APPENDICES

APPENDIX A	Well Records
Appendix A-1	Records of Deep Wells that Penetrate at Least to the Bethlehem Steel Confining Zone (5 wells)
Appendix A-2	Records of Wells the Indiana Geological Survey Classified as "Deep", but which did not Reach the Bethlehem Steel Confining Zone (9 wells)
Appendix A-3	Records of Water Wells Drilled Post 1994, within 2-1/2 Miles of Bethlehem's Injection Wells (25 wells)
Appendix A-4	Records of Wells Drilled up until 1994, within 2-1/2 Miles of Bethlehem's Injection Wells (132 wells)
Appendix A-5	Records of Water Wells Drilled at any Time Up Until September 1997, in the Area Between 2-1/2 and 4 Miles from Bethlehem's Injection Wells (205 wells)
APPENDIX B	Fracture Gradient Data
APPENDIX C	Waste Analysis Plan
APPENDIX D	Financial Assurance Mechanism.

UIC PERMIT RENEWAL APPLICATIONS

FOR

SPL-1 (PERMIT NUMBER IN-127-1W-0001)
WAL-1 (PERMIT NUMBER IN-127-1W-0003)
WAL-2 (PERMIT NUMBER IN-127-1W-0004)

for

BETHLEHEM STEEL CORPORATION, INC.
BURNS HARBOR DIVISION

OCTOBER 1997

VOLUME 2 OF 2

TEXAS WORLD OPERATIONS INC
520 POST OAK BLVD SUITE 450
HOUSTON TEXAS 77027-9405
(713) 850-0003

APPENDIX A-1

Permit ----

SPL-1

DATA	
Electric Log	X R S
Scout Ticket	
Drillers Log	
Survey Well Record	X
Sample Study	X
Formation Density Log	X
Temperature Log	X
SWRA	X

TD 4304 Precambrian

BETHLEHEM STEEL -- #WD-1
Farm and Well No.

BETHLEHEM STEEL
Operator

28 - 37N - 6W
Sec. Twp. Rge.

PORTER
County

Workover

FIELD CHECKED BY D. SULLIVAN, 1963
LOCATION: 28-37N-6W
NW
1010'NL, 1710'WL
ELEVATION: 613 (Paulin), 625KB

DATA FILED ELSEWHERE	
Small Scale Log:	
Electric	
Sonic	
Nuclear	X
Samples	X
Cores	X
Lithologic Strip	X
Colored Drillers Log	
Colored Sample Study	X
Drilling Time Log	X

GEOLOGICAL SURVEY
Department of Natural Resources
State of Indiana

WELL DATA CARD

PERMIT ----- SPL-1

BSC WD-1

FARM Bethlehem Steel NO. WD-1

OPERATOR Bethlehem Steel

COUNTY Porter

TWP. 37N RGE. 6W

SEC. 28; NW;

1010'NL, 1710'WL

COMMENCED 11-[illegible]-63 COMPLETED 11-22-63 12-18-63

COMPLETION INTERVAL 2222-4263

ELEV. 625 KB 613

IP Waste Disposal FORMATION Mt. Simon Eau Claire &

POOL ----- BY Paulin

TD 4304 FORMATION Precambrian

ROTARY X CABLE

INFORMATION FILED

Electric Log	X E. S. F.	Sample Study	X
Scout Ticket		Strip Log	C-ss, L
Drillers Log		Formation Density Log	
Drilling Time	X	Temperature Log	
Cores	X	SWBA	X
Samples	X	SWR	X

REMARKS

Geophysical logs measured from ground level.

UTM 490095 4608910

Field checked by D. Sullivan, 1963

PH—9-67—2500—A291

BSC SPL-1

INDIANA GEOLOGICAL SURVEY
WELL RECORD

This record has been compiled by the Indiana Geological Survey in the absence of conventional well records (except samples, in some cases).

Permit -----	County Porter
Well No. WD-1	Twp. 37N Rge. 6W
Farm Bethlehem Steel	Sec. 28; NW;
Operator Bethlehem Steel	1010'NL, 1710'WL

Commenced 11-4-63	Elevation 613, 625 KB	Pool -----
Completed 11-22-63	Total Depth 4304	Type Tools Rotary

Initial Production Waste Disposal Interval 2222-4263 Formation Eau Claire & Mt. Simon

Information Source Bethlehem Steel, Operator

The operator advised that completion was effected as a waste disposal well.

The operator advised by letter of 12-13-63 that casing was installed as follows: 7" at 4206 from ground level, perforated 2210'-4206'. Stage packer set at 2210', cemented from packer to surface.

(Stage packer with reference to Kelly bushing = 2222').

Compiler G. Carpenter Date 12-16-63

BSC SPL-1

INDIANA GEOLOGICAL SURVEY
WELL-RECORD ADDENDUM

This record has been compiled by the Indiana Geological Survey. It contains information that is supplemental to conventional well records.

Permit	-----	County	Porter
Well No.	[illegible]-1	Twp. 37N	Rge. 6W
Farm	Bethlehem Steel	Sec.	28; NW;
Operator	Bethlehem Steel		1010'NL, 1710'WL

Commenced	11-4-63	Elevation	625 KB 613	Pool	-----
Completed	11-22-63	Total Depth	4304	Type Tools	Rotary

Initial Production Waste Disposal Interval 2222-4263 Formation Eau Claire & Mt. Simon

Information Source Geochemistry Section letter by R. K. Leininger, dated 12-11-64

Letter reads as follows:

"-----. The results are as follows (in parts per million):

Sample Number	C63-4	C63-17	C64-1
Formation	St. Peter	Eau Claire & Mt. Simon	Eau Claire & Mt. Simon
Interval	1297-1347	1865-2918	2210-4292
Source	Drill Stem Test	Drill Stem Test	Wellhead
Date	11/13/63	11/20/63	4/11/64
pH	7.20	8.54	6.33
Total Solids	9360	1280	68,100
Na	2330	328	17,400
K	87.0	43.9	610
Total Iron	0.08	Not Run	21.5
Ca	2670	19.4	6100
Mg	763	14.4	1110
Cl	4360	355	41,700
HCO_3	207	234	97.6
CO_3	0	28.8	0
SO_3	1510	242	1060
Br	12	0	197

As hinted in Mr. Dawson's letter, data for sample C63-17 are in doubt because of clay content of the sample."

Compiler J. Carpenter Date 12-15-64

BSC SPL-1

INDIANA GEOLOGICAL SURVEY
WELL-RECORD ADDENDUM

This record has been compiled by the Indiana Geological Survey. It contains information that is supplemental to conventional well records.

Permit	-----	County	Porter
Well No.	WD-1	Twp. 37N	Rge. 6W
Farm	Bethlehem Steel	Sec.	28: NW;
Operator	Bethlehem Steel		1010'NL, 1710'WL

Commenced	11-4-63	Elevation	613, 625 KB	Pool	-----
Completed	11-22-63	Total Depth	4304	Type Tools	Rotary

Initial Production Waste Disposal Interval 2222-4263 Formation Eau Claire & Mt. Simo

Information Source Bethlehem Steel, Operator

The swabbed water sample submitted (# C64-1 of Indiana Survey) carries a depth record of 2210-4292. This depth record is interpreted to be a measurement from ground level. Depth records on two water samples recovered by drill stem testing (# C63-4 and C63-17) are interpreted to be measurements from the Kelly bushing.

Compiler H. Smith Date 3-24-65

BSC SPL-1

Permit -----
Bethlehem Steel
Bethlehem Steel #WD-1
Completed 11-22-63
D&A

Porter County

28-37N-6W
NW
1010'NL, 1710'WL
Elevation 625 KB

0-100	SKIP	
100-170	GLACIAL DRIFT	
170-175	GLACIAL DRIFT; some SH, gy-blk, slty	NEW ALBANY
175-200	SH, lt gy & blk, slty	
200-220	DOL, gytn-tn, m xtln, vug	DEVONIAN LS. 200'
220-235	DOL, brn, m xtln-ds, vug	
235-245	DOL, tn-brn, ds-m xtln, sl vug	
245-250	DOL, tn-brn, ds-m xtln, sl vug; tr DOL, lt gy, vf gran, arg, aren	
250-255	DOL, lt gy-lt tn, vf gran, lam, sl aren, arg	
255-260	DOL, lt tn, ds-m xtln, vug; tr DOL, lt gy, vf gran, aren, arg	SILURIAN 256'
260-270	DOL, lt tn-gytn, ds-m xtln, vug	
270-345	DOL, wh, m xtln, vug-v vug	
345-435	DOL, wh-lt gy, m xtln, vug-v vug	
435-495	DOL, wh, m xtln, vug	
495-510	DOL, wh-pnk, m xtln, vug	
510-515	DOL, wh-lt gn, m xtln, vug	
515-520	DOL, wh-pnk, m xtln, vug	
520-525	DOL, wh-lt gn, m xtln, vug; tr SH, gn	
525-530	DOL, wh-lt gn-pnk, m xtln, vug	
530-540	DOL, wh, m xtln, vug	
540-550	DOL, wh-lt gn, f-m xtln, vug	
550-570	DOL, wh-pnkbrn, f-m xtln, vug	
570-575	DOL, wh-lt gy, f-m xtln, vug	
575-580	DOL, wh-lt gy-pnk, f-m xtln, vug	
580-595	DOL, wh-lt gy, f xtln, vug	
595-600	DOL, lt gy-wh, ds-f xtln, sl vug	
600-610	DOL, lt gy, ~~vf gran~~-f xtln	
610-625	DOL, wh-tn-lt gy, ds-f xtln	
625-630	DOL, wh-tn, f gran-ds	
630-645	DOL, wh-tn, ds-f xtln	
645-655	DOL, lt gy-salmn, ds-f xtln	
655-660	DOL, tn, ds-f xtln	
660-665	DOL, tn-wh, ds-f xtln	
665-675	DOL, tn-wh, ds-f xtln, glauc	
675-690	DOL, tn-wh, ds-f xtln, chty	
690-700	DOL, tn, ds-f xtln, sl chty	
700-705	DOL, tn-wh, ds-f xtln, chty	
705-720	DOL, tn-wh, ds-f xtln	
720-745	DOL, gytn, ds-f xtln	
745-750	DOL, wh & gy (mtld), m-f xtln; tr SH, gn	CINCINNATIAN 745'
750-755	DOL, lt tn, m xtln	
755-760	DOL, tn, f-m xtln	
760-770	DOL, tn, f-m xtln, sl pyr; tr SH, gy-gngy	
770-775	DOL, gytn, ds-f xtln, arg; tr SH, gngy	
775-780	DOL, tn & gy (mtld), f-m xtln; tr DOL, gytn, ds-f xtln, arg; tr SH, gngy; tr DOL, whtn & gy (mtld), f-m xtln	
780-805	DOL, whtn & gy (mtld), f-m xtln, shly, fos	
805-810	DOL, whtn & gy (mtld), f-m xtln, shly, fos; SH, gngy	
810-815	SH, gy; some DOL, whtn & gy (mtld), f-m xtln, fos	
815-840	SH, gy	

FIELD CHECKED BY D. SULLIVAN, 1963
LOCATION: 28-37N-6W
NW
1010'NL, 1710'WL
ELEVATION: 614, 625 KB (Paulin)

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1610-1615	DOL, brn, f-m xtln, sl vug
1615-1625	DOL, tn-pnktn-mrn, ds-f xtln
1625-1630	DOL, dk tn, f-m xtln, sl vug
1630-1640	DOL, tn-pnktn-gytn-mrn, vf-f xtln
1640-1645	DOL, tn-gytn, f xtln
1645-1650	DOL, tn-gytn-pnktn, vf-f xtln
1650-1655	DOL, tn-whtn-gytn-pnktn, vf-m xtln, chty
1655-1675	DOL, gytn, vf-m xtln, sl chty
1675-1690	DOL, brn-tn, f-m xtln, glauc; some SD, clr-wh, f-c, ang-rnd (frstd), uncon-v fr; tr SH, gn
1690-1695	SD, clr, f-m, ang, uncon-fr, dol, glauc
1695-1700	DOL, tn-lt tngy, f-m xtln, v aren, glauc
1700-1735	SD, clr-gy, f-m, uncon-con, v glauc, shly, dol
1735-1740	SD, clr-gy, f-m, fr-hd, v glauc, dol; some SH, gygn, glauc
1740-1745	SH, dk gygn; some DOL, lt tn-gytn, f xtln-ds, glauc
1745-1755	DOL, lt tn-lt gy, ds-f xtln, glauc, sl aren
1755-1770	SD, lt tn-lt gy, vf, con, slty, glauc, dol-v dol
1770-1775	DOL, tn-lt tn, ds-vf xtln, sl glauc
1775-1785	DOL, gytn, f-m xtln, sl vug, sl glauc
1785-1795	DOL, gytn-lt tn, ds-m xtln, sl glauc
1795-1805	DOL, lt tn-gy, ds-m xtln, glauc, aren (m-vc, frstd)
1805-1810	DOL, lt tn-tn, f-m xtln, glauc, v aren (m-vc, frstd)
1810-1815	DOL, brn-lt tn, f-m xtln, sl glauc, v aren (m-vc, frstd)
1815-1825	DOL, brn-lt tn, f-m xtln, aren (f-vc, frstd); SD, wh, f-vc, rnd (frstd), uncon
1825-1830	DOL, brn-lt tn, f-m xtln, aren (f-vc, frstd), pyr; SD, wh, f-vc, rnd (frstd), uncon
1830-1840	SD, clr-wh, f-vc, rnd (frstd), uncon; some DOL, brn- lt tn, f-m xtln, aren (f-vc, frstd), sl pyr
1840-1845	DOL, lt tn-tn, ds-m xtln, aren, sl pyr, sl chty; some SD, clr-wh, f-vc, rnd (frstd), uncon
1845-1870	SD, clr-wh, vf-vc, rnd (frstd), uncon; some DOL, brn-lt tn, f-m xtln, aren; tr SH, gn
1870-1875	DOL, lt tngy, ds-f xtln, aren; tr SD, clr-wh, vf-vc, rnd (frstd), uncon; tr SH, gygn
1875-1880	SD, clr-wh, vf-vc, rnd (frstd), uncon-fr; tr DOL, brn-lt tn, ds-f xtln, aren; tr SH, gn
1880-1895	SD, clr-wh, vf-vc, rnd (frstd), uncon-fr, dol, sl shly
1895-1900	SD, clr-wh, vf-vc, rnd (frstd), uncon-fr, dol; some SH, gn
1900-1920	SD, clr-wh, vf-vc, rnd (frstd), uncon-fr, sl dol, sl shly (gn-gygn)
1920-1935	SD, clr-wh, vf-vc, rnd (frstd), uncon
1935-1970	SD, clr-wh, vf-vc, rnd (frstd), uncon; tr DOL, tn, f xtln
1970-1985	SD, clr-wh, vf-c, rnd (frstd), uncon; some DOL, gybrn, f xtln, shly
1985-1995	SD, clr-wh, vf-c, rnd (frstd), uncon; some DOL, gybrn-gytn-wh, f xtln, v shly, aren, glauc, sl chty
1995-2005	DOL, dk gytn-lt tn, f xtln, shly, aren, glauc, sl chty; SD, clr-wh, vf-c, rnd (frstd), uncon-con
2005-2010	SLT, pnktn-gy, hd, aren, glauc, dol, shly; tr DOL, tn-gytn, f xtln, aren
2010-2175	SLT, pnktn-gytn-lt mrn, hd-fr, aren, glauc, dol, mic, shly
2175-2180	SLT, pnktn-gytn-lt mrn, hd-fr, aren, glauc, dol, mic, shly; tr DOL, gytn-lt tn,f-m xtln, glauc
2180-2190	DOL, tn-pnktn-lt mrn, f-m xtln, glauc, shly, aren
2190-2195	SLT, pnktn, hd-fr, aren, glauc, dol, mic, shly; some DOL, tn-gy, f-m xtln, glauc
2195-2200	SLT, pnktn, hd-fr, aren, glauc, dol, mic, shly

EAU CLAIRE 1675'

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2200-2205	SLT, pnktn, hd-fr, aren, glauc, dol, mic, shly; some DOL, lt tn-lt gytn, f-m xtln, glauc, sl aren
2205-2220	DOL, lt tn-lt gytn, f-m xtln, glauc, aren
2220-2225	SD, lt gy-lt tn, f-vf, fr-hd, dol, sl glauc; some DOL, lt gy-lt tn, f-m xtln, glauc, aren
2225-2250	SD, lt gy-lt tn, vf-m, fr-hd, dol, sl glauc
2250-2260	SD, lt tn-lt gy-lt pnktn, vf-m, fr-hd, dol, glauc
2260-2280	SD, lt tn-lt gy-lt pnktn, vf-m, fr-hd, v dol, v glauc
2280-2345	SD, lt tn-lt gy-lt pnktn, vf-m, fr-uncon-hd, dol, sl glauc-glauc, dol, sl chty
2345-2355	SD, lt tn-lt gy, vf-m, fr-uncon-hd, dol, sl glauc, sl chty; some SH, gy
2355-2360	DOL, gy-lt gy-whtn, f-c xtln, aren; some SD, clr-lt tn, fr-uncon; some SH, gy
2360-2365	SD, clr, f-m, fr-uncon, dol, v sl glauc; tr DOL, lt gy, f-c xtln, aren
2365-2380	SD, clr-lt tn-lt gy, f-m, fr-uncon, dol, sl glauc
2380-2400	SD, lt tn-lt gy, f-m, fr-uncon, glauc, dol; some DOL, tn, f-vf xtln
2400-2410	SD, lt tn-lt gy, f-m, fr-uncon, glauc, dol
2410-2420	SD, lt gy-lt tn, f-m, fr-uncon, v sl dol
2420-2445	SD, clr-lt gy, c-f, uncon-fr, v sl dol
2445-2455	SD, clr-lt gy, f, fr, v sl dol, sl shly
2455-2460	SD, gyblk-clr, f-m, fr, shly, sl dol
2460-2465	SD, clr-lt gy, c-f, fr-uncon, sl dol
2465-2475	SD, clr-lt gy, f-m, fr-uncon, sl dol, sl shly
2475-2500	SD, clr-lt gy, f-c, uncon, shly; some DOL, tn-wh, f xtln
2500-2510	SD, clr-lt gy, f-m, uncon-fr, sl dol
2510-2520	SD, gy-lt gy, f, fr, sl dol, shly
2520-2525	SH, gy, slty; some SD, clr, f-m, fr-uncon, dol
2525-2535	SD, clr-lt gy, f-m, uncon-hd, shly, dol
2535-2585	SD, clr-wh, c-vf, ang-rnd (frstd), uncon (MT. SIMON 2535')
2585-2595	SD, clr-wh, c-vf, ang-rnd (frstd), uncon; some SD, pnktn-whtn, f, fr
2595-2600	SD, pnktn-whtn, f, fr; some SD, clr-wh, c-vf, ang-rnd (frstd), uncon
2600-2605	SD, clr-wh, c-vf, ang-rnd (frstd), uncon; some SD, pnktn-whtn, f, fr
2605-2625	SD, clr-wh, c-vf, ang-rnd (frstd), uncon
2625-2630	SD, clr-wh-whtn, ang-rnd (frstd), uncon-fr, sl shly
2630-2710	SD, clr-wh-pnktn-pale gn, vc-vf, ang-rnd (frstd), uncon-fr
2710-2720	SD, whtn-lt gy, f-c, hd-fr-uncon, sl mic, shly
2720-2745	SD, whtn-pnktn-lt gy-clr, vc-vf, uncon-fr
2745-2760	SD, whtn-pnktn-lt gy-clr, c-vf, uncon-fr, sl shly
2760-2765	SD, whtn-clr, vc-vf, uncon-fr
2765-2915	SD, lt mrn-yel-clr, vc-vf, uncon-fr
2915-2920	SKIP
2920-2950	SD, lt mrn-yel-clr, vc-vf, uncon-fr
2950-2985	SD, lt mrn-clr-yel, vc-vf, fr-uncon; tr SH, mrn
2985-3365	SD, mrn (cotd)-clr-yel-wh, vc-vf, ang-subang (frstd), uncon-fr
3365-3370	SD, mrn (cotd)-clr-yel, vc-vf, ang-subang, uncon-fr; some SH, mrn, v mic
3370-3450	SD, mrn (cotd)-clr-yel, vc-vf, ang-subang, uncon-fr
3450-3470	SD, mrn (cotd)-clr-yel, vc-vf, ang-subang, uncon-fr; tr SH, mrn, mic
3470-3605	SD, mrn (cotd)-clr-yel, vc-vf, ang-subang, uncon-fr
3605-3655	SD, mrn (cotd)-clr-yel, vc-vf, ang-subang, uncon-fr; tr SH, mrn, mic
3655-3715	SD, mrn (cotd)-clr-yel, vc-vf, ang-subang, uncon-fr
3715-3740	SD, mrn (cotd)-clr-yel, vc-vf, ang-subang, uncon-fr; tr SH, mrn

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3740-3775	SD, mrn (cotd)-clr-yel, vc-vf, ang-subang, uncon-fr
3775-3790	SD, clr-pnk-yel, vc-vf, ang-subang, uncon-fr
3790-3880	SD, clr-lavnclr-pnk-yel, vc-vf, ang-subang, uncon-fr
3880-3950	SD, clr-pale mrn-pnk-yel, vc-vf, ang-subang, uncon-fr
3950-3960	SKIP
3960-4010	SD, clr-pale mrn-pnk-yel, vc-vf, ang-subang, uncon-fr
4010-4100	SD, mrn-clr-pnk-yel, vc-vf, ang-subang, uncon-fr
4100-4130	SD, mrn-clr-pnk-yel, vc-vf, ang-subang, uncon-fr; tr SH, mrn
4130-4145	SD, mrn-clr-pnk-yel, vc-vf, ang-subang, uncon-fr; some SH, mrn
4145-4205	SD, mrn-clr-pnk-yel, vc-vf, ang-subang, fr-uncon; tr SH, mrn
4205-4210	SD, mrn-whtn, vc-c, ang-subang, fr-uncon; some SH, mrn
4210-4220	SD, mrn-whtn, vf-c, ang-subang, fr-uncon; tr SH, mrn
4220-4250	SD, mrn, vf-c, ang-subang, fr-uncon; tr SH, mrn
4250-4260	SD, mrn, vf-c, ang-subang, fr-uncon; some SH, mrn
4260-4265	SD, mrn-clr, f-vc, ang-subang, uncon-fr; some GRANITE, red, PRECAMBRIAN 4263' vc xtln; tr SH, mrn
4265-4300	GRANITE, red, vc xtln
4300-4304	GRANITE, red, vc xtln

Total Depth 4304'

A. Hreha
2-19-64

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Bloomington, Indiana

Permit -----

DATA	
Electric Log	R S
Scout Ticket	
Drillers Log	
Survey Well Record	
SWRA	X
Caliper Log	X
Formation Density Log	X

TD 3945 Mt. Simon

BSC WAL-1

BETHLEHEM STEEL -- #WD-1C

Farm and Well No.

BETHLEHEM STEEL

Operator

30 - 37N - 6W

Sec. Twp. Rge.

PORTER

County

Workover

FIELD CHECKED BY D. SULLIVAN, 1968

LOCATION: 30-37N-6W
SE
2070'SL, 70'EL

ELEVATION: 613 (Paulin), 624 KB

DATA FILED ELSEWHERE	
Small Scale Log:	
Electric	
Sonic	
Nuclear	
Samples	X
Cores	
Lithologic Strip	X
Colored Drillers Log	
Colored Sample Study	
Drilling Time Log	

GEOLOGICAL SURVEY
Department of Natural Resources
State of Indiana

BSC WAL-1

WELL DATA CARD

PERMIT ----- WD-1C

FARM Bethlehem Steel NO. WD-1C

OPERATOR Bethlehem Steel

COMMENCED 1-21-63 COMPLETED 3-23-63 L-24-68

COMPLETION INTERVAL 2530-3945

IP Waste Disposal FORMATION Mt. Simon & Eau Claire

TD 3945 FORMATION Mt. Simon

COUNTY Porter

TWP. 37N RGE. 6W

SEC. 30; SE;

2070'SL, 70'EL

ELEV. 624 KB 613

POOL ----- BY Paulin

ROTARY X CABLE

INFORMATION FILED

Electric Log R S

Scout Ticket

Drillers Log

U Time

Co

Samples X

Sample Study

Strip Log L

SWRA X

Caliper Log

Formation Density Log

X

REMARKS

UTM 487940 4608300

Field checked by D. Sullivan, 1968

PH—9-67—2500—A291

INDIANA GEOLOGICAL SURVEY
WELL-RECORD ADDENDUM

BSC WAL-1

This record has been compiled by the Indiana Geological Survey. It contains information that is supplemental to conventional well records.

Permit	-----	County	Porter
Well No.	WD-1C	Twp. 37N	Rge. 6W
Farm	Bethlemen Steel	Sec.	30; SE;
Operator	Bethlehem Steel		2070'SL, 70'EL

Commenced	3-31-68	Elevation	613, 624 KB	Pool	-----
Completed	4-24-68	Total Depth	3945	Type Tools	Rotary

Initial Production Waste Disposal Interval 2530-3945 Formation Eau Claire & Mt. Simon

Information Source M. Henderson, engineer, American Industrial Disposal Systems, Inc.

Mr. Henderson advised by letter of 9-9-68, that completion of WD-1C (WAL-1) was effected as a waste disposal well, and that casing was installed as follows:

13 3/8" @ 226' with 300 sacks cement

9 5/8" @ 1437' circulated 500 sacks cement

7" @ 2530' circulated 525 sacks cement

Compiler H. Smith Date 9-13-68

Modified from SWRA dated 8-23-68.

Permit ----

DATA

Electric Log	R S
Scout Ticket	
Drillers Log	
Survey Well Record	
SWRA	X
Caliper Log	X
Formation Density Log	X

TD 4301 Precambrian

BSC WAL-2

BETHLEHEM STEEL -- #WD-2C

Farm and Well No.

BETHLEHEM STEEL

Operator

29 - 37N - 6W

Sec. Twp. Rge.

PORTER

County

Workover

FIELD CHECKED BY D. SULLIVAN, 1968
LOCATION: 29-37N-6W
SW
2070'SL, 675'WL
ELEVATION: 613 (Paulin), 624KB

DATA FILED ELSEWHERE

Small Scale Log:	
Electric	
Sonic	
Nuclear	
Samples	X
Cores	
Lithologic Strip	X
Colored Drillers Log	
Colored Sample Study	
Drilling Time Log	

GEOLOGICAL SURVEY
Department of Natural Resources
State of Indiana

BSC WAL-2

WELL DATA CARD

PERMIT -----

FARM Bethlehem Steel NO. WD-2C

OPERATOR Bethlehem Steel

COMMENCED 3-21-68 COMPLETED 3-22-68

COMPLETION INTERVAL 3921-4281

IP Waste Disposal FORMATION Mt. Simon

TD 4281 FORMATION Precambrian

COUNTY Porter

TWP. 37N RGE. 6W

SEC. 29; SW;

2070'SL, 675'WL

ELEV. 624 KB 613

POOL ----- BY Paulin

ROTARY X CABLE

INFORMATION FILED

Electric Log R S

Scout Ticket

Drillers Log

Drilling Time

Cores

Samples X

Sample Study

Strip Log L

SWRA X

Caliper Log

Formation Density Log

REMARKS

UTM 488140 . 4608360

Field checked by D. Sullivan, 1968

X

PH—9-67—2500—A291

INDIANA GEOLOGICAL SURVEY
WELL-RECORD ADDENDUM

BSC WAL-2

This record has been compiled by the Indiana Geological Survey. It contains information that is supplemental to conventional well records.

Permit	-----	County	Porter
Well No.	WD-2C	Twp. 37N	Rge. 6W
Farm	Bethlehem Steel	Sec.	29; SW;
Operator	Bethlehem Steel		2070'SL, 675'WL

Commenced	2-24-68	Elevation	613, 624 KB	Pool	-----
Completed	3-22-68	Total Depth	4301	Type Tools	Rotary

Initial Production Waste Disposal Interval 2521-4265 Formation Eau Claire & Mt. Simon

Information Source M. Henderson, engineer, American Industrial Disposal Systems, Inc.

Mr. Henderson advised by letter of 9-9-68 that completion of WD-2C (WAL-2) had been effected as a waste disposal well, and that casing had been installed as follows:

13 3/8" @ 230' with 300 sacks cement

9 5/8" @ 1435'

7" @ 2521'

Compiler H. Smith Date 9-13-68

Verified from SWRA dated 8-23-68.

