

**APPENDIX A**  
**WISCONSIN ADMINISTRATIVE CODE**

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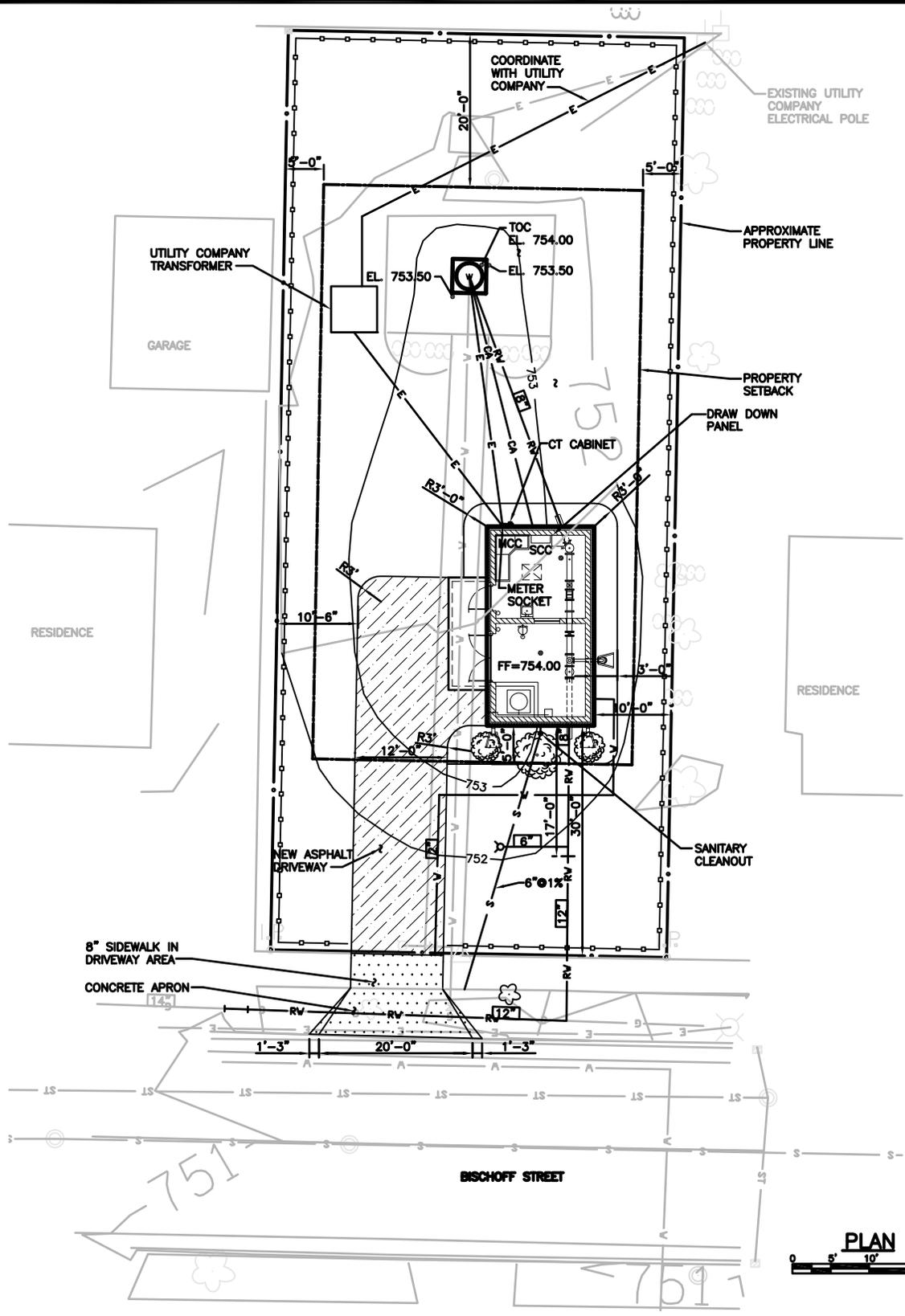
The Wisconsin Administrative Code, Chapter NR 811, Section 16(5) states:

- (5) Well Head Protection Plan. A well head protection plan shall be provided for all new wells for municipal water systems. The plan shall be developed by the owner of the municipal water system or its agent. No new municipal well may be placed into service until the department has approved the well head protection plan. The plan shall include but is not limited to:
  - (a) Identification of the recharge area for the proposed well.
  - (b) Identification of the zone of influence for the proposed well.
  - (c) Identification of the groundwater flow direction.
  - (d) An inventory of existing potential contamination sources within a ½ mile radius of the proposed well and an assessment of existing potential contamination sources within the recharge area of the well.
  - (e) Establishment of a well head protection area for the proposed well. The well head protection area shall encompass, at a minimum, that portion of the recharge area equivalent to a 5 year time of travel to the well. The well head protection area may be determined by a hydrogeologic investigation.
  - (f) A public education program for well head protection.
  - (g) A water conservation program.
  - (h) A contingency plan for providing safe water and protecting the well from contamination based on the inventory and assessment of potential contamination sources.
  - (i) A management plan, based upon an assessment of alternatives for addressing potential contamination sources, describing the local ordinances, zoning requirements, monitoring program, and other local initiatives proposed within the well head protection area established in subpar.(e). The management plan shall address maintaining the separation distances established by well siting in sub.(4)(d).

**APPENDIX B  
SITE PLANS FOR UNIT WELLS**

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### WELL NO. 10

WELL HEAD PROTECTION PLAN  
CITY OF FOND DU LAC  
COUNTY OF FOND DU LAC, WISCONSIN



FIGURE 1

1-063-045

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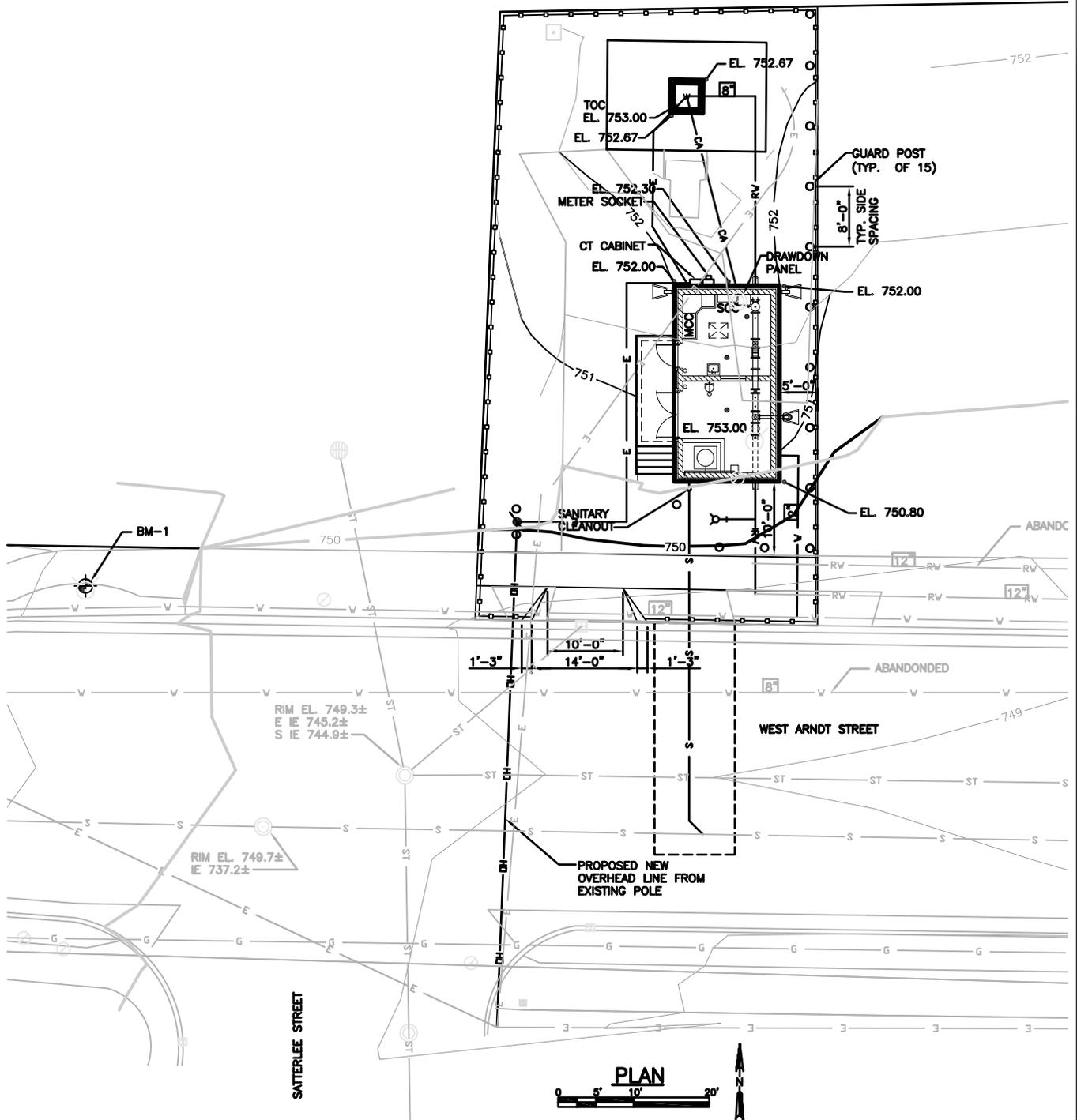
**BENCHMARK INFORMATION:**

BM-1: TAG BOLT ON HYDRANT,  
EL. = 751.75.

BM-2: TAG BOLT ON HYDRANT  
AT WELL SITE, EL. = 752.70.

**GENERAL NOTES:**

1. THE LOCATIONS OF UTILITIES SHOWN ARE BASED ON RECORD INFORMATION. CONTRACTOR SHALL VERIFY UTILITY LOCATIONS AND PERFORM EXPLORATORY EXCAVATIONS PRIOR TO UNDERTAKING BUILDING DEMOLITION, CONSTRUCTION, AND UTILITY WORK.



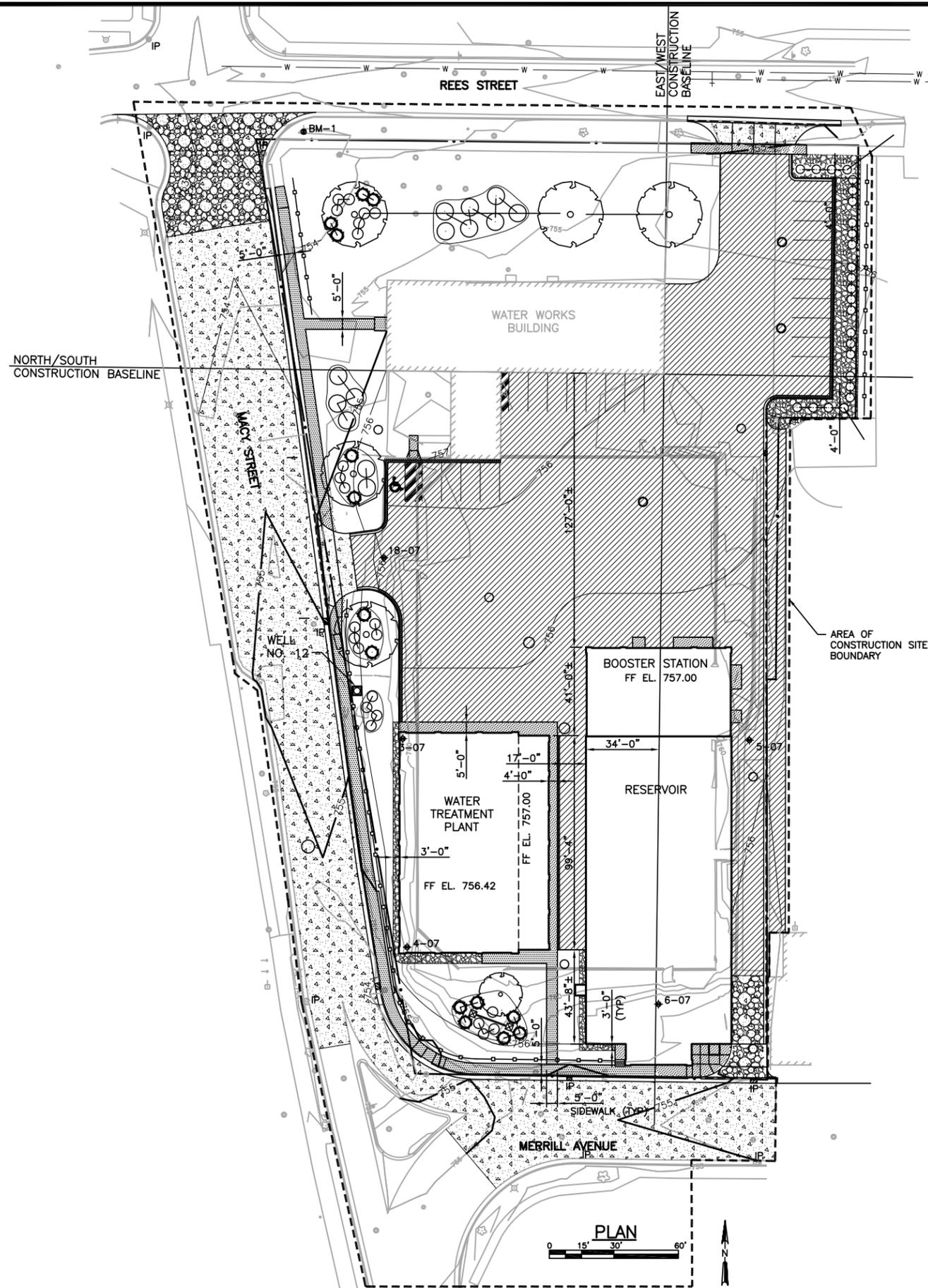
**WELL NO. 11**

**WELL HEAD PROTECTION PLAN  
CITY OF FOND DU LAC  
COUNTY OF FOND DU LAC, WISCONSIN**



**FIGURE 1**

1-063-045



**GENERAL NOTES:**

1. BENCHMARK (BM-1) EL=754.19 PK NAIL IN POWER POLE AT SOUTHEAST CORNER OF REES STREET AND MACY STREET.

**LEGEND**

	NEW STONE MULCH
	NEW CONCRETE PAVEMENT
	NEW ASPHALTIC PAVEMENT
	NEW REJECT CURB & GUTTER SECTION
	NEW DRIVEWAY CURB & GUTTER SECTION
	NEW SIDEWALK
	AREA OF CONSTRUCTION SITE
	POTENTIALLY CONTAMINATED FILL LIMITS
	TEMPORARY STONE TRACKING PAD
	SILT FENCE

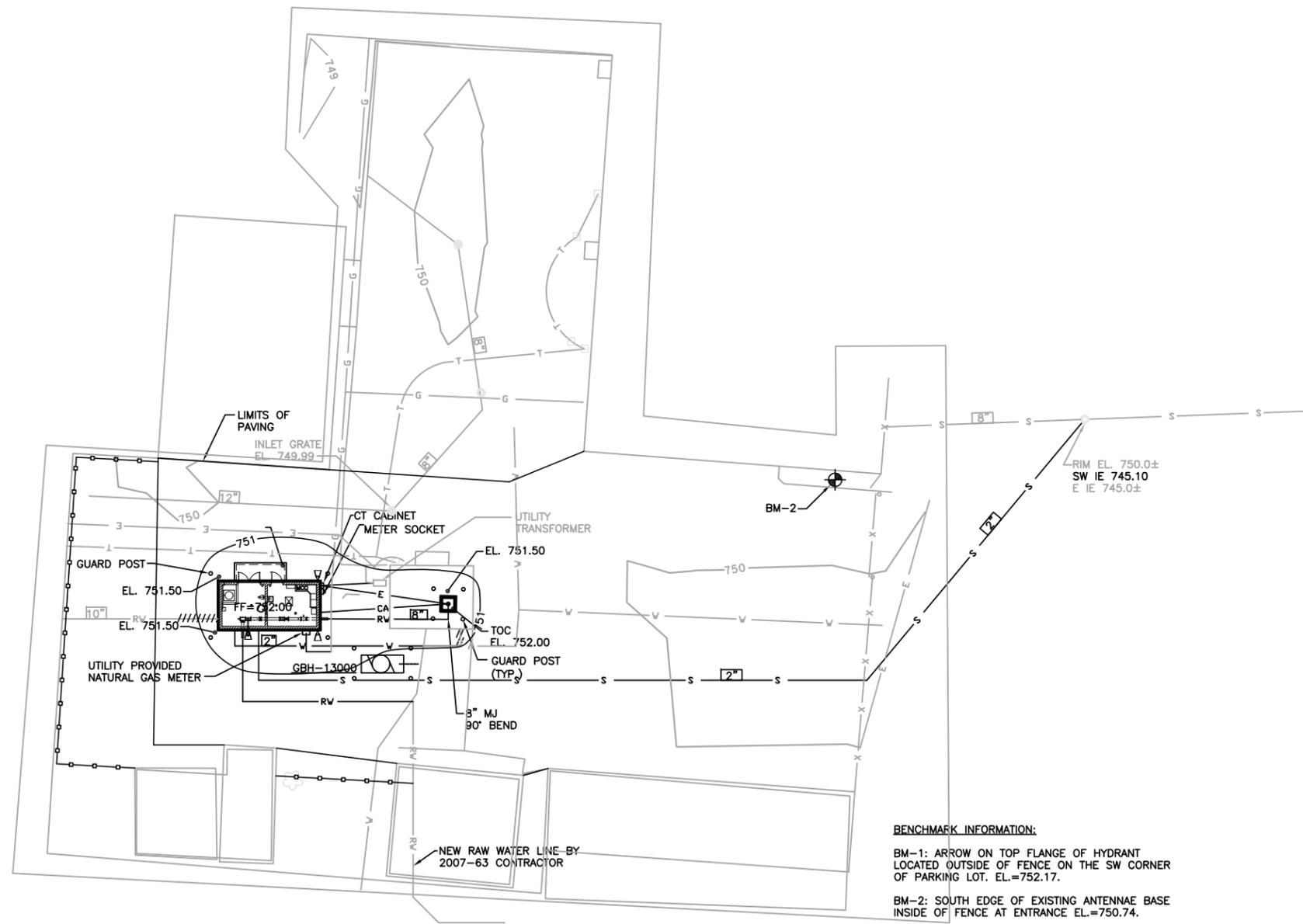
DATE:	JULY, 2007
DES BY:	GWT
CHK BY:	CMW
RECORD DRAWING	
BY:	
DATE:	
CONTRACTOR:	

**MERRILL AVENUE - WELL 12  
SITE PLAN**

MERRILL AVENUE WTP, RESERVOIR, AND BOOSTER STATION  
CITY OF FOND DU LAC  
COUNTY OF FOND DU LAC, WISCONSIN



SHEET  
**1**  
10-C-01  
JOB NO. 1-063-032



**BENCHMARK INFORMATION:**  
 BM-1: ARROW ON TOP FLANGE OF HYDRANT LOCATED OUTSIDE OF FENCE ON THE SW CORNER OF PARKING LOT. EL.=752.17.  
 BM-2: SOUTH EDGE OF EXISTING ANTENNAE BASE INSIDE OF FENCE AT ENTRANCE EL.=750.74.



