STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

Platteville, Wisconsin

TO : Carl Dutton

DATE: May 15, 1953

FROM : W. A. Broughton

SUBJECT: Docket No. D.M.E.A. 1352x, B. Thomas Lease.

Enclosed are two copies, for your files, of the final report on the exploration by the Dodgeville Mining Company in the Thomas Lease.

W. A. Broughton

WAB:mcw

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UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

May 12, 1953

Memorandum

To: Operating Committee, Defense Minerals Exploration Administration, Interior Building, Washington 25, D. C.

From: Executive Officer, Field Team, Region V

Subject: Docket DMEA-1352x, Contract Idm M-183, Dodgeville Mining Co. Thomas Lease

Here are the original and three copies of the field team's Final Geological and Engineering Report on the subject project which indicates nothing of consequence was found and accordingly no certification is necessary.

The operator's report was sent in October 1952.

A. B. Needham
Executive Officer, Field Team
Region V

Attachments - 4

CC - C. E. Dutton
W. A. Grosh
W. A. Broughton

MAY 1953

CONFIDENTIAL
DOCUMENT RELEASED

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

FINAL GEOLOGICAL-ENGINEERING REPORT
BY FIELD TEAM REGION V

DOCKET NO. D.M.E.A. 1352x
CONTRACT NO.: Idm-6183
COMMODITY: Zinc-Lead

Dodgeville Mining Company
B. Thomas Lease
Iowa County, Wisconsin

H. J. Schroeder, Mining Engineer
U. S. Bureau of Mines
W. A. Broughton, Geologist
U. S. Geological Survey

May 8, 1953

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Location:

The exploration program was conducted on land about 5 miles East of the city of Dodgeville, Wisconsin. Approximately 160 acres of land contained in the Benjamin Thomas property was leased to the operator for inclusion under the contract. A detailed land description is as follows: E½ of the SE¼ (except the north 6.13 acres), the NW¼ of the SE¼ of Section 21; also the NE¼ of the NE¼ of Section 28; all in T 6 N, R 4 E, Iowa County, Wisconsin.

Most of the land was gently rolling terrain devoted to farming, and presented no difficulties in moving the drilling machines.

Contract Provisions and Amendments:

The U. S. Government and Dodgeville Mining Company of 924 Gay Building, Madison 3, Wisconsin entered into contract agreement DMEA Docket 1352x, Idm E 183, dated October 16, 1951 for purposes of exploring for zinc and lead ores. The contract amount was for $7,500 with an estimated 5485 feet of churn drilling to be done at a contract price of $1.00 per foot. Other estimated expense was $1140.00 for assaying, and $1875.00 for supervision, engineering, sample preparation, and miscellaneous. Government participation in the expenses was 50 percent. The Landlord's Subordination Agreement attached to the contract is dated October 18, 1951.

Prior to the company's signing the contract, an amendment dated December 5, 1951 was attached to the contract. This amendment provided for deviation from the drilling pattern specified on the

contract map, should ore of a minable grade be found in any of the holes prior to completion of the initial pattern. The starting and completion dates were extended to nine months and fifteen months, respectively. Allowable cost per foot of drilling was increased to $1.25. Permission was granted to have surveying done by a civil engineer and supervision of the exploration by other qualified personnel, if a mining engineer was not available.

Summary:

Work was terminated by mutual agreement before completion of the proposed initial drill hole pattern. The limited drilling that was accomplished did not succeed in indicating the existence of an ore body. However, the geologic probabilities of ore existing in the unexplored portions of the lease are not necessarily decreased by virtue of the negative results encountered in the area that was drilled under the contract.

Possible Exploitation - Certification:

The drilling accomplished did not disclose mineralization having significant economic value. Since no ore reserves are indicated, possible exploitation is not considered. Certification of the property is not recommended.

Description of the Work:

Drilling under the contract began on June 6, 1952 and the last hole completed was on June 24, 1952. Five holes with an average depth of 77 feet or a total of 387 feet were accomplished.

Equipment used consisted of two 22-W Bucyrus-Erie churn drills using a six-inch chisel type bit. Normally only the upper unconsolidated weathered zone required casing. Usual procedure is to drill five feet and then bail out the sludge with a flap-type valve bailer. This sludge is dumped into a tub, and when well mixed, a representative sample is placed in a pile on the ground for logging and assay samples. When an ore zone is encountered, the sample interval is usually reduced to two feet.

Initial drilling designated by the contract map consisted of two rows containing a total of thirteen holes to the south, and seven holes to the east of previous drilling by the company during the 1947-48 period. Five of the holes to the south were completed under the program. Negative results of this early work, indicated poor ground for mining, and probably the adverse effects the declining zinc market had upon the company's operating mine, contributed to the operator's decision for discontinuing exploration in the contract area. A request was made and granted on October 29, 1952 for termination of the contract before completion of the work.

Holes B-1, B-2, B-3, and D-2 were drilled by the operator during the same period as the contract holes described above and were submitted for payment. However, it was necessary to disallow payment for these holes as they did not conform to contract stipulations for either location or depth.

Plate 1 accompanying this report shows the location of the holes drilled both during and prior to the contract work. There is

also included a set of the logs for the holes accomplished under the contract showing formations and estimated metallic values. Because the disallowed holes drilled during the contract period are pertinent to the work accomplished, copies of these logs are also included.

The operator's final geologic-engineering report has been previously forwarded.

Expenditures:

The following tabulation shows the essential items in regard to the expenditures incurred under this contract:

Contract amount	$ 7,500.00
Total approved expenditures	614.67
Government's share of the cost	307.33
Government's share unexpended	3,442.67

Items of Expense	Approved Expense	Cost per Foot
Contract Drilling	$ 483.75	$ 1.250
Supervision	91.14	.235
Technical services	27.50	.071
Transportation	12.28	.032
Total	$ 614.67	$ 1.588

Monthly MF-104 reports had partial supporting evidence of costs incurred and bills paid. A review of the completed project was made by a DMEA auditor at Minneapolis on February 19, 1953. The auditor certified the approved expenses as being valid and proper.

Technical Control - Supervision:

Direct supervision of the project was a company responsibility. Locations of twenty initial holes were shown on a map attached to and made a part of the contract. Only five of these initial holes were completed, therefore no decision was required for any additional hole locations.

The company employed Dixon and Ottensman, local engineering consultants, to furnish the required surveying and mapping.

Driller's logs were supplied by the company for use in monthly reports. Samples of each cut were furnished the U.S. Geological Survey for use in preparing a more detailed log of the formations and estimated values contained. It is this latter log which has been filed in the Wisconsin District Atlas, copies of which are submitted with this report.

The visual estimates showed that none of the cuts contained enough values to warrant an assay.

Final geologic report and results of drilling by Dodgeville Mining Company in the Benjamin Thomas property, Iowa County, Wisconsin

W. A. Broughton

U. S. Geological Survey

Docket no.: DMEA 1352X

Contract no.: Idm E-183

Commodity: zinc-lead

Location of property

The Benjamin Thomas property is in the Porter's Grove area about 5½ miles east of Dodgeville, Wis. (fig. 1). The property includes the N½SE¼ (except the north 6.13 acres) and the NW¼SE¼ sec. 21 and the NE¼NE¼ sec. 28, all in T. 6 N., R. 4 E. (pl. 1).