Permit ---

DATA	
Electric Log	X R S S
Scout Ticket	
Drillers Log	
Survey Well Record	
Temperature log	
Formation Test Record	
SWRA	X
Core Analysis	X

TD 4308 Precambrian

MIDWEST STEEL -- #WD-1
Farm and Well No.

MIDWEST STEEL
Operator

25 - 37N - 7W
Sec. Twp. Rge.

PORTER
County

Workover

FIELD CHECKED BY J. CAZEE, 1964
LOCATION: 25-37N-7W
NW NW SE
130'NL, 350'WL
ELEVATION: 603 (Paulin), 615 KB

DATA FILED ELSEWHERE	
Small Scale Log:	
Electric	X
Sonic	
Nuclear	X
Samples	X
Cores	X
Lithologic Strip	X
Colored Drillers Log	
Colored Sample Study	
Drilling Time Log	

GEOLOGICAL SURVEY
Department of Natural Resources
State of Indiana

WELL DATA CARD

PERMIT -----

FARM Midwest Steel NO. WD-1

OPERATOR Midwest Steel

COUNTY Porter

TWP. 37N RGE. 7W

SEC. 25; NW NW SE;

130'NL, 350'WL

COMMENCED 7-17-64 COMPLETED 10-5-64 8-14-64

COMPLETION INTERVAL 2160-4259

IP Waste Disposal FORMATION Mt. Simon Eau Claire ?

TD 4308 FORMATION Precambrian

615 KB

ELEV. 603

POOL ----- BY Paulin

ROTARY X CABLE

INFORMATION FILED

Electric Log	X R S xr	Sample Study	
Scout Ticket		Strip Log	L
Drillers Log		Temperature Log	
Drilling Time		Formation Test Record	
Cores	X	SWRA	X
Samples	X	Core Analysis	X

X

REMARKS

UTM 485725 4608540

Field checked by J. Cazee, 1964

PT1—3-62—2500—A29

MID WEST STEEL

WHOLE CORE ANALYSIS REPORT

WELL NO. 1

PORTER COUNTY, INDIANA

FORMATION CORED

Following is the description of the formation cored:

Depth Interval Feet	Description
MT. SIMON	
3441.0 - 3441.8	Sandstone, red, fine grained, rounded to sub angular, poor sorting, numerous one millimeter clastic quartz pebbles, ferruginous cementing.
3442.8 - 3443.5	Sandstone, red, fine grained, rounded to sub angular, poor sorting, numerous one millimeter clastic quartz pebbles, ferruginous cementing, with streaks of pyrite.
3447.3 - 3447.9	Sandstone, red, medium grained, round, fair sorting, few disseminated quartz pebbles one millimeter in diameter, faint bedding planes, ferruginous cementing.
3449.0 - 3449.7	Sandstone, red, medium grained, round, fair sorting, few disseminated quartz pebbles one millimeter in diameter, faint bedding planes, ferruginous cementing.
3451.5 - 3452.4	Sandstone, red, medium grained, round, fair sorting, few disseminated quartz pebbles one millimeter in diameter, faint bedding planes, ferruginous cementing.
3454.1 - 3454.8	Sandstone, red, medium grained, round, fair sorting, few disseminated quartz pebbles one millimeter in diameter, faint bedding planes, ferruginous cementing.

INDIANA GEOLOGICAL SURVEY
WELL-RECORD ADDENDUM

This record has been compiled by the Indiana Geological Survey. It contains information that is supplemental to conventional well records.

Permit	-----	County	Porter
Well No.	WD-1	Twp. 37N	Rge. 7W
Farm	Midwest Steel	Sec.	25; NW NW SE;
Operator	Midwest Steel		130'NL, 350'WL

Commenced	7-17-64	Elevation	603, 615 KB	Pool	-----
Completed	8-14-64	Total Depth	4308	Type Tools	Rotary

Initial Production Waste Disposal Interval 2160-4259 Formation Eau Claire & Mt. Simon

Information Source Geochemistry Section letter by R. K. Leininger, dated 12-11-64.

Letter reads as follows:

"-----. The analysis is as follows (in parts per million):

Sample Number	C64-13	K	606
Formation	Eau Claire & Mt. Simon	Total Iron	145
		Ca	5190
Interval	2160-4259	Mg	950
Source	Swab Test	Cl	35,600
Date	8/64	HCO_3	0
pH	1.73	CO_3	0
Total Solids	57,300	SO_4	895
Na	14,300	Br	164

Very truly yours,"

Compiler G. Carpenter Date 12-15-64

INDIANA GEOLOGICAL SURVEY
WELL-RECORD ADDENDUM

This record has been compiled by the Indiana Geological Survey. It contains information that is supplemental to conventional well records.

Permit	-----	County	Porter
Well No.	WD-1	Twp. 37N	Rge. 7W
Farm	Midwest Steel	Sec.	25; NW NW SE;
Operator	Midwest Steel		130'NL, 350'WL

Commenced	7-17-64	Elevation	603, 615 KB	Pool	-----
Completed	8-14-64	Total Depth	4308	Type Tools	Rotary

Initial Production Waste Disposal Interval 2160-4259 Formation Eau Claire & Mt. Simon

Information Source Midwest Steel, Operator

The operator advised that completion was effected as a waste disposal well.

The operator advised by letter of 10-3-64 that casing was installed as follows: 7" at 2160', the bottom 100' being 6 5/8" Monel tubing.

Compiler H. Smith Date 10-5-64

Permit --

DATA

Electric Log	X D/R
Scout Ticket	
Drillers Log	
Survey Well Record	
GR Spec log	X
Computed log	X
Formation Microscanner	
Production log	X
Core Description	X
SWRA	X

TD 4248 Precambrian

MIDWEST STEEL -- #WD-2

Farm and Well No.

MIDWEST STEEL

Operator

25 - 37N - 7W

Sec. Twp. Rge.

PORTER

County

Workover

FIELD CHECKED BY D. ALGER, 1987
LOCATION: 25-37N-7W
SW SW NE
31'SL, 438'WL
ELEVATION: 60% (Paulin), 616 KB

DATA FILED ELSEWHERE

Small Scale Log:	
Electric	
Sonic	
Nuclear	
Samples	X
Cores	X
Lithologic Strip	L
Colored Drillers Log	
Colored Sample Study	
Drilling Time Log	

GEOLOGICAL SURVEY
Department of Natural Resources
State of Indiana

WELL DATA CARD

D

PERMIT -----

FARM Midwest Steel NO. WD-2

OPERATOR Midwest Steel

COUNTY Porter

TWP. 37N RGE. 7W

SEC. 25; SW SW NE;

31'SL, 438'WL

COMMENCED 7-30-87 COMPLETED 5-24-89 10-1-87

ELEV. 616 KB 603

COMPLETION INTERVAL 2779-4248

POOL ----- BY Paulin

IP Waste Disposal FORMATION Mt. Simon

TD 4248 FORMATION Precambrian

ROTARY X CABLE

INFORMATION FILED

Electric Log	X, D/R	Sample Study	
Scout Ticket		Strip Log	L
Drillers Log		GR Spec. log	X
Drilling Time		Computed Log	X
Cores	X	Formation Microscanner	X
Samples	X	Production Log	X
		Core Description	X
		SWRA	X

REMARKS

UTM 485680 4609460

Field checked by D. Alger, 1987

Pt2—2-80—2M—A7

INDIANA GEOLOGICAL SURVEY
WELL-RECORD ADDENDUM

This record has been compiled by the Indiana Geological Survey. It contains information that is supplemental to conventional well records.

Permit -----

Farm Midwest Steel Well No. WD-2

Operator Midwest Steel

Commenced 7-30-87 Completed 10-1-87 5-24-89

Completion Interval 2779-4248

Initial Production Waste Disposal Formation Mt. Simon

Total Depth 4248 Formation Precambrian

County Porter

Twp. 37N Rge. 7W

Sec. 25; SW SW NE:

31'SL, 438'WL

Elevation 603 (Paulin), 616 KB

Pool -----

Rotary X Cable

Information Source Midwest Steel, Operator

The operator advised that completion was effected as a waste disposal well 2779'-4248' in the Mount Simon Sandstone. TD is 4248' Casing set at 20"-177', 13 3/8"-943', 9 5/8"-2779', with protection casing 9 5/8" from 2017'-2695' and 8 5/8"from 2696'-2734'.

FIELD CHECKED BY D. ALMER, 1987

LOCATION: SW SW NE

ELEVATION: 603 (Paulin), 616 KB

Formation tops		
Devonian Ls. (Traverse)	194 e	(+409)
Silurian	240 ls	(+363)
Cincinnatian (Maquoketa)	680 ls	(-77)
Trenton	930 ls	(-327)
Black River	1120 ls	(-517)
Chazyan	1280 ls	(-677)
Knox	1320 ls	(-717)
Franconia	1640 r	(-1037)
Ironton	1748 r	(-1145)
Galesville	1875 r	(-1259)
Eau Claire	1926 r	(-1323)
Mt. Simon	2485 r	(-1882)
Precambrian	4248 per operator	

Compiler S. Keller Date 12-3-92

Form: WELLADD1.FRM

Permit ------

DATA	
Electric Log	X D/R
Scout Ticket	
Drillers Log	
Survey Well Record	X
Mud Log	X

BSC Galesville mw

TD 1947 Eau Claire

BETHLEHEM STEEL - #OBS
Farm and Well No.

BETHLEHEM STEEL
Operator

29-37N-6W
Sec. Twp. Rge.

PORTER
County

Workover

FIELD CHECKED BY S. BROWN, 1996
LOCATION: 29-37N-6W
2200'SL, 385'WL
ELEVATION: 613 (Topo Map) (629KB)

DATA FILED ELSEWHERE	
Small Scale Log:	
Electric	X
Sonic	
Nuclear	
Samples	
Cores	
Lithologic Strip	
Colored Drillers Log	
Colored Sample Study	
Drilling Time Log	

GEOLOGICAL SURVEY
Department of Natural Resources
State of Indiana

INDIANA GEOLOGICAL SURVEY
WELL RECORD

This record has been compiled by the Indiana Geological Survey in the absence of conventional well records (except samples, in some cases).

Permit ----- Galesville mw

Farm Bethlehem Steel Well No. OBS

Operator Bethlehem Steel

County Porter

Twp. 37N Rge. 6W

Sec. 29;

2200'SL, 385'WL

Commenced ----- Completed 6/16/95

Completion Interval -----

Initial Production Water Observation Well Formation -----

Total Depth 1947 Formation Eau Claire

Elevation 613 (Topo Map) 629 KB

Pool -----

Rotary X Cable

Information Source Steve Brown & Bethlehem Steel

Well drilled for groundwater monitoring in the Galesville Sandstone formation.

Compiler J. Cazee Date 1/6/97

Form: WELLREC1.FRM

•Permit -----

DATA RECEIVED	
Electric Log	
Scout Ticket	
Drillers Log	
Samples	
Elevation	
Production	
Drilling Time	
Sample Study	Xo
Abandoned	

TD 1308 Chazyan

DATA FILED ELSEWHERE	
Small Scale Log:	
Electric	
Sonic	
Nuclear	
Samples	
Cores	
Lithologic Strip	
Colored Drillers Log	
Colored Sample Study	Xo
Drilling Time Log	

NORTHERN INDIANA PUBLIC SERVICE CO. -- #1

NORTHERN INDIANA PUBLIC SERVICE CO.

28 - 37N - 6W

PORTER

FIELD CHECKED BY S. KELLER, 1960
LOCATION: 28-37N-6W
SW SE NW
377'SL, 231'WL
ELEVATION: 613 (Paulin)

Division of Geology

Department of Conservation

State of Indiana

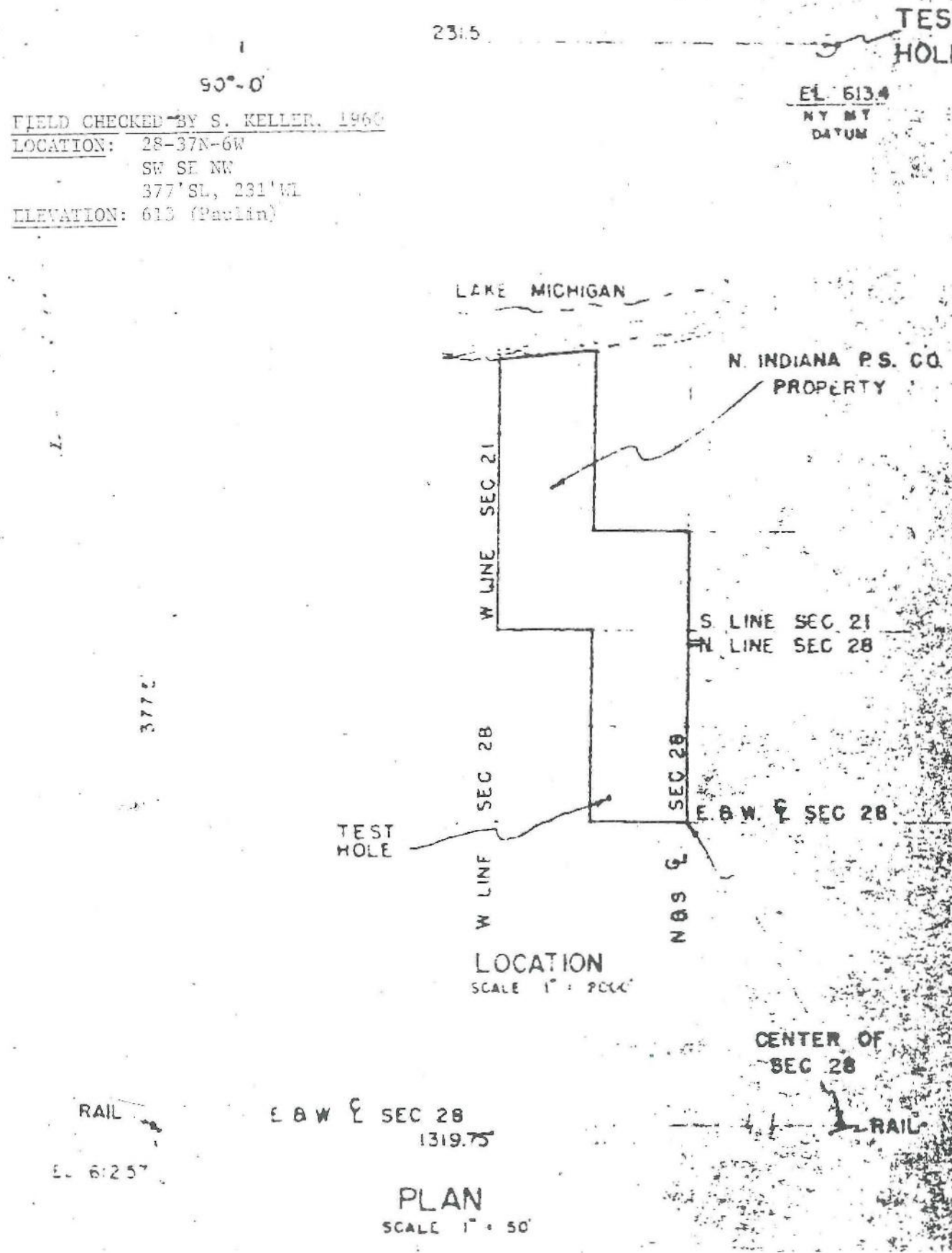
APPENDIX A-2

CAVERN STORAGE TEST HOLE

WESTCHESTER TWP., PORTER COUNTY, INDIANA.

FIELD CHECKED BY S. KELLER, 1960
LOCATION: 28-37N-6W
SW SE NW
377'SL, 231'WL
ELEVATION: 613 (Paulin)

LOCATION
SCALE 1" = 2000'



PLAN
SCALE 1" = 50'

ILLINOIS GEOLOGICAL SURVEY, URBANA

Strata	Thickness	Top	Bottom
Studied by L. E. Workman & G. O. Raesch			
PLEISTOCENE SYSTEM			
No core	175		175
Till, Calcareous, pebbly, brownish gray	11.4		186.4
Gravel, composed of dolomite pebbles	2.0		188.4
DEVONIAN SYSTEM			
Sellersburg formation			
Siltstone, dolomitic, gray, tough	3.4		191.8
Dolomite, sandy, grayish brown, medium crystalline, vuggy	2.0		193.8
Dolomite, sandy, buff and grey mottled, medium crystalline, vesicular	17.3		211.1
Dolomite, argillaceous, brown, very fine, stromatoporoids, corals, crincids	2.6		213.7
Dolomite, grayish brown, very fine, stromatoporoids, corals	8.4		222.1
Dolomite, buff and brown mottled, very finely crystalline, contorted and brecciated appearance	1.1		223.2
Gap	4.3		227.5
Dolomite, brown, very fine, stromatoporoids	0.3		227.8
Dolomite, conglomaretic, light gray, pebbles of dolomite and blue chert to ¼", basal contact uneven	0.2		228.0
Jeffersonville formation			
Dolomite, light gray, some medium gray mottling, compact	1.5		229.5
Dolomite, gray, medium crystalline, somewhat porous and vuggy, some portions friable	5.4		234.9

Company	Northern Indiana Public Service Co.	No.	
Farm	Fee	No.	1
Date Drilled	1950	County No.	
Authority	Summary Core Study		
Elevation			
Location	377.5' S. line, 231.5' W. line of SWc SE NW		
County	Porter Co., Indiana	28-37N-6W	

Strata	Thickness	Top	Bottom
Same, but not porous	2.8		237.7
Dolomite, brownish gray with small dense dark gray mottling, very fine, dense	0.3		238.0
Dolomite, reddish brown, very fine, vuggy, brecciated at base, very marcasitic	2.3		240.3
Dolomite, brecciated, brownish gray and gray mottled, lithographic, vuggy, very marcasitic	3.5		243.8
Dolomite, argillaceous, light gray, extra fine crystalline, shrinkage cracks some of which contain tar, contorted brecciated appearance	2.9		246.7
Dolomite, argillaceous, gray, chalk-like, very fine, conglomeratic or brecciated appearance decreasing downward, uneven dark gray inter-laminations, thin shale partings	8.2		254.9
Same, gray mottled, containing sandstone lenses	0.8		255.7
Dolomite, light gray to light buff gray mottled with medium gray, very fine, dense but containing scattered vugs, cracks and pores	13.0		268.7
Dolomite, argillaceous, light buff gray mottled with medium gray, chalk-like, increasingly argillaceous downward	4.7		273.4
Same, but light to medium brownish gray, chonetes, scalecondonte, large sporangitos	0.9		274.3
Dolomite, sandy, argillaceous, light to medium brown, dark brown argil-laceous mottling, numerous brown specks, sporangites	1.2		275.5
Dolomite, finely sandy, gray, very fine, carious	1.8		277.3
Dolomite, finely sandy, gray, very fine, compact, chalk-like appearance green clay blobs in lowppt 0.2'	1.6		278.9

Strata	Thickness	Top	Bottom
Dolomite, sandy, medium to dark gray mottled, medium crystalline, contorted bedding	1.2		280.1
SILURIAN SYSTEM			
Niagaran Series			
Dolomite, gray, grading downward to mottled light gray and white, medium to coarsely crystalline, somewhat vesicular	2.9		284.0
Dolomite, white, medium crystalline, highly vesicular	56.6		340.6
Dolomite, light gray to white, medium crystalline, vesicular, partly crinoidal	95.8		436.4
Dolomite, light gray, medium to coarsely crystalline, vesicular to compact, crinoidal	14.6		451.0
Dolomite, light gray to white, medium crystalline, vesicular	9.0		460.0
Dolomite, light and medium gray speckled, faint pink tint, medium to coarsely crystalline, vesicular, originally coarse grained limestone	6.2		466.2
Dolomite, light and medium gray mottled, coarsely crystalline, more or less vesicular, thin green clay partings	3.5		469.7
Dolomite, white to light gray, coarse, vesicular	3.9		473.6
Dolomite, light gray, very fine, compact, thin uneven shale partings	10.6		483.0
Dolomite, white, light gray, and pink, finely to medium crystalline, vesicular	13.5		496.5
Dolomite, light gray, slightly pinkish, some light green, finely to medium crystalline, crinoidal, vesicular, thin green shale partings	9.8		506.3
Dolomite, white, some slightly pinkish, medium crystalline, very vesicular	13.8		520.1

Northern Indiana Public Service Co. - Fee #1

unty PORTER, INDIANA 28-37N-6W

Strata	Thickness	Top	Bottom
Dolomite, light gray, slightly greenish tint, very finely crystalline, vuggy	6.5		526.6
Dolomite, light gray, slightly greenish tint, very finely crystalline, dense, some partings green clay	5.4		532.0
Dolomite, white, medium crystalline, few partings green clay	5.2		537.2
Dolomite, light greenish gray, very fine, numerous uneven partings green clay	3.3		540.5
Dolomite, light and medium gray speckled, medium crystalline, formerly coarse grained, vesicular, pyritic, scattered vugs some containing calcite and green clay	3.5		544.0
Dolomite, light gray, some medium gray zoning, medium, vesicular	4.9		548.9
Dolomite, gray, finely crystalline, somewhat vesicular, calcite in vugs and veins	4.8		553.7
Dolomite, light to medium gray, pink, red spotted, medium crystalline, crinoidal, vesicular, very vuggy, pink due to weathering, clay and calcite in vugs	13.3		567.0
Dolomite, light gray, medium crystalline, compact	1.0		568.0
Dolomite, light and medium gray mottled, medium grains, formerly coarse grained, vuggy, vesicular, grades into stratum below	14.8		583.2
Dolomite, silty, gray, very fine, compact, few shale partings	29.4		612.6
Dolomite, but increasingly argillaceous downward	17.2		629.8
Shale, silty, argillaceous, green			

Northern Indiana Public Service Co. - Fee #1

ounty PORTER, INDIANA 28-37N-6W

Strata	Thickness	Top	Bottom
and gray, numerous thin green shale partings, bottom contact sharp	3.1		632.9
Dolomite, pink, very fine to medium crystalline, lenticular, shaly with uneven laminae of green shale, increasingly shaly downward	17.4		650.3
Alexandrian Series			
Kankakee formation			
Dolomite, brown to buff, medium crystalline, compact, few uneven brown shale partings	0.9		651.2
Similar but little finer andsomewhat vugular	0.7		651.9
Shale, dolomitic, dark brownish gray, smooth	0.02		651.92
Dolomite, cherty, buffish gray, fine to medium, numerous shaly partings	6.08		658.0
Dolomite, buffish gray, fine, uneven shale partings, pentamorus(?) at 658.6'	4.7		662.7
Dolomite, cherty, gray, fine to medium, shale partings	37.5		700.2
Dolomite, gray, very finely to finely crystalline	4.8		705.0
Edgewood formation			
Dolomite, argillaceous, gray, finely to very finely crystalline	13.2		718.2
Dolomite, argillaceous, gray to brownish gray, medium to very finely crystalline, uneven brown shale partings	6.8		725.0
Dolomite, as above, probably sandy with very fine sand, bottom uneven and indistinct	5.4		730.4
ıDOVICIAN SYSTEM			
:incinnatian Series			
Maquoketa formation			
Shale, dolomitic, dark greenish			

Northern Indiana Public Service Co. - Fee #1

ınty PORTER, INDIANA 28-37N-6W

Strata	Thickness	Top	Bottom
gray, paper-thin layers of argillaceous dolomite	2.6		733.0
Shale, green smooth, few paper-thin layers of chalk-like dolomite	0.3		733.3
Shale, dolomitic, greenish gray, containing numerous phosphatic grains, conodonte, and grains of weathered dolomite, grades into dolomite below by increasing dolomite content downward (Divine limestone 734.4-761.1)	1.1		734.4
Dolomite, gray speckled, coarse, some shale partings in upper 1' and near base, vesicular below; basal contact irregular	7.8		742.8
Dolomite, gray brown, medium crystalline, compact, few vugs and vesicular areas; bedding irregular with wavey shale partings	15.5		757.7
Dolomite, same, interbedded with gray-black fissile shale and argillaceous dolomite	2.8		760.5
Dolomite, same, with abundant large ramose bryozoan casts filled with crystalline white dolomite	0.6		761.1
Shale, gray black, fissile, with thin bands of limestone, fine argillaceous to limestone, coarse, fossiliferous, shale full of white fusilinido, brachiopods, bryosoa, etc. Rafinesquina	6.6		767.7
Shale, gray black, fissile, non-fossiliferous, with dolomotic bands as above	22.6		790.3
Shale, sub-fissile, medium olive gray, few dolomite shale bands. Trails and Lingula fragments	2.7		793.0
Dolomite, black and white speckled, argillaceous, granular, with shale stringers	1.3		794.3
Shale, subfissile, olive gray			

Northern Indiana Public Service Co., - Fee #1

County PORTER, INDIANA 28-37N-6W

Strata	Thickness	Top	Bottom
Ambonychia, Modiola (?) Lingula, Trometis, etc. Dolomite bands full of Ambonychia	10.0		804.0
Shale, dark gray, fissile to non-fissile, some zones decrepitating; some bands of dolomite-shale, dark brown, fine crystalline, dull. Lingula, sparse marcasite and sphalerite nodules	86.0		890.0
Shale, subfissile, in bands of gray green, dark brown, and greenish gray, some mottling	53.4		943.4
Shale, as above, but with few laminae and partings of granular dolomite, gray brown, medium crystalline, fossiliferous, Conodonts, obloid, apicules, small teeth, undetermined pyritized, mollusks, etc. (Contact with Galena dolomite sharp; top of dolomite polished.	4.6		948.0
Mohawkian Series			
Galena formation			
Dubuque member			
Dolomite, gray brown, relatively compact, vesicular, medium crystalline; irregular argillaceous partings common. Shows of heavy oil in porous zones 958-964'. Casts of broken mollusks	20.0		968.0
Stewartville-Prosser Members			
Dolomite, same, but argillaceous partings fewer, bedding thicker	20.0		988.0
Dolomite, gray brown, relatively fine crystalline, dull, compact, some vesicular, casts of fragments fossiliferous	1.1		989.1
Dolomite, gray brown, fine-medium crystalline, dull and vitreous bands, fossiliferous casts make bands vesicular. Normatoza	10.9		1,000.0

Northern Indiana Public Service Co. - Fee #1

ounty PORTER, INDIANA 28-37N-6W

Strata	Thickness	Top	Bottom
Dolomite, darker and more vitreous, fine to medium crystalline, thick bedded with shaly beddings planes; vesicular. Hormotoma. Lower 12' lighter.	38.0		1038.0
Dolomite, light brown to violet brown, medium crystalline, porous to compact, vuggy, thick-bedded; dark shale laminae on bedding planes. Casts of fossils indeterminate	23.4		1061.4
Dolomite, violet brown, coarse medium crystalline, granular, porous, vesicular and vuggy bands; argillaceous zones with brown carbonaceous shale. Barite crystals in vugs. Casts of fossils indeterminate. "Murchisonia" (1064')	9.5		1070.9
Dolomite, same, but less argillaceous	11.1		1082.0
Dolomite, same, violet brown to yellow brown, with common casts of ramose bryozoa and gastropode. Platystrophia (?) at 1083'	11.3		1093.3
Dolomite, gray brown to brownish gray, medium crystalline, compact to porous and vesicular; very vuggy; dolomite and barite crystals in vugs.	8.7		1102.0
Dolomite, similar, brown to buff mottled; some of ramose bryozoa casts 1105-6	10.0		1112.0
Dolomite, similar, few argillaceous dolomite bands, dark	5.0		1117.0
Dolomite, similar, more compact, vuggy to very vuggy; stylolites near base	10.0		1127.0
Decorah formation			
Ion member			
Dolomite, purplish brown, coarse			

Strata	Thickness	Top	Bottom
medium crystalline, mostly porous; vesicular with fragment mollusk casts; zones and partings of dark shale; Stenodonta, Normotoma, Vanuxemia, etc.; band of slender ramose bryozoa casts, abundant, 1127-31(Ion fauna)	25.5		1152.5
Guttenburg member			
Dolomite, chocolate brown, relatively coarse, numerous irregular partings of black to chocolate shale; dolomite, vuggy mostly compact, porous zones, lower 3' less argillaceous; Pionodoma (Guttenburg lithology)	7.5		1160.0
Dolomite, medium grayish brown, medium coarse, compact	3.0		1163.0
Dolomite, gray, medium crystalline, vitreous to dull, compact to vesicular, relatively thick beds, shale laminae partings; mollusk fragment casts; Selicotoma (1165)	9.3		1172.3
Dolomite, dark chocolate, coarse-medium crystalline, compact	1.0		1173.3
Platteville formation			
Quimbys Mill member			
Dolomite, light gray, dull, fine crystalline, compact, vesicular, much light gray, fine crystalline chert; casts of fossil fragments (Quimbys Mill lithology)	2.6		1175.9
Dolomite, chocolate brown, coarse-medium crystalline, compact, extra vuggy	0.8		1176.7
Dolomite, brown, relatively fine crystalline, relatively compact, vesicular with casts fossil fragments, cherty	1.3		1178.0
Dolomite, gray, relatively fine crystalline, dull, relatively compact; zones and partings argillaceous; locally vesicular	3.3		118[illegible].3