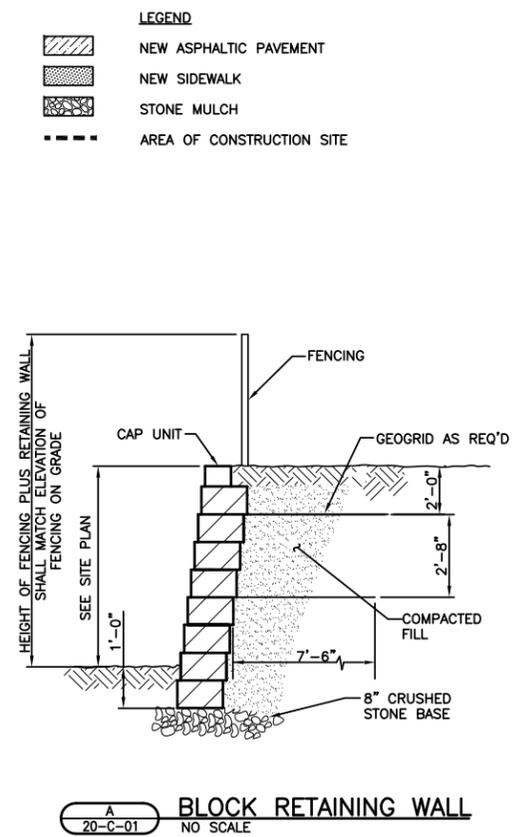
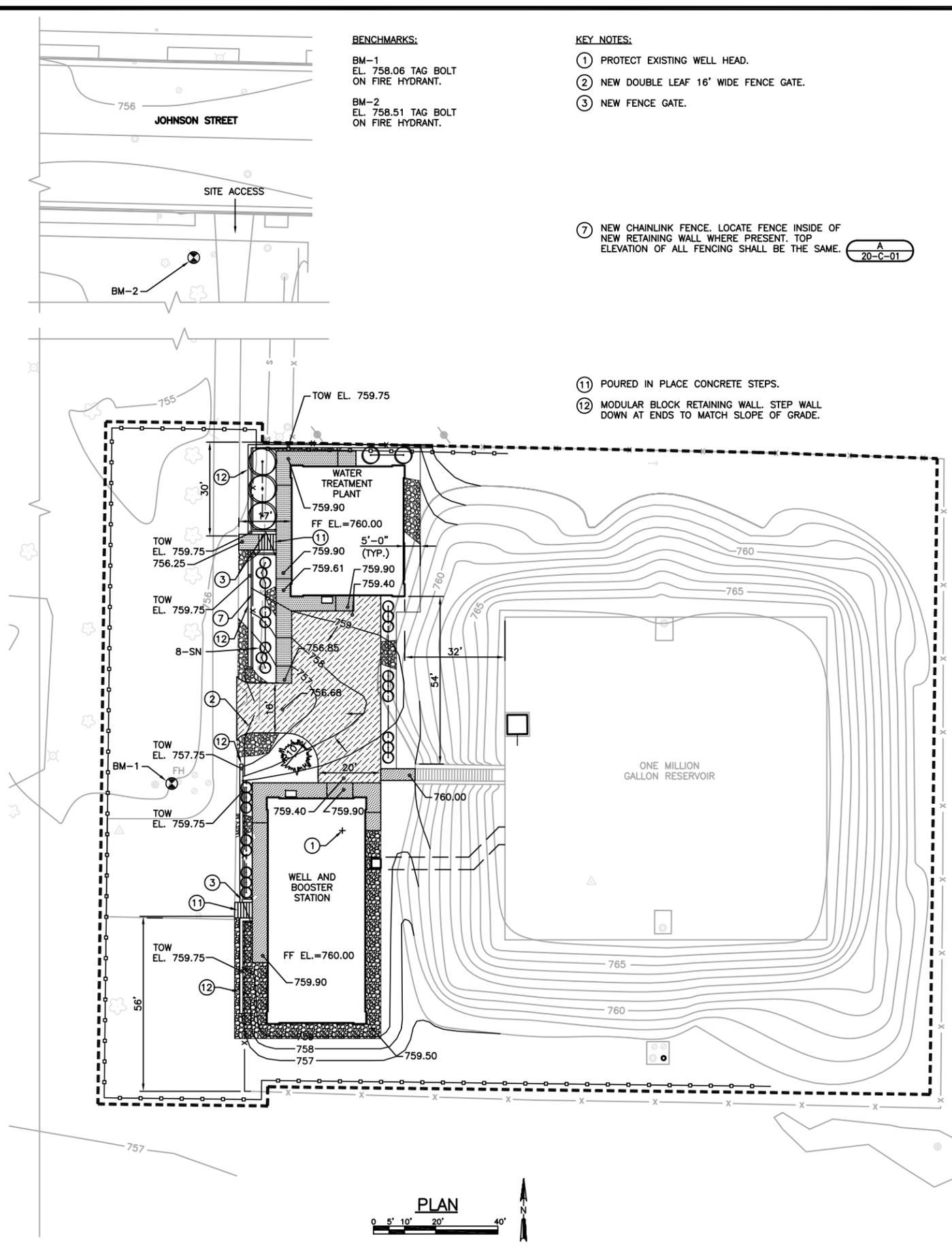
- GENERAL NOTES:**
- THE LOCATIONS OF UTILITIES SHOWN ARE BASED ON RECORD INFORMATION. CONTRACTOR SHALL VERIFY UTILITY LOCATIONS AND PERFORM EXPLORATORY EXCAVATIONS PRIOR TO UNDERTAKING BUILDING DEMOLITION, CONSTRUCTION, AND UTILITY WORK.

NO.	REVISIONS	DATE:

DATE: FEBRUARY 2008  
 DES BY: JSR CHK BY: SBK  
 RECORD DRAWING  
 BY: \_\_\_\_\_ DATE: \_\_\_\_\_ CONTRACTOR: \_\_\_\_\_

**WELL NO. 13  
 SITE PLAN**  
 WELL HEAD PROTECTION PLAN  
 CITY OF FOND DU LAC  
 COUNTY OF FOND DU LAC, WISCONSIN



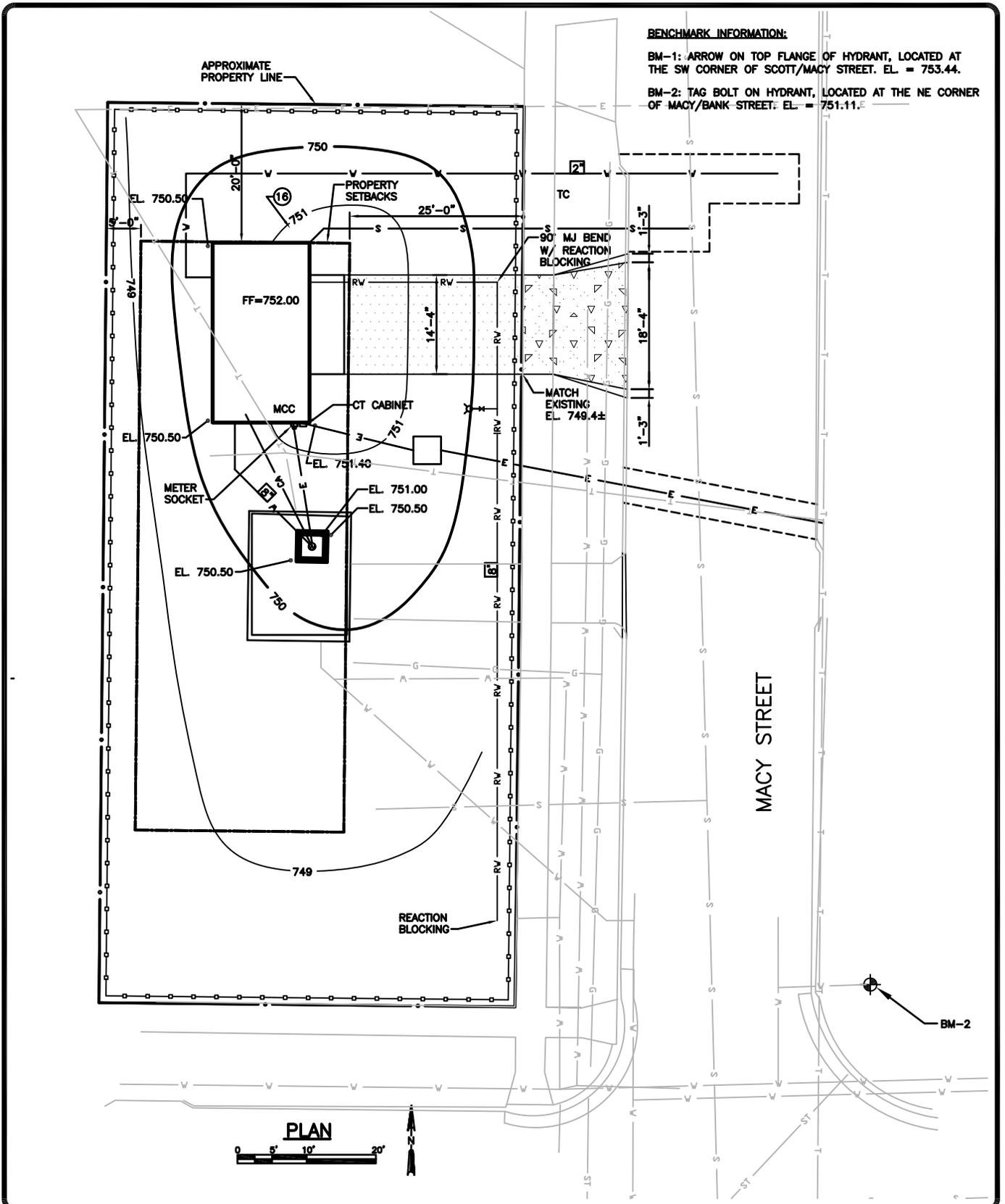


DATE:	07/12/07
REVISIONS	
NO.	1
DATE: OCTOBER, 2007	DES BY: MJF
	CHK BY: SBK
	RECORD DRAWING
	BY:
	DATE:
	CONTRACTOR:

**WELL 14, McDERMOTT PARK**  
**SITE PLAN**  
 McDERMOTT PARK, TROWBRIDGE, AND WELL 21  
 WATER TREATMENT PLANTS AND FACILITY IMPROVEMENTS  
 CITY OF FOND DU LAC  
 COUNTY OF FOND DU LAC, WISCONSIN



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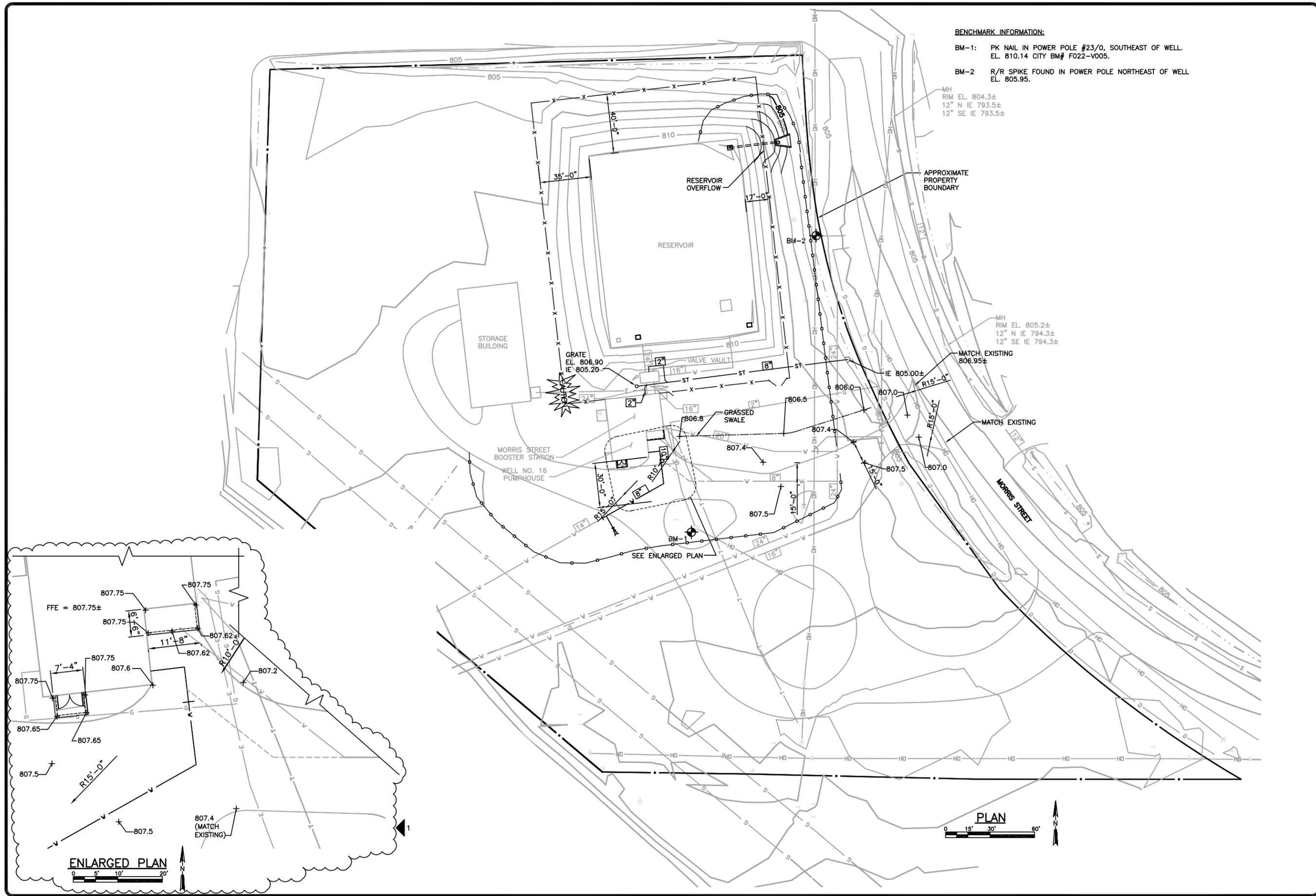
### WELL NO. 15

**WELL HEAD PROTECTION PLAN  
CITY OF FOND DU LAC  
COUNTY OF FOND DU LAC, WISCONSIN**



**FIGURE 1**

1-063-045

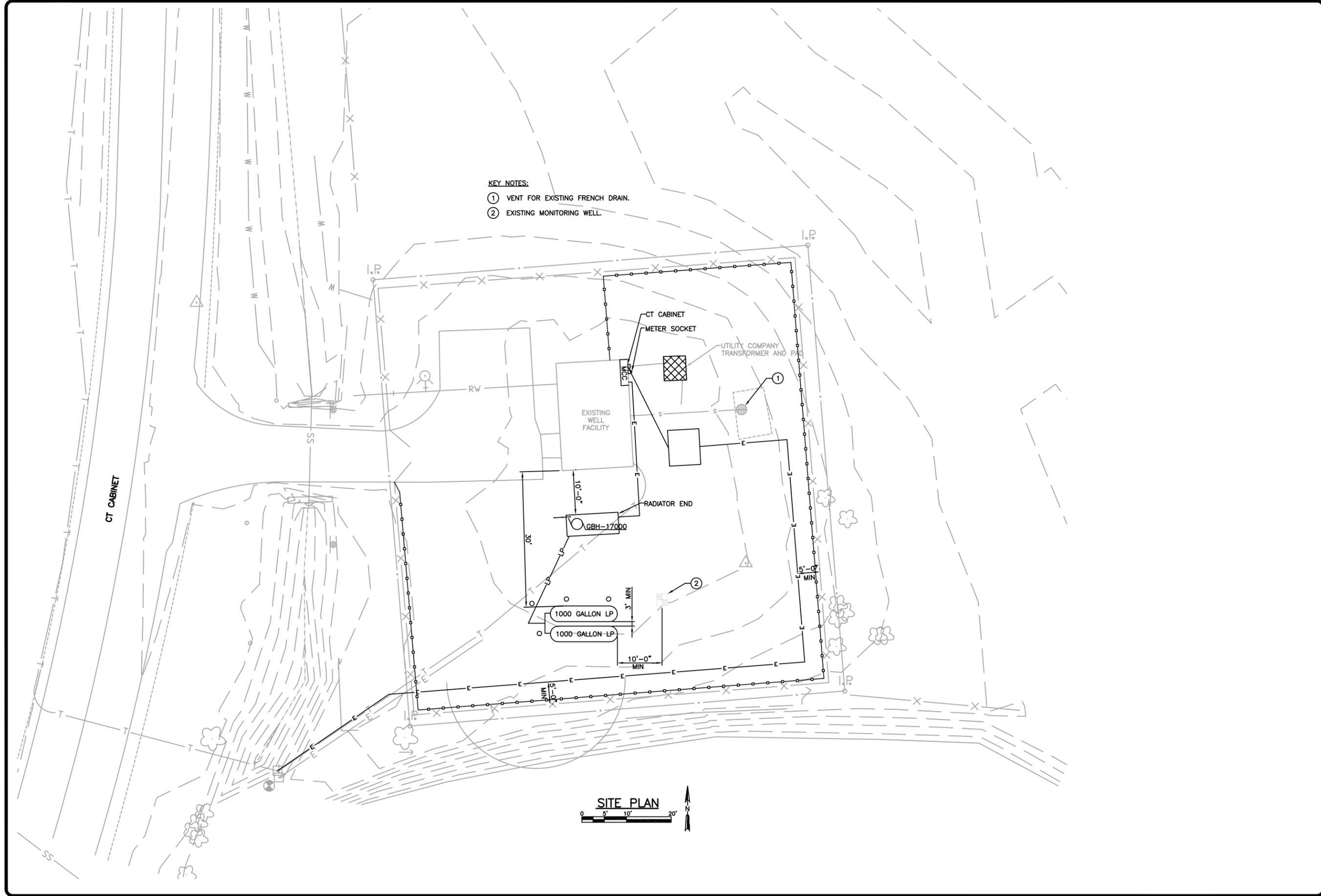


**BENCHMARK INFORMATION:**  
 BM-1: PK NAIL IN POWER POLE #23/0, SOUTHEAST OF WELL.  
 EL. 810.14 CITY BM# F022-V005.  
 BM-2: R/R SPIKE FOUND IN POWER POLE NORTHEAST OF WELL.  
 EL. 805.95.

DATE:	1/29/08
REVISIONS	
NO.	1
DATE: FEBRUARY 2008	DES BY: JSR
CHK BY: SBK	RECORD DRAWING
BY:	DATE:
CONTRACTOR:	

**WELL 16, MORRIS STREET BOOSTER STATION  
 SITE PLAN**  
 WELL HEAD PROTECTION PLAN  
 CITY OF FOND DU LAC  
 COUNTY OF FOND DU LAC, WISCONSIN





- KEY NOTES:**
- ① VENT FOR EXISTING FRENCH DRAIN.
  - ② EXISTING MONITORING WELL.