Exploration

The Dodgeville Mining Co. drilled about 34 holes in the Thomas property in 1947 and 1948. Most of these holes were drilled in the northwestern part of the SE¼SE¼ sec. 21, and some of them were reported by the company to have shown "fair to good zinc". Nine holes were drilled in 1952 by the Dodgeville Mining Co. under DMEA contract E-183 as an attempt to locate zinc and lead ore down to the top beds of the "Trenton" (fig. 2). One group was to have been approximately where holes D1 through D6 were drilled (pl. 1). The second group was to have been drilled in the northeastern part of the SE¼SE¼ sec. 21 as an eastward continuation of the 1947-1948 drilling. Hole D2, in the first

group, was disallowed because it was not drilled deep enough to penetrate the potential ore zone at the top of the "Trenton". Holes B1 through B3 were presumably drilled by the company as a part of the second group of proposed holes, but as they were not located reasonably close to the designated area they were also disallowed for payment.

Owing to a lack of proper supervision and cooperation by the Dodgeville Mining Co. the contract was terminated without completion of the planned exploration program.

Occurrence of ore

Ore-bearing beds

Zinc and lead minerals of the Porter's Grove area occur in the Galena, Decorah, and Platteville formations, all of Ordovician age (fig. 2). Early lead production was largely from the lower part of the Galena formation. Zinc sulfide ore is not known to have been produced in this area although it is reported that some smithsonite was produced from shallow diggings. Miners' terms, subdividing the formation into members, are used in this report.

The recent drilling in the Benjamin Thomas property by the Dodgeville Mining Co. failed to discover zinc or lead ore, but small amounts of galena were found from the "drab" into the top of the "Trenton", and small amounts of sphalerite were found in the middle beds of the "gray" and from the top of the "blue" into the top of the "Trenton" (fig. 2). The best concentration of sphalerite (one-quarter of one percent zinc estimated) was in the "brown rock" and "glass rock".

Geologic structure

Very little detailed structural information is available in the Porter's Grove area. Although the Dodgeville Mining Co. has done considerable drilling in the area, the records have been poorly kept and in many cases the drill-hole information is inadequate for determining structure. Based on the meager information available, the Ordovician formations of the Thomas property appear to have been gently folded. The general trends of the folds appear to be north-south and east-west (pl. 1).

Elongate areas of old surface lead diggings and shallow shafts indicate the presence of lead "crevices" and "ranges" trending, in general, a few degrees west of north (pl. 1).

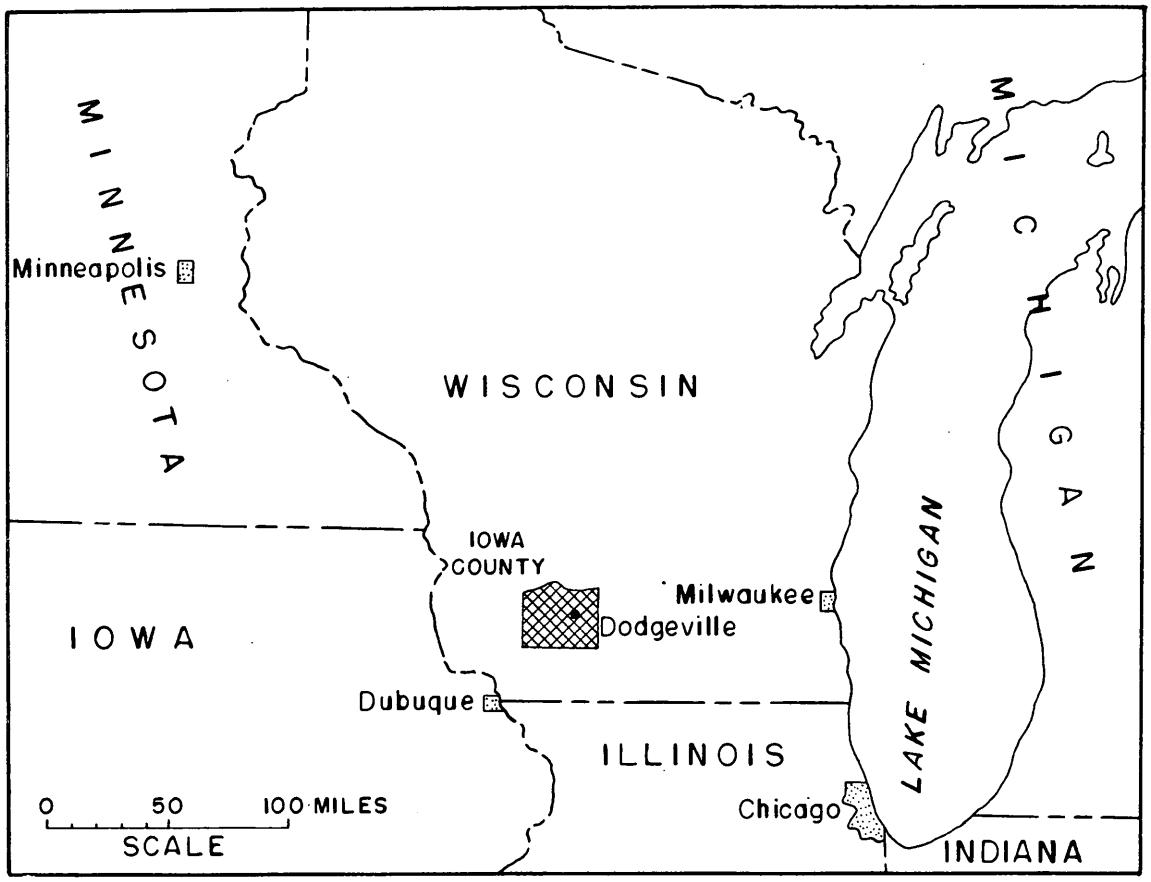
Results of exploration

All of the nine DMEA drill holes in the Thomas property show small amounts (up to one-half of one percent zinc or lead estimated) of sphalerite or galena (app. A, logs). Seven of the drill holes show small amounts of both ore minerals. Although none of the drill holes penetrated zinc and lead occurrences of ore grade, they do indicate that the area has possibilities of containing ore that might be discovered by a thorough exploration program.

Recommendations

It is the opinion of the reporting geologist that drilling by the Dodgeville Mining Co., with DMEA assistance, failed to discover zinc or lead ore in the Benjamin Thomas property. Therefore it is recommended that the exploration not be certified as a discovery.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