COUNTY Northern Indiana Public Service Co., Fee #1
POTTER, INDIANA 28-37N-6W

Strata	Thickness	Top	Bottom
Magnolia member			
Dolomite, light gray to brown, medium crystalline, moderately vesicular, foselliferous fragment casts, medium thick beds, shale partings	6.3		1187.6
Dolomite, dull gray fine medium crystalline, compact with "birds-eye" cross-section; many black argillaceous laminae (Nachusa lithology)	0.5		1188.1
Dolomite, gray to brownish gray, medium crystalline, compact to vesicular, fossiliferous fragment casts; thick-bedded, planes irregular with argillaceous laminae, bands of "bird-eyes" in lower 19' (Nachusa lithology)	5.3		1193.4
Dolomite, gray brown to yellow brown, porous to compact, medium crystalline, coarsely vesicular with many fossil casts; mollusks (Grand Detour lithology)	2.0		1195.4
Dolomite, brownish gray, fine-medium crystalline, relatively compact, zones of borings with porous dolomite; little vesicular, irregular black argillaceous partings. Heliotoma (1200)	6.8		1202.2
Mifflin member			
Dolomite, gray to gray brown mottled, fine crystalline, compact, thin-bedded, abundant dark shaly laminae dull and darker near base (Mifflin lithology)	8.2		1211.0
Dolomite, brownish, relatively fine crystalline, relatively thin-bedded, relatively vesicular, fossiliferous fragment casts. Leperditia fabulites; Lambecceras(1212) (Mifflin lithology)	1.6		1212.6

County Northern Indiana Public Service Co. - Fee #1
PORTER , INDIANA 28-37N-6W

Strata	Thickness	Top	Bottom
Pecatonica member			
Dolomite, dark brown, medium crystalline, massive, compact to porous, vuggy, calcareous crystals, argillaceous laminae few. Spirocores (Pecatonica lithology)	4.3		1215.9
Dolomite, dark gray, fine crystalline, compact, full to subvitreous, dark wavy argillaceous partings, bands vesicular in lower 3' (Pecatonica lithology)	9.0		1225.9
Dolomite, gray to dark brown variegated, coarse to fine, relatively massive and vuggy, grading from above (Pecatonica lithology)	1.6		1227.5
Shale, black brown, dull, finely laminated; bituminous(?)	0.3		1227.8
Dolomite, light gray brown to brown gray, fine medium crystalline, massive, minutely vesicular, compact to porous, locally vuggy, few borings (Pecatonica lithology)	4.4		1232.2
Dolomite, similar, buff mottled by argillaceous areas, nodular (Pecatonica lithology)	7.0		1239.2
Dolomite, similar, argillaceous content decreasing, fossil casts relatively common. Ctenodonta (1246), Rafinesquin (1248),(Pecatonica lithology)	10.0		1249.2
Dolomite, gray, relatively compact, dull, vuggy. Tetradium near top. (Pecatonica lithology)	1.2		1250.4
"Joachim" member			
Dolomite, dark gray to dark brown, fine crystalline to dense, homogeneous, with large round nodules of gray dull impure chert, interbedded with dark, impure dolomitic			

Strata	Thickness	Top	Bottom
shale in lower 4" foot. (Joachim lithology?)	11.7		1262.1
Dolomite, gray to brown, medium crystalline, relatively compact with porous mottling, thick-bedded, irregular dark argillaceous seams, small vug common, vesicular in upper part, fossil fragment casts, mollusks, etc.	21.1		1283.2
Dolomite, similar, with floating sand grains, rounded, coarse to very coarse, increase downward	2.0		1285.2
Dolomite, sandy, light and dark gray mottled, dull, fine crystalline, argillaceous at top, very sandy at base; Strophomena 6" above base	2.9		1288.1
Dolomite, silty, light and dark gray mottled, compact, fine crystalline, high content of siliceous silt	0.2		1288.3
Glenwood formation			
Sandstone, dolomitic and argillaceous, light and dark gray variegated, very poorly sorted; dolomite as scant, fine crystalline matrix; shale very dark in flocks and stringers	0.4		1288.7
Sandstone, gray mottled, very mixed grain, argillaceous, dolomitic content decreasing downward, indurated, pyritic	1.6		1290.3
Sandstone, mottled, pyritic, very poorly sorted, brown to green clay stain; organic boring activity	0.3		1290.6
St. Peter formation			
Sandstone, white, stained green by clay and greenish black by pyrite; sandstone, medium-grain, well sorted	0.6		1291.2
Sandstone, light buff, fine-medium grained, well sorted, indurated by secondary crystal growth	3.2		1294.4

County Northern Indiana Public Service Co. - Fee #1

PORTER Co., INDIANA 28-37N-6W

Strata	Thickness	Top	Bottom
Sandstone, white to buff, mostly medium grain and well sorted, clean, friable	13.6		1308.0

•Pub. 10c

DATA RECEIVED
Electric Log
Scout Ticket
Drillers Log
Samples
Elevation
Production
Drilling Time
Sample Study
Abandoned

TD 1200* Black River*

HYDRAULIC PRESSED BRICK CO. -- #---

HYDRAULIC PRESSED BRICK CO.

35 - 37N - 6W

PORTER

FIELD CHECKED BY H. SMITH, 1959
LOCATION: 35-37N-6W
NW
2700'NL, 2050'WL*
ELEVATION: 644 (Paulin)

NO OTHER INFO AVAILABLE

Division of Geology

Department of Conservation

State of Indiana

DATA FILED ELSEWHERE	
Small Scale Log:	
Electric	
Sonic	
Nuclear	
Samples	
Cores	
Lithologic Strip	
Colored Drillers Log	
Colored Sample Study	
Drilling Time Log	

PERMIT Pub. 108
FARM Hydraulic Pressed Brick Co. NO. 1
OPERATOR Hydraulic Pressed Brick Co.

COMMENCED ----- COMPLETED 1900*
COMPLETION INTERVAL -----
IP D&A FORMATION -----
TD 1200* FORMATION Black River*

COUNTY Porter
TWP. 37N RGE. 6W
SEC. 35; NW;
2700'NL, 2050'WL*
ELEV. 6
POOL Wildcat By Paul
ROTARY CABLE X

REMARKS

•Permit -----

DATA

Electric Log _____

Scout Ticket _____

Drillers Log X

Survey Well Record _____

TD 210 Devonian Ls.

BAILLY GENERATING STATION -- #B-101

NORTHERN INDIANA PUBLIC SERVICE CO.

21 - 37N - 6W

PORTER

REVIEWED BY B. KEITH, 1982

LOCATION: 21-37N-6W
SW
1885' SL, 315' WL

ELEVATION: 620 (Topo Map)

DATA FILED ELSEWHERE

Small Scale Log:

Electric _____

Sonic _____

Nuclear _____

Samples _____

Cores _____

Lithologic Strip _____

Colored Drillers Log _____

Colored Sample Study _____

Drilling Time Log _____

GEOLOGICAL SURVEY

Department of Natural Resources

State of Indiana

EXHIBIT 2-5
SL-3629
3-8-78
PAGE 1 OF 3

BORING B-101

SURFACE ELEVATION 9.6

REVIEWED BY B. TTH, 1982:
LOCATION: 21-6W
SW
1885'SL, 315'WL
ELEVATION: 620 (Topo Map)

5676-008-07

ELEVATION IN FEET	TESTS REPORTED ELSEWHERE	ATTERBERG LIMITS: PLASTIC LIMIT %	ATTERBERG LIMITS: LIQUID LIMIT %	SHEAR STRENGTH: [illegible]	SHEAR STRENGTH: [illegible]	SHEAR STRENGTH: [illegible]	MOISTURE CONTENT %	DRY DENSITY PCF	PERMEABILITY (K) FT/YEAR
+10									
+5									
0									
-5									
-10									
-15									
-20									
-25	BT	35	13	5215	-950		17.4	113	
-30									
-35		36	11	1311(UC) 1728(UU) 6000 3442(CU) 6000			20.1 20.4 18.2	107 106 111	
-40									
-45									
-50									
-55									
-60									
-65	BT	35	16	15589	7200		14.7	123	
-70									

BLOW COUNTS SAMPLES	SYMBOLS	DESCRIPTIONS	DEPTH IN FEET
		LIGHT BROWN FINE TO MEDIUM SAND WITH TRACE GRAVEL (MEDIUM DENSE TO DENSE)	0
20 B	SP		
			-5
45 B	SP		
		GRAVEL GRADES OUT	-10
17 B	SP		
		LIGHT GRAY AND BROWN SILTY CLAY WITH GRAY SILT LAMINATIONS (STIFF)	-15
14 B	CL		
P	CL		
		GRADES TO INTERBEDDED SAND AND GRAVEL AND GRAY SILTY CLAY	-20
8 B	CL		
		GRAY SILTY CLAY WITH TRACE FINE TO MEDIUM SAND AND OCCASIONAL LENSES OF GRAVEL (STIFF)	
P	CL		-25
		GRADES WITH SOME FINE TO COARSE GRAVEL AND OCCASIONAL LAYERS LIGHT BROWN FINE TO MEDIUM SAND	
25 B	CL		
19 B	CL	GRAVEL GRADES OUT	-30
P	CL		-35
24 B	CL		-40
P	CL		-45
36 B	CL		-50
P	CL		
		DARK GRAY SILTY CLAY WITH TRACE FINE TO MEDIUM SAND AND TRACE FINE GRAVEL (HARD)	-55
105/6" B	CL		-60
		GRAYISH-BROWN FINE SAND WITH OCCASIONAL LENSES GRAY SILTY CLAY (VERY DENSE)	-65
159 B	SP		
		GRADES WITH OCCASIONAL GRAY SILTY CLAY LAYERS (HARD)	
85 B	SP		-70
		GRAY SILTY CLAY WITH TRACE FINE TO MEDIUM SAND AND OCCASIONAL GRAY SILT LAMINATIONS (HARD)	-75
P	CL		

NOTE: THE ABOVE SOIL CONSISTENCY DESCRIPTIONS ARE BASED ON STANDARD PENETRATION TEST RESULTS ONLY; ACCORDING TO PECK, HANSON, & THORNBURN, 1974, FOUNDATION ENGINEERING, 2 ND EDITION, JOHN WILEY & SONS, p. 316.

EXHIBIT 2-5

BORING B-101 CONT'D SL-3629

3-8-78

LABORATORY TEST DATA

ELEVATION IN FEET	TESTS REPORTED ELSEWHERE	ATTENBERG LIMITS: PLASTIC LIMIT %	ATTENBERG LIMITS: LIQUID LIMIT %	SHEAR STRENGTH: [illegible]	SHEAR STRENGTH: [illegible]	SHEAR STRENGTH: [illegible]	MOISTURE CONTENT %	DRY DENSITY PCF	PERMEABILITY CM/SEC FT/YEAR
-70									
				11287(CU) 8500			25.1	121	
-75	CS	15	13				15.6	117	
-80	CS						20.5	101	
-85									
-90	PS,DT						25.1	111	
-95									
-100									
-105									
-110	PS,AC						21.4	103	
		14	10						
		15	10	4340(UC)			15.7	115	
				6042(CU) 11000			14.3	121	
	CS						15.2	116	
-115									
-120									
	BT	11	13	15429	10350		22.1	130	
-125									
-130									
-135									
-140									
-145									
-150									

BLOW COUNTS SAMPLES	SYMBOLS	DESCRIPTIONS	DEPTH IN FEET
8 D	CL		80
P			85
105 B	SP	GRAYISH-BROWN FINE SAND WITH TRACE SILT AND TRACE MEDIUM SAND (VERY DENSE)	90
100/4" B		GRADES WITH OCCASIONAL POCKETS STIFF GRAY SILTY CLAY	95
72 B			100
58 D	CL	DARK GRAY SILTY CLAY WITH TRACE FINE TO MEDIUM SAND AND OCCASIONAL FINE GRAVEL (HARD)	105
103 B			110
100/5" D	SP	GRAYISH-BROWN FINE SAND WITH TRACE MEDIUM SAND AND OCCASIONAL LENSES GRAY SILTY CLAY (VERY DENSE)	115
40 B			120
P	CL	GRAY SILTY CLAY WITH TRACE FINE TO MEDIUM SAND AND OCCASIONAL FINE GRAVEL (HARD)	
60 D		GRADES WITH LAYERS CLAYEY SILT AND OCCASIONAL GRAY SILT LENSES (HARD)	125
P	ML	GRAY CLAYEY SILT WITH OCCASIONAL GRAY SILT LENSES AND LAYERS GRAY SILTY CLAY (HARD)	130
125 D			135
200/5" B		GRADES WITH OCCASIONAL BLACK SHALE FRAGMENTS AND POCKETS MEDIUM SAND (HARD)	140
	SP	GRAY FINE SAND WITH TRACE MEDIUM TO COARSE SAND	145
120/6" D	ML CL	DARK GRAY CLAYEY SILT WITH SOME MEDIUM SAND AND OCCASIONAL FINE GRAVEL (HARD)	150
125/3" D		DEVONIAN SYSTEM ANTRIM SHALE SHALE, DARK BROWNISH-GRAY; SILTY; FRACTURED BEDDING; BROKEN, HIGHLY WEATHERED.	155
150/4" D		GRADES LIGHT GRAY WITH OCCASIONAL LIGHT GRAY DOLOMITE	

NOTE: THE ABOVE SOIL CONSISTENCY DESCRIPTIONS ARE BASED ON STANDARD PENETRATION TEST RESULTS ONLY. ACCORDING TO PECK, HANSEN, & THORNBURN, 1974, FOUNDATION ENGINEERING, 2 ND EDITION, JOHN WILEY & SONS, p. 314.

5676-008-07

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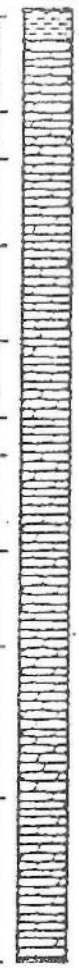
3-8-78
PAGE 3 OF 3

BORING B-101 CONT'D.

ELEVATION IN FEET	LABORATORY TEST DATA: TESTS REPORTED ELSEWHERE	ATTERBERG LIMITS: PLASTIC LIMIT %	ATTERBERG LIMITS: PLASTICITY INDEX %	SHEAR STRENGTH: DIAMETER	SHEAR STRENGTH: DIAMETER	SHEAR STRENGTH: DIRECT SHEAR	MOISTURE CONTENT %	DRY DENSITY PCF	PERMEABILITY (K) FT./YEAR
-150									
-155	PY, PR							174	
-160									
-165									
-170	PY, PR							172	
-175									
-180									
-185									
-190	E			5640 PSI (UC)			0.3	156	
-195									
-200									

SYMBOLS



DESCRIPTIONS

TRAVERSE FORMATION

SILTSTONE: GRAY; SLIGHTLY DOLOMITIC; SLIGHTLY WEATHERED.
60° OPEN FRACTURE AT 160.4 FEET

DOLOMITE. GRAY; FINE GRAINED; SLIGHTLY FOSSILIFEROUS; PINPOINT TO 0.1 FOOT VUGS LESS THAN 5%; PETROLEUM STAINED; OCCASIONAL BLACK SHALE PARTINGS, SLIGHTLY WEATHERED.
0.1 FOOT OPEN FRACTURE ZONE AT 162.3 FEET
0.9 FOOT CLAY ZONE WITH BROKEN SHALE FILLING AT 164.8 FEET
0.5 FOOT SANDY ZONE AT 165.6 FEET
GRADES COARSE GRAINED WITH HIGHLY WEATHERED DARK BROWN SHALE LAYERS WITH DOLOMITIC SAND FILLINGS
1.0 FOOT BROKEN ZONE AT 167.8 FEET
OPEN FRACTURE ZONE FROM 169.0 TO 169.6 FEET

0.2 POROUS ZONE (FRIABLE) AT 170.8 FEET
30° OPEN FRACTURE 171.5 FEET
PAIR OF SUBHORIZONTAL FRACTURES ([illegible] FOOT SPACING) AT 171.9 FEET
0.6 FOOT HIGHLY FOSSILIFEROUS ZONE WITH HIGH ANGLE FRACTURES 172.6 FEET
0.2 FOOT POROUS ZONE 175.2 FEET
50° OPEN FRACTURE 176.1 FEET
0.2 FOOT GRAY SILTY CLAY ZONE (SOFT) AT 178.0 FEET
GRADES FRACTURED
0.3 FOOT DARK BROWNISH-GRAY SHALE (ORGANIC ODOR), HIGHLY WEATHERED AT 180.6 FEET
GRADES FINE GRAINED AND ARGILLACEOUS
0.5 FOOT DARK BROWN SHALE; HIGHLY WEATHERED WITH SOFT DARK BROWN SILTY CLAY AT 184.5 FEET
0.2 FOOT FRACTURE ZONE WITH DARK BROWN SILTY SAND FILLINGS AT 187.2 FEET
0.2 FOOT FRACTURE ZONE, FOSSILIFEROUS 188.2 FEET
0.5 FOOT ZONE OF NUMEROUS BROWN SHALE PARTINGS 189.3 FEET
0.2 FOOT OF WELL DEVELOPED CALCITE CRYSTALS (FRIABLE) 189.5 FEET
0.3 FOOT FOSSILIFEROUS ZONE (POROUS) AT 190.7 FEET
0.2 FOOT BROKEN ZONE 193.0 FEET
OCCASIONAL STYLOLITES AND BLACK SHALE PARTINGS BELOW 193.0 FEET
0.7 FOOT ZONE OF 0.04 FOOT VUGS LESS THAN 10% AT 194.7 FEET

GRADES MEDIUM GRAINED WITH LIGHT AND DARK GRAY MOTTLING

OCCASIONAL COARSE CALCITE CRYSTALS BELOW 208.2 FEET

BORING COMPLETED AT A DEPTH OF 209.5 FEET ON 11-17-77.
SURFACE CASING USED TO A DEPTH OF 25.0 FEET.
NX CASING USED TO A DEPTH OF 148.0 FEET.
BORING GROUTED TO SURFACE ON 12-21-77.

5676-008-07

Permit -----

DATA

Electric Log _____

Scout Ticket _____

Drillers Log X

Survey Well Record _____

TD 208 Devonian Ls.

BAILLY GENERATING STATION -- #B-102

NORTHERN INDIANA PUBLIC SERVICE CO.

21 - 37N - 6W

PORTER

REVIEWED BY B. KEITH, 1982
LOCATION: 21-37N-6W
SW
1884' SL, 434' WL
ELEVATION: 620 (Topo Map)

DATA FILED ELSEWHERE

Small Scale Log:

Electric _____

Sonic _____

Nuclear _____

Samples _____

Cores _____

Lithologic Strip _____

Colored Drillers Log _____

Colored Sample Study _____

Drilling Time Log _____

GEOLOGICAL SURVEY
Department of Natural Resources
State of Indiana

EXHIBIT 2-6
SL-3629
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PAGE 1 OF 3

SURFACE ELEVATION 8.0

ELEVATION IN FEET	LABORATORY TEST DATA: TESTS REPORTED ELSEWHERE	ATTERBERG LIMITS: PLASTIC LIMIT %	ATTERBERG LIMITS: PLASTICITY INDEX %	SHEAR STRENGTH: COMPRESSION	SHEAR STRENGTH: DIRECT SHEAR	MOISTURE CONTENT %	DRY DENSITY PCF	PERMEABILITY IN FT./YEAR
+10								
+5								
0								
-5								
-10								
-15								
-20								
-25								
-30								
-35								
-40		16	12	6-18(CU) 6048 / 2195(UC)		15.9 / 18.0	117 / 111	
-45								
-50								
-55								
-60								
-65								
-70								

BLOW COUNTS / SAMPLES	SYMBOLS	DESCRIPTIONS	DEPTH IN FEET
		GRAYISH-BROWN FINE TO MEDIUM SILTY SAND WITH OCCASIONAL FINE GRAVEL (DENSE)	0
33	SP		-5
19	SP	GRADES TO BROWNISH-GRAY FINE SAND WITH TRACE SILT (MEDIUM DENSE)	-10
21	SP	GRADES TO GRAY	-15
19	ML	GRAY SILTY CLAY WITH POCKETS BROWN FINE SAND (STIFF)	-20
33	SP	GRAYISH-BROWN FINE TO MEDIUM SAND WITH TRACE SILT (MEDIUM DENSE TO DENSE)	-25
11	SP	GRADES WITH OCCASIONAL GRAVEL LENSES GRADES WITH OCCASIONAL GRAY SILT LAYERS (MEDIUM DENSE)	-30
9	CL	GRAY SILTY CLAY WITH TRACE FINE TO MEDIUM SAND	-35
P	SP	GRAYISH-BROWN FINE TO MEDIUM SAND (MEDIUM DENSE)	
4	SP	GRADES WITH POCKETS SOFT GRAY SILTY CLAY (LOOSE)	-40
P	CL	GRAY SILTY CLAY WITH SOME FINE TO COARSE SAND (MEDIUM STIFF) GRADES WITH TRACE FINE TO MEDIUM SAND (STIFF)	
11	CL		-45
P	CL	GRADES VERY STIFF WITH OCCASIONAL LAYERS GRAYISH-BROWN SILTY SAND	
24	CL		-50
21	CL		
37	CL	GRADES HARD	-55
62	CL		-60
55	CL		-65
18.8/11	SP	GRAYISH-BROWN FINE SAND (VERY DENSE)	
129	CL	GRAY SILTY CLAY WITH BROWN FINE TO MEDIUM SAND LENSES (HARD)	-70
	SP	BROWN FINE TO MEDIUM SAND (VERY DENSE)	-75
83	CL	GRAY SILTY CLAY WITH TRACE MEDIUM SAND (HARD)	

NOTE: THE ABOVE SOIL CONSISTENCY DESCRIPTIONS ARE BASED ON STANDARD PENETRATION TEST RESULTS ONLY; ACCORDING TO PECK, HANSEN, & THORNBURN, 1974, FOUNDATION ENGINEERING, 2 nd EDITION, JOHN WILEY & SONS, p. 114.

THE SOIL AND BLOW COUNT DATA TO A DEPTH OF 40.0 FEET ARE NOT TYPICAL OF NATURAL CONDITIONS DUE TO PREVIOUS NEARBY PILE INSTALLATION ACTIVITIES.

LOG OF BORING B-102

REVIEWED BY B. [illegible]TH, 1982
LOCATION: 21-[illegible]N-6W
SW
1884'SL, 434'WL
ELEVATION: 620 (Topo Map)

5676-008-07

EXHIBIT 2—6
SL—3629
3—8—78
PAGE 2 OF 3

ELEVATION IN FEET	LABORATORY TEST DATA: TESTS REPORTED DESCRIPTIVE	ATTERBERG LIMITS: PLASTIC LIMIT %	ATTERBERG LIMITS: LIQUID LIMIT %	SHEAR STRENGTH: Unconfined Compressive Strength	SHEAR STRENGTH: Direct Shear	SHEAR STRENGTH: Triaxial Shear	MOISTURE CONTENT %	DRY DENSITY pcf	PERMEABILITY (cm/sec or ft/year)	BLOW COUNTS / SAMPLES	SYMBOLS	DESCRIPTIONS	DEPTH
-70	DS DS					1576 6000 10648 12000	19.6 19.5 19.5	108 108		100/5 B	SP	GRAY FINE TO MEDIUM SAND (VERY DENSE)	E
-75										100/4" B		GRADES WITH DARK GRAY FINE TO MEDIUM SAND LAMINATIONS	E
-80										38 B	CL	GRAY SILTY CLAY WITH TRACE FINE TO MEDIUM SAND (HARD)	9
-85		9	8	11116(CU)1.680 17969(CU)19000			13.3 11.6	121 128		30 B P			9
-90										128 D 55 B	SM	GRAY FINE SAND AND SILT WITH OCCASIONAL GRAY SILTY CLAY LENSES (VERY DENSE)	10
-95										157 D 158/6" B			10
-100										85 B		GRADES TO SOME SILT WITH OCCASIONAL GRAY SILTY CLAY LENSES	11
-105				1967(CU)12000			17.1	110		197 B			
-110										65 B 76 B	ML	GRAY SILT WITH TRACE CLAY AND SOME VERY FINE SAND (HARD)	11
-115										79 B 46 B	CL	GRAY SILTY CLAY WITH SILT LAMINATIONS (HARD)	12 12
-120										58 B	ML	GRAY CLAYEY SILT WITH TRACE FINE TO MEDIUM SAND (HARD)	13
-125										49 D 57 B		GRADES WITH SOME BROWN SHALE FRAGMENTS	13
-130										100/4" B			14
-135										64 B	SP	DARK GRAY MEDIUM SAND WITH TRACE COARSE SAND AND FINE GRAVEL (DENSE)	14
-140										200/5" B		DEVONIAN SYSTEM ANTRIM SHALE SHALE, BROWN; HIGHLY WEATHERED AND FRAGMENTED; PYRITIC; WITH OCCASIONAL BROWN CLAY SEAMS AND PETROLEUM SMELL.	15
-145										71 101 50/5" 175/7" 100/1" B		GRAYISH-BROWN CLAY WITH WEATHERED BROWN SHALE FRAGMENTS AND PETROLEUM SMELL. TRAVERSE FORMATION	15
-150													

NOTE: THE ABOVE SOIL CONSISTENCY DESCRIPTIONS ARE BASED ON STANDARD PENETRATION TEST RESULTS ONLY, ACCORDING TO PECK, HANSEN, & THORNBURN, 1974, FOUNDATION ENGINEERING, 2 ND EDITION, JOHN WILEY & SONS, p. 174.

5676-008-07

LOG OF BORING B—102

EXHIBIT 2—6
SL—3629
3—8—78

ELEVATION IN FEET	LABORATORY TEST DATA: TESTS REPORTED ELSEWHERE	ATTERBERG LIMITS: PLASTIC LIMIT %	ATTERBERG LIMITS: LIQUID LIMIT %	SHEAR STRENGTH			MOISTURE CONTENT %	DRY DENSITY PCF	PERMEABILITY (K) FT./YEAR	RQD	SYMBOLS	DESCRIPTIONS	DEPTH
-150										100 (59)		SILTSTONE, GRAY; FINE GRAINED, THICK BEDDED; DOLOMITIC; SLIGHTLY WEATHERED.	
												DOLOMITE, GRAY, FINE GRAINED, THIN TO MEDIUM BEDDED; FOSSILIFEROUS WITH OCCASIONAL PINPOINT TO .25 INCH VUGS.	—16
												PETROLEUM STAINED ZONE FROM 160.2 TO 161.5 FEET	
												GRAY SHALE PARTINGS AT 162.3 FEET	
												PETROLEUM STAINED ZONE FROM 162.7 TO 164.7 FEET	
-155												POROUS ZONE FROM 165.6 TO 165.8 FEET	—16
												POROUS ZONE, FOSSIL MOLDS FROM 166.0 TO 166.7 FEET	
												VERTICAL FRACTURE, HEALED FROM 167.2 TO 167.5 FEET	
-160									1	98 (76)		PETROLEUM STAINED ZONE FROM 167.5 TO 167.2 FEET	
												POROUS ZONE FROM 168.7 TO 169.0 FEET	
												VERTICAL FRACTURE, HEALED FROM 168.5 TO 169.2 FEET	—17
												POROUS ZONE FROM 169.6 TO 169.7 FEET	
												POROUS ZONE, FOSSIL MOLDS, DOLOMITE CRYSTAL LINED FROM 170.5 TO 171.3 FEET	
-165												POROUS ZONE FROM 171.5 TO 171.7 FEET	
												DOLOMITE, GRAY, MEDIUM GRAINED, MEDIUM TO THICK BEDDED, ARGILLACEOUS, GRAY SHALE PARTINGS SPACED 0.5 TO 1.0 FOOT APART, NUMEROUS HAIRLINE FRACTURES, HEALED	—17
-170									<1	100 (82)		DOLOMITE, DARK GRAY, FINE GRAINED; THIN TO MEDIUM BEDDED, ARGILLACEOUS WITH NUMEROUS INTERBEDDED SHALE LAMINATIONS.	
												DOLOMITE; DARK GRAY; FINE TO MEDIUM GRAINED; MEDIUM TO THICK BEDDED; FOSSILIFEROUS, WITH OCCASIONAL SHALE SEAMS.	—18
												OPEN 45° FRACTURE AT 181.3 FEET	
												BLACK SHALE SEAM FROM 183.1 TO 183.6 FEET	
												VERTICAL FRACTURE, HEALED FROM 184.2 TO 184.6 FEET	
												FRACTURE ZONE, HEALED, CALCITE CRYSTALS FROM 184.8 TO 185.1 FEET	—18
-175												OPEN 60° FRACTURE AT 186.0 FEET	
												OPEN 60° FRACTURE AT 187.2 FEET	
												OPEN 60° FRACTURE AT 187.5 FEET	
												GRAY SHALE LAMINATIONS FROM 187.7 TO 188.1 FEET	
												GRADES WITH SHALE PARTINGS AT 189.3 FEET	
												POROUS ZONE, FOSSIL MOLDS FROM 189.6 TO 190.0 FEET	—19
-180										100 (89)		OPEN 80° FRACTURE AT 190.6 FEET	
												DOLOMITE, DARK GRAY, FINE GRAINED; MEDIUM TO MASSIVE BEDDED, ARGILLACEOUS.	
												OPEN VERTICAL FRACTURE FROM 193.0 TO 194.2 FEET	
-185													—19
-190										98 (89)		GRADES LESS ARGILLACEOUS FROM 201.6 TO 204.0 FEET	—20
-195										80 (54)		OPEN 60° FRACTURE FROM 204.4 TO 206.8 FEET	—20
-200													—210

BORING COMPLETED TO A DEPTH OF 207.7 FEET ON 1-6-78.
SURFACE CASING USED TO A DEPTH OF 5.0 FEET.
NX CASING USED TO A DEPTH OF 146.0 FEET.
BORING GROUTED TO SURFACE ON 1-6-78.

