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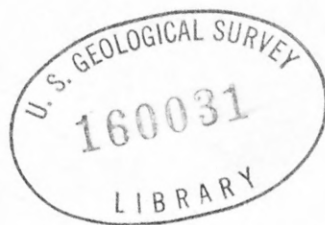
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UNITED STATES DEPARTMENT OF THE INTERIOR

U.S. GEOLOGICAL SURVEY

Reports - Open file series

DRILLING DATA IN THE MONTFORT, REWEY, MIFFLIN, BELMONT,
AND CALAMINE QUADRANGLES, WISCONSIN ZINC-LEAD DISTRICT

By

J. E. Carlson
J. E. Carlson 1919-



Prepared in cooperation with the
Wisconsin Geological and Natural History Survey

U. S. Geological Survey

OPEN FILE REPORT

U. S. Geological Survey

OPEN FILE REPORT

This report is preliminary and has
not been edited or reviewed for
conformity with Geological Survey
standards or nomenclature.

Released April 22 - 1956

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DRILLING DATA IN THE MONTFORT, REWEY, MIFFLIN, BELMONT,
AND CALAMINE QUADRANGLES, WISCONSIN ZINC-LEAD DISTRICT

By

J. E. Carlson

General statement

Sixty-six churn drill holes aggregating 10,351 feet were drilled in the fall of 1955 in the zinc-lead district of southwestern Wisconsin (fig. 1). This drilling was part of a cooperative program of geologic mapping by the U. S. Geological Survey and the Wisconsin Geologic and Natural History Survey.

The holes penetrate the Maquoketa, Galena, Decorah, and Platteville formations of ^{Late} Upper and Middle Ordovician age in areas of sparse outcrop and subsurface information. They provide basic data for stratigraphic study and for the projection of geologic structures in these areas. Exact location of the holes is shown in figs. 2, 3, 4, 5, and 6.

Generalized descriptive logs of the 66 holes were prepared mainly from driller's logs, and from a field study of the drill cuttings by J. E. Carlson. Where delineation of the formations drilled was difficult in the field, the cuttings were examined by binocular microscope.

MONTFORT QUADRANGLE

Algrim 1

Location: NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T. 5 N.,
 R. 1 E. Collar Elevation: 1169.1
 Contractor: J. D. Judd Total Depth: 122 ft.
 Drill Operator: W. Pahnke Depth to Water:
 Date Drilled: Sept. 24-28, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-8
DOLOMITE:	
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	8-88
DECORAH FORMATION:	
Ion ^{dolomite} member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	88-99
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	99-106
Guttenberg ^{limestone} member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	106-119
Spechts Ferry ^{shale} member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	119-122

Frank Andrew 1

Location: NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 22, T. 5 N., Collar Elevation: 1126.2
R. 1 W. Total Depth: 142 ft.
Contractor: J. D. Judd Depth to Water: 40 ft.
Drill Operator: W. Pahnke
Date Drilled: Oct. 3-5, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-10
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	10-10 $\frac{1}{4}$
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	10 $\frac{1}{4}$ -119
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	119-126
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	126-13 $\frac{1}{4}$
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	13 $\frac{1}{4}$ -136
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	136-139
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	139-142

Parland Andrew 1

Location: SE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 12, T. 5 N., Collar Elevation: 1143
 R. 1 W. Total Depth: 160 ft.
 Contractor: J. D. Judd Depth to Water: 19 ft.
 Drill Operator: L. Schloeman Cased
 Date Drilled: Sept. 28-30, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-12
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	12-106
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	106-119
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	119-127
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	127-140
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	140-142 $\frac{1}{2}$
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	142 $\frac{1}{2}$ -149
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches...	149-160

Bollant 1

Location: SE¹₄SE¹₄SW¹₄ sec. 24, T. 5 N.,
R. 1 W.

Collar Elevation: 1100.9

Total Depth: 138 ft.

Contractor: J. D. Judd

Depth to Water: 25 ft.

Drill Operator: W. Pahnke

Date Drilled: Oct. 5-6, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-10
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	10-97 $\frac{1}{2}$
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	97 $\frac{1}{2}$ -110
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	110-117 $\frac{1}{2}$
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	117 $\frac{1}{2}$ -129
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	129-132
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	132-136
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	136-138

Bollant 2

Location: NW¹₄SE¹₄SW¹₄ sec. 19, T. 5 N.,
R. 1 E.

Collar Elevation: 1137.1

Total Depth: 155 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: C. Komprood

Date Drilled: Oct. 4-5, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-10
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	10-10 $\frac{1}{2}$
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	10 $\frac{1}{2}$ -117
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	117-125
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	125-139
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	139-142
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	142-147
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	147-155

Cordts 1

Location: NE¹/₄NE¹/₄SE¹/₄ sec. 2, T. 5 N.,
R. 1 W.

Collar Elevation: 1160.4

Total Depth: 141 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: C. Komprood

Cased

Date Drilled: Sept. 30, Oct. 2, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-10
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	10-94
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	94-110
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	110-117
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	117-127
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	127-130
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	130-134
McGregor Member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches...	134-141

Hartsook 1

Location: NW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 12, T. 5 N.,
R. 1 W.

Collar Elevation: 1177.3

Total Depth: 180 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: W. Pahnke

Date Drilled: Sept. 28, Oct. 1, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-30
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	30-36
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	36-136
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	136-149
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	149-158
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	158-169
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	169-172 $\frac{1}{2}$
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	172 $\frac{1}{2}$ -176
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	176-180

Hill 1

Location: SE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 11, T. 5 N.,
R. 1 W.
Contractor: J. D. Judd
Drill Operator: W. Pahnke
Date Drilled: Sept. 29, Oct. 3, 1955

Collar Elevation: 1145.0
Total Depth: 147 ft.
Depth to Water: 65 ft.
Cased

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-10
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	10-103
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	103-115
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	115-123
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	123-136
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	136-139
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	139-143 $\frac{1}{2}$
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	143 $\frac{1}{2}$ -147

Sam Johns 1

Location: NE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 26, T. 6 N.,
R. 1 W.

Collar Elevation: 1159.3

Total Depth: 107 $\frac{1}{2}$ ft.

Contractor: J. D. Judd

Depth to Water: 55 ft.

Drill Operator: W. Pahnke

Date Drilled: Sept. 24-25, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-8
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	8-88
DECORAH FORMATION:	
Iron member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	88-102 $\frac{1}{2}$
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	102 $\frac{1}{2}$ -107 $\frac{1}{2}$

J. H. Johnsen 1

Location: NW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 25, T. 6 N.,
R. 1 W.

Contractor: J. D. Judd

Drill Operator: W. Pahnke

Date Drilled: Sept. 25-26, 1955

Collar Elevation: 1114.4

Total Depth: 90 ft.

