich and others. 1961, p. 128
 3) Lund. 1950, p. 41, 42, 75

Main commodity: Undifferentiated Granite
County: Redwood
Status: Inactive
USGS quadrangle: Iverson Lake
Location: T 114 R 37 W Sec 7 SE1/4 SW1/4 (1)
Geologic age: Archean

Geologic formation: (Sacred Heart Granite)
Description: Granite (1)
References: 1) MGS. [1978-1979?]

Main commodity: Undifferentiated Granite
County: Redwood
Status: Inactive
Past operator/owner: Johnson Quarry Co. (6)
USGS quadrangle: Iverson Lake
Location: T 114 R 37 W Sec 7 SW1/4 SW1/4 (1-3,6)
Location comments: See Ref. 1, fig. 29, Ref. 2, fig. 3, and Ref. 5, plate 7 for location maps
Geologic age: Archean
Geologic formation: Sacred Heart Granite (1,2,5)
Description: Mixed rock (3)
References: 1) Goldich and others. 1961, p. 128
 2) Goldrich and others. 1970, p. 3674
 3) MGS. [1978-1979?]
 4) Grant and others. 1972, p. 37
 5) Lund. 1950, plate 7
 6) Hogberg. 1969, p. 50

Main commodity: Undifferentiated Granite
County: Redwood
Quarry/pit name: Sander's Quarry (3)
Status: Inactive
USGS quadrangle: Iverson Lake
Location: T 114 R 37 W Sec 7 N1/2 SE1/4 (1-3)
Location comments: Center of N1/2 SE1/4 (1-3); See Ref. 1, fig. 3, Ref. 2, fig. 29, and Ref. 4, plate 7 for location maps
Geologic age: Archean
Geologic formation: Morton Gneiss (1,2,4)
References: 1) Goldich and others. 1970, p. 3674
 2) Goldich and others. 1961, p. 128
 3) MGS. [1978-1979?]
 4) Lund. 1950, plate 7

Main commodity: Undifferentiated Granite
County: Redwood
Quarry/pit name: Sacred Heart Quarry (3)
Status: Inactive
USGS quadrangle: Iverson Lake
Location: T 114 R 37 W Sec 17 SW1/4 SW1/4 NW1/4 (1,2) OR
 T 114 R 37 W Sec 18 SE1/4 SE1/4 NE1/4 (4)
Location comments: West side of road (1,2); see Ref. 1, fig. 3, Ref. 2, fig. 29, Ref. 4, fig. 50, and Ref. 5, plate 7 for location maps
Geologic age: Archean
Geologic formation: Sacred Heart Granite (1,2,5)
Description: Granite (3)

References:	1) Goldich and others. 1970 p. 3674 2) Goldich and others. 1961, p.128 3) MGS. [1978-1979?] 4) Thiel; Dutton. 1935, p. 95 5) Lund. 1950, plate 7
Main commodity:	Undifferentiated Granite
County:	Redwood
Quarry/pit name:	Grannes' Quarry (3)
Status:	Inactive
Location:	T 114 R 37 W Sec 17 SW1/4 NW1/4 (1-3)
Location comments:	East side of road (1,2); see Ref. 1, fig. 3, Ref. 2, fig. 29 and Ref. 4, plate 7 for location maps
Geologic age:	Archean
Geologic formation:	Sacred Heart Granite (1,2,4)
Description:	Granite (3)
References:	1) Goldich and others. 1970, p. 3674 2) Goldich and others. 1961, p. 128 3) MGS. [1978-1979?] 4) Lund. 1950, plate 7
Main commodity:	Undifferentiated Granite
County:	Redwood
Status:	Inactive
Location:	T 114 R 37 W Sec 18 S1/2 NE1/4 (1-3)
Location comments:	See Ref. 1, fig. 3, Ref. 2, fig. 29, and Ref. 3, plate 7 for location maps
Geologic age:	Archean
Geologic formation:	Sacred Heart Granite (1-3)
References:	1) Goldich and others. 1970, p. 3674 2) Goldich and others. 1961, p. 128 3) Lund. 1950, plate 7
Main commodity:	Undifferentiated Granite
County:	Redwood
Status:	Inactive
Location:	T 114 R 37 W Sec 18 N1/2 SE1/4 (1-3)
Location comments:	See Ref. 1, fig. 3, Ref. 2, fig. 29, and Ref. 3, plate 7 for location maps
Geologic age:	Archean
Geologic formation:	Sacred Heart Granite (1-3)
Remarks:	Two quarry symbols shown at this location in Refs. 1-3
References:	1) Goldich and others. 1970, p. 3674 2) Goldich and others. 1961, p. 128 3) Lund. 1950, plate 7
Main commodity:	Undifferentiated Granite
County:	Redwood
Status:	Inactive
Location:	T 114 R 37 W Sec 18 SW1/4 NW1/4 NE1/4 (1-3)

Location comments:	South of Sacred Heart, 2420 ft west and 1030 ft south of the NE corner (3); see Ref. 1, fig. 3, Ref. 2, fig. 29, and Ref. 4, plate 7 for location maps
Geologic age:	Archean
Geologic formation:	Sacred Heart Granite (1-4)
Description:	Modal Analyses: potash feldspar 30%, plagioclase 40%, quartz 23%, biotite 5%, accessories (magnetite, apatite, zircon, sphene, muscovite, calcite, epidote, hematite) 2% (2); see Refs. 3-5 for additional modal analyses of pink facies of leucoadamellite and gray facies of adamellite
References:	1) Goldich and others. 1970, p. 3674 2) Goldich and others. 1961, p. 128, 130 3) Lund. 1956, p. 1486 4) Lund. 1950, p. 66, 75 5) Magen. 1956, p. 7, 10, 11
Main commodity:	Undifferentiated Granite
County:	Redwood
Status:	Inactive
Location:	T 114 R 37 W Sec 18 NE1/4 SW1/4 (1-3)
Location comments:	Center of NE1/4 SW1/4 (1-3); see Ref. 1, fig. 3, Ref. 2, fig. 29, and Ref. 3, plate 7 for location maps
Geologic age:	Archean
Geologic formation:	Sacred Heart Granite (1-3)
References:	1) Goldrich and others. 1970, p. 3674 2) Goldrich and others. 1961, p. 128 3) Lund. 1950, plate 7
Main commodity:	Undifferentiated Granite
County:	Redwood
Status:	Inactive
Location:	T 114 R 37 W Sec 18 NE1/4 NW1/4 SW1/4 (1-3)
Location comments:	See Ref. 1, fig. 3, Ref. 2, fig. 29 and Ref. 3, plate 7 for location maps
Geologic age:	Archean
Geologic formation:	Sacred Heart Granite (1-3)
References:	1) Goldich and others. 1970, p. 3674 2) Goldich and others. 1961, p. 128 3) Lund. 1950, plate 7
Main commodity:	Undifferentiated Granite
County:	Redwood
Status:	Inactive
Location:	T 114 R 37 W Sec 18 E1/2 SW1/4 NW1/4 (1-3)
Location comments:	See Ref. 1, fig. 3, Ref. 2, fig. 29, and Ref. 3, plate 7 for location maps
Geologic age:	Archean
Geologic formation:	Sacred Heart Granite (1-3)

References: 1) Goldich and others. 1970, p. 3674
2) Goldich and others. 1961, p. 128
3) Lund. 1950, plate 7

Main commodity: Undifferentiated Granite
County: Redwood
Status: Inactive
Location: T 114 R 37 W Sec 18 NW1/4 (1-3)
Location comments: Center of NW1/4 (1-3); see Ref. 1, fig. 3, Ref. 2, fig. 29, and Ref. 3, plate 7 for location maps
Geologic age: Archean
Geologic formation: Sacred Heart Granite (1-3)
References: 1) Goldich and others. 1970, p. 3674
2) Goldich and others. 1961, p. 128
3) Lund. 1950, plate 7

Main commodity: Undifferentiated Granite
County: Redwood
Status: Inactive
Location: T 114 R 37 W Sec 18 NE1/4 NW1/4 (1-3)
Location comments: See Ref. 1, fig. 3, Ref. 2, fig. 29, and Ref. 3, plate 7 for location maps
Geologic age: Archean
Geologic formation: Sacred Heart Granite (1-3)
References: 1) Goldich and others. 1970, p. 3674
2) Goldich and others. 1961, p. 128
3) Lund. 1950, plate 7

Main commodity: Undifferentiated Granite
County: Redwood
Status: Inactive
Location: T 114 R 37 W Sec 18 NE1/4 NW1/4 NW1/4 (1,2,4)
Location comments: (South of Sacred Heart); 950 ft east and 500 ft south of the NW corner (3); see Ref. 1, fig. 3, Ref. 2, fig 29 and Ref. 4, plate 7 for location maps
Geologic age: Archean
Geologic formation: Sacred Heart Granite (1-4)
Description: Modal analyses of gray facies of adamellite: potash feldspar 38%, plagioclase 30%, quartz 25%, biotite 5%, accessories (magnetite, apatite, zircon, sphene, allanite, muscovite) 2% (3)
Remarks: Two quarry symbols shown at this location in Refs. 1, 2, and 4
References: 1) Goldich and others. 1970, p. 3674
2) Goldich and others. 1961, p. 128
3) Lund. 1956, p. 1486
4) Lund. 1950, plate 7

Main commodity: Undifferentiated Granite
County: Redwood

Status: Inactive
Location: T 114 R 37 W Sec 18 NW1/4 SW1/4 SE1/4 (1)
Location comments: 2460 ft west and 1010 ft north of the SE corner (1); (NW1/4 SW1/4 SE1/4 determined from Ref. 1 location measurements)
Description: Amphibolite (1)
References: 1) Lund. 1956, p. 1480

Main commodity: Undifferentiated Granite
County: Renville
Status: Inactive
Location: T 113 R 34 W Sec 31 S1/2 SE1/4 NE1/4 (1)
Location comments: Near Morton (1)
References: 1) Renville County Assessor. 1989, personal communication

Main commodity: Undifferentiated Granite
County: Renville
Status: Inactive
Location: T 113 R 34 W Sec 31 NE1/4 SW1/4 NW1/4 (2)
Location comments: 940 ft east and 1420 ft south of the NW corner (1); lot 1, block 4 of Dallenbocks Addition, West Ledge, Morton (2); see Ref. 3, plate 4 for location map
Geologic age: Archean
Geologic formation: Morton Gneiss (1)
Remarks: See references for location maps, detailed lithologic descriptions including modal analyses, and chemical test data of the Morton area.
References: 1) Lund. 1956, p. 1480
2) Renville County Assessor. 1989, personal communication
3) Lund. 1950, plate 4
4) Goldich and others. 1980b, p. 45-56
5) Suda. 1975
6) Lund. 1953, p. 46-52
7) Goldich and others. 1970, p. 3671-3695
8) Goldich and others. 1961, p. 123-146
9) Thiel; Dutton. 1935, p. 88-94
10) Bowles. 1918, p. 47-49
11) Nielsen; Weiblen. 1980 p. 95-103
12) Wooden and others. 1980 p. 57-75
13) Farhat. 1975, p. 172
14) Ankenbauer. 1975

Main commodity: Undifferentiated Granite
County: Renville
Status: Inactive
Past operator/owner: Cold Spring Granite Co. (see Producer Directory) (14,15)
Location: T 113 R 34 W Sec 31 NW1/4 SE1/4 (1,14,15)
Location comments: See Ref. 1, plate 4 for location map
Geologic age: Archean
Geologic formation: Morton Gneiss (1)

Description: Quartz monzonite gneiss (1); see Ref. 1, table 7 for modal analyses of gray part of gneiss

Remarks: See references for location maps, detailed lithologic descriptions including modal analyses, and chemical test data of the Morton area.

References:

- 1) Lund. 1950, p. 74
- 2) Goldich and others. 1980b, p. 45-56
- 3) Suda. 1975
- 4) Lund. 1956, p. 1475-1490
- 5) Lund. 1953, p. 46-52
- 6) Goldich. 1936, p. 15-29
- 7) Goldich and others. 1970, p. 3671-3695
- 8) Goldich and others. 1961, p. 123-146
- 9) Mangen. 1956, p. 7-11
- 10) Thiel; Dutton. 1935, p. 88-94
- 11) Bowles. 1918, p. 47-49
- 12) Nielsen; Weiblen. 1980, p. 95-103
- 13) Wooden and others. 1980, p. 57-75
- 14) Hogberg. 1969, p. 49
- 15) Hogberg. 1966, p. 32, 38
- 16) Ankenbaur. 1975

Main commodity: Undifferentiated Granite

County: Renville

Quarry/pit name: Sodergren Quarry (1)

Status: Inactive

Location: T 113 R 35 W Sec 1 (1)

Location comments: (Location may be in error, Ref. 1 states that quarry is in Redwood Co. but given T., R., Sec. location is actually in Renville Co.); near North Redwood (1,2)

Remarks: (Rock type is assumed to be granite though not stated in Refs. 1, 2); Cretaceous fossils were collected at this quarry (1,2)

References:

- 1) Sloan. 1964, p. 26, 49
- 2) Bolin. 1956, p. 278, 282

Main commodity: Undifferentiated Granite

County: Renville

Status: Inactive

Location: T 113 R 35 W Sec 29 NW1/4 (1)

Geologic age: Archean

Geologic formation: Morton Gneiss (1)

References:

- 1) Goldich. 1936, p. 16

Main commodity: Undifferentiated Granite

County: Sherburne

Quarry/pit name: Studer Quarry (1)

Status: Inactive

USGS quadrangle: Cable

Location: T 35 R 30 W Sec 17 SW1/4 SW1/4 (1)

Description: Granite (1)

References:

- 1) MGS. [1978-1979?]

Main commodity: Undifferentiated Granite

County: St. Louis

Quarry/pit name: McLean Quarry (1-3)

Status: Inactive

Location: T 50 R 14 W

Location comments: Near the shore of Lake Superior between 24th and 25th Ave. East, Duluth (1-3); (T., R. locations determined from county highway map)

Description: Intermediate red rock (1-2)

Chemical analyses: See Ref. 1 for chemical analyses

Physical test data: Specific gravity 2.74 (3)

References:

- 1) Schwartz. 1949, p. 64, 65
- 2) Green. 1972, p. 326
- 3) Bleifuss. 1952, p. xvi, ix

Main commodity: Undifferentiated Granite

County: St. Louis

Status: Inactive

Location: T 50 R 14 W Sec 2 SE1/4 SW1/4 (1)

Location comments: Woodland Ave., Duluth (1)

Description: Granophyre intrusive near top of anorthositic gabbro (1); Modal Analyses; feldspar 66%, quartz 25%, magnetite 2%, uraltite 3%, chlorite 4%, trace (apatite, zircon, epidote, calcite) (2)

References:

- 1) Goldich and others. 1961, p. 176
- 2) Taylor. 1956, p. 60

Main commodity: Undifferentiated Granite

County: St. Louis

Status: Inactive

Location: T 50 R 14 W Sec 15 (1-3)

Location comments: Kenwood Ave., Duluth (1-3)

Description: "...quarry...exposes granophyre intruding basalt flows above the gabbro. The granophyre is a sodic granite, with irregular implication texture. The albite has well-developed chessboard twinning, a combination of albite and pericline twins in which no individual lamella goes all the way across the grain. Perthitic orthoclase and quartz seem to corrode the albite. Even the freshest samples contain epidote, and suggest contamination by basic plagioclase from the basalt. Dikes of red granophyre with sharp contacts extend into the basalt flows as offshoots from the main mass, and rotated inclusions of the flows occur in the granophyre." (1)

Modal Analyses: feldspar 68%, quartz 17%, magnetite 3%, epidote 5%, chlorite 7%, trace (apatite, sphene, uraltite, calcite, leucoxene) (1); see Ref. 2, for further lithologic description and modal analyses.

