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186 Geologic map and recent drilling data of the Sinsinawa River area,
Grant County, Wisconsin

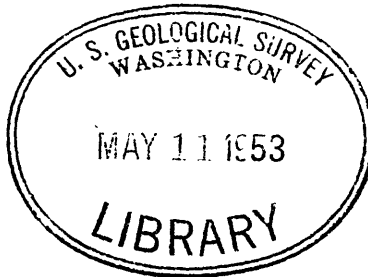
John Flint
J. W. Allingham, ¹⁹³⁰A. E. Flint 1933
" and A. F. Agnew ¹⁹³³

U. S. Geological Survey

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This report and accompanying illustrations are preliminary and have not been edited or reviewed for conformity with U. S. Geological Survey standards and nomenclature.

Prepared in cooperation with the Wisconsin Geological and Natural History Survey

Geologic map and recent drilling data of the Sinsinawa River area,
Grant County, Wisconsin

J. W. Allingham, A. E. Flint,
and A. F. Agnew
U. S. Geological Survey

A geologic map and recent drilling data of the Sinsinawa River area, Grant County, Wisconsin, are now available for examination.

The geologic mapping and exploratory drilling in this area are part of the cooperative investigations of the zinc-lead district by the Geological Survey and the Wisconsin Geological and Natural History Survey. The data complement previous mapping of the Hazel Green-Shullsburg area and area east of Cuba City, and the interpretations of the data indicate that possible ore-bearing synclinal structures extend westward into the Sinsinawa River area.

Most of the geology of the Sinsinawa River area was mapped during 1950-51 by John W. Allingham, Arthur E. Flint, and Allen F. Agnew in order to appraise more adequately the potentialities of the area for zinc and lead exploration. The map shows areal geology and geologic structure interpreted from outcrop and drill-hole data and also shows lead diggings and zinc-lead workings.

Areas that contain few outcrops, and from which little subsurface information was available, were drilled during the latter part of 1951 and early part of 1952. The Maquoketa, Galena, Decorah, and Platteville formations were penetrated by this drilling, and the descriptions of lithology and evidences of mineralization in these strata are based upon the study of samples from 18 churn-drill holes totaling 2,367 feet. These data also were used in compilation of the map.

The geologic map and drilling data of the Sinsinawa River area are on file and may be examined at the Geological Survey: Room 1033 (Library), General Services Administration Building, Washington, D. C., and Room 108, Wisconsin Institute of Technology, Platteville, Wis.; and at the Wisconsin Geological and Natural History Survey, Room 115, Science Hall, University of Wisconsin, Madison, Wis.

The map and an accompanying short report will be published later as a Field Study in the Mineral Investigations Series.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

