County ..... PUTNAM
T. 13 N ..... R ..... 3 W
Sec ..... NW NW 1
Other Survey .....

Quarry or Pit ..... Core ... X .... Dim ..... Other .....
Name . Standard Materials GP-9 .....
Former Names .....
. .....
Operator .....
Former Operators .....

COAL AND INDUSTRIAL MINERALS SECTION
INDIANA GEOLOGICAL SURVEY
DEPARTMENT OF NATURAL RESOURCES
611 NORTH WALNUT GROVE
BLOOMINGTON, INDIANA 47401

MEMORANDUM REPORTS BY:

	Name	Date
1	Donald D. Carr	July 22, 1969
2		
3		
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5		
6		
7		
8		
9		
10		

REMARKS

Sample cutting examined with binocular microscope.
Percentage figures based on visual estimates.

M06009

SAMPLE DESCRIPTION

by

DONALD D. CARR

Company: Standard Materials CP-9

Location: NW¼ SW¼ sec. 1, T. 13 N., R. 3 W.
Putnam County

Locality: About 7 miles northeast of Cloverdale

Date of drilling: June-July, 1969

Date of sample description: July 22, 1969

Surface elevation: 860 feet

Comments: Sample cutting examined with binocular microscope.
Percentage figures based on visual estimates.

Unit	Description	Thickness in feet From	To
	Samples begin at 7 feet.		
	Salem Limestone		
1	Limestone, light-and medium-brown gray, skeletal, med. grained.	7	14
2	Limestone, light brown-gray, skeletal-micritic, fine-med.-grained, about 5% chert lt. and dk. gray, mottled, and siliceous limestone, lt. gray, porous and dense. Chert has replaced limestone.	14	15
3	Limestone, as unit 2, (30%) and lt. yellowish brown argillaceous limestone (30%), and chert (40%) as unit 2.	15	17
4	Argillaceous limestone, lt. yellowish-brown, micritic, soft (60%) and chert (40%).	17	21
5	As unit 4; Argillaceous ls. (40%), chert (60%).	21	27
6	As unit 4.	27	28
7	As unit 4; Argillaceous ls. (90%), chert (10%).	28	29
8	Argillaceous limestone, yellowish brown, skeletal-micritic, med.-to cs.-grained; less than 1% chert replacing skeletal grains.	29	31
9	Argillaceous ls. as unit 8 (90%) and 10% white and lt. gray	31	33
	Harrodsburg Limestone		
10	Limestone, lt. gray and brn.-gray, mottled, skeletal, cs.-grained, hard.	33	42
11	Dolomitic siltstone, med. gray, sli. carbonaceous, soft.	42	46
12	Argillaceous limestone, med.-dark gray, mottled, fn.-to med. grained, med. soft, carbonaceous; about 15% siltstone as unit 11.	46	47
13	Limestone, lt. and dk-gray, mottled, skeletal-micritic, slightly silty, med. hard.	47	51
14	Silty limestone, lt. gray, micritic and micritic-skeletal, fn.-to med.-grained, med. soft; trace white, porous chert as med. to cs. grains.	51	56

Unit	Description	Thickness in feet From	To
15	Limestone, lt. brn-gray, skeletal, cs. grained, hard; about 30 percent silty limestone as unit 14; trace of dog-tooth spar calcite suggesting vugs.	56	60
16	Silty limestone, lt. green gray, micritic-skeletal, fine- to coarse-grained, med. hard.	60	61
17	Limestone, v. light brown, crinoidal-skeletal, coarse-grained, med. hard.	61	70
18	Limestone, light gray, skeletal and micritic-skeletal, fine-coarse-grained, hard; trace lt.-gray chert, med.-coarse-grained; up to about 10% rhombohedral calcite, possibly from vugs.	70	77
19	Limestone, light gray, skeletal, med.-very coarse grained, crinoidal and bryozoanal, hard.	77	89
20	Limestone as unit 19 and about 30% light green-gray dolomitic siltstone, soft.	89	92
21	Silty dolomite, light gray, finely crystalline, soft; up to 5 percent rhombohedral calcite possibly from vugs.	92	99
	Borden Group?		
22	Dolomitic siltstone, gray, soft; up to about 1 percent white crystalline quartz.	99	107
	Total depth		107

standard cp9
67-413-03-01

Standard Materials CP-9
NW¼ SW¼ sec. 1, T. 13 N., R. 3 W. Putnam County
About 7 miles northeast of Cloverdale
Date of drilling: June-July, 1969
Date of sample description: July 22, 1969
Surface elevation: 860 feet
Comments: Sample cutting examined with binocular microscope. Percentage figures based on visual estimates.
By Donald D. Carr