Depth to Water: 47 ft.

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-15
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	15-58
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	58-71
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	71-79
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	79-86
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	86-89 $\frac{1}{2}$
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	89 $\frac{1}{2}$ -90

Simpson 1

Location: SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T. 5 N.,
R. 1 W.

Collar Elevation: 1171.7

Total Depth: 145 ft.

Contractor: J. D. Judd

Depth to Water: 18 ft.

Drill Operator: L. Schloeman

Date Drilled: Sept. 26-28, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-10
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	10-102
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	102-114
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	114-122
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	122-133
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	133-135
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	135-141
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	141-145

Staver 1

Location: NW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 27, T. 6 N.,
R. 1 W.

Collar Elevation: 1156.8

Total Depth: 120 ft.

Contractor: J. D. Judd

Depth to Water: 47 ft.

Drill Operator: L. Schloeman

Date Drilled: Sept. 22-23, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-18
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	18-93 $\frac{1}{2}$
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	93 $\frac{1}{2}$ -104
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	104-109 $\frac{1}{2}$
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	109 $\frac{1}{2}$ -114
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	114-115 $\frac{1}{2}$
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	115 $\frac{1}{2}$ -117
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	117-120

Weigel 1

Location: NW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 27, T. 6 N.,
R. 1 W.

Collar Elevation: 1158

Total Depth: 145 ft.

Contractor: J. D. Judd

Depth to Water: 95 ft.

Drill Operator: W. Pahnke

Date Drilled: Sept. 23-24, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-16
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	16-85
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	85-95
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	95-101
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	101-111
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	111-113 $\frac{1}{2}$
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	113 $\frac{1}{2}$ -117
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	117-142 $\frac{1}{2}$
Pecatonica ^{dolomite} member (quarry beds):	
Dolomite, light-tan, fine-granular; black phosphatic nodules in lower foot.....	142 $\frac{1}{2}$ -145

Comment: This hole was soft and highly oxidized.

Winters 1

Location: NW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 28, T. 6 N.,
R. 1 W.

Collar Elevation: 1151

Total Depth: 95 ft.

Contractor: J. D. Judd

Depth to Water: 45 ft.

Drill Operator: L. Schloeman

Date Drilled: Sept. 23-24, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-21
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	21-57
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	57-65
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	65-73
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	73-84
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	84-88
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	88-91 $\frac{1}{2}$
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches...	91 $\frac{1}{2}$ -95

REWEY QUADRANGLE

Bockhop 1

Location: SE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 21, T. 4 N., Collar Elevation: 1130.5
 R. 1 E. Total Depth: 90 ft.
 Contractor: J. D. Judd Depth to Water:
 Drill Operator: C. Komprood
 Date Drilled: Oct. 28-29, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-5
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	5-45
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	45-60
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	60-68
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	68-79
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	79-80
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	80-87 $\frac{1}{2}$
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	87 $\frac{1}{2}$ -90

Joe Gates 1

Location: NW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 34, T. 5 N., Collar Elevation: 1134.2
 R. 1 W. Total Depth: 90 ft.
 Contractor: J. D. Judd Depth to Water:
 Drill Operator: W. Pahnke Cased
 Date Drilled: Oct. 27-28, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-5
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	5-55
DECORAH FORMATION:	
Iron member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	55-65
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	65-72
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	72-82
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	82-85
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	85-87 $\frac{1}{2}$
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches.....	87 $\frac{1}{2}$ -90

John Gates 1

Location: SW $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 34, T. 5 N.,
R. 1 W.

Collar Elevation: 1171.8

Total Depth: 132 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: C. Komprood

Date Drilled: Oct. 5-6, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-5
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	5-90
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	90-100
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	100-107
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	107-119
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	119-122 $\frac{1}{2}$
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	122 $\frac{1}{2}$ -126
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	126-132

Fritz Gobrecht 1

Location: SW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 32, T. 4 N.,
R. 1 E.
Contractor: J. D. Judd
Driller: C. Komprood
Date Drilled: Oct. 25-28, 1955

Collar Elevation: 1178.2
Total Depth: 270 ft.
Depth to Water:
Cased

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess and residuum.....	0-5
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	5-120
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	120-225
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	225-237 $\frac{1}{2}$
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	237 $\frac{1}{2}$ -244
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	244-257
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	257-258
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	258-265
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	265-270

Estimated metallic mineral content			
Depth	Zinc	Lead	Iron
235-237			Trace
242 $\frac{1}{2}$ -247 $\frac{1}{2}$			Trace
252 $\frac{1}{2}$ -262 $\frac{1}{2}$			Trace
262 $\frac{1}{2}$ -267 $\frac{1}{2}$		Trace	Trace

Trace = approximately < 0.5% metal content (visual estimate)

Griswold 1

Location: SW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 33, T. 5 N.,
R. 1 W.

Collar Elevation: 1146.3

Total Depth: 117 $\frac{1}{2}$

Contractor: J. D. Judd

Depth to Water:

Drill Operator: W. Pahnke

Date Drilled: Oct. 7-9, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-10
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	10-72
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	72-85
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	85-93
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	93-107 $\frac{1}{2}$
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	107 $\frac{1}{2}$ -110
PLATTEVILLE FORMATION:	
Quimby's Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sublitho- graphic to fine-granular; chocolate brown shale in lower foot.....	110-115
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	115-117 $\frac{1}{2}$

Hardy 1

Location: SE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 33, T. 4 N.,
R. 1 E.

Collar Elevation: 1053.9

Total Depth: 128 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: W. Pahnke

Date Drilled: Oct. 25-26, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial: (Hole collar on quarry floor)	
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	0-30
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	30-44
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	44-50
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	50-62
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	62-62 $\frac{1}{2}$
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	62 $\frac{1}{2}$ -69
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	69-104
Pecatonica member (quarry beds):	
Dolomite, light-tan, fine-granular; black phosphatic nodules in lower foot.....	104-122 $\frac{1}{2}$
Glenwood ^{shale} member:	
Shale, green, dolomitic with quartz sand grains, dissemi- nated pyrite.....	122 $\frac{1}{2}$ -125
SANDSTONE: ST. PETER FORMATION:	
Sandstone, quartz, clear to frosted, medium-grained.....	125-128

Jenks 1

Location: NW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 18, T. 4 N.,
R. 1 E.

Contractor: J. D. Judd

Drill Operator: C. Komprood

Date Drilled: Nov. 1-2, 1955

Collar Elevation: 1146.2

Total Depth: 135 ft.