NO.	REVISIONS	DATE:

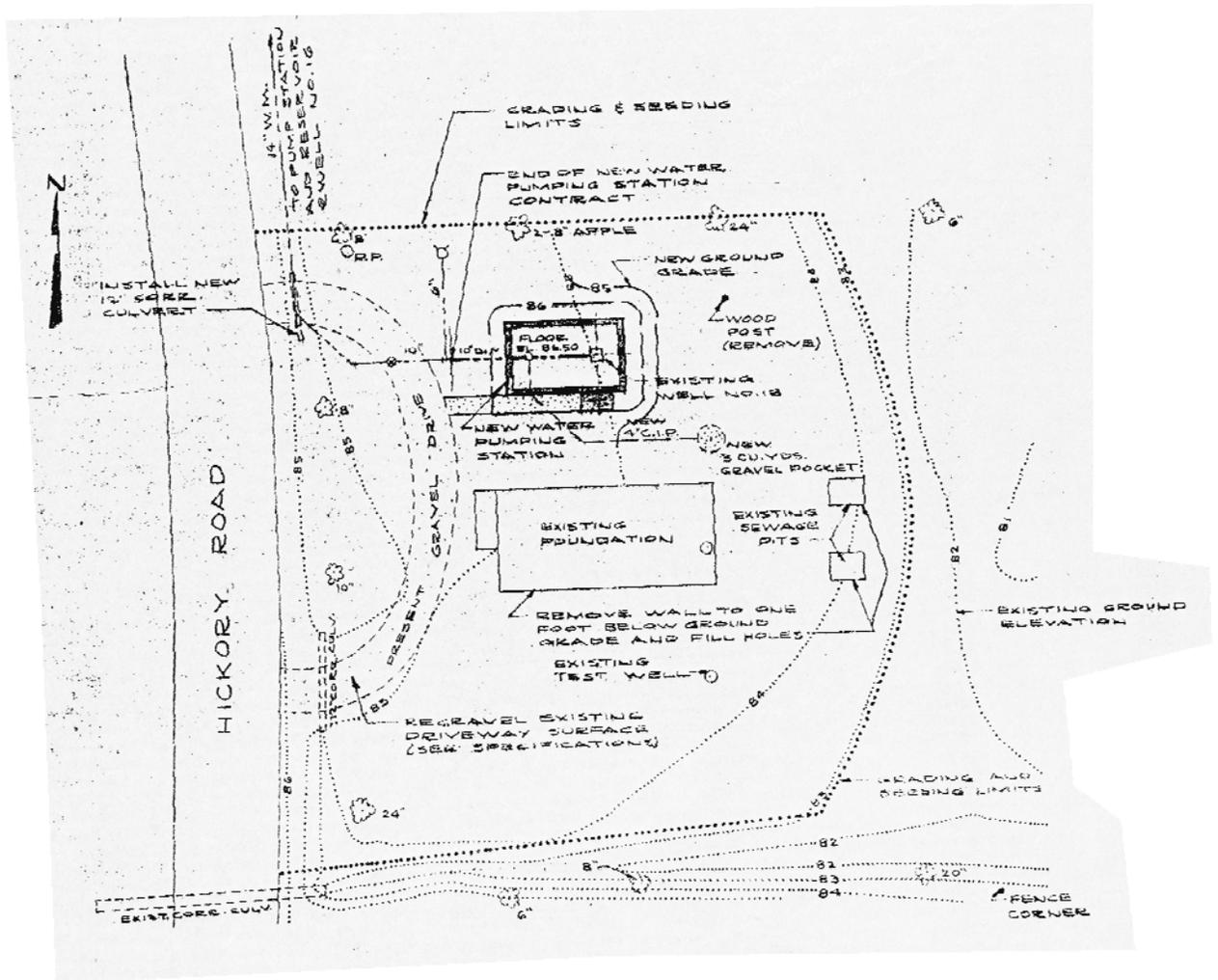
DATE: FEBRUARY 2008  
 DES BY: MDC CHK BY: JSR  
 RECORD DRAWING  
 BY: DATE: CONTRACTOR:

**WELL NO. 17  
 SITE PLAN**

WELL HEAD PROTECTION PLAN  
 CITY OF FOND DU LAC  
 COUNTY OF FOND DU LAC, WISCONSIN



SHEET  
**1**  
 170-C-01  
 JOB NO. 1-063-045



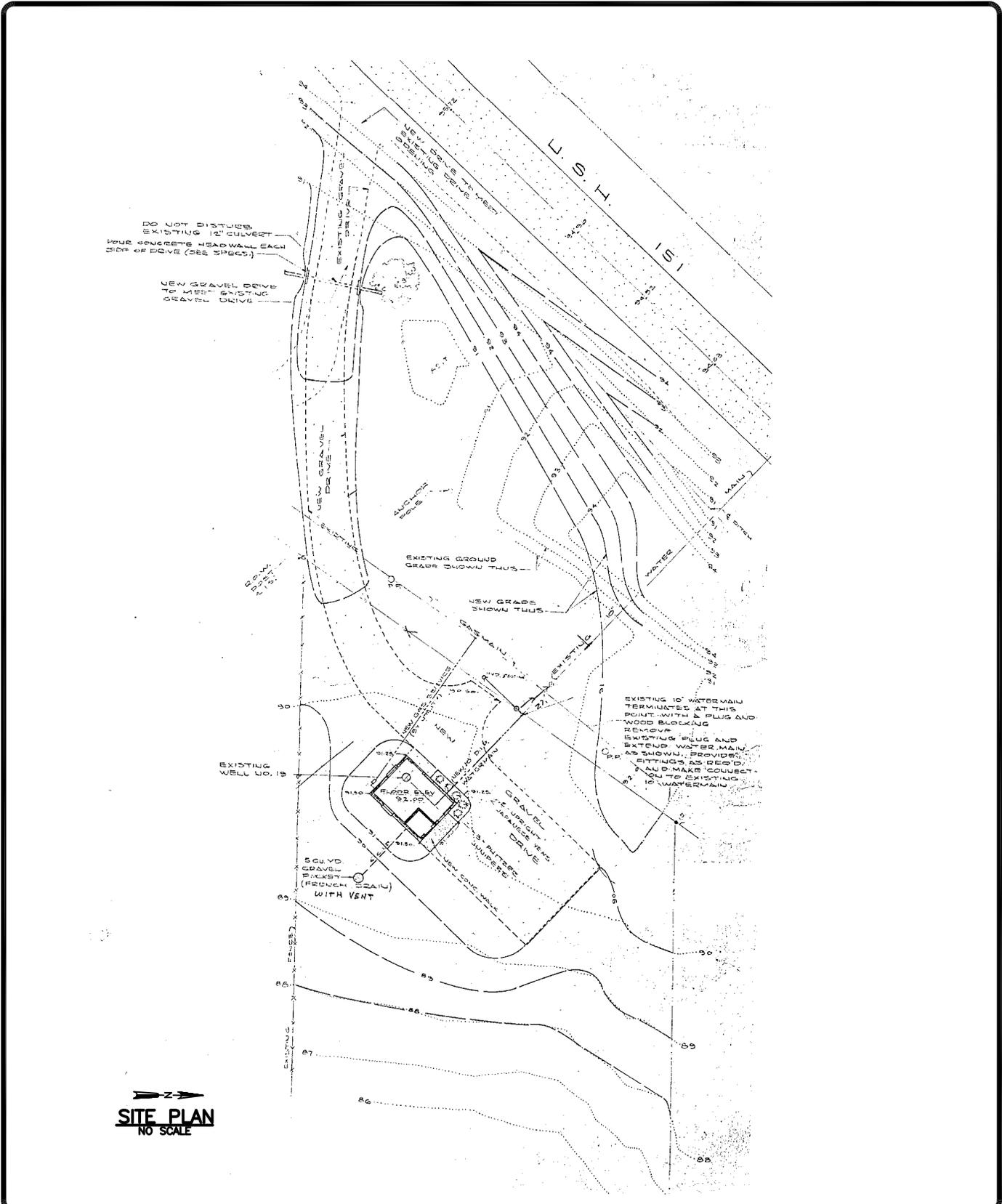
## WELL NO. 18

WELL HEAD PROTECTION PLAN  
CITY OF FOND DU LAC  
COUNTY OF FOND DU LAC, WISCONSIN



FIGURE 1

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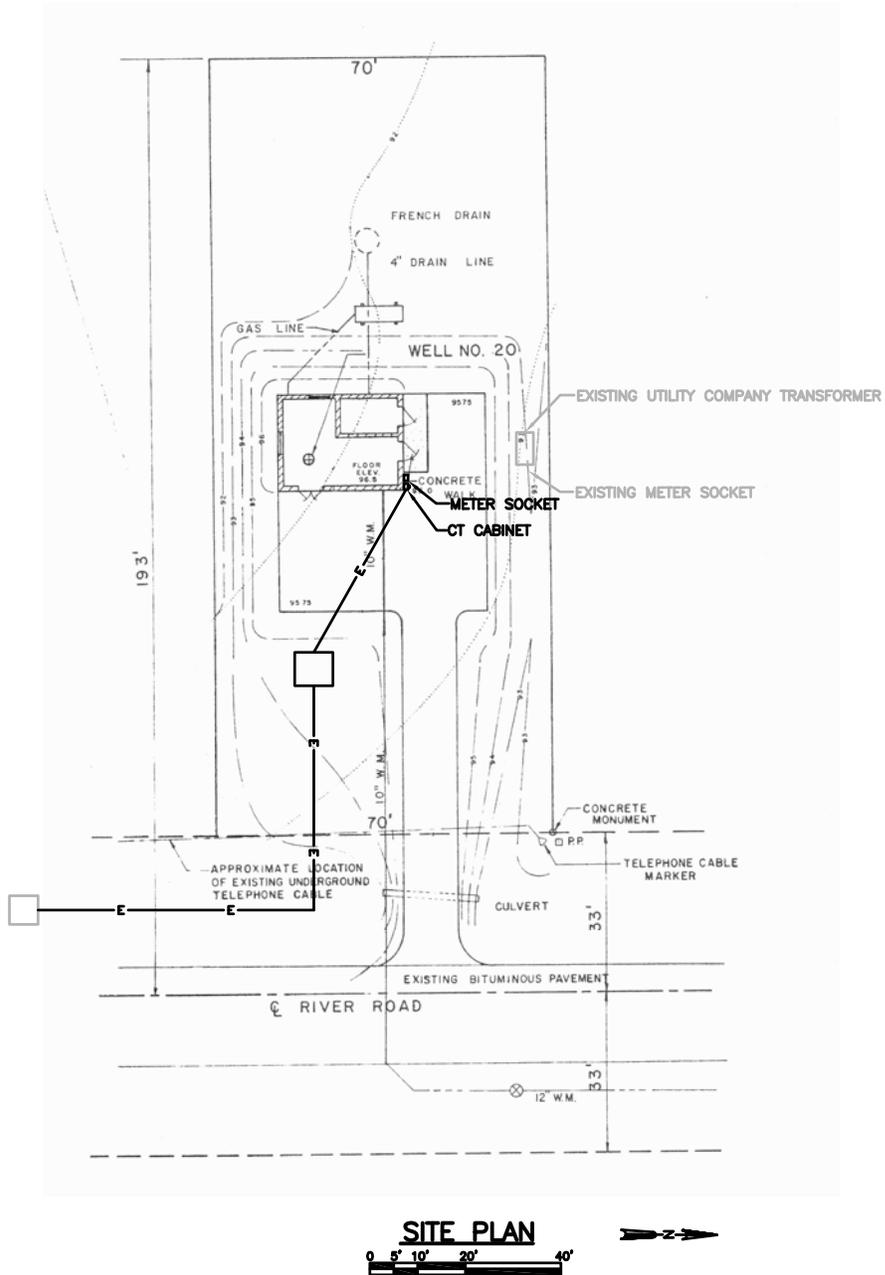
## WELL NO. 19

**WELL HEAD PROTECTION PLAN  
 CITY OF FOND DU LAC  
 COUNTY OF FOND DU LAC, WISCONSIN**



**FIGURE 1**

1-063-045



**WELL NO. 20**  
**WELL HEAD PROTECTION PLAN**  
**CITY OF FOND DU LAC**  
**COUNTY OF FOND DU LAC, WISCONSIN**

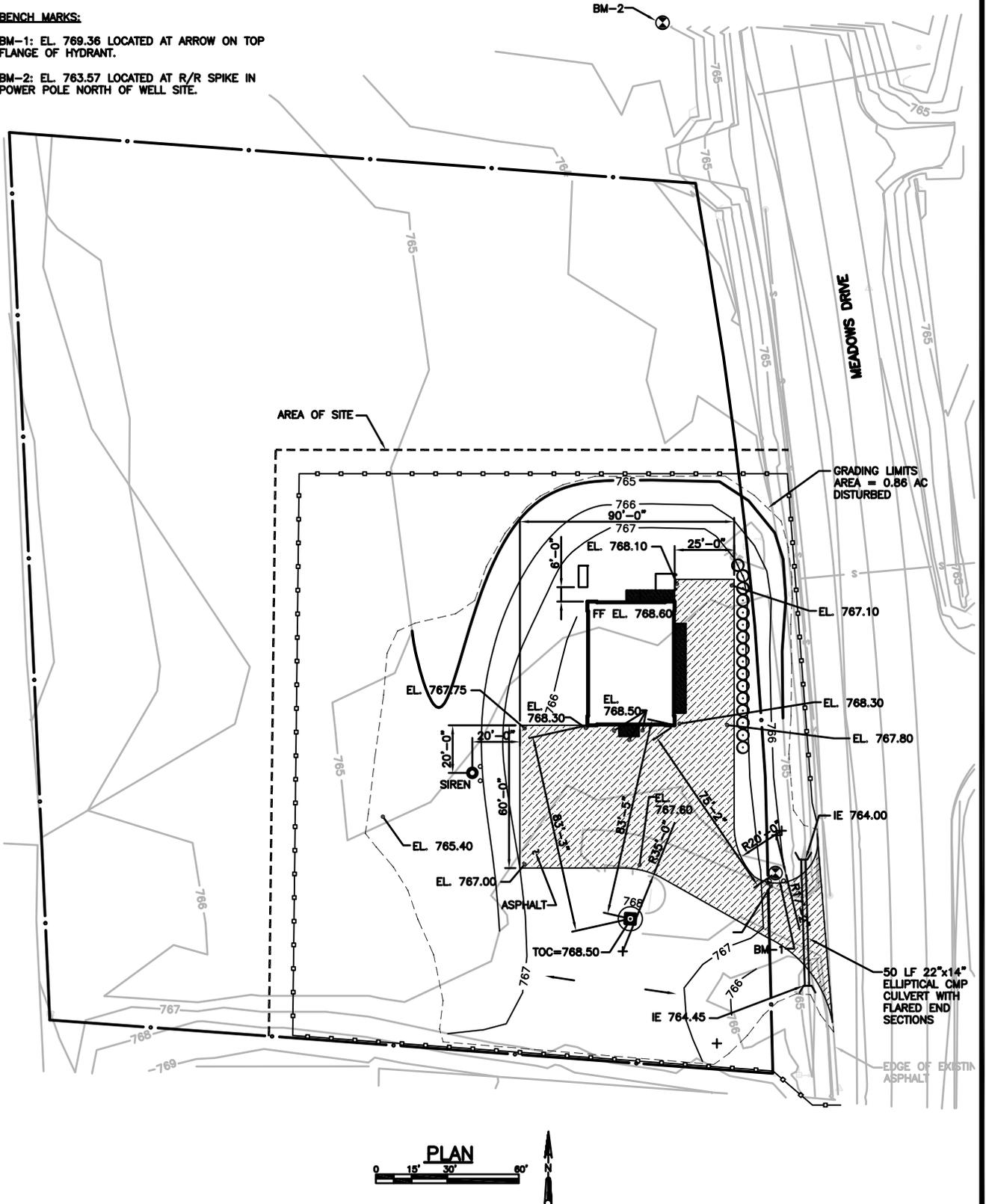


**FIGURE 1**  
1-063-045

**BENCH MARKS:**

BM-1: EL. 769.36 LOCATED AT ARROW ON TOP FLANGE OF HYDRANT.

BM-2: EL. 763.57 LOCATED AT R/R SPIKE IN POWER POLE NORTH OF WELL SITE.



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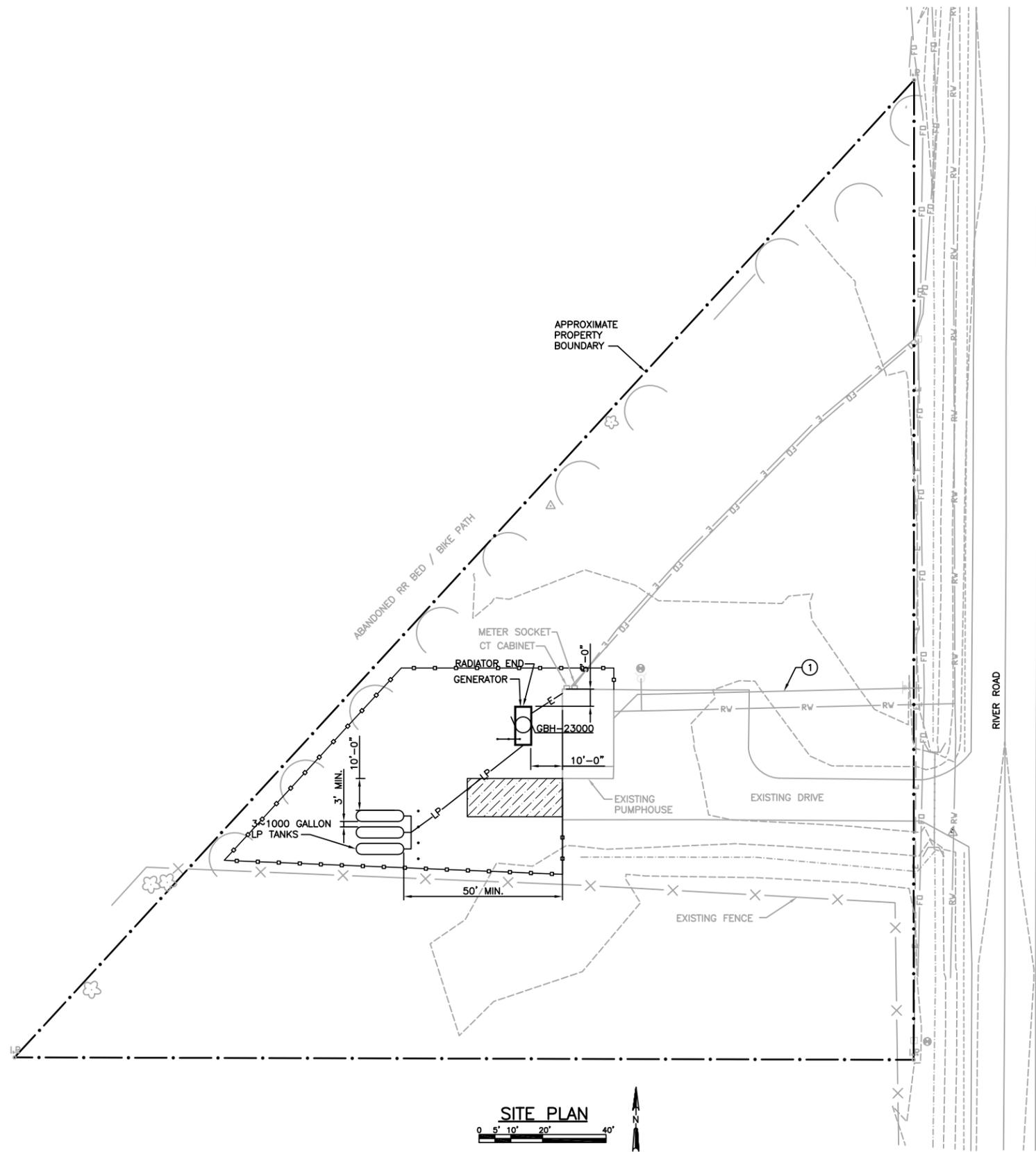
**WELL NO. 21**

**WELL HEAD PROTECTION PLAN  
CITY OF FOND DU LAC  
COUNTY OF FOND DU LAC, WISCONSIN**



**FIGURE 1**

1-063-045



**SITE PLAN**  
 0 5' 10' 20' 40'

**KEY NOTES:**

- ① EXISTING EQUIPMENT DRAIN.