Chemical analyses: See Ref. 2, table 11 for partial chemical analyses

References: 1) Taylor. 1956, p. 58, 60
2) Taylor. 1964, p. 36, 40
3) Goldich and others. 1961, p. 176
4) Green and others. 1977, p. 77

Main commodity: Undifferentiated Granite
County: St. Louis
Status: Inactive
Location: T 50 R 14 W Sec 20 (1)
Location comments: Near Coffee Creek (1)
Description: "...massive ferrogranodiorite... with a few pegmatitic concentrations of quartz and feldspar. The ferrogranodiorite is a medium-grained rock with pink feldspars set in a dark matrix." (1)
Chemical analyses: See Ref. 1, table 9, p. 31 and table 10, p. 32 for chemical analyses
References: 1) Taylor. 1964 p. 31, 32

Main commodity: Undifferentiated Granite
County: St. Louis
Status: Inactive
Location: T 50 R 14 W Sec 28 (1)
Location comments: At 12th Ave West, Duluth (1)
Description: Granophyre (1); Modal Analyses: plagioclase 30%, orthoclase 41%, quartz 9%, pyroxene 11%, magnetite 9%, trace (apatite, sphene, chlorite, uranite) (1)
Remarks: Enger Tower intrusive (1)
References: 1) Taylor. 1964, p. 31

Main commodity: Undifferentiated Granite
County: St. Louis
Status: Inactive
Location: T 50 R 14 W Sec 28 SE1/4 NE1/4 (1)
Location comments: 150 yards NE of the top of the inclined railway (now defunct) (1); see Ref. 1, fig. 9 for location map
Description: Granophytic microgabbro (1)
Chemical analyses: See Ref. 2, table 7, p. 26 for chemical analyses
References: 1) Goldich and others. 1956, p. 70
2) Taylor. 1964, p. 26

Main commodity: Undifferentiated Granite
County: St. Louis
Status: Inactive
Location: T 50 R 14 W Sec 33 NE1/4 (3)
Location comments: At Superior St. and 13th Ave. West, at a cliff known as "Point of Rocks" (1); see Ref. 3, fig. 9, for location map
Geologic age: Middle Proterozoic
Geologic formation: (Duluth Complex)

Description: Gabbro (1)
Remarks: Considerable quarrying for a proposed extension of Superior St. (1)
References: 1) Schwartz. 1949, p. 91
2) Green and others. 1977, p. 77
3) Goldich and others. 1956, fig. 9

Main commodity: Undifferentiated Granite
County: St. Louis
Status: Inactive
Location: T 50 R 14 W Sec 33 NW1/4 NE1/4 (1)
Location comments: 13th Ave. West and Second or Third Street (1-4); southeast of Enger Tower (3); see Ref. 1, fig. 9 for location map
Description: Red rock contaminated with inclusions of anorthositic gabbro (1); for further lithologic description see Refs. 2-4
Chemical analyses: See Ref. 1, table 6, p. 82, Ref. 3, table 17, p. 86 and Ref. 5, table 15, p. 49 for chemical analyses
References: 1) Goldich and others. 1956, p. 82, 84
2) Schwartz. 1949, p. 91, 128
3) Goldich and others. 1961, p. 86
4) Grout; Longley. 1935, p. 134
5) Taylor. 1964, p. 49

Main commodity: Undifferentiated Granite
County: St. Louis
Status: Inactive
Location: T 50 R 14 W Sec 34 NW1/4 (1)
Location comments: Rice Point, Duluth (1,2)
Geologic age: Middle Proterozoic
Geologic formation: (Duluth Complex)
Description: Gabbro, coarse grained, lavender gray or greenish gray (1); for further description see Ref. 1
Physical test data: For detailed test data see Ref. 2, p. 196-199
References: 1) Winchell; Grant. 1900, p. 81-87
2) Winchell and others. 1884, p. 147, 149, 196-199

Main commodity: Undifferentiated Granite
County: St. Louis
Quarry/pit name: Hibbing Taconite Pit (1)
Status: Inactive
Past operator/owner: ABI Contracting Inc. (1)
USGS quadrangle: Dewey Lake SE
Location: T 58 R 20 W (1)
Location comments: (Near center of township)
References: 1) USBM. [1979], MILS

Main commodity: Undifferentiated Granite
County: St. Louis

Status: Inactive
Location: T 59 R 18 W Sec 31 SE1/4 (1)
Description: Pink granite (1)
Physical test data: Specific gravity 2.65 (1)
References: 1) Bleifuss. 1952, p. xx, vii

Main commodity: Undifferentiated Granite
County: St. Louis
Status: Inactive (1)
Location: T 61 R 18 W Sec 8 SE1/4 NW1/4 (1)
Description: Diabase (1)
References: 1) Mark Jirsa. 1989, personal communication

Main commodity: Undifferentiated Granite
County: St. Louis
Status: Inactive (1)
Location: T 61 R 19 W Sec 12 SW1/4 NW 1/4 (1)
Description: Greenish-black diabase (1)
Remarks: Small quarry (1)
References: 1) Mark Jirsa. 1989, personal communication

Main commodity: Undifferentiated Granite
County: St. Louis
Status: Inactive (1)
Location: T 61 R 20 W Sec 9 SE1/4 (1)
Remarks: Ferweda General Contracting owns quarry (see Producer Directory) (1989) (1)
References: 1) Eugene Ferweda. 1989, personal communication

Main commodity: Undifferentiated Granite
County: Stearns
Status: Inactive
Location: T 123 R 30 W Sec 19 SE1/2 (1)
Geologic age: Archean
Geologic formation: Richmond Gneiss (1)
Description: Consists of a porphyritic mafic gneiss, "This rock has an equigranular, granoblastic texture characterized by large porphyroblasts of plagioclase that are as much as 10mm long. The porphyroblasts define a near-vertical foliation trending N. 50 deg. - 60 deg. E. Small lenticular inclusions of amphibolite define a lineation plunging 15 deg., S. 70 deg. E. The principle rock type is a dark gray to black phase which consists dominantly of hypersthene, calcic plagioclase, brown hornblende, and lesser amounts of quartz, garnet, opaque oxides and symplectic intergrowths of albite and microcline. The foliated texture and the presence of mineral assemblages containing hypersthene, garnet and symplectite suggests a rock of charnokitic

affinity metamorphosed to the granulite grade." (1)

Remarks: Group of abandoned quarries (1)

References: 1) Morey. 1976, p. 6

Main commodity: Undifferentiated Granite
County: Stearns
Status: Inactive
Location: T 123 R 30 W Sec 20 SW1/4 SW1/4 (2,3)
Location comments: See Ref. 1 for location directions
Geologic age: Archean
Geologic formation: Richmond Gneiss (1-3)
Description: "...vaguely foliated, dark-colored rock characterized by large porphyroblasts of K-feldspar and plagioclase set in a goundmass of plagioclase, quartz, hypersthene, hornblende, and biotite. Much of the unit is typified by dark reddish-gray zones concentrated along irregularly spaced joints or cataclastic zones, where the original rock has been oxidized and hydrated. Additionally the gneiss contains inclusions of biotite-hornblende schist, generally less than 20 centimeters long." (1)

Modal Analyses: quartz 14%, plagioclase 40%, microcline 32%, biotite 4%, hornblende 5%, orthopyroxene 4%, opaque oxides 1%, trace (apatite, zircon, chlorite, sericite, serpentine) (2); within the abandoned quarry a shear zone was noted (2); see Refs. 2 and 3 for further descriptions including modal analyses

References: 1) Morey. 1979, p. 37, 38
 2) Dacre. 1981
 3) Dacre and others. 1984, p. 3
 4) MGS. [1978-1979?]

Main commodity: Undifferentiated Granite
County: Stearns
Status: Inactive
Location: T 123 R 30 W Sec 29 NW1/4 NW1/4 (1,2)
Geologic age: Archean
Geologic formation: Richmond Gneiss (1-3)
Description: "The Richmond Gneiss is a vaguely foliated rock that is generally grayish to greenish black. Local areas that are dark reddish gray to pale red are believed, to result from hydration and oxidation. The gneiss is characterized by megacrysts of perthitic microcline and sodic plagioclase, some of which are as much as 5cm in length. The megacrysts are somewhat aligned and impart a near-vertical, east-northeast-trending foliation to the gneiss. The gneiss is also characterized by elongate lenses rich in mafic minerals that parallel the feldspar foliation." (1)
 "The microcline and plagioclase megacrysts occur in a medium-grained goundmass of

quartz, biotite, hornblende, and orthopyroxene. Accessory minerals include apatite, magnetite, ilmenite, and zircon; chlorite, sericite, and 'serpentine' are secondary minerals. Cordierite and garnet were reported in minor amounts..." (1); see Refs. 2 and 3 for further descriptions including modal analyses

- References:**
- 1) Dacre and others. 1984, p. 3, 4
 - 2) Dacre. 1981, p. 3, 9, 13
 - 3) Morey. 1979, p. 37, 38
 - 4) MGS. [1978-1979?]

Main commodity: Undifferentiated Granite
County: Stearns
Quarry/pit name: Drive-in Theater Quarry (1)
Status: Inactive
Location: T 124 R 28 W Sec 18 SE1/4 NE1/4 (1)
Description: Granite (1)
References: 1) MGS. [1978-1979?]

Main commodity: Undifferentiated Granite
County: Stearns
Quarry/pit name: Burlington Northern Railroad Quarry (1)
Status: Inactive
Location: T 124 R 28 W Sec 18 SW1/4 SE1/4 (1)
Description: Granite (1)
References: 1) MGS. [1978-1979?]

Main commodity: Undifferentiated Granite
County: Stearns
Status: Inactive
Location: T 124 R 28 W Sec 19 (1)
Location comments: Three quarries located 1000 feet SE of MN Hwy. 23 (1); (Ref. 1 states R 29, due to the location of Hwy. 23 this site is probably in R 28)

Description: "Typically the rock is coarse-grained, pink to red in color and contains white plagioclase (andesine-oligoclase), quartz and biotite. Identifiable accessory minerals include hornblende, pyroxene, magnetite and hematite....At least two kinds of felsic dikes are exposed at this locality....Two kinds of basalt dikes also have been recognized." (1)

- References:** 1) Morey. 1976, p. 8

Main commodity: Undifferentiated Granite
County: Stearns
Status: Inactive
Location: T 124 R 28 W Sec 19 SW1/4 NE1/4 (1)
Remarks: Small abandoned quarry (1)
References: 1) Hogberg; Matsch. 1966?, p. 5, 7

Main commodity: Undifferentiated Granite
County: Stearns
Status: Inactive
Location: T 124 R 28 W Sec 20 W1/2 (1)
Location comments: Near the center of the west line of section 20 (1)
Description: Red granite (1)
References: 1) Hanson. 1968, p. 20

Main commodity: Undifferentiated Granite
County: Stearns
Status: Inactive
Location: T 124 R 28 W Sec 20 NE1/4 SW1/4 (1)
Location comments: 1-1/2 miles south of the junction of Highways 23 and 52 in the SW part of St. Cloud(1)
Description: Red granite (1)
References: 1) Hanson. 1968, p. 20

Main commodity: Undifferentiated Granite
County: Stearns
Status: Inactive
Location: T 124 R 28 W Sec 20 NW1/4 NW1/4 (1)
Description: Granite (1)
References: 1) MGS. [1978-1979?]

Main commodity: Undifferentiated Granite
County: Stearns
Status: Inactive
Location: T 124 R 28 W Sec 29 SW1/4 NE1/4 (1)
Location comments: Near center of section 29 (1)
Description: Granite (1)
References: 1) MGS. [1978-1979?]

Main commodity: Undifferentiated Granite
County: Stearns
Status: Inactive
Location: T 124 R 29 W
Location comments: 4-1/2 miles east of Rockville and immediately north of Hwy. 23 (1); (T., R. locations determined from county highway map)
Geologic age: Early Proterozoic
Geologic formation: Rockville Granite (1)
Description: Rockville porphyritic granite (1)
References: 1) Hanson. 1968, p. 20

Main commodity: Undifferentiated Granite
County: Stearns
Status: Inactive
Location: T 124 R 29 W Sec 24 E1/2 SE1/4 (1)

References: 1) MGS. [1978-1979?]

Main commodity: Undifferentiated Granite

County: Stearns

Status: Inactive

Location: T 124 R 29 W Sec 26 NE1/4 (1)

Location comments: SW of St. Cloud (1)

Description: Porphyritic quartz monzonite (1)

References: 1) Keighin and others. 1982, p. 255

Main commodity: Undifferentiated Granite

County: Stearns

Quarry/pit name: Crystal Gray Quarry (2)

Status: Inactive

Location: T 124 R 29 W Sec 27 NE1/4 (2-3)

Location comments: See Ref. 1 for location directions; small quarry on the west side of the road (1); (Refs. 1-3 may possibly be describing more than one quarry within the NE1/4)

Geologic age: Early Proterozoic

Geologic formation: St. Cloud Granite (1)

Description: "...dusky-red, medium- to coarse-grained, vaguely porphyritic rocks typical of the St. Cloud Granite (Middle Precambrian) south and southwest of the cities of St. Cloud and Waite Park. In general this rock type contains 24-38 percent sodic plagioclase, 20-34 percent K-feldspar (dominantly microcline), 24-25 percent quartz, 23-26 percent hornblende, 3-11 percent biotite and 5-12 percent augite. A vaguely porphyritic texture is imparted by 1- to 2-millimeter grains of plagioclase and somewhat larger grains of perthitic microcline." (1)

"Numerous blocky inclusions of the Reformatory Granite are present at this locality. Pegmatitic and aplitic phases of the St. Cloud Granite occur as rims that partially surround the inclusions and as apophyses that cut them. Also present are small inclusions of biotitic material and younger dikes of basalt porphyry." (1)

Quartz-bearing monzonite, porphyritic with phenocrysts up to 2.54 cm (2)

"Color—pinkish gray. Texture—granitoid, seriate; phenocrysts 1-2 cm long, grains of groundmass 1-5 mm long. Essential minerals—30 per cent orthoclase and microcline in 1-2 cm pinkish-gray crystals and fine pink interstitial grains, 30 per cent greenish-gray andesine-oligoclase in 1 cm crystals and fine interstitial grains, 30 per cent bluish opalescent quartz in grains 5 mm and smaller, 10 per cent biotite in flakes 5 mm and smaller. Accessory minerals—albite, hornblende, apatite, hyacinth and normal zircon, magnetite." (3)

References: 1) Morey. 1979, p. 35
2) Johnson. 1978, p. 20, 220
3) Woyski. 1949, p. 1008, 1009

Main commodity: Undifferentiated Granite

County: Stearns

Quarry/pit name: Crystal Gray Quarry (1)

Date opened: 1951 (1)

Status: Inactive

Location: T 124 R 29 W Sec 27 SE1/4 (1)

Location comments: Just east of the Sauk River (1)

Description: "The quarry exposes a porphyritic quartz monzonite much like that observed in the Rockville quarry. The rock is a distinctly purplish to greenish-gray facies of the St. Cloud red granite (Skillman, 1949). Alteration is strong along fractures as shown by the presence of pyrite, chlorite and oxidized feldspar." (1)

"As at Rockville, the potash feldspar phenocrysts are perthitic. The medium-grained groundmass consists of opalescent quartz, plagioclase (andesine to oligoclase) and biotite. Some of the larger plagioclase grains contain small grains of biotite and are rimmed by orthoclase, atesting to a complex crystallization history." (1)

"A basalt dike, about 5 feet wide, is present in the quarry and the bedrock is overlain by about 10 feet of kaolinide-rich residuum presumably formed during a period of intense weathering before or during Cretaceous time." (1)

References: 1) Morey. 1976, p. 7, 8

Main commodity: Undifferentiated Granite

County: Stearns

Status: Inactive

Past operator/owner: Atwood (2)

Location: T 125 R 29 W Sec 12 SE1/4 SE1/4 (3,5)

Location comments: See Ref. 1 for location directions; see Ref. 2, plate 1 for location map

Geologic age: Archean

Geologic formation: St. Wendel Metagabbro (1)

Description: "...a dark greenish-gray to greenish-black, plagioclase-clinopyroxene gneiss characterized by grains as much as 8 millimeters in diameter. Plagioclase occurs as large, relatively fresh to slightly sericitized, euhedral grains of generally labradoritic composition. In contrast the clinopyroxene occurs interstitially to the plagioclase as small subhedral to anhedral grains that are generally altered along cleavage planes to hornblende and opaque oxides. Commonly the clinopyroxene and its alteration products are poikilitically enclosed in somewhat larger grains of strongly pleochroic biotite. Minor amounts of quartz occur as small, irregularly shaped interstitial grains, and trace

amounts of chlorite replace both the biotite and the clinopyroxene." (1)

"Jointing planes are very irregular and the rock is greatly decomposed to a depth of 4 to 5 feet. The upper part of the ridge includes masses of decayed porphyritic and schistose rocks." (2)

Modal Analyses: quartz 18%, plagioclase 48%, K-feldspar 7%, biotite 16%, hornblende 1%, orthopyroxene 5%, augite 5%, opaque oxides 1%, trace (apatite, zircon, chlorite, sericite, serpentine) (3); for further description and modal analyses see Ref. 3

Remarks: "The rock is dark green in color and takes a good polish" (2)

References: 1) Morey. 1979, p. 34
2) Bowles. 1918, p. 116, 117
3) Dacre. 1981, p. 3, 31-35, 106
4) Morey. 1976, p. 5
5) Dacre and others. 1984, p. 11, 12
6) MGS. [1978-1979?]