Depth to Water:

Cased

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-5
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	5-38
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	38-49
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	49-57 $\frac{1}{2}$
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	57 $\frac{1}{2}$ -72 $\frac{1}{2}$
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	72 $\frac{1}{2}$ -75
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	75-81
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	81-111
Pecatonica member (quarry beds):	
Dolomite, light-tan, fine-granular; black phosphatic nodules in lower foot.....	111-130
Glenwood member:	
Shale, green, dolomitic with quartz sand grains, dissemi- nated pyrite.....	130-132
ST. PETER FORMATION:	
Sandstone, quartz, clear to frosted, medium-grained.....	132-135

Harvey Johnson 1

Location: NW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 31, T. 4 N.,
R. 1 E.

Collar Elevation: 1044.2

Total Depth: 95 ft.

Contractor: J. D. Judd

Depth to Water

Drill Operator: C. Komprood

Date Drilled: Nov. 3, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-5
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	5-50
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	50-65
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	65-73
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	73-82
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	82-83
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	83-90
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	90-95

Johns and Turnbull 1

Location: $SW\frac{1}{4}SE\frac{1}{4}NE\frac{1}{4}$ sec. 17, T. 4 N.,
R. 1 E.

Collar Elevation: 1115.2

Total Depth: 115 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: C. Komprood

Date Drilled: Oct. 29-30, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-5
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	5-15
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	15-30
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	30-38
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	38-50
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	50-52½
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	52½-62½
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	62½-92½
Pecatonica member (quarry beds):	
Dolomite, light-tan, fine-granular; black phosphatic nodules in lower foot.....	92½-111
Glenwood member:	
Shale, green, dolomitic with quartz sand grains, dissemi- nated pyrite.....	111-112½
ST. PETER FORMATION:	
Sandstone, quartz, clear to frosted, medium-grained.....	112½-115

Kies 1

Location: NW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 35, T. 5 N.,
R. 1 W.

Contractor: J. D. Judd
Drill Operator: W. Pahnke

Date Drilled: Oct. 26-27, 1955

Collar Elevation: 1111.4

Total Depth: 70 ft.

Depth to Water:

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum; oxidized.....	0-25
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	25-30
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	30-43
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	43-51
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	51-63
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	63-65
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	65-67 $\frac{1}{2}$
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	67 $\frac{1}{2}$ -70

Kies 2

Location: E $\frac{1}{2}$ SE $\frac{1}{4}$ sec. 31, T. 4 N.,
R. 1 E.

Collar Elevation: 1262.5

Total Depth: 360 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: W. Pahnke

Cased

Date Drilled: Nov. 1-5, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-5
MAQUOKETA FORMATION:	
Shale, dark-brown to gray, carbonaceous; depauperate fossils common in lower 3 feet.....	5-90
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	90-210
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	210-315
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	315-327 $\frac{1}{2}$
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	327 $\frac{1}{2}$ -335
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	335-350
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	350-352 $\frac{1}{2}$
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	352 $\frac{1}{2}$ -358 $\frac{1}{2}$
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	358 $\frac{1}{2}$ -360

Hugh Nodolf 1

Location: $W\frac{1}{2}NW\frac{1}{4}NE\frac{1}{4}$ sec. 2, T. 4 N.,
R. 1 W.

Collar Elevation: 1067

Total Depth: 95 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: W. Pahnke

Cased

Date Drilled: Oct. 28-31, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-5
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	5-10
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	10-18
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	18-30
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	30-32 $\frac{1}{2}$
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	32 $\frac{1}{2}$ -40
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	40-72 $\frac{1}{2}$
Pecatonica member (quarry beds):	
Dolomite, light-tan, fine-granular; black phosphatic nodules in lower foot.....	72 $\frac{1}{2}$ -90
Glenwood member:	
Shale, green dolomitic with quartz sand grains, dissemi- nated pyrite.....	90-92 $\frac{1}{2}$
ST. PETER FORMATION:	
Sandstone, quartz, clear to frosted, medium-grained.....	92 $\frac{1}{2}$ -95



MIFFLIN QUADRANGLE

Bartels 1

Location: NE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 11, T. 3 N., Collar Elevation: 1056.6
 R. 1 E. Total Depth: 170 ft.
 Contractor: J. D. Judd Depth to Water:
 Drill Operator: C. Komprood Cased
 Date Drilled: Nov. 8-11, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0- 5
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	5-20
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	20-125
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	125-137
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	137-145
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	145-157 $\frac{1}{2}$
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	157 $\frac{1}{2}$ -158
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	158-168
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	168-170

Dolphin 1

Location: S¹/₂NE¹/₄SE¹/₄ sec. 33, T. 4 N.,
R. 1 E.

Collar Elevation: 1134

Total Depth: 249 ft.

Contractor: J. D. Judd

Depth to Water: 75 ft.

Drill Operator: W. Pahnke

Date Drilled: Oct. 21-24, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0- 5
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	5-93
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	93-203
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	203-215
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	215-223
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	223-234
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	234-236
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	236-246
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	246-249

F. G. Gobrecht 1

Location: SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 4, T. 3 N.,
R. 1 E.

Collar Elevation: 1167.7

Total Depth: 277 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: C. Komprood

Date Drilled: Nov. 4-6, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0- 5
MAQUOKETA FORMATION:	
Shale, dark-brown to gray, carbonaceous; depauperate fossils common in lower 3 feet.....	5-18
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff or drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	18-132
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	132-237
DECORAH FORMATION:	
Iron member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	237-250
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	250-259
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	259-267 $\frac{1}{2}$
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	267 $\frac{1}{2}$ -268
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	268-274
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	274-277

Estimated metallic mineral content			
<u>Depth</u>	<u>Zinc</u>	<u>Lead</u>	<u>Iron</u>
20-30			Shine
70-80			Shine
175-180			Shine
200-205			Shine
240-245			Shine
252-255			Shine
270-275		Shine	Shine
275-277		Shine	Shine

/ shine = approximately 0.5-1.5 % metal content
(visual estimate)

Goke 1

Location: NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 1, T. 3 N.,
R. 1 E.

Collar Elevation: 1095.1

Total Depth: 212 ft.

Contractor: J. D. Judd

Depth to Water: 25 ft.

Drill Operator: W. Pahnke

Cased

Date Drilled: Oct. 15-18, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0- 5
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	5-55
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	55-165
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	165-179
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	179-186
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	186-198
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	198-199
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	199-208
McGregor member (Trenton lime):	
Limestone, light to dark-gray with darker gray patches.....	208-212

Heins 1

Location: SE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 36, T. 4 N.,
R. 1 E.

Collar Elevation: 1105

Total Depth: 170 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: C. Komprood

Date Drilled: Oct. 18-20, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0- 5
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	5-17
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	17-122
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	122-134
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	134-142 $\frac{1}{2}$
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	142 $\frac{1}{2}$ -156
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	156-157 $\frac{1}{2}$
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	157 $\frac{1}{2}$ -166
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	166-170

Kearns 1

Location: SW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 33, T. 4 N.,
R. 2 E.