NO.	REVISIONS	DATE:

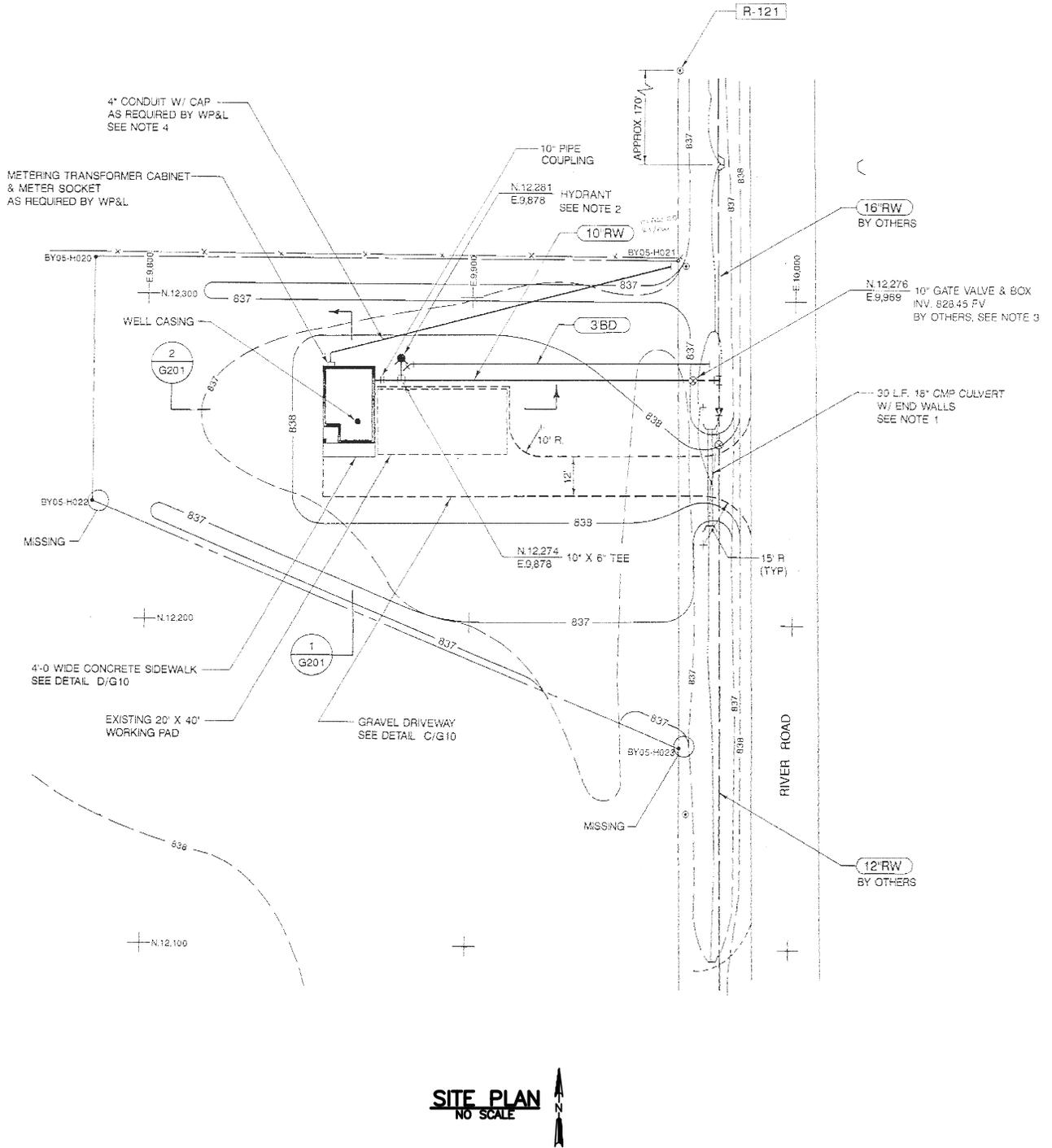
DATE: FEBRUARY 2008  
 DES BY: MDC CHK BY: JSR  
 RECORD DRAWING  
 BY: DATE: CONTRACTOR:

**WELL 23  
 SITE PLAN**  
 WELL HEAD PROTECTION PLAN  
 CITY OF FOND DU LAC  
 COUNTY OF FOND DU LAC, WISCONSIN



SHEET  
**1**  
 230-C-01  
 JOB NO. 1-063-045

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### WELL NO. 24

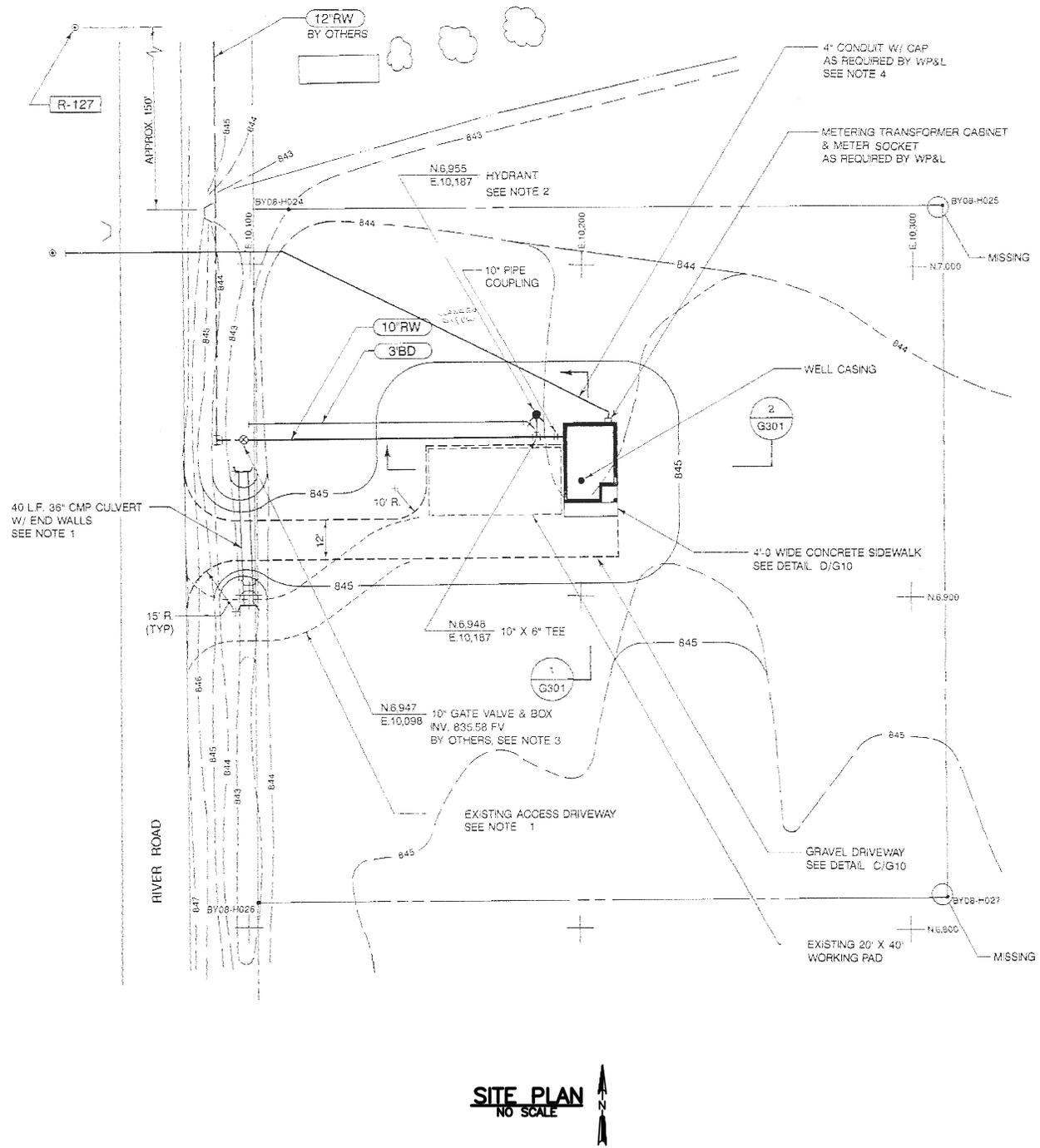
WELL HEAD PROTECTION PLAN  
CITY OF FOND DU LAC  
COUNTY OF FOND DU LAC, WISCONSIN



FIGURE 1

1-063-045

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### WELL NO. 25

**WELL HEAD PROTECTION PLAN  
CITY OF FOND DU LAC  
COUNTY OF FOND DU LAC, WISCONSIN**



**FIGURE 1**  
1-063-045

**APPENDIX C**  
**CONSTRUCTION REPORTS AND FORMATION LOGS**

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CITY WELL NO. 10, FOND DU LAC, WIS.  
 Bischoff and Park Ave.  
 NW 1/4, Sec. 11, T. 15 N., R. 17 E.  
 E. J. Kream, Superintendent of Waterworks  
 W. L. Thorne Co., Contractors, 1932  
 Samples examined by F. T. Thwaites, Nos. 88498-886480  
 Elevation 755 753

D R I N T	100	0-60	60		No samples, red clay	52' water 20" pipe
		60-90	30		Clay, gray, dolomitic	
G A L L E N A P L A T E V.	200	90-100	10		Clay, red, dolomitic	108
		100-165	65		Dolomite, light gray	
		165-185	20		Dolomite, gray, some blue spots	
		185-225	40		Dolomite, gray to light gray, no samples 205-210, 215-220	
		225-230	5		Dolomite, gray, blue spots	
		230-240	10		Dolomite, light gray	
		240-245	5		Dolomite, light gray, some blue-gray layers	
		245-250	15		Dolomite, dark blue-gray	
		250-270	10		Dolomite, light gray, blue spots	
		270-280	10		Dolomite, light gray	
S T P E T E R	190	280-285	5		No sample	375 shot
		285-300	15		Dolomite, light blue-gray	
		300-310	10		Sandstone, coarse to med., lt. gray; sh., kv.	
		310-325	15		Sandstone, medium to fine, light gray	
		325-355	30		Sandstone, medium to fine, light gray, dolomitic	
		355-365	10		Sandstone, coarse to medium, light pink	
		365-370	5		No sample	
		370-380	10		Sandstone, coarse to medium, light pink	
		380-385	5		No sample	
		385-395	10		Sandstone, fine to medium, light pink	
		395-400	5		No sample	
		400-405	5		Sandstone, medium to coarse, very light pink	
		405-440	35		Sandstone, medium to fine, white	
		440-450	10		Sandstone, fine, white	
		450-465	15		Sandstone, medium, light gray and pink, hard	
T R E F R A N C O	115	465-480	15		Conglomerate, chert pebs in ss.; shale, red	650 shot
		480-490	10		Ss., fine, light gray, some hard; shale, red	
		490-495	5		No sample	
		495-500	5		Dolomite, gray and pink, sandy, glauconitic	
		500-520	20		Ss., fine, greenish gray, pink, dol; sh, gn. d.	
		520-550	30		Sandstone, fine, pink and light gray, dolomitic, some glauconitic	
		550-560	10		Sandstone, very fine, light gray, dolomitic	
		560-570	10		Sandstone, very fine, light gray, dol; sh, red, dol.	
		570-575	5		Sandstone, fine, pink and red, dolomitic	
		575-585	10		Sandstone, fine to medium, light gray, dol.	
D R I N T	115	585-605	20		Sandstone, medium to fine, white	
		605-615	10		Sandstone, fine, light gray, dolomitic	
D R I N T	115	615-650	35		Sandstone, fine, white	650 shot
		650-790	140		Sandstone, medium to fine, white	

FL 8  
775 shot

A C H G W	180	790-795	5		Sandstone, fine, light gray
		795-805	10		Sandstone, fine, brownish red (Granite Wash)
	40	805-835	30		Sandstone, fine to coarse, pebbles quartzite
P C	50	835-885	50		Slate, gray, talcose; much soft red slate= ferruginous slate of Huronian

Tested when at 300, water at 56, specific capacity 6.0 g.p.m. per foot of drawdown  
 " " " 885, " " 45 " " 10.22 " " " "  
 " after shooting " " 51.75 " " 13.47 " " " "  
 Entering the sandstones increased capacity by 4.22 Sandstone capacity increased  
 77 percent by shooting but total capacity only 32 percent.  
 Formations: Drift; Galena-Platteville; St. Peter; Trempealeau; Franconia;  
 Dresbach; "granite wash"; pre-Cambrian

# 10

BAULIE WELL (CITY WELL NO. 11), FOND DU LAC, WIS.  
 NE<sub>4</sub> SW<sub>4</sub> NW<sub>4</sub> sec. 10, T. 15 N., R. 17 E. (Site of No. 3 Test Well)  
 E. J. Braun, Supt. of Water Dept.; Fasneger Bros., Drillers, 1945  
 Elevation 755.750  
 Samples examined by F. T. Thwaites, Nos. 125262-125379

F1-9

D R I F T	70	0-20	20		Till, red, dolomitic	20" pipe 16" pipe cemented 70 80 water 75
		20-70	50		Till, stony, gray, dolomitic	
G A L E N A - P L A T T E V I L L E	195	70-180	110		Dolomite, light gray	15" hole
		180-195	15		Dolomite, gray	
		195-215	20		Dolomite, blue-gray	
		215-230	15		Dolomite, gray	
		230-255	25		No samples (dolomite, light gray)	
		255-265	10		Sandstone, fine, gray, dolomitic	
S T P E T E R	185	265-280	15		Sandstone, fine, gray, dolomitic	320 100% 340 "shot
		280-295	15		Sandstone, fine to medium, light gray,	
		295-300	5		No sample (sandstone, medium to fine, lt. gray)	
		300-315	15		Sandstone, medium to fine, light pink	
		315-335	20		Sandstone, medium to fine, light pink	
		335-345	10		No samples (sandstone, medium to fine, lt. gray)	
		345-350	5		Sandstone, medium to fine, light pink	
		350-365	15		No samples (sandstone, med to fine, zv; sh.r)	
		365-380	15		Shale, red	
		380-415	35		No samples (shale, red)	
		415-420	5		Sandstone, fine, red; shale, red	
		T R E M P E A L E A U	45	420-425	5	
425-430	5				Sandstone, fine, red; shale, red	
430-450	20				Sandstone, medium to fine, lt. gy; chert, wha	
450-455	5				Sandstone, medium to fine, light gray	
455-460	5				No sample (ss, fine, yellow-gray, dolomitic)	
460-465	5				Dolomite, pink and gray	
465-515	50				No samples (ss, fine, yl-gy, dol to 475; ss fine-med, lt. gy, dol. to 495; ss, med-crs, to 500; ss, med-fine to 515)	
515-520	5				Sandstone, silty to fine, light gy, dolomitic	
520-540	20				No samples (sandstone, med. to fine, white)	
540-545	5				Sandstone, silty to fine, pink, dolomitic	
F R A N C O N I A	105	545-560	15		Siltstone, light gray, sandy	625 "
		560-565	5		Sandstone, fine to medium, light gray	
		565-580	15		Sandstone, medium to silty, light gray	
		580-595	15		Sandstone, fine to silty, light pink	
		595-600	5		Sandstone, fine to medium, light gray	
		600-615	15		Sandstone, fine to silty, light gray	
		615-625	10		Sandstone, medium to fine, white	
		625-635	10		Sandstone, fine to silty, gray, slightly dol	
D R E S B A C H	150	635-750	115		Sandstone, medium to fine, white	670 "
		750-760	10		Quartzite, pink, gray, glassy	

Formations: Drift; Galena-Platteville; St. Peter; Trempealeau; Franconia; Dresbach; pre-Cambrian  
 Tested, Dec. 7, 1945 before shooting 4 hrs at 822 g.p.m. specific capacity = 28.3 g.p.m./ft.  
 Tested, Mar. 2, 1946 after shooting 16 3/4 hrs at 1280 g.p.m. specific cap. = 34.6 g.p.m./ft.

CITY WELL NO. 12, FOND DU LAC, WIS.

NW 1/4 sec. 10, T. 15 N., R. 17 E. E. side N. Macy St., 252' of S. line. W. Rees St., and 27' W. of reservoir  
 Fassbender Bros., Drillers, 1946 E. J. Braun, Supt.  
 Samples examined by F. T. Thwaites, Nos. 128706-128850

Stratigraphic Unit	Interval	Thickness	Description	Notes
DRIFT	0-35	35	Till, red, dolomitic	18" pipe 16" pipe cemented 91 water
	35-105	70	Till, stony, gray, dolomitic	
GALONA-PLATTEVILLE	105-165	60	Dolomite, light gray	104.3 116 15 1/2" hole
	165-170	5	Dolomite, light gray, blue spots	
	170-195	25	Dolomite, light gray and gray	
	195-215	20	Dolomite, light gray	
	215-225	10	Dolomite, light gray, blue spots	
	225-240	15	Dolomite, blue-gray and gray	
	240-270	30	Dolomite, light gray	
	270-290	20	Dolomite, light gray, blue specks	
ST. PETER	290-300	10	Sandstone, fine to med., gray, lt. gy, dol.	355 shot 385 shot 415 shot all shots 100'
	300-325	25	Sandstone, medium to fine, light gray	
	325-330	5	Sandstone, fine, light gray	
	330-345	15	Sandstone, fine, light pink, gray, dolomitic	
	345-360	15	Sandstone, fine to medium, light gray	
	360-375	15	Sandstone, medium to fine, pink	
	375-385	10	Sandstone, medium to fine, light gray	
	385-395	10	Sandstone, medium to fine, light pink	
	395-405	10	Sandstone, medium to fine, light gray	
	405-420	15	Sandstone, fine to medium, light gray	
FRANCONIA	420-430	10	Sandstone, fine to medium, pink, gray, dol.	all shots 100'
	430-470	40	Shale, red, slightly dolomitic at top	
DRESBACH	470-480	10	Sandstone, fine, pink, dolomitic	80
	480-490	10	Sandstone, fine, light gray	
	490-495	5	Dolomite, light gray, pink	
DRESBACH	495-520	25	Sandstone, very fine, lt. gray, dol., glauc.	80
	520-535	15	Siltstone, light pink, dolomitic	
	535-565	30	Siltstone, pink, dolomitic	
DRESBACH	565-575	10	Sandstone, fine, silty, gray, dolomitic	215
	575-740	215	Sandstone, fine to silty, light gray; no sample 625-630	
FRANCONIA	740-745	5	Quartzite, light gray	

Drift; Galona-Platteville; St. Peter; Trempealeau; Franconia; Dresbach Spec. cap.=16.8 g.p.  
 Tested 24 hours at 907 g.p.m.

CITY WELL NO. 13, FOND DU LAC, WIS.

Lakeside Park, SE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 3, T. 15 N., R. 17 E. 364' W. of  
 W line N. Main St., and 16' N of S Park line. Elev. 750  
 E. J. Braun, Supt. Masbender Bros., Contractors, 1948  
 Samples examined by F. T. Thwaites, Nos. 138630-138784

Stratigraphic Unit	Interval	Thickness	Symbol	Description	Notes
DRIFT	0-10	10	---	Clay, red, dolomitic (fill)	20" pipe 162 pipe cemented 76 water 80 90
	10-35	25	•••••	Till, red, dolomitic	
	35-40	5	---	Clay, red, dolomitic	
	40-65	25	•••••	Till, stony, gray	
GALENA	65-79	14	▧	Dolomite, light gray, broken	15" hole
	79-210	131	▧	Dolomite, light gray	
	210-230	20	▧	Dolomite, blue-gray	
	230-275	45	▧	Dolomite, gray to light gray	
	275-285	10	▧	Dolomite, gray, sandy; shale, gray	
	285-290	5	•••••	Sandstone, coarse to fine, lt. gray, dolomitic	
SPELTER	290-300	10	•••••	Sandstone, fine to medium, light gray	310 shot 330 shot 350 shot
	300-325	25	•••••	Sandstone, medium to fine, light gray	
	325-345	20	•••••	Sandstone, fine to medium, light gray	
	345-355	10	•••••	Sandstone, medium to fine, light gray	
	355-375	20	▧	Shale, sandy, red, dolomitic	
	375-385	10	•••••	Sandstone, medium to fine, gray, dolomitic	
	385-435	50	▧	Dolomite, light gray	
	435-445	10	•••••	Sandstone, fine, silty, red, dolomitic	
	445-460	15	•••••	Sandstone, fine to medium, light gray, dol.	
	460-480	20	▧	Siltstone, red, dolomitic	
MPP	480-485	5	▧	Siltstone, gray, dolomitic	555 shot
	485-505	20	▧	Siltstone, red, dolomitic	
	505-540	35	•••••	Sandstone, fine, silty, pink, gray, dolomitic	
FRANCON	540-550	10	▧	Siltstone, red, dolomitic	638 shot
	550-555	5	•••••	Sandstone, fine, silty, pink-gray, dolomitic	
	555-590	35	•••••	Sandstone, fine, light gray	
	590-605	15	•••••	Sandstone, fine, silty, red	
DRESBACH	605-635	30	•••••	Sandstone, fine, silty, light gray	735 shot
	635-655	20	•••••	Sandstone, fine to medium, light gray	
	655-710	55	•••••	Sandstone, fine, silty, light gray	
	710-755	45	•••••	Sandstone, fine, silty, pink	

City well No. 13, Fond du Lac, Wis., p. 2

185	755-790	35		Sandstone, fine, very silty, pink
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Formations: Drift; Lena-Platteville; St. Peter; Lower Magnesian (Prairie du Chien);  
 Trempealeau Franconia; Dresbach (Galesville and possibly some Eau Claire)  
 Tested 24 hours at 900 g.p.m. specific capacity = 8.42 g.p.m./ft.