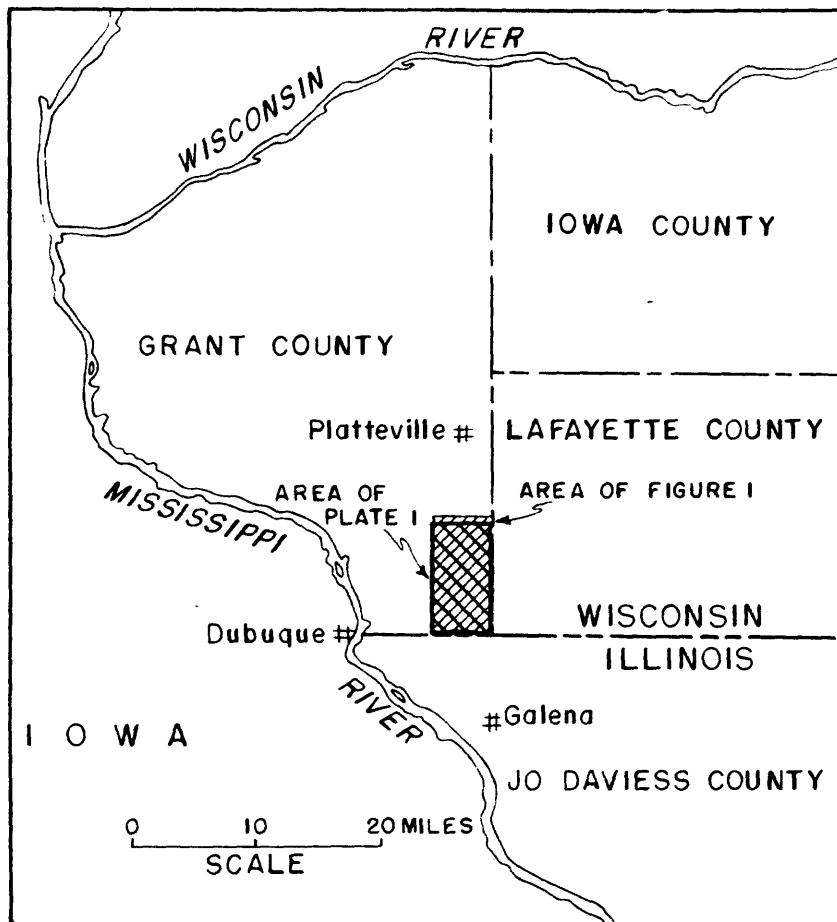


Figure I Index map showing location of area of detailed maps, Grant County, Wisconsin.

PREPARED IN COOPERATION WITH
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UNITED STATES DEPARTMENT OF THE INTERIOR -
GEOLOGICAL SURVEY

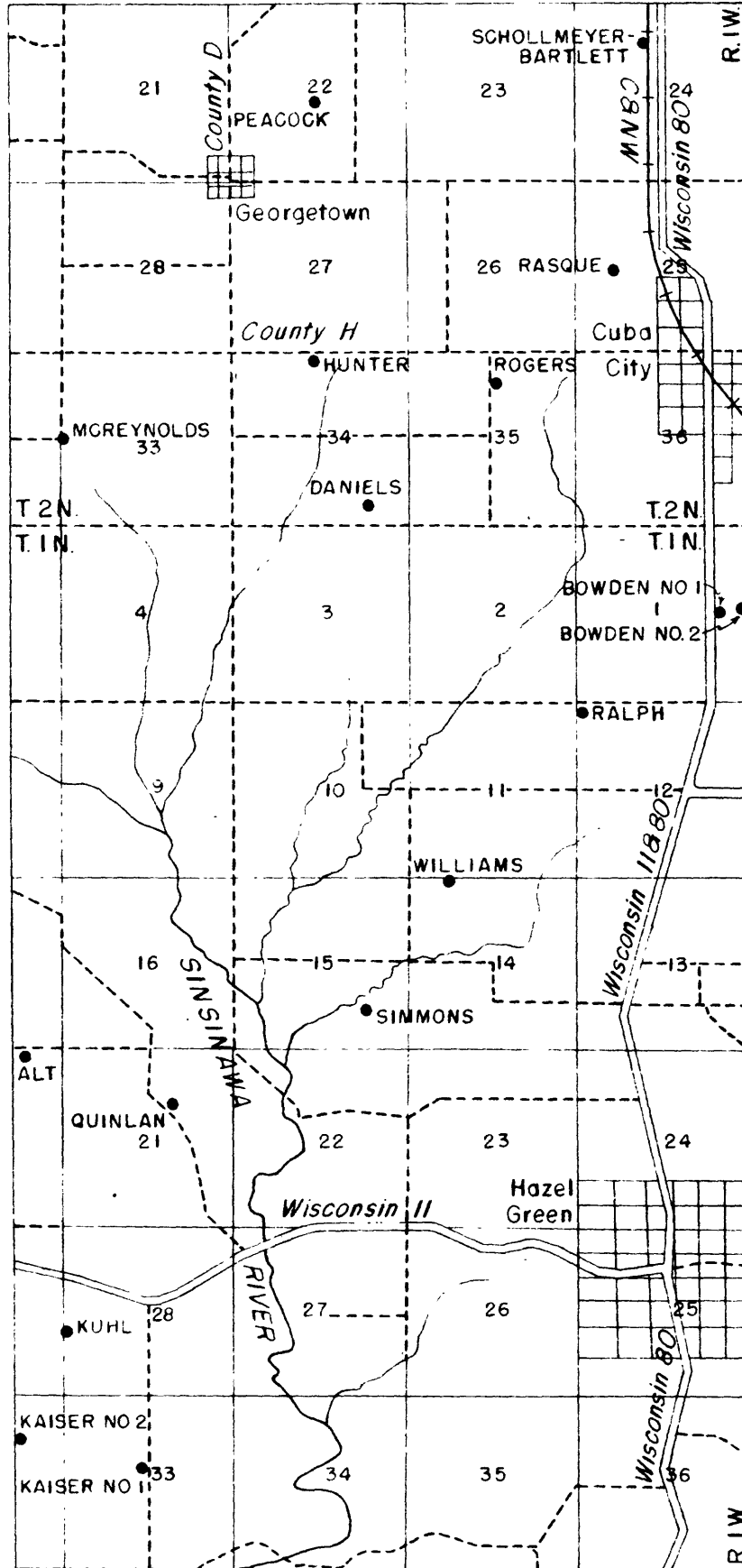


Figure 2. Map of the Sinsinawa River area, Grant County, Wisconsin, showing location of drill holes for which logs are included.