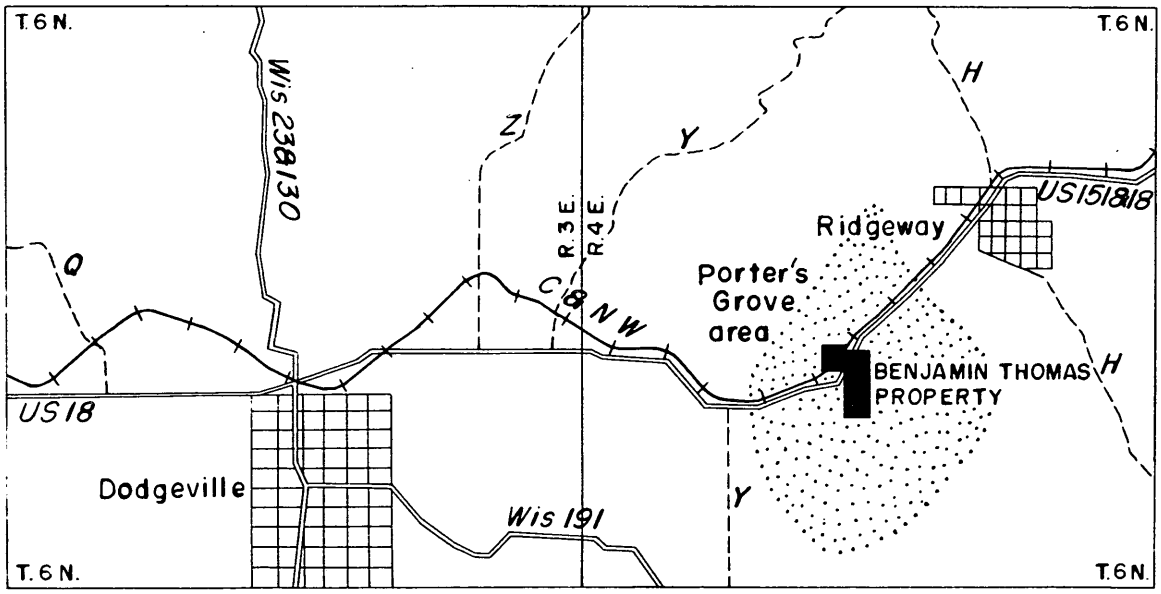


Figure 1. Index maps showing the location of the Benjamin Thomas property, Iowa County, Wisconsin

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

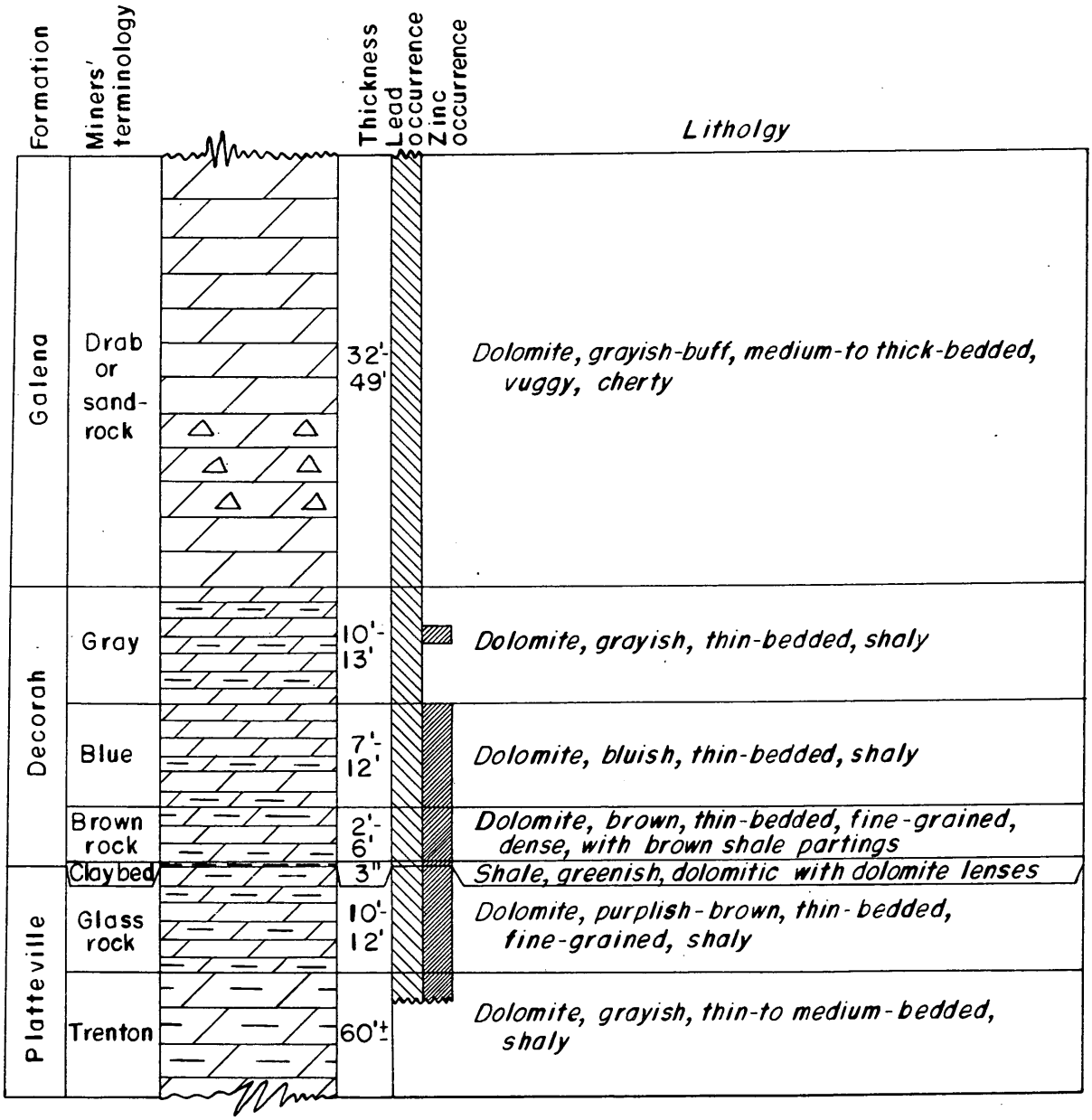


Figure 2. Stratigraphic section of the Benjamin Thomas property, Iowa County, Wisconsin.

Appendix A

Drill Hole Logs and Estimated Assays

Iowa County
~~See Ref. 351~~

~~Serial No. 30~~
Hole No. B-1
Collar Elevation: 1188.6'
Depth of Hole: 85'
Location: Thomas

Date completed: June 14, 1952
Drilled by: Dodgeville Mn.Co., DMA
Logged by: Broughton, U.S.G.S.
Type of Drilling: Churn

Depth From	Depth To	Lithology
0	10	Clay and Drab
10	49	Drab
49	59	Gray
59	69	Blue
69	74	Brown
74	85	Glassrock

Water table: 50' Medium

Depth From	Depth To	Remarks and Estimated Analyses Zn	Fe	Pb
0	20		1.	
20	35		Shine	
35	55		Shine	Shine
55	65		Shine	
65	70		1.	
70	74	Shine	1.	
74	85		Shine	

Entire hole oxidized.
Hole not to Trenton

~~Serial No. 31~~
Hole No. B-2
Collar Elevation: 1179.6'
Depth of Hole: 79'
Location: Thomas

Date completed: June 17, 1952
Drilled by: Dodgeville Mn.Co., DMA
Logged by: Broughton, U.S.G.S.
Type of Drilling: Churn

Depth From	Depth To	Lithology
0	10	Clay and Drab
10	39	Drab
39	50	Gray
50	61	Blue
61	66	Brown
66	76	Glassrock
76	79	Trenton

Water table: 45' Medium

Depth From	Depth To	Remarks and Estimated Analyses Zn	Fe	Pb
0	10		Shine	Shine
10	20		Shine	
20	70		Shine	Shine
70	75		Shine	
75	77		Shine	Shine
77	79		Shine	

Hole oxidized to 60'

Iowa County

~~Serial No. 32~~ ~~Ref. 351~~

Hole No. B-3
Collar Elevation: 1168.8'
Depth of Hole: 65'
Location: Thomas

Date completed: June 19, 1952
Drilled by: Dodgeville Mn. Co., DMA
Logged by: Broughton, U.S.G.S.
Type of Drilling: Churn

Depth From	Depth To	Lithology
0	10	Clay and Drab
10	32	Drab
32	44	Gray
44	52	Blue
52	54	Brown
54	62	Glassrock
62	65	Trenton