Main commodity: Undifferentiated Granite
County: Yellow Medicine
Quarry/pit name: Larson Quarry (1,2)
Status: Inactive
USGS quadrangle: School Grove Lake
Location: T 113 R 39 W Sec 29 SW1/4 NW1/4 (2)
Location comments: 8 miles west and 3 miles south of Echo (1)
Description: Red medium grained granite, "...apparently the rock has been granulated and recrystallized with the development of a mortar structure in which finely granular quartz and feldspar surround the larger grains as well as fill fractures. The biotite is fresh, with only minor alteration to chlorite." (1)

"The granite has undergone metamorphism which involved shearing and granulation and some recrystallization." (1)

Modal Analyses: potash feldspar 36%, plagioclase 28%, quartz 32%, biotite 2%, accessories (magnetite, apatite, zircon, calcite, hematite) 2%. (1); see Ref. 1 for additional lithologic description
References: 1) Goldich and others. 1961, p. 130, 131, 179
2) MGS. [1978-1979?]

Main commodity: Undifferentiated Granite
County: Yellow Medicine
Status: Inactive
Location: T 114 R 38 W Sec 12 SE1/4 NE1/4 (1)
Location comments: See Ref. 1, fig. 50 for location map
Geologic age: Archean
Geologic formation: (Sacred Heart Granite)
References: 1) Thiel; Dutton. 1935, p. 95

Main commodity: Undifferentiated Granite
County: Yellow Medicine
Status: Inactive
Location: T 114 R 38 W Sec 12 S1/2 SE1/4 (1)
Location comments: See Ref. 1, fig. 50 for location map
Geologic age: Archean
Geologic formation: (Sacred Heart Granite)
References: 1) Thiel; Dutton. 1935, p. 95

Main commodity: Undifferentiated Granite
County: Yellow Medicine
Status: Inactive
Location: T 114 R 38 W Sec 13 NE1/4 (1,2)
Location comments: Center of NE 1/4 (1,2); see Ref. 1, fig. 29 and Ref. 2, plate 7 for location maps; two quarries shown at this location (1,2)
Geologic age: Archean
Geologic formation: Sacred Heart Granite (1,2)
References: 1) Goldich and others. 1961, p. 128
2) Lund. 1950, plate 7

Main commodity: Undifferentiated Granite
County: Yellow Medicine
Status: Inactive
Location: T 114 R 38 W Sec 13 W1/2 NE1/4 NE1/4 (1,2)
Location comments: See Ref. 1, fig. 29 and Ref. 2, plate 7 for location maps; two quarries shown at this location (1,2)
Geologic age: Archean
Geologic formation: Sacred Heart Granite (1,2)
References: 1) Goldich and others. 1961, p. 128
2) Lund. 1950, plate 7

Main commodity: Undifferentiated Granite
County: Yellow Medicine
Status: Inactive
Location: T 114 R 38 W Sec 13 NE1/4 NE1/4 NE1/4 (1,2)
Location comments: See Ref. 1, fig. 29 and Ref. 2, plate 7 for location maps; two quarries shown at this location (1,2)
Geologic age: Archean
Geologic formation: Sacred Heart Granite (1,2)
References: 1) Goldich and others. 1961, p. 128
2) Lund. 1950, plate 7

Main commodity: Undifferentiated Granite
County: Yellow Medicine
Status: Inactive
Location: T 115 R 39 W Sec 4 (1,2)
Location comments: 1/2 mile south of Granite Falls (1)

Description: Garnetiferous gabbro (1,2)
Remarks: Not suitable for structural purposes (1)
References: 1) Bowles. 1918, p. 71
 2) Thiel; Dutton. 1935, p. 101

Main commodity: Undifferentiated Granite
County: Yellow Medicine
Status: Inactive
Location: T 116 R 39 W Sec 29 SE1/4 SE1/4 (1)
Location comments: See Ref. 1, plate 1 for location map
Description: Granitic gneiss (1)
References: 1) Bauer. 1974, plate 1

Main commodity: Undifferentiated Granite
County: Yellow Medicine

Date opened: 1897 (2)
Status: Inactive
Past operator/owner: Granite Falls Stone Co. (1,2)
Location: T 116 R 39 W Sec 32 (1,2)

Location comments: On the steep face of a 50 to 60 ft bluff overlooking the marshlands northeast of the Minnesota River (1,2); (Ref. 1, p. 101 states R 32 which appears to be a typographical error)

Description: "The rock is a dark biotite gneiss. The gneissic texture is very marked, and the planes of schistosity or easy splitting, though in a few places from 1 to 3 ft apart, are commonly so closely spaced that the rock is useless. Firm rock, suitable for ordinary foundation work, may be obtained from the back part of the quarry."(1)

References: 1) Thiel; Dutton. 1935, p. 99, 101
 2) Bowles. 1918, p. 71

Main commodity: Crushed Greenstone
County: St. Louis
Status: Inactive
Past operator/owner: Ulland Bros. Construction Inc. (1)
Location: T 59 R 17 W
Location comments: Just north of Virginia (1); (possibly in R. 18; T., R. locations determined from county highway map)
Geologic age: Archean
Geologic formation: Ely Greenstone (1)
Physical test data: Available from MN/DOT Aggregate Unit
Uses of commodity: Crushed rock for bituminous surfacing (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Greenstone
County: St. Louis
Date opened: Early 1920's (2,4,5)
Status: Inactive

Past operator/owner: B. F. Nelson Co. (1); Emeraldite Rock Products Co. (5); Emeraldite Surfacing Products Co. (2,6)
Location: T 63 R 12 W Sec 31 (1)
 T 63 R 13 W Sec 36 NE1/4 SE1/4 (3)
Location comments: 3 miles SW of Ely (2,7); 5 miles SW of Ely (5); near U.S. Highway 169 (4)
Geologic age: Archean
Geologic formation: Ely Greenstone (4,5,7)
Description: Massive grayish-green basalt (1); porphyritic variety of greenstone (2,6)
Physical test data: Specific gravity: 2.77, 2.80 (7)
Extraction method: Blasted (1)
Uses of commodity: Granules for roofing paper (1,2,4-6)
References: 1) Thiel; Dutton. 1935, p. 111
 2) Grout. 1926, p. 69, 82
 3) USGS. 1965, Shagawa Lake quadrangle
 4) Ojakangas; Matsch. 1982, p. 153
 5) Emmons; Grout. 1943, p. 79
 6) Martin. 1985, p. 188
 7) Bleifuss. 1952, p. xi, xix

Main commodity: Crushed Quartzite
County: Cottonwood
Quarry/pit name: Hallet-Jeffers Quarry (2)
Status: Inactive
Past operator/owner: Hallet (Hallett) Construction Co. (1-3)
MN/DOT source no: 17001
Location: T 107 R 35 W Sec 8 SE1/4 (2)
Location comments: Near Jeffers, just west of junction of Hwy. 71 and Hwy. 30 (1)
Geologic age: Middle Proterozoic
Geologic formation: Sioux Quartzite (2)
Description: Medium grained red quartzite (2)
Physical test data: Available from U.S. Army Corps of Engineers (2) and MN/DOT Aggregate Unit - COPES file (4)
References: 1) MN/DOT Mankato District. 1989, personal communication
 2) U.S. Army Corps of Engineers files
 3) Hogberg. 1966, p. 4
 4) MN/DOT Aggregate Unit files

Main commodity: Crushed Quartzite
County: Freeborn
Status: Inactive
Past operator/owner: Olson (1)
MN/DOT source no: 24020
Location: T 101 R 20 W Sec 6 (1)
Location comments: Glenville (1)
Description: Quartzite (1)
Physical test data: Available from MN/DOT Aggregate Unit - COPES file (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Quartzite
Other commodities: Dimension Quartzite
County: Nicollet
Status: Inactive
Past operator/owner: Minnesota Flint Rock Co. Quarries (1)
Location: T 110 R 30 W
Location comments: Near Courtland (1); (T., R. locations determined from county highway map)
Geologic age: Middle Proterozoic
Geologic formation: Sioux Quartzite (2)
Description: Quartzite (1,2)
Uses of commodity: Crushed for concrete and road construction, a small amount of building stone and riprap is obtained as a by-product (1918) (1)
References: 1) Bowles. 1918, p. 202
 2) Austin and others. 1970

Main commodity: Crushed Quartzite

County: Pipestone
Quarry/pit name: Scarlet Stone Quarry (1)
Status: Inactive
USGS quadrangle: Pipestone North
Location: T 106 R 46 W Sec 12 N1/2 (3)
Location comments: Just north of the town of Pipestone (1); (exact location undetermined, quarry may possibly be in the S1/2 of section 1; T., R., Sec. locations determined from Pipestone North quadrangle)
Description: "...a poorly cemented quartzite of maroon color....The ledges as quarried are from 6 to 8 inches thick, but where exposed for some time these have again separated into layers averaging 2 inches thick. In general the rock is medium grained, but there are long thin lenses composed of coarse grains....there are numerous intersecting joints (N. 40 deg. E. and N. 55 deg. W.)....The rock is leached to a buff color along the joints..." (1)
Extraction method: Sledge hammers and crowbars (1)
Uses of commodity: Roofing granules (1)
References: 1) Thiel; Dutton. 1935, p. 148
 2) Austin and others. 1970
 3) USGS. 1967, Pipestone North quadrangle

Main commodity: Crushed Quartzite
Other commodities: Dimension Quartzite
County: Pipestone
Quarry/pit name: Nason Co. Quarry (1)
Status: Inactive; active 1912-? (1)
Past operator/owner: L. Moore leased to O. P. Nason Co. (1918) (1)
USGS quadrangle: Pipestone North
Location: T 106 R 46 W Sec 12 N1/2 (3)
Location comments: About half a mile north of Pipestone (1); (exact location undetermined, quarry may possibly be in the S1/2 of section 1; T., R., Sec. locations determined from Pipestone North quadrangle)
Geologic age: Middle Proterozoic
Geologic formation: Sioux Quartzite (2)
Uses of commodity: Crushed for roofing granules, building stone (1)
References: 1) Bowles. 1918, p. 203
 2) Austin and others. 1970
 3) USGS. 1967, Pipestone North quadrangle

Main commodity: Crushed Quartzite
County: Rock
Status: Inactive since 1928 (1)
Past operator/owner: Minnesota Quartzite Co. (1)
Location: T 104 R 46 W
Location comments: About a mile east of Jasper (1); (T., R. locations determined from county highway map)
Geologic age: Middle Proterozoic
Geologic formation: Sioux Quartzite (2)
References: 1) Thiel; Dutton. 1935, p. 149

Main commodity: Crushed Quartzite
County: St. Louis
Quarry/pit name: Pool Location Quarry (1)
Status: Inactive
USGS quadrangle: Hibbing
Location: T 58 R 21 W Sec 25 SW1/4 SW1/4 (3)
Location comments: 2 1/2 miles north of Hibbing (1)
Geologic age: Early Proterozoic
Geologic formation: Pokegama Quartzite (1,2,4)
Description: "Orthoquartzite, medium to coarse grained, grey to pink, massive, solidly quartz cemented.

Upper contact not observable. Some grey zones are slightly silty and pyritiferous. The lower several feet of this section is finer grained, shows a bedding, and contains some silt and muscovite." (1); see Ref. 1 for lithologic section description

Uses of commodity: Street construction (2)

References:

- 1) Dolence. 1961, p. 43, 44
- 2) Bowles. 1918, p. 205
- 3) USGS. 1957, Hibbing quadrangle
- 4) Grout and others. 1951, p. 1044
- 5) Thiel; Schwartz. 1932, p. 26

Main commodity: Dimension Quartzite
Other commodities: Crushed Quartzite
County: Aitkin
Status: Inactive
Past operator/owner: H. B. Ayers (1)
Location: T 47 R 25 W Sec 14 (1)
Location comments: Near Kimberly (1)
Description: Quartzite (1)
Uses of commodity: "Local building purposes and roads." (1)
Marketing area: Local (1)
References: 1) Cooley. 1911, p. 15

Main commodity: Dimension Quartzite
County: Cottonwood
Status: Inactive
Past operator/owner: P. Schmith (1884) (1)
Township name: Dale
Location: T 106 R 36 W Sec 6 W1/2 SW1/4 (1)
Location comments: "...on a westward slope, about a mile east from the east end of Lake Augusta." (1)

Geologic age: Middle Proterozoic
Geologic formation: Potsdam Quartzite (1); Sioux Quartzite (2)
Description: "The stone varies in color from yellowish gray to a dull red, is much jointed, and has a dip at the quarry of about five degrees northeast. Laminae of pipestone from a fourth to a third of an inch thick, deep red, traversed by whitish veins, in their predominant red color and soft slaty texture closely like the pipestone of Pipestone quarry, were noted here upon the surface about fifteen feet east of the quarried excavations, occurring at bedding planes along an extent of about two rods. Here, also, fragments of this deep red pipestone, up to one or two inches in diameter, are enclosed in the quartzite, which is mostly of a more grayish red color." (1)

Remarks: Slightly quarried (1)
References: 1) Winchell and others. 1884, p. 502, 513
 2) Thiel; Dutton. 1935, p. 151

Main commodity: Dimension Quartzite
County: Cottonwood
Status: Inactive
Location: T 107 R 34 W (1)
Location comments: "...on a branch of the Watonwan Creek..." (1)
Geologic age: Middle Proterozoic
Geologic formation: Potsdam (1); Sioux Quartzite (2)
Description: Red quartzite (1)
Remarks: Ref. 1 (1873) states, site is about to be quarried
References: 1) Winchell. 1873, p. 75
 2) Austin and others. 1970

Main commodity: Dimension Quartzite
County: Cottonwood
Status: Inactive
Township name: Selma
Location: T 107 R 34 W Sec 23 SE1/4 (1)
Location comments: "...this rock outcrops on a southward slope...and a height of only one to two feet." (1)
Geologic age: Middle Proterozoic
Geologic formation: Potsdam Quartzite (1); Sioux Quartzite (2)
Description: "...very hard quartzite, intersected by systems of joints which give it a rhomboidal fracture." (1)
Uses of commodity: "Owing to the very hard and gritty nature of this rock and its tendency to rhomboidal fracture, it supplies only rough blocks, seldom of large dimensions, yet quite suitable for common foundations and walls, and for the masonry of culverts and small bridges." (1)
Remarks: Slightly quarried (1)
References: 1) Winchell and others. 1884, p. 500, 513
 2) Austin and others. 1970

Main commodity: Dimension Quartzite
County: Cottonwood
Status: Inactive
Township name: Selma
Location: T 107 R 34 W Sec 25 NE1/4 (1)
Location comments: "... this red quartzite is exposed upon an eastward slope of till,...rising some two feet above the general surface." (1)
Geologic age: Middle Proterozoic
Geologic formation: Potsdam Quartzite (1); Sioux Quartzite (2)
Description: Red quartzite, "...very hard quartzite, intersected by systems of joints which give it a rhomboidal fracture." (1)
Uses of commodity: "Owing to the very hard and gritty nature of this rock and its tendency to rhomboidal fracture, it supplies only rough blocks, seldom of large dimensions, yet quite suitable for common foundations and walls, and for the masonry of culverts and small bridges." (1)
Remarks: Slightly quarried (1)
References: 1) Winchell and others. 1884, p. 500, 513
 2) Austin and others. 1970