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

Ralph hole no. 1

Location: NW¹/₄NW¹/₄NW¹/₄ sec. 12, T. 1 N., R. 1 E.
Wisconsin

Collar elevation: 990.9 ft.
Total depth: 124 ft.
Depth to water: 70 ft.
Sample study and logging:
J. W. Allingham

Driller: D. Butson
3/12/52-3/15/52

	Depth (feet)
Surficial:	
Soil, silts, clays, residual oxidized iron nodules and chert.	0-15
GALENA FORMATION:	
Noncherty unit:	
Dolomite, brownish-buff, medium-grained, moderately argillaceous; trace to $\frac{1}{2}\%$ oxidized iron	15-25
Dolomite, yellowish-buff to tan, subcrystalline to crystalline, argillaceous	25-50
Dolomite, pale, gray-buff, less argillaceous, some MnO ₂ , calcite and trace of marcasite; open ground at 70-73 feet.	50-95
Cherty unit:	
Dolomite, orange-drab; white to pink chert	95-112
Dolomite, drab, noncherty	112-122
Dolomite, drab, granular; chert	122-124

Hunter hole no. 1

Location: NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 34, T. 2 N., R. 1 E., Collar elevation: 993.9 ft.
 Wisconsin Total depth: 80 ft.
 Driller: D. Butson Depth to water: 30 ft.
 5/13/52-5/15/52 Sample study and logging:
 A. W. Allingham

	Depth (feet)
Surficial:	
Soil and loess	0-9
GALENA FORMATION:	
Noncherty unit:	
Dolomite, yellow-buff, subcrystalline, moderately argillaceous with decreasing clay and increasing crystallinity downward, very fine to fine-grained; mottling	9-35
Dolomite, pale buff, medium- to fine-grained, local mottling, less argillaceous, calcite	35-73
Cherty unit:	
Dolomite, drab, medium- to fine-grained, moderately argil- laceous; milky cherty and with some gelatinous, banded (incipient) chert at top	73-80

Daniels hole no. 1

Location: S $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 34, T. 2 N., R. 1 W.
Wisconsin

Collar elevation: 979.2 ft.

Total depth: 65 ft.

Driller: D. Butson
5/17/52-5/19/52

Sample study and logging:

J. W. Allingham

	depth (feet)
Surficial:	
Soil, silts, oxidized iron and calcite	0-8
GALENA FORMATION:	
Noncherty unit:	
Dolomite, yellowish-buff, medium- to finely crystalline, trace oxidized iron	8-30
Dolomite, pale buff, crystalline, medium- to fine-grained, mottled with yellow-orange argillaceous specks, trace MnO ₂	30-55
Cherty unit:	
Dolomite, gray-drab, crystalline, fine-grained; translucent to milky, yellow-stained chert	55-65

Rogers hole no. 1

Location:	NW ¹ / ₄ NE ¹ / ₄ sec. 35, T. 2 N., R. 1 W. Wisconsin	Collar elevation: 970.9 ft. Total depth: 43 ft.
Driller:	D. Butson 5/16/52	Sample study and logging: J. W. Allingham

	Depth (feet)
Surficial:	
Soil, loess, residual chert, clays, oxidized iron and manganese	0-20
GALENA FORMATION:	
Noncherty unit:	
Dolomite, pale yellowish-buff, medium- to finely crystalline; calcite	20-37
Cherty unit:	
Dolomite, yellow to orange-drab; crystalline, medium-grained; white to pink, mottled chert, milky to translucent	37-43
No significant metallic miner ^a s in drill hole.	