Water table: 35' Weak

Depth From	Depth To	Remarks and Estimated Analyses Zn	Fe	Pb
0	10		Shine	
10	15		Shine	Shine
15	20		Shine	
20	25		1.	
25	59		Shine	
59	61	Shine	Shine	Shine
61	65		Shine	

Entire hole slightly oxidized

~~Serial No. 33~~

Hole No. D-1
Collar Elevation: 1167.4'
Depth of Hole: 76'
Location: Thomas

Date completed: June 10, 1952
Drilled by: Dodgeville Mn.Co., DMA
Logged by: Broughton, U.S.G.S.
Type of Drilling: Churn

Depth From	Depth To	Lithology
0	5	Soil and Drab
5	37	Drab
37	50	Gray
50	57	Blue
57	62	Brown
62	74	Glassrock
74	76	Trenton

Water table: 30' Medium

Depth From	Depth To	Remarks and Estimated Analyses Zn	Fe	Pb
0	15		Shine	
15	25		Shine	Shine
25	30		.25	.25
30	74		Shine	Shine
74	76	Shine	Shine	Shine

Oxidized to 25'

Iowa County

~~S[illegible] Ref. 351~~

~~Serial No. 34~~
Hole No. D-2
Collar Elevation: 1172.1'
Depth of Hole: 80'
Location: Thomas

Date completed: 6/11/52
Drilled by: Dodgeville Mn.Co.,DMA
Logged by: Broughton, U.S.G.S.
Type of Drilling: Churn

Depth From	Depth To	Lithology
0	10	Clay and Drab
10	43	Drab
43	53	Gray
53	65	Blue
65	70	Brown
70	80	Glassrock

Water table: 25' Medium

Depth From	Depth To	Remarks and Estimated Analyses Zn	Fe	Pb
0	10		Shine	
10	25		Shine	Shine
25	30		1.	.25
30	35		3.	.25
35	45		3.	Shine
45	50		Shine	Shine
50	55		3.	Shine
55	80		1.	Shine

Hole did not cut trenton
Oxidized to 55'

~~Serial No. 35~~
Hole No. D-3
Collar Elevation: 1174.5'
Depth of Hole: 82'
Location: Thomas

Date completed: 6/16/52
Drilled by: Dodgeville Mn.Co.,DMA
Logged by: Broughton, U.S.G.S.
Type of Drilling: Churn

Depth From	Depth To	Lithology
0	10	Clay and Drab
10	44	Drab
44	55	Gray
55	65	Blue
65	70	Brown
70	81	Glassrock
81	82	Trenton

Water table: 25' Medium

Depth From	Depth To	Remarks and Estimated Analyses Zn	Fe	Pb
0	15		Shine	
15	20		Shine	Shine
20	25		Shine	
25	30		Shine	Shine
30	40		1.	Shine
40	45		Shine	Shine
45	50		1.	Shine
50	55		Shine	Shine
55	65		3.	Shine

Continued

Iowa County
~~Sec. Ref. 351~~

~~Serial No. 35~~
Hole No. D-3 (Cont'd)
Collar Elevation: 1174.5'
Depth of Hole: 82'
Location: Thomas

Date completed: 6/16/52
Drilled by: Dodgeville Mn.Co., DMA
Logged by: Broughton, U.S.G.S.
Type of Drilling: Churn

Depth From	Depth To	Remarks and Estimated Analyses Zn	Fe	Pb
65	70	Shine	2.	Shine
70	75	.25	2.	Shine
75	78	Shine	2.	Shine
78	80	.25	2.	Shine
80	82	Shine	1.	Shine
		Oxidized to 40'		

~~Serial No. 36~~
Hole No. D-4
Collar Elevation: 1175.1'
Depth of Hole: 73'
Location: Thomas

Date completed: 6/18/52
Drilled by: Dodgeville Mn.Co., DMA
Logged by: Broughton, U.S.G.S.
Type of Drilling: Churn

Depth From	Depth To	Lithology
0	15	Clay and Drab
15	33	Drab
33	45	Gray
45	55	Blue
55	61	Brown
61	71	Glassrock
71	73	Trenton

Water table: 25' Medium

Depth From	Depth To	Remarks and Estimated Analyses Zn	Fe	Pb
0	15		Shine	
15	20		Shine	Shine
20	30		1.	Shine
30	33		5.	.25
33	35		5.	.25
35	50		2.	Shine
50	60	Shine	2.	
60	67½	Shine	1.	Shine
67½	70		1.	
70	73		1.	Shine
		Oxidized to 72'		

Iowa County

~~S[illegible] Ref. 351~~

~~Serial No. 37~~
Hole No. D-5
Collar Elevation: 1165.5'
Depth of Hole: 84'
Location: Thomas

Date completed: 6/24/52
Drilled by: Dodgeville Mn.Co.,DMA
Logged by: Broughton, U.S.G.S.
Type of Drilling: Churn

Depth From	Depth To	Lithology
0	10	Clay and Drab
10	43	Drab
43	55	Gray
55	65	Blue
65	70	Brown
70	81	Glassrock
81	84	Trenton

Water table: 30' Medium

Depth From	Depth To	Remarks and Estimated Analyses Zn	Fe	Pb
0	10		Shine	
10	25		Shine	
25	60		Shine	Shine
60	80	Shine	Shine	Shine
80	84		Shine	Shine

Entire hole slightly oxidized.

~~Serial No. 38~~
Hole No. D-6
Collar Elevation: 1163.6'
Depth of Hole: 72'
Location: Thomas

Date completed: 6/26/52
Drilled by: Dodgeville Mn.Co.,DMA
Logged by: Broughton, U.S.G.S.
Type of Drilling: Churn

Depth From	Depth To	Lithology
0	15	Clay and Drab
15	34	Drab
34	44	Gray
44	52	Blue
52	58	Brown
58	69	Glassrock
69	72	Trenton

Water table: 25' Heavy

Depth From	Depth To	Remarks and Estimated Analyses Zn	Fe	Pb
0	30		Shine	
30	35		Shine	Shine
35	40	Shine	Shine	
40	50		Shine	
50	65		Shine	Shine
65	67	Shine	Shine	Shine
67	72		Shine	

Entire hole slightly oxidized

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : Carl Dutton

DATE: April 23, 1953

FROM : W. A. Broughton

SUBJECT: Benjamin Thomas Report

Enclosed are two copies of the Benjamin Thomas Final Report and three illustrations. Will you please process these as usual?

Subject: DMEA Drilling Information on the Little Grant Property

New Jersey Zinc has asked us if we would release our DMEA map and drill logs of the exploration on Scallon's Little Grant Property provided Scallon agrees to release the information. The question is would the Government have any objection to the release of this information if Scallon agrees to releasing it.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

March 6, 1953

Memorandum

To: Over time Committee, Defense Minerals Exploration Administration, Interior Building, Washington 25, D. C.

From: Executive Officer, Field Team, Region V

Subject: Docket [illegible]-1352, Contract Id[illegible]-183, Rodgerville Mining Co. Thomas Lease

Here are the original and three copies of the operator's Final Geological and Engineering Report on the subject docket project.

The Government Field Team Report has not been completed, but it will be transmitted to you as soon as it is received.

A. D. Meadham
Executive Officer, Field Team
Region V

Attachments

CC - Broughton

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

March 2, 1953

Memorandum

To: Operating Committee, Defense Minerals Exploration Administration, Interior Building, Washington 25, D. C.

From: Executive Officer, Field Team, Region V

Subject: Docket DMA-1352, Contract Idm 2183, Dodgeville Mining Co., Thomas lease.