CITY WELL NO. 14, FOND DU LAC, WIS.  
 McDermot Park C. NE 1/4 SE 1/4 sec. 11, T. 15 N.; R. 17 E.  
 Miller Well and Pump Co., Contractors, 1953.  
 Consoer, Townsend & Associates, Engineers  
 Samples examined by F. T. Thwaites, Nos. 159114-159279

Alt 757'

DRIFT	105	0-15	15	Till, red, dolomitic	24" pipe
		15-105	90	Till, gray, dolomitic	59 water
					16" pipe cemented by Holland
GALENA-PLATEVILLE	240	105-125	20	Dolomite, light gray, broken, some drift	143.75 23" hole 154.66
		125-135	10	Dolomite, light gray, some blue	
		135-215	80	Dolomite, light gray	
		215-225	10	Dolomite, light gray and gray	
		225-240	15	Dolomite, light gray	
		240-250	10	Dolomite, light gray, some blue; chert, white	
		250-270	20	Dolomite, light gray, some gray, blue-gray	
		270-285	15	Dolomite, blue-gray, some light gray	
		285-330	45	Dolomite, light gray	
		ST. PETER	160	330-345	
345-360	15			Sandstone, fine to medium, light gray	
360-370	10			Sandstone, medium to fine, light gray	
370-380	10			Sandstone, medium to fine, light pink	
380-395	15			Sandstone, fine to medium, light gray	
395-415	20			Sandstone, fine to medium, light pink	
415-430	15			Sandstone, medium to fine, light gray, pink	
430-450	20			Sandstone, fine to medium, light gray	
450-455	5			Sandstone, fine to coarse, pink, dolomitic	
455-465	10			Shale, red	
TR	35	465-480	15	Shale, silty, red, some dol.; chert, white	579 12" hole
		480-505	25	Shale, red	
FRANCO	80	505-540	35	Siltstone, pink, lt. gray, green-gray, dolomitic	690 200 lb. shot
		540-555	15	Sandstone, very fine, light pink, dolomitic	
		555-560	5	Sandstone, very fine, silty, green gy, pink	
		560-570	10	Siltstone, sandy, pink, dolomitic	
		570-585	15	Sandstone, very fine, pink, dolomitic	
		585-595	10	Sandstone, fine, light pink, dolomitic	
		595-610	15	Sandstone, fine to medium, light gray	
		610-620	10	Sandstone, fine to medium, gray, sl. dolomitic	
DESBACH		620-645	25	Sandstone, very fine, silty, light gray	
		645-655	10	Sandstone, fine to medium, light gray	
		655-665	10	Sandstone, fine to very fine, light gray	
		665-675	10	Sandstone, fine, light gray	
		675-685	10	Sandstone, fine to very fine, light gray	
		685-695	10	Sandstone, fine to medium, light gray	
		695-705	10	Sandstone, fine to very fine, light gray	
		705-745	40	Sandstone, fine, some silt, light gray	

745-795	50		Sandstone, fine to medium, light gray	1-775 shot, 300 lbs
795-805	10		Sandstone, medium to fine, light gray	805 shot, 300 lbs.
805-810	5		Sandstone, fine to medium, light gray	
205 810-825	15		Sandstone, very coarse to fine, silty, red	
10 825-835	10		Quartzite, light gray to pink	

Formations: Drift; Galena-Platteville; St. Peter; Trempealeau; Franconia; Dresbach;  
pre-Cambrian (Huronian)

Tested, depth 444 at 134 g.p.m. specific capacity = 1.35 g.p.m./ft.

Tested, depth 835 at 280 g.p.m. specific capacity = 2.03 g.p.m./ft.

Tested after shooting at 380 g.p.m. specific capacity = 2.93 g.p.m./ft.

CITY WELL NO. 15, FOND DU LAC, WIS.

West Bank and Macy Sts. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 10, T. 15 N., R. 17 E.  
 Conocer, Townsend and Assoc., Engineers Miller Well and  
 Pump Co., Contractors; Fasbender Bros. Drillers, 1952  
 Samples examined by F. T. Thwaites, Nos. 158835-159001

Alt. = 753'

D R I F T	0-15	15		Clay, pink, dolomitic	24" pipe 16" pipe cemented		
	15-35	20		Till, pink, dolomitic			
	35-80	45		Till, gray, dolomitic, stony			
80					90 95 water 101		
G A L E N A - P L A T T E V I L	80-180	100		Dolomite, light gray	15 1/2" hole		
	180-190	10		Dolomite, light gray, blue specks			
	190-230	40		Dolomite, light gray			
	230-240	10		Dolomite, blue-gray			
	240-260	20		Dolomite, light gray and gray			
	260-285	25		Dolomite, light gray			
	220	285-300	15			Sandstone, medium to fine, very dol. gy. bugy	
	300-310	10		Sandstone, medium to fine, light gray			
	S T P R T E R	310-330	20			Sandstone, fine to medium, light gray, sl. dol	+327 1/2 shot 100'
		330-355	25			Sandstone, fine to medium, light gray, pink, part dolomitic	
355-385		30		Sandstone, medium to fine, light gray to pink, part dolomitic	+365 shot		
385-410		25		Sandstone, fine to medium, light gray	+390 shot		
130		410-430	20		Shale, silty, red		
T R E F R A N C O N		430-470	40		Siltstone, pink to red, very dolomitic		
	40	470-480	10		Sandstone, very fine, pink, dolomitic		
	480-540	60		Siltstone, sandy, red to pink, very dolomitic			
	540-575	35		Sandstone, very fine, silty, pink, dolomitic			
	120	575-590	15		Sandstone, fine, pink, dolomitic		
D R E S B A C H	590-620	30		Sandstone, fine to medium, light pink, dolomitic	+685 shot  +732 1/2 shot		
	620-655	35		Sandstone, fine to medium, silty, light pink, to light gray			
	655-665	10		Sandstone, fine to silty, light gray			
	665-685	20		Sandstone, medium to fine, silty, light gray			
	685-740	55		Sandstone, fine to medium, silty, light gray			
	740-750	10		Sandstone, fine to medium, silty, light gray			

	750-760	10	Sandstone, medium to fine, silty, light gray	777 shot 125#
	760-775	15	Sandstone, fine to medium, light gray	
	775-785	10	Sandstone, medium to fine, light gray	
	785-805	20	Sandstone, fine to medium, light gray	
220	805-810	5	Conglomerate, qz. pebs in ss, coarse, red	
P 15	810-825	15	Quartzite, light gray to light pink	

Formations: Drift; Galena-Platteville; St. Peter; Trempealeau; Franconia; Dresbach; pre-Cambrian (Huronian)

Tested 24 hours at 425 specific capacity = 5.51; tested at total depth for 24 hours at 525 g.p.m. specific capacity = 5.89 g.p.m./ft.; tested after shooting at 975 g.p.m. specific capacity = 9.46 g.p.m./ft.

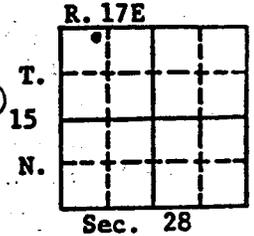
County: Fond du Lac

Well name City of Fond du Lac, Wis., Well #16

Owner.... City of Fond du Lac, Wis.  
 Address.. Clerk, City Hall, Fond du Lac, Wis.

Driller.. Layne-Northwest Co.  
 Engineer. Donohue & Assoc., Inc.  
 Sheboygan, Wisconsin

Completed... 5-65  
 Field check.  
 Altitude.... 810.50' (Approx)  
 Use..... Municipality  
 Static w. 1.35 feet  
 Spec. cap... 2.6



Quad. Fond du Lac

Drill Hole						Casing & Liner Pipe or Curbing							
Dia.	from	to	Dia.	from	to	Dia.	Wgt. & Kind	from	to	Dia.	Wgt. & Kind	from	to
20"	0	164'9"				20"	steel	+2'	164'9"				
19½"	164'9"	968'				16"	steel, 3/8 wall	+27"	402'3"				
Grout: Kind												from	to
Neat cement												+2'	402'3"

Samples from 0 to 970' Date received: 3-2-66  
 Sample Nos. 263081 to 263274 Examined by: Joan M. Warren Date: 2-23-67  
 Formations: Drift, Platteville-Galena, St. Peter, Prairie du Chien, Cambrian  
 Undifferentiated, Precambrian  
 Remarks: Well tested for 12 hours at 720 gpm with 281 feet of drawdown.

LOG OF WELL:

Interval	Depth	Description
0-30	30	Cl, rd bn, P srtg, dolic; mch Vfn snd, tr fn gvl
30-45	15	Cl, rd bn, P srtg, dolic; ltl st & Vfn snd, tr M & C gvl
45-50	5	Cl, rd bn, P srtg, dolic; tr st & Vfn snd, tr fn/VC & Vfn gvl
50-55	5	Cl, gry rd, P srtg, dolic; ltl st, Vfn snd, tr fn/VC, tr M gvl
55-65	10	Cl, gry rd, P srtg, dolic; ltl st, ltl Vfn snd, tr fn/VC, mch M gvl
65-75	10	Cl, rd bn, P srtg, dolic; ltl st & Vfn snd, tr M gvl
75-80	5	Cl, gry mot rd, P srtg, dolic; ltl st & Vfn snd, ltl fn gvl
80-90	10	Cl, gry mot rd, P srtg, dolic; ltl st & Vfn snd, tr fn/VC, tr fn gvl
90-110	20	Cl, rd bn, P srtg, dolic; ltl st & Vfn snd, tr fn/C, ltl VC & fn gvl
110-130	20	Cl, vl bn, P srtg, dolic; tr st & Vfn snd, tr fn/C, ltl VC, mch fn gvl
130-135	5	Cl, vl bn, P srtg, dolic; mch st & Vfn snd, tr fn/C, mch VC, mch Vfn gvl
135-140	5	St, vl bn, C; mch cl, fn & Vfn snd, ltl M & C, tr VC, ltl fn gvl
140-150	10	Snd, vl bn & mxd cl, VC, ltl C, tr Vfn/M, mstly dol; mch gn gvl
150-155	5	St, vl bn & mxd cl, C, dolic; mch cl, mch Vfn/M snd, ltl C & VC, tr fn gvl
155-160	5	St, vl bn & mxd cl, C, dolic; mch cl, mch Vfn/VC & fn gvl
160-165	5	Dol, pl vl bn, Vfn, dns, tr M & fn, wea; tr pyr & cvd snd

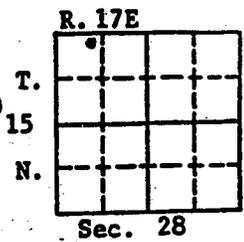
Well name City of Fond du Lac, Wis., Well #16  
 Sample Nos. 263081 to 263274

G A L E N A - P L A T E V I L L E	165-195	30		Dol. pl yl bn. Vfn. dns. tr C; tr pyr & cvd snd
	195-205	10		Dol. pl yl bn. fn & Vfn. dns. tr M; tr pyr. cvd snd & st
	205-215	10		Dol. pl yl gry. fn & Vfn. sft. ltl dns. tr M; tr lim & cvd snd
	215-220	5		Dol. pl yl gry. fn & Vfn. dns. tr M; tr pyr. st & cvd snd
	220-225	5		Dol. pl yl gry. fn & Vfn. dns. tr M; tr pyr. st & cht
	225-235	10		Dol. pl yl bn mot pl yl gry. fn & Vfn. dns. tr M; tr pyr. st & cht
	235-255	20		Dol. pl yl bn mot pl yl gry. fn & Vfn. dns. tr M; tr pyr. st & cht
	255-265	10		Dol. pl yl bn mot pl yl gry. fn. dns. tr por & M; tr pyr & st
	265-270	5		Dol. pl yl bn mot pl yl gry. fn. dns. tr Vfn & M; tr pyr. st & gry sh
	270-285	15		Dol. Vpl yl bn. fn. dns. tr mot. tr Vfn. ltl M; tr pyr & st
	285-290	5		Dol. Vpl yl bn. fn. dns. ltl mot. tr Vfn. ltl M; tr pyr & st
	290-295	5		Dol. Vpl yl bn. fn. dns. ltl mot. tr Vfn. ltl M;
	295-300	5		Dol. Vpl yl bn. fn. dns. tr mot. tr Vfn. ltl M; tr pyr & st
	300-320	20		Dol. Vpl yl bn. fn. dns. ltl mot. tr Vfn & C. ltl M; tr fossif
	320-330	10		Dol. gry mot pl yl bn. fn. dns. tr Vfn & M; tr pyr. gry sh & st
	330-335	5		Dol. gry mot pl yl bn. fn. dns. tr Vfn & M;
	335-340	5		Dol. gry mot pl yl bn. fn & Vfn. dns. tr Vfn & M; tr foss frags
	340-345	5		Dol. gry mot pl yl bn. fn & Vfn. dns. tr Vfn & M; tr pyr
	345-350	5		Dol. pl yl bn mot gry. fn & Vfn. dns; tr pyr. st & cht
	350-365	15		Dol. pl yl bn mot gry. fn & Vfn. dns; tr pyr. st & cht
	365-370	5		Dol. pl yl bn. Vfn. dns. tr fn. tr mot; tr pyr & foss frags
	370-375	5		Dol. pl yl bn. Vfn. dns. tr fn. M & C. tr mot; tr pyr
	220 375-380	5		Dol. pl yl bn mot gry. Vfn. dns;
	380-385	5		Ss. yl gry. C. rnd. P srtg. F dol-cem P pyr-cem. mchM&VC. tr fn&V
	385-390	5		Ss. yl gry. C. rnd. P srtg. dol-cem P pyr-cem. mchM. ltl VC. tr fn&V
	220 390-400	10		Ss. yl gry. C. F dol-cem. P pyr-cem. mchM. ltl VC. tr Vfn&fn; ltl dol&pyr
	400-410	10		Ss. or pnk. M&fn. Sang. P srtg. P lim-cem. ltl C. tr Vfn&VC; mch lim. tr
	410-415	5		Ss. or pnk. M&fn. P lim-cem. mchC. ltl VC. tr Vfn; mch lim. tr Si-cem. gn&V
	415-420	5		Ss. or pnk. M&fn. P lim-cem. ltl C. tr VC&Vfn; ltl lim. Si- & pyr-cem
	420-430	10		Ss. or pnk. M&fn. P lim-cem. mchC. tr VC&Vfn; mch lim. tr pyr & rd sh
	430-435	5		Ss. gry pnk. M&fn. slight dolc. ltl C&Vfn; mch st
	435-445	5		Ss. gry pnk. M. P lim-cem; mch C. ltl fn; ltl lim-cem. tr dol. pyr&sh
	445-450	5		Ss. gry pnk. M&C. P lim-cem. ltl fn; ltl lim-cem. tr rd sh & Si-cem
	60 450-460	10		Sh. rn bn. tr mot pl gn; ltl st. Vfn & fn snd. tr M&C. tr Si-cem Ss
	460-465	5		Dol. Vpl or mot gry. Vfn. ltl fn. dns; mch M & C snd. ltl Vfn & fn
465-470	5		Dol. Vpl or mot gry. Vfn. ltl fn. dns; mchC&Vfn. ltl Vfn&fn (in dol) ltl st	
470-475	5		Dol. Vpl or mot gry. Vfn. ltl fn. dns; mchfn/C&Vfn. tr pyr. gn&rd sh&dol	
475-490	15		mch fn. ltl Vfn; mch cht. ltl st. ltl	
490-495	5		Ss. Vpl or. M&C. P dol-cem. gn sh & dol. tr rd sh	
495-505	10		Dol. Vpl yl bn mot pl or. fn&Vfn. dns. tr M; mch loose M&C snd. ltl cht	
505-510	5		Dol. Vpl yl bn mot wh&or pnk. fn&Vfn. dns. ltl M; ltl Vfn&C. ltl cht. tr	
510-515	5		Dol. Vpl yl bn mot wh&or pnk. fn&Vfn. dns. ltl M; ltl Vfn&C. tr Fe s.	
515-525	10		Dol. lt ol gry. fn. dns. ltl M; ltl fn&Vfn snd. tr M/VC. tr pyr&Fe sta	
525-550	25		Dol. yl gry. fn. dns. ltl M; mch Vfn/M snd. tr C&VC & pyr	
550-560	10		Dol. Vpl or mot lt ol gry. fn&Vfn. dns. ltl M; ltl fn. tr M	

County: Fond du Lac

Well name City of Fond du Lac, Wis., Well #16  
 Owner.... City of Fond du Lac, Wis.  
 Address.. Clerk, City Hall, Fond du Lac, Wis.  
 Driller.. Layne-Northwest Co.  
 Engineer. Donohue & Assoc., Inc.  
 Sheboygan, Wisconsin

Completed... 5-65  
 Field check.  
 Altitude.... 810.50' (Approx)  
 Use..... Municipality  
 Static w. 1.35 feet  
 Spec. cap... 2.6



Quad. Fond du Lac

Drill Hole						Casing & Liner Pipe or Curbing							
Dia.	from	to	Dia.	from	to	Dia.	Wgt. & Kind	from	to	Dia.	Wgt. & Kind	from	to
20"	0	164'9"				20"	steel	2'	164'9"				
19 1/2"	164'9"	968'				16"	steel, 3/8 wall	+27"	402'3"				
Grout: Kind												from	to
Neat cement												2'	402'3"

Samples from 0 to 970' Date received: 3-2-66  
 Sample Nos. 263081 to 263274 Examined by: Joan M. Warren Date: 2-23-67  
 Formations: Drift, Platteville-Galena, St. Peter, Prairie du Chien, Cambrian  
 Undifferentiated, Precambrian  
 Remarks: Well tested for 12 hours at 720 gpm with 281 feet of drawdown.