Williams hole no. 1

Location: ~~N₄NE₄W₄~~ sec. 15, T. 1 N.,
 R. 1 W., Wisconsin
 Driller: D. Butson
 4/10/52-4/12/52

Collar elevation: 925.3 ft.
 Total depth: 110 ft.
 Sample study and logging:
 J. W. Allingham

	Depth (feet)
Surficial:	
Soil and residuum	0-7
GALENA FORMATION:	
Noncherty unit:	
Dolomite, dark orange-buff, subcrystalline, fine-grained, moderately argillaceous, slightly vuggy; very hard	7-30
Dolomite, buff, granular, coarse- to fine-grained; decreasing amount of argillaceous material, very hard	30-70
Dolomite, pale buff, fine- to very finely granular; mottled, reddish-drab dolomite at base with calcite and trace of oxidized iron	70-99
Cherty unit:	
Dolomite, drab; mottled, white to pink chert	99-110

No significant metallic minerals in drill hole.

Bowden hole no. 1

Location: SW ¹ / ₄ SE ¹ / ₄ NE ¹ / ₄ Sec. 1, T. 1 N., R. 1 W.,	Collar elevation: 1012 ft.
Wisconsin	Total depth: 55 ft.
Driller: D. Butson	Sample study and logging:
6/6/52-6/7/52	J. W. Allingham

	Depth (feet)
Surficial:	
soil and loess	0-10
GALENA FORMATION:	
Noncherty unit:	
Dolomite, orange-buff, highly argillaceous, granular, very soft, ochery with traces of oxidized iron	10-55

Drill hole on a crevice or in soft fractured ground;
driller moved east.

Bowden hole no. 2

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

Driller: D. Butson
6/9/52-6/12/52

Collar elevation: 963.9 ft.
Total depth: 125 ft.
Depth to water: 45, 60 ft.
Sample study and logging:
J. W. Allingham

	Depth (feet)
Surficial:	
Soil, loess, residual cherts, brown clays and calcite	0-20
GALENA FORMATION:	
Noncherty unit:	
Dolomite, buff, argillaceous, medium- to fine-grained	20-30
Dolomite, pale gray-buff, coarse- to medium-crystalline, moderately argillaceous, mottling near base; colloidal (banded) chert at base; calcite	30-55
Cherty unit:	
Dolomite, pale drab, medium-grained, argillaceous; milky chert, increasing downward to 30%; 0.2% marcasite	55-75
Dolomite as above, noncherty	75-80
Dolomite as above, mottled, milky to yellow chert; trace marcasite	80-118
Dolomite as above, subcrystalline; noncherty	118-125

Simmons hole no. 1

Location: NW¹/₄SE¹/₄SE¹/₄ sec. 15, T. 1 N., R. 1 W.,
 Wisconsin
 Driller: D. Butson
 3/17/52-3/22/52
 Collar elevation: 915.0 ft.
 Total depth: 105 ft.
 Depth to water: 75 ft.
 Sample study and logging:
 J. W. Allingham

	Depth (feet)
Surficial:	
soil, loess, and ochery clay	0-14
GALENA FORMATION:	
Noncherty unit:	
Dolomite, red- to orange-buff, fine- to medium crystalline, moderately argillaceous; trace of marcasite and trace of oxidized iron in lower part	14-35
Dolomite, buff, decreasing argillaceous material, hard, fine- to medium-grained; 0.2% MnO ₂	35-70
Dolomite, pale buff, crystalline, coarse- to medium-grained, mottling in lower portion; drab at base	70-98
Cherty unit:	
Dolomite, drab, very fine-grained; white chert	98-105

Kaiser hole no. 1

Location: 35 ft., east, 20 ft., north of center of the NW $\frac{1}{4}$ sec. 32, T. 1 N., R. 1 W., Wisconsin
 Driller: D. Butson
 4/22/52-5/6/52

Collar elevation: 911.2 ft.
 Total depth: 270 ft.
 Depth to water: 95 ft.
 Sample study and logging:
 A. E. Flint