Main commodity: Dimension Quartzite
County: Cottonwood
Status: Inactive
Township name: Delton
Location: T 107 R 35 W Sec 8 E1/2 SE1/4 (1)
Location comments: Much has been quarried in the banks and channel of the Cottonwood River, some twenty rods east of the Little Cottonwood Falls (1)
Geologic age: Middle Proterozoic
Geologic formation: Potsdam Quartzite (1); Sioux Quartzite (2)

Description: "It occurs in layers of all thicknesses up to two and a half feet, the thinly bedded portions, as usually, being much divided by joints into rhomboidal fragments a foot or less in length. The bedding planes are often ripple-marked over several square rods together, in parallel undulations about a quarter of an inch high and two to four inches apart from crest to crest. The dip is about 5 deg. S. 20 deg. W." (1)

Uses of commodity: Rough stone used for foundations, cellar walls, well curbing, culverts, chimneys (1)

References: 1) Winchell and others. 1884, p. 500, 513
2) Thiel; Dutton. 1935, p. 151

Main commodity: Dimension Quartzite
County: Cottonwood
Status: Inactive
Location: T 108 R 37 W (1)
Location comments: "...on Dutch Charley's Creek..." (1)
Geologic age: Middle Proterozoic
Geologic formation: Potsdam (1); Sioux Quartzite (2)
Description: Red quartzite (1)
References: 1) Winchell. 1873, p. 75
2) Austin and others. 1970

Main commodity: Dimension Quartzite
County: Nicollet
Status: Inactive
Past operator/owner: Various quarry owners (late 1800's): G. Arndt (1); F. Meierding (1) or Meyerding (2); Wm. Winkelmann (1,2); J. Reinhart (1,2); F. Baasen (1,2)
Township name: Courtland
Location: T 110 R 30 W
Location comments: Various quarries 2-3 miles below New Ulm. Quarries owned by Baasen are located about 30 rods southeast from the railroad bridge; Winkelmann's quarry is located a few rods further east; Meierding's quarry a little farther east. Arndt's quarry is 1/5 of a mile northeast of Meierding's and Reinharts quarry is just east of Arndts. (1888) (1); Near Redstone (3,4); (T., R. locations determined from county highway map)
Geologic age: Middle Proterozoic
Geologic formation: Sioux Quartzite (2)
References: 1) Winchell; Upham. 1888, p. 176
2) Austin and others. 1970
3) Winchell; Peckham. 1874, p. 209
4) Winchell. 1873, p. 75

Main commodity: Dimension Quartzite
County: Nicollet
Status: Inactive
Township name: Courtland

Location: T 110 R 30 W Sec 27 W1/2 (1)
Location comments: Across the river from New Ulm (1)
Geologic age: Middle Proterozoic
Geologic formation: Sioux Quartzite (2)
Description: "... a jasper conglomerate, some of which has been quarried, outcrops in a ridge about 1,000 feet long with strike N. 20 deg. E. and dip 18 deg. S. 60 deg. E. The pebbles, which are of all sizes up to a foot in diameter, are well rounded by water action, and are cemented firmly together with a quartz cement, forming a firm, indurated rock. Both pebbles and cement being largely of silica, the rock is more uniform in hardness than most conglomerates." (1)
Remarks: "It is possible that decorative rock of good quality could be obtained from this ridge." (1918) (1)
References: 1) Bowles. 1918, p. 29, 202, 203
2) Austin and others. 1970

Main commodity: Dimension Quartzite
Other commodities: Crushed Quartzite
County: Pipestone
Quarry/pit name: Jasper Cooperative Stone Co. Quarry (1)
Date opened: 1890
Status: Inactive
Past operator/owner: Jasper Cooperative Stone Co. (1918) (1); leased by Andrew Roy (1918) (1)
Location: T 105 R 46 W
Location comments: "...opened half a mile from Jasper..." (1); (T., R. locations determined from county highway map; quarry possibly in T. 104, R. 46 in Rock Co.)
Geologic age: Middle Proterozoic
Geologic formation: Sioux Quartzite (2)
Description: "The rock is a highly indurated pale-pink quartzite, which in thin section is seen to be made up almost entirely of quartz, with very little iron stain and calcite cement. The most notable feature is the secondary enlargement of quartz grains—that is, the cementation of the original sand grains by the deposition of quartz in the intergranular spaces. Such cementation results in the formation of a very hard rock, and microscopic examination indicates that the 'Jasper' stone is more difficult to cut than the deep-red rock from Pipestone, in which secondary enlargement of the quartz is not apparent and iron oxide forms much of the cementing material." (1)

"Bedding planes are 6 inches to 2 feet apart and dip generally less than 5 deg. approximately southeast. Major joints strike about N. 20 deg. W. but curve and become irregular in places. Some are open and some filled with clay. Secondary joints at right angles to the major joints are not so prominent. They are spaced several feet apart. Quarry

conditions are good, the overburden being 1 to 4 feet of soil and the quarry of bench type." (1)

Uses of commodity: Paving stones, building blocks, rubble, crushed stone (1)

References: 1) Bowles. 1918, p. 203, 204
2) Austin and others. 1970

Main commodity: Dimension Quartzite

County: Pipestone

Status: Inactive

Past operator/owner: C. H. Bennett leased quarry to J. A. Phelps (1884) (1)

Location: T 106 R 46 W Sec 1 (1)

Location comments: Near Pipestone City, quarried at the base of the "three maidens" (1); Bennett owned another quarry a 1/4 mile to the southeast (1); see Ref. 1, plate 23 and 24 for location map

Geologic age: Middle Proterozoic

Geologic formation: Sioux Quartzite (2)

Description: (The quarry) "... at the base of the 'three maidens', supplying a dark red stone similar in color to the red pipestone, the other (quarry) a quarter of a mile southeast from that point where the stone is reddish-gray, being at each place very hard, strong and durable quartzite." (1)

References: 1) Winchell and others. 1884, p. 554

Main commodity: Dimension Quartzite

County: Rock

Date opened: 1875 (1)

Status: Inactive

Past operator/owner: Shoemaker and Kelly (1)

Township name: Mound

Location: T 103 R 45 W Sec 25 NW1/4 (1)

Location comments: (Quarry located) "...some thirty rods east of the highest part of the mound..." (1)

Geologic age: Middle Proterozoic

Geologic formation: Sioux Quartzite (2)

Description: Red quartzite, "The rock lies in layers from six inches to two feet thick. The outside is usually the hardest." (1)

Uses of commodity: Mill stones (1)

References: 1) Winchell and others. 1884, p. 554, 555
2) Austin and others. 1970

Main commodity: Dimension Quartzite

County: Rock

Status: Inactive

Past operator/owner: Larry McDermott (1884) (1)

Township name: Mound

Location: T 103 R 45 W Sec 25 SW1/4 (1)

Geologic age: Middle Proterozoic

Geologic formation: Sioux Quartzite (2)

References: 1) Winchell and others. 1884, p. 554, 555
2) Austin and others. 1970

Main commodity: Dimension Quartzite

County: Rock

Status: Inactive

Past operator/owner: Hinkley (1,2)

Location: T 103 R 45 W Sec 27 (1)

Location comments: Near Luverne (1)

Geologic age: Middle Proterozoic

Geologic formation: Sioux Quartzite (3)

Description: "Red jasper" (quartzite) (1)

Uses of commodity: "General purposes, paving, macadam, etc." (1)

References: 1) Cooley. 1911, p. 14
2) Bowles. 1918, p. 205
3) Austin and others. 1970

Main commodity: Dimension Quartzite

County: Rock

Quarry/pit name: Staples Quarry (1)

Status: Inactive

Past operator/owner: H. W. Staples (1)

Location: T 104 R 46 W

Location comments: About 2 miles south of Jasper (1); (T., R. locations determined from county highway map)

Geologic age: Middle Proterozoic

Geologic formation: Sioux Quartzite (2)

Description: Pale-pink quartzite (1)

Uses of commodity: Paving stone (1)

References: 1) Bowles. 1918, p. 205
2) Austin and others. 1970

Main commodity: Dimension Quartzite

Other commodities: Abrasive Quartzite

County: Rock

Status: Inactive

Past operator/owner: Jasper Silica Products Co. and Sandberg Quartzite Co. (1)

Location: T 104 R 46 W

Location comments: "Two small openings...are present 2 miles south of Jasper." (1); (T., R. locations determined from county highway map)

Geologic age: Middle Proterozoic

Geologic formation: Sioux Quartzite (2)

Uses of commodity: Lining blocks, ball mill "cubes" (1)

References: 1) Thiel; Dutton. 1935, p. 149

Main commodity: Dimension Quartzite
Other commodities: Crushed Quartzite
County: Rock
Status: Inactive
Past operator/owner: E. W. Davies (1)
Location: T 104 R 46 W Sec 6 (1)
Location comments: Near Jasper (1); (Ref. 1 stated quarry to be in Pipestone Co., but the T., R., Sec. as given is actually in Rock Co.)

Geologic age: Middle Proterozoic
Geologic formation: Sioux Quartzite (2)
Physical test data: Crushing strength 23,000 psi (1)
Uses of commodity: Buildings, road purposes, bridges, concrete work, paving (1)
References:
1) Cooley. 1911, p. 14
2) Austin and others. 1970

Main commodity: Undifferentiated Quartzite
County: Nicollet
Status: Inactive
USGS quadrangle: New Ulm
Location: T 109 R 30 W Sec 2 NE1/4 NW1/4 (1,2)
Location comments: Near New Ulm (1,2); see Refs. 1, plate 2 and Ref. 2, fig. 6 for location maps
Geologic age: Middle Proterozoic
Geologic formation: Sioux Quartzite (1,2)
Description: Quartzite (1,2); two mudstone beds approximately eight feet apart stratigraphically are exposed in the north wall of the quarry (Ref. 1, fig. 26 and 27), "These beds strike north 80 deg. west and dip 15 deg. north." (1); see Ref. 1 for further lithologic description
References: 1) Miller. 1961, p. 45, 46
 2) Baldwin. 1951, fig. 6

Main commodity: Undifferentiated Quartzite
County: Pipestone
Status: Inactive (1,2)
Location: T 105 R 46 W Sec 21 SE1/4 (1)
Location comments: (Near Jasper); two quarries within the SE1/4 (1)
Geologic age: Middle Proterozoic
Geologic formation: Sioux Quartzite (3)
References: 1) Facile, R. 1989, personal communication
 2) Jasper Stone Co. 1989, personal communication
 3) Austin and others. 1970

Main commodity: Undifferentiated Quartzite
County: Pipestone
Quarry/pit name: North Sioux Falls Quarry (2)
Status: Inactive (1,2)
Location: T 105 R 46 W Sec 27 NW1/4 (1)
Location comments: (Near Jasper); one large quarry and several small quarry pits at this location (1)
Geologic age: Middle Proterozoic
Geologic formation: Sioux Quartzite (3)
References: 1) Burke, T. 1989, personal communication
 2) Jasper Stone Co. 1989, personal communication
 3) Austin and others. 1970

Main commodity: Undifferentiated Quartzite
County: Pipestone
Status: Inactive (1)
Location: T 105 R 46 W Sec 28 NE1/4 NE1/4 (1)
Location comments: (Near Jasper)
Geologic age: Middle Proterozoic
Geologic formation: Sioux Quartzite (2)

References: 1) Jasper Stone Co. 1989, personal communication
 2) Austin and others. 1970

Main commodity: Undifferentiated Quartzite
County: Pipestone
Status: Inactive (1)
Location: T 105 R 46 W Sec 33 N1/2 (1)
Location comments: (Near Jasper)
Geologic age: Middle Proterozoic
Geologic formation: Sioux Quartzite (2)
References: 1) Jasper Stone Co. 1989, personal communication
 2) Austin and others. 1970

Main commodity: Undifferentiated Quartzite
County: Pipestone
Status: Inactive
USGS quadrangle: Jasper
Location: T 105 R 46 W Sec 33 NW1/4 SE1/4 (1)
Location comments: Near center of section 33 (1)
Geologic age: Middle Proterozoic
Geologic formation: Sioux Quartzite (2)
References: 1) USGS. 1967, Jasper quadrangle
 2) Austin and others. 1970

Main commodity: Undifferentiated Quartzite
County: Pipestone
Quarry/pit name: The Pipestone Quarry (2)
Status: Inactive
USGS quadrangle: Pipestone North
Location: T 106 R 46 W Sec 1 (3)
Location comments: About 1/2 mile north of the city of Pipestone, 700 to 800 feet east of the catlinite (pipestone) quarry (1)
Geologic age: Middle Proterozoic
Geologic formation: Potsdam (1); Sioux Quartzite (1)
Physical test data: See Ref. 2, p. 196-199 for detailed test data
References: 1) Berg. 1938, p. 259
 2) Winchell and others. 1884, p. 196-199
 3) USGS. 1967, Pipestone North quadrangle

Main commodity: Undifferentiated Quartzite
County: Pipestone
Status: Inactive
Past operator/owner: Elmer Johnson (1921) (1)
Location: T 107 R 46 W Sec 36 SW1/4 (1)
Remarks: (Rock type determined from Ref. 2 Geologic Map of Minnesota)
References: 1) MN/DOT Aggregate Unit files (1921)
 2) Morey. 1976b

Main commodity: Undifferentiated Quartzite
County: Rock
Status: Inactive
Location: T 103 R 45 W Sec 24 S1/2 (1)
Location comments: In Blue Mounds State Park, small quarries along ridge in section 24 (1)
Geologic age: Middle Proterozoic
Geologic formation: Sioux Quartzite (2)
References: 1) Blue Mounds State Park. 1989, personal communication
 2) Austin and others. 1970

Main commodity: Undifferentiated Quartzite
County: Rock
Status: Inactive
Location: T 103 R 45 W Sec 25 SW1/4 (1)
Location comments: Quarry at Blue Mounds State Park, large quarry in section 25 (1)

Geologic age: Middle Proterozoic
Geologic formation: Sioux Quartzite (2)
References: 1) Blue Mounds State Park. 1989, personal communication
 2) Austin and others. 1970

Main commodity: Undifferentiated Quartzite
County: Rock
Status: Inactive
Location: T 103 R 45 W Sec 26 SE1/4 (1)
Location comments: Blue Mounds State Park, 2 quarries in section 26 (1)
Geologic age: Middle Proterozoic
Geologic formation: Sioux Quartzite (2)
References: 1) Blue Mounds State Park. 1989, personal communication
 2) Austin and others. 1970

Main commodity: Abrasive Sandstone
County: Pine
Status: Inactive
Location: T 42 R 20 W Sec 17 W1/2 (1)
Geologic age: Middle Proterozoic
Geologic formation: Hinkley Sandstone (2)

Description: Hard, fine-grained sandstone (1)
Uses of commodity: Grindstones (1)
Remarks: "...quarried several years ago to test its value as a grindstone." (1884) (1)
References: 1) Upham. 1884, p. 126, 127
2) Morey and others. 1981

Main commodity: Crushed Sandstone
County: Fillmore
Status: Inactive
Past operator/owner: C. C. Temple (1884) (1)
Township name: Bloomfield
Location: T 102 R 13 W Sec 8 SE1/4 (1)
Geologic age: Cretaceous
Description: Sandstone (1)
Uses of commodity: Mortar sand (1)
References: 1) Winchell and others. 1884, p. 309, 324

Main commodity: Crushed Sandstone
County: Fillmore
Status: Inactive
Past operator/owner: A. McNee (1884) (1)
Location: T 102 R 13 W Sec 22 NW1/4 (1)
Geologic age: Cretaceous
Description: Sandstone (1)
Uses of commodity: Mortar sand (1)
References: 1) Winchell and others. 1884, p. 309, 324

Main commodity: Crushed Sandstone
County: Fillmore
Status: Inactive
Past operator/owner: J. M. Rexford (1884) (1)
Township name: Bloomfield
Location: T 102 R 13 W Sec 36 NE1/4 (1)
Geologic age: Cretaceous
Description: Sandstone (1)
Uses of commodity: Mortar sand (1)
References: 1) Winchell and others. 1884, p. 309, 324

Main commodity: Crushed Sandstone
County: Fillmore
Status: Inactive
Township name: Spring Valley
Location: T 103 R 13 W Sec 17 (1)
Geologic age: Cretaceous
Description: Sandstone (1)
Uses of commodity: Mortar sand (1)
References: 1) Winchell and others. 1884, p. 309, 324