LOG OF WELL:

Interval	Depth	Stratigraphic Unit	Description
0-30	30	Cl.	rd bn, P srtg, dolic; mch Vfn snd, tr fn gvl
30-45	15	Cl.	rd bn, P srtg, dolic; ltl st & Vfn snd, tr M & C gvl
45-50	5	Cl.	rd bn, P srtg, dolic; tr st & Vfn snd, tr fn/VC & Vfn gvl
50-55	5	Cl.	gry rd, P srtg, dolic; ltl st, Vfn snd, tr fn/VC, tr M gvl
55-65	10	Cl.	gry rd, P srtg, dolic; ltl st, ltl Vfn snd, tr fn/VC, mch M gvl
65-75	10	Cl.	rd bn, P srtg, dolic; ltl st & Vfn snd, tr M gvl
75-80	5	Cl.	gry mot rd, P srtg, dolic; ltl st & Vfn snd, ltl fn gvl
80-90	10	Cl.	gry mot rd, P srtg, dolic; ltl st & Vfn snd, tr fn/VC, tr fn gvl
90-110	20	Cl.	rd bn, P srtg, dolic; ltl st & Vfn snd, tr fn/C, ltl VC & fn gvl
110-130	20	Cl.	yl bn, P srtg, dolic; tr st & Vfn snd, tr fn/C, ltl VC, mch fn gvl
130-135	5	Cl.	yl bn, P srtg, dolic; mch st & Vfn snd, tr fn/C, mch VC, mch Vfn gvl
135-140	5	St.	yl bn, C; mch cl, fn & Vfn snd, ltl M & C, tr VC, ltl fn gvl
140-150	10	Snd.	yl bn & mxid cl, VC, ltl C, tr Vfn/M, mstly dol; mch gn gvl
150-155	5	St.	yl bn & mxid cl, C, dolic; mch cl, mch Vfn/M snd, ltl C & VC, tr fn gvl
155-160	5	St.	yl bn & mxid cl, C, dolic; mch cl, mch Vfn/VC & fn gvl
160-165	5	Dol.	pl yl bn, Vfn, dns, tr M & fn, wea; tr pyr & cvd snd

Well name City of Fond du Lac, Wis., Well #16  
 Sample Nos. 263081 to 263274

G A L E N A - P L A T T E V I L L E	165-195	30		Dol. pl yl bn. Vfn. dns. tr C; tr pyr & cvd snd
	195-205	10		Dol. pl yl bn. fn & Vfn. dns. tr M; tr pyr. cvd snd & st
	205-215	10		Dol. pl yl gry. fn & Vfn. sft. ltl dns. tr M; tr lim & cvd snd
	215-220	5		Dol. pl yl gry. fn & Vfn. dns. tr M; tr pyr. st & cvd snd
	220-225	5		Dol. pl yl gry. fn & Vfn. dns. tr M; tr pyr. st & cht
	225-235	10		Dol. pl yl bn mot pl yl gry. fn & Vfn. dns. tr M; tr pyr. st & cht
	235-255	20		Dol. pl yl bn mot pl yl gry. fn & Vfn. dns. tr M; tr pyr. st & cht
	255-265	10		Dol. pl yl bn mot pl yl gry. fn. dns. tr por & M; tr pyr & st
	265-270	5		Dol. pl yl bn mot pl yl gry. fn. dns. tr Vfn & M; tr pyr. st & gry sh
	270-285	15		Dol. Vpl yl bn. fn. dns. tr mot. tr Vfn. ltl M; tr pyr & st
	285-290	5		Dol. Vpl yl bn. fn. dns. ltl mot. tr Vfn. ltl M; tr pyr & st
	290-295	5		Dol. Vpl yl bn. fn. dns. ltl mot. tr Vfn. ltl M;
	295-300	5		Dol. Vpl yl bn. fn. dns. tr mot. tr Vfn. ltl M; tr pyr & st
	300-320	20		Dol. Vpl yl bn. fn. dns. ltl mot. tr Vfn & C. ltl M; tr fossif
	320-330	10		Dol. gry mot pl yl bn. fn. dns. tr Vfn & M; tr pyr. gry sh & st
	330-335	5		Dol. gry mot pl yl bn. fn. dns. tr Vfn & M;
	335-340	5		Dol. gry mot pl yl bn. fn & Vfn. dns. tr Vfn & M; tr foss frags
	340-345	5		Dol. gry mot pl yl bn. fn & Vfn. dns. tr Vfn & M; tr pyr
	345-350	5		Dol. pl yl bn mot gry. fn & Vfn. dns; tr pyr. st & cht
	350-365	15		Dol. pl yl bn mot gry. fn & Vfn. dns; tr pyr. st & cht
	365-370	5		Dol. pl yl bn. Vfn. dns. tr fn. tr mot; tr pyr & foss frags
	370-375	5		Dol. pl yl bn. Vfn. dns. tr fn. M & C. tr mot; tr pyr
	220 375-380	5		Dol. pl yl bn mot gry. Vfn. dns;
	380-385	5		Ss. yl gry. C. rnd. P srtg. F dol-cem P pyr-cem. mchM&VC. tr fn&V
	385-390	5		Ss. yl gry. C. rnd. P srtg. dol-cem P pyr-cem. mchM. ltl VC. tr fn&V
	60 390-400	10		Ss. yl gry. C. F dol-cem. P pyr-cem. mchM. ltl VC. tr Vfn&fn; ltl dol&pyr
	400-410	10		Ss. or pnk. M&fn. Sang. P srtg. P lim-cem. ltl C. tr Vfn&VC; mch lim. tr
	410-415	5		Ss. or pnk. M&fn. P lim-cem. mchC. ltl VC. tr Vfn; mch lim. tr Si-cem. gn&r
	415-420	5		Ss. or pnk. M&fn. P lim-cem. ltl C. tr VC&Vfn; ltl lim. Si- & pyr-cem
	420-430	10		Ss. or pnk. M&fn. P lim-cem. mchC. tr VC&Vfn; mch lim. tr pyr & rd sh
	430-435	5		Ss. gry pnk. M&fn. sight dolc. ltl C&Vfn; mch st
	435-445	5		Ss. gry pnk. M. P lim-cem; mch C. ltl fn; ltl lim-cem. tr dol. pyr&sh
	445-450	5		Ss. gry pnk. M&C. P lim-cem. ltl fn; ltl lim-cem. tr rd sh & Si-cem
	60 450-460	10		Sh. rn bn. tr mot pl gn; ltl st. Vfn & fn snd. tr M&C. tr Si-cem Ss
	460-465	5		Dol. Vpl or mot gry. Vfn. ltl fn. dns; mch M & C snd. ltl Vfn & fn
465-470	5		Dol. Vpl or mot gry. Vfn. ltl fn. dns; mchC&Vfn. ltl Vfn&fn (in dol) ltl st	
470-475	5		Dol. Vpl or mot gry. Vfn. ltl fn. dns; mchfn/C&Vfn. tr pyr. gn&rd sh&do	
475-490	15		mch fn. ltl Vfn; mch cht. ltl st. ltl	
490-495	5		Ss. Vpl or. M&C. P dol-cem. gn sh & dol. tr rd sh	
495-505	10		Dol. Vpl yl bn mot pl or. fn&Vfn. dns. tr M; mch loose M&C snd. ltl cht	
505-510	5		Dol. Vpl yl bn mot wh&or pnk. fn&Vfn. dns. ltl M; ltl Vfn&C. ltl cht. tr	
510-515	5		Dol. Vpl yl bn mot wh& or pnk. fn&Vfn. dns. ltl M; ltl Vfn&C. tr Fe st	
515-525	10		Dol. lt ol gry. fn. dns. ltl M; ltl fn&Vfn snd. tr M/VC. tr pyr&Fe stn	
525-550	25		Dol. yl gry. fn. dns. ltl M; mch Vfn/M snd. tr C&VC & pyr	
550-560	10		Dol. Vpl or mot lt ol gry. fn&Vfn. dns. ltl M; ltl fn. tr M	

Well name City of Fond du Lac, Wis., Well #16  
 Sample Nos. 263081 to 263274

C A M B R I A N U N D I F F E R E N T I A T E D	560-565	5		Dol, Vpl or mot lt ol gry, fn&Vfn, dns, lt	
	565-570	5	G	Dol, Vpl or mot lt ol gry, fn&Vfn, dns, lt	M; ltl fn, Vfn&M, tr C, pyr&rd
	570-575	5	G	Dol, Vpl or mot lt ol gry, fn&Vfn, dns, lt	M; ltl fn, Vfn&M, tr C, pyr&rd
	575-580	5	G	Ss, pl or pnk, fn&M, P dol-cem, mchC, ltIVC	M; ltl fn, Vfn&M, tr C, pyr&rd
	580-585	5	G	Ss, pl or pnk, fn&M, P dol-cem, mchC, ltIVC	M; ltl fn, Vfn&M, tr C, pyr&rd
	585-595	10	G	Ss, pl or pnk, fn&M, P dol-cem, mchC, ltIVC	tr cong, pyr, ltl dol, tr glau
	595-610	15	G	Ss, pl or pnk, fn&M, P dol-cem, ltlC&Vfn; l	tl dol, tr st, tr glauc
	610-615	5	G	Ss, Vpl or, fn&M, F dol-cem, ltl C&Vfn, trV	tl dol, tr st & glauc
	615-620	5	G	Ss, gry pnk, fn, P dol-cem, mchM, ltIVfn, tr	mch dol, tr st, glauc&rd sh
	620-630	10	G	Ss, gry pnk, M&fn, P dol-cem, ltl Vfn, tr	C; ltl dol, tr rd sh & st
	630-640	10	G	Ss, gry pnk, M&fn, F dol-cem, mchC, ltIVfn; C	& VC; ltl dol, tr st
	640-645	5	G	Ss, gry or pnk, M&fn, F dol-cem, trC, ltIVfn	mch dol, tr st & rd sh
	645-655	10	G	Ss, gry or pnk, M&fn, G dol-cem, mchC, ltIVfn	mch dol, tr st & rd sh
	655-665	10	G	Ss, gry or pnk, M, P dol-cem, mchC&fn, tr Vfn	mch dol, tr st & gn sh
	665-675	10	G	Ss, gry pnk, M, P dol-cem, mch C & fn, tr Vfn	ltl dol, tr lim & gn sh
	675-685	10	G	Ss, Vpl or, M, Sang Srnd, mch C, tr VC; tr	fn&VC; ltl dol, tr lim
	685-695	10	G	Ss, Vpl or, M&C, Srnd, F srtg, ltl fn; tr	dol, rd sh & st
	695-700	5	G	Ss, wh, M&C, Srnd, F srtg, ltl fn; tr lim	
	700-705	5	G	Ss, wh, M&C, rnd, F srtg, tr fn; tr lim, gn	lim
	705-715	10	G	Ss, wh, M&C, rnd, F srtg, ltl fn; tr lim, rd	sh, dol & cht (cvd)?
	715-720	5	G	Ss, pnk, M, rnd, mch fn&C, trVC; ltl rd&gn s	sh, dol&Vfn ang qtz gvl
	720-725	5	G	Ss, Vpl or, M&fn, Sang Srnd, F srtg, ltl C, t	ndy sh, tr gvl, dol&cht
	725-735	10	G	Ss, pl or pnk, fn&M, Sang, P srtg, P dol-cem	tr Vfn&VC; tr gn & rd sh
	735-755	20	G		m, ltlC&Vfn; ltl dol, tr st
	755-760	5	G	Dol, pl rd mot pnk&pl yl gry, fn, dns; snd	
	760-765	5	G	Ss, pl or pnk mot pl or M&fn, G dol-cem,	y-M&fn, ltl C & VC, tr st
	765-770	5	G	Dol, rd mot pl or, fn&Vfn, dns; sndy-M&fn,	ltl C, tr VC&Vfn; tr st&lim-cem
	770-785	15	G	Ss, Vpl or mot pnk, M, G dol-cem, mch fn,	tr Vfn, C & VC; tr mot gn
	785-790	5	G	No Sample	tr Vfn, C&VC; tr mot gn&st
	790-795	5	G	Ss, Vpl or mot pnk, M, G dol-cem, mchfn, tr	
795-800	5	G	Ss, Vpl or mot pnk, M, F dol-cem, mch fn, tr	Vfn, C&VC; ltl mot gn, trst&rd	
800-805	5	G	Ss, or pnk mot pl rd, M&fn, G dol-cem, ltl	tr Vfn, C&VC; tr mot gn&st	
805-810	5	G	No Sample	Vfn, trC&VC; tr mot gn, tr st	
810-820	10	G	Ss, or pnk mot pl rd, M&fn, G dol-cem, ltl		
820-825	5	G	Sh, pl gn, F srtg; mch fn snd, ltl wh snd	Vfn, trC&VC; ltl rd&gry sh, tr	
825-835	10	G	Ss, pl yl gry mot pnk&gn, M, VG dol-cem, ltl	ly dol	
835-840	5	G	Ss, lt gry, M&fn, P dol-cem, ltIVfn; ltlgn	ltl fn, trC; ltl gn sh& st	
840-850	10	G	Ss, lt gry, fn, F dol-cem, ltIVfn&M; ltl d	sh, tr gry, tr pyr cotg&dol	
850-865	15	G	Ss, lt gry, M&fn, Srnd, F srtg, F dol-cem,	ol&gry sh, tr gn, tr pyr cotg	
865-875	10	G	Ss, lt gry, M&fn, VP dol-cem, ltIVfn, C&VC	ltl Vfn; ltl dol, gry sh &	
875-880	5	G	Ss, Vpl yl gry, fn&Vfn, ltlM, trC&VC; tr p	st, tr gn sh & pyr cotg,	
880-890	10	G	Ss, ol gry, M&fn, ltIVfn, trC&VC; mch gry	gvl	
890-895	5	G	Sh, dk ol gry; mch ang snd-M&C, ltIVfn, F	tr, dol, gn&gry sh & st	
895-900	5	G	Ss, dk ol gry, M&fn, ltIVfn, C&VC; mch st	sh, ltl st, tr gnsh&lim-&dol-c	
900-910	10	G	Sh, Vpl gn gry mot lt gry; mch Vfn&fn	gn sh, ltl dol, tr fn gvl&pyr	
910-920	10	G	Ss, Vpl gn gry mot lt gry, M&fn, Srnd, P	nd, mch st, tr dol	
920-925	5	G	Ss, Vpl yl gry, M, ltl fn, ltlC&VC; mch gr	mch Vfn, ltlC&VC; mch st	

Well name City of Fond du Lac, Wis., Well #16  
 Sample Nos. 263081 to 263274

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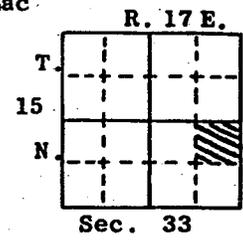
	925-935	10		Ss, Vpl yl gry, M&fn, lt1C&VC; lt1 dol, tr fn gvl, gry&gn sh, pyr & li
	935-945	10		Ss, lt rd, M&fn, lt1C, trVC; mch st, tr dol, tr fn gvl, pyr & sh
	945-955	10		Sh, pl rd mot yl dk rd&lt gry; lt1Vfn/M snd & st
390'	955-965	10		Ss, rd bn, M&fn, lt1 C, VC&Vfn; mch rd sh, lt1 fn gvl, tr gry sh
PO 5	965-970	5		Qtzt, Vpl or mot lt&dk rd, fn/VC, tr vl&wh; tr sh, mch M snd

END OF WELL

Well name **Fond du Lac City Well #17**  
Town of Fond du Lac  
Owner.... **City of Fond du Lac**  
Address.. **76 E. Second Street**  
**Fond du Lac, WI 54935**  
Driller.. **Egerer-Galloway Well Corp.**  
Engineer.

County: **Fond du Lac**  
Completed... **3/12/75**  
Field check.  
Altitude.... **815'**  
Use..... **Municipal**  
Static w.l.. **99'**  
Spec. cap... **3.4 GPM/ft**

Quad. **Byron 7½'**



Drill Hole			Casing & Liner Pipe or Curbing										
Dia.	from	to	Dia.	from	to	Dia.	Wgt. & Kind	from	to	Dia.	Wgt. & Kind	from	to
23 1/4"	0	385'				24"	A-53 3/8" Wall Welded	0	159'	14"	A-53 3/8" Wall Welded	363'4"	553'
17 1/4"	385'	655'				18"	A-53 3/8" Wall Welded	+5'	384'5'				
13 1/4"	655'	1025'											

Drilling method: **Cable Tool**  
Samples from 0 to 1025' Rec'd: 2/19/75

Studied by: **Mary J. Hartman**

Grout  
Grout-5 gals. per bag  
Grout

from to  
0 384'5"  
484' 553'

Issued: 10/5/83

Formations: **Drift, Sinnipee Group, St. Peter Sandstone, Tunnel City Group, Elk Mound Group, Precambrian.**

Remarks: **Well tested for 24 hours at 708 GPM with 206 feet of drawdown.**

LOG OF WELL:

	Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
					Mode	Range	
D R I F T	0-5		Clay	Red brown	—	—	Dolomitic. Trace sand, silt.
	5-10		"	"	—	—	Same plus trace gravel.
	10-15		"	"	—	—	Same.
	15-20		"	"	—	—	"
	20-25		"	Yl brown	—	—	"
	25-30		"	"	—	—	"
	30-35		"	Gray brown	—	—	Dolomitic. Trace sand, silt.
	35-40		"	"	—	—	Same plus trace red brown shale.
	40-45		"	"	—	—	Dolomitic. Trace sand, silt, red brown shale, gravel.
	45-50		"	"	—	—	Dolomitic. Trace gravel, sand, silt.
	50-55		"	"	—	—	Same.
	55-60		"	"	—	—	"
	60-65		"	"	—	—	"
	65-70		"	"	—	—	"
	70-75		"	"	—	—	Dolomitic. Trace gravel, sand, silt, red brown shale.
	75-80		"	"	—	—	Same.
	80-85		"	"	—	—	Same but no red brown shale.
	85-90		"	"	—	—	Dolomitic. Trace sand, silt, red brown shale.
	90-95		"	"	—	—	Dolomitic. Trace gravel, sand, silt.
	95-100		"	"	—	—	Same.
100-105		"	"	—	—	Same plus trace red brown shale.	
105-110		"	"	—	—	Dolomitic. Trace gravel, sand, silt.	
110-115			NO SAMPLE. Driller reports same as adjoining intervals.				
115-120			Clay	Gray brown	—	—	Dolomitic. Trace sand, silt.
120-125			"	"	—	—	Dolomitic. Trace gravel, sand, silt, red brown shale.
125-130			"	"	—	—	Same.
130-135			"	"	—	—	"
135-140			Gravel	"	Gran	Gran/S pbb	Dolomite, chert, quartz, trap. Much sand. Trace silt.
140-145			"	"	"	"	Same plus little gray brown clay.
145-150			"	"	"	"	Same plus trace Fr-glaucouite.
150-155			"	"	"	"	Same but no glaucouite.
160	155-160		Clay	Brown	—	—	Dolomitic. Little gravel, sand, silt.