The following is pertinent information on the above contract, which has been completed:

Total amount of contract	$7,500.00
Government share	3,750.00
Total amount spent	614.67
Government share	307.33
Balance	$3,442.67

J. B. Needham
Executive Officer, Field Team
Region V

CC - Broughton

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Region V
2900 Colfax Avenue South
Minneapolis 8, Minnesota

October 17, 1952

Mr. J. H. McDonald
Dodgeville Mining Company
924 Jay Building
Madison, Wisconsin

Dear Mr. McDonald:

Reference is made to your Defense Minerals Exploration contracts Idm-E154, Jenkins lease, and Idm-E183, Thomas lease.

We have not processed your June vouchers because, ordinarily, we withhold a certain percentage for completion of the operator's final geological and engineering report and, in the case of these two, we do not know if they are to be considered as final vouchers or reports and neither amount to much and it would not be worthwhile to withhold only a portion.

If you have an estimate as to when you might resume exploration on either, or whether it is your intention to close both, we would appreciate the information.

Sincerely yours,

A. B. Needham
Executive Officer
Field Team, Region V

ABNeedham:mrdg
cc Button
Crosh
Croughton
Hill
Region V
files
df

C
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P
Y

BENJAMINE THOMAS LEASE -- D.M.A. 1352X
Geologic and Engineering Report

Location of Lease: This lease covers property located in the Town of Dodgeville, about five and one-half miles East of the City of Dodgeville, Iowa County, Wisconsin, in an area heavily mined for lead in the early days. The leased lands are contiguous to the lands covered in the Margaret Jenkin lease, D.M.A. 1351X, and are more specifically described as the East Half of the Southeast Quarter, the Northwest Quarter of the Southeast Quarter, Section 21 and the Northeast Quarter of the Northeast Quarter of Section 28 all in Town 6 North, Range 4 East.

History of Exploration Project: The contract was entered into with the government on October 16, 1951. Prior to this date Dodgeville Mining Company had drilled thirty-three holes on the lease in the years of 1947 and 1948 although none of these holes revealed a mineralization sufficiently rich to justify mining operations, but did reveal sufficient evidences of the presence of lead and zinc to justify further drilling.

Churn drilling under the government contract began June 11, 1952 and continued until nine additional holes were drilled of which four were disallowed for government assistance. Drilling was done in consultation with representatives of Bureau of Mines and Geological Survey, Platteville, Wisconsin. Evidence of mineralization as to either zinc or lead was so slight that holes were not considered worthy of an assay. Reports were made of the drilling which included detailed maps and drill hole logs.

Object of Drilling Program: The object of the drilling program was to explore the possibility of an ore body lying in the immediate vicinity of the old lead diggings on the lease by extending the drilling program previously started by the Company by cross-cutting the old lead range.

Description of Area Drilled: The general geology of the area is common to other areas in Southwestern Wisconsin having zinc deposits, these having been frequently described in many publications, government and otherwise, dealing with the Upper Mississippi lead and zinc field. The immediate area drilled has a surface covering of from four to ten feet of clay. Below the clay lies a strata of dolomite or drab commonly called sand rock of a thickness of from sixteen to forty feet. Immediately below the sand rock in the following order lie stratas of gray lime, blue lime and brown or oil rock, each approximating from seven to ten feet in thickness. Immediately below the brown or oil rock will be found a layer of so-called "glass rock" that averages about ten feet in thickness. It was expected that if an ore body was found it would be found of a sheet type just below the glass rock. The holes drilled did not extend but a few feet beyond the glass rock.

Drilling Results and Conclusions: The net result of the drilling was a failure to locate a mineralized area. Accordingly no estimate of an ore reserve can be made.

October 22, 1952.

/S/ James J. McDonald
General Partner
Dodgeville Mining Company

DODGEVILLE MINING COMPANY
DRILL HOLE RECORDS

LESSOR'S NAME: Thomas HOLE NO. B-1

LOCATION OF HOLE 200 ft. South & 100 ft. east of that point south of the windmill

			REMARKS
0 TO 10	CLAY		
10 TO 50	SAND ROCK		
50 TO 60	GRAY LIME		
60 TO 67	BLUE LIME		
67 TO 77	BROWN ROCK		shines of zinc
77 TO 87	GLASS ROCK		opening with heavy water from ~~85-87~~ 85-87.
87 TO 90			Heavy water washed cuttings away. Glass rock was soft & red color and caved after the opening.
TO			
TO			
TO			
TO			
TO			

TOTAL DEPTH OF HOLE 90 ft. ; DEPTH WATER STRUCK 50 ft. ;

TYPE OF WATER - HEAVY ☐ MEDIUM ☒ WEAK ☐

DATE STARTED June 11 195 2 ; DATE FIN. June 14 195 2

LABOR 24.00

ASSAY REPORT

ZINC _____ LEAD _____ SULPHUR _____

SIGNED ~~Lester Baker~~

DATE _____

U.S.G.S

DODGEVILLE MINING COMPANY
DRILL HOLE RECORDS

LESSOR'S NAME Thomas HOLE NO. B-2

LOCATION OF HOLE 125 ft. east of B-1

REMARKS

0 TO 10 CLAY

10 TO 40 SAND ROCK

40 TO 50 GRAY LIME

50 TO 57 BLUE LIME

57 TO 67 BROWN ROCK

67 TO 77 GLASS ROCK Blank.

77 TO 79 Trenton lime

TO

TO

TO

TO

TO

TOTAL DEPTH OF HOLE 79 ft. ; DEPTH WATER STRUCK 45 ft. ;

TYPE OF WATER - HEAVY ☐ MEDIUM ☒ WEAK ☐

DATE STARTED June 16 195 2 ; DATE FIN. June 17 195 2

LABOR 24.00

ASSAY REPORT

ZINC LEAD SULPHUR

SIGNED Lester Baker

DATE

DODGEVILLE MINING COMPANY
DRILL HOLE RECORDS

LESSOR'S NAME Thomas HOLE NO. B-3

LOCATION OF HOLE 125 ft. east of B-2

REMARKS

0 TO 10 CLAY

10 TO 26 SAND ROCK

26 TO 36 GRAY LIME

36 TO 43 BLUE LIME

43 TO 53 BROWN ROCK

53 TO 63 GLASS ROCK

63 TO 65 Trenton lime

TO

TO

TO

TO

TO

TOTAL DEPTH OF HOLE 65 ft. ; DEPTH WATER STRUCK 35 ft.;

TYPE OF WATER - HEAVY ☐ MEDIUM ☐ WEAK ☒

DATE STARTED June 18 1952 ; DATE FIN. June 19 1952

LABOR 24.00

ASSAY REPORT

ZINC LEAD SULPHUR

SIGNED Lester Baker

DATE

DODGEVILLE MINING COMPANY
DRILL HOLE RECORDS

LESSOR'S NAME Bennie Thomas HOLE NO. D-1

LOCATION OF HOLE 100' S. of E-W fence along N-S road

REMARKS

0 TO 6 CLAY

6 TO 38 SAND ROCK

38 TO 48 GRAY LIME

48 TO 56 BLUE LIME

56 TO 64 BROWN ROCK

64 TO 74 GLASS ROCK

74 TO 76 Trenton lime

Blank

TO

TO

TO

TO

TO

TOTAL DEPTH OF HOLE 76 ; DEPTH WATER STRUCK 30 ;