Main commodity: Crushed Sandstone
County: Goodhue
Status: Inactive
Township name: Goodhue
Location: T 111 R 15 W Sec 23 SW1/4 (1)

Geologic age: Ordovician
Geologic formation: St. Peter Sandstone (1)
Description: Sandstone (1)
Uses of commodity: Mortar sand (1)
References: 1) Winchell and others. 1884, p. 54

Main commodity: Crushed Sandstone
County: Houston
Status: Inactive
Past operator/owner: Scofield (1884) (1)
Township name: Caledonia
Location: T 102 R 6 W Sec 14 (1)
Location comments: (T., R. locations determined from Ref. 1, plate 8)
Geologic age: Ordovician
Geologic formation: St. Peter Sandstone (1)
Description: Sandstone (1)
Uses of commodity: Mortar sand (1)
References: 1) Winchell and others. 1884, p. 233

Main commodity: Crushed Sandstone
County: Houston
Status: Inactive
Location: T 102 R 6 W Sec 26 (1)
Location comments: (T., R. locations determined from Ref. 1, plate 8)
Geologic age: Ordovician
Geologic formation: St. Peter Sandstone (1)
Description: Sandstone (1)
Uses of commodity: Mortar sand (1)
References: 1) Winchell and others. 1884, p. 233

Main commodity: Crushed Sandstone
County: Houston
Status: Inactive
Past operator/owner: Kline (1884) (1)
Township name: Union
Location: T 103 R 5 W Sec 16 (1)
Geologic age: Cambrian
Geologic formation: St. Croix Sandstone (1)
Description: Sandstone (1)
Uses of commodity: Mortar sand (1)
References: 1) Winchell and others. 1884, p. 233

Main commodity: Crushed Sandstone
County: Rice
Quarry/pit name: Wheeling Quarry (1)
Status: Inactive
Past operator/owner: Kielmeyer Construction Co. (1)
Location: T 110 R 19 W Sec 10 SW1/4 NE1/4 (1)

References: 1) USBM. [1979], MILS

Main commodity: Crushed Sandstone
County: Scott
Quarry/pit name: Jordan Quartz Pit (1,2)
Status: Inactive (2)
Past operator/owner: Jordan Quartz Co. Inc. (1,2)
Location: T 114 R 23 W Sec 4 NE1/4 NW1/4 (1,4)
Geologic age: Cambrian
Geologic formation: Jordan Sandstone (3)
References: 1) USBM. [1979], MILS
 2) USDL. MSHA mine reference list
 3) Mossler. 1987, p. 12
 4) Mossler. 1974a, station 8
 5) Webers; Austin. 1972, p. 30

Main commodity: Crushed Sandstone
County: Winona
Status: Inactive
Location: T 105 R 6 W Sec 13 NE1/4 NE1/4 SE1/4 NE1/4 (1)
Geologic age: Cambrian
Geologic formation: Jordan Sandstone (1)
Description: Sandstone (1)
Uses of commodity: Sand or fill (1)
References: 1) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Sandstone
County: Winona
Status: Inactive
Location: T 105 R 9 W Sec 6 NE1/4 NE1/4 NW1/4 (1)
Geologic age: Ordovician
Geologic formation: St. Peter Sandstone (1)
Description: Sandstone (1)
Uses of commodity: Sand or fill (1)

References: 1) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Sandstone
County: Winona
Status: Inactive
Location: T 106 R 5 W Sec 7 SE1/4 NW1/4 SW1/4 SE1/4 (1)
Geologic age: Cambrian
Geologic formation: Ironton Sandstone (1)
Description: Sandstone (1)
Uses of commodity: Sand or fill (1)
References: 1) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Sandstone
County: Winona
Status: Inactive
Location: T 106 R 9 W Sec 31 NW1/4 SE1/4 SE1/4 SE1/4 (1)
Geologic age: Ordovician
Geologic formation: St. Peter Sandstone (1)
Description: Sandstone (1)
Uses of commodity: Sand or fill (1)
References: 1) Jirsa; Meyer. 1984, plate 8

Main commodity: Crushed Sandstone
County: Winona
Status: Inactive
Location: T 107 R 7 W Sec 19 NW1/4 SW1/4 SW1/4 NE1/4 (1)
Geologic age: Cambrian
Geologic formation: Ironton Sandstone (1)
Description: Sandstone (1)
Uses of commodity: Sand or fill (1)
References: 1) Jirsa; Meyer. 1984, plate 8

Main commodity: Dimension Sandstone
County: Brown
Status: Inactive
Township name: North Star
Location: T 109 R 35 W Sec 25 NE1/4 (1)
Location comments: North side of Cottonwood River (1)
Geologic age: Cretaceous
Description: Sandstone (1,2)
Uses of commodity: Used somewhat for building material (1)
References: 1) Winchell and others. 1884, p. 573, 587
 2) Thiel; Dutton. 1935, p. 101

Main commodity: Dimension Sandstone
County: Chisago
Status: Inactive
Location: T 33 R 19 W
Location comments: At Franconia, close below the Lower Dalles, in the bluff of Lawrence Creek at Munch's mill (1,2); (exact location undetermined, possibly in township 34); (T., R. locations determined from county highway map)
Geologic age: Cambrian
Geologic formation: St. Croix Sandstone (2); Franconia Fm. (3)
Description: Its upper 40 ft are a gray, thick-bedded, sandstone, which is rather friable, but hardens after quarrying (1,2)
Uses of commodity: Building stone (1)
References: 1) Upham. 1884, p. 134
 2) Winchell; Upham. 1888, p. 408, 422
 3) Stauffer; Thiel. 1941, p. 131-133

Main commodity: Dimension Sandstone
County: Chisago
Status: Inactive
Location: T 34 R 19 W
Location comments: Near Taylor Falls (1-3); (exact location undetermined, possibly in township 33); (T., R. locations determined from county highway map)
Geologic age: Cambrian
Geologic formation: St. Croix Sandstone (2-4)
Description: "It is white, coarse grained, and rather friable when quarried but is said to become much harder with age." (1)
Uses of commodity: Building stone (2)
References: 1) Bowles. 1918, p. 210
 2) Upham. 1884, p. 134
 3) Winchell; Upham. 1888, p. 408, 422
 4) Winchell and others. 1884, p. 200-204
 5) Winchell. 1875, p. 80

Main commodity: Dimension Sandstone
County: Dakota

Status: Inactive
Location: T 28 R 23 W
Location comments: Near Fort Snelling (1); (T., R. locations determined from county highway map)
Geologic formation: Potsdam (1)
Description: Yellow sandrock (1)
Physical test data: For detailed test data see Ref. 1, p. 200-203
Uses of commodity: Bridge construction (1)
References: 1) Winchell and others. 1884, p. 200-204

Main commodity: Dimension Sandstone
County: Dakota
Status: Inactive (3)
Location: T 28 R 23 W Sec 33 SW1/4 (1-4,6)
Location comments: In Fort Snelling State Park (3); two quarry sites on small island on right bank of Minnesota River (3)
Geologic age: Ordovician
Geologic formation: St. Peter Sandstone (1-4)
Description: Sandstone, "It is exceptional that the St. Peter is sufficiently coherent to be utilized for structural work. The rock is in thick beds, dipping slightly southward. It weathers to a rusty yellow of almost exactly the same shade as the weathered Platteville limestone at Mendota." (1)
Uses of commodity: Bridge piers at Fort Snelling and two walls of the old Faribault House at Mendota (1)
References: 1) Bowles. 1918, p. 210, 211
 2) Winchell; Upham. 1888, p. 81
 3) Minneapolis Tribune. July 21, 1968
 4) Schwartz. 1936, p. 136
 5) Merrill. 1884, p. 249
 6) Thiel; Dutton. 1935, p. 142

Main commodity: Dimension Sandstone
County: Dakota
Status: Inactive
Location: T 114 R 19 W Sec 22 (1)
Location comments: About 1 1/2 miles west of Empire City (1)
Geologic age: Ordovician
Geologic formation: St. Peter Sandstone (1)
Description: Sandstone (1)
Uses of commodity: Foundation stone (1)
References: 1) Winchell; Peckham. 1874, p. 138

Main commodity: Dimension Sandstone
County: Fillmore
Status: Inactive
Location: T 102 R 9 W Sec 27
Location comments: Near the Amherst post office (1); (T., R., Sec. locations determined from county highway map)

Geologic age: Ordovician
Geologic formation: Jordan Sandstone (1)
Uses of commodity: Foundations (1)
References: 1) Winchell and others. 1884, p. 323

Main commodity: Dimension Sandstone
County: Houston
Status: Inactive
Location: T 103 R 4 W
Location comments: East of Hokah, and across Thompson's Creek (1); (exact location undetermined, possibly in township 104); (T., R. locations determined from county highway map)
Description: Coarse to fine-grained shaly and arenaceous sandstone, containing abundant greensands (1)
Remarks: "...now abandoned because the rock is worthless for all purposes..." (1)
References: 1) Winchell and others. 1884, p. 224
 2) Merrill. 1884, p. 249

Main commodity: Dimension Sandstone
County: Houston
Quarry/pit name: Whitman's Quarry (1)
Status: Inactive
Location: T 104 R 4 W
Location comments: Near Hokah (1,2); (exact location undetermined, possibly in township 103); (T., R. locations determined from county highway map)
Description: Shaly and arenaceous sandstone, containing layers of green sands (1)
References: 1) Winchell and others. 1884, p. 224
 2) Merrill. 1884, p. 249

Main commodity: Dimension Sandstone
County: Lincoln
Date opened: 1879 (1)
Status: Inactive
Past operator/owner: G. B. Mason (1884) (1)
Township name: Alta Vista
Location: T 113 R 44 W Sec 12 SW1/4 NE1/4 (1)
Geologic age: Cretaceous
Description: Light gray calcareous sandstone (1); see Ref. 1, p. 599 and 611 for further description
Remarks: Slightly quarried (1)
References: 1) Winchell and others. 1884, p. 599, 611
 2) Thiel; Dutton. 1935, p. 152

Main commodity: Dimension Sandstone
County: Mower
Status: Inactive

Past operator/owner: Roseberry and Miner (1873) (1)
Location: T 102 R 18 W
Location comments: At Austin (1); (exact location undetermined, possibly in township 103); (T., R. locations determined from county highway map)

Geologic age: Lower Cretaceous
Description: Very fine grained sandstone (1)
Uses of commodity: Bases for monuments (1)
References: 1) Winchell. 1873, p. 116

Main commodity: Dimension Sandstone
County: Nicollet
Status: Inactive
Past operator/owner: W. Fritz (1888) (1)
Township name: Courtland
Location: T 109 R 29 W Sec 16 NE1/4 (1)
Location comments: 8 miles below New Ulm (1); on the north side of the river (4)
Geologic age: Cretaceous
Description: Sandstone consisting of alternating layers of friable sand, and hard, cemented gray sandstone which is sometimes coarse enough to be styled conglomeritic. (1) see Ref. 4, p. 182 for stratigraphic section description
Uses of commodity: Culverts, cellar walls (1); flagging (2)
References: 1) Winchell; Upham. 1888, p. 164, 177
 2) Merrill. 1884, p. 256
 3) Winchell. 1880, p. 20
 4) Winchell; Peckham. 1874, p. 182

Main commodity: Dimension Sandstone
County: Nicollet
Status: Inactive
Past operator/owner: H. Greenholtz (1888) (1)
Township name: Courtland
Location: T.109 R 29 W Sec 24 (1)
Geologic age: Cretaceous
Description: Sandstone (1)
Uses of commodity: Culverts, cellar wells (1)
Remarks: Quarried a little (1)
References: 1) Winchell; Upham. 1888, p. 165, 177

Main commodity: Dimension Sandstone
County: Pine
Date opened: Before 1884 (1)
Status: Inactive
Past operator/owner: T. R. Rice (1,2)
Location: T 39 R 20 W Sec 36 S1/2 NE1/4 (1,2)
Location comments: Along the Snake River near its mouth, about a mile above its junction with the St. Croix River, located in the NE bluff (1)

Geologic age: Middle Proterozoic
Geologic formation: St. Croix Sandstone (1,2); Hinckley Sandstone (3)
Description: "...gray and white sandstone, which extends about twenty rods, rising ten to fifteen feet above the river. This is a levelly stratified, somewhat friable rock, in layers from three inches to one and a half feet thick, mostly intersected by nearly vertical joints two to five feet apart." (1,2)
Uses of commodity: Foundations (1,2)
References: 1) Upham. 1884, p. 132
 2) Winchell; Upham. 1888, p. 640
 3) Morey and others. 1981

Main commodity: Dimension Sandstone
County: Pine
Date opened: 1878 (1,2)
Status: Inactive
Past operator/owner: St. Paul and Duluth Railroad Co. (1-3)
Location: T 41 R 21 W (1)

Location comments: At Hinckley, on the Grindstone river about four miles above its mouth, lying close north of the river and east of the railroad (1); "The old quarries are situated between the Northern Pacific Railway Co. tracks and the Hinckley-Duluth Hwy." (4)

Geologic age: Middle Proterozoic
Geologic formation: Hinckley Sandstone (4,6)
Description: "The rock is a hard and compact, medium-grained sandstone of light buff color, nearly level in stratification. Its beds vary from one inch to two feet in thickness, and in some portions they show oblique lamination, which is inclined 10 deg. to 15 deg. northward." (1,2)

Physical test data: For detailed test data see Ref. 5, p. 200-203

Uses of commodity: Bridge masonry (1-3)
References: 1) Upham. 1884, p. 126, 127
 2) Winchell; Upham. 1888, p. 639
 3) Merrill. 1884, p. 249
 4) Thiel. 1947, p. 196, 197
 5) Winchell and others. 1884, p. 200-203
 6) Stauffer; Thiel. 1941, p. 15-23, 185
 7) Bowles. 1918, p. 153

Main commodity: Dimension Sandstone
Other commodities: Silica Sand, Crushed Sandstone
County: Pine
Date opened: 1885 (2,3,4,12)
Status: Inactive
Past operator/owner: Sandstone Quarries Co., Kettle River Quarries Co., The Minnesota Sandstone Co., Ring and Tobin, Grant (2); Grant and Knowles (6)
Location: T 42 R 20 W

Location comments: At the town of Sandstone (1-12); (probably section 10); (T., R. locations determined from county highway map)

Geologic age: Middle Proterozoic
Geologic formation: Hinckley Sandstone (4,5,8-11)

Description: "The rock quarried is a fine-grained light-pink or salmon-colored stone, generally very hard and durable. The sand grains are sharp and many of them sparkle and show recrystallized faces....The cementing material is mainly silica. There are some beds, especially toward the top of the quarry, in which the rock is of a darker shade, varying in color from yellow to brownish red....The rock lies in massive beds, 1 to 3 feet thick, and there are three thin zones of shaly sandstone, 16 to 20 feet apart, that divide the quarry face vertically into four divisions. The beds dip 2 deg. to 4 deg. SE. and are jointed in places by well-marked vertical joints that facilitate quarrying but do not prevent blocks 5 to 10 feet long from being easily obtained." (1)

See Refs. 2-5 and 8-10 for further lithologic descriptions; see Ref. 11, table V-36 for modal analyses; see Ref. 9, table 6 for summary of textural characteristics; see Refs. 4, 9 and 10 for stratigraphic section descriptions

Chemical analyses: See Refs. 2, 3, and 4 for chemical analyses

Physical test data: "...specific gravity, 2.5; weight per cubic foot, 156 pounds; water absorbed per cubic foot, 1.23 pounds; per cent wear, 15.8; French coefficient, 2.9; hardness, 14.8; toughness, 4.0; and crushing strength, 8,000 to 12,000 pounds per cubic foot." (2); see Refs. 1, 3, 4 and 13 for further test data

Uses of commodity: Building stone, sawed stone, flagstone, curbing, rubble, riprap, bridge stone, coping, monument bases (1); macadam, concrete, ect. (7); foundry sand (9); paving blocks, crushed stone, silica sand (2)

Trade names: Kettle River Standard, Kettle River Varigated (5)

Remarks: Quarried very extensively (3)