5676-008-07

LOG OF BORING B-102

Permit -----

DATA

Electric Log	
Scout Ticket	
Drillers Log	X
Survey Well Record	

TD 208 Devonian Ls.

BAILLY GENERATING STATION -- #B-103

NORTHERN INDIANA PUBLIC SERVICE CO.

21 - 37N - 6W

PORTER

REVIEWED BY B. KEITH, 1982
LOCATION: 21-37N-6W
SW
1830' SL, 378' WL
ELEVATION: 620 (Topo Map)

DATA FILED ELSEWHERE

Small Scale Log:	
Electric	
Sonic	
Nuclear	
Samples	X
Cores	X
Lithologic Strip	X
Colored Drillers Log	
Colored Sample Study	
Drilling Time Log	

GEOLOGICAL SURVEY
Department of Natural Resources
State of Indiana

EXHIBIT 2-7
SL-3629
3-8-78
PAGE 1 OF 3

SURFACE ELEVATION 8.2

ELEVATION IN FEET	TESTS REPORTED ELSEWHERE	ATTERBERG LIMITS: PLASTIC LIMIT %	ATTERBERG LIMITS: PLASTICITY INDEX %	SHEAR STRENGTH: DRAINAGE	SHEAR STRENGTH: DRAINAGE	SHEAR STRENGTH: DRAINAGE	MOISTURE CONTENT %	DRY DENSITY PCF	PERMEABILITY (K) FT/YEAR
+10									
+5									
0	RC						21.9	101	
-5									
-10									
-15									
-20									
-25									
-30	CS						21.1	108	
	RC	13	6	1845	5400		2 .7	1[illegible]	
		16	8	5837(CU)	6000		15.2	123	
-35									
-40									
-45									
-50									
-55									
-60									
-65	RC			10778	7200		16.[illegible]	119	
-70									

BLOW COUNTS SAMPLES	SYMBOLS	DESCRIPTIONS	DEPTH IN FEET
	SP	BROWN FINE TO MEDIUM SAND WITH TRACE SILT	0
73	SP	GRADES WITH OCCASIONAL LENSES OF COARSE SAND AND FINE GRAVEL (VERY DENSE)	-5
90	SP		-10
45	SP		-15
	CL	GRAY AND OLIVE MOTTLED SILTY CLAY WITH TRACE MEDIUM TO COARSE SAND (HARD)	
127	ML	GRAY SILT WITH TRACE FINE SAND (HARD)	-20
P	CL	GRAYISH-BROWN SILTY CLAY WITH BLUEISH-GRAY SILT STRINGERS AND TRACE FINE TO COARSE SAND (HARD)	-25
P	CL	GRADES VERY STIFF	-30
P	CL	GRADES WITH OCCASIONAL LAYERS GRAY SILT	-35
P	CL		-40
100/6"	SP	GRAYISH-BROWN FINE SAND WITH TRACE SILT (VERY DENSE)	-45
150/6"	SP		-50
140/6"	SP	GRADES WITH OCCASIONAL GRAVEL	-55
117	CL	GRAY SILTY CLAY WITH TRACE SAND AND FINE GRAVEL (HARD)	-60
59	CL	GRADES WITH OCCASIONAL FINE TO MEDIUM SAND LENSES	-65
121	CL		-70
			-75

NOTE: THE ABOVE SOIL CONSISTENCY DESCRIPTIONS ARE BASED ON STANDARD PENETRATION TEST RESULTS ONLY; ACCORDING TO PECK, HANSEN, & THORNBURN, 1974, FOUNDATION ENGINEERING, 2 nd EDITION, JOHN WILEY & SONS, p. 114.

LOG OF BORING B-103

REVIEWED BY B. ITH, 1982
LOCATION: 21 N-6W
SW
1830'SL, 378'WL
ELEVATION: 620 (Topo Map)

5676-008-07

EXHIBIT 2-7
SL-3629
3-8-78
PAGE 2 OF 3

ELEVATION IN FEET	LABORATORY TEST DATA: TESTS REPORTED ELSEWHERE	ATTERBERG LIMITS: PLASTIC LIMIT %	ATTERBERG LIMITS: PLASTICITY INDEX %	SHEAR STRENGTH: DIAPHRAGMA	SHEAR STRENGTH: DIRECT SHEAR	SHEAR STRENGTH: DIRECT SHEAR	MOISTURE CONTENT %	DRY DENSITY PCF	PERMEABILITY (K) FT/YEAR
-70	CS						23.1	101	
-75									
-80									
-85									
-90									
-95	DT	12	6	1427	-554		12.0	123	
-100									
-105									
-110	CS						13.5	123	
-115									
-120	CS						10.4	130	
-125									
-130									
-135									
-140									
-145									
-150									

BLOW COUNTS / SAMPLES	SYMBOLS	DESCRIPTIONS	DEPTH IN FEET
100/6"	CL	GRAY FINE TO MEDIUM SAND WITH TRACE SILT (VERY DENSE)	-80
150/5"	SP	GRADES WITH OCCASIONAL CLAY STRINGERS	-85
125/6"			-90
	CL	GRAY SILTY CLAY WITH TRACE MEDIUM TO COARSE SAND AND OCCASIONAL SAND LENSES (HARD)	-95
150/6"	SP	LIGHT BROWN FINE TO MEDIUM SAND (VERY DENSE)	-100
105	CL	GRAY SILTY CLAY WITH TRACE SAND AND GRAVEL AND OCCASIONAL LENSES OF SILT (HARD)	-105
103			-110
200/6"		GRADES TO INTERBEDDED BROWN [illegible] SILTY CLAY AND BROWN FINE SAND	-115
156	ML	LIGHT GRAY SILT WITH SOME SILT CLAY LENSES (HARD)	-120
78			-125
78		GRADES TO GRAY SILTY CLAY WITH SOME SAND AND GRAVEL	-130
146			-135
148		GRADES WITH DARK GRAY MEDIUM SAND LENSES	-140
		GRADES WITH LENSES HIGHLY WEATHERED BROWN SHALE	-145
200/3"		DEVONIAN SYSTEM ANTRIM SHALE SHALE, DARK GRAYISH-BROWN; SILTY; IRREGULAR BEDDING; HIGHLY WEATHERED TO DECOMPOSED; BROKEN.	-150
88/(0)		GRADES TO LIGHT GRAY	-155
100/(55)		TRAVERSE FORMATION SILTSTONE, LIGHT GRAY, FINE TO MEDIUM GRAINED, HARD, THIN BEDDED; BLOCKY, FRESH HORIZONTAL FRACTURES AT 157.7 AND 158.6 FEET.	

NOTE: THE ABOVE SOIL CONSISTENCY DESCRIPTIONS ARE BASED ON STANDARD PENETRATION TEST RESULTS ONLY, ACCORDING TO PECK, HANSEN, & THORNBURN, 1974, FOUNDATION ENGINEERING, 2nd EDITION, JOHN WILEY & SONS, p. 114.

LOG OF BORING B-103

5676-008-07

REVISED
7/17/78

EXHIBIT 2-7
SL-3629
3-8-78
PAGE 3 OF 3

LABORATORY TEST DATA

ELEVATION IN FEET	TESTS REPORTED ELSEWHERE	ATTERBERG LIMITS: PLASTIC LIMIT %	ATTERBERG LIMITS: LIQUID LIMIT %	SHEAR STRENGTH: Compressive: 0-1.5	SHEAR STRENGTH: Compressive: 1-2.5	SHEAR STRENGTH: Compressive: 2-4.5	SHEAR STRENGTH: Direct Shear: 1-2	SHEAR STRENGTH: Direct Shear: 2-4	MOISTURE CONTENT %	DRY DENSITY PCF	PERMEABILITY (K) FT./YEAR
-150											
	E, PR			7370 PSI (UC)					0.2	173	
-155											
-160											
-165											
	E			13,550 PSI (UC)					0.2	171	
-170											
-175											
-180											
-185											
-190	PR, PR									148	
-195											
-200											
-205											

RQD	Recovery
86 (79)	
100 (40)	
100 (74)	
100 (30)	
100 (23)	
99 (93)	

SYMBOLS DESCRIPTIONS

IRREGULAR CONTACT WITHIN DARK GRAY SHALE FILLING; PYRITIC AT 155.0 FEET

DOLOMITE: GRAY; FINE GRAINED AND HARD; THIN BEDDED; BROKEN TO BLOCKY; FRACTURED; PYRITIC; PINPOINT TO .25 INCH VUGS IN HORIZONTAL ZONES.

CLOSED VERTICAL FRACTURE FROM 159.4 TO 159.7 FEET

OPEN HORIZONTAL FRACTURE ZONE FROM 160.1 TO 161.9 FEET

HORIZONTAL FRACTURE WITH IRON STAINED CLAY FILLING .125 INCH THICK AT 163.6, 164.1 AND 164.5 FEET

PINPOINT POROSITY TO APPROXIMATELY 15% IN 1 INCH ZONES AT 164.1, 165.2 AND 165.5 FEET; FRACTURED CONCLOMERATIC 30° TO 45° BEDDING FROM 166.5 TO 167.0 FEET; PINPOINT POROSITY APPROXIMATELY 15%

SHALE ZONE WITH FOSSIL MOLDS, TO .5 INCH DIAMETER FROM 167.0 TO 168.0 FEET; POROSITY APPROXIMATELY 20 TO 30%

BROKEN ZONE; ABUNDANT FOSSIL MOLDS AND CASTS TO 1 INCH DIAMETER FROM 170.2 TO 171.0 FEET

PINPOINT POROSITY TO 10% FROM 172.5 TO 174.5 FEET

OPEN HORIZONTAL FRACTURES AT 172.9, 173.8, 174.1 AND 174.3 FEET

CLOSED .125 INCH FRACTURE WITH CLAY FILLING; 30°; AT 175.5 AND 176.3 FEET

LIMESTONE: GRAYISH-BROWN; MICRO-GRAINED; HARD; THIN BEDDED; BROKEN; VERY THIN SHALE PARTINGS FROM 178.6 TO 178.8 FEET AND 179.0 TO 179.3 FEET.

DOLOMITE: LIGHT GRAYISH-BROWN; MEDIUM-GRAINED; HARD; THIN BEDDED; BROKEN.

OPEN VERTICAL FRACTURE FROM 181.9 TO 182.6 FEET

DOLOMITE/DOLOMITIC LIMESTONE: GRAYISH-BROWN; MICRO-GRAINED; HARD; THIN BEDDED; SHALEY; BROKEN; SOME COARSE CRYSTALLINE CALCITE VUGS; NUMEROUS CALCITE FILLED FRACTURES TO .25 INCH WIDE.

OPEN VERTICAL FRACTURE FROM 186.4 TO 187.2 FEET

CLOSED VERTICAL FRACTURE FROM 187.5 TO 188.0 FEET

OPEN, 30° FRACTURES AT 188.1 AND 188.8 FEET

DOLOMITE: GRAY; MICRO-GRAINED; MEDIUM BEDDED; BROKEN. VERY BROKEN ZONE FROM 189.4 TO 189.1 FEET; FRESH

OPEN HORIZONTAL FRACTURE ZONE FROM 190.1 TO 192.9 FEET

GRADES DARKER GRAY; POROSITY APPROXIMATELY 20% PINPOINT TO 1 INCH DIAMETER VUGS; HORIZONTAL FRACTURE AT 193.4 FEET

BROKEN ALONG VERTICAL FRACTURE FROM 193.6 TO 194.1 FEET

GRADES SHALEY

FRACTURES ON SHALE SEAM AT 194.7 FEET

OPEN HORIZONTAL FRACTURES AT 196.0 AND 196.2 FEET

OPEN HORIZONTAL FRACTURE AT 197.3 FEET

OPEN VERTICAL FRACTURE FROM 198.0 TO 198.5 FEET

CLAY SEAM .5 INCH THICK FROM 198.0 FEET

OPEN HORIZONTAL FRACTURE AT 199.3 FEET

SHALEY MATERIAL GRADES OUT AT 200.0 FEET

GRADES LIGHT GRAY; THIN BEDDED

BROKEN ZONE FROM 201.3 TO 201.4 FEET

GRADES SANDY FROM 201.5 TO 205.0 FEET

OPEN HORIZONTAL FRACTURES AT 201.7, 202.0, 202.8, 203.6, 204.5 AND 204.6 FEET

GRADES DARK GRAY; SHALEY AT 205.1 FEET

FRACTURES ALONG SHALE PARTINGS AT 205.1, 205.3, 205.5, 205.9 AND 206.2 FEET

BORING COMPLETED TO A DEPTH OF 208.0 FEET ON 11-18-77.
SURFACE CASING USED TO A DEPTH OF 15.5 FEET.
BORING GROUTED TO SURFACE 12-21-77.

DRILLING FLUID LOSS: APPROXIMATELY 150 GALLONS BETWEEN ELEVATIONS -174.3 AND -196.3 FEET.

0676-008-07

LOG OF BORING B-103

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DATA

ectric Log _____

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illers Log X

rvey Well Record _____

TD 212 Devonian Ls.

BAILLY GENERATING STATION -- #B-104

NORTHERN INDIANA PUBLIC SERVICE CO.

21 - 37N - 6W

PORTER

REVIEWED BY B. KEITH, 1982
LOCATION: 21-37N-6W
SW
1780' SL, 435' WL
ELEVATION: 620 (Topo Map)

DATA FILED ELSEWHERE

mall Scale Log:

Electric _____

Sonic _____

Nuclear _____

amples _____

ores _____

ithologic Strip _____

olored Drillers Log _____

olored Sample Study _____

rilling Time Log _____

GEOLOGICAL SURVEY
Department of Natural Resources
State of Indiana

EXHIBIT 2-8
SL-3629
3-8-78
PAGE 1 OF 3

SURFACE ELEVATION 8.0

ELEVATION IN FEET	LABORATORY TEST DATA: TESTS REPORTED ELSEWHERE	ATTERBERG LIMITS: PLASTIC LIMIT %	ATTERBERG LIMITS: PLASTICITY INDEX %	SHEAR STRENGTH: [illegible]	SHEAR STRENGTH: [illegible]	SHEAR STRENGTH: [illegible]	MOISTURE CONTENT %	DRY DENSITY PCF	PERMEABILITY [illegible] FT/YEAR
+10									
+5									
0									
	PS								
-5									
-10									
-15									
-20									
-25									
-30									
-35									
-40									
-45									
-50									
-55									
-60									
	CS	14	12	4590(UC)			16.6	114	
							16.6	119	
-65				7943(CU)	7500		14.1	115	
-70									

BLOW COUNTS SAMPLES	SYMBOLS	DESCRIPTIONS	DEPTH IN FEET
	SP	BROWN FINE TO MEDIUM SAND	0
	SW	BROWN AND GRAY FINE TO COARSE SAND (VERY DENSE)	
75			-5
	SP	BROWN FINE SAND WITH TRACE SILT (DENSE)	
41			-10
76			
34		GRADES GRAY (VER. DENSE)	-15
	ML	GRAY SILT WITH TRACE CLAY (VERY STIFF)	
P			-20
	CL	GRAY SILTY CLAY WITH TRACE MEDIUM TO COARSE SAND AND FINE GRAVEL (VERY STIFF)	
29		GRADES WITH RED SILTY CLAY LENSES (HARD)	-25
15		RED SILTY CLAY LENSES GRADE OUT (STIFF)	-30
		FINE GRAVEL GRADES OUT	
P			-35
	SP	GRAYISH-BROWN FINE TO MEDIUM SAND (DENSE)	
131	CL	GRAY SILTY CLAY WITH TRACE SAND (HARD)	-40
100/3"	SP	GRAYISH-BROWN FINE TO MEDIUM SAND WITH TRACE SILT (VERY DENSE)	-45
111	CL	GRAY SILTY CLAY WITH TRACE FINE TO MEDIUM SAND (HARD)	-50
100/6"	SP	BROWN FINE TO MEDIUM SAND (VERY DENSE)	-55
	CL	GRAY SILTY CLAY WITH TRACE FINE TO MEDIUM SAND (HARD)	
151	SP	BROWN FINE TO MEDIUM SAND (VERY DENSE)	-60
	CL	GRAY SILTY CLAY WITH TRACE FINE TO MEDIUM SAND (HARD)	-65
85			
		GRADES WITH OCCASIONAL SAND LENSES	-70
47		GRADES WITH TRACE FINE GRAVEL	-75

NOTE: THE ABOVE SOIL CONSISTENCY DESCRIPTIONS ARE BASED ON STANDARD PENETRATION TEST RESULTS ONLY, ACCORDING TO PECK, HANSEN, & THORNBURN, 1974, FOUNDATION ENGINEERING, 2 ND EDITION, JOHN WILEY & SONS, p. 114.

LOG OF BORING B-104

REVIEWED BY B. [illegible]TH, 1982
LOCATION: 21 N-6W
SW
1780'SL, 435'WL
ELEVATION: 620 (Topo Map)

5676-008-07

EXHIBIT 2-8
SL-3629
3-8-78
PAGE 2 OF 3

ELEVATION IN FEET	LABORATORY TEST DATA: TESTS REPORTED ELSEWHERE	ATTERBERG LIMITS: PLASTIC LIMIT %	ATTERBERG LIMITS: PLASTICITY INDEX %	SHEAR STRENGTH: Compressive (a)	SHEAR STRENGTH: Compressive (b)	SHEAR STRENGTH: Direct Shear (c)	MOISTURE CONTENT %	DRY DENSITY PCF	PERMEABILITY (N) FT/YEAR	BLOW COUNTS SAMPLES	SYMBOLS	DESCRIPTI	DEPTH IN FEET
-70										52	CL	GRADES TO INTERBEDDED GRAY SILTY CLAY AND GRAYISH-BROWN FINE TO MEDIUM SAND (HARD)	80
-75	DS, PS					7560/9000 4448/12000	21.0 20.5	108 108		100/6"	SP	BROWN FINE TO MEDIUM SAND (VERY DENSE)	85
-80										185/11"			90
-85										144			95
-90										100/3"			100
-95										56	CL	GRAY SILTY CLAY WITH TRACE SAND (HARD)	105
-100										121		GRADES WITH SOME SAND AND TRACE SILT LENSES	110
-105										100/2.5"			115
-110										160/8"	SM	GRAYISH-BROWN SILTY FINE SAND (VERY DENSE) GRADES WITH SOME CLAY	120
-115										87	CL	GRAY SANDY SILTY CLAY WITH TRACE BLACK SHALE FRAGMENTS (HARD)	125
-120											ML	GRAY CLAYEY SILT WITH OCCASIONAL MEDIUM TO COARSE SAND AND TRACE BROWN SHALE FRAGMENTS (HARD)	130
-125	RC			14170	11500		11.5	128					135
-130										160/3"		GRADES WITH TRACE FINE GRAVEL	140
-135										160/6"			145
-140												DEVONIAN SYSTEM ANTRIM SHALE SHALE, BROWN, HIGHLY WEATHERED SHALE FRAGMENTS IN GRAY SILTY CLAY MATRIX	150
-145										25/(0)			
-150	PV, PR							166		100/(0)		BLUEISH-GRAY CLAYEY SILT FROM 155.0 TO 156.0 FEET	155
												TRAVERSE FORMATION SILTSTONE, GRAY, FINE GRAINED, MASSIVE BEDDED, SLIGHTLY WEATHERED	

NOTE: THE ABOVE SOIL CONSISTENCY DESCRIPTIONS ARE BASED ON STANDARD PENETRATION TEST RESULTS ONLY, ACCORDING TO PECK, HANSEN, & THORNBURN, 1974, FOUNDATION ENGINEERING, 2nd EDITION, JOHN WILEY & SONS, p. 114.

LOG OF BORING B-104

5676-008-07

EXHIBIT 2—8
SL—3629
3—8—78

LABORATORY TEST DATA

ELEVATION IN FEET	TESTS ACCORDING ELSEWHERE	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: LIQUID LIMIT	SHEAR STRENGTH	MOISTURE CONTENT %	DRY DENSITY	PERMEABILITY (K) FT/YEAR
-150	TT, PS E			7300 PSI(UC)	0.2	165 168	
-155							11
-160	E, PS			11700 PSI(UC)	0.4	170	
-165							1
-170							
	E			13000 PSI(UC)	0.1	172	
-175							95
-180							
	E			12060 PSI(UC)	0.4	165	
-185							31
-190							
-195	E			10550 PSI(UC)	0.2	173	12
-200							
-205							

SYMBOLS

DESCRIPTIONS

DEPTH IN FEET

100 (100)
100 (94)
100 (97)
95 (81)
95 (67)
100 (67)

DOLOMITE, GRAY, FINE TO MEDIUM GRAINED; MASSIVE BEDDED; FOSSILIFEROUS; OCCASIONAL PINPOINT TO .25 INCH VUGS; PYRITIC
PETROLEUM STAINS, OCCASIONAL .25 INCH VUGS AND FOSSIL MOLDS, DOLOMITE CRYSTAL LINED FROM 155.1 TO 160.5 FEET
GRADES WITH GRAY SHALE PARTINGS FROM 163.9 FEET
PETROLEUM STAINED POROUS ZONE FROM 164.7 TO 165.4 FEET
VERTICAL FRACTURE, PETROLEUM STAINED AND DOLOMITE CRYSTAL LINED FROM 165.1 TO 165.5 FEET
VERTICAL FRACTURE, SAND FILLED WITH DOLOMITE CRYSTALS FROM 165.1 TO 166.6 FEET
PETROLEUM STAINED POROUS ZONE FROM 166.1 TO 166.1 FEET
SAND FILLED BEDDING PLANE AT 168.2 FEET
POROUS ZONE WITH FOSSIL MOLDS AND VUGS UP TO .50 INCH DIAMETER AND DOLOMITE CRYSTALS FROM 169.7 TO 170.0 FEET
VERTICAL FRACTURE, HEALED FROM 170.1 TO 171.5 FEET
GRADES WITH SHALE PARTINGS FROM 171.7 FEET
VERTICAL FRACTURE, HEALED FROM 171.7 TO 171.7 FEET
3° OPEN FRACTURE, SHALE LINED AT 175.5 FEET
60° FRACTURE, HEALED AT 176.3 FEET

LIMESTONE, GRAYISH-BROWN, FINE GRAINED, THIN BEDDED; ARGILLACEOUS; INTERBEDDED SHALE SEAMS .10 TO .25 INCH THICK.

DOLOMITE; GRAY; FINE GRAINED; MASSIVE BEDDED, FOSSILIFEROUS.
VERTICAL FRACTURE, CALCITE FILLED FROM 177.4 TO 178.6 FEET
VERTICAL FRACTURE, HEALED FROM 178.7 TO 179.6 FEET
BROWN SHALE PARTINGS, .10 INCH THICK AT 180.5 FEET
DARK GRAY SHALE, GRADE, ARGILLACEOUS FROM 181.8 TO 182.0 FEET
CALCITE HEALED FRACTURED ZONE, HIGHLY FOSSILIFEROUS FROM 184.0 TO 184.7 FEET
POROUS ZONE WITH SHALE PARTINGS FROM 186.0 TO 187.0 FEET
VERTICAL FRACTURE, HEALED FROM 186.0 TO 186.4 FEET
BROKEN ZONE, PARTIALLY HEALED FROM 187.7 TO 188.6 FEET
VUG, 0.3 FOOT DIAMETER, FOSSIL MOLD, DOLOMITE CRYSTAL LINED AT 189.4 FEET
GRADES WITH SHALE PARTINGS FROM 190.3 FEET
OPEN VERTICAL FRACTURE, DOLOMITE CRYSTAL LINED, FOSSILIFEROUS FROM 190.8 TO 191.4 FEET

DOLOMITE; LIGHT GRAY; FINE GRAINED TO MICROCRYSTALLINE; MASSIVE BEDDED; FOSSILIFEROUS; ARGILLACEOUS.
NUMEROUS OPEN FOSSIL MOLDS FROM 192.5 TO 196.0 FEET
GRADES WITH GRAY SHALE PARTINGS FROM 194.2 FEET
60° OPEN FRACTURE AT 195.7 FEET

30° OPEN FRACTURE FROM 203.5 FEET

DOLOMITE, DARK GRAY; FINE GRAINED; MEDIUM BEDDED; ARGILLACEOUS.
45° FRACTURE, SHALE LINED AT 208.5 FEET
FOSSILIFEROUS ZONE, POROUS FROM 208.6 TO 209.4 FEET
GRADES WITH GRAY SHALE PARTINGS FROM 209.4 FEET

DOLOMITE; LIGHT GRAY; MICROCRYSTALLINE; THIN TO MEDIUM BEDDED, FOSSILIFEROUS; NUMEROUS PINPOINT TO .10 INCH OPEN FOSSIL MOLDS WITH OCCASIONAL PYRITE CRYSTALS.

BORING COMPLETED AT A DEPTH OF 212.2 FEET ON 12-23-77.
SURFACE CASING USED TO A DEPTH OF 10.0 FEET.
NX CASING USED TO A DEPTH OF 146.5 FEET.
BORING GROUTED TO SURFACE ON 12-23-77.

5676-008-07

LOG OF BORING B—104

Permit -----

DATA

Electric Log _____

Scout Ticket _____

Drillers Log X

Survey Well Record _____

TD 209 Devonian Ls.

BAILLY GENERATING STATION -- #B-105-A

NORTHERN INDIANA PUBLIC SERVICE CO.