	Depth (feet)
Surfficial:	
Soil, loess, and gray clay (probably residual Maquoketa shale)	0-20
GALENA FORMATION:	
Noncherty unit:	
Dolomite, buff, fine to medium crystalline (recrystallized?), argillaceous; limonite common	20-30
Dolomite, buff, mainly fine granular, argillaceous; limonite sparse	30-60
Dolomite, buff, mainly fine to medium crystalline; limonite common 80-90 feet	60-105
Dolomite as above but partly decomposed by solution; dolomite sand common	105-110
Dolomite, drab, fine to medium crsyttalline; limonite common 125-130 feet	110-130
Crevice clay, brown, unctuous; a few fragments of decomposed buff dolomite	130-133
Cherty unit:	
As above plus sparse white decomposed chert	133-140
Dolomite, drab, fine to medium crystalline, soft upper 2 or 3 feet; chert, white and brown-gray sparse to common; dolomite is partly decomposed by solution at 175-185 and 190-195 feet	140-210
Dolomite, drab, fine to medium crystalline; brown to tan fine-grained limestone common to abundant; light-gray chert sparse to common	210-225
Limestone, light-brown, fine to medium granular and crystalline, fossiliferous; dolomitic limestone sparse; light-gray chert sparse to absent	225-234 $\frac{1}{2}$
DECORAH FORMATION:	
Ion member ("gray" and "blue" beds):	
Limestone, gray-brown, fine to medium granular and crystalline, argillaceous and fossiliferous; sparse green shale	234-249
Limestone as above but darker because of increase in argillaceous content	249-255
Guttenberg member ("oil rock"):	
Limestone, light-tan, mainly very fine granular but some is crystalline, fossiliferous in part; brown shale common, rock very soft	255-261

Kaiser hole no. 1 continued

DECORAH FORMATION, continued:

Spechts Ferry member ("clay bed"):
 shale, green, gray, and buff; light gray-brown and gray, fine-grained limestone, some of which is silicified 261-267

PLATTEVILLE FORMATION:

Quimbys Mill member ("glass rock"):
 Limestone, medium- and dark-brown, very fine-grained 267-270

Estimated zinc and iron content

<u>Depth</u>	<u>Zinc</u>	<u>Iron</u>
25-30	trace	trace
30-40	-	trace
65-70		trace
80-85	trace	trace
85-90		trace
105-130		trace
140-185		trace †
200-210		Trace †
215-240		trace †
250-260		$\frac{1}{2}\%$
260-270		trace

Kaiser hole no. 2

Location: 450 ft., north, 50 ft., west of center
of sec. 33, T. 1 N., R. 1 W., Wisconsin
Driller: D. Butson
5/7/52-5/9/52

Collar elevation: 785.9 ft.
Total depth: 70 ft.
Depth to water: 5 ft.
Sample study and logging:
A. E. Flint

	Depth (feet)
Surficial:	
Soil	0-4
Mainly residual dolomite and chert	4-9
GALENA FORMATION:	
Cherty unit:	
Dolomite, brown-buff, fine to medium, much decomposition (hole in open joint?); chert common	9-25
Dolomite as above; white and tan chert common	25-45
Dolomite, mainly drab, fine to medium crystalline; chert as as above, common	45-70

Insignificant amounts of iron sulfide occur in most
samples from 35 to 70 feet.

Kuhl hole no. 1

Location: 1875 ft. west, 840 ft. south of
center, sec. 28, T. 1 N., R. 1 W.,
Wisconsin

Collar elevation: 943.9 ft.
Total depth: 170 ft.
Depth to water: 85 ft.
Sample study and logging:
A. E. Flint

Driller: D. Butson
2/29/52-3/9/52

	Depth (feet)
Surficial:	
Soil	0-4
Loess, buff, silty	4-18
Residual Silurian chert and Maquoketa shale; abundant limonite	18-23
MAQUOKETA FORMATION:	
Shale, gray, and gray silty dolomitic limestone; basal 5 ft. dark-brown shale containing abundant depauperate fossils and small phosphatic nodules. Sparse iron sulfide in basal shale	23-32
GALENA FORMATION:	
Noncherty unit:	
Dolomite, gray and buff, fine to medium granular; buff shale common	32-65
Dolomite, buff and drab, mainly medium crystalline (recrystallization); sparse buff shale	65-75
Dolomite, mainly buff but drab lower 15 feet, fine to medium crystalline; marked solutional decomposition of the dolomite 145-153 feet	75-153
Cherty unit:	
Dolomite, mainly drab, fine-medium and medium crystalline; drab chert common; calcite common	153-170

Insignificant amounts of disseminated iron are present throughout the samples, and a trace of lead occurs in 40- to 45-foot sample.