Collar Elevation: 1077.5

Total Depth: 135 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: C. Komprood

Date Drilled: Oct. 7-8, 1955

Generalized Drill Hole Record

Depth
(feet)

Surficial:

Soil, loess, and residuum..... 0-5

GALENA FORMATION:

Cherty unit (drab beds):

Dolomite, buff to tan, limonite-stained, argillaceous;
gray to white chert..... 5-88

DECORAH FORMATION:

Ion member (gray and blue beds):

Dolomite and limestone, light-gray, argillaceous; green
shale partings..... 88-99

Dolomite and limestone, gray to blue-gray, mottled with
dark specks; green shale partings..... 99-106

Guttenberg member (oil rock):

Limestone and dolomite, light-brown to tan, fossiliferous,
fine-granular; brown shale common..... 106-117 $\frac{1}{2}$

Spechts Ferry member (clay bed):

Shale, blue-green to gray; light gray, dense limestone;
black phosphatic nodules; white to tan bentonite in
upper part..... 117 $\frac{1}{2}$ -118

PLATTEVILLE FORMATION:

Quimbys Mill member (glass rock):

Limestone and dolomite, dark-brown to tan, dense, sub-
lithographic to fine-granular; chocolate brown shale
in lower foot..... 118-129

McGregor member (Trenton lime):

Limestone, light- to dark-gray with darker gray patches.... 129-135

Klinge 1

Location: NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 30, T. 4 N.,
R. 2 E.

Collar Elevation: 1066

Total Depth: 120 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: C. Komprood

Date Drilled: Oct. 20-21, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-5
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	5-78
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	78-90
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	90-97
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	97-109
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	109-110
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	110-118
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	118-120

Martin 1

Location: SE¹₄NE¹₄SE¹₄ sec. 31, T. 4 N.,
R. 2 E.

Contractor: J. D. Judd

Drill Operator: W. Pahnke

Date Drilled: Oct. 12-14, 1955

Collar Elevation: 1041.1

Total Depth: 125 ft.

Depth to Water: 80 ft.

Cased

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-6
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	6-80
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	80-90
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	90-96
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	96-110
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	110-111
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	111-121
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	121-125

W. Nodolf

Location: SW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T. 3 N.,
R. 2 E.

Contractor: J. D. Judd

Drill Operator: C. Komprood

Date Drilled: Oct. 12-13, 1955

Collar Elevation: 1069.4

Total Depth: 166 ft.

Depth to Water:

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0- 5
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	5- 20
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	20-125
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	125-137
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	137-145
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	145-155
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	155-162 $\frac{1}{2}$
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	162 $\frac{1}{2}$ -166

Point Farms, Inc. 1

Location: SW¹/₄ NE¹/₄ SE¹/₄ sec. 33, T. 4 N., Collar Elevation: 1075.2
R. 2 E. Total Depth: 132 ft.
Contractor: J. D. Judd Depth to Water:
Drill Operator: W. Pahnke
Date Drilled: Oct. 10-11, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-5
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	5-89
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	89-98
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	98-105
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	105-118
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	118-119
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	119-129
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	129-132

Point Farms, Inc. 2

Location: NE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32, T. 4 N., Collar Elevation: 1052.6
R. 2 E. Total Depth: 145 ft.
Contractor: J. D. Judd Depth to Water:
Drill Operator: C. Komprood
Date Drilled: Oct. 10-11, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-5
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	5-103
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	103-114
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	114-121
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	121-132 $\frac{1}{2}$
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	132 $\frac{1}{2}$ -133 $\frac{1}{2}$
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	133 $\frac{1}{2}$ -143
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	143-145

Schult 1

Location: NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 1, T. 3 N.,
R. 1 E.

Contractor: J. D. Judd

Drill Operator: C. Komprood

Date Drilled: Oct. 14-16, 1955

Collar Elevation: 1087.8

Total Depth: 190 ft.

Depth to Water:

Cased

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0- 5
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	5-42
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	42-147 $\frac{1}{2}$
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	147 $\frac{1}{2}$ -157 $\frac{1}{2}$
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	157 $\frac{1}{2}$ -162 $\frac{1}{2}$
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	162 $\frac{1}{2}$ -175
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	175-177 $\frac{1}{2}$
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	177 $\frac{1}{2}$ -187 $\frac{1}{2}$
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	187 $\frac{1}{2}$ -190

Steinhoff 1

Location: N¹/₂NW¹/₄NE¹/₄ sec. 1, T. 3 N.,
R. 1 E.

Collar Elevation: 1067.4

Total Depth: 152¹/₂ ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: W. Pahnke

Date Drilled: Oct. 13-15, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0- 7
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	7-106
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	106-117
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	117-125
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	125-141
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	141-142
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	142-149
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	149-152 ¹ / ₂

E. Voigts 1

Location: SE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$, sec. 36, T. 4 N., Collar Elevation: 1053.9
 R. 1 E. Total Depth: 120 ft.
 Contractor: J. D. Judd Depth to Water:
 Drill Operator: C. Komprood
 Date Drilled: Oct. 15-16, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0- 5
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	5-78
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	78-90
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	90-97 $\frac{1}{2}$
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	97 $\frac{1}{2}$ -107 $\frac{1}{2}$
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	107 $\frac{1}{2}$ -108
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	108-118
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches.....	118-120

H. Voigts 1

Location: SW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, T. 3 N.,
R. 1 E.

Collar Elevation: 1187.3

Total Depth: 290 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: C. Komprood

Cased

Date Drilled: Oct. 21-25, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0- 5
MAQUOKETA FORMATION:	
Shale, dark-brown to gray, carbonaceous; depauperate fossils common in lower 3 feet.....	5-20
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	20-141
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	141-246
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	246-257 $\frac{1}{2}$
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	257 $\frac{1}{2}$ -266
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	266-280
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light-gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	280-281
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	281-289
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	289-290

R. Voigts 1

Location: NW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 10, T. 3 N.,
R. 1 E.

Collar Elevation: 1093.5

Total Depth: 215 ft.

Contractor: J. D. Judd

Depth to Water: 22 ft.