Unit	Description	Thick-ness	
	Samples begin at 7 feet.		
	Salem Limestone		
1	Limestone, light-and medium-brown gray, skeletal, med. grained.	7.0	14.0
2	Limestone, light brown-gray, skeletal-micritic, fine-med.-grained, about 57. chert lt. and dk. gray, mottled, and siliceous limestone, lt. gray, porous and dense. Chert has replaced limestone.	14.0	15.0
3	Limestone, as unit 2, (30%) and lt. yellowish brown argillaceous limestone (30%), and chert (40%) as unit 2.	15.0	17.0
4	Argillaceous limestone, lt. yellowish-brown, micritic, soft (60%) and chert (40%).	17.0	21.0
5	As unit 4; Argillaceous ls. (40%), chert (60%).	21.0	27.0
6	As unit 4.	27.0	28.0
7	As unit 4; Argillaceous ls. (90%), chert (10%).	28.0	29.0
8	Argillaceous limestone, yellowish brown, skeletal-micritic, med.-to cs.-grained; less than 17. chert replacing skeletal grains.	29.0	31.0
9	Argillaceous ls. as unit 8 (90%) and 10% white and lt. gray	31.0	33.0
	Harrodsburg Limestone		
10	Limestone, lt. gray and brn.-gray, mottled, skeletal, cs.-grained, hard.	33.0	42.0
11	Dolomitic siltstone, med. gray, sli. carbonaceous, soft.	42.0	46.0
12	Argillaceous limestone, med.-dark gray, mottled, fn.-to med. grained, med. soft, carbonaceous; about 15% siltstone as unit 11.	46.0	47.0
13	Limestone, lt. and dk-gray, mottled, skeletal-micritic, slightly silty, med. hard.	47.0	51.0
14	Silty limestone, lt. gray, micritic and micritic-skeletal, fn.-to med.-grained, med. soft; trace white, porous chert as med. to cs. grains.	51.0	56.0
15	Limestone, lt. bin-gray, skeletal, cs. grained, hard; about 30 percent silty limestone as unit 14; trace of dog-tooth spar calcite suggesting vugs.	56.0	60.0

16	Silty limestone, lt. green gray, micritic-skeletal, fine- to coarse-grained, med. hard.	60.0	61.0
17	Limestone, v. light brown, crinoidal-skeletal, coarse-grained, med. hard.	61.0	70.0
18	Limestone, light gray, skeletal and micritic-skeletal, fine-coarse-grained, hard; trace lt.-gray chert, med.-coarse-grained; up to about 10% rhombohedral calcite, possibly from vugs.	70.0	77.0
19	Limestone, light gray, skeletal, med.-very coarse grained, crinoidal and bryozoanal, hard.	77.0	89.0
20	Limestone as unit 19 and about 30% light green-gray dolomitic siltstone, soft.	89.0	92.0
21	Silty dolomite, light gray, finely crystalline, soft; up to 5 percent rhombohedral calcite possibly from vugs.	92.0	99.0
	Borden Group?		
	Dolomitic siltstone, gray, soft; up to about 1 percent white crystalline quartz.	99.0	107.0
	Total depth	107.0	