Alt hole no. 1

Location: 1050 ft. west, 180 ft. south of NE corner, sec. 20, T. 1 N., R. 1 W., Wisconsin
 Driller: D. Butson
 3/29/52-4/9/52

Collar elevation: 909.6 ft.
 Total depth: 140 ft.
 Depth to water: 35 ft.
 Sample study and logging:
 A. E. Flint

	Depth (feet)
Surficial:	
Soil, loess, and residual dolomite	0-13
GALENA FORMATION:	
Noncherty unit:	
Dolomite, buff, fine to medium, granular, argillaceous	13-35
Dolomite, buff, fine to medium, mainly crystalline, moderately soft	35-45
Dolomite as above but in part decomposed by solution	45-55
Dolomite and dolomite sand, buff, very soft, much solution decomposition; abundant dark-brown crevice clay; considerable limonite staining; very little consolidated rock in this interval	55-100
Dolomite as above but harder, less dolomite sand; sparse crevice clay	100-127
Cherty unit:	
Dolomite as above, soft to very soft; light-brown chert	127-140

Estimated lead and iron content

<u>Depth</u>	<u>Lead</u>	<u>Iron</u>
45-50	-	trace
80-85	-	trace
85-90	trace	-
90-95	-	trace
100-130	-	trace
135-140	-	trace

McReynolds hole no. 1

Location: 10 ft., west, 20 ft., north of NW corner of the NE¹/₄ sec. 32, T. 2 N., R. 1 W., Wisconsin
 Collar elevation: 971.1 ft.
 Total depth: 250 ft.
 Depth to water: Not recorded
 Driller: R. Pagenhardt
 5/2/52-5/17/52
 Sample study and logging:
 A. E. Flint

	Depth (feet)
Surficial:	
Soil, loess, and residuum	0-13
GALENA FORMATION:	
Noncherty unit:	
Dolomite, buff, fine to medium crystalline, in part mottled dark-brown; local limonite stain and limonite nodules. . .	13-25
Dolomite as above but mainly fine granular; argillaceous material common	25-36
Dolomite, buff, fine to medium crystalline; varying amounts of limonite staining	36-60
Dolomite as above; red-brown clay and sparse calcite in upper 5 feet	60-85
Dolomite, mainly buff, some drab and gray, otherwise as above; disseminated iron sulfide in the dolomite	85-90
Dolomite, drab and buff, otherwise as above; calcite sparse .	90-95
Dolomite, drab, fine to medium crystalline; calcite and disseminated iron sulfide sparse	95-106
Cherty unit:	
Dolomite as above; chert tan, glassy, and light-gray to white, granular common to abundant, both dolomite and chert contain, in part, disseminated iron sulfide; calcite sparse to common	106-145
Dolomite as above; chert as above sparse to common; sparse shale, gray and green, upper 10 feet; iron sulfide disseminated in both dolomite and chert; calcite sparse	145-160
Dolomite as above; chert sparse to absent; shale sparse to common; calcite common lower 5 feet	160-170
Dolomite as above; chert as above common; calcite common. . .	170-180
Dolomite as above; chert very sparse upper 10 feet, abundant lower 10 feet; calcite common; increase in amount of disseminated iron sulfide	180-200
Dolomite as above except light-brown lower 5 feet; chert as above abundant upper 5 feet, otherwise sparse to absent .	200-218
DECORAH FORMATION:	
Iron member ("gray" and "blue" beds):	
Dolomite, brown-gray, mottled dark-gray, fine to medium crystalline, argillaceous; calcite very common	218-228

McReynolds hole no. 1 continued

	Depth (feet)
DECORAH FORMATION, continued:	
Ion member, continued:	
Dolomite as above but medium-gray, very argillaceous; and dolomitic limestone; shale, gray and green, sparse; calcite common	228-238
Guttenberg member ("oil rock"):	
Limestone, light-tan, very fine to medium granular, fossil- iferous in part; medium-brown shale, sparse to common . .	238-244
Spechts Ferry member ("clay bed"):	
Shale, green and gray, silty in part, and limestone, gray, mainly very fine granular; phosphatic nodules, common. . .	244-248
PLATTEVILLE FORMATION:	
Quimbys Mill member ("glass rock"):	
Limestone, brown, very fine granular; dark-brown shale abundant	248-250

MINERALIZED SAMPLES

Nearly all samples from the interval 85 to 250 feet below the surface had at least traces of iron sulfide in them. In addition:

Estimated Iron Content

<u>Depth</u>	<u>Percent</u>
125-130	$\frac{1}{4}$
145-150	$\frac{1}{4}$ - $\frac{1}{2}$
150-170	$\frac{1}{4}$
170-185	$\frac{1}{2}$
185-190	$\frac{1}{4}$
235-240	$\frac{1}{4}$
240-245	3

Quinlan hole no. 1

Location: 825 ft., east, 960 ft., north of
center, sec. 21, T. 1 N., R. 1 W.,
Wisconsin