Well name: Fond du Lac City Well #17

	Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
					Mode	Range	
S I N N I P E E G R O U P	160-165		Dolomite	Gray brown	M	Fn/M	V limy. Slightly sug. Tr pyrtzd fos frags, rd spkig(hvy conc locally), wh mot, snd fr abv.
	165-170		"	"	"	"	Same but no sand,
	170-175		"	"	"	"	V limy. Slightly sug. Tr pyrtzd fos frags, rd spkig(hvy conc locally), wh mot, pyr, cvd snd.
	175-180		"	"	"	"	Same,
	180-185		"	Lt bn gray	"	"	V limy. Trace pyrite, pyritized fossil fragments, red speckling.
	185-190		"	"	"	"	Same plus trace white mottling.
	190-195		"	"	"	"	Same,
	195-200		"	"	"	"	Limy. Trace pyrite, brown shale, red speckling.
	200-205		"	"	"	"	Limy. Trace pyrite, pyritized fossil fragments, red speckling.
	205-210		"	"	"	"	Same.
	210-215		"	"	"	"	Same but no speckling.
	215-220		"	"	"	"	Same,
	220-225		"	"	"	"	Limy. Few pyritized fossil fragments.
	225-230		"	"	"	"	Limy. Trace pyrite, pyrtzd fos frags, gry stng fr pyr, wh shale.
	230-235		"	"	"	"	Same plus trace white mottling, brown shale.
	235-240		"	"	"	"	Same but no white shale.
	240-245		"	"	"	"	Same.
	245-250		"	"	"	"	Limy. Few pyrtzd fossil frags, Trace pyrite, gry stng fr pyr.
	250-255		"	"	"	"	Same but many fossil fragments.
	255-260		"	"	"	"	Limy. Few pyrtzd fossil frags, Trace brown shale, wh mottling.
	260-265		"	"	"	"	Limy. Trace pyrtzd fos frags, pyrite, bk spkig, bn shale, wh mot.
	265-270		"	"	"	"	Same.
	270-275		"	"	"	"	Same but no speckling.
	275-280		"	"	"	"	Same plus trace calcite crystals.
	280-285		"	"	"	"	Limy. Sug. Trace pyrtzd fossil fragments, brown shale, pyrite.
	285-290		"	"	"	"	Same plus trace white mottling.
	290-295		"	"	"	"	Same.
	295-300		"	"	"	"	Limy. Trace pyrtzd fossil frags, bn shale, pyrite, wh mottling.
	300-305		"	"	"	"	Limy. Few pyrtzd fos frags, Trace bn & wh & gn gry sh, wh mot.
	305-310		"	"	"	"	Limy. Few pyrtzd fos frags, Lt l bn gry sh. Tr bn & wh sh, wh mot.
310-315		Shale	Gray	—	—	Dolic. Mch dol as abv. Tr bk spkig, wh shale.	
315-320		"	"	—	—	Same.	
320-325		Dolomite	Lt bn gray	M	Fn/M	Limy. Lt l bn gry sh. Tr calc xls, pyrtzd fos frags, bn sh, wh mot, gry stng.	
325-330		"	"	"	"	Same but no calcite crystals.	
330-335		"	"	"	"	Same.	
335-340		"	"	"	"	Same plus trace pyrite.	
340-345		"	"	"	"	Same.	
345-350		"	"	"	"	"	
350-355		"	"	"	"	"	
355-360		"	"	"	"	"	
205	360-365		"	Dk bn gray	"	"	Slightly limy. Tr pyr, pyrtzd fos frags, bn sh, bk spkig, fltg atz snd
S T. P E T E R	365-370		Sandstone	Gray brown	"	Vfn/VC	Srnd. Mch gry to wh fos dol. Mny sec qtz grwth. Tr pyr, frags.
	370-375		Shale	Gray	—	—	Dolic. Mch fltg atz snd, Tr pyr, rd & bk spkig. mfe incl.
	375-380		Sandstone	Lt bn gray	M	Vfn/VC	Rnd. Lt l G dol cem, Mny sec qtz grwth. Tr pyr, mfe incl, cvd
	380-385		Shale	Gray brown	—	—	Dolic. Mch fltg atz snd. Tr pyr, bk spkig. gry dol.
	385-390		Sandstone	Lt bn gray	Fn	Vfn/VC	Rnd. Mch P to G dol cem, Mny sec qtz grwth. Tr pyr, mfe incl.
	390-395		"	"	"	Vfn/C	Srnd. Mch v G dol cem, Mny sec qtz grwth. Tr pyr, bk spkig, mfe incl.
	395-400		"	"	"	"	Same.
	400-405		"	"	"	Vfn/VC	"
	405-410		"	"	"	"	Same plus trace gray shale.
	410-415		"	Light gray	"	"	Same but no gray shale.
	415-420		"	Lt bn gray	"	"	Same.
	420-425		Shale	Light gray	—	—	Dolomitic. Mch fltg Vfn/C quartz sand, Tr rd & bn speckling.
	425-430		"	"	—	—	Dolic. Mch fltg Vfn/C atz snd, Tr bn sil sh, yl sil cem as, wh
	430-435		"	Brown	—	—	Dolic. Mch fltg Vfn/VC atz snd, Tr gn gry cht, rd & bk spkig.
	435-440		"	Pink gray	—	—	See end of log. & dk bn sh, wh ool & tan cht, dray atz.
	440-445		"	"	—	—	Dolic. Mch fltg atz snd, Tr wh dol (more than abv), gn gry sh (so
	445-450		"	"	—	—	See end of log. w/Fn fltg atz snd), bn sh, wh cht, bk speckling.
	450-455		"	"	—	—	Dolic. Mch wh to lt gry dol w/tr gn stng, Lt l fltg atz snd, wh &
	455-460		"	Pink	—	—	Dolic. Mch wh to lt gry dol w/tr gn stng, Tr yl cht, dk bn sh.
	460-465		"	"	—	—	Same plus tr rd bn hemic sh. atz snd, bn & gn gry sh, wh & vl
465-470		"	Lt rd bn	—	—	Same but no brown shale. ool cht, dray atz, pyr.	
470-475		"	"	—	—	Same.	
475-480		"	Pink	—	—	"	
480-485		"	"	—	—	Dolic. Mch wh to lt gry dol w/tr pyr, Tr qtz snd, gn gry & rd bn	
485-490		"	"	—	—	Same. sh w/Fn fltg atz snd, wh & vl cht.	

Well name: Fond du Lac City Well #17

	Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
					Mode	Range	
S T. P E T E R	490-495		Shale	Yellow red	—	—	Dolic. Tr wh to lt gry dol w/pyr,qtz snd,an gry & rd bn sh w/Fn
	495-500		"	Lt rd bn	—	—	Dolic. Ltl wh to lt gry dol w/pyr. Tr qtz snd,wh ool cht,an gry
	500-505		"	"	—	—	Same but much dolomite. & rd bn sh.
	505-510		"	Pink	—	—	Same but much floating quartz sand. sh,pyr,wh cht.
	510-515		"	"	—	—	Dolic. Mch wh to lt gry dol. Ltl fltg qtz snd. Tr an gry & bn
	515-520		"	"	—	—	Dolic. Mch wh to lt gry dol. Tr fltg qtz snd,an gry,rd bn & wh
	520-525		"	"	—	—	Same plus trace pyrite. sh.
	525-530		"	"	—	—	Dolic. Mch wh to lt gry dol. Tr pyrite,an gry & rd bn shale.
	530-535		"	"	—	—	Same plus trace white oolitic chert.
	535-540		"	Lt rd bn	—	—	Dolic. Mch wh to lt gry dol. Ltl rd bn sh. Tr pyr,an gry shale.
190 T U N N E L C I T Y	540-545		"	Lt brown	—	—	Dolic. Ltl fltg qtz sand. Tr pyr,an gry & rd bn shale,wh dol.
	545-550		"	"	—	—	Same but little dolomite. sh,wh ool cht,pyr,mfc incl,fros.
	550-555		"	Pink gray	—	—	Same but much fltg sand. qtz snd,Fn-glauc,lt bn sh. Tr an gry
	555-560		Sandstone	V pl bn to lt gy	M	Vfn/VC	Ang. Mch v G dol cem. Mny sec qtz grwths. Ltl lt gry dol w/fltg
	560-565		"	V pl brown	Fn	"	Sang. Mch P dol cem. Mny sec qtz grwths. Tr an gry & rd bn sh.
	565-570		"	Light gray	"	"	Same plus tr mafic incl. pyr,Vfn/Fn glauc,lt gry dol,fros.
	570-575		"	"	"	"	Same.
	575-580		"	"	"	"	Sang. Mch P dol cem. Mny sec qtz grwths. Tr Vfn/Fn glauc,an gry
	580-585		"	"	"	"	Same.
	585-590		Shale	Lt brown	—	—	Dolic. Mch fltg qtz snd. Tr an gry & wh sh,lt gry dol,Vfn glauc
100 E L K M O U N D G R O U P	590-595		Sandstone	Red brown	Fn	Vfn/VC	Sang. Mch P dol cem. Mny sec qtz grwths. Tr v G dol cem,an gry
	595-600		Shale	Lt rd bn	—	—	Dolic. Mch fltg qtz snd. Tr an gry & rd bn sh,Fn glauc,pyr.
	600-605		"	Yellow red	—	—	Same but no pyrite. sh,pyr,wh ool cht,Fn glauc.
	605-610		"	"	—	—	Same.
	610-615		"	"	—	—	Dolic. Mch fltg qtz snd. Tr bl an & wh sh,wh v well cem ss.
	615-620		"	"	—	—	Same.
	620-625		"	"	—	—	Dolic. Mch fltg qtz sand. Tr bl an shale,wh v well cem ss,pyr.
	625-630		Sandstone	"	Fn/M	Vfn/VC	Srnd. Mch P dol cem,Ltl v G dol cem. Mny sec qtz grwths. Tr bl
	630-635		"	"	M	"	Same plus tr wh dolomite. an & rd bn sh,wh cht,mfc incl,fros.
	635-640		"	Red brown	"	Vfn/C	Srnd. Mch P dol cem. Mny sec qtz grwths. Tr bl an & gry & wh sh.
640-645		Shale	"	—	—	Dolic. Mch Fn/M fltg qtz snd. wh dol,fros,Fn glauc,mfc incl.	
645-650		"	"	—	—	Same. Tr bl an & gry & wh sh,wh dol,Fn glauc,wh cht.	
650-655		"	"	—	—	" wh dol,wh cht,cvd grnt.	
655-660		Sandstone	Yellow red	M	Vfn/VC	Rnd. Mch G dol cem. Mny sec qtz grwths. Tr an gry & wh & bn sh.	
660-665		"	"	"	Vfn/C	Same but no brown shale. incl,wh dol,fros,cvd drift snd.	
665-670		"	Lt rd bn	"	"	Rnd. Mch G dol cem. Mny sec qtz grwths. Tr wh sh,wh fos cht,mfc	
670-675		"	"	"	Vfn/VC	Srnd. Mch v G dol cem. Mny sec qtz grwths. Tr wh dol,bl an & rd	
675-680		"	Lt brown	Fn/M	Vfn/C	See end of log. bn sh,mfc incl,pyr.	
680-685		"	"	Fn	Vfn/VC	Srnd. Mch G dol cem. Mny sec qtz grwths. Tr wh dol,pyr,wh & bn	
685-690		"	"	M	"	Same but no pyrite,bn shale. & an gry sh,mfc incl.	
690-695		"	"	Fn	"	Srnd. Mch G dol cem. Mny sec qtz grwths. Tr pyr,an gry & wh sh.	
695-700		"	Pink gray	"	"	Same plus trace frosting. pl vl cht,mfc incl.	
700-705		"	"	"	"	Sang. Mch G dol cem. Mny sec qtz grwths. Tr pyr,an gry & wh sh.	
705-710		"	"	"	"	Sang. Mch G dol cem. Mny sec qtz grwths. mfc incl,fros,wh dol.	
710-715		"	"	M	"	Same but no white chert. Tr mfc incl,wh cht,fros,wh sh.	
715-720		"	Pink white	"	"	Srnd. Mch G dol cem. Mny sec qtz grwths. Tr wh dol,mfc incl,pyr.	
720-725		"	"	Fn	"	Rnd. Mch G dol cem. Mny sec qtz grwths. Tr wh cvd drift snd.	
725-730		"	"	"	"	Same but no an gry shale. & an gry sh,mfc incl.	
730-735		"	"	"	"	Rnd. Mch G dol cem. Mny sec qtz grwths. Tr wh & pl an sh,wh cht.	
735-740		"	"	"	"	Srnd. Mch P dol cem. Mny sec qtz grwths. Tr wh sh. mfc incl.	
740-745		"	"	"	"	Same. mfc incl,pyrite.	
745-750		"	Red yellow	"	"	Srnd. Mch P dol cem. Mny sec qtz grwths. Tr rd shale. mfc incl.	
750-755		"	"	"	"	Srnd. Mch P dol cem. Mny sec qtz grwths. Tr v G dol cem,wh dol.	
755-760		"	"	M	"	Same but no white dolomite. wh sh,mfc incl.	
760-765		"	Yellow red	Fn	"	Same plus trace white dolomite. gry sh,pyr,rd spkls,mfc incl.	
765-770		"	Brown	"	Vfn/C	Srnd. Ltl P dol cem. Mny sec qtz grwths. Tr v G dol cem,wh & an	
770-775		"	Gray	"	Vfn/VC	Sang. Mch P dol cem,bn spkls. Mny sec qtz grwths. Tr v G dol cem	
775-780		"	"	M	"	See end of log. pyr,an gry & wh sh,mfc incl.	
780-785		Shale	Dark gray	—	—	Dolic. Mch fltg qtz sand. Tr wh & an gry & v dk gry shale.	
785-790		Sandstone	Gray	M	Vfn/VC	Srnd. Mch P dol cem. Mny sec qtz grwths. Tr mfc incl,pyr,an gry	
790-795		Shale	"	—	—	Dolic. Mch fltg qtz sand. Tr wh sh,wh cht,bk spkls. & wh sh.	
795-800		"	"	—	—	Dolic. Mch fltg qtz sand. Tr wh sh,wh & pl vl & pnk dol,pyr,bk	
800-805		Sandstone	"	M	Vfn/VC	Srnd. Mch P dol cem. Mny sec qtz grwths. Tr pyr,an gry spkls.	
805-810		Shale	Gray brown	—	—	See end of log. & pnk & wh sh,wh & pl vl dol,mfc incl,fros.	
810-815		Sandstone	"	Fn	Vfn/VC	Srnd. Mch P dol cem. Mny sec qtz grwths. Tr pyr,an gry & wh sh.	
815-820		"	"	"	"	Same plus little very good dolomite cement. rd spkls,fros.	

Well name: Fond du Lac City Well #17

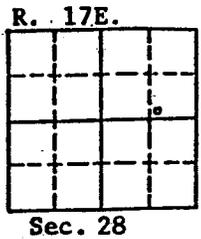
E L K  M O U N D  G R O U P	Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics	
					Mode	Range		
	820-825		Sandstone	Gray	M	Vfn/VC	Srnd. Mch P dol cem. Mny sec qtz grwths. Tr pyr(ctng snd grn	
	825-830		"	Dark gray	"	"	Same, qn gry & wh sh,mfc incl,fros,v G dol cem	
	830-835		"	Gray	"	"	Same plus trace white dolomite, white chert,	
	835-840		"	"	"	"	Same,	
	840-845		Shale	"	—	—	Dolic. Much floating quartz sand. Trace pyrite, white dolomi	
	845-850		Sandstone	"	M	Vfn/VC	Sang. Mch P dol cem. Mny sec qtz grwths. Tr pyr,gn gry & wh	
	850-855		"	"	Fn	"	Same plus v G dolomite cement, wh dol,mfc incl,fro	
	855-860		"	"	"	"	Same but subrounded,	
	860-865		"	"	"	"	Same.	
	865-870		"	"	"	"	Same but no green gray shale, gry dol,wh sh,pyr,mfc incl,fr	
	870-875		"	"	M	"	Srnd. Mch P dol cem. Mny sec qtz grwths. Tr v G dol cem,wh &	
	875-880		Shale	"	—	—	Dolic. Mch fltg quartz sand. Tr pyrite,wh & pnk dol,wh shale	
	880-885		"	"	—	—	Same.	
	885-890		"	Dark gray	—	—	"	
	890-895		"	"	—	—	"	
	895-900		"	V dk gray	—	—	Mic & slgtly dolic. Mch fltg qtz snd(less than abv). Tr pyr(c	
	900-905		"	"	—	—	Same but more floating sand,	
	905-910		"	Gray	—	—	Dolic. Much floating quartz sand, Trace pyrite, white dolomite	
	910-915		"	Red brown	—	—	Dolic. Mch fltg quartz sand. Tr pyrite, wh dolomite, gry sha	
	915-920		"	"	—	—	Dolic. Mch floating quartz sand. Tr wh & gn gry shale,pyrite	
	920-925		"	"	—	—	Same plus trace white dolomite.	
	925-930		"	Yellow red	—	—	Dolic. Mch floating quartz sand. Tr pl qn & wh & rd bn shale.	
	930-935		"	"	—	—	Same plus trace white dolomite, orange chert.	
	935-940		"	"	—	—	Dolic. Lt1 fltg qtz sand. Tr pl qn & wh & rd bn sh,wh dolomi	
	940-945		"	"	—	—	Same.	
	945-950		"	"	—	—	Sil. Mch fltg qtz sand. Tr gn gry & wh & rd bn shale,wh chert	
	950-955		"	"	—	—	Same plus trace red speckling.	
	955-960		Sandstone	Red yellow	M	Vfn/C	Ang. Tr P sil cem,vl rd & wh sh,mfc incl. Mny sec qtz grwths,	
	960-965		"	"	"	Vfn/VC	Ang. Mch P sil sh cem. Mny sec qtz grwths. Tr wh sh,mfc incl	
	965-970		Shale	"	—	—	Sil. Mch fltg quartz sand. Tr white shale. pnk ch	
	970-975		Sandstone	Lt rd bn	M	Vfn/VC	Sang. Lt1 P sil sh cem. Mny sec qtz grwths,v ang qtz grans w	
	975-980		"	Lt brown	C	"	Same but few mfc grains. weblike incl. Tr wh sh,mfc grns.	
	980-985		"	Pink	M	"	Sang. Mch P sil sh cem. Mny sec qtz grwths. Tr v ang qtz gran	
	985-990		"	"	C	"	Same, as abv,mfc grns,wh sh	
	990-995		"	"	"	"	" like incl,rd feld,mfc incl. Mny sec qtz grwths	
	995-1000		"	"	"	"	Srnd. Tr P sil sh cem,wh sh,rd spk1g(hvy conc locally),rd web-	
	1000-1005		"	"	M	"	Sang. Mch P sil sh cem. Mny sec qtz grwths. Tr wh sh,rd weblike	
	1005-1010		"	"	"	"	Sang. Mch P sil sh cem. Mny sec incl,mfc incl,zircon grns	
360	1010-1015		"	Lt rd bn	"	"	Same but ang. qtz grwths. Tr wh sh,rd weblike incl,mfc incl	
PC	1015-1020		Saprolite	Red	—	—	Mch fltg qtz snd(most grns are rd or spk1g(hvy conc locally	
10'	1020-1025		"	Yellow red	—	—	Same. vl). Tr mfc grns,wh feld,wh sh.	
			END OF LOG					
			Duplicate Sample.					
	430-433		Shale	Red brown	—	—	Sil. Mch gran to S peb sized wh ool cht(ool are not snd cored) & lt gry & wh & vl ss(wl cem by sil). Tr pyr,gry dolic sh, drnsy qtz,fltq qtz snd	
	435-440		Shale	Pink gray	—	—	Dolic. Mch fltg Vfn/VC qtz snd. Tr gn gry & dk bn sh(less than abv),wh cht,pyr,rd & bk spk1g,wh dol	
	445-450		Shale	Pink gray	—	—	Dolic. Mch fltg qtz snd. Lt1 wh dolomite. Tr gn gr sh(some w/Fn fltg qtz snd),wh cht,bk spk1g.	
	675-680		Sandstone	Lt brown	Fn/M	Vfn/VC	Srnd. Mch G dol cem. Mny sec qtz grwths. Tr wh & bl gn sh,py mfc inc	
	775-780		Sandstone	Gray	M	Vfn/VC	Rnd. Mch P dol cem. Mny sec qtz grwths. Lt1 bn spk1g. Tr wh dol pyr,wh & gn gry & dk gry sh,mfc inc	
	805-810		Shale	Gray brown	—	—	Dolic. Mch fltg qtz snd. Tr pyrite,gn gry & rd bn shale,wh d	

County: Fond du Lac

Well name City of Fond du Lac, Wis. Well #18

Owner.... City of Fond du Lac, Wis.  
Address.. c/o Clerk, City Hall, Fond du Lac, Wis.  
Driller.. Miller Well & Pump Co.  
Engineer. Donohue & Associates, Inc.