Drill Operator: W. Pahnke

Date Drilled: Oct. 19-21, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-10
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	10-66
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	66-172
DECORAH FORMATION:	
Iron member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	172-182 $\frac{1}{2}$
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	182 $\frac{1}{2}$ -192 $\frac{1}{2}$
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	192 $\frac{1}{2}$ -206
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	206-207 $\frac{1}{2}$
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	207 $\frac{1}{2}$ -211
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	211-215

BELMONT QUADRANGLE

Adickes 1

Location: SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 22, T. 3 N.,
R. 1 E.
Collar Elevation: 1052.8
Total Depth: 150 ft.
Contractor: J. D. Judd
Depth to Water:
Drill Operator: W. Pahnke
Date Drilled: Nov. 9-11, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0- 5
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	5-115
DECORAH FORMATION:	
Iron member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	115-126
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	126-132 $\frac{1}{2}$
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	132 $\frac{1}{2}$ -149 $\frac{1}{2}$
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	149 $\frac{1}{2}$ -150

Estimated metallic mineral content

<u>Depth</u>	<u>Zinc</u>	<u>Lead</u>	<u>Iron</u>
45-65			20%

/ % metallic content

Edwards 1

Location: NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 28, T. 3 N.,
R. 1 E.

Collar Elevation: 1057.5

Total Depth: 187 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: W. Pahnke

Date Drilled: Nov. 12-14, 1955

Generalized Drill Hole Record

Depth
(feet)

Surficial:

Soil, loess, and residuum..... 0- 5

GALENA FORMATION:

Noncherty unit (buff beds):

Dolomite, buff and drab, limonite-stained, argillaceous,
fine- to medium-crystalline..... 5-32

Cherty unit (drab beds):

Dolomite, buff to tan, limonite-stained, argillaceous;
gray to white chert..... 32-137

DECORAH FORMATION:

Ion member (gray and blue beds):

Dolomite and limestone, light-gray, argillaceous; green
shale partings..... 137-149

Dolomite and limestone, gray to blue-gray, mottled with
dark specks; green shale partings..... 149-157

Guttenberg member (oil rock):

Limestone and dolomite, light-brown to tan, fossiliferous,
fine-granular; brown shale common..... 157-172

Spechts Ferry member (clay bed):

Shale, blue-green to gray; light gray, dense limestone;
black phosphatic nodules; white to tan bentonite in
upper part..... 172-172 $\frac{1}{2}$

PLATTEVILLE FORMATION:

Quimbys Mill member (glass rock):

Limestone and dolomite, dark-brown to tan, dense, sub-
lithographic to fine-granular; chocolate brown shale
in lower foot..... 172 $\frac{1}{2}$ -182 $\frac{1}{2}$

McGregor member (Trenton lime):

Limestone, light- to dark-gray with darker gray patches.... 182 $\frac{1}{2}$ -187

✓
Harms 1

Location: SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 26, T. 3 N.,
R. 1 E.
Contractor: J. D. Judd
Drill Operator: C. Komprood
Date Drilled: Nov. 12-13, 1955

Collar Elevation: 1059.7
Total Depth: 162 ft.
Depth to Water:

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-14
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	14-110
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	110-125
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	125-133
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	133-149 $\frac{1}{2}$
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	149 $\frac{1}{2}$ -150
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	150-161
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches.....	161-162

John Hillery 1

Location: SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 4, T. 3 N., R. 2 E.	Collar Elevation: 1063
Contractor: J. D. Judd	Total Depth: 160 ft.
Drill Operator: W. Pahnke	Depth to Water:
Date Drilled: Nov. 23-24, 1955	Cased

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-15
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	15-120
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	120-130
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	130-138
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	138-147
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	147-147 $\frac{1}{2}$
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	147 $\frac{1}{2}$ -157 $\frac{1}{2}$
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	157 $\frac{1}{2}$ -160

Ervin Johnson 1

Location: SW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 33, T. 3 N.,	Collar Elevation: 1076.4
R. 2 E.	Total Depth: 170 ft.
Contractor: J. D. Judd	Depth to Water:
Drill Operator: C. Komprood	Cased
Date Drilled: Nov. 19-20, 1955	

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0- 5
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	5-15
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	15-120
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	120-135
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	135-142 $\frac{1}{2}$
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	142 $\frac{1}{2}$ -155
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	155-156
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	156-168
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	168-170

Knebel 1

Location: NW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 23, T. 3 N.,
R. 1 E.

Collar Elevation: 1079.2

Total Depth: 172 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: W. Pahnke

Date Drilled: Nov. 16-19, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-10
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	10-30
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	30-135
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	135-145
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	145-150
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	150-157
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	157-157 $\frac{1}{2}$
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot....CALICO.....	157 $\frac{1}{2}$ -168
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	168-172

McNett 1

Location: SW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 8, T. 3 N., Collar Elevation: 1053.2
 R. 2 E. Total Depth: 132 ft.
 Contractor: J. D. Judd Depth to Water:
 Drill Operator: W. Pahnke
 Date Drilled: Nov. 8-9, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0- 5
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	5-85
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	85-95
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	95-103
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	103-117
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	117-117 $\frac{1}{2}$
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	117 $\frac{1}{2}$ -129
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	129-132

Miller 1

Location: NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29, T. 3 N.,
R. 2 E.

Collar Elevation: 1077.4

Total Depth: 168 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: W. Pahnke

Cased

Date Drilled: Nov. 18-19, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-10
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	10-122
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	122-132 $\frac{1}{2}$
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	132 $\frac{1}{2}$ -139
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	139-152
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	152-163
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	163-168

Lester Riter 1

Location: NE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 9, T. 2 N.,
R. 2 E.

Collar Elevation: 1076.7

Total Depth: 171 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: C. Komprood

Cased

Date Drilled: Nov. 21-22, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial	
Soil, loess, and residuum.....	0- 5
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	5-10
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	10-125
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	125-140
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	140-148
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	148-155
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	155-156
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sublitho- graphic to fine-granular; chocolate brown shale in lower foot.....	156-169
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	169-171

Estimated metallic mineral content

<u>Depth</u>	<u>Zinc</u>	<u>Lead</u>	<u>Iron</u>
55-65		Trace	Good
65-70	Trace	Trace	Good
70-80	Trace		Good
80-90	Trace		Good
90-95		Trace	Good
95-115			Good
115-125		Trace	Good
148-155		Trace	Shine
156-169		Shine	Shine

Harley Riter 1

Location: SE¹/₄SE¹/₄NE¹/₄ sec. 25, T. 3 N., Collar Elevation: 1076.9
R. 1 E. Total Depth: 185 ft.
Contractor: J. D. Judd Depth to Water
Drill Operator: C. Komprood
Date Drilled: Nov. 14-15, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-20
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	20-30
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	30-140
DECORAH FORMATION:	
Iron member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	140-153
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	153-160
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	160-174
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	174-175
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	175-183
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	183-185

W. M. Riter 1

Location: NW $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 19, T. 3 N.,	Collar Elevation: 1078.1
R. 2 E.	Total Depth: 182 ft.
Contractor: J. D. Judd	Depth to Water: 45 ft.
Drill Operator: C. Komprood	Cased
Date Drilled: Nov. 17-18, 1955	

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0- 5
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	5-37
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	37-142
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	142-152
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	152-160
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	160-172
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	172-172 $\frac{1}{2}$
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	172 $\frac{1}{2}$ -181
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	181-182

Speth 1

Location: SE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 26, T. 3 N.,
R. 1 E.