Collar elevation: 924.0 ft.
Total depth: 150 ft.
Depth to water: 105 ft.
Sample study and logging:
A. E. Flint

Driller: D. Putson
4/11/52-4/21/52

	Depth (feet)
Surficial:	
Soil, loess, and residual Silurian chert	0-18
MAQUOKETA FORMATION:	
Shale, medium-brown, containing a few depauperate fossils; trace of limonite	18-23
GALENA FORMATION:	
Noncherty unit:	
Dolomite, buff, fine and medium, granular and crystalline, argillaceous; limonite common; trace of calcite	23-35
Dolomite, buff, mainly fine granular except lower 5 feet is more crystalline; crinoid plates common in several of the samples; rock softer at 50-60 feet	35-65
Dolomite, buff and brown-buff, fine to medium crystalline; calcite common at 75-95 feet	65-95
Dolomite, mainly drab, fine to medium crystalline; sparse calcite	95-110
Dolomite as above but much is decomposed by solution to dolomite sand. Crevice clay and calcite common; rock is very soft.	110-125
As above but rock harder	125-135
As above but rock is softer; much dolomite sand	135-143
Cherty unit:	
Dolomite as above; gray and buff chert abundant; trace of calcite	143-150

Estimated iron content

<u>Depth</u>	<u>Percentage</u>
120-145	trace

Rasque hole no. 1

Location: Northeast corner of the NW $\frac{1}{4}$ SW $\frac{1}{4}$
 sec. 28, T. 2 N., R. 1 W., Wisconsin
 Driller: Don Butson
 6/1/52-6/4/52

Collar elevation: 1009 ft.
 Total depth: 130 ft.
 Depth to water: 65, 90 ft.
 Sample study and logging:
 A. F. Agnew, 6/10/52

	Depth (feet)
Surficial:	
Loess, brown	0-10
GALENA FORMATION:	
Noncherty unit:	
Dolomite, light-brown, mottled lighter, coarse-grained, crystal- line to granular	10-40
Dolomite as above but more brownish	40-55
Dolomite as above but silty	55-60
Dolomite as 40-55	60-70
Dolomite as 55-60	70-120
Dolomite as above, with cinnamon specks	120-125
Cherty unit:	
Dolomite as above; chert, white to pink	125-130

Estimated iron and mangense content

<u>Depth</u>	<u>Percentage iron ("sulfur")</u>	<u>Percentage manganese</u>
90-100	-	trace
100-115	-	0.5
115-120	-	trace
125-130	0.5	-

Schollmeyer-Bartlett hole no. 1

Location: Southeast corner of the NE $\frac{1}{4}$ NW $\frac{1}{4}$	Collar elevation: 1014 ft.
sec. 24, T. 2 N., R. 1 W., Wisconsin	Total depth: 265 ft.
Driller: D. Butson	Depth to water: 70, 90 ft.
5/20/52-5/31/52	Sample study and logging: A. F. Agnew, 6/20/52

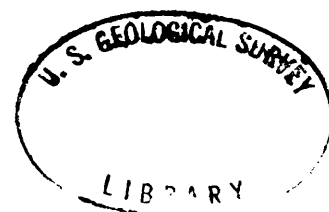
	Depth (feet)
Surficial:	
Soil, dark-brown	0-1
Loess, brown	1-5
GALENA FORMATION:	
Noncherty unit:	
Dolomite, yellowish-brown, medium-grained, granular	5-32
Dolomite, yellowish-buff, medium-grained, crystalline	32-70
Dolomite as above, red specks	70-90
Dolomite as above, fewer red specks	90-100
Dolomite as above but partly drabish and medium-grained, granular	100-105
Cherty unit:	
Dolomite as above; chert, brown to cream	105-110
Dolomite as above; chert as above but also spicular	110-135
Dolomite as above but some gray; little chert	135-150
Dolomite as above but buff; chert	150-155
Dolomite as above but buff and gray, silty, granular; chert	155-160
Dolomite as above, but not silty; little chert.	160-180
Dolomite as above; limestone, cream, fine-grained; little chert	180-185
Dolomite and limestone as above; little chert, trace brown shale	185-209
DECORAH FORMATION:	
Ion member ("gray beds"):	
Dolomite, grayish-brown, coarse-grained, crystalline, gray-specked	209-215
Dolomite as above; trace shale, greenish calcareous	215-223
("blue beds"):	
Limestone, dark-gray, greenish, argillaceous, sandy with rounded quartz, silty with phosphatic grains	223-225
Limestone as above, also buffish and gray-specked; silt size phosphatic grains	225-230
Guttenberg member ("oil rock"):	
Limestone, tan to brown, fine-grained, argillaceous.	230-246
Spechts Ferry member ("clay bed"):	
Shale, green, calcareous, fossiliferous; limestone, gray-greenish, fine-grained, fossiliferous; sand and silt size phosphatic grains	246-250