21 - 37N - 6W

PORTER

REVIEWED BY B. KEITH, 1982

LOCATION: 21-37N-6W
SW
1780' SL, 330' WL

ELEVATION: 620 (Topo Map)

DATA FILED ELSEWHERE

Small Scale Log:

Electric _____

Sonic _____

Nuclear _____

Samples _____

Cores _____

Lithologic Strip _____

Colored Drillers Log _____

Colored Sample Study _____

Drilling Time Log _____

GEOLOGICAL SURVEY

Department of Natural Resources

State of Indiana

EXHIBIT 2-9
SL-3629
3-8-78
PAGE 1 OF 3

LOCATION: 21 N-6W
SW
1780'SL, 330'WL
ELEVATION: 620 (Topo Map)

5676-008-07

SURFACE ELEVATION 8.2

ELEVATION IN FEET	LABORATORY TEST DATA: TESTS REPORTED ELSEWHERE	ATTERBERG LIMITS: PLASTIC LIMIT %	ATTERBERG LIMITS: PLASTICITY INDEX %	SHEAR STRENGTH: [illegible]	SHEAR STRENGTH: [illegible]	SHEAR STRENGTH: [illegible]	MOISTURE CONTENT %	DRY DENSITY PCF	PERMEABILITY (K) FT/YEAR
+10									
+5									
0									
-5									
-10									
-15									
-20				2754(UC) 2217(UU) 5000 2376(CU) 5000			16.5 18.7 17.4	111 111 115	
-25									
-30									
-35									
-40									
-45									
-50									
-55									
-60									
-65	CS						19.1	96	
-70									

BLOW COUNTS / SAMPLES	SYMBOLS	DESCRIPTIONS	DEPTH IN FEET
	SP	BROWN FINE SAND WITH TRACE MEDIUM SAND (VERY DENSE)	-0
74	SP		-5
46	SP	GRADES WITH TRACE ORGANIC MATTER (DENSE)	-10
103	ML	GRAY SILT WITH TRACE CLAY AND TRACE FINE SAND (HARD)	-15
53	CL	GRAYISH-BROWN SILTY CLAY WITH BLUEISH-GRAY SILT STRINGERS AND TRACE FINE TO COARSE SAND (HARD)	-20
P	CL	GRADES VERY STIFF	-25
P	CL		-30
P	CL		-35
180/11"	CL ML	DARK GRAY SILTY CLAY WITH SOME MEDIUM TO COARSE SAND AND TRACE FINE GRAVEL (HARD)	-40
110/6"	SP	GRAYISH-BROWN FINE SAND (VERY DENSE)	-45
168	SP		-50
130	CL	GRAY SILTY CLAY WITH TRACE FINE SAND AND SILT STRINGERS (HARD)	-55
93	CL	GRADES WITH TRACE MEDIUM TO COARSE SAND AND TRACE RED CLAY MOTTLING	-60
88	SP	GRAYISH-BROWN FINE SAND WITH OCCASIONAL LAYERS GRAY SILTY CLAY (VERY DENSE)	-65
26	CL	GRAY SILTY CLAY WITH TRACE FINE TO MEDIUM SAND AND OCCASIONAL LAYERS GRAYISH-BROWN FINE TO MEDIUM SAND (VERY STIFF)	-70
			-75

NOTE: THE ABOVE SOIL CONSISTENCY DESCRIPTIONS ARE BASED ON STANDARD PENETRATION TEST RESULTS ONLY; ACCORDING TO PECK, HANSEN, & THORNBURN, 1974, FOUNDATION ENGINEERING, 2 nd EDITION, JOHN WILEY & SONS, p. 174.

LOG OF BORING B-105A

[illegible]

EXHIBIT 2-9
SL-3629
3-8-78
PAGE 2 OF 3

ELEVATION IN FEET	TESTS REPORTED ELSEWHERE	ATTERBERG LIMITS: PLASTIC LIMIT %	ATTERBERG LIMITS: PLASTICITY INDEX %	SHEAR STRENGTH: ADMINISTRATION	SHEAR STRENGTH:	SHEAR STRENGTH:	MOISTURE CONTENT %	DRY DENSITY PCF	PERMEABILITY (K) FT/YEAR
-70									
-75									
-80									
-85									
-90									
-95									
	CS	13	9	[illegible]	6500		13.3 14.5	124 119	
-100									
-105	RC CS PS(N)	17	17				15.8 15.1	110 107	
-110									
-115									
-120									
-125									
-130									
-135	RC PS				10,200		13.1	11[illegible]	
-140									
-145									
-150									

BLOW COUNTS / SAMPLES

BLOW COUNTS	SAMPLES
53	
58	
120/6"	
47	
33	
P	
P 115/6"	
61	
139	
116	
150/8.5"	
160	
95	
100/2"	
200/6"	
100/51	

SYMBOLS

DESCRIPTIONS

SYMBOL	DESCRIPTION
CL	GRADE, WITH TRACE RED CLAY MOTTLING (H[illegible])
SP	GRAY SILTY FINE SAND WITH OCCASIONAL GRAY SILTY CLAY LENSES
CL ML	GRAY SILTY CLAY WITH TRACE FINE GRAVEL AND OCCASIONAL SAND LENSES (HARD)
CL	GRAY SILTY [illegible] WITH TRACE MEDIUM SAND [illegible]
	GRADES TO INTERBEDDED BROWNISH-GRAY SILTY CLAY AND BROWN FINE TO MEDIUM SAND
	GRADES WITH OCCASIONAL SANDY SILT LAYERS
ML	GRAY CLAYEY SILT AND SILTY CLAY WITH OCCASIONAL SILT STRINGERS AND SILTY SAND LENSES (HARD)
	GRADES TO GRAY THINLY LAMINATED SILTY CLAY WITH OCCASIONAL GRAY SILT STRINGERS (HARD)
	GRADE, WITH LENSES HIGHLY WEATHERED BROWN SHALE
	DEVONIAN SYSTEM ANTRIM SHALE SHALE, GRAYISH-BROWN; SOFT; IRREGULAR BEDDED; VERY BROKEN; HIGHLY WEATHERED TO DECOMPOSED.
	GRADES WITH GRAY SILT ZONES
	TRAVERSE FORMATION SILTSTONE, LIGHT GRAY; FINE GRAINED; LIMY; MEDIUM BEDDED; MEDIUM HARD; BLOCKY TO BROKEN. DOLOMITE, LIGHT GRAYISH-BROWN; MEDIUM GRAINED; MEDIUM BEDDED;

DEPTH IN FEET: -80, -85, -90, -95, -100, -105, -110, -115, -120, -125, -130, -135, -140, -145, -150, -155

NOTE. THE ABOVE SOIL CONSISTENCY DESCRIPTIONS ARE BASED ON STANDARD PENETRATION TEST RESULTS ONLY, ACCORDING TO PECK, HANSEN, & THORNBURN, 1974, FOUNDATION ENGINEERING, 2nd EDITION, JOHN WILEY & SONS, p. 114.

LOG OF BORING B-105A

5676-008-07

EXHIBIT 2-9
SL-3629
3-8-78
PAGE 3 OF 3

ELEVATION IN FEET	LABORATORY TEST DATA: TESTS REPORTED ELSEWHERE	ATTERBERG LIMITS: PLASTIC LIMIT %	ATTERBERG LIMITS: PLASTICITY INDEX %	SHEAR STRENGTH: Compressive $\frac{\sigma_1-\sigma_3}{\sigma_1}$	SHEAR STRENGTH: σ_3	SHEAR STRENGTH: Direct Shear $\frac{\tau}{\sigma}$	MOISTURE CONTENT %	DRY DENSITY PCF	PERMEABILITY (K) FT/YEAR
-150	E			14,670 PSI (UC)			0.3	176	
	PV, PI							172	
-155									
-160									
	E			3330 PSI (UC)			2.0	154	
-165									
-170									
	PV, PR							174	
-175									
-180									
-185									
-190									
	E			8150 PSI (UC)			0.4	171	
-195									
-200									
-205									

NOTE: REFER TO TABLE 2-5 FOR SUMMARY OF WATER PRESSURE TEST RESULTS.

SYMBOLS

DESCRIPTIONS

DEPTH IN FEET

100/89

BLOCKY TO BROKEN; HARD; IRREGULAR VUGS TO .25 INCH DIAMETER WITH PETROLEUM STAIN; TRACE OF PYRITE.
GRADES FINER GRAINED, LIGHT GRAY
OPEN HORIZONTAL FRACTURES AT 159.5, 160.2, 160.3, 160.4, 160.5, 160.6 AND 161.5 FEET
SEVERAL CLOSED, CALCITE FILLED, 45° FRACTURES LESS THAN .06 INCH THICK FROM 160.8 TO 162.0 FEET
VUGS TO .5 INCH DIAMETER FROM 162.6 TO 165.5 FEET, POROSITY APPROXIMATELY 15%
HORIZONTAL FRACTURES AT 163.7, 164.3, 165.0, 165.5, 166.6, 166.9, 16[illegible].1, 167.6, 168.2, 168.3, 169.0, 169.1, AND 169.3 FEET
OPEN HORIZONTAL FRACTURES AT 169.5, 169.9 AND 170.5
PINPOINT POROSITY APPROXIMATELY 15% FROM 170.0 TO 170.5 FEET
GRADES WITH LESS POROSITY, APPROXIMATELY 5%
OPEN HORIZONTAL FRACTURES AT 171.2, 173.2, 173.4 AND 173.7 FEET

100/62

LIMESTONE. GRAYISH-BROWN, VERY FINE CRYSTALLINE; HARD, THIN BEDDED, BROKEN.
GRADES SHALEY

DOLOMITE. GRAYISH-BROWN, MICRO-GRAINED; HARD; THIN BEDDED, VERY BROKEN

100/50

DOLOMITE. GRAY, FINE GRAINED, HARD, THIN BEDDED, BROKEN ARGILLACEOUS
CLOSED, CALCITE FILLED FRACTURE TO 1 INCH WIDE FROM 18[illegible] TO 180.8 FEET, AND AT 181.0 FEET
VERY BROKEN ZONE FROM 182.8 TO 183.8 AND 185.0 TO 186.0 FEET

DOLOMITE: LIGHT GRAY; MICRO-GRAINED, HARD; THIN BEDDED, BROKEN. GRADES DARK GRAY AND ARGILLACEOUS WITH DEPTH
FRESH VERTICAL FRACTURE FROM 187.5 TO 187.7 FEET
FRACTURE ON .25 INCH SHALEY SEAM AT 192.2 FEET
OPEN, VERTICAL AND 45° FRACTURE IN ARGILLACEOUS ZONE FROM 192.6 TO 192.7 FEET

100/85

DOLOMITE. DARK GRAY; FINE GRAINED; HARD, THIN BEDDED, ARGILLACEOUS; BLOCKY.
CLOSED VERTICAL FRACTURE FROM 196.0 TO 197.0 FEET

98/91

DOLOMITE: LIGHT GRAYISH-BROWN; FINE GRAINED; HARD, MEDIUM TO THICK BEDDED; BLOCKY.
OPEN HORIZONTAL FRACTURES WITH CLAY FILLING AT 198.5 AND 199.0 FEET
OPEN HORIZONTAL FRACTURES AT 200.3 AND 200.5 FEET
GRADES LIGHT GRAY; NUMEROUS FOSSIL MOLDS AND VUGS TO .75 INCH DIAMETER
GRAY SHALEY SEAM WITH FRACTURE FROM 202.6 TO 202.8 FEET
OPEN HORIZONTAL FRACTURE ZONE FROM 204.5 TO 205.0 FEET
OPEN 45° FRACTURE AT 206.5 FEET ON .12 IN SHALEY SEAM
OPEN FRACTURE ON 30° SHALEY SEAM AT 207.1 AND 207.2 FEET
OPEN 45° FRACTURE FROM 207.5 TO 208.0 FEET

BORING COMPLETED TO A DEPTH OF 208.5 FEET ON 11-23-77.
SURFACE CASING USED TO A DEPTH OF 10.0 FEET.
NX CASING USED TO A DEPTH OF 155.0 FEET.
BORING GROUTED TO SURFACE ON 12-20-77.

LOG OF BORING B-105A

5676-008-07

ermit -----

DATA

lectric Log

eout Ticket

rillers Log X

urvey Well Record

TD 197 Devonian Ls.

BAILLY GENERATING STATION -- #G-3

NORTHERN INDIANA PUBLIC SERVICE CO.

21 - 37N - 6W

PORTER

REVIEWED BY R. KEITH, 1982
LOCATION: 21-37N-6W
SW
1757' SL, 361' WL
ELEVATION: 620 (Topo Map)

DATA FILED ELSEWHERE

Small Scale Log:

Electric

Sonic

Nuclear

Samples

Cores

Lithologic Strip

Colored Drillers Log

Colored Sample Study

Drilling Time Log

GEOLOGICAL SURVEY
Department of Natural Resources
State of Indiana

REVISED 7/17/78

EXHIBIT 2-1
SL-3629
3-8-78

SURFACE ELEVATION 8.4

LABORATORY TEST DATA

ELEVATION IN FEET	TESTS REPORTED (U,S,C,W,H,A)	ATTERBERG LIMITS: PLASTIC LIMIT %	ATTERBERG LIMITS: LIQUID LIMIT %	SHEAR STRENGTH: COMPRESSION: [illegible]	SHEAR STRENGTH: COMPRESSION: [illegible]	SHEAR STRENGTH: DIRECT SHEAR: [illegible]	SHEAR STRENGTH: DIRECT SHEAR: [illegible]	MOISTURE CONTENT %	DRY DENSITY [illegible]	PERMEABILITY (K) FT./YEAR
-140										
-145	E			15380 PSI (UC)				0.3	168	
-150										
-155										
-160										
-165	E			3150 PSI (UC)				0.9	166	
-170										
-175										
-180										
-185	E			16000 PSI (UC)				0.2	169	
-190										

DEPTH

SYMBOLS — DESCRIPTIONS

OVERBURDEN SOIL NOT SAMPLED FROM 0.0 TO 151. FEET

DEVONIAN SYSTEM
ANTRIM SHALE
SHALE: BROWN; HIGHLY WEATHERED; DISTURBED.

TRAVERSE FORMATION
SILTSTONE: LIGHT GRAY; FINE TO MEDIUM GRAINED; HARD; THIN BEDDED.
DOLOMITE. GRAY; FINE GRAINED; HARD; THIN BEDDED; BROKEN TO BLOCKY; PYRITIC; PINPOINT TO .25 INCH VUGS IN HORIZONTAL ZONES; OIL BEARING POROUS ZONES THROUGHOUT. FOSSILIFEROUS.
OPEN VERTICAL FRACTURE, OIL BEARING FROM 160.1 TO 160.4 FEET
OPEN VERTICAL FRACTURE FROM 163.1 TO 163.5 FEET
FRACTURE ZONE FROM 165.0 TO 165.9
PINPOINT POROSITY TO APPROXIMATELY 15% FROM 161.0 TO 161.5, 165.0 TO 165.7 AND 165.8 TO 165.9 FEET
OPEN VERTICAL FRACTURE FROM 168.3 TO 168.9 FEET
.25 INCH SHALE PARTING AT 172.6 FEET
PINPOINT POROSITY TO APPROXIMATELY 15% FROM 173.0 TO 173.7 FEET
OPEN 45° FRACTURE, PYRITE CRYSTALS AT 174.1 FEET
GRAY CLAY SEAM, HARD FROM 174.5 TO 174.7 FEET
LIMESTONE. GRAY; FINE-GRAINED; HARD; MASSIVE-BEDDED; VERY THIN SHALE PARTINGS TO 181.1 FEET.
HEALED FRACTURE ZONE FROM 175.5 TO 176.2 FEET
VUG, DOLOMITE CRYSTAL LINED FROM 176.6 TO 176.7
DOLOMITE: GRAY; FINE GRAINED; HARD; THIN TO MEDIUM BEDDED; NUMEROUS FRACTURES; FOSSILIFEROUS.
BROWN SHALE SEAM, HARD, WEATHERED FROM 179.5 TO 179.9 FEET
CALCITE FILLED HORIZONTAL FRACTURE 180.3 TO 180.4 FEET
FRACTURES WITH CALCITE FILLING AND SHALE PARTINGS FROM 181.3 TO 183.0 FEET
HORIZONTAL FRACTURE, CALCITE AND SHALE LINED AT 183.2 FEET
FRACTURE ZONE FROM 184.0 TO 187.0 FEET
BROWN CLAY SEAM, HARD FROM 184.9 TO 185.0 FEET
PINPOINT POROSITY TO APPROXIMATELY 5% FROM 187.0 TO 187.5 FEET
OPEN 60° FRACTURE AT 187.9 FEET
PINPOINT POROSITY TO APPROXIMATELY 5% FROM 188.6 TO 190.3 FEET
HORIZONTAL FRACTURE AT 190.0 FEET
PINPOINT POROSITY TO APPROXIMATELY 15% FROM 190.4 TO 191.6 FEET
HORIZONTAL FRACTURE AND SHALE PARTING AT 191.5 FEET
OPEN 45° FRACTURE AT 193.8 FEET
PINPOINT POROSITY TO APPROXIMATELY 10% FROM 193.8 TO 196.3 FEET
GRADES DARK GRAY, SHALEY AT 195.0 FEET
HORIZONTAL FRACTURE AND SHALE PARTING AT 195.9 FEET

BORING COMPLETED AT A DEPTH OF 197.0 FEET ON 12-13-77.
NO CASING USED TO A DEPTH OF 151.0 FEET.
BORING GROUTED TO SURFACE ON 12-19-77.

NOTE:

1. BOREHOLE G-1 (GEOPHYSICAL ENERGY HOLE) LOCATED 6.4 FEET SOUTHWEST OF G-3. SURFACE ELEVATION 8.4 FEET. DRILLED WITH ROLLER BIT TO A DEPTH OF 164.5 FEET. TERMINATED AT 164.5 FEET DUE TO WORN BIT. NO SOIL SAMPLING OR ROCK CORING CONDUCTED.
2. BOREHOLE G-2 (GEOPHYSICAL ENERGY HOLE TO REPLACE G-1) LOCATED 13.5 FEET SOUTHWEST OF G-3. SURFACE ELEVATION 8.4 FEET. DRILLED WITH ROLLER BIT TO A DEPTH OF 173.0 FEET. TERMINATED AT 173.0 FEET DUE TO LOSS OF DRILLING FLUID CIRCULATION. WATER WAS OBSERVED RISING AND FLOWING IN BORINGS B-101, B-102, AND B-105A, WHICH WERE OPEN AND UNCORRUPTED AT THE TIME THE LOSS OF DRILLING FLUID OCCURRED AND IN WHICH THE WATER LEVELS HAD BEEN STABLE WITH NO FLOW PRIOR TO THAT TIME. NO SOIL SAMPLING OR ROCK CORING CONDUCTED.
3. BORING G-3 (GEOPHYSICAL ENERGY HOLE TO REPLACE G-1 & G-2)

REVIEWED BY B. KEITH, 1982
LOCATION: 21-37N-6W
SW
1757'SL, 361'WL
ELEVATION: 620 (Topo Map)

LOG OF BORING G-3

5676-000-07

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*****************************************
*            RECORD OF WATER WELL       *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
*****************************************
```

Reference number: 55552

Driving directions to well:
?.) TAKE HWY 20 W OF SR49 TO WEST OAK HILL RD (1350W) TURN N ON OAK
ILL RD APP 300 TO DUNE MEADOWS DR TURN E HOUSE IS ON THE S SIDE OF ST

OWNER-CONTRACTOR

Name of well owner: ROBERT MALETTA
Address: 1140 DUNE MEADOWS PORTER IN
Zip code: 46304 Telephone #:

Name of building contractor: NEW CONCEPT HOMES
Address: PO BOX 537 CHESTERTON IN
Zip code: 46304 Telephone #:

Name of drilling contractor: JOHNSON WELL DRILLING
Address: 1303 ROBIN RD VALPARAISO IN
Zip code: 46383 Telephone #:

Name of equipment operator: MIKE JOHNSON License number: 313

Date completed: 1/13/94

CONSTRUCTION DETAILS

Well use: DOMESTIC Method of drilling: ROTARY Type of pump: SUBMERSIBLE

Casing length: 105 (ft) Material: PVC Diameter: 4 (in)

Screen length: 5 (ft) Material: PVC Diameter: 33 (in) Screen slot size: 10
Total depth of well: 110 Depth of pump setting: Water quality: CLEAR

WELL CAPACITY TEST

Type of test: PUMPING Test rate: 20 gpm for 5 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 7 (ft) Static water level: 70 (ft)

GROUTING INFORMATION

Grout material: VOLCLAY Depth of grout from: 100 to: 70
Method of installation: PUMPED Number of bags used: 2

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 37N Range: 6W ¼ of the ¼ of the NE ¼ of Section: 26
Topo map: DUNE ACRES
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: DUNE MEADOWS Lot number: 19
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
YEL CLAY	0	10
BLLUE CLAY	10	90
GRAY S&G	90	95
BLUE CLAY	95	100
GRAY SAND	100	110

COMMENTS:

SEE MAP