Collar Elevation: 1040

Total Depth: 150 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: C. Komprood

Date Drilled: Nov. 10-11, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-18
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	18-105
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	105-115
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	115-123
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	123-137
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	137-137 $\frac{1}{2}$
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	137 $\frac{1}{2}$ -148
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	148-150

Von Glahn 1

Location: SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 7, T. 3 N.,
R. 2 E.

Collar Elevation: 1045.9

Total Depth: 134 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: W. Pahnke

Date Drilled: Nov. 5-6, 1955

Generalized Drill Hole Record

Depth
(feet)

Surficial:

Soil, loess and residuum..... 0- 5

GALENA FORMATION:

Cherty unit (drab beds):

Dolomite, buff to tan, limonite-stained, argillaceous;
gray to white chert..... 5-90

DECORAH FORMATION:

Ion member (gray and blue beds):

Dolomite and limestone, light-gray, argillaceous; green
shale partings..... 90-100

Dolomite and limestone, gray to blue-gray, mottled with
dark specks; green shale partings..... 100-105

Guttenberg member (oil rock):

Limestone and dolomite, light-brown to tan, fossiliferous,
fine-granular; brown shale common..... 105-117 $\frac{1}{2}$

Spechts Ferry member (clay bed):

Shale, blue-green to gray; light gray, dense limestone;
black phosphatic nodules; white to tan bentonite in
upper part..... 117 $\frac{1}{2}$ -118

PLATTEVILLE FORMATION:

Quimbys Mill member (glass rock):

Limestone and dolomite, dark-brown to tan, dense, sub-
lithographic to fine-granular; chocolate brown shale in
lower foot..... 118-129

McGregor member (Trenton lime):

Limestone, light- to dark-gray with darker gray patches.... 129-134

CALAMINE QUADRANGLE

Arnsmeier 1

Location: SW¹/₄SE¹/₄SE¹/₄ sec. 5, T. 2 N.,
R. 3 E.
Contractor: J. D. Judd
Drill Operator: W. Pahnke
Date Drilled: Nov. 30, Dec. 1, 1955

Collar Elevation: 1019.6
Total Depth: 180 ft.
Depth to Water:

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-15
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	15-27
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	27-132
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	132-145
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	145-152 ¹ / ₂
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	152 ¹ / ₂ -165
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	165-179
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	179-180

Estimated metallic mineral content

Depth	Zinc	Lead	Iron
160-162 ¹ / ₂	Shine	Shine	
162 ¹ / ₂ -165		Shine	

Bonjour 1

Location: SW¹₄SW¹₄SW¹₄ sec. 27, T. 3 N.,
R. 2 E.

Contractor: J. D. Judd

Drill Operator: W. Pahnke

Date Drilled: Nov. 21-23, 1955

Collar Elevation: 1049.5

Total Depth: 133 ft.

Depth to Water:

Cased

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0- 5
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	5-85
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	85-95
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	95-102 $\frac{1}{2}$
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	102 $\frac{1}{2}$ -114 $\frac{1}{2}$
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	114 $\frac{1}{2}$ -115
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	115-129
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches.....	129-133

O. Hillery 1

Location: ~~NE 1/4 NW 1/4 SW 1/4~~ NW 1/4 NE 1/4 SW 1/4 sec. 12, T. 2 N.,
R. 2 E.

Collar Elevation: 1036.7

Total Depth: 186 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: W. Pahnke

Date Drilled: Nov. 28-30, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-15
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	15-25
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	25-138
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	138-150
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	150-157
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	157-169½
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	169½-170
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	170-182½
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	182½-186

Estimated metallic mineral content			
Depth	Zinc	Lead	Iron
55-60	Shine		Shine
130-137½	Shine		Shine
140-142½	Shine		Shine
157½-167½	Shine		Shine
167½-172½	Shine		Shine
172½-182½	Shine		Shine
-61-			

McKillip 1

Location: SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 10, T. 3 N.,
R. 3 E.

Contractor: J. D. Judd

Drill Operator: Curtis Komprood

Date Drilled: Nov. 25-26, 1955

Collar Elevation: 1030.7

Total Depth: 117 ft.

Depth to Water:

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0- 5
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	5-75
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	75-87
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	87-95
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	95-110
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	110-115
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	115-117

McWilliams 1

Location: NW $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 22, T. 2 N.,
R. 2 E.

Collar Elevation: 1002

Total Depth: 158 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: C. Komprood

Date Drilled: Nov. 23-24, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0-20
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	20-110
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	110-122 $\frac{1}{2}$
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	122 $\frac{1}{2}$ -130
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	130-142 $\frac{1}{2}$
Spechts Ferry member (clay bed):	
Shale, blue-green to gray; light gray, dense limestone; black phosphatic nodules; white to tan bentonite in upper part.....	142 $\frac{1}{2}$ -143
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	143-157
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	157-158

Merriam 1

Location: SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 16, T. 2 N.,
R. 3 E.

Collar Elevation: 961.8

Total Depth: 145 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: C. Komprood

Date Drilled: Dec. 1-2, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0- 5
GALENA FORMATION:	
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	5-105
DECORAH FORMATION:	
Iron member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	105-117
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	117-125
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	125-130
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sublitho- graphic to fine-granular; chocolate brown shale in lower foot.....	130-144 $\frac{1}{2}$
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches.....	144 $\frac{1}{2}$ -145

Lawrence Mill 1

Location: SE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 17, T. 2 N.,
R. 3 E.

Collar Elevation: 994.5

Total Depth: 176 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: Walter Pahnke

Date Drilled: Dec. 2-3, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0- 5
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	5-30
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	30-135
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	135-147 $\frac{1}{2}$
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	147 $\frac{1}{2}$ -153
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	153-161
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sublitho- graphic to fine-granular; chocolate brown shale in lower foot.....	161-172 $\frac{1}{2}$
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	172 $\frac{1}{2}$ -176

Estimated zinc and lead		
Depth	Zinc	Lead
110-125	Shine	Shine
130-135	Shine	Shine
135-142 $\frac{1}{2}$	Shine	Shine
152 $\frac{1}{2}$ -155	Shine	Shine
155-157 $\frac{1}{2}$	Shine	Shine
157 $\frac{1}{2}$ -160	Shine	Shine
160-165	Shine	Shine
165-172 $\frac{1}{2}$	Shine	Shine

Noble & Shaw 1

Location: SW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 18, T. 2 N.,
R. 3 E.