References: 1) Burchard. 1910, p. 281, 282
 2) Thiel; Dutton. 1935, p. 143-146
 3) Bowles. 1918, p. 206, 208
 4) MN Dept. of Conservation. 1964a, p. 27-29, 41, 112
 5) Emmons; Grout. 1943, p. 78, 88
 6) Winchell; Upham. 1888, p. 645
 7) Cooley. 1911, p. 13
 8) Grout and others. 1951, p. 1061
 9) Thiel. 1957, p. 8, 9
 10) Thiel. 1947, p. 17
 11) Tryhorn; Ojakangas. 1972, p. 434
 12) Pine County Historical Society brochure. 1956
 13) Coventry. 1987, p. 29
 14) Knapp. 1923, p. 18, 19

Main commodity: Dimension Sandstone
Other commodities: Crushed Sandstone
County: Pine

Status: Inactive (1)
USGS quadrangle: Sandstone North
Location: T 42 R 20 W Sec 10 NE1/4 SW1/4 (2)
Location comments: See Ref. 1, p. 10 for location directions
Geologic age: Middle Proterozoic
Geologic formation: Hinckley Sandstone (1)
Description: "The Hinckley is generally buff colored and beds range in thickness from a few centimeters to several meters. Large-scale cross-bedding is common and current ripple marks are present locally. Much of the sandstone is medium to coarse grained. The grains are generally moderately to well rounded; sorting varies from poor to moderate. The rock is weakly to strongly cemented by silica and by iron oxides which were deposited both before and after deposition of the silica cement. The average framework grain composition is about 96 percent quartz, 2 percent feldspar, and 2 percent felsic volcanic rock fragments, metamorphic rock fragments and chert." (1)
Uses of commodity: Building stone, paving material (1)
References: 1) Morey. 1979, p. 10
 2) USGS. 1981, Sandstone North quadrangle
 3) Vach, A. H., Local Historian. 1989, personal communication

Main commodity: Dimension Sandstone
County: Pine
Date opened: 1855 (1)
Status: Inactive
Past operator/owner: Grant (1)
Location: T 42 R 20 W Sec 15 (1)
Geologic age: Middle Proterozoic
Geologic formation: Hinckley Sandstone (2)
Uses of commodity: Building stone, paving material (1)
References: 1) Vach, A. H., Local Historian. 1989, personal communication
 2) Morey and others. 1981

Main commodity: Dimension Sandstone
Other commodities: Crushed Sandstone
County: Pine
Date opened: 1880's (1)
Status: Inactive since 1905 (1)
Past operator/owner: Barber Asphalt Paving Co. (1-4)
Township name: Finlayson
Location: T 43 R 20 W Sec 34 S1/2 SE1/4 (2)
Location comments: In Banning State Park (1)
Geologic age: Middle Proterozoic
Geologic formation: Hinckley Sandstone (6)
Uses of commodity: Bridges, buildings, paving, macadam, concrete, etc. (4)

References: 1) MN/DNR. 1981, Banning State Park Summer Trails brochure
 2) Vach, A. H., Local Historian. 1989, personal communication
 3) Bowles. 1918, p. 208
 4) Cooley. 1911, p. 13
 5) Pine County Historical Society brochure. 1956
 6) Morey and others. 1981

Main commodity: Dimension Sandstone
County: Scott
Status: Inactive
Past operator/owner: (Past quarry owners): J. Volk (1874) (4); Wosanick and Loniacheck (1874) (4); P. Kipp (1884) (1,5); F. Nicolin (1884) (1,5); Foss, Wells and Co. (1888) (1)
Location: T 114 R 23 W
Location comments: (Various quarries at Jordan, exact locations undetermined); (T., R. locations determined from county highway map)
Geologic age: Cambrian
Geologic formation: Jordan Sandstone (1,2,3,5)
Description: "...coarse-grained sandstone, white or light gray, or often somewhat stained with iron-rust. It is usually soft and crumbling, so that it is readily excavated with a shovel; but some of its beds, quarried at Jordan, yield stone sufficiently durable for the construction of large mills and bridge masonry. It becomes harder upon exposure to the air, and its ledges sometimes have an induated surface while they are quite friable within. The stratification is level or nearly so, in beds that vary from six inches to three feet in thickness. While each of these layers is plainly horizontal, its lamination is frequently oblique, being inclined 5 deg. to 20 deg." (1); see Refs. 2-5 for further lithologic descriptions
Physical test data: See Ref. 5, p. 200-204 for detailed test data
Uses of commodity: Building stone (4); masonry (1)
References: 1) Winchell; Upham. 1888, p. 121, 139, 140
 2) Bowles. 1918, p. 210
 3) Stauffer; Thiel. 1941, p. 47
 4) Winchell; Peckman. 1874, p. 139, 149
 5) Winchell and others. 1884, p. 200-204

Main commodity: Dimension Sandstone
County: St. Louis
Status: Inactive
Location: T 48 R 15 W Sec 5 (3,5)
Location comments: Near the Krause Quarry (1)
Geologic age: Middle Proterozoic
Geologic formation: Fond du Lac Fm. (2,3)
Description: "A ledge of steel-gray stone of fine texture..." (1); see Ref. 6 for stratigraphic section description

- References:**
- 1) Coventry. 1987, p. 29
 - 2) Goldich and others. 1961, p. 93, 94
 - 3) Morey. 1967, plate 1
 - 4) Thwaites. 1912, plate 15
 - 5) Grout and others. 1951, p. 1060
 - 6) Stauffer; Thiel. 1941, p. 193

Main commodity: Dimension Sandstone
County: St. Louis
Quarry/pit name: Krause Quarry (1,2)
Date opened: 1882 (1)
Status: Inactive
Past operator/owner: Fond du Lac Brownstone Co. (2); Krause and Hulett (1); McDonald (7)
Location: T 48 R 15 W Sec 5 W1/2 (5)
 T 48 R 15 W Sec 5 (1)
Location comments: North bank of Mission Creek (2,8); north of Fond du Lac (7,8); (typographical error assumed in Ref. 5 which lists R 12 instead of R 15)
Geologic age: Middle Proterozoic
Geologic formation: Fond du Lac Fm. (3,5,7)
Description: "The rock is light to dark purple-maroon in color, much of it having light spots one-eighth to one-fourth of an inch across. It is fairly even-grained in texture and is interbedded with shale. Under the microscope it proves to be a feldspathic sandstone or arkose. The quartz grains forming the main mass are somewhat angular in form; with them are many grains of orthoclase, plagioclase, and microcline. Flakes of biotite and grains of hornblende and magnetite are present. Decay of the ferromagnesian minerals has resulted in the separation of iron oxides which give the rock its characteristic color." (1)

"Major joints strike north and south and secondary joints east and west, are 1 to 10 feet apart, and nearly vertical. Bedding planes are very distinct and are 1 to 5 feet apart. The dip is about 15 deg. SE. and the strike northeast. Distinct cross-bedded planes are in places only a few inches apart." (1); see Ref. 9 for stratigraphic section description

- References:**
- 1) Bowles. 1918, p. 208, 209
 - 2) Coventry. 1987, p. 6, 7, 28, 72
 - 3) Morey. 1967, plate 1
 - 4) Thwaites. 1912, plate 15
 - 5) Goldich and others. 1961, p. 93, 94
 - 6) Grout and others. 1951, p. 1060
 - 7) Winchell and others. 1884, p. 180
 - 8) Thiel; Dutton. 1935, p. 111
 - 9) Stauffer; Thiel. 1941 p. 193

Main commodity: Dimension Sandstone
County: St. Louis
Quarry/pit name: Chambers' Quarry (3)
Date opened: 1870 (2)

Status: Inactive
Past operator/owner: Boyle (2); Chambers (2,3)
Location: T 48 R 15 W Sec 6 SE1/4 (4,7)
Location comments: Bluff of the St. Louis River above Fond du Lac near the first rapids, near the St. Paul and Duluth Railroad (1884) (2); other abandoned quarries in the area (7); (location determined from quarry symbol shown on Ref. 4 map); (typographical error assumed in Ref. 7 which lists R 12 instead of R 15)
Geologic age: Middle Proterozoic
Geologic formation: Fond du Lac Fm. (2,5,7)
Description: "The sandstone is light yellow to dark brown, generally fine to medium grained with some coarse and conglomeratic zones. It is commonly cross-bedded, and locally ripple marks are well preserved. The sandstone weathers to a dark brown or red, and some weathered surfaces show numerous light-colored balls or spheres, conspicuous by contrast with the red sandstone." (7); see Ref. 8 for stratigraphic section description
Physical test data: See Ref. 2, p. 200-203 for detailed test results
Remarks: (This rock) "...lost its popularity, probably in considerable part owing to its porosity, which caused it to become very dark with the absorption of dirt." (1)
References:

- 1) Schwartz. 1949, p. 127
- 2) Winchell and others. 1884, p. 181, 200-203
- 3) Coventry 1987, p. 7, 28, 29
- 4) Thwaites. 1912, plate 15
- 5) Morey. 1967, plate 1
- 6) Grout and others. 1951, p. 1060
- 7) Goldich and others. 1961, p. 93, 94
- 8) Stauffer; Thiel. 1941, p. 193

Main commodity: Dimension Sandstone
County: Wabasha
Status: Inactive
Location: T 111 R 12 W
Location comments: Lake City (1); (T., R. locations determined from county highway map)
Geologic age: Cambrian
Geologic formation: St. Croix Sandstone (1)
Description: Sandstone (1)
Uses of commodity: Rough walls (1)
Remarks: Cannot be used for first-class architecture (1)
References:

- 1) Merrill. 1884, p. 249

Main commodity: Dimension Sandstone
County: Winona
Status: Inactive
Past operator/owner: Hartley (2)
Location: T 105 R 4 W
Location comments: At Dakota (1-3); (T., R. locations determined from county highway map)

Geologic age: Cambrian
Geologic formation: St. Croix Sandstone (2); Dresbach Sandstone (1)
Description: "It is white and somewhat friable and resembles the Berea sandstone of Ohio" (1)
Physical test data: See Ref. 2, p. 200-204 for detailed test results
References: 1) Bowles. 1918, p. 209
 2) Winchell and others. 1884, p. 200-204, 265
 3) Merrill. 1884, p. 249

Main commodity: Dimension Sandstone
Other commodities: Abrasive Sandstone
County: Winona
Quarry/pit name: Dresbach Quarries (1,5)
Status: Inactive (2)
Past operator/owner: J. F. Tostevin, Jr. (1,4,5)
Location: T 105 R 4 W
Location comments: Between the highway and the Mississippi River (2); at Dresbach (1-6); on the west bank of the Mississippi (1); (others quarries in the area); (T., R. locations determined from county highway map)

Geologic age: Cambrian
Geologic formation: Dresbach Fm. (2-4); St. Croix Sandstone (1,5,6)
Description: "The stone is evenly granular, gray and of a medium sized grain, very much resembling the Berea sandstone of Ohio. It is in beds that are quarried out from six inches to three or four feet thick. It is free from nodules or pyrite or of coarse quartz pebbles." (1); white and somewhat friable (3); see Refs. 2 and 4 for stratigraphic section descriptions
Physical test data: "Its strength in crushing pressure is 6,500 pounds per square inch when placed on its bedding plane, and 3,750 pounds when placed on its edge." (1); see Ref. 5, p. 200-204 for detailed test results
Uses of commodity: Building stone (1,3,5,6); grindstones (1)
References: 1) Minnesota Miscellany. 1886, p. 1-13
 2) Thiel. 1944, p. 476
 3) Bowles. 1918, p. 209
 4) Stauffer; Thiel. 1941, p. 25
 5) Winchell and others. 1884, p. 179, 200-204, 265
 6) Merrill. 1884, p. 249

Main commodity: Undifferentiated Sandstone
County: Cook
Status: Inactive
Location: T 63 R 6 E Sec 3 SE1/4 (1)
Location comments: See Ref. 1, p. 88 for location map
References: 1) Green and others. 1977, p. 74-88

Main commodity: Undifferentiated Sandstone
County: Dakota
Status: Inactive
Location: T 28 R 22 W Sec 22 NW1/4 NW1/4 (1)
Location comments: (This site could possibly be in Ramsey Co.)
Geologic age: Ordovician
Geologic formation: St. Peter Sandstone (1)
References: 1) Mossler. 1974a, station 129

Main commodity: Undifferentiated Sandstone
County: Dakota
Status: Inactive
Location: T 114 R 18 W Sec 18 NE1/4 (1)
Location comments: Center of NE1/4 (1); "Exposed in a sand quarry on south side of hill, 2 miles south on Dakota County Aid Rd. 34, from intersection of this road and U.S. Hwy. 52." (1)
Description: Sand quarry (1)
References: 1) Ford. 1958, p. 108

Main commodity: Undifferentiated Sandstone
County: Goodhue
Status: Inactive
Location: T 113 R 14 W
Location comments: Red Wing, southwest part of town (1,2); (T., R. locations determined from Ref. 2, fig. 45)
Geologic age: Cambrian
Geologic formation: Jordan Sandstone (1,2)
Description: See Refs. 1 and 2 for stratigraphic section descriptions
Physical test data: See Ref. 1, p. 14 and 15 for screen analyses and grain size distribution analyses
Remarks: Sand mines (1,2)
References: 1) Thiel. 1957, p. 14, 15
 2) Stauffer; Thiel. 1941, p. 156, 161

Main commodity: Undifferentiated Sandstone
County: Goodhue
Status: Inactive
Past operator/owner: Red Wing Filler Sand Co. (1)
Location: T 113 R 15 W

Location comments: Red Wing (1); (exact location undetermined, possibly in range 14); (T., R. locations determined from county highway map)
Geologic age: Cambrian
Geologic formation: Jordan Sandstone (1)
Description: Sandstone (1)
Remarks: Sand mine (1)
References: 1) Stauffer; Thiel. 1941, p. 46, 47

Main commodity: Undifferentiated Sandstone
County: Goodhue
Quarry/pit name: Taber Sand Mine (1)
Status: Inactive
Location: T 113 R 16 W (2)
Location comments: Eggleston (1); (T., R. locations determined from Goodhue County assessor)
Geologic age: Cambrian
Geologic formation: Jordan Sandstone (1)
Description: Sandstone (1); see Ref. 1 for stratigraphic section description
References: 1) Stauffer; Thiel. 1941, p. 158, 159
 2) Goodhue County Assessor. 1989, personal communication

Main commodity: Undifferentiated Sandstone
County: Olmsted
Quarry/pit name: Libby Hill Quarry (1)
Status: Inactive
Location: T 106 R 14 W (1)
Location comments: See Ref. 1 for location directions and map; near Rochester (1)
Geologic age: Ordovician
Geologic formation: St. Peter Sandstone (1)
Description: "White to yellow-brown fine-grained sandstone. The mottling in color is due to oxidation of pyrite....The sandstone becomes coarser and more iron-rich upward toward the contact. Hard brown iron-cemented sandstone ledges are present near the top of the formation." (1)
References: 1) Austin. 1968, p. 19, 24, 25

Main commodity: Undifferentiated Sandstone
County: Pine
Status: Inactive
USGS quadrangle: Sandstone North
Location: T 42 R 20 W Sec 10 S1/2 NW1/4 (1)
Geologic age: Middle Proterozoic
Geologic formation: Hinckley Sandstone (3)
References: 1) USGS. 1981, Sandstone North quadrangle
 2) Vach, A. H., Local Historian. personal communication
 3) Morey and others. 1981

Main commodity: Undifferentiated Sandstone
County: Pine
Status: Inactive
Location: T 43 R 20 W Sec 32 (1)
Geologic age: Middle Proterozoic
Geologic formation: Hinckley Sandstone (2)
Description: Sandstone (1)
References: 1) Bowles. 1918, p. 153
 2) Morey and others. 1981

Main commodity: Undifferentiated Sandstone
County: Ramsey
Quarry/pit name: Heaton Sand Mine (1)
Status: Inactive
Location: T 28 R 23 W
Location comments: Near Fort Snelling (1); (exact location undetermined); (T., R. locations determined from county highway map)
Geologic age: Ordovician
Geologic formation: St. Peter Sandstone (1)
Description: See Ref. 1 for stratigraphic section description
References: 1) Hoeft. 1959, p. 41-44