```
*****************************************
*            RECORD OF WATER WELL       *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
*****************************************
```

Reference number: 67370

Driving directions to well:
AKE ST. RD. 49 N. OF U.S. HWY 6 TO 1100 N. W. ON 110 N. & GO TO 125 W.
REASON RD)TURN N. HOUSE IS ON THE NORTH EAST CORNER OF INTERSECTION

OWNER-CONTRACTOR

Name of well owner: LARRY CLEVELAND
Address: 1103 N. PEARSON RD. CHESTERTON IN
Zip code: 46304 Telephone #:

Name of building contractor:
Address:
Zip code: Telephone #:

Name of drilling contractor: JOHNSON WELL DRILLING INC
Address: 1303 ROBIN RD VALPARAISO IN
Zip code: 46383 Telephone #: (219)462-5548

Name of equipment operator: MIKE JOHNSON License number: 313

Date completed: 3/03/94

CONSTRUCTION DETAILS

Well use: DOMESTIC Method of drilling: ROTARY Type of pump: SHALLOW JET

Casing length: 55 (ft) Material: PVC Diameter: 4 (in)

Screen length: 5 (ft) Material: PVC Diameter: 3 (in) Screen slot size: 10
Total depth of well: 60 Depth of pump setting: Water quality: CLEAR

WELL CAPACITY TEST

Type of test: PUMPING Test rate: 20 gpm for .5 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 10 (ft) Static water level: 7 (ft)

GROUTING INFORMATION

Grout material: VOLCLAY Depth of grout from: 50 to: 25
Method of installation: PUMP Number of bags used: 2

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 36N Range: 6W ¼ of the SE ¼ of the SE ¼ of Section: 3
Topo map: CHESTERTON
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: Lot number:
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
TOP SOIL	0	1
YEL SAND	1	17
GRAY SAND	17	39
BLUE CLAY	39	53
GRAY SAND	53	60

COMMENTS

... NO COMMENTS FOR RECORD: 67370

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*******************************************
*            RECORD OF WATER WELL         *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
*******************************************
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Reference number: 66433

Driving directions to well:
65 TO 80 -94 E. 8 MI. TO EXIT 22B GO E. ON RT. 20 3 MI. TO OAK HILL RD.
1 BLK TO LOT11 HOUSE ON W. SIDE OF RD. WELL AT NORTH EAST CORNER OF HOUS

OWNER-CONTRACTOR

Name of well owner:
Address: 1155 DUNE MEADOW DR. LOT 11 DUNE MEADOW SUBDIVISIO
Zip code: 46304 Telephone #:

Name of building contractor: NEW CONCEPT HOMES
Address: P.O. BOX 537 CHESTERTON , IN
Zip code: 46304 Telephone #: (219)926-7835

Name of drilling contractor: ECONOMY WELL SERVICE INC
Address: 5110 W. 133 RD AVE CROWN POINT IN
Zip code: 46307 Telephone #: (219)663-9400

Name of equipment operator: JOHN E. GLADE License number: 533

Date completed: 5/02/94

CONSTRUCTION DETAILS

Well use: DOMESTIC Method of drilling: ROTARY Type of pump: SUBMERSIBLE

Casing length: 105 (ft) Material: PVC Diameter: 4 (in)

Screen length: 5 (ft) Material: PVC Diameter: 4 (in) Screen slot size: 10
Total depth of well: 110 Depth of pump setting: 80 Water quality: CLEAR

WELL CAPACITY TEST

Type of test: AIR Test rate: 15 gpm for 1 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 5 (ft) Static water level: 50 (ft)

GROUTING INFORMATION

Grout material: VOLCLAY Depth of grout from: 90 to: 65
Method of installation: PUMP Number of bags used: 1

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 37N Range: 6W ¼ of the ¼ of the ¼ of Section: 26
Topo map: DUNE ACRES
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: DUNE MEADOWS Lot number: 11
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
BLUE CLAY	0	90
CLEAN SAND	90	110

COMMENTS

... NO COMMENTS FOR RECORD: 66433

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*****************************************
*            RECORD OF WATER WELL       *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
*****************************************
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Reference number: 66434

Driving directions to well:
f 65 N. TO 80 - 94 GO EAST 8 MI. TO EXT 22B TO RT. 20 E. 4 MI. TO OAK
.ILL RD. N. 1ST HOUSE ON W. SIDE LOT 2 (DUNE MEADOW SUBDIVISION) HOUSE ON W. S

OWNER-CONTRACTOR

Name of well owner: EDWARD & NANCY JUSTICE
Address: 1005 DUNE MEADOWS DR. PORTER IN
Zip code: 46304 Telephone #:

Name of building contractor: NEW CONCEPT HOMES
Address: P.O. BOX 537 CHESTERTON ,IN
Zip code: 46304 Telephone #: (219)926-7835

Name of drilling contractor: ECONOMY WELL SERVICE INC
Address: 5110 W. 133 RD. AVE CROWN POINT IN
Zip code: 46307 Telephone #: (219)663-9400

Name of equipment operator: JOHN E. GLADE License number: 533

Date completed: 5/02/94

CONSTRUCTION DETAILS

Well use: DOMESTIC Method of drilling: ROTARY Type of pump: SUBMERSIBLE

Casing length: 80 (ft) Material: PVC Diameter: 4 (in)

Screen length: 5 (ft) Material: PVC Diameter: 4 (in) Screen slot size: 10
Total depth of well: 85 Depth of pump setting: 60 Water quality: CLEAR

WELL CAPACITY TEST

Type of test: AIR Test rate: 20 gpm for 1 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 5 (ft) Static water level: 60 (ft)

GROUTING INFORMATION

Grout material: VOLCLAY Depth of grout from: 75 to: 40
Method of installation: PUMP Number of bags used: 1

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 37N Range: 6W ¼ of the ¼ of the ¼ of Section: 26
Topo map: DUNE ACRES
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: DUNE MEADOWS Lot number: 2
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
BLUE CLAY	0	75
CLEAN SAND	75	85

COMMENTS

... NO COMMENTS FOR RECORD: 66434

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*****************************************
*          RECORD OF WATER WELL         *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
*****************************************
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Reference number: 66468

Driving directions to well:
OCK WALL DEWATERING DOCL WALL AREA BURNS HARBOR PLANT DW-1

OWNER-CONTRACTOR

Name of well owner: BETHLEHEM STEEL CORP
Address: P O BOX 248 CHESTERTON, IN
Zip code: 46304 Telephone #:

Name of building contractor:
Address:
Zip code: Telephone #:

Name of drilling contractor: PEERLESS MIDWEST INC
Address: 51255 BITTERSWEET RD-P O BOX 26 GRANGER INC
Zip code: 46530 Telephone #: (219)272-9050

Name of equipment operator: RUSSELL JONES License number: 218

Date completed: 3/17/94

CONSTRUCTION DETAILS

Well use: O Method of drilling: CABLE TOOL Type of pump: NO DATA

Casing length: 24 (ft) Material: STEEL Diameter: 12 (in)

Screen length: 5 (ft) Material: SSWW Diameter: (in) Screen slot size: 025
Total depth of well: 26 Depth of pump setting: Water quality:

WELL CAPACITY TEST

Type of test: PUMPING Test rate: 23 gpm for 8 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 16.4 (ft) Static water level: (ft)

GROUTING INFORMATION
---
rout material: Depth of grout from: to:
Method of installation: Number of bags used:

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 37N Range: 6W NW ¼ of the NE ¼ of the NE ¼ of Section: 30
Topo map: PORTAGE
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by: RS
Subdivision name: Lot number:
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
FILL	0	2
MED SAND SOME GRAVEL	2	21
FINE SAND	21	26
CLAY	26	

COMMENTS:

STOPPED IN FORMATION - 1 1\4 PIEZOMETER INSTALLED

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*****************************************
*            RECORD OF WATER WELL       *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
*****************************************
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Reference number: 67360

Driving directions to well:
IWAY 130 FROM VALPO TO 149 N. GO N. TO 1050 N. GO E. TO 125W. GO NORTH TO
EASON RD. 125 W. 923

OWNER-CONTRACTOR

Name of well owner: RICH DAVIS
Address: 2890 GLENROSE PORTAGE IN
Zip code: 46368 Telephone #: (219)762-3548

Name of building contractor:
Address:
Zip code: Telephone #:

Name of drilling contractor: B&H WELL SERVICE
Address: 436 W. DIVISION RD. VALPARAISO IN
Zip code: 46383 Telephone #: (219)462-4893

Name of equipment operator: HARRY DYE License number: 688771

Date completed: 3/01/94

CONSTRUCTION DETAILS

Well use: DOMESTIC Method of drilling: ROTARY Type of pump: SUBMERSIBLE

Casing length: 40 (ft) Material: PVC Diameter: 4 (in)

Screen length: 5 (ft) Material: PVC Diameter: 3 (in) Screen slot size: 10
Total depth of well: 45 Depth of pump setting: 40 Water quality: CLEAR

WELL CAPACITY TEST

Type of test: PLUNGING Test rate: 12 gpm for hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 0 (ft) Static water level: 15 (ft)

GROUTING INFORMATION

Grout material: BNSL Depth of grout from: to:
Method of installation: GROUT PUMP Number of bags used: 1

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 36N Range: 6W ¼ of the ¼ of the ¼ of Section: 3
Topo map: CHESTERTON
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: Lot number:
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
BR CLAY	0	5
BR SAND	5	30
WATER SAND	30	45

COMMENTS

... NO COMMENTS FOR RECORD: 67360

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*****************************************
*          RECORD OF WATER WELL         *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
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Reference number: 67363

Driving directions to well:
AKE ST. RD. 49 N. TO U.S. 20 TURN W. ON U.S. 20 TO WAVERLY RD. S. ON
AVERLY TO OAK HILL RD. W. ON OAK HILL RD. APP 2 BLOCKS TO HAKANSON N. ON HOKANS

OWNER-CONTRACTOR

Name of well owner: ROBERT CARNEY
Address: 1020 HOKANSON PORTER IN
Zip code: 46304 Telephone #:

Name of building contractor:
Address:
Zip code: Telephone #:

Name of drilling contractor: JOHNSON WELL DRILLING INC
Address: 1303 ROBIN RD VALPARAISO IN
Zip code: 46383 Telephone #: (219)462-5548

Name of equipment operator: MIKE JOHNSON License number: 313

Date completed: 4/25/94

CONSTRUCTION DETAILS

Well use: DOMESTIC Method of drilling: ROTARY Type of pump: SUBMERSIBLE

Casing length: 85 (ft) Material: PVC Diameter: 4 (in)

Screen length: 5 (ft) Material: PVC Diameter: 3 (in) Screen slot size: 10
Total depth of well: 90 Depth of pump setting: Water quality: CLEAR

WELL CAPACITY TEST

Type of test: PUMPING Test rate: 20 gpm for .5 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 7 (ft) Static water level: 50 (ft)

GROUTING INFORMATION

Grout material: VOLCLAY Depth of grout from: 80 to: 55
Method of installation: PUMP Number of bags used: 2

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 37N Range: 6W ¼ of the ¼ of the NE ¼ of Section: 26
Topo map: MICHIGAN CITY WEST
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: Lot number:
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

...See next page for lithologic data...

Well log for record 67363
WELL LOG

FORMATION	TOP	BOTTOM
TOPSOIL	0	1
YEL CLAY	1	10
BLUE CLAY	10	22
LUE CLAY & GRAV	22	24
LUE CLAY	24	40
BR SAND	40	45
BLUE CLAY & BR SAND	45	48
BLUE CLAY	48	65
BR SAND	65	75
GRAY SAND	75	80
BLUE CLAY	80	82
GRAY SAND	82	90

COMMENTS

... NO COMMENTS FOR RECORD: 67363

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*******************************************
*            RECORD OF WATER WELL         *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
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Reference number: 67364

Driving directions to well:
WY 65 TO RT. 80-94 E. 10 MI. TO 22 B E. EXIT TO RT 2 E. 3MI. TO DUNE
EADOW SUB. (OAK HILL RD) 3RD HOME W. SIDE OF OAK HILL RD. WELL AT NORTH EAST CO

OWNER-CONTRACTOR

Name of well owner:
Address: LOT 12 DUNE MEADOW SUB. 1175 DUNE MEADOWS DR PORTE
Zip code: 46304 Telephone #:

Name of building contractor: NEW CONCEPT HOMES
Address: 2452 IDAHO STREET PO BOX 537 CHESTERTON IN
Zip code: 46304 Telephone #: (219)926-7835

Name of drilling contractor: ECONOMY WELL SERVICE INC
Address: 5110 W. 133 RD AVE CROWN POINT IN
Zip code: 46307 Telephone #: (219)663-9400

Name of equipment operator: JOHN E. GLADE License number: 533

Date completed: 3/11/94

CONSTRUCTION DETAILS

Well use: DOMESTIC Method of drilling: ROTARY Type of pump: SUBMERSIBLE

Casing length: 100 (ft) Material: PVC Diameter: 4 (in)

Screen length: 5 (ft) Material: PVC Diameter: 4 (in) Screen slot size: 10
Total depth of well: 105 Depth of pump setting: 80 Water quality: CLEAR

WELL CAPACITY TEST

Type of test: AIR Test rate: 20 gpm for 1 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 10 (ft) Static water level: 40 (ft)

GROUTING INFORMATION

Grout material: VOLCLAY Depth of grout from: 90 to: 55
Method of installation: PUMP Number of bags used: 1

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 37N Range: 6W ¼ of the ¼ of the ¼ of Section: 26
Topo map: MICHIGAN CITY WEST
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: DUNE MEADOWS Lot number: 12
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
BLUE CLAY	0	90
CLEAN SAND	90	105

COMMENTS

... NO COMMENTS FOR RECORD: 67364

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*******************************************
*            RECORD OF WATER WELL         *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
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Reference number: 67365

Driving directions to well:
WY 65 TO 80-94 E. 10 MI. TO 22B E. EXIT TO RT.20 E. 3 MI. TO DUNE MEADOW
JB (OAK HILL RD) N. 2ND HOUSE E. SIDE OF OAK HILL RD WELL AT NORTH EAST COR

OWNER-CONTRACTOR

Name of well owner:
Address: LOT 18 DUNE MEADOW SUBDIVISION 1160 DUNE MEADOWS D
Zip code: 46304 Telephone #:

Name of building contractor: NEW CONCEPT HOMES
Address: 2452 IDAHO STREET P.O. BOX 537 CHESTERTON IN
Zip code: 46304 Telephone #: (219)926-7835

Name of drilling contractor: ECONOMY WELL SERVICE INC
Address: 5110 W. 133 RD AVE CROWN POIINT IN
Zip code: 46307 Telephone #: (219)663-9400

Name of equipment operator: JOHN E. GLADE License number: 533

Date completed: 3/11/94

CONSTRUCTION DETAILS

Well use: DOMESTIC Method of drilling: ROTARY Type of pump: SUBMERSIBLE

Casing length: 100 (ft) Material: PVC Diameter: 4 (in)

Screen length: 5 (ft) Material: PVC Diameter: 4 (in) Screen slot size: 10
Total depth of well: 105 Depth of pump setting: 80 Water quality: CLEAR

WELL CAPACITY TEST

Type of test: AIR Test rate: 20 gpm for 1 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 10 (ft) Static water level: 50 (ft)

GROUTING INFORMATION

Grout material: VOLCLAY Depth of grout from: 90 to: 55
Method of installation: PUMP Number of bags used: 1

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 37N Range: 6W ¼ of the ¼ of the ¼ of Section: 267
Topo map: MICHIGAN CITY WEST
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: DUNE MEADOWS Lot number: 18
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
BLUE CLAY	0	85
HARD GARV	85	90
CLEAN SAND	90	105

COMMENTS

... NO COMMENTS FOR RECORD: 67365

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*******************************************
*            RECORD OF WATER WELL         *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
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Reference number: 67368

Driving directions to well:
AKE ST. RD. 49 BYPASS N. TO U.S. 12. W. ON U.S.12 TO WAGNER RD (50W) S.
N WAGNER ROAD APP 2 BLOCKS TO SIX BOX LANE E. ON SIX OBX LANE HOUSE ON N. SD

OWNER-CONTRACTOR

Name of well owner: JOHN A. ERNST
Address: 400 SIX BOX LANE PORTER IN
Zip code: 46304 Telephone #:

Name of building contractor:
Address:
Zip code: Telephone #:

Name of drilling contractor: JOHNSON WELL DRILLING INC
Address: 1303 ROBIN ROAD VALPARAISO IN
Zip code: 46383 Telephone #: (219)462-5548

Name of equipment operator: MIKE JOHNSON License number: 313

Date completed: 3/07/94

CONSTRUCTION DETAILS

Well use: DOMESTIC Method of drilling: ROTARY Type of pump: SUBMERSIBLE

Casing length: 80 (ft) Material: PVC Diameter: 4 (in)

Screen length: 5 (ft) Material: PVC Diameter: 3 (in) Screen slot size: 10
Total depth of well: 85 Depth of pump setting: Water quality: CLEAR

WELL CAPACITY TEST

Type of test: PUMPING Test rate: 20 gpm for .5 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 12 (ft) Static water level: 40 (ft)

GROUTING INFORMATION

Grout material: VOLCLAY Depth of grout from: 75 to: 45
Method of installation: PUMP Number of bags used: 2

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 37N Range: 6W ¼ of the NE ¼ of the NW ¼ of Section: 26
Topo map: MICHIGAN CITY WEST
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: Lot number:
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
TOPSOIL	0	1
YEL CLAY	1	18
BLUE CLAY	18	35
BLUE CLAY & GARV	35	40
CLUE CLAY	40	71
BLUE CLAY & GRAV	71	73
BLUE CLAY	73	75
GRAV	75	85

COMMENTS

... NO COMMENTS FOR RECORD: 67368

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*****************************************
*            RECORD OF WATER WELL       *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
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Reference number: 255177

Driving directions to well:
580' W OF LOOP RD & 770' N OF BOUNDRY RD WELL #2

OWNER-CONTRACTOR

Name of well owner: BETA STEEL CORP.
Address: 6600 US HWY 12, PORTAGE, IN
Zip code: 46368 Telephone #:

Name of building contractor:
Address:
Zip code: Telephone #:

Name of drilling contractor: PEERLESS-MIDWEST, INC.
Address: 51255 BITTERSWEET RD, PO BOX 26, GRANGER, IN
Zip code: 46530 Telephone #: (219)272-9050

Name of equipment operator: DOUGLAS GENTRY License number: 1182

Date completed: 5/31/95

CONSTRUCTION DETAILS

Well use: INDUSTRY Method of drilling: CABLE TOOL Type of pump: NO DATA

Casing length: 32.5 (ft) Material: STEEL Diameter: 8 (in)

Screen length: 15 (ft) Material: SSWW Diameter: 6 (in) Screen slot size: .012
Total depth of well: 45 Depth of pump setting: Water quality:

WELL CAPACITY TEST

Type of test: PUMPING Test rate: 169 gpm for 1 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 15.5 (ft) Static water level: 12.16 (ft)

GROUTING INFORMATION

Grout material: BENTONITE CLAY Depth of grout from: 0 to: 20
Method of installation: Number of bags used:

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 37N Range: 7W ¼ of the ¼ of the ¼ of Section: 25
Topo map: PORTAGE
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: Lot number:
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
SAND & SLAG FILL	0	5
FN SAND	5	25
FN SAND W/ SOME GRAV	25	45

COMMENTS:

CLAY STOPPED IN FORMATION; NOTE: A 1" PIEZOMETER INSTALLED TO 30'; WATER
EVELS IN PIEZOMETER WITH WELL SEAL, A COPY OF OUR WELL LOG/WELL PRINT IS
TACHED FOR YOUR INFORMATION;

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*****************************************
*          RECORD OF WATER WELL         *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
*****************************************
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Reference number: 265065

Driving directions to well:
DOCK WALL DEWATERING DOCK WALL AREA BURNS HARBOR PLANT DW-3

OWNER-CONTRACTOR

Name of well owner: BETHLEHEM STEEL CORP
Address: P O BOX 248 CHESTERTON IN
Zip code: 46304 Telephone #:

Name of building contractor:
Address:
Zip code: Telephone #:

Name of drilling contractor: PEERLESS MIDWEST INC
Address: 51255 BITTERSWEET RD P O BOX 26 GRANGER INC
Zip code: 46530 Telephone #: (219)272-9050

Name of equipment operator: RUSSELL JONES License number: 218

Date completed: 3/17/94

CONSTRUCTION DETAILS

Well use: O Method of drilling: CABLE TOOL Type of pump: NO DATA

Casing length: 22 (ft) Material: STEEL Diameter: 12 (in)

Screen length: 5 (ft) Material: STEEL Diameter: 12 (in) Screen slot size: 025
Total depth of well: 24 Depth of pump setting: Water quality:

WELL CAPACITY TEST

Type of test: PUMPING Test rate: 80 gpm for 8 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 14.4 (ft) Static water level: (ft)

GROUTING INFORMATION

Grout material: Depth of grout from: to:
Method of installation: Number of bags used:

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 37N Range: 6W NW ¼ of the NE ¼ of the NE ¼ of Section: 30
Topo map: PORTAGE
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: Lot number:
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
ASHPHALT	0	1
SAND	1	15
MED SAND & GRAVEL	15	23
FINE SAND	23	24
CLAY	24	

COMMENTS:

STOPPED IN FORMATION - 1 1\4 PIEZOMETER INSTALLED

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*****************************************
*          RECORD OF WATER WELL         *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
*****************************************
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Reference number: 265070

Driving directions to well:
OCK WALL DEWATERING DOCK WALL AREA BURNS HARBOR PLANT DW-4

OWNER-CONTRACTOR

Name of well owner: BETHLEHEM STEEL CORP
Address: P O BOX 248 CHESTERTON IN
Zip code: 46304 Telephone #:

Name of building contractor:
Address:
Zip code: Telephone #:

Name of drilling contractor: PEERLESS MIDWEST INC
Address: 51255 BITTERSWEET ROAD P O BOX 26 GRANGER INC
Zip code: 46530 Telephone #: (219)272-9050

Name of equipment operator: RUSSELL JONES License number: 218

Date completed: 3/14/94

CONSTRUCTION DETAILS

Well use: O Method of drilling: CABLE TOOL Type of pump: NO DATA

Casing length: 23 (ft) Material: STEEL Diameter: 12 (in)

Screen length: 5 (ft) Material: STEEL Diameter: 12 (in) Screen slot size: .025
Total depth of well: 26 Depth of pump setting: Water quality:

WELL CAPACITY TEST

Type of test: PUMPING Test rate: 78 gpm for 8 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 15.8 (ft) Static water level: 6 (ft)

GROUTING INFORMATION

Grout material: Depth of grout from: to:
Method of installation: Number of bags used:

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 37N Range: 6W NW ¼ of the NE ¼ of the NE ¼ of Section: 30
Topo map: PORTAGE
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: Lot number:
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
FILL	0	1
FINE TO MED SAND	1	12
MED SAND & GRAVEL	12	25.5
CLAY	25.5	26.5

COMMENTS:
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1 1\4 PIEZOMETER INSTALLED

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*******************************************
*            RECORD OF WATER WELL         *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
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Reference number: 265075

Driving directions to well:
OCK WALL DEWATERING - DOC WALL AREA - BURNS HARBOR PLANT DW-5

OWNER-CONTRACTOR

Name of well owner: BETHLEHEM STEEL CORPORATION
Address: P. O. BOX 248, CHESTERTON, IN
Zip code: 46304 Telephone #:

Name of building contractor:
Address:
Zip code: Telephone #:

Name of drilling contractor: PEERLESS-MIDWEST, INC.
Address: 51255 BITTERSWEET ROAD, P.O. BOX 26, GRANGER, IN
Zip code: 46530 Telephone #:

Name of equipment operator: RUSSELL JONES License number: 218

Date completed: 3/15/94

CONSTRUCTION DETAILS

Well use: O Method of drilling: CABLE TOOL Type of pump: NO DATA

Casing length: 22 (ft) Material: STEEL Diameter: 12 (in)

Screen length: 5 (ft) Material: SSWW Diameter: 12 (in) Screen slot size: 0.025
Total depth of well: 25 Depth of pump setting: Water quality:

WELL CAPACITY TEST

Type of test: PUMPING Test rate: 86 gpm for 8 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 11.8 (ft) Static water level: 6.9 (ft)

GROUTING INFORMATION

Grout material: Depth of grout from: to:
Method of installation: Number of bags used:

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 37N Range: 6W NW ¼ of the NE ¼ of the NE ¼ of Section: 30
Topo map: PORTAGE
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: Lot number:
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
SLAG	0	3
MED. FINE SAND	3	10
MED. SAND SOME GRAVEL	10	21
COARSE SAND & GRAVEL	21	24
GREY CLAY	24	

COMMENTS:

STOPPED IN FORMATION - 1 1\4 PIEZOMETER INSTALLED

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*****************************************
*            RECORD OF WATER WELL       *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
*****************************************
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Reference number: 265080

Driving directions to well:
DCK WALL DEWATERING DOCK WALL AREA BURNS HARBOR PLANT

OWNER-CONTRACTOR

Name of well owner: BETHLEHEM STEEL CORP
Address: P O BOX 248, CHESTERTON, IN
Zip code: 46304 Telephone #:

Name of building contractor:
Address:
Zip code: Telephone #:

Name of drilling contractor: PEERLESS-MIDWEST INC
Address: 51255 BITTERSWEET RD.-P O BOX 26, GRANGER, IN
Zip code: 46530 Telephone #: (219)272-9050

Name of equipment operator: RUSSELL JONES License number: 218

Date completed: 3/10/94

CONSTRUCTION DETAILS

Well use: O Method of drilling: CABLE TOOL Type of pump: NO DATA

Casing length: 29 (ft) Material: STEEL Diameter: 12 (in)

Screen length: 5 (ft) Material: SSWW Diameter: 12 (in) Screen slot size: 0.025
Total depth of well: 27 Depth of pump setting: Water quality:

WELL CAPACITY TEST

Type of test: PUMPING Test rate: 36 gpm for 8 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 17.2 (ft) Static water level: 6 (ft)

GROUTING INFORMATION

Grout material: Depth of grout from: to:
Method of installation: Number of bags used:

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 37N Range: 6W NW ¼ of the NE ¼ of the NE ¼ of Section: 30
Topo map: PORTAGE
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: Lot number:
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
TOPSOIL	0	1
MED TO FINE SAND	1	15
FINE TO MED SAND & GRAVEL	15	20
FINE TO MED SAND	20	26
FINE SAND & CLAY	26	

COMMENTS:

STOPPED IN FORMATION - 1 1\4 PIEZOMETER INSTALLED

```
*****************************************
*          RECORD OF WATER WELL         *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
*****************************************
```

Reference number: 265085

Driving directions to well:
OCK WALL DEWATERING DOCK WALL AREA BURNS HARBOR PLANT DW-9

OWNER-CONTRACTOR

Name of well owner: BETHLEHEM STEEL CORP
Address: P O BOX 248, CHESTERTON IN
Zip code: 46304 Telephone #:

Name of building contractor:
Address:
Zip code: Telephone #:

Name of drilling contractor: PEERLESS-MIDWEST INC
Address: 51255 BITTERSWEET RD. - P O BOX 26, GRANGER, IN
Zip code: 46530 Telephone #: (219)272-9050

Name of equipment operator: RUSSELL JONES License number: 218

Date completed: 3/21/94

CONSTRUCTION DETAILS

Well use: O Method of drilling: CABLE TOOL Type of pump: NO DATA

Casing length: 25 (ft) Material: STEEL Diameter: 12 (in)

Screen length: 5 (ft) Material: SSWW Diameter: 12 (in) Screen slot size: 0.025
Total depth of well: 27 Depth of pump setting: Water quality:

WELL CAPACITY TEST

Type of test: no data Test rate: 95 gpm for 8 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 16.1 (ft) Static water level: 6 (ft)

GROUTING INFORMATION

Grout material: Depth of grout from: to:
Method of installation: Number of bags used:

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 37N Range: 6W NW ¼ of the NE ¼ of the NE ¼ of Section: 30
Topo map: PORTAGE
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: Lot number:
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
FILL	0	4
FINE TO MED SAND SOME GRAVEL	4	17
MED TO COARSE SAND & GRAVEL	17	27
CLAY	27	

COMMENTS:
---
1 1\4 PIEZOMETER INSTALLED

```
*****************************************
*          RECORD OF WATER WELL         *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
*****************************************
```

Reference number: 265090

Driving directions to well:
DOCK WALL DEWATERING DOCK WALL AREA BURNS HARBOR PLANT DW-10

OWNER-CONTRACTOR

Name of well owner: BETHLEHEM STEEL CORP
Address: P O BOX 248, CHESTERTON, IN
Zip code: 46304 Telephone #:

Name of building contractor:
Address:
Zip code: Telephone #:

Name of drilling contractor: PEERLESS-MIDWEST INC
Address: 51255 BITTERSWEET RD. - P O BOX 26, GRANGER, INC
Zip code: 46530 Telephone #: (219)272-9050

Name of equipment operator: RUSSELL JONES License number: 218

Date completed: 3/21/94

CONSTRUCTION DETAILS

Well use: O Method of drilling: CABLE TOOL Type of pump: NO DATA

Casing length: 25 (ft) Material: STEEL Diameter: 12 (in)

Screen length: 5 (ft) Material: SSWW Diameter: 12 (in) Screen slot size: 0.025
Total depth of well: 27 Depth of pump setting: Water quality:

WELL CAPACITY TEST

Type of test: PUMPING Test rate: 95 gpm for 8 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 14.7 (ft) Static water level: 6 (ft)

GROUTING INFORMATION

Grout material: Depth of grout from: to:
Method of installation: Number of bags used:

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: Township: 37N Range: 6W NW ¼ of the NE ¼ of the NE ¼ of Section: 30
Topo map: PORTAGE
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: Lot number:
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
SLAG	0	3
COARSE TO MED SAND	3	25
COARSE GRAVEL	25	27
GRAY CLAY	27	

COMMENTS:

STOPPED IN FORMATION - 1 1\4 PIEZOMETER INSTALLED

```
*****************************************
*          RECORD OF WATER WELL         *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
*****************************************
```

Reference number: 265095

Driving directions to well:
OCK WALL DEWATERING DOCK WALL AREA BURNS HARBOR PLANT DW-6

OWNER-CONTRACTOR

Name of well owner: BETHLEHEM STEEL CORP
Address: P O BOX 248, CHESTERTON, IN
Zip code: 46304 Telephone #:

Name of building contractor:
Address:
Zip code: Telephone #:

Name of drilling contractor: PEERLESS-MIDWEST INC
Address: 51255 BITTERSWEET ROAD - P O BOX 26, GRANGER, IN
Zip code: 46530 Telephone #: (219)272-9050

Name of equipment operator: RUSSELL JONES License number: 218

Date completed: 3/17/94

CONSTRUCTION DETAILS

Well use: O Method of drilling: CABLE TOOL Type of pump: NO DATA

Casing length: 24 (ft) Material: STEEL Diameter: 12 (in)

Screen length: 5 (ft) Material: SSWW Diameter: 12 (in) Screen slot size: 0.025
Total depth of well: Depth of pump setting: Water quality:

WELL CAPACITY TEST

Type of test: PUMPING Test rate: 79 gpm for 8 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 15.3 (ft) Static water level: 5 (ft)

GROUTING INFORMATION

Grout material: Depth of grout from: to:
Method of installation: Number of bags used:

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 37N Range: 6W NW ¼ of the NE ¼ of the NE ¼ of Section: 30
Topo map: PORTAGE
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: Lot number:
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
SLAG	0	3
FINE SAND	3	9
COARSE GRAVEL & FINE SAND	9	16
FINE & MED SAND SOME GRAVEL	16	24
MED SAND & GRAVEL	24	27
CLAY	27	28

COMMENTS:
---
1 1\4 PIEZOMETER INSTALLED

```
*****************************************
*          RECORD OF WATER WELL         *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
*****************************************
```

Reference number: 265100

Driving directions to well:
DOCK WALL DEWATERING DOCK WALL AREA BURNS HARBOR PLANT DW-7

OWNER-CONTRACTOR

Name of well owner: BETHLEHEM STEEL CORP
Address: P O BOX 248, CHESTERTON, IN
Zip code: 46304 Telephone #:

Name of building contractor:
Address:
Zip code: Telephone #:

Name of drilling contractor: PEERLESS-MIDWEST INC
Address: 51255 BITTERSWEET ROAD - P O BOX 26, GRANGER, IN
Zip code: 46530 Telephone #: (219)272-9050

Name of equipment operator: RUSSELL JONES License number: 218

Date completed: 3/19/94

CONSTRUCTION DETAILS

Well use: O Method of drilling: CABLE TOOL Type of pump: NO DATA

Casing length: 24 (ft) Material: STEEL Diameter: 12 (in)

Screen length: 5 (ft) Material: SSWW Diameter: 12 (in) Screen slot size: 0.025
Total depth of well: 26 Depth of pump setting: Water quality:

WELL CAPACITY TEST

Type of test: no data Test rate: 83 gpm for 8 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 16.3 (ft) Static water level: 6 (ft)

GROUTING INFORMATION

Grout material: Depth of grout from: to:
Method of installation: Number of bags used:

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 37N Range: 6W NW ¼ of the NE ¼ of the NE ¼ of Section: 30
Topo map: PORTAGE
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: Lot number:
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
SLAG	1	3
MED FINE SAND	3	22
COARSE SAND & GRAVEL	22	26
GRAY CLAY	26	

COMMENTS:

STOPPED IN FORMATION - 1 1\4 PIEZOMETER INSTALLED

```
*****************************************
*            RECORD OF WATER WELL       *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
*****************************************
```

Reference number: 265105

Driving directions to well:
CK WALL DEWATERING DOCK WALL AREA BURNS HARBOR PLANT DW-8

OWNER-CONTRACTOR

Name of well owner: BETHLEHEM STEEL CORP
Address: P O BOX 248, CHESTERTON, IN
Zip code: 46304 Telephone #:

Name of building contractor:
Address:
Zip code: Telephone #:

Name of drilling contractor: PEERLESS-MIDWEST INC
Address: 51255 BITTERSWEET ROAD - P O BOX 26, GRANGER, IN
Zip code: 46530 Telephone #: (219)272-9050

Name of equipment operator: RUSSELL JONES License number: 218

Date completed: 3/17/94

CONSTRUCTION DETAILS

Well use: O Method of drilling: CABLE TOOL Type of pump: NO DATA

Casing length: 25 (ft) Material: STEEL Diameter: 12 (in)

Screen length: 5 (ft) Material: SSWW Diameter: 12 (in) Screen slot size: 0.025
Total depth of well: 27 Depth of pump setting: Water quality:

WELL CAPACITY TEST

Type of test: PUMPING Test rate: 71 gpm for 8 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 16.8 (ft) Static water level: 6 (ft)

GROUTING INFORMATION
---
out material: Depth of grout from: to:
Method of installation: Number of bags used:

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 37N Range: 6W NW ¼ of the NE ¼ of the NE ¼ of Section: 30
Topo map: PORTAGE
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: Lot number:
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
SLAG	0	3
MED FINE SAND	3	25
COARSE SAND & GRAVEL	25	27
GRAY CLAY	27	

COMMENTS:

STOPPED IN FORMATION - 1 1\4 PIEZOMETER INSTALLED

```
*****************************************
*          RECORD OF WATER WELL         *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
*****************************************
```

Reference number: 269275

Driving directions to well:
KE SR 249 OFF I 94 N APPROX .5 MILE TO SYMPHONY ANEON THE E SIDE OF THE
J TURN E GO TO 1ST ST N GO TO 1448 BURNS DR

OWNER-CONTRACTOR

Name of well owner: EARL WILLIAMS
Address: 1448 BURNS DR PORTAGE, IND
Zip code: 46368 Telephone #:

Name of building contractor:
Address:
Zip code: Telephone #:

Name of drilling contractor: JOHNSON WELL DRILLING
Address: 1303 ROBIN RD VALPARAISO, IND
Zip code: 46383 Telephone #: (219)462-5548

Name of equipment operator: MIKE JOHNSON License number: 313

Date completed: 12/21/95

CONSTRUCTION DETAILS

Well use: DOMESTIC Method of drilling: ROTARY Type of pump: SUBMERSIBLE

Casing length: 40 (ft) Material: PVC Diameter: 4 (in)

Screen length: 5 (ft) Material: PVC Diameter: 4 (in) Screen slot size: 10
Total depth of well: 45 Depth of pump setting: 35 Water quality: CLEAR

WELL CAPACITY TEST

Type of test: AIR Test rate: 20 gpm for .5 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 6 (ft) Static water level: 16 (ft)

GROUTING INFORMATION

Grout material: VOLCLAY Depth of grout from: 37 to: 0
Method of installation: PUMPED Number of bags used: 3

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 37N Range: 7W ¼ of the ¼ of the SE ¼ of Section: 36
Topo map: PORTAGE
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: SWANSON DUNES Lot number:
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
TOPSOIL	0	2
TAN SAND	2	22
GRAY SAND	22	45

COMMENTS:

SEE MAP