Collar Elevation: 1002

Total Depth: 165 ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: C. Komprood

Date Drilled: Dec. 3-5, 1955

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0- 5
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	5-12
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	12-117
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	117-127
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	127-135
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	135-149
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock)I	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	149-162
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	162-165

Estimated metallic mineral content

<u>Depth</u>	<u>Zinc</u>	<u>Lead</u>	<u>Iron</u>
150-152			Shine
160-163	Shine		

Olson 1

Location: ~~S. 1/4 NW 1/4~~ ^{NW 1/4 NE 1/4 SE 1/4} sec. 10, T. 2 N.,
R. 2 E.
Contractor: J. D. Judd
Drill Operator: W. Pahnke
Date Drilled: Nov. 25-28, 1955

Collar Elevation: 1018.9
Total Depth: 188 ft.
Depth to Water:

Generalized Drill Hole Record

	Depth (feet)
Surficial:	
Soil, loess, and residuum.....	0- 5
GALENA FORMATION:	
Noncherty unit (buff beds):	
Dolomite, buff and drab, limonite-stained, argillaceous, fine- to medium-crystalline.....	5-35
Cherty unit (drab beds):	
Dolomite, buff to tan, limonite-stained, argillaceous; gray to white chert.....	35-140
DECORAH FORMATION:	
Ion member (gray and blue beds):	
Dolomite and limestone, light-gray, argillaceous; green shale partings.....	140-150
Dolomite and limestone, gray to blue-gray, mottled with dark specks; green shale partings.....	150-157½
Guttenberg member (oil rock):	
Limestone and dolomite, light-brown to tan, fossiliferous, fine-granular; brown shale common.....	157½-170
PLATTEVILLE FORMATION:	
Quimbys Mill member (glass rock):	
Limestone and dolomite, dark-brown to tan, dense, sub- lithographic to fine-granular; chocolate brown shale in lower foot.....	170-184
McGregor member (Trenton lime):	
Limestone, light- to dark-gray with darker gray patches....	184-188

Ross 1

Location: NE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 15, T. 3 N.,
R. 3 E.
Contractor: J. D. Judd
Drill Operator: C. Komprood
Date Drilled: Nov. 28-30, 1955

Collar Elevation: 1043
Total Depth: 149 ft.
Depth to Water:

Generalized Drill Hole Record

Depth
(feet)

Surficial:

Soil, loess, and residuum..... 0- 5

GALENA FORMATION:

Cherty unit (drab beds):

Dolomite, buff to tan, limonite-stained, argillaceous;
gray to white chert..... 5-107

DECORAH FORMATION:

Ion member (gray and blue beds):

Dolomite and limestone, light-gray, argillaceous; green
shale partings..... 107-115

Dolomite and limestone, gray to blue-gray, mottled with
dark specks; green shale partings..... 115-123

Guttenberg member (oil rock):

Limestone and dolomite, light-brown to tan, fossiliferous,
fine-granular; brown shale common..... 123-137 $\frac{1}{2}$

PLATTEVILLE FORMATION:

Quimbys Mill member (glass rock):

Limestone and dolomite, dark-brown to tan, dense, sub-
lithographic to fine-granular; chocolate brown shale
in lower foot..... 137 $\frac{1}{2}$ -148

McGregor member (Trenton lime):

Limestone, light- to dark-gray with darker gray patches.... 148-149

Estimated metallic mineral content

<u>Depth</u>	<u>Zinc</u>	<u>Lead</u>	<u>Iron</u>
120-125			Shine
130-132 $\frac{1}{2}$	Trace		
132 $\frac{1}{2}$ -135	Trace	Trace	

Sauer 1

Location: NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 7, T. 2 N.,
R. 3 E.

Collar Elevation: 1015.9

Total Depth: 177 $\frac{1}{2}$ ft.

Contractor: J. D. Judd

Depth to Water:

Drill Operator: C. Komprood

Date Drilled: Nov. 25-26, 1955

Generalized Drill Hole Record

Depth
(feet)

Surficial:

Soil, loess, and residuum..... 0- 5

GALENA FORMATION:

Noncherty unit (buff beds):

Dolomite, buff and drab, limonite-stained, argillaceous,
fine- to medium-crystalline..... 5-35

Cherty unit (drab beds):

Dolomite, buff to tan, limonite-stained, argillaceous; gray
to white chert..... 35-137 $\frac{1}{2}$

DECORAH FORMATION:

Ion member (gray and blue beds):

Dolomite and limestone, light-gray, argillaceous; green
shale partings..... 137 $\frac{1}{2}$ -147

Dolomite and limestone, gray to blue-gray, mottled with
dark specks; green shale partings..... 147-153

Guttenberg member (oil rock):

Limestone and dolomite, light-brown to tan, fossiliferous,
fine-granular; brown shale common..... 153-157 $\frac{1}{2}$

Spechts Ferry member (clay bed):

Shale, blue-green to gray; light gray, dense limestone;
black phosphatic nodules; white to tan bentonite in
upper part..... 157 $\frac{1}{2}$ -158

PLATTEVILLE FORMATION:

Quimbys Mill member (glass rock):

Limestone and dolomite, dark-brown to tan, dense, sub-
lithographic to fine-granular; chocolate brown shale
in lower foot..... 158-166 $\frac{1}{2}$

McGregor member (Trenton lime):

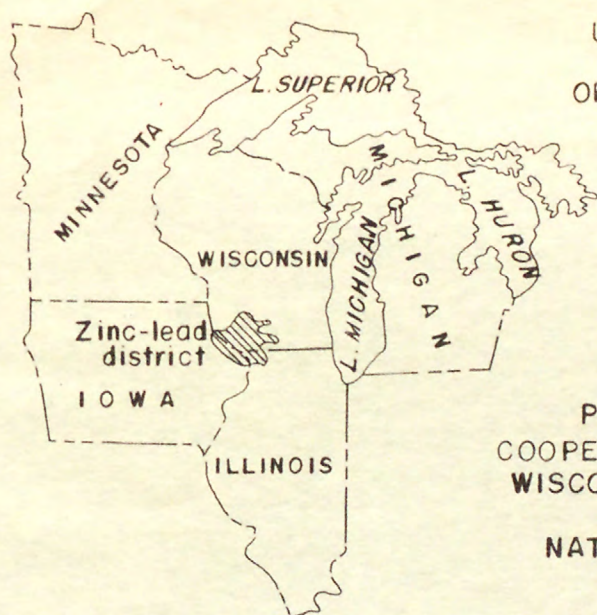
Limestone, light- to dark-gray with darker gray patches.... 166 $\frac{1}{2}$ -177 $\frac{1}{2}$

Metallic mineral content (Figures are assay values, shine & trace notations
are visual estimations)