Main commodity: Undifferentiated Sandstone
County: Scott
Status: Inactive
Location: T 114 R 23 W Sec 4 NE1/4 NW1/4 (1)
Location comments: Near Jordan (2)
Geologic age: Cambrian
Geologic formation: Jordan Sandstone (2,3); Van Oser Mbr. (3)
References: 1) USGS. 1981, Jordan East quadrangle
 2) Webers; Austin. 1972, p. 30
 3) Mossler. 1987, p. 12

Main commodity: Undifferentiated Sandstone
County: St. Louis
Date opened: 1891 (1)
Status: Inactive
Past operator/owner: St. Louis River Water Power Company (1)
Location: T 48 R 15 W (3,4)
Location comments: Near the foot of the rapids on the Minnesota side of the St. Louis River (1); (probably section 6)
Geologic age: Middle Proterozoic
Geologic formation: Fond du Lac Fm. (2,3)
Description: See Ref. 6 for stratigraphic section description
Remarks: No shipments were made from this quarry (1)
References: 1) Coventry. 1987, p. 53
 2) Goldich and others. 1961, p. 93, 94
 3) Morey. 1967, plate 1

4) Thwaites. 1912, plate 15
 5) Grout and others. 1951, p. 1060
 6) Stauffer; Thiel. 1941, p. 193

Main commodity: Undifferentiated Sandstone
County: Washington
Status: Inactive (1)
Township name: Denmark
Location: T 27 R 20 W Sec 6 S1/2 (1)
Location comments: South of the center of section 6 (1)
Geologic age: Ordovician
Geologic formation: St. Peter Sandstone (1)
References: 1) Kohls. 1958, p. 119

Main commodity: Undifferentiated Sandstone
County: Washington
Status: Inactive (1)
Township name: Denmark
Location: T 27 R 20 W Sec 30 SE1/4 SW1/4 NW1/4 (1)
Geologic age: Ordovician
Geologic formation: St. Peter Sandstone (1)
Remarks: (This site could possibly be a sand and gravel pit exposing the St. Peter Sandstone)
References: 1) Kohls. 1958, p. 117

Main commodity: Undifferentiated Sandstone
County: Washington
Status: Inactive (1)
Location: T 30 R 21 W Sec 32 SW1/4 (1)
Location comments: On west shore of Long Lake (1)
Geologic age: Ordovician
Geologic formation: St. Peter Sandstone (2)
References: 1) Schwartz. 1936, p. 185
 2) Morey and others. 1981

Main commodity: Undifferentiated Sandstone
County: Washington
Status: Inactive
Past operator/owner: J. Hale (1)
Location: T 32 R 19 W
Location comments: 1 mile above Marine at Meridian Lake (part of main river) (1); small quarry near the ferry (2); (exact location undetermined, possibly in township 31); (T., R. locations determined from county highway map)
Geologic age: Cambrian
Geologic formation: Jordan Sandstone (1); Franconia Fm. (2)
Description: Sandstone (1); gray to reddish-brown, thin-bedded, with gray shale partings (2)

Remarks: Several other less worked quarries in the area (1)

References: 1) Winchell; Upham. 1888, p. 382
2) Schwartz; Thiel. 1954, p. 333

Main commodity: Undifferentiated Sandstone

County: Winona

Status: Inactive

Township name: Warren

Location: T 106 R 8 W Sec 18 SW1/4 (1)

Location comments: At Stockton, along the railroad, 1 1/2 miles east of Lewiston (1); other quarries in area (1)

Geologic age: Cambrian

Geologic formation: Jordan Sandstone (1)

Description: Sandstone (1)

References: 1) Winchell and others. 1884, p. 252

Main commodity: Undifferentiated Sandstone

County: Winona

Status: Inactive

Location: T 107 R 7 W

Location comments: Near Winona (1); (T., R. locations determined from county highway map)

Geologic age: Cambrian

Geologic formation: Jordan Sandstone (1)

References: 1) Winchell and others. 1884, p. 252

Main commodity: Dimension Schist
County: Morrison
Status: Inactive
Past operator/owner: I. P. Lambert (1888) (1)
Township name: Bellevue
Location: T 39 R 32 W Sec 17 N1/2 SW1/4 (1)
Location comments: "...at the middle of Muncy's Rapids...extends about twenty-five rods along the east shore of the Mississippi, rising some eight feet above low water." (1); (T., R. locations determined from Ref. 1, plate 53)
Description: Mica schist with many large staurolite crystals, and sometimes including small garnets. (1)
Uses of commodity: Cellar walls, etc. (1)
Remarks: Slightly quarried (1)
References: 1) Winchell; Upham. 1888, p. 598, plate 53

Main commodity: Dimension Schist
County: Morrison

Status: Inactive
Past operator/owner: G. T. Smith (1888) (1)
Location: T 130 R 30 W Sec 7 NE1/4 (1)
Location comments: Near the fork of the Little Elk River (1)
Description: Dark schist, very compact and hard, with few joints (1)
Uses of commodity: Building stone (1)
References: 1) Winchell; Upham. 1888, p. 601

Main commodity: Dimension Schist
County: Rice
Quarry/pit name: B. H. Heselton LS Quarry (1)
Status: Inactive
Past operator/owner: B. H. Heselton Co. (1)
Location: T 110 R 20 W Sec 33 SW1/4 SE1/4 (1)
Description: Mica schist (1)
References: 1) USBM. [1979], MILS

Main commodity: Dimension Slate
County: Carlton
Status: Inactive
Location: T 46 R 19 W
Location comments: Barnum (1-3); (T., R. locations determined from county highway map, possibly located in T. 47)
Geologic age: Early Proterozoic
Geologic formation: Thomson Fm. (4)
Description: "The slates are dark and fine grained and dip steeply." (1)
Uses of commodity: Roofing slate and crushed rock (2)
Remarks: "A small slate quarry supplies stone for local use at Barnum." (1)
References: 1) Bowles. 1918, p. 211
 2) MN Dept. of Conservation. 1964a, p. 39
 3) Thiel; Dutton. 1935, p. 111
 4) Morey and others. 1981

Main commodity: Dimension Slate
County: Carlton
Status: Inactive
Location: T 48 R 16 W Sec 5 (1-3)
Location comments: Near Thomson (4-6); just south of reservoir and west of the village of Thomson (2); just east of the bridge over the St. Louis River, where the road enters Jay Cooke State Park (1); Ref. 3 states that there are 3 quarries in this area, (some of which may now be located within the reservoir)
Geologic age: Early Proterozoic
Geologic formation: Thomson Fm. (1,2)
Description: Dark-gray to black slate with well-developed secondary cleavage (2); "The slate is black, hard, and compact, fine and uniform, contains no spots developing crystals, pebbles, or other defects..." (1884) (4)
Uses of commodity: Roofing slate (3-5); partly used in the manufacture of brick (5)
References: 1) Schwartz. 1949, p. 128
 2) Goldich and others. 1961, p. 177
 3) Winchell; Grant. 1900, p. 378, 379
 4) Merrill. 1884, p. 255
 5) Bowles. 1918, p. 211
 6) Thiel; Dutton. 1935, p. 111

Main commodity: Dimension Slate
County: Carlton
Date opened: 1939 (1)
Status: Inactive
Location: T 48 R 17 W Sec 1 (1)
Location comments: Between Carlton and Cloquet (1)
Geologic age: Early Proterozoic
Geologic formation: Thomson Fm. (2)

Uses of commodity: Used in construction of the buildings in Jay Cooke State Park by the WPA and CCC. (1)
References: 1) Schwartz. 1949, p. 128
 2) Morey and others. 1981

Main commodity: Dimension Slate
County: Carlton
Quarry/pit name: Dietz and Dugan's Slate Quarries (1)
Status: Inactive
Location: T 49 R 16 W
Location comments: 3 miles north of Carlton (1); (T., R. locations determined from county highway map, possibly located in R. 17)
Geologic age: Early Proterozoic
Geologic formation: Thomson Fm. (2)
Description: Slates with calcareous masses (1)
References: 1) Winchell; Grant. 1900, p. 748
 2) Morey and others. 1981

Main commodity: Dimension Slate
County: Carlton
Quarry/pit name: Old Trial Quarry (1)
Status: Inactive (5)
Past operator/owner: St. Paul and Duluth Railroad Co. (1)
Location: T 49 R 17 W
Location comments: At Cloquet (2,4,5); a mile and a half south of Cloquet (1); east of the main highway entering Cloquet from the south (1949) (3); (T., R. locations determined from county highway map)
Geologic age: Early Proterozoic
Geologic formation: Thomson Fm. (2)
Description: Slate with calcareous concretions (1)
Uses of commodity: Roofing slate and crushed rock (2,4)
References: 1) Winchell; Grant. 1900, p. 748
 2) MN Dept. of Conservation. 1964a, p. 39
 3) Schwartz. 1949, p. 128
 4) Bowles. 1918, p. 211
 5) Thiel; Dutton. 1935, p. 111

Main commodity: Dimension Slate
County: Carlton
Date opened: 1870 (1)
Status: Inactive (1)
Location: T 49 R 17 W
Location comments: At Knife Falls, about 3 miles from the quarry owned by the St. Paul and Duluth Railroad Co. (1884) (1); (T., R. locations determined from Ref. 2, plate 56 and county highway map)
Geologic age: Early Proterozoic
Geologic formation: Thomson Fm. (3)
Description: Slates (1)
Uses of commodity: Roofing (1)

References: 1) Merrill. 1884, p. 255
2) Winchell and others. 1899, plate 56
3) Morey and others. 1981

Main commodity: Dimension Slate
County: Carlton
Date opened: 1880 (1)
Status: Inactive (1)
Past operator/owner: Saint Paul and Duluth Railroad Co. (1884) (1)
Location: T 49 R 17 W
Location comments: At Knife Falls, five miles north of the Northern Pacific junction, near the northern boundary line of Carlton County (1); (T., R. locations determined from Ref. 2, plate 56 and county highway map)
Geologic age: Early Proterozoic
Geologic formation: Thomson Fm. (3)
Description: "Considerable stone was taken out, but none has been shipped or dressed in the condition of roofing slate. All that has been quarried was designed for flags, and the pieces are from a quarter of an inch upward in thickness and generally contain about 6 square feet, though some are larger. They are dark blue or nearly black, smooth and uniform, and well adapted for flagging, flooring, or marbleizing. The form of the natural slabs, as determined by transverse joints, is subrhomboidal and rectangular." (1)

Uses of commodity: Flagging (1)

References: 1) Merrill. 1884, p. 255
2) Winchell and others. 1899, plate 56
3) Morey and others. 1981

Main commodity: Dimension Slate

County: Morrison

Status: Inactive

Location: T 40 R 32 W

Location comments: "It has been slightly quarried on the east shore, nearly opposite the north end of Mill Island..." (1); Near Little Falls (1); (T., R. locations determined from county highway map)

Description: "...no massive blocks nor any of regular form are obtainable. Its cleavage is usually quite perfect, into sheets a fourth or an eighth of an inch in thickness; it is nearly vertical, not varying from this more than five degrees to either side, so far as seen in my examination; and its strike is N. 25 deg. to 35 deg. E....White quartz veins occur somewhat frequently in this slate, varying from an eighth of an inch to three inches in width, and extending from ten to fifty or seventy-five feet. Their strike and dip are conformable with the slaty cleavage." (1); for further lithologic description see Ref. 1, p. 595

Uses of commodity: Foundations (1)

References: 1) Winchell; Upham. 1888, p. 595

Main commodity: Undifferentiated Slate
County: Carlton
Status: Inactive (1)
Location: T 48 R 16 W Sec 5 SE1/4 SW1/4 (1)
Geologic age: Early Proterozoic
Geologic formation: Thompson Fm. (1)
Description: Slatey-graywacke (1)
Physical test data: See Ref. 1, p. x for test results
References: 1) Bleifuss. 1952, p. xiv, x

Main commodity: Undifferentiated Slate
County: Carlton
Status: Inactive
Location: T 48 R 17 W Sec 1 NE1/4 NW1/4 (1,2)
Geologic age: Early Proterozoic
Geologic formation: Thomson Fm. (1,2)
Description: Slate (1,2)
References: 1) MN Dept. of Conservation. 1964a, p. 69, 70
2) Schwartz. 1949, p. 101

Main commodity: Crushed Trap Rock
County: Beltrami
Status: Inactive
Past operator/owner: L. B. Larson (1)
MN/DOT source no: 4-1
Location: T 153 R 30 W Sec 9 SW1/4 SW1/4 (1)
Description: Predominantly a micro gabbro (1)
Physical test data: Available from MN/DOT Aggregate Unit (1)
References: 1) MN/DOT Aggregate Unit files

Main commodity: Crushed Trap Rock
County: Chisago
Status: Inactive
Past operator/owner: Taylors Falls Trap Rock Co. (1); Northwestern Crushed Rock Co. (2)
Location: T 34 R 19 W
Location comments: Near Taylors Falls, on St. Croix River (1); (T., R. locations determined from county highway map)
Description: Diabase and basalt, "This rock is tough, black, and massive and is somewhat amygdaloidal in places." (1)
Uses of commodity: Crushed for concrete (1,2); road surfacing (2)
Remarks: "According to report, the rock is, on account of its toughness, very hard to crush" (1)
References: 1) Bowles. 1918, p. 149
 2) Cooley. 1911, p. 15

Main commodity: Crushed Trap Rock
County: Cook
Status: Inactive
Location: T 58 R 5 W Sec 11 NE1/4 (1)
Location comments: See Ref. 1, p. 83 for location map
Description: Basalt (1)
References: 1) Green and others. 1977 p. 74-88

Main commodity: Crushed Trap Rock
County: Cook
Status: Inactive
Location: T 61 R 2 E Sec 7 SE1/4 (1)
Location comments: See Ref. 1, p. 86 for location map, 2 quarries shown at this location
Description: Felsite (1)
References: 1) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock
County: Cook
Status: Inactive
Location: T 62 R 4 E Sec 4 SE1/4 (1)

Location comments: T 62 R 4 E Sec 9 NE1/4 (1)
 See Ref. 1, p. 87 for location map
Description: Borrow pit in outcrops of diabase, material is scraped from the surface of the exposure (1)
Uses of commodity: Road building (1)
Remarks: "Gravel" pit in weathered diabase (1)
References: 1) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock
County: Cook
Status: Inactive
Location: T 62 R 4 E Sec 12 NW1/4 (1)
Location comments: See Ref. 1, p. 87 for location map
Description: Borrow pit in outcrops of diabase, material is scraped from the surface of the exposure (1)
Uses of commodity: Road building (1)
Remarks: "Gravel" pit in weathered diabase (1)
References: 1) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock
County: Lake
Status: Inactive
Location: T 52 R 10 W Sec 6 SW1/4 (1)
Location comments: See Ref. 1, p. 79 for location map, 2 quarries shown at this location; (located at Light House Point)
Description: Widely jointed basalt (1)
Uses of commodity: Riprap for the Two Harbors breakwater (1)
References: 1) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock
County: Lake
Status: Inactive
Location: T 53 R 9 W Sec 6 NW1/4 (1)
Location comments: See Ref. 1, p. 79 for location map
Description: Borrow pit in outcrops of weathered diabase, material is scraped from the surface of the exposure (1)
Uses of commodity: Road building (1)
Remarks: "Gravel" pit in weathered diabase (1)
References: 1) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock
County: Lake
Status: Inactive
Location: T 53 R 10 W Sec 1 SE1/4 (1)
 T 53 R 10 W Sec 12 NE1/4 (1)
Location comments: See Ref. 1, p. 79 for location map

Description: Borrow pit in outcrops of weathered diabase, material is scraped from the surface of the exposure (1)

Uses of commodity: Road building (1)

Remarks: "Gravel" pit in weathered diabase (1)

References: 1) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock

County: Lake

Status: Inactive

Location: T 53 R 10 W Sec 10 SE1/4 (1)

Location comments: See Ref. 1, p. 79 for location map

Description: Diabase (1)

References: 1) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock

County: Lake

Status: Inactive

Location: T 53 R 10 W Sec 30 SE1/4 (1)
T 53 R 10 W Sec 31 NE1/4 (1)