INDIANA GEOLOGICAL SURVEY
ELECTRIC WELL LOG

M21005

WELL NO. 5 ELEVATION 855.0

LOCATION: COUNTY Putnam

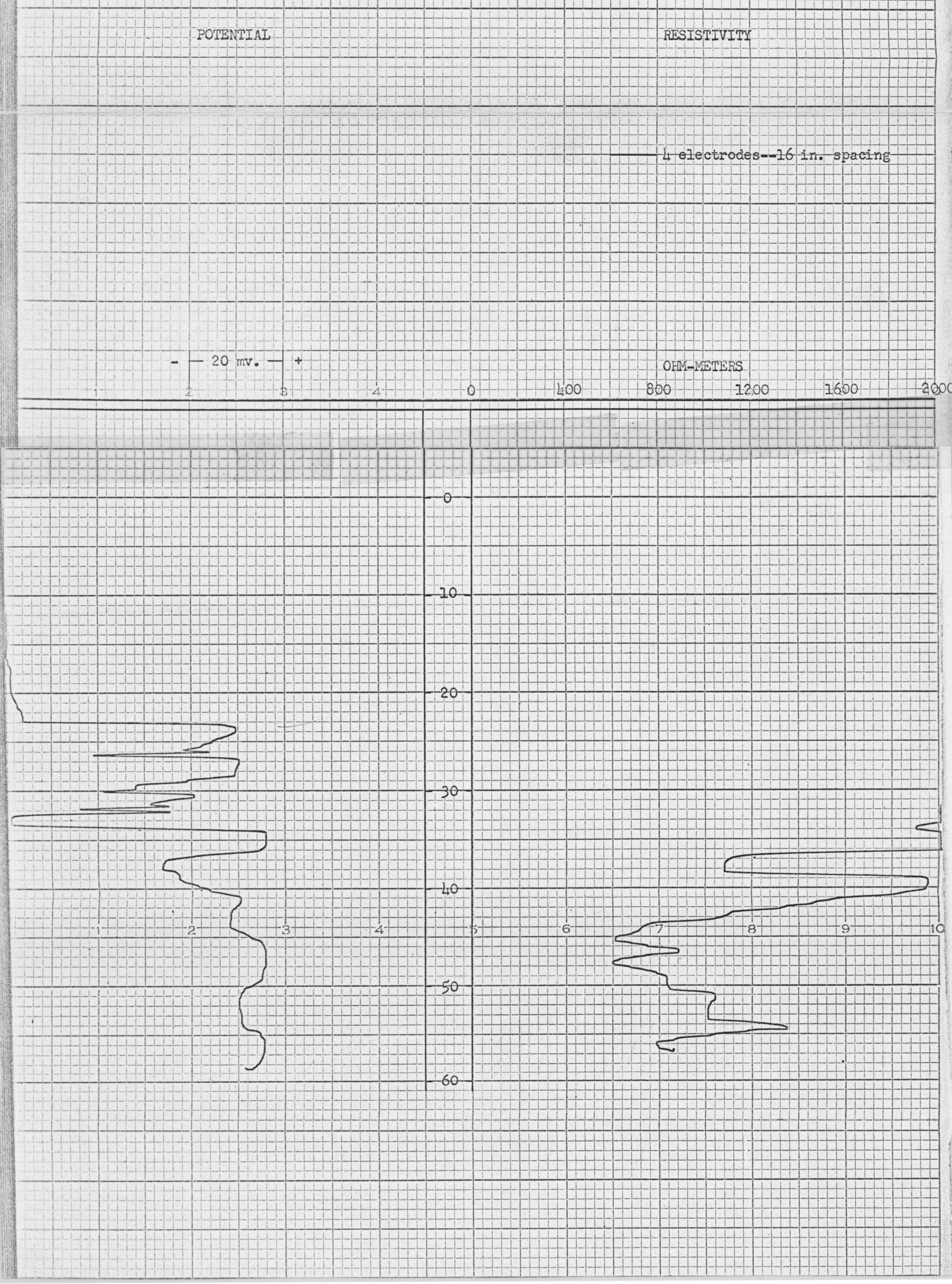
SECTION 31, TOWNSHIP 13N, RANGE 3W

NE NE 1100 NL 0 EL

Standard Materials--Cloverdale Quarry
110S 090W

Logged by: J. Whaley

RUN NUMBER	1	2		
DATE	2-13-67	2-13-67		
LOGGED FROM (feet)	23	36		
LOGGED TO (feet)	58.5	56.5		
LONG NORMAL (3)				
SHORT NORMAL (3)				
LONG NORMAL (4)				
SHORT NORMAL (4)		X		
LATERAL (A)				
LATERAL (B)				
SELF POTENTIAL	X			
HOLE DIAMETER				



INDIANA GEOLOGICAL SURVEY
ELECTRIC WELL LOG M21006

WELL NO. 6 ELEVATION 880

LOCATION: COUNTY Putnam

SECTION 31, TOWNSHIP 13N, RANGE 3W

NE 2100 NL 900 EL

Standard Materials--Cloverdale Quarry
21OS 09OW

Logged by: J. Whaley

RUN NUMBER	1	2		
DATE	2-13-67	2-13-67		
LOGGED FROM (feet)	19	20		
LOGGED TO (feet)	172	170		
LONG NORMAL (3)				
SHORT NORMAL (3)				
LONG NORMAL (4)				
SHORT NORMAL (4)		X		
LATERAL (A)				
LATERAL (B)				
SELF POTENTIAL	X			
HOLE DIAMETER				

POTENTIAL

RESISTIVITY

4 electrodes--16 in. spacing

- 20 mv. +

OHM-METERS

0 1000 2000 3000 4000 5000

Reset

INDIANA GEOLOGICAL SURVEY
ELECTRIC WELL LOG M21001

WELL NO. 1 ELEVATION 873.5

LOCATION: COUNTY Putnam

SECTION 31, TOWNSHIP 13N, RANGE 3W

NE NE NE 100 NL 450 EL

Standard Materials--Cloverdale Quarry
010S 045W

Logged by: J. Whaley

RUN NUMBER	1	2		
DATE	2-13-67	2-13-67		
LOGGED FROM (feet)	6	6		
LOGGED TO (feet)	24.5	22.5		
LONG NORMAL (3)				
SHORT NORMAL (3)				
LONG NORMAL (4)				
SHORT NORMAL (4)		X		
LATERAL (A)				
LATERAL (B)				
SELF POTENTIAL	X			
HOLE DIAMETER