Schollmeyer-Bartlett hole no. 1 continued

	Depth (feet)
PLATTEVILLE FORMATION:	
Quimbys Mill member ("glass rock"):	
Limestone, brown to tan, fine-grained, granular	250-255
Limestone as above; limestone brown, dolomitic, medium-grained, granular; shale, dark-brown	255-258
McGregor member ("Trenton"):	
Limestone, light gray to white, fine-grained, in part silty .	258-260
Limestone, gray-brown, fine-grained, granular, silty; shale, light-gray, splintery but soft; "glass rock" limestone and shale, caved	260-265

Estimated iron content ("sulfur")

<u>Depth</u>	<u>Percent iron</u>
95-100	trace
105-110	0.5
120-125	trace
135-140	trace
155-160	trace
170-185	trace
220-225	trace
245-250	1.0
260-265	trace



peacock hole no. 1

Location: About 300 ft., south of the Northeast
 corner of the NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, T. 2 N., R. 1 W., Wisconsin
 Driller: John Hauser
 5/19 52-6/4/52

Collar elevation: 967 ft.
 Total depth: 215 ft.
 Depth to water: 35, 45, ft
 Sample study and logging:
 A. F. Agnew, 6/21/52

	Depth (feet)
Surficial:	
Loess and soil, dark-brown	0-5
Loess, brown	5-14
GALENA FORMATION:	
Noncherty unit:	
Dolomite, cream to buff, coarse-grained, crystalline, yellow specks	14-25
Dolomite, buff, coarse-grained, crystalline	25-40
Dolomite as above, in partly silty	40-50
Dolomite as above, in part red-specked	50-70
Dolomite as above, more brownish; trace white chert	70-75
Dolomite, brown, coarse-grained, crystalline, silty, red-specked	75-80
Dolomite as above, but dark-brown	80-85
Cherty unit:	
Dolomite as above; chert, cream	85-95
Dolomite as above; little chert	95-110
Dolomite, light buffish-gray, medium-grained, crystalline; little chert	110-120
Dolomite, drabish-brown, coarse-grained, crystalline; little chert	120-125
Dolomite as above; chert	125-130
Dolomite as 110-120; chert	130-135
Dolomite, brown, coarse-grained, crystalline; chert	135-140
Dolomite as above; little chert	140-145
Dolomite as 110-120	145-150
Dolomite, brown, coarse-grained, crystalline to granular; no chert	150-165
Dolomite as above; chert	165-170
Dolomite as above; no chert	170-186
DECORAH FORMATION:	
Ion member ("gray beds"):	
Dolomite, light-gray, coarse-grained, crystalline, gray-specked	186-190
Dolomite as above, but grayish-buff	190-198
("blue beds"):	
Dolomite, gray, medium to coarse-grained, granular, silty; phosphatic silt	198-206
Guttenberg member ("oil rock"):	
Limestone, tan to brown, fine-grained, and crystalline to medium-grained and granular, fossiliferous; trace shale dark-brown, hard	206-210

Peacock shale no. 1 continued

Depth
(feet)

DECORAH FORMATION continued:

Guttenberg member continued:

Limestone as above; much brown shale as above; trace white fine-grained limestone with phosphatic sand grains; trace green shale

Touched Spechts Ferry member ("clay bed")

210-215

Estimated iron and calcite content

<u>Depth</u>	<u>Percentage iron ("sulfur)</u>	<u>Percentage calcite ("tiff)</u>
75-80	trace	-
80-85	1.0	-
85-90	trace	-
90-95*	-	-
95-100	trace	10
100-110	trace	5
110-120	trace	trace
		-
125-130	-	-
130-135	trace	trace
		-
145-150	trace	-
		trace
155-160	trace	-
160-165	1.0	trace
165-170	trace	3
170-175*	1.0	trace
175-180	trace	trace
		-
185-190	trace	-
		-
195-200	trace	-
200-205	trace	-
205-210	trace	trace
210-215**	-	-

*drillers reported soft ground (one of the "opening" horizons)

** Trace zinc