```
*****************************************
*          RECORD OF WATER WELL         *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
*****************************************
```

Reference number: 269303

Driving directions to well:
WY 20 TO WAGNER RD TURN N GO ON W SIDE

OWNER-CONTRACTOR

Name of well owner:
Address:
Zip code: Telephone #:

Name of building contractor: EMBREE HOMES
Address: 1050 BROADWAY CHESTERTON, IND
Zip code: 46304 Telephone #: (000)926-7131

Name of drilling contractor: RIPPE WELL SERVICE
Address: 261N 475W VALPO, IND
Zip code: 46383 Telephone #: (000)759-2906

Name of equipment operator: RICHARD RIPPE License number: 88

Date completed: 10/04/95

CONSTRUCTION DETAILS

Well use: DOMESTIC Method of drilling: ROTARY Type of pump: SUBMERSIBLE

Casing length: 100 (ft) Material: PVC Diameter: 4 (in)

Screen length: 5 (ft) Material: PVC Diameter: 4 (in) Screen slot size: .008
Total depth of well: 105 Depth of pump setting: 100 Water quality: CLEAR

WELL CAPACITY TEST

Type of test: PUMPING Test rate: 12 gpm for 1 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: (ft) Static water level: 70 (ft)

GROUTING INFORMATION
---
rout material: BENSEAL Depth of grout from: 100 to: 0
Method of installation: PUMP Number of bags used: 4

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 37N Range: 6W ¼ of the ¼ of the NW ¼ of Section: 26
Topo map: DUNE ACRES
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: Lot number:
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
BRN CLAY	0	20
GRAY CLAY	20	75
GRAY S &G	75	105

COMMENTS

... NO COMMENTS FOR RECORD: 269303

```
*****************************************
*          RECORD OF WATER WELL         *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
*****************************************
```

Reference number: 269304

Driving directions to well:
S 12 E OF ST RD 149 APP 2.5 MILES TO WAGNERS RD TURN S GO APP .5 MI
BUILDING ON THE W SIDE OF THE RD

OWNER-CONTRACTOR

Name of well owner: PORTER VETERANS OF FOREIGN WA
Address: 1290 WAGNER RD PORTER IN
Zip code: 46304 Telephone #:

Name of building contractor:
Address:
Zip code: Telephone #:

Name of drilling contractor: JOHNSON WELL DRILLING, INC
Address: 1303 ROBIN RD VALPARAISO, IN
Zip code: 46383 Telephone #: (219)462-5548

Name of equipment operator: MIKE JOHNSON License number: 313

Date completed: 11/15/95

CONSTRUCTION DETAILS

Well use: PUBLIC SUPPLY Method of drilling: ROTARY Type of pump: SUBMERSIBLE

Casing length: 105 (ft) Material: PVC Diameter: 4 (in)

Screen length: 5 (ft) Material: PVC Diameter: 3 (in) Screen slot size: 10
Total depth of well: 110 Depth of pump setting: 85 Water quality: CLEAR

WELL CAPACITY TEST

Type of test: AIR Test rate: 20 gpm for .5 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 3 (ft) Static water level: 75 (ft)

GROUTING INFORMATION

Grout material: VOLCLAY Depth of grout from: 105 to: 0
Method of installation: PUMPED Number of bags used: 6

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 37N Range: 6W ¼ of the ¼ of the NW ¼ of Section: 26
Topo map: DUNE ACRES
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: Lot number:
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
LIMESTONE	0	3
BRN CLAY	3	32
BL CLAY	32	77
GRAY SAND	77	110

COMMENTS:

SEE MAP