Location comments: NE of Two Harbors; see Ref. 1, p. 79 for location map

Description: Borrow pit in outcrops of weathered basalt, material is scraped from the surface of the exposure (1)

Uses of commodity: Road building (1)

Remarks: "Gravel" pit in weathered basalt (1)

References: 1) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock

County: Lake

Status: Inactive

Location: T 53 R 11 W Sec 25 SW1/4 SW1/4 (1)

Location comments: See Ref. 1, p. 79 for location map

Description: Diabase (1)

References: 1) Green and others. 1979, p. 74-88

Main commodity: Crushed Trap Rock

County: Lake

Status: Inactive

Location: T 54 R 10 W Sec 36 SE1/4 (1)

Location comments: See Ref. 1, p. 79 for location map

Description: Borrow pit in outcrops of diabase, material is scraped from the surface of the exposure (1)

Uses of commodity: Road building (1)

Remarks: "Gravel" pit in weathered diabase (1)

References: 1) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock

County: Lake

Status: Inactive

Location: T 55 R 7 W Sec 7 NW1/4 (1)

Location comments: At the NE headland of Beaver Bay (1); east Beaver Bay (2); see Ref. 2, p. 81 for location map

Geologic age: Middle Proterozoic

Geologic formation: Beaver Bay Diabase (1)

Description: Diabase (1,2)

Uses of commodity: Breakwater at Two Harbors (1)

References: 1) Grout; Schwartz. 1939, p. 73
2) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock

County: Lake

Status: Inactive

Location: T 55 R 8 W Sec 5 SE1/4 (1)

Location comments: Milepost 7 area (1); see Ref. 1, p. 4, 5 for location map

Description: Ophitic basalt (1); see Ref. 1 for further lithologic description

References: 1) Green. 1982, p. 4, 5

Main commodity: Crushed Trap Rock

County: Lake

Status: Inactive

Location: T 55 R 8 W Sec 22 NE1/4 (1)

Location comments: See Ref. 1, p. 80 for location map

Description: Borrow pit in outcrops of weathered diabase, material is scraped from the surface of the exposure (1)

Uses of commodity: Road building (1)

Remarks: "Gravel" pit in weathered diabase (1)

References: 1) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock

County: Lake

Status: Inactive

Location: T 56 R 7 W Sec 32 NE1/4 (1)

Location comments: See Ref. 1, p. 81 for location map

Description: Basalt (1)

References: 1) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock

County: Lake

Status: Inactive

Location: T 56 R 7 W Sec 32 NE1/4 NE1/4 (1)

Location comments: See Ref. 1, p. 81 for location map, 2 quarries shown at this location

Description: Felsite (1)

References: 1) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock
County: Lake
Status: Inactive
Location: T 56 R 7 W Sec 32 N1/2 (1)
Location comments: Center of N1/2 (1); see Ref. 1, p. 81 for location map
Description: Basalt (1)
References: 1) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock
County: Lake
Status: Inactive
Location: T 56 R 8 W Sec 29 SE1/4 (1)
Location comments: Milepost 7 area (1); see Ref. 1, p. 4, 5 for location map
Description: See Ref. 1 for lithologic description
References: 1) Green. 1982, p. 4, 5

Main commodity: Crushed Trap Rock
County: Lake
Status: Inactive
Location: T 56 R 8 W Sec 31 SE1/4 (1)
 T 56 R 8 W Sec 32 SW1/4 (1)
Location comments: Milepost 7 area (1); see Ref. 1, p. 4, 5 for location map
Description: Ophitic olivine diabase (1); see Ref. 1 for further lithologic description
References: 1) Green. 1982, p. 4, 5

Main commodity: Crushed Trap Rock
County: St. Louis
Status: Inactive
Location: T 50 R 13 W Sec 4 SW1/4 (1)
Location comments: (East of Lester River, north of Superior St.); see Ref. 1, p. 77 for location map
Description: Diabase (1)
References: 1) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock
County: St. Louis
Status: Inactive
Location: T 50 R 13 W Sec 7 NW1/4
Location comments: Quarry at 40th and Pitt Street, NW of Northland Country Club (1935) (1); (T., R., Sec. locations determined from Duluth quadrangle)
Uses of commodity: Riprap, crushed stone (1)

References: 1) Thiel; Dutton. 1935, p. 107
 2) USGS. 1975, Duluth quadrangle

Main commodity: Crushed Trap Rock
County: St. Louis
Status: Inactive
Location: T 50 R 14 W Sec 2 S1/2 (1)
 T 50 R 14 W Sec 11 N1/2 (1)
Location comments: (Near Hartley Park, west of Woodland Ave., and Tischer Creek); see Ref. 1, p. 77 for location map
Description: Basalt (1)
References: 1) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock
County: St. Louis
Status: Inactive
Location: T 50 R 14 W Sec 11 NW1/4 (1)
Location comments: See Ref. 1, p. 77 for location map
Description: Basalt (1)
References: 1) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock
County: St. Louis
Status: Inactive
Location: T 50 R 14 W Sec 15 S1/2 (1)
Location comments: See Ref. 1, p. 77 for location map
Description: Basalt (1)
References: 1) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock
County: St. Louis
Status: Inactive
Location: T 50 R 14 W Sec 22 SW1/4 (1)
Location comments: See Ref. 1, p. 77 for location map
Description: Basalt (1)
References: 1) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock
County: St. Louis
Status: Inactive
Location: T 51 R 12 W Sec 1 SW1/4 (1)
Location comments: (North of North Shore Drive, near Stoney Point); see Ref. 1, p. 78 for location map
Description: Diabase (1)
References: 1) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock

County: St. Louis
Status: Inactive
Location: T 51 R 12 W Sec 2 NE1/4 SE1/4 (1)
Location comments: (North of North Shore Drive, near Stoney Point);
see Ref. 1, p. 78 for location map
Description: Basalt (1)
References: 1) Green and others. 1977, p. 74-88

Main commodity: Crushed Trap Rock
County: St. Louis
Status: Inactive
Location: T 51 R 14 W Sec 24 SE1/4 (1)
Location comments: See Ref. 1, p. 77 for location map
Description: Diabase (1)
References: 1) Green and others. 1977, p. 74-88

Main commodity: Dimension Trap Rock
County: Chisago
Status: Inactive
Location: T 34 R 19 W
Location comments: At Taylors Falls (1); (T., R. locations determined from county highway map)

Description:

"The color is dark, almost black, and as to the texture it seems to be made of pyroxene crystals embracing the other minerals, these causing a spotted exterior; otherwise the texture is uniform....It may be described as tough rather than hard." (1)

Remarks:

Used in construction of foundations and rough walls at Taylor's Falls. (1)

References:

1) Merrill. 1884, p. 247

Main commodity: Undifferentiated Trap Rock
County: St. Louis
Status: Inactive
USGS quadrangle: Duluth
Location: T 50 R 14 W
Location comments: Near 4th and 5th Avenues East, Duluth (1); (T., R. locations determined from Duluth quadrangle)
Description: Amygdaloidal basalt (1); see Ref. 1, p. 103 for further lithologic description
References: 1) Winchell; Grant. 1900, p. 103

Main commodity: Undifferentiated Trap Rock
County: St. Louis
Date opened: 1878 (1)
Status: Inactive
USGS quadrangle: Duluth
Location: T 50 R 14 W

Location comments: In alley between First and Superior Streets, Duluth (1); (T., R. locations determined from Duluth quadrangle)
Description: Amygdaloidal basalt (1); see Ref. 1, p. 103 for further lithologic description
References: 1) Winchell; Grant. 1900, p. 103

Main commodity: Undifferentiated Trap Rock
County: St. Louis
Quarry/pit name: Tischer's Creek Quarry (1-3)
Status: Inactive
USGS quadrangle: Duluth
Location: T 50 R 14 W
Location comments: Duluth (1-3); (T., R. locations determined from Duluth quadrangle)
Description: Brownish dark, compact, fine-grained diabase (1)
Physical test data: For detailed test data see Ref. 1, p. 196-199
References: 1) Winchell; Grant. 1900, p. 149
 2) Winchell and others. 1884, p. 196-199
 3) Green. 1972, p. 326

Main commodity: Crushed Miscellaneous Stone
County: Crow Wing
Status: Inactive
Past operator/owner: Pittsburg Pacific Co. (1)
Location: T 46 R 29 W Sec 3 (1)
Location comments: Crosby (1)
Description: Mine tailings (1)
Physical test data: Available from U.S. Army Corps of Engineers (1)
Uses of commodity: Riprap (1)
References: 1) U.S. Army Corps of Engineers files

Main commodity: Crushed Miscellaneous Stone
County: Itasca
Quarry/pit name: National Pit (1)
Status: Inactive
Past operator/owner: A.B.I. Contracting Inc. (1)
Location: T 57 R 22 W Sec 13 SW1/4 SW1/4 (1)
Uses of commodity: Crushed and broken stone (1)
References: 1) USBM. [1980], MILS

Main commodity: Crushed Miscellaneous Stone
County: St. Louis
Quarry/pit name: Minorca Site Pit (1)
Status: Inactive
Past operator/owner: Ulland Brothers Inc. (1)
Location: T 59 R 17 W Sec 30 (1)
References: 1) USBM. [1980], MILS

Main commodity: Crushed Miscellaneous Stone
County: St. Louis
Status: Inactive
Past operator/owner: Mesabi Iron Co. (1,2)
Location: T 60 R 13 W
Location comments: Babbitt (1,2); (T., R. locations determined from county highway map)
Description: "...quartzite-like, low-grade, iron formation (taconite)..." (1,2)
Uses of commodity: Crushed rock (1,2)
References: 1) Froelich. 1961, p. 20
 2) Emmons; Grout. 1943, p. 112

Main commodity: Undifferentiated Miscellaneous Stone
County: St. Louis
Quarry/pit name: Minntac Operations (1)
Status: Inactive (1)
Past operator/owner: Ulland Brothers Inc. (1)

Location: T 58 R 16 W
Location comments: (Near Kinney; T., R. locations determined from county highway map)
References: 1) USDL. MSHA mine reference list

Main commodity: Tripoli
County: Washington
Status: Inactive
Past operator/owner: Minnesota Tripoli Co. (5)
Location: T 30 R 20 W
Location comments: Stillwater (1-7); between the bluffs of Brown Creek (3-5,7); (T., R. locations determined from county highway map)
Description: "It was apparently a silt deposited in a glacial lake and is at least partially interlaminated with

clay" (1); red siliceous clay, 70-80% silica (5); see Ref. 4 for further description

Chemical analyses: See Ref. 6, p. 97 for chemical analyses

Uses of commodity: Polishing powder (3)

References:

- 1) Froelich. 1961, p. 23
- 2) Emmons; Grout. 1943, p. 134
- 3) Schrader and others. 1917, p. 171
- 4) Winchell. 1873, p. 117
- 5) Winchell; Upham. 1888, p. 394-397
- 6) Grout. 1919, p. 97
- 7) Grout; Soper. 1914, p. 165, 166

Main commodity: Miscellaneous Minerals
County: Carlton
Quarry/pit name: Arrowhead Mine (1)
Date opened: About 1910 (1)
Status: Inactive
Past operator/owner: Myers (2)
Location: T 48 R 18 W Sec 32 W1/2 NW1/4 (2)
Location comments: Near Mahtowa (1,2)
Geologic age: Early Proterozoic
Geologic formation: Thomson Fm. (1,2)
Description: "The so-called 'Arrowhead Mine' at this locality was dug into the Thomson Formation in about 1910 for carbonaceous slate to be used as coal, and possibly also as a gold prospect. Rocks in the immediate vicinity of the mine include thin, alternating beds of fine-grained graywacke, siltstone, and gray slate. However, the dominant lithology in the mine itself appears to be black carbonaceous slate, much fractured

Remarks:

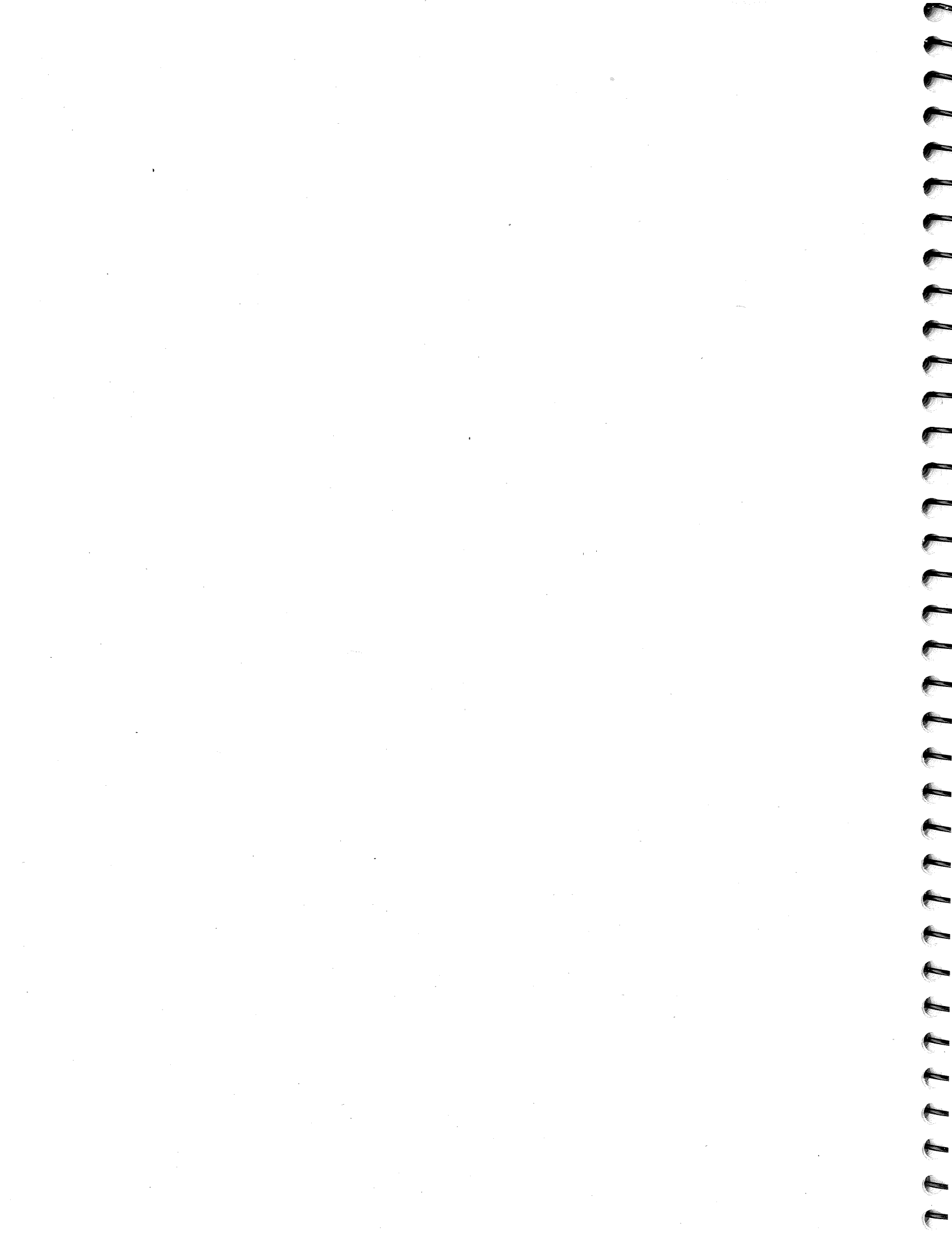
and impregnated with pyrite. Although bedding attributes have an easterly trend, the northerly trend of the pyrite-rich zone implies that it is a vein-filling deposit that follows a fracture." (1); see Ref. 1 for further lithologic description

"People in the area state that the mine produced about 10 to 12 gondolas of graphite for use in paint...The following statements, regarding the mines were made by local residents: 'They hauled the sulfides at night because we never saw any hauling in the day time.'; 'They were mining sulfides, soluble gold, arsenic, graphite, etc.'; 'It must of been some special secret stuff because we never could see what they mined and when they would ship it.'" (2)

(It is undetermined if anything has actually been produced from this "mine".)

References:

- 1) Morey. 1979, p. 6, 7
- 2) MN Dept. of Conservation. 1964a, p. 38, 99, 100



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