<u>Depth</u>	<u>Zinc</u>	<u>Lead</u>	<u>Iron</u>
110-115	0.50 7.	2.30 7.	
115-120	3.65	0.60	
120-122 $\frac{1}{2}$	1.30	0.40	
122 $\frac{1}{2}$ -125	0.50	0.35	
125-127 $\frac{1}{2}$	5.2	0.40	
127 $\frac{1}{2}$ -130	1.70	0.35	
130-132 $\frac{1}{2}$	3.30	0.40	
132 $\frac{1}{2}$ -135	3.70	0.45	
135-137 $\frac{1}{2}$		Shine 2/	
137 $\frac{1}{2}$ -140	Trace	Trace 3/	
140-147 $\frac{1}{2}$		Trace	
150-157 $\frac{1}{2}$		Trace	
157 $\frac{1}{2}$ -165		Trace	Trace

- 1/ metallic content in percent
- 2/ approximately 0.5-1.5 % metallic content
- 3/ approximately <0.5 % metallic content

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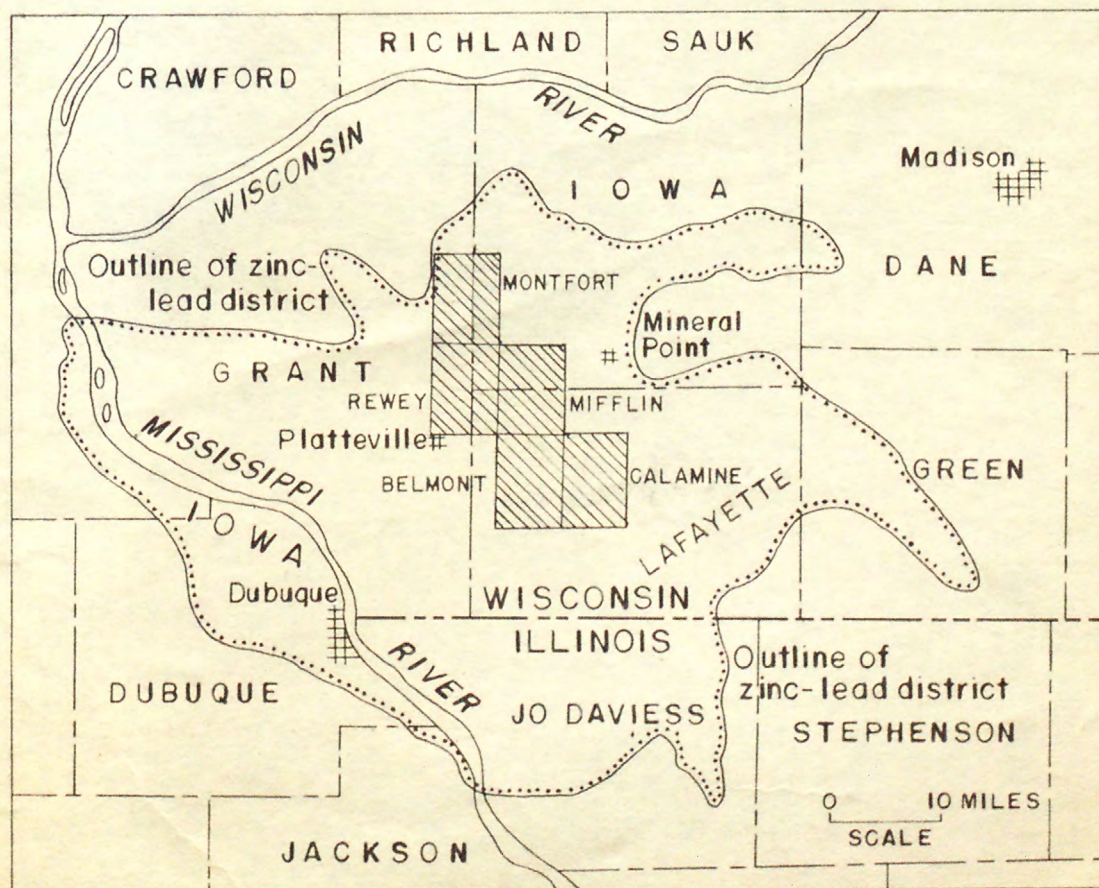
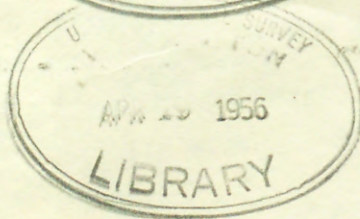
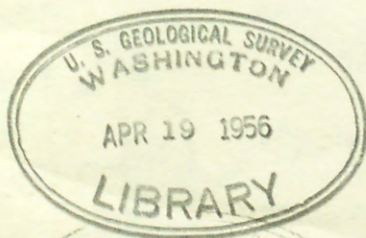


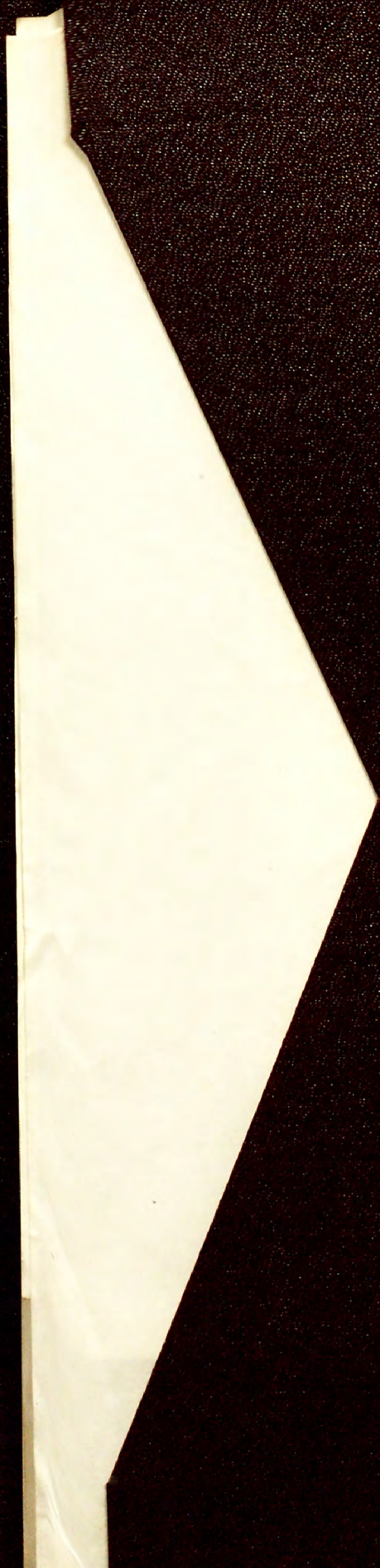
Figure 1. Index maps showing the location of the Montfort, Rewey, Mifflin, Belmont, and Calamine quadrangles, Wisconsin.

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