TYPE OF WATER - HEAVY ☐ MEDIUM ☒ WEAK ☐

DATE STARTED 6-6 1952 ; DATE FIN. 6-10 1952

LABOR 30.00

ASSAY REPORT

ZINC LEAD SULPHUR

SIGNED Dalen Rickard

DATE 6-10-52

DODGEVILLE MINING COMPANY
DRILL HOLE RECORDS

LESSOR'S NAME Bennie Thomas HOLE NO. D-2

LOCATION OF HOLE 100 ft. South of hole D-1

REMARKS

0 TO 10 CLAY

10 TO 42 SAND ROCK

42 TO 52 GRAY LIME

52 TO 60 BLUE LIME

60 TO 68 BROWN ROCK

68 TO 78 GLASS ROCK

78 TO 80 Trenton lime

TO

TO

TO

TO

TO

TOTAL DEPTH OF HOLE 80 ; DEPTH WATER STRUCK 25 ;

TYPE OF WATER - HEAVY ☐ MEDIUM ☒ WEAK ☐

DATE STARTED 6-10 1952 ; DATE FIN. 6-11 1952

LABOR 20.00

ASSAY REPORT

ZINC LEAD SULPHUR

SIGNED Dalon Rickard

DATE 6-11-52

DODGEVILLE MINING COMPANY
DRILL HOLE RECORDS

LESSOR'S NAME Bennie Thomas HOLE NO. D-3

LOCATION OF HOLE 120 ft. South of hole No. D-2

REMARKS

0 TO 4 CLAY

4 TO 46 SAND ROCK

46 TO 56 GRAY LIME

56 TO 62 BLUE LIME

62 TO 70 BROWN ROCK

70 TO 80 GLASS ROCK

80 TO 82 Trenton lime

Few shines of zinc under glass rock

____ TO ____

____ TO ____

____ TO ____

____ TO ____

____ TO ____

TOTAL DEPTH OF HOLE 82 ; DEPTH WATER STRUCK 25 ;

TYPE OF WATER - HEAVY ☐ MEDIUM ☒ WEAK ☐

DATE STARTED 6-13 1952 ; DATE FIN. 6-16 1952

LABOR 30.00

ASSAY REPORT

ZINC _____ LEAD _____ SULPHUR _____

SIGNED Dalen Rickard

DATE 6-16-52

DODGEVILLE MINING COMPANY
DRILL HOLE RECORDS

LESSOR'S NAME B. Thomas HOLE NO. D-4

LOCATION OF HOLE 120 ft. South of hole No. D-3

REMARKS

0 TO 7 CLAY

7 TO 36 SAND ROCK

36 TO 46 GRAY LIME

46 TO 54 BLUE LIME

54 TO 62 BROWN ROCK

62 TO 72 GLASS ROCK

72 TO 73 Trenton lime

Blank

____ TO ____

____ TO ____

____ TO ____

____ TO ____

____ TO ____

TOTAL DEPTH OF HOLE 73 ; DEPTH WATER STRUCK 25 ;

TYPE OF WATER - HEAVY ☐ MEDIUM ☒ WEAK ☐

DATE STARTED 6-17 195 2 ; DATE FIN. 6-18 195 2

LABOR 20.00

ASSAY REPORT

ZINC ____ LEAD ____ SULPHUR ____

SIGNED Dalen Rickard

DATE 6-18-52

DODGEVILLE MINING COMPANY
DRILL HOLE RECORDS

LESSOR'S NAME B. Thomas HOLE NO. D-5

LOCATION OF HOLE 60 ft. North of D-3

60 ft. South of D-2

REMARKS

0 TO 8 CLAY

8 TO 45 SAND ROCK

45 TO 55 GRAY LIME

55 TO 63 BLUE LIME

63 TO 71 BROWN ROCK

71 TO 81 GLASS ROCK

81 TO 84 Trenton lime

Blank

____ TO ____

____ TO ____

____ TO ____

____ TO ____

____ TO ____

TOTAL DEPTH OF HOLE 84 ; DEPTH WATER STRUCK 30 ;

TYPE OF WATER - HEAVY ☐ MEDIUM ☒ WEAK ☐

DATE STARTED 6-19 1952 ; DATE FIN. 6-24 1952

LABOR 20.00

ASSAY REPORT

ZINC ____ LEAD ____ SULPHUR ____

SIGNED Delon Rickard

DATE 6- 52

DODGEVILLE MINING COMPANY
DRILL HOLE RECORDS

LESSOR'S NAME B. Thomas HOLE NO. D-6

LOCATION OF HOLE 120 ft. South of hole D-4

			REMARKS
0	TO 8	CLAY	
8	TO 34	SAND ROCK	Blank
34	TO 44	GRAY LIME	
44	TO 52	BLUE LIME	
52	TO 60	BROWN ROCK	
60	TO 68	GLASS ROCK	
68	TO 72	Trenton lime	
	TO		
	TO		
	TO		
	TO		
	TO		

TOTAL DEPTH OF HOLE 72 ; DEPTH WATER STRUCK 25 ;

TYPE OF WATER - HEAVY ☒ MEDIUM ☐ WEAK ☐

DATE STARTED 6-24 195 2; DATE FIN. 6-26 1952

LABOR 30.00

ASSAY REPORT

ZINC _____ LEAD _____ SULPHUR _____

SIGNED Dalon Richard

DATE 6-26-52

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Geologic report on the Benjamin Thomas lease near Dodgeville, Wisconsin

by

W. A. Broughton

Location of property

The Benjamin Thomas property is in the Porter's Grove area about 5½ miles east of Dodgeville, Wisconsin (fig. 1). This lease includes the NW¼SE¼ and the E½SE¼ sec. 21 and the NE¼NE¼ sec. 28, T. 6 N., R. 4 E. (pl. 1).

Occurrence of ore

Ore-bearing beds

Zinc and lead mineralization of the Porter's Grove area occurs in the Galena, Decorah, and Platteville formations, all of Ordovician age (fig. 2). Early lead ore production was largely from the lower part of the Galena formation. Zinc sulfide ore is not known to have been produced in this area although some smithsonite has been accumulated from shallow diggings. Miners' terms, subdividing the formations into members, are used in this report.

The oldest member of the Galena formation is the "drab" or "sand rock". The maximum thickness of the "drab" is about 110 feet, but much of the member has been eroded in the Porter's Grove area. The Decorah formation is divided, from top to bottom, into the "gray", "blue", "brown rock", and "clay bed". "Glass rock" is the upper member of the Platteville formation, and "Trenton" is the lower member.

Geologic structure

Detailed structure has not been mapped in the Porter's Grove area. However, it is assumed to be similar to structure in the Dodgeville area, about 5 miles to the west, where very gently folded east-west anticlines and synclines are crossed by less perceptible north-south folds. Zinc and lead ore bodies occur in the Dodgeville area as narrow bedding-plane veins, called "flats", at or near the "glass rock"-"Trenton" contact. The veins are on the limbs of the east-west synclines and bend around the noses of the interfingering folds. These flats of ore are in some places connected by similar flats where the north-south anticlines cross the east-west synclines. The small amount of drilling in the Porter's Grove area indicates the existence of gentle folds, but not enough information is available to determine definite trends and the locations of axes.

Elongate areas of old surface lead diggings in the Porter's Grove area indicate the presence of lead "crevices" and "ranges" similar to those in other parts of the district. The crevices are nearly vertical mineralized fractures striking east-west, north-south, northwest, and northeast. Two or more closely spaced and parallel crevices constitute a range. The crevices are normally a fraction of an inch to several inches wide, and at definite stratigraphic horizons in the Galena formation they may widen into ore shoots called "openings". Known lead ranges on the Benjamin Thomas property are shown on plate 1.