```
*****************************************
*          RECORD OF WATER WELL         *
* INDIANA DEPARTMENT OF NATURAL RESOURCES *
*****************************************
```

Reference number: 269306

Driving directions to well:
ROM INTERSTATE 94 TAKE RT 49 S FROM INTERSTATE 80 AND 90 TAKE RT 49 N GO
ON CO RD 1100N FOR ABOUT 2.5 MILES

OWNER-CONTRACTOR

Name of well owner: LEGENDS OF IND GOLF COURSE
Address: PO BOX 39 FRANKLIN, IND
Zip code: 46161 Telephone #: (317)736-8186

Name of building contractor:
Address:
Zip code: Telephone #:

Name of drilling contractor: K & S TESTING & ENGINEERING
Address: 9715 KENNEDY AVE HIGHLAND, IND
Zip code: 46322 Telephone #: (219)942-5231

Name of equipment operator: MANUEL ROSARIO License number: 1154

Date completed: 2/09/96

CONSTRUCTION DETAILS

Well use: TEST Method of drilling: O Type of pump: SUBMERSIBLE

Casing length: 10 (ft) Material: PVC Diameter: 2 (in)

Screen length: 50 (ft) Material: PVC Diameter: 2 (in) Screen slot size: .01
Total depth of well: 57.5 Depth of pump setting: 57 Water quality: CLEAR

WELL CAPACITY TEST

Type of test: PUMPING Test rate: 4.5 gpm for 3 hrs
Bail test.. Test rate: gpm for hrs
Drawdown: 1.35 (ft) Static water level: 8.74 (ft)

GROUTING INFORMATION

Grout material: BENTONITE Depth of grout from: 2 to: 6.5
Method of installation: Number of bags used: 2.5

WELL ABANDONMENT

Sealing material: Depth filled from: to:
Method of installation: Number of bags used:

ADMINISTRATIVE INFORMATION

County: PORTER Township: 36N Range: 6W ¼ of the SW ¼ of the SE ¼ of Section: 3
Topo map: CHESTERTON
Field located by: on: Courthouse location by: on:
Location accepted w/o verification by:
Subdivision name: Lot number:
Ft W of EL: Ft N of SL: Ft E of WL: Ft S of NL:
Ground elevation: Depth to bedrock: Bedrock elevation: Aquifer elevation:
UTM - EASTING: UTM - NORTHING:

WELL LOG

FORMATION	TOP	BOTTOM
BRN TOPSOIL	0	4
BRN SAND	4	4.5
BRN CLAY	4.5	8
SILT	8	12
BRN SAND	12	17
GRAY SAND	17	58

COMMENTS:

SEE MAP

APPENDIX A-3

APPENDIX A-4

Wells in area-of-review archived prior to 1994

Resorted to digital data files, since most paper files were in such poor shape.

REFN 38796

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 28

QUAR1: SE QUAR2: NW QUAR3: NE

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 98

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: O USEOTHER: DEWATERING

Lithology:

REFNO: 38796

TOP	BOTTOM	FORMATION
0	18	BEACH SAND
18	23	MARL
23	41	COARSE SAND S
41	76	FINE CLEAN SAN
76	90	SAND & SILT
90	98	CLEAN FINE SAN
98		CLAY

REFN 38797

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 29

QUAR1: NE **QUAR2:** SW **QUAR3:** NE

TOPO: OGDEN DUNES **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 82

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: **WELLUSE:** O **USEOTHER:** DEWATERING

Lithology:

REFNO: 38797

TOP	BOTTOM	FORMATION
0	22	MED & FINE SAND
22	29	SILT & MARL
29	39	MED SAND
39	57	SAND & SMALL G
57	82	FINE SAND
82		CLAY

REFN 38801

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 28

QUAR1: SE QUAR2: NW QUAR3: NE

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 98

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: O USEOTHER: DEWATERING

Lithology:

REFNO: 38801

TOP	BOTTOM	FORMATION
0	17	BROWN SAND ME
17	21	MARL
21	46	MED SAND LITTL
46	71	FINE SAND
71	91	DIRTY SAND
91	98	FINE SAND

REFN 38802

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 29

QUAR1: NE QUAR2: SW QUAR3: NE

TOPO: OGDEN DUNES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 79

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: O USEOTHER: DEWATERING

Lithology:

REFNO: 38802

TOP	BOTTOM	FORMATION
0	23	MED & FINE SAND
23	28	SILT & MARL
28	37	MED SAND
37	64	SAND & SMALL G
64	79	FINE SAND
79		CLAY

REFN 38806

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 28

QUAR1: SE **QUAR2:** NW **QUAR3:** NE

TOPO: DUNE ACRES **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 81

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: **WELLUSE:** **USEOTHER:**

Lithology:

REFNO: 38806

TOP	BOTTOM	FORMATION
0	21	BEACH SAND
21	26	MARL
26	43	MED SAND CLEA
43	81	FINE SAND CLEA
81		SILTY SAND

REFN 38812

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 23

QUAR1: QUAR2: QUAR3:

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 86'

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: USEOTHER:

Lithology:

REFNO: 38812

TOP	BOTTOM	FORMATION
0	11	BEACH SAND
11	16	MARL
16	32	MUDDY SAND
32	61	CLEAN MEDIUM S
61	86	SANDY CLAY

REFN 38817

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 23

QUAR1: **QUAR2:** **QUAR3:**

TOPO: DUNE ACRES **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 41

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: **WELLUSE:** O **USEOTHER:** DEWATERING

Lithology:

REFNO: 38817

TOP	BOTTOM	FORMATION
0	35	BEACH SAND
35	39	MEDIUM SAND &
39	41	FINE SAND
41		CLAY & SILT

REFN 38822

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 23

QUAR1: QUAR2: QUAR3:

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 77

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: O USEOTHER: DEWATERING

Lithology:

REFNO: 38822

TOP	BOTTOM	FORMATION
0	22	SAND, MEDIUM T
22	25	SILT
25	39	SAND, FINE
39	60	SAND, MEDIUM T
60	77	SAND, VERY FINE
77		CLAY

REFN 38827

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 23

QUAR1: QUAR2: QUAR3:

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH:

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: O USEOTHER: DEWATERING

Lithology:

REFNO: 38827

TOP	BOTTOM	FORMATION
0	32	BEACH SAND
32	43	SAND & GRAVEL
43	48	SAND, MEDIUM
48	49	SAND & GRAVEL
49		CLAY

REFN 38832

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 23

QUAR1: **QUAR2:** **QUAR3:**

TOPO: DUNE ACRES **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 72

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: **WELLUSE:** **USEOTHER:**

Lithology:

REFN 38837

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 23

QUAR1: QUAR2: QUAR3:

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 83

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: T USEOTHER:

Lithology:

REFNO: 38837

TOP	BOTTOM	FORMATION
0	23	MEDIUM SAND
23	35	SILT & MUCK
35	39	FINE SAND
39	44	MED SAND SOME
44	61	MEDIUM SAND
61	78	FINE SAND
78	83	CLAY & FINE SAN

REFN 38842

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 23

QUAR1: QUAR2: QUAR3:

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 80

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: T USEOTHER:

Lithology:

REFNO: 38842

TOP	BOTTOM	FORMATION
0	25	SAND
25	26	CLAY
26	44	FINE SAND
44	75	MEDIUM SAND
75	78	SAND, GRAVEL &
78	80	CLAY

REFN 38847

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 23

QUAR1: QUAR2: QUAR3:

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 72

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: USEOTHER:

Lithology:

REFN 38851

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 29

QUAR1: NE **QUAR2:** SE **QUAR3:** NE

TOPO: OGDEN DUNES **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 93

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: **WELLUSE:** **USEOTHER:**

Lithology:

REFNO: 38851

TOP	BOTTOM	FORMATION
0	20	BEACH SAND
20	27	MUCK
27	55	SAND MED
55	93	FINE SAND
93		SITLY SAND

REFN 38861

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 28

QUAR1: NW QUAR2: SW QUAR3: NW

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 90

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: USEOTHER:

Lithology:

REFNO: 38861

TOP	BOTTOM	FORMATION
0	22	BEACH SAND
22	27	MUCK
27	90	MED SAND
90		SANDY CLAY

REFN 38866

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 32

QUAR1: SE QUAR2: NW QUAR3: NW

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 57

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: O USEOTHER: DEWATERING

Lithology:

REFNO: 38866

TOP	BOTTOM	FORMATION
0	1	TOP SOIL
1	10	YELLOW SAND
10	42	YELLOW SAND &
42	55	MED GRAY SAND
55	57	COARSE GRAVEL
57		CLAY

REFN 38871

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 32

QUAR1: SE QUAR2: NE QUAR3: NW

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 45

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: O USEOTHER: DEWATERING

Lithology:

REFNO: 38871

TOP	BOTTOM	FORMATION
0	1	TOP SOIL
1	10	YELLOW SAND
10	30	YELLOW SAND &
30	35	GRAY SAND & GR
35	45	FINE GRAY SAND
45		CLAY

REFN 38876

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 32

QUAR1: SE **QUAR2:** NE **QUAR3:** NW

TOPO: PORTAGE **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 39.5

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: **WELLUSE:** O **USEOTHER:** DEWATERING

Lithology:

REFNO: 38876

TOP	BOTTOM	FORMATION
0	1	TOP SOIL
1	16	YELLOW SAND
16	29	YELLOW SAND &
29	39	GRAY SAND & GR
39		CLAY

REFN 38881

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 32

QUAR1: NE QUAR2: NE QUAR3: NW

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 48

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: O USEOTHER: DEWATERING

Lithology:

REFNO: 38881

TOP	BOTTOM	FORMATION
0	1	TOP SOIL
1	20	YELLOW SAND W
20	30	MED GRAY SAND
30	34	YELLOW SAND &
34	48	MED GRAY SAND
48		CLAY & FINE SAN

REFN 38886

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 32

QUAR1: NE QUAR2: NE QUAR3: NW

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 49

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: O USEOTHER: DEWATERING

Lithology:

REFNO: 38886

TOP	BOTTOM	FORMATION
0	1	TOP SOIL
1	16	YELLOW SAND
16	37	MED FINE SAND &
37	47	MED FINE SAND
47	49	MED FINE SAND &
49		CLAY

REFN 38891

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 32

QUAR1: NE QUAR2: NE QUAR3: NW

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 38

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: O USEOTHER: DEWATERING

Lithology:

REFNO: 38891

TOP	BOTTOM	FORMATION
0	1	TOP SOIL
1	19	YELLOW SAND
19	29	MED GRAY SAND
29	38	MED GRAY SAND
38		CLAY

REFN 38896

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 29

QUAR1: QUAR2: QUAR3:

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 62

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: O WELLUSE: USEOTHER: TEST BORING

Lithology:

REFNO: 38896

TOP	BOTTOM	FORMATION
0	33	BROWN SAND &
33	58	GRAY SAND
58	60	GRAY SAND & SO
60	62	GRAY CLAY & GR
62		GRAY CLAY

REFN 38901

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 32

QUAR1: SE QUAR2: NE QUAR3: NW

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 51

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: O WELLUSE: USEOTHER: TEST BORING

Lithology:

REFNO: 38901

TOP	BOTTOM	FORMATION
0	35.5	BROWN SAND &
33.5	39	GRAY SAND & SO
39	51	VERY FINE GRAY
51		GRAY CLAY

REFN 38906

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 29

QUAR1: SE QUAR2: NW QUAR3: NE

TOPO: OGDEN DUNES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 86

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: USEOTHER:

Lithology:

REFN 38911

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 28

QUAR1: SW **QUAR2:** NE **QUAR3:** NE

TOPO: DUNE ACRES **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 94

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: **WELLUSE:** O **USEOTHER:** DEWATERING

Lithology:

REFNO: 38911

TOP	BOTTOM	FORMATION
0	16	BEACH SAND
16	23	MARL
23	45	COARSE SAND
45	75	FINE SAND
75	77	SILTY SAND
77	81	SAND & CLAY
81	85	SOLID CLAY
85	94	CLEAN FINE SAN
94		CLAY

REFN 39163

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 29

QUAR1: SE **QUAR2:** NW **QUAR3:** NE

TOPO: OGDEN DUNES **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 92

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: **WELLUSE:** **USEOTHER:**

Lithology:

REFN 39164

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 29

QUAR1: NE **QUAR2:** SW **QUAR3:** SW

TOPO: OGDEN DUNES **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:**

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: **WELLUSE:** O **USEOTHER:** DEWATERING

Lithology:

REFNO: 39164

TOP	BOTTOM	FORMATION
0	15	BEACH SAND
15	23	FINE SAND
23	28	CLAY
28	30	MED SAND
30	36	SILTY SAND
36	50	MED SAND
50	86	SITLY SAND
86	93	MED SAND
93		CLAY

REFN 39168

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 29

QUAR1: SE **QUAR2:** NE **QUAR3:** NE

TOPO: OGDEN DUNES **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 97

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: **WELLUSE:** **USEOTHER:**

Lithology:

REFNO: 39168

TOP	BOTTOM	FORMATION
0	18	FINE LAKE SAND
18	30	MED SAND
30	39	MUCKEY CLAY
39	50	MED SAND GRAY
50	60	COARSE SAND W
60	96	MED SAND
96		BLUE CLAY

REFN 39183

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 30

QUAR1: NE **QUAR2:** NE **QUAR3:** NE

TOPO: OGDEN DUNES **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 46

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: **WELLUSE:** **USEOTHER:**

Lithology:

REFNO: 39183

TOP	BOTTOM	FORMATION
0	11	FILL SAND
11	27	BROWN SAND &
27	41	GRAY CLAY
41	46	GRAY SAND SOM
46	55	GRAY CLAY

REFN 39188

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 30

QUAR1: NE **QUAR2:** NE **QUAR3:** NE

TOPO: OGDEN DUNES **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 30

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: **WELLUSE:** **USEOTHER:**

Lithology:

REFNO: 39188

TOP	BOTTOM	FORMATION
0	8	FILL SAND
8	27	SAND GRAVEL
27	47	GRAY CLAY & BO
47	48	SILTY SAND
48	60	GRAY CLAY

REFN 39193

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 32

QUAR1: NE QUAR2: NE QUAR3: NW

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 90

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: USEOTHER:

Lithology:

REFNO: 39193

TOP	BOTTOM	FORMATION
0	32	SAND W/STRIPS
32	41	SAND
41	46	SILT
46	53	SAND
53	57	SILT
57	90	SAND

REFN 39203

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 29

QUAR1: SW **QUAR2:** NE **QUAR3:** NW

TOPO: OGDEN DUNES **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 83

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: **WELLUSE:** **USEOTHER:**

Lithology:

REFNO: 39203

TOP	BOTTOM	FORMATION
0	17	MED BEACH SAN
17	24	COARSE GRAVEL
24	64	DENSE SAND W/T
64	83	GRAY CLAY

REFN 39208

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 28

QUAR1: NW QUAR2: NE QUAR3: NW

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 59

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: USEOTHER:

Lithology:

REFNO: 39208

TOP	BOTTOM	FORMATION
0	19	SAND
19	28	SAND & GRAVEL
28	33	SAND & GRAVEL
33	34	FINE SAND
34	39	SAND W/LITTLE G
39	45	FINE SAND
45	45.5	CLAY
45.5	46.5	FINE SAND
46.5	47	CLAY
47	48	FINE SAND
48	54	CLAY
54	58	SAND W/CLAY MI
58	68	CLAY W/SOME SA
68	70	CLAY W/SOME SA

REFN 39213

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 29

QUAR1: SW QUAR2: NE QUAR3: SW

TOPO: OGDEN DUNES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 87

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: USEOTHER:

Lithology:

REFNO: 39213

TOP	BOTTOM	FORMATION
0	25	BEACH SAND
25	29	GRAY SANDY CLA
29	61	BROWN SAND ME
61	70	FINE SAND
70	87	MED SAND SOME

REFN 39218

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 28

QUAR1: SW QUAR2: NE QUAR3: NW

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 75

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: USEOTHER:

Lithology:

REFNO: 39218

TOP	BOTTOM	FORMATION
0	22	BROWN SAND F
22	25	SILTY CLAY
25	47	BROWN SAND ME
47	50	GRAY GRAVEL &
50	75	BROWN SAND FI

REFN 39223

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 28

QUAR1: SE **QUAR2:** NE **QUAR3:** NW

TOPO: DUNE ACRES **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 77

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: **WELLUSE:** **USEOTHER:**

Lithology:

REFNO: 39223

TOP	BOTTOM	FORMATION
0	30	BEACH SAND
30	40	COARSE SAND
40	77	FINE SAND

REFN 39228

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 29

QUAR1: NE **QUAR2:** NW **QUAR3:** NW

TOPO: OGDEN DUNES **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 61

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: **WELLUSE:** **USEOTHER:**

Lithology:

REFNO: 39228

TOP	BOTTOM	FORMATION
0	48	MED SAND TRAC
48	50	GRAY CLAY
50	52	MED SAND
52	61	HARD GRAY CLA

REFN 39233

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 29

QUAR1: NW QUAR2: NW QUAR3: NE

TOPO: OGDEN DUNES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 70

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: USEOTHER:

Lithology:

REFNO: 39233

TOP	BOTTOM	FORMATION
0	48	SAND SOME GRA
48	52	GRAY SILTY CLAY
52	69	FINE SAND
69	70	CLAY

REFN 39238

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 29

QUAR1: NE QUAR2: NE QUAR3: NW

TOPO: OGDEN DUNES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 92

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: USEOTHER:

Lithology:

REFNO: 39238

TOP	BOTTOM	FORMATION
0	23	SAND TRACE OF
23	26	SILTY CLAY
26	92	SAND
92		CLAY

REFN 39243

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 29

QUAR1: NW QUAR2: NW QUAR3: NE

TOPO: OGDEN DUNES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 93

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: USEOTHER:

Lithology:

REFNO: 39243

TOP	BOTTOM	FORMATION
0	23	SAND TRACE OF
23	26	SILTY CLAY
26	93	SAND
93		CLAY

REFN 39248

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 29

QUAR1: SE **QUAR2:** NE **QUAR3:** NW

TOPO: OGDEN DUNES **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 91

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: **WELLUSE:** **USEOTHER:**

Lithology:

REFNO: 39248

TOP	BOTTOM	FORMATION
0	22	SAND TRACE OF
22	24	SILTY CLAY
24	91	SAND
91		CLAY

REFN 39253

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 28

QUAR1: SW QUAR2: NE QUAR3: NW

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 104.5

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: USEOTHER:

Lithology:

REFNO: 39253

TOP	BOTTOM	FORMATION
0	28	BROWN FINE SA
28	29	FILL SAND
29	48	BROWN FINE SA
48	52	BROWN COARSE
52	60	BRN CLEAN FINE
60	95	BROWN FINE SA
95	99	BROWN FINE SN
99	100	GRAY VERY F SN
100	106	GRAY F SAND CL
106		GRAY F SAND CL

REFN 39258

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 28

QUAR1: SE QUAR2: NE QUAR3: NW

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 101

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: USEOTHER:

Lithology:

REFNO: 39258

TOP	BOTTOM	FORMATION
0	25	LAKE SAND
25	26	MUCK
26	30	MED SAND & GRA
30	46	MED SAND
46	74	FINE SAND
74	76	MED SAND
76	84	FINE SAND
84	91	SILTY SAND
91	102	COARSE SAND
102		CLAY

REFN 39263

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 33

QUAR1: NE QUAR2: SE QUAR3: NW

TOPO: CHESTERTON SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 80

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: R USEOTHER:

Lithology:

REFNO: 39263

TOP	BOTTOM	FORMATION
0	55	SANDY CLAY
55	58	COARSE SAND
58	78	COARSE SAND &
78	79	COARSE SAND S
79	82	COARSE SAND &
82		CLAY

REFN 39268

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 29

QUAR1: NW **QUAR2:** SW **QUAR3:** SW

TOPO: PORTAGE **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:**

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: **WELLUSE:** O **USEOTHER:** DEWATERING

Lithology:

REFNO: 39268

TOP	BOTTOM	FORMATION
0	15	BEACH SAND
15	23	SILTY SAND
23	26	CLAY
26	80	MED SAND
80	96	COARSE SAND
96		CLAY

REFN 40457

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 21

QUAR1: QUAR2: SW QUAR3: NW

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: 602 FEETWE: 786

UTMX: UTMY:

GRNDELEV: DEPTH: 50

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: USEOTHER:

Lithology:

REFNO: 40457

TOP	BOTTOM	FORMATION
0	5	BEACH SAND
5	15	BROWN MUDDY
15	23	LIGHT BROWN S
23	34	SAND & GRAVEL
34	41	GRAVEL & SAND
41	46	GRAVEL & FINE S
46	49	FINE SAND & LITT
49	50	GRAY SOFT CLAY

REFN 40458

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 23

QUAR1: QUAR2: QUAR3:

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 86

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40458

TOP	BOTTOM	FORMATION
0	70	BROWN SAND
70	90	WHITE SAND

REFN 40459

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 23

QUAR1: QUAR2: QUAR3:

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 86

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40459

TOP	BOTTOM	FORMATION
0	70	BROWN SAND
70	90	WHITE SAND

REFN 40460

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 23

QUAR1: QUAR2: QUAR3:

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 71

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40460

TOP	BOTTOM	FORMATION
0	40	HARD YELLOW C
40	60	BLUE CLAY
60	71	DARK COARSE S

REFN 40462

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 21

QUAR1: QUAR2: SW QUAR3: NW

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 55

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: USEOTHER:

Lithology:

REFNO: 40462

TOP	BOTTOM	FORMATION
0	28	FINE BROWN SA
28	38	SAND LITTLE GR
38	44	GRAVEL & SAND
44	50	FINE GRAY SAND
50	55	GRAY CLAY

REFN 40463

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 23

QUAR1: QUAR2: QUAR3: SE

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 60

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40463

TOP	BOTTOM	FORMATION
0	25	YELLOW SAND
25	45	BLUE CLAY
45	53	MUDDY SAND
53	60	CLEAN COARSE

REFN 40464

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 23

QUAR1: QUAR2: QUAR3: SE

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 75

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40464

TOP	BOTTOM	FORMATION
0	14	SAND
15	70	CLAY
71	77	WATER SAND W

REFN 40465

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 23

QUAR1: QUAR2: QUAR3: SE

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 90

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40465

TOP	BOTTOM	FORMATION
0	60	YELLOW CLAY S
60	80	BLUE CLAY
80	84	SAND SOME MUD
84	90	CLEAN GRAY CO

REFN 40467

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 21

QUAR1: QUAR2: SW QUAR3: NW

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 38

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: USEOTHER:

Lithology:

REFNO: 40467

TOP	BOTTOM	FORMATION
0	4	BEACH SAND
4	15	FINE MUDDY SAN
15	18	FINE SAND CLAY
18	28	CLEAN MED SAN
28	34	SAND LITTLE GR
34	36	BLUE CLAY
36	38	SILTY SAND
38		STOPPED IN SILT

REFN 40468

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 23

QUAR1: QUAR2: QUAR3: SE

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 70

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40468

TOP	BOTTOM	FORMATION
0	60	BLUE CLAY
60	72	WHITE SAND & G

REFN 40472

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 21

QUAR1: **QUAR2:** SW **QUAR3:** NW

TOPO: DUNE ACRES **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 56

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: **WELLUSE:** **USEOTHER:**

Lithology:

REFNO: 40472

TOP	BOTTOM	FORMATION
0	3	BEACH SAND
3	32	CLEAN MED SAN
32	35	SAND & GRAVEL
35	41	GRAVEL & SAND
41	48	SAND & GRAVEL
48	53	GRAVEL SAND S
53	56	BLUE CLAY
56		STOPPED IN CLA

REFN 40479

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 30

QUAR1: QUAR2: QUAR3:

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 48

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40479

TOP	BOTTOM	FORMATION
0	20	BROWN SAND
20	25	CLAY
25	48	WATER SAND

REFN 40483

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 14

QUAR1: QUAR2: QUAR3:

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 26

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: USEOTHER:

Lithology:

REFNO: 40483

TOP	BOTTOM	FORMATION
0	15	DRY BEACH SAN
15	26	WATER SAND ME
26		CLAY

REFN 40485

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 33

QUAR1: NE **QUAR2:** NE **QUAR3:** SW

TOPO: CHESTERTON **SUBDIV:** HAGLAND **LOTNO:**

FEETNS: **FEETSN:** 1150 **FEETEW:** **FEETWE:** 2750

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 37

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** H **USEOTHER:**

Lithology:

REFNO: 40485

TOP	BOTTOM	FORMATION
0	28	YELLOW CLAY
28	37	SAND & GRAVEL

REFN 40487

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 22

QUAR1: **QUAR2:** **QUAR3:**

TOPO: DUNE ACRES **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 63

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** H **USEOTHER:**

Lithology:

REFNO: 40487

TOP	BOTTOM	FORMATION
0	56	RED SAND
56	63	GRAY SAND

REFN 40489

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 31

QUAR1: NW QUAR2: NW QUAR3: NW

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: 325 FEETEW: 300 FEETWE:

UTMX: UTMY:

GRNDELEV: 605 DEPTH: 35

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: USEOTHER:

Lithology:

REFNO: 40489

TOP	BOTTOM	FORMATION
0	30	BROWN SAND
30	35	GRAY SAND

REFN 40490

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 33

QUAR1: QUAR2: QUAR3:

TOPO: CHESTERTON SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 48

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40490

TOP	BOTTOM	FORMATION
0	24	YELLOW CLAY
24	30	MUDDY SAND
30	40	BLUE CLAY
40	48	SAND

REFN 40492

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 23

QUAR1: QUAR2: QUAR3: SE

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 47

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40492

TOP	BOTTOM	FORMATION
0	24	YELLOW CLAY
24	33	MUDDY SAND
33	40	BLUE CLAY
40	47	GRAY SAND

REFN 40495

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 33

QUAR1: QUAR2: QUAR3:

TOPO: CHESTERTON SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 39

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40495

TOP	BOTTOM	FORMATION
0	39	BROWN CLAY & B

REFN 40497

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 23

QUAR1: QUAR2: QUAR3:

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 66

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40497

TOP	BOTTOM	FORMATION
0	24	RED SAND
24	62	MIXED BLUE CLA
62	66	WATER SAND

REFN 40500

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 33

QUAR1: QUAR2: QUAR3:

TOPO: CHESTERTON SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 33

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40500

TOP	BOTTOM	FORMATION
0	18	BROWN CLAY
18	36	BROWN WATER

REFN 40502

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 23

QUAR1: QUAR2: QUAR3: SE

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 65

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40502

TOP	BOTTOM	FORMATION
0	22	BROWN SAND
22	30	WHITE SAND
30	46	CLAY
56	65	WATER SAND

REFN 40504

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 31

QUAR1: NW **QUAR2:** NW **QUAR3:** NW

TOPO: PORTAGE **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** 400 **FEETEW:** 325 **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: 605 **DEPTH:** 40

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** **USEOTHER:**

Lithology:

REFNO: 40504

TOP	BOTTOM	FORMATION
0	29	BROWN SAND
29	40	GRAY SAND

REFN 40505

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 33

QUAR1: QUAR2: QUAR3:

TOPO: CHESTERTON SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 40

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: V WELLUSE: H USEOTHER:

Lithology:

REFNO: 40505

TOP	BOTTOM	FORMATION
0	8	YELLOW CLAY
8	40	YELLOW SAND

REFN 40508

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 14

QUAR1: NE QUAR2: SE QUAR3: NE

TOPO: SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 22

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: USEOTHER:

Lithology:

REFNO: 40508

TOP	BOTTOM	FORMATION
0	15	SANDY FINE
15	18.5	SAND COARSE
18.5	20	GRAVEL
20	21	SAND WATER
21	22	GRAVEL COARSE
22		CLAY

REFN 40510

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 33

QUAR1: QUAR2: QUAR3:

TOPO: CHESTERTON SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 50

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40510

TOP	BOTTOM	FORMATION
0	38	YELLOW CLAY
38	42	BLUE CLAY
42	50	GRAY SAND

REFN 40520

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 34

QUAR1: QUAR2: QUAR3: SE

TOPO: CHESTERTON SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 28

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40520

TOP	BOTTOM	FORMATION
0	20	YELLOW CLAY
20	30	SAND

REFN 40525

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 34

QUAR1: QUAR2: QUAR3: NE

TOPO: CHESTERTON SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 22

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: V WELLUSE: H USEOTHER:

Lithology:

REFNO: 40525

TOP	BOTTOM	FORMATION
0	28	BROWN CLAY & B
28	32	BROWN SAND

REFN 40528

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 19

QUAR1: **QUAR2:** **QUAR3:**

TOPO: PORTAGE **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 46

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** H **USEOTHER:**

Lithology:

REFNO: 40528

TOP	BOTTOM	FORMATION
0	42	BROWN & WHITE
42	46	WHITE SAND

REFN 40530

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 34

QUAR1: QUAR2: QUAR3:

TOPO: CHESTERTON SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 36

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: P USEOTHER:

Lithology:

REFNO: 40530

TOP	BOTTOM	FORMATION
0	13	YELLOW TYPE CL
13	17	WATER BEARING
17	21	CLAY YELLOW TY
21	28	WATER BEARING
28	35	MIXTURE
35	42	CLAY BLUE GRY

REFN 40533

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 19

QUAR1: QUAR2: QUAR3:

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 46

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40533

TOP	BOTTOM	FORMATION
0	42	BROWN CLAY & S
42	46	WATER BEARING

REFN 40534

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 32

QUAR1: NW QUAR2: SE QUAR3: SE

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: 635 DEPTH: 54

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: I USEOTHER:

Lithology:

REFNO: 40534

TOP	BOTTOM	FORMATION
0	7	CLAY
7	22	COARSE SAND
22	35	MED SAND
35	54	MED FINE SAND

REFN 40535

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 34

QUAR1: NW **QUAR2:** NE **QUAR3:** NE

TOPO: CHESTERTON **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 48

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** H **USEOTHER:**

Lithology:

REFNO: 40535

TOP	BOTTOM	FORMATION
0	33	BROWN CLAY ME
33	41	GRAY CLAY MED
41		GRAY SAND MED

REFN 40538

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 19

QUAR1: **QUAR2:** **QUAR3:**

TOPO: PORTAGE **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 46

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** H **USEOTHER:**

Lithology:

REFNO: 40538

TOP	BOTTOM	FORMATION
0	36	BROWN CLAY & B
36	42	BLUE CLAY
42	52	WHITE SAND

REFN 40543

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 19

QUAR1: QUAR2: QUAR3:

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 46

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40543

TOP	BOTTOM	FORMATION
0	46	BROWN SAND &

REFN 40544

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 32

QUAR1: SE **QUAR2:** SW **QUAR3:** NW

TOPO: PORTAGE **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** 2200 **FEETEW:** 1200 **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: 615 **DEPTH:** 43

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** **USEOTHER:**

Lithology:

REFNO: 40544

TOP	BOTTOM	FORMATION
0	5	BRN DRY SND BE
5	7	GRY STICKY CLY
7	12	GRY MUDDY SND
12	43	GY LOOSE SND LI
43		SAND & GRAVEL

REFN 40548

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 20

QUAR1: QUAR2: QUAR3:

TOPO: GARY SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 49

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: USEOTHER:

Lithology:

REFNO: 40548

TOP	BOTTOM	FORMATION
0	3	BUILD UP
3	8	BEACH SAND
8	17	COARSE SAND &
17	37	MED TO FINE SA
37	38	FINE SAND SOME
38	51	FINE SAND
51		CLAY

REFN 40553

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 21

QUAR1: QUAR2: SW QUAR3: NW

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 48

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: USEOTHER:

Lithology:

REFNO: 40553

TOP	BOTTOM	FORMATION
0	5	BEACH SAND
5	18	FINE BROWN SA
18	34	MED BROWN SAN
34	40	CLEAN SAND LITT
40	47	CLEAN GRAVEL &
47	48	FINE CLEAN SAN

REFN 40560

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 34

QUAR1: QUAR2: QUAR3: NE

TOPO: CHESTERTON SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 81

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40560

TOP	BOTTOM	FORMATION
0	45	YELLOW CLAY
45	70	BLUE CLAY
70	80	SAND

REFN 40961

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 34

QUAR1: QUAR2: QUAR3:

TOPO: CHESTERTON SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 89

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40961

TOP	BOTTOM	FORMATION
0	50	CLAY
50	80	SAND & GRAVEL
80	89	WATER SAND

REFN 40962

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 35

QUAR1: QUAR2: QUAR3: SE

TOPO: CHESTERTON SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 31

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: P USEOTHER:

Lithology:

REFNO: 40962

TOP	BOTTOM	FORMATION
0	18	BLACK MUCH
18	25	MUDDY SAND
25	31	CLEAN FINE GRA

REFN 40966

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 34

QUAR1: QUAR2: QUAR3:

TOPO: SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 60

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40966

TOP	BOTTOM	FORMATION
0	52	CLAY
52	60	SAND

REFN 40971

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 34

QUAR1: QUAR2: QUAR3:

TOPO: CHESTERTON SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 44

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40971

TOP	BOTTOM	FORMATION
0	24	YELLOW SAND
24	38	BLUE CLAY
38	44	SAND

REFN 40976

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 34

QUAR1: QUAR2: QUAR3:

TOPO: CHESTERTON SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 64

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40976

TOP	BOTTOM	FORMATION
0	40	YELLOW CLAY S
40	58	BLUE CLAY
58	64	GRAY SAND

REFN 40986

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 34

QUAR1: **QUAR2:** **QUAR3:**

TOPO: CHESTERTON **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 70

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** H **USEOTHER:**

Lithology:

REFNO: 40986

TOP	BOTTOM	FORMATION
0	40	CLAY & GRAVEL Y
40	50	BLUE CLAY
50	70	SAND

REFN 40989

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 27

QUAR1: **QUAR2:** **QUAR3:**

TOPO: DUNE ACRES **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 67

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** H **USEOTHER:**

Lithology:

REFNO: 40989

TOP	BOTTOM	FORMATION
0	30	CLAY
30	55	YELLOW SAND S
55	67	DARK CLEAN SAN

REFN 40991

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 34

QUAR1: QUAR2: QUAR3:

TOPO: CHESTERTON SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 40

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40991

TOP	BOTTOM	FORMATION
0	20	YELLOW SAND
20	30	YELLOW CLAY
30	34	BLUE CLAY
34	40	GRAY SAND

REFN 40995

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 30

QUAR1: QUAR2: QUAR3:

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 40

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: O USEOTHER: DEWATERING

Lithology:

REFNO: 40995

TOP	BOTTOM	FORMATION
0	23	BEACH SAND
23	33	BROWN SAND &
33	40	GRAY SAND & GR
40		SILT & CLAY

REFN 40996

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 34

QUAR1: QUAR2: QUAR3:

TOPO: CHESTERTON SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 69

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 40996

TOP	BOTTOM	FORMATION
0	40	YELLOW CLAY
40	60	BLUE CLAY
60	70	COARSE GRAY S

REFN 40999

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 27

QUAR1: **QUAR2:** SE **QUAR3:** NE

TOPO: **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: 492565 **UTMY:** 4608655

GRNDELEV: **DEPTH:** 125

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** **USEOTHER:**

Lithology:

REFNO: 40999

TOP	BOTTOM	FORMATION
0	15	YELLOW CLAY
15	22	YELLOW CLAY W/
22	27	LIGHT BROWN CL
27	37	GRAY CLAY
37	80	GRAY TILL
80	87	GRAY TILL & FINE
87	112	FINE GRAVEL GR
112	125	MED TO FINE SA

REFN 41000

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 30

QUAR1: QUAR2: QUAR3:

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 39

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: O USEOTHER: DEWATERING

Lithology:

REFNO: 41000

TOP	BOTTOM	FORMATION
0	23	BEACH SAND
23	33	BROWN SAND &
33	40	GRAY SAND & GR
40		SILTY CLAY

REFN 41001

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 34

QUAR1: QUAR2: QUAR3:

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 63

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 41001

TOP	BOTTOM	FORMATION
0	40	YELLOW CLAY
40	55	BLUE CLAY & GR
55	65	GRAY SAND & FIN

REFN 41005

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 30

QUAR1: QUAR2: QUAR3:

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 39

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: O USEOTHER: DEWATERING

Lithology:

REFNO: 41005

TOP	BOTTOM	FORMATION
0	22	BEACH SAND
22	31	SAND & GRAVEL
31	39	SAND & GRAVEL
39	40	CLAY & SILT W/G

REFN 41006

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 34

QUAR1: QUAR2: QUAR3:

TOPO: CHESTERTON SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 47

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 41006

TOP	BOTTOM	FORMATION
0	18	YELLOW CLAY
18	40	CLAY SAND
40	47	GRAY SAND

REFN 41009

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 27

QUAR1: SW **QUAR2:** NE **QUAR3:** NE

TOPO: DUNE ACRES **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: 640 **DEPTH:** 93

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** **USEOTHER:**

Lithology:

REFNO: 41009

TOP	BOTTOM	FORMATION
0	30	YELLOW CLAY
30	36	BLUE CLAY
36	86	RED SAND
86	93	GRAY WATER SA

REFN 41010

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 30

QUAR1: QUAR2: QUAR3:

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 40

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: O USEOTHER: DEWATERING

Lithology:

REFNO: 41010

TOP	BOTTOM	FORMATION
0	22	BEACH SAND
22	31	SAND & GRAVEL
31	40	SAND & GRAVEL
40	41	GRAY SILT & CLA

REFN 41019

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 27

QUAR1: **QUAR2:** **QUAR3:**

TOPO: CHESTERTON **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 63

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** H **USEOTHER:**

Lithology:

REFNO: 41019

TOP	BOTTOM	FORMATION
0	32	CLAY
32	54	SAND & GRAVEL
54	63	WATER SAND

REFN 41026

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 35

QUAR1: QUAR2: QUAR3:

TOPO: SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 31

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: USEOTHER:

Lithology:

REFNO: 41026

TOP	BOTTOM	FORMATION
0	15	YELLOW CLAY
15	35	BRN SAND COAR

REFN 41029

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 28

QUAR1: QUAR2: QUAR3:

TOPO: DUNE ACRES SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 54

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 41029

TOP	BOTTOM	FORMATION
0	20	YELLOW SAND
20	35	YELLOW CLAY
35	40	MUDDY FINE SAN
40	50	GRAY SAND

REFN 41030

COUNTY: PORTER

TWN: 37N RNG: 7W SEC: 25

QUAR1: QUAR2: QUAR3:

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 39

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: USEOTHER:

Lithology:

REFNO: 41030

TOP	BOTTOM	FORMATION
0	17	BROWN FINE SA
17	31	BROWN SAND SO
31	39	GRAY SAND SOM
39		GRAY SILTY CLAY

REFN 41034

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 28

QUAR1: NW **QUAR2:** SE **QUAR3:** SW

TOPO: CHESTERTON **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: 630 **DEPTH:** 48

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** P **USEOTHER:**

Lithology:

REFNO: 41034

TOP	BOTTOM	FORMATION
0	40	YELLOW SAND FI
40	48	CRSE SND F GRV

REFN 41168

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 26

QUAR1: SE **QUAR2:** SE **QUAR3:** NW

TOPO: DUNE ACRES **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: 675 **DEPTH:** 89

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** H **USEOTHER:**

Lithology:

REFNO: 41168

TOP	BOTTOM	FORMATION
0	36	YELLOW CLAY
36	60	BLUE CLAY
60	83	SAND
83	89	WATER SAND

REFN 44091

COUNTY: PORTER

TWN: 37N RNG: 7W SEC: 26

QUAR1: QUAR2: QUAR3:

TOPO: PORTAGE SUBDIV: OGDEN DUNES LOTNO: 34J

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 109

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 44091

TOP	BOTTOM	FORMATION
0	82	BEACH SAND
82	101	BEACH SAND & G
101	109	MIXED COLORS,

REFN 44096

COUNTY: PORTER

TWN: 37N RNG: 7W SEC: 26

QUAR1: SE QUAR2: NE QUAR3: SE

TOPO: PORTAGE SUBDIV: OGDEN DUNES LOTNO:

FEETNS: 1500 FEETSN: FEETEW: FEETWE: 600

UTMX: UTMY:

GRNDELEV: 650 DEPTH: 98

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 44096

TOP	BOTTOM	FORMATION
0	85	BROWN SAND
85	90	GRAVEL
90	92	SAND & GRAVEL
92	99	SAND

REFN 44101

COUNTY: PORTER

TWN: 37N **RNG:** 7W **SEC:** 26

QUAR1: **QUAR2:** **QUAR3:**

TOPO: PORTAGE **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 134

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** H **USEOTHER:**

Lithology:

REFNO: 44101

TOP	BOTTOM	FORMATION
0	125	YELLOW BLOW S
125	134	FINE MIXED COL

REFN 44116

COUNTY: PORTER

TWN: 37N **RNG:** 7W **SEC:** 26

QUAR1: **QUAR2:** **QUAR3:**

TOPO: PORTAGE **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 26

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** H **USEOTHER:**

Lithology:

REFNO: 44116

TOP	BOTTOM	FORMATION
0	20	BEACH SAND
20	22	WHITE SAND
22	26	WATER GRAVEL

REFN 44117

COUNTY: PORTER

TWN: 37N **RNG:** 7W **SEC:** 36

QUAR1: **QUAR2:** **QUAR3:**

TOPO: PORTAGE **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 52

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** P **USEOTHER:** CLUB

Lithology:

REFNO: 44117

TOP	BOTTOM	FORMATION
0	12	BLACK LOAM
12	25	YELLOW CLAY
25	30	YELLOW SAND
30	45	BLUE CLAY
45	60	GRAY SAND, COA

REFN 44121

COUNTY: PORTER

TWN: 37N RNG: 7W SEC: 26

QUAR1: QUAR2: QUAR3:

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 82

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: V WELLUSE: H USEOTHER:

Lithology:

REFNO: 44121

TOP	BOTTOM	FORMATION
0	60	BROWN SAND
60	82	BRN WTR SND, R

REFN 44122

COUNTY: PORTER

TWN: 37N RNG: 7W SEC: 36

QUAR1: NE QUAR2: NW QUAR3: NE

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: 300 FEETEW: FEETWE: 1800

UTMX: UTMY:

GRNDELEV: 607 DEPTH: 74

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: I USEOTHER:

Lithology:

REFNO: 44122

TOP	BOTTOM	FORMATION
0	14	SAND
14	18	MUCK
18	28	FINE GRAY SAND
28	32	GRAY CLAY
32	47	LAYERS OF PEAT
47	74	FINE GRAY SAND
74		BLUE CLAY

REFN 44127

COUNTY: PORTER

TWN: 37N RNG: 7W SEC: 36

QUAR1: NW QUAR2: NW QUAR3: NE

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: 607 DEPTH: 78

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: I USEOTHER:

Lithology:

REFNO: 44127

TOP	BOTTOM	FORMATION
0	15	SAND
15	19	DARK GRAY SAN
19	28	GRAY SAND, FINE
28	30	CLAY
30	34	LAYERS OF PEAT
34	38	CLAY
38	42	SANDY CLAY
42	84	FINE SAND
84	85	GRAY CLAY

REFN 44131

COUNTY: PORTER

TWN: 37N RNG: 7W SEC: 26

QUAR1: QUAR2: QUAR3:

TOPO: PORTAGE SUBDIV: OGDEN DUNES LOTNO: 333

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 2

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 44131

TOP	BOTTOM	FORMATION
0	37	BROWN SAND, S
37	50	GRAY SAND, TRA

REFN 44141

COUNTY: PORTER

TWN: 37N RNG: 7W SEC: 26

QUAR1: QUAR2: QUAR3:

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 28

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: V WELLUSE: H USEOTHER:

Lithology:

REFNO: 44141

TOP	BOTTOM	FORMATION
1	24	BEACH SAND
24	28	WATER GRAVEL

REFN 44142

COUNTY: PORTER

TWN: 37N RNG: 7W SEC: 36

QUAR1: QUAR2: QUAR3: SE

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 52

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 44142

TOP	BOTTOM	FORMATION
0	20	SILT SAND & MUC
20	40	YELLOW CLAY
40	52	GRAY SAND

REFN 44146

COUNTY: PORTER

TWN: 37N RNG: 7W SEC: 26

QUAR1: SE QUAR2: NW QUAR3: SW

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: 610 DEPTH: 38

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 44146

TOP	BOTTOM	FORMATION
0	21	PIPE FILLED W/ B
21	33	BROWN SAND
33	38	GRAY SAND

REFN 44147

COUNTY: PORTER

TWN: 37N RNG: 7W SEC: 36

QUAR1: QUAR2: QUAR3:

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 29

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFN 44156

COUNTY: PORTER

TWN: 37N RNG: 7W SEC: 26

QUAR1: QUAR2: QUAR3:

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 34

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 44156

TOP	BOTTOM	FORMATION
1	30	BEACH SAND
30	34	SAND & WATER

REFN 44161

COUNTY: PORTER

TWN: 37N **RNG:** 7W **SEC:** 26

QUAR1: **QUAR2:** **QUAR3:**

TOPO: PORTAGE **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 110

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** H **USEOTHER:**

Lithology:

REFNO: 44161

TOP	BOTTOM	FORMATION
0	85	BROWN SAND, M
85	110	GRAY SAND, MED

REFN 44166

COUNTY: PORTER

TWN: 37N **RNG:** 7W **SEC:** 26

QUAR1: **QUAR2:** **QUAR3:**

TOPO: PORTAGE **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 127

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** H **USEOTHER:**

Lithology:

REFNO: 44166

TOP	BOTTOM	FORMATION
0	127	YELLOW SAND

REFN 44171

COUNTY: PORTER

TWN: 37N RNG: 7W SEC: 26

QUAR1: QUAR2: QUAR3:

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 132

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 44171

TOP	BOTTOM	FORMATION
0	125	YELLOW BLOW S
125	132	COARSE SAND

REFN 44176

COUNTY: PORTER

TWN: 37N RNG: 7W SEC: 26

QUAR1: QUAR2: QUAR3:

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 42

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 44176

TOP	BOTTOM	FORMATION
0	42	BRN SAND, BRN

REFN 55547

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 23

QUAR1: SW **QUAR2:** NE **QUAR3:** SE

TOPO: DUNE ACRES **SUBDIV:** **LOTNO:**

FEETNS: 1500 **FEETSN:** **FEETEW:** **FEETWE:** 850

UTMX: **UTMY:**

GRNDELEV: 660 **DEPTH:** 65

GROUTM: VOLCLAY **GROUTF:** 55 **GROUTT:** 25 **METHOD_G:** PUMPED

WELLTYPE: **WELLUSE:** H **USEOTHER:**

Lithology:

REFNO: 55547

TOP	BOTTOM	FORMATION
0	60	YELLOW SAND
60	65	GRAY SAND

REFN 62324

COUNTY: PORTER

TWN: 36N RNG: 6W SEC: 8

QUAR1: NW QUAR2: NW QUAR3: SW

TOPO: PORTAGE SUBDIV: ROBIN WOOD LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 70

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: O USEOTHER: TEST

Lithology:

REFNO: 62324

TOP	BOTTOM	FORMATION
0	3	TOP SOIL
3	37	BROWN FINE GR
37	40	BROWN COARSE
40	44	WHITE F GRN SN
44	53	BLUE CLAY
53	67	WHT CRSE GRIN
67	70	SILT

REFN 62332

COUNTY: PORTER

TWN: 36N **RNG:** 7W **SEC:** 1

QUAR1: SW **QUAR2:** NW **QUAR3:** SE

TOPO: PORTAGE **SUBDIV:** **LOTNO:**

FEETNS: 1800 **FEETSN:** **FEETEW:** 2500 **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: 635 **DEPTH:** 77

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** **USEOTHER:**

Lithology:

REFNO: 62332

TOP	BOTTOM	FORMATION
0	50	BROWN & BLUE C
50	77	WHITE SAND

REFN 62354

COUNTY: PORTER

TWN: 36N **RNG:** 6W **SEC:** 6

QUAR1: NW **QUAR2:** NW **QUAR3:** SE

TOPO: PORTAGE **SUBDIV:** **LOTNO:**

FEETNS: 1875 **FEETSN:** **FEETEW:** **FEETWE:** 2500

UTMX: **UTMY:**

GRNDELEV: 639 **DEPTH:** 175

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** **USEOTHER:**

Lithology:

REFNO: 62354

TOP	BOTTOM	FORMATION
0	7	FINE BROWN SA
7	25	BROWN SANDY C
25	49	SILTY SOFT GRA
49	55	MED REDDISH BR
55	80	FINE BROWN SA
80	100	SILTY GRAY CLAY
100	168	SMOOTH GRAY C
168	170	BROWN CLAY
170	175	BROWN SHALE

REFN 62366

COUNTY: PORTER

TWN: 36N RNG: 7W SEC: 1

QUAR1: QUAR2: QUAR3:

TOPO: PORTAGE SUBDIV: PLEASANT MEAD LOTNO: 53

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 45

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 62366

TOP	BOTTOM	FORMATION
0	36	BROWN SAND
36	45	WHITE SAND

REFN 62381

COUNTY: PORTER

TWN: 36N RNG: 7W SEC: 1

QUAR1: QUAR2: QUAR3:

TOPO: PORTAGE SUBDIV: PLEASANT MEAD LOTNO: 34

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 44

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: H USEOTHER:

Lithology:

REFNO: 62381

TOP	BOTTOM	FORMATION
0	44	BROWN CLAY &

REFN 62394

COUNTY: PORTER

TWN: 36N RNG: 6W SEC: 4

QUAR1: QUAR2: QUAR3:

TOPO: SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 84

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: WELLUSE: I USEOTHER:

Lithology:

REFNO: 62394

TOP	BOTTOM	FORMATION
0	1	TOPSOIL
1	10	BROWN CLAY
10	42	MEDIUM BROWN
42	72	FINE TO MEDIUM
72	73	SILTY FINE GRAY
73	84	GRAY CLAY, SAN

REFN 62406

COUNTY: PORTER

TWN: 36N RNG: 7W SEC: 1

QUAR1: SE QUAR2: NE QUAR3: SE

TOPO: PORTAGE SUBDIV: LOTNO:

FEETNS: 1500 FEETSN: FEETEW: FEETWE: 550

UTMX: 486125 UTMY: 4604975

GRNDELEV: 638 DEPTH: 50

GROUTM: GROUTF: GROUTT: METHOD_G:

WELLTYPE: D WELLUSE: P USEOTHER:

Lithology:

REFNO: 62406

TOP	BOTTOM	FORMATION
0	42	BROWN SAND &
42	52	WHITE SAND

REFN 62414

COUNTY: PORTER

TWN: 36N **RNG:** 6W **SEC:** 4

QUAR1: NW **QUAR2:** NW **QUAR3:** SW

TOPO: CHESTERTON **SUBDIV:** **LOTNO:**

FEETNS: 650 **FEETSN:** **FEETEW:** **FEETWE:** 2400

UTMX: **UTMY:**

GRNDELEV: 635 **DEPTH:** 73

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: **WELLUSE:** I **USEOTHER:**

Lithology:

REFNO: 62414

TOP	BOTTOM	FORMATION
0	6	CLAY
6	27	BROWN SAND
27	50	MEDIUM TO FINE
50	73	FINE GRAY SAND,

REFN 67363

COUNTY: PORTER

TWN: 37N RNG: 6W SEC: 26

QUAR1: QUAR2: QUAR3: NE

TOPO: MICHIGAN CITY SUBDIV: LOTNO:

FEETNS: FEETSN: FEETEW: FEETWE:

UTMX: UTMY:

GRNDELEV: DEPTH: 90

GROUTM: VOLCLAY GROUTF: 80 GROUTT: 55 METHOD_G: PUMPED

WELLTYPE: WELLUSE: H USEOTHER:

Lithology:

REFNO: 67363

TOP	BOTTOM	FORMATION
0	1	TOPSOIL
1	10	YELLOW CLAY
10	22	BLUE CLAY
22	24	BLUE CLAY & GR
24	40	BLUE CLAY
40	45	BROWN SAND
45	48	BLUE CLAY & BR
48	65	BLUE CLAY
65	75	BROWN SAND
75	80	GRAY SAND
80	82	BLUE CLAY
82	90	GRAY SAND

REFN 67368

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 26

QUAR1: **QUAR2:** NE **QUAR3:** NW

TOPO: MICHIGAN CITY **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** **FEETEW:** **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 85

GROUTM: VOLCLAY **GROUTF:** 75 **GROUTT:** 45 **METHOD_G:** PUMPED

WELLTYPE: **WELLUSE:** H **USEOTHER:**

Lithology:

REFNO: 67368

TOP	BOTTOM	FORMATION
0	1	TOPSOIL
1	18	YELLOW CLAY
18	35	BLUE CLAY
35	40	BLUE CLAY & GR
40	71	BLUE CLAY
71	73	BLUE CLAY & GR
73	75	BLUE CLAY
75	85	GRAVEL

REFN 41015

COUNTY: PORTER

TWN: 37N **RNG:** 6W **SEC:** 30

QUAR1: NE **QUAR2:** SE **QUAR3:** NW

TOPO: PORTAGE **SUBDIV:** **LOTNO:**

FEETNS: **FEETSN:** 1350 **FEETEW:** 2350 **FEETWE:**

UTMX: **UTMY:**

GRNDELEV: **DEPTH:** 50

GROUTM: **GROUTF:** **GROUTT:** **METHOD_G:**

WELLTYPE: D **WELLUSE:** **USEOTHER:**

Lithology:

REFNO: 41015

TOP	BOTTOM	FORMATION
0	3	FILL BUILD UP
3	12	BEACH SAND
12	15	COARSE SAND
15	17	COARSE SAND G
17	32	MED SAND
32	35	COARSE SAND G
35	37	FINE SAND SOME
37	43	FINE SAND W/SIL
43	52	COARSE SAND
52		CLAY