Character of the ore

The lead crevices contain coarse- to fine-grained galena, some smithsonite, and ocherous clay above the water table; and coarse- to fine-grained galena, pyrite, marcasite, calcite, and a small amount of sphalerite below the water table.

Drill records indicate that zinc and lead mineralization occurs in the "brown rock" and at the base of the "glass rock". These mineralized zones are not exposed in the area, but it is believed that the "brown rock" mineralization consists of fine- to medium-grained disseminations of sphalerite, galena, pyrite, marcasite, and calcite. The basal "glass rock" mineralization is probably a flat of coarse-grained sphalerite, galena, pyrite, marcasite, and calcite.

Exploration

Exploration for ore in this district is customarily by churn drilling. Although wildcat prospecting for vertical lead crevices by vertical drilling is likely to be unsuccessful, drilling for lead crevices in areas of old surface diggings may be feasible because these areas commonly mark the sites of lead ranges. Churn drilling for the lower flats and disseminated deposits of zinc-lead ore has more possibilities because of the greater horizontal extent of the flats. In the Porter's Grove area no satisfactory system has been established to prospect for the lower zinc-lead flats and disseminations, except to drill in areas of old surface diggings or along their trends because large lead ranges indicate rather intense mineralization and, in areas adjacent to the Porter's Grove area, lower flats of zinc-lead ore have been found under some of the ranges.

Twenty-nine holes have been drilled on the Benjamin Thomas property, in sec. 21 (pl. 1). Partial logs of these holes have been included in the examining mining engineer's portion of this report. All of the holes show some sulfide mineralization either in the "brown rock" or near the "glass rock"-"Trenton" contact, and many of them show at least slight zinc sulfide and lead sulfide mineralization at these horizons. Hole 7 shows good galena in the "sand rock", probably indicating a lead crevice. Holes 1, 13, and 28 show rather good zinc mineralization in the "brown rock". Hole 19 shows fairly good zinc mineralization in the "glass rock".

Further drilling is necessary to outline a mineable body of ore. Drilling as proposed by the loan applicant is shown on plate 1. The double line of proposed holes south of hole 7 seems reasonable. Rather than the double line of holes east of hole 25, it might be better to put an east-west line of holes between holes 19 and 28 and north of hole 1. An east-west line of holes through hole 13, in order to have a cross section through the three lead ranges, would add greatly to the structural picture of the area, would also prospect the ranges for ore, and possibly extend the rather good mineralization in hole 13.

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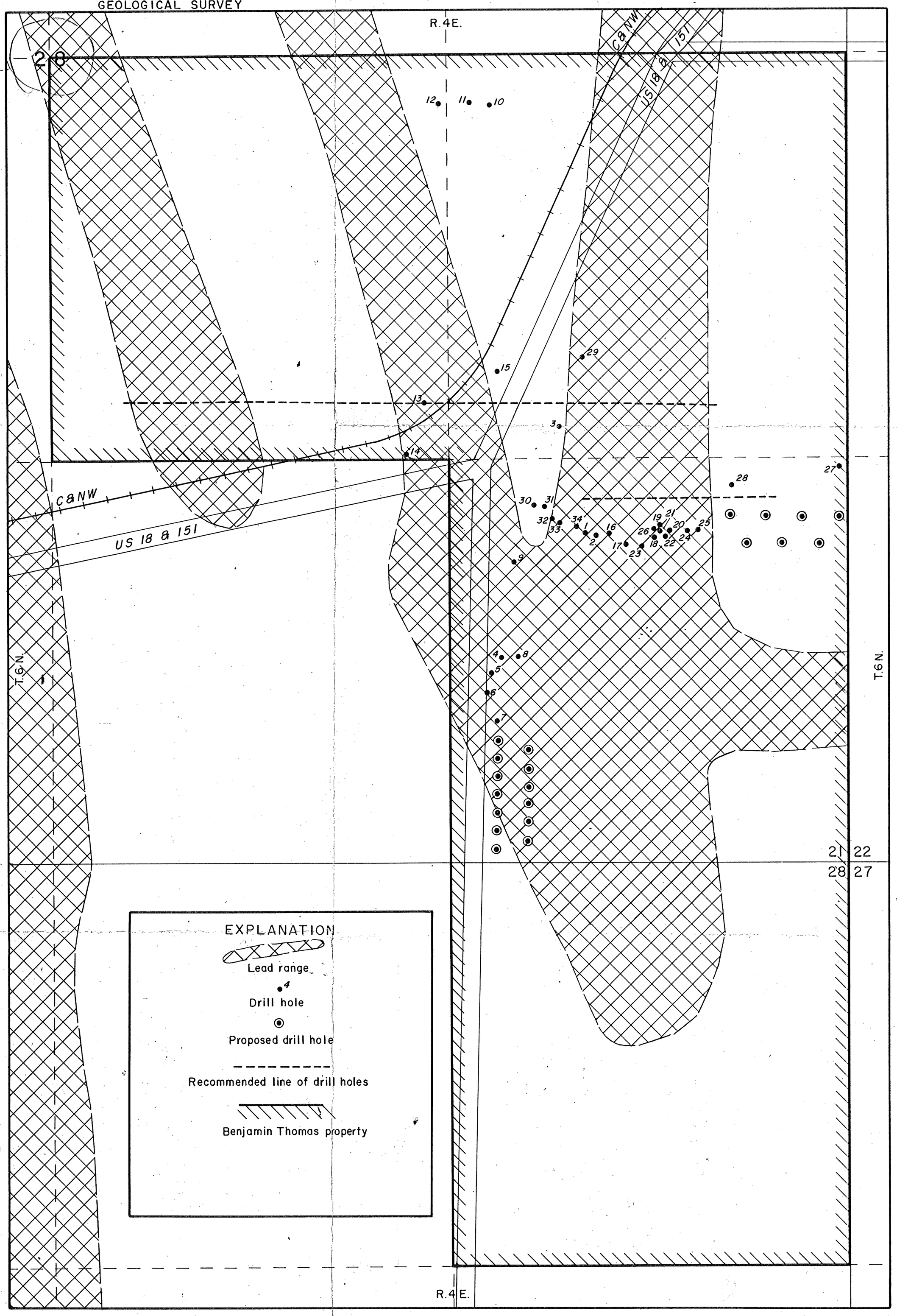
GEOLOGICAL SURVEY

PLATE I



MAP SHOWING THE BENJAMIN THOMAS PROPERTY NEAR DODGEVILLE
IOWA COUNTY, WISCONSIN

200 0 200 400 600 Feet
SCALE

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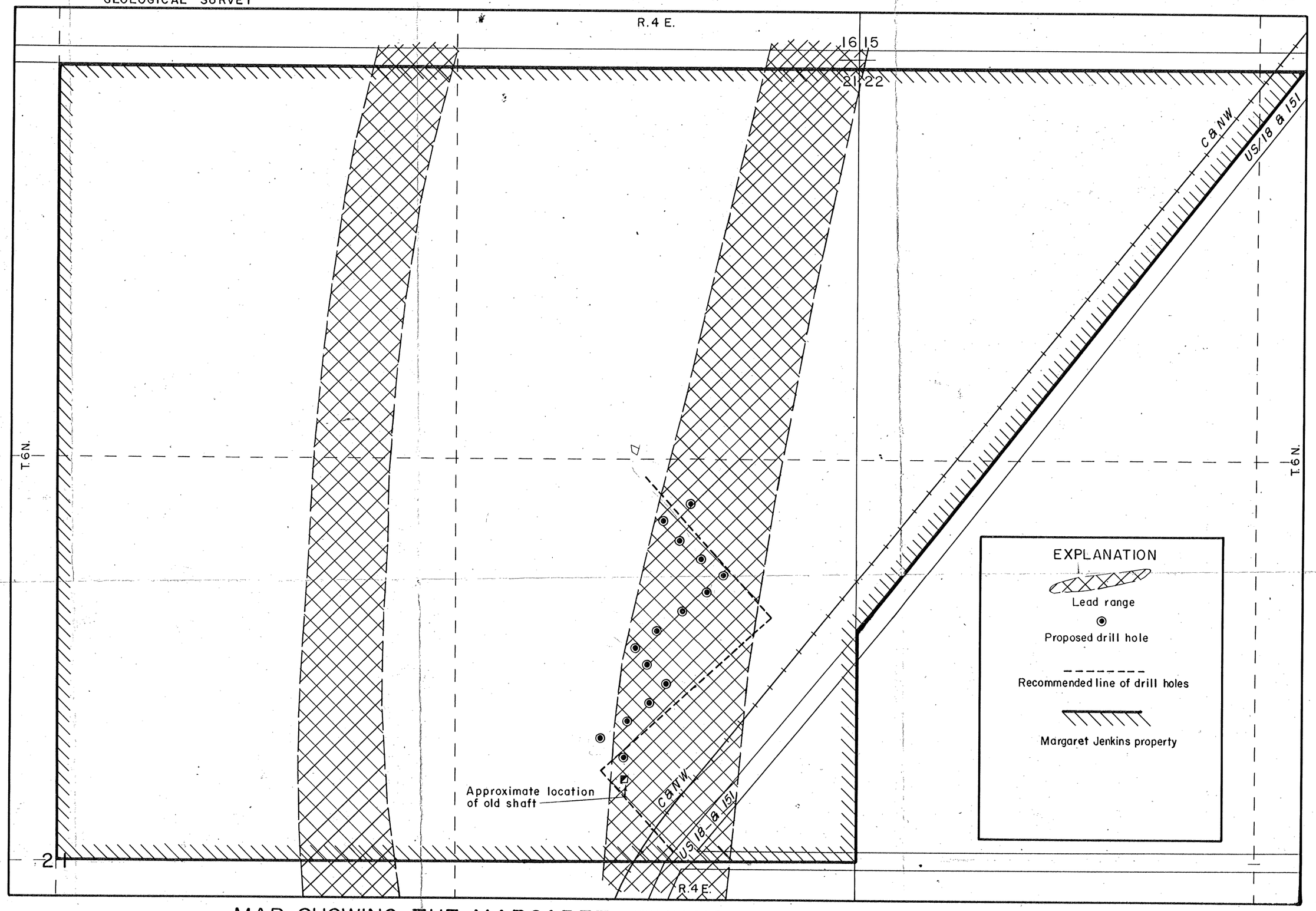
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PLATE I



MAP SHOWING THE MARGARET JENKINS PROPERTY NEAR DODGEVILLE
IOWA COUNTY, WISCONSIN

200 0 200 400 600 Feet
SCALE

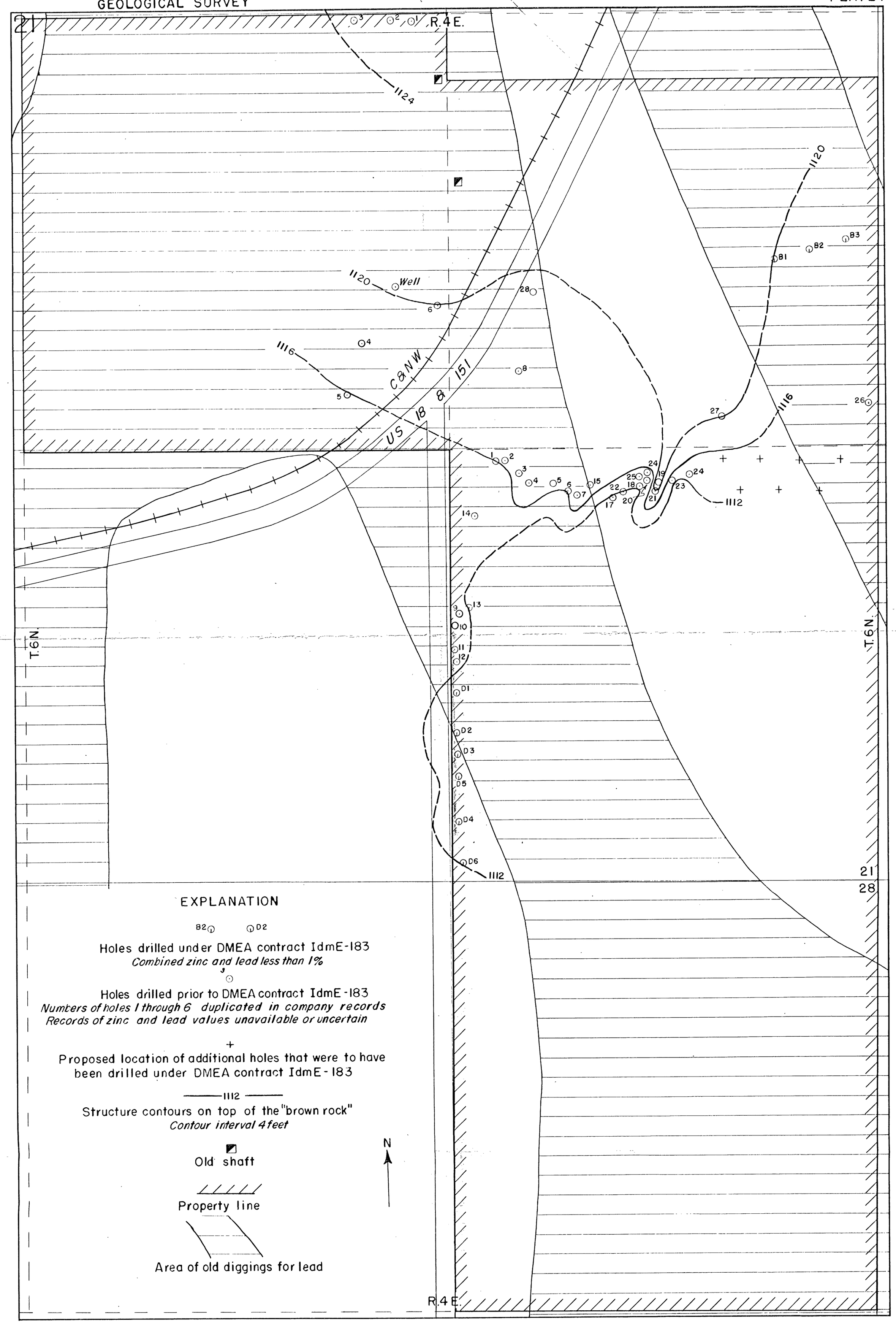
Thomas Jenkin
works map.

Thomas - Jenkin
works map.

Thomas-Jenkins
Company

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PLATE I



MAP OF THE BENJAMIN THOMAS PROPERTY SHOWING DRILL HOLES AND STRUCTURE CONTOURS

PORTER'S GROVE AREA, IOWA COUNTY, WISCONSIN

0 200 400 600 Feet

SCALE