Completed... 11-7-66  
Field check.  
Altitude.... 834.50' (Approx)  
Use..... Municipal supply  
Static w. 1.74 feet  
Spec. cap... 3.7



Quad. Fond du Lac

Drill Hole			Casing & Liner Pipe or Curbing										
Dia.	from	to	Dia.	from	to	Dia.	Wgt. & Kind	from	to	Dia.	Wgt. & Kind	from	to
26"	0	159'8"				26"	blk st. 3/8"	0	159'8"				
23"	159'8"	378'8"					wall						
19"	378'	989'				20"	blk st. 3/8"	14'	378'				
												from	to
Grout: Kind													
Neat cement												+2'	378'

Samples from 0 to 989' Date received: 11-23-66  
Sample Nos. 272442 to 272639 Examined by: Joan M. Warren Date: 4-26-67  
Formations: Drift, Platteville-Galena, St. Peter, Prairie du Chien, Cambrian Undifferentiated

Remarks: Well tested for 4 hours at 700 gpm with 188 feet of drawdown. Driller reports bedrock surface at 158 feet, however predominance of bedrock material does not appear in samples until 180'. Driller reports granite at 985', amount of quartzite in sample is not a (see last page of well)

LOG OF WELL:

Depth (ft)	Interval (ft)	Stratigraphic Unit	Description
0-20	20	DRIFT	Cl, mch st & Vfn snd, tr Vfn/VC pl rd bn mot rd or, P srtg, dolic; & fn gvl
20-30	10	DRIFT	Cl, pl rd bn, G srtg, dolic; mch st, tr Vfn snd
30-35	5	DRIFT	Cl, pl rd bn, F srtg, dolic; ltl st & Vfn snd, tr fn/C
35-60	25	DRIFT	Cl, pl rd bn, P srtg, dolic; ltl st & Vfn snd, tr fn/C, tr Vfn gvl
60-65	5	DRIFT	Cl, pl rd bn, F srtg, slight dolic; tr st & Vfn snd, tr VC
65-75	10	DRIFT	Cl, Vpl rd, F srtg, slight dolic; tr st & Vfn snd, tr VC snd
75-80	5	DRIFT	Cl, gry or pnk, F srtg, slight dolic; tr st & Vfn/VC snd
80-85	5	DRIFT	Cl, Vlt ol gry, F srtg, slight dolic; tr st & Vfn/VC snd
85-90	5	DRIFT	Cl, lt ol gry, F srtg, slight dolic; tr st & Vfn/VC snd
90-95	5	DRIFT	Cl, lt ol gry, P srtg, slight dolic; tr st & Vfn/VC snd, tr fn gvl
95-100	5	DRIFT	Cl, lt ol gry, F srtg, slight dolic; tr st & Vfn/VC snd
100-110	10	DRIFT	Cl, lt ol gry, P srtg; slight dolic; tr st, ltl Vfn/VC, tr fn gvl
110-120	10	DRIFT	Cl, lt ol gry, P srtg, slight dolic; tr st, ltl Vfn/VC & fn gvl
120-130	10	DRIFT	Cl, lt ol gry, P srtg, slight dolic; ltl st & Vfn snd, tr fn/VC
130-135	5	DRIFT	Cl, lt ol gry, P srtg, slight dolic; ltl st & Vfn snd, tr fn & M, ltl C & fn
135-140	5	DRIFT	Cl, lt ol gry, P srtg, slight dolic; ltl st & Vfn snd, tr VC & Vfn gvl
155-140-155	15	DRIFT	Cl, lt ol gry, P srtg, slight dolic; mch Vfn snd, ltl fn/VC & fn gvl, tr
155-165	10	GAL	Dol, pl yl bn mot gry or, Vfn, dns, ltl fn, tr mot gry; tr pyr, ltl cvd snd & cl
165-175	10	GAL	Dol, pl yl bn, Vfn, dns, ltl fn, tr M; tr ltl xln pyr
175-180	5	GAL	Dol, pl yl bn, inc Vfn, dns, tr M, tr mot gry; tr pyr rd bn ss
180-190	10	GAL	Dol, pl yl bn, fn, dns, tr mot gry; tr pyr

Well name City of Fond du Lac, Wis. Well #18  
 Sample Nos. 272442 to 272639

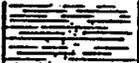
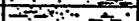
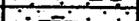
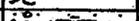
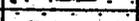
G A L L E N A P L A T T E V I L L E	190-200	10		Dol. pl yl bn, fn, dns, tr mot gry, tr M; tr pyr
	200-215	15		Dol, pl yl bn, fn, dns, tr mot gry, tr M & Vfn; tr pyr
	215-230	15		Dol, Vpl yl bn, fn, dns, tr M, tr mot gry; tr VC xln calc, tr pyr
	230-235	5		Dol, Vpl yl bn, fn, dns, tr M, tr mot gry; tr pyr
	235-240	5		Dol, yl gry mot gry & pl yl bn, fn dns, tr M; tr pyr
	240-245	5		Dol, pl gry or, fn, dns, ltl Vfn, tr M; tr pyr
	245-255	10		Dol, pl yl bn, fn, dns, ltl Vfn, tr M; tr pyr (gry), tr cht
	255-260	5		Dol, pl yl bn mot gry & lt gry, fn, dns, ltl Vfn, tr M; tr pyr
	260-265	5		Dol, pl gry or mot gry, fn, dns, tr Vfn & M; tr pyr
	265-270	5		Dol, pl gry or mot gry, fn, dns, ltl M, tr Vfn; tr pyr & st
	270-280	10		Dol, yl gry, fn, dns, ltl mot pl yl bn & gry, ltl Vfn, tr M; tr pyr
	280-285	5		Dol, yl gry, fn, dns, ltl mot pl yl bn & gry, tr Vfn, ltl M; tr pyr, cht, gr
	285-290	5		Dol, yl gry, fn, dns, mch mot pl yl bn, ltl gry, tr Vfn, ltl M; tr pyr
	290-300	10		Dol, pl gry or, fn, dns, tr Vfn, ltl M; tr pyr (gry)
	300-305	5		Dol, yl gry mot lt bn & pl or, fn, dns, ltl M & Vfn; tr pyr & gn & gry sh
	305-315	10		Dol, ol gry mot lt bn & lt gry, fn, dns, ltl M, tr Vfn; tr pyr
	315-320	5		Dol, ol gry mot lt bn & lt gry, fn, dns, tr M & Vfn; tr pyr & gn sh
	320-325	5		Dol, dk gry or mot gry, fn, dns, tr M & Vfn; tr pyr & VC xln calc
	325-330	5		Dol, dk gry or mot gry, fn, dns, tr M & Vfn; tr pyr & gn sh
	330-350	20		Dol, yl bn mot gry, fn, dns, ltl Vfn, tr M; tr pyr
	350-365	15		Dol, pl bn mot gry, fn, dns, tr Vfn; tr xln & descem pyr
	365-370	5		Dol, pl bn mot gry, fn, dns, ltl Vfn; tr xln & descem pyr, ltl fn/VC &
	370-380	10		Ss, lt ol gry, M&C, Sang, P-F dol-cem, P pyr-cem, dol & dol-cem, tr pyr-c
	380-390	10		Ss, gry or pnk, M, Srd, P srtg, P dol-cem, mch fn, ltl C & Vfn; ltl sft dol
	390-400	10		Ss, pl rd or, M, P pyr-cem, mch C, ltl fn, tr Vfn & VC; tr lim- & pyr-cem,
	400-410	10		Ss, pl rd or, M, P pyr- & dol-cem, mch C, ltl fn, tr Vfn; tr lim- & pyr-cem, d
	410-420	10		Ss, or pnk, M, VP dol-cem, ltl C & fn; tr lim-, pyr- & dol-cem, tr cht
	420-440	20		Ss, or pnk, M, F srtg, VP dol-cem, ltl C & fn; tr dol-, lim- & pyr-cem
	440-450	10		Ss, or pnk, M, F srtg, VP dol-cem, mch C & fn, tr Vfn & VC; tr lim- & pyr-cem
	450-455	5		Ss, pl rd bn, VP dol-cem, mch fn, ltl C & Vfn, tr VC; tr st, ltl dol-cem,
	455-460	5		Ss, pl rd bn, M, VP dol-cem, mch fn & C, tr Vfn; mch rd bn sh, tr st.
	460-465	5		Ss, rd bn, M, VP dol-cem, mch fn, ltl C & VC, tr Vfn; ltl fn cht, gvl, mch rd bn
	465-475	10		Ss, rd bn, M, VP dol-cem, mch fn & C, tr VC & Vfn; tr fn gvl, mch rd bn sh
475-480	5		Ss, rd bn, M, VP dol-cem, mch fn & C, tr VC & Vfn; tr fn gvl, mch rd bn sh, tr	
480-485	5		Ss, rd bn, M, VP dol-cem, mch fn & C, tr VC & Vfn; mch rd bn sh	
485-490	5		Ss, pl rd bn, fn & C, ltl M & VC, tr Vfn; mch pl rd bn sh & dol gvl	
490-500	10		Ss, pl rd, Vfn, ang, P srtg, ltl M & C, tr Vfn, mch VC; mch rd bn sh & dol gvl	
500-505	5		Dol, yl gry, fn & Vfn, dns, tr M; mch pl rd or cl, ltl Vfn/C snd, tr pyr	
505-510	5		Dol, Vpl or M & fn, dns, tr Vfn & C; mch pl rd cl, mch fn/C snd, tr lim, cht	
510-515	5		Dol, Vpl or M & fn, dns, tr Vfn & C; mch pl rd or cl, mch fn/VC snd, tr lim, g	
515-525	10		Dol, Vpl or mot pl yl bn, M & fn, dns, tr Vfn & C; ltl cl & fn/C snd, ltl Vfn	
525-530	5		Dol, Vpl or mot gry, M & fn, dns, tr Vfn & C; ltl cl & Vfn/C snd, tr Vfn	
530-535	5		Dol, Vpl or mot gry, M & fn, dns, tr Vfn & C; ltl cl, tr Vfn/C snd, tr lim & pyr	
535-540	5		Dol, yl gry mot Vpl or M & fn, dns, tr Vfn & C; ltl cl, ltl Vfn/C snd, tr cl	
540-545	5		Dol, yl gry mot Vpl or M & fn, dns, tr Vfn & C; ltl mot gn, snd; ltl Vfn/	
545-550	5		Ss, or pnk, M, ang, F G dol-cem, mch C & fn, ltl Vfn; mch sndy dol, tr pyr, ltl	
550-560	10		Ss, or pnk, M, Sang, F srtg, F-G dol-cem, mch C & fn, ltl Vfn & VC; mch st dol (pnk, or & gn), tr lim &	
P d u C	550-560	10		Ss, or pnk, M, Sang, F srtg, F-G dol-cem, mch C & fn, ltl Vfn & VC; mch st dol (pnk, or & gn), tr lim &
	550-560	10		Ss, or pnk, M, Sang, F srtg, F-G dol-cem, mch C & fn, ltl Vfn & VC; mch st dol (pnk, or & gn), tr lim &
C A R B O N	550-560	10		Ss, or pnk, M, Sang, F srtg, F-G dol-cem, mch C & fn, ltl Vfn & VC; mch st dol (pnk, or & gn), tr lim &
	550-560	10		Ss, or pnk, M, Sang, F srtg, F-G dol-cem, mch C & fn, ltl Vfn & VC; mch st dol (pnk, or & gn), tr lim &

Well name City of Fond du Lac, Wis. Well #18  
 Sample Nos. 272442 to 272639

C  
A  
M  
B  
R  
I  
A  
N  
U  
N  
D  
I  
F  
E  
R  
E  
N  
T  
I  
A  
T  
E  
D

Interval	Thickness	Notes	Description
560-565	5		Ss, or pnk, M&fn, ang, P srtg, F-G dol-cem, mch Vfn, ltl C, trVC; mch sndy dol (Vpl or) tr gn&pl
565-570	5		Ss, or pnk, fn, F-G dol-cem, ltl Vfn, M&C; mch sndy Vpl or dol, tr pnk&gn
570-575	5	G	Ss, or pnk, fn&Vfn, F-P dol-cem, tr M&C; ltl dol-cem, tr st & glauc
575-585	10	G	Ss, or pnk, fn, F-P dol-cem, mch M&Vfn, tr C, mch dol-cem, tr st & glauc
585-590	5	G	Ss, Vpl or, fn&Vfn, F dol-cem, ltl M, tr C; mch dol-cem, tr glauc & lim
590-600	10	G	Ss, Vpl or, fn, F dol-cem, ltl M, tr C & Vfn; mch dol-cem, tr glauc, lim
600-605	5		Ss, or pnk, fn&Vfn, P dol-cem, tr M & C; ltl dol-cem
605-615	10		Ss, or pnk, fn, F dol-cem, tr M, C&Vfn; mch dol-cem, tr lim
615-620	5		Ss, or pnk, fn, G dol-cem, tr M, C&Vfn; mch dol-cem
620-625	5	G	Ss, Vbrt rd or, fn, F dol-cem, mch M, ltl Vfn, tr C; mch dol-cem, tr glauc
625-640	15		Ss, or pnk, M&fn, F-P dol-cem, ltl C, tr Vfn&VC; mch sndy dol, tr lim-&pyr
640-650	10		Ss, or pnk, M, F-P dol-cem, mch fn, ltl C, tr VC&Vfn; ltl mch dol-cem, tr l
650-655	5		Ss, or pnk, M, P dol-cem, mch fn, ltl C&Vfn; ltl pnk& pl or dol-cem, tr st
655-660	5		Ss, Vbrt rd or, M&C, F dol-cem, mch fn, tr Vfn&VC; mch dns&sndy dol, tr s
660-665	5		Ss, rd or, M&C, P dol-cem, mch fn, tr Vfn; tr dol-cem
665-675	10		Ss, rd or, M&C, rnd, P srtg, VP dol-cem, mch fn, tr Vfn, tr VC; tr dol-
675-680	5		Ss, rd bn, M, mch fn, ltl Vfn & C, tr Vfn; tr st, dol-cem, pyr & gn sh
680-690	10		Ss, or pnk, M & fn, Sang, F srtg, ltl Vfn;
690-695	5		Ss, rd or, M, Sang, F srtg, mch fn & C, ltl Vfn;
695-700	5		Ss, rd or, M & fn, Sang, F srtg, ltl Vfn, tr C;
700-705	5		Ss, or pnk, M, P-F dol-cem, mch fn&C, tr VC; tr grans, ltl pl or&pl rd
705-715	10		Ss, or pnk, M, F dol-cem, mch fn&C, ltl Vfn, tr VC; tr grans, ltl mch pl or
715-720	5		Ss, gry or pnk, M, P dol-cem, mch C&fn, tr VC&Vfn; ltl pl or, pnk&gn sndy
720-730	10		Ss, Vpl or, M & fn, Sang, F srtg, P dol-cem, ltl Vfn, tr C&VC; ltl dol-cem
730-740	10		Ss, gry or pnk, M, rnd, P srtg, P dol-cem, tr fn, C & Vfn; ltl dol-cem,
740-745	5		Ss, gry or pnk, M, P dol-cem, mch fn, tr C&Vfn; tr dol-&lim-cem
745-755	10		Ss, gry or pnk, M&fn, Sang, P srtg, P dol-cem, ltl Vfn, tr C; tr dol-&lim-c
755-760	5		Ss, gry or pnk, M&fn, Sang, P dol-cem, ltl Vfn, tr C&VC; tr dol-&lim-cem
760-770	10		Ss, gry or pnk, M&fn, P dol-cem, ltl Vfn, tr C; tr dol-&lim-cem
770-780	10		Ss, gry or pnk, M&fn, P dol-cem, ltl Vfn, tr C&VC; tr dol-&lim-cem
780-785	5		Ss, Vlt ol gry, fn&Vfn, P dol-cem, mch M, tr C&VC; ltl dol-cem, tr lim-&pyr
785-795	10		Ss, gry, M&fn, P dol-cem, mch Vfn, tr C & VC; tr dol-lim-& pyr-cem
795-810	15		Ss, gry, M, rnd, F srtg, P dol-cem, mch fn, tr Vfn, C & VC;
810-820	10		Ss, Vlt ol gry, M&fn, P dol-cem, mch Vfn; ltl gn sh, tr lim-& dol-cem
820-830	10		Ss, Vlt ol gry, M&fn, mch Vfn, tr C&VC; tr gn sh&lim-cem, ltl dol-cem, tr
830-840	10		Ss, dk gry, M&fn, mch Vfn, tr C; ltl dol-cem, tr pyr, cotg, tr lim-cem
840-855	15		Ss, gry, M&fn, P dol-cem, mch Vfn, tr C&VC (A.ig); tr dol-cem, pyr cotg
855-860	5		Ss, gry, M&fn, P dol-cem, mch Vfn; tr dol-&lim-cem, tr pyr
860-870	10		Ss, gry mot dk gry, M&fn, mch Vfn, tr C&VC (A.ig); tr qtz mch dk gry sh,
870-875	5		Sh, gry, dolie; mch Vfn/M snd, tr dol, pyr & lim
875-880	5		Ss, gry, Vfn/M, P dol-cem, tr C (A.ig); tr dol, lim & pyr, mch gry sh
880-890	10		Ss, gry, Vfn&fn, P dol-cem, ltl M; ltl dol, tr lim&pyr, mch gry sh
890-900	10		Ss, gry, M&fn, P dol-cem, ltl Vfn, tr C&VC (ig); mch gry dolie sh, ltl dol
900-915	15		Ss, gry, fn&Vfn, P dol-cem, ltl M; tr dol, lim & pyr, mch gry sh
915-920	5		Sh, brt rd bn, F srtg, slight dolie; mch st, tr Vfn snd, ltl fn/C, tr VC
920-925	5		Ss, brt rd bn, fn&Vfn, VP dol-cem, ltl M, tr C; mch rd bn sh, tr dol&pyr

Well name City of Fond du Lac, Wis., Well #18  
 Sample Nos. 272442 to 272639

439 925-945 945-950 950-955 955-965 965-970 970-985 985-989	20		Sh, brt rd bn, P srtg, VP dol-cem; lt1 Vfn/M snd
	5		Ss, brt rd bn, fn&Vfn, Sang, P srtg, VP dol-cem, lt1 M&C, trVC; mch rd
	5		Ss, rd or, fn&Vfn, VP dol-cem, lt1 M/VC snd; tr grans, mch rd or sh, tr
	10		Ss, rd or, fn&Vfn, VP dol-cem, mchM, lt1 C&VC(ig); mch rd or sh, lt1 st,
	5		Ss, rd or, Vfn/M, VP dol-cem, mch C&VC(ig) lt1 Vfn ig gvl+rd or sh, tr
	15		Ss, rd or, fn&Vfn, VP dol-cem, lt1 M&C, trVC; mch rd or sh, tr grans
	4		Ss, rd or, fn&Vfn, VP dol-cem, mch M/VC; lt1 fn qtzt gvl, mch rd or s

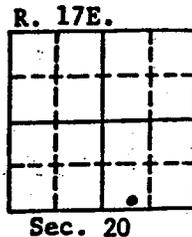
END OF WELL

Remarks con'td: majority but shale and sand from above could contaminate sample.

County: Fond du Lac

Well name City of Fond du Lac, Wisconsin  
 Well #19  
 Owner.... City of Fond du Lac, Wisconsin  
 Address.. c/o City Clerk, City Hall  
 Fond du Lac, Wisconsin  
 Driller.. Miller Well and Pump Co.  
 Engineer. Donahue & Assoc.  
 Sheboygan, Wisconsin

Completed... 3/25/68  
 Field check, MEO, PGO(WGS) T.  
 Altitude... 838.50' ~~838.50' - 838.50'~~ 15  
 Use..... Municipal N.  
 Static w. l. -- 82'2"  
 Spec. cap... -- 3.0



Quad. Campbellsport 15'

Drill Hole						Casing & Liner Pipe or Curbing							
Dia.	from	to	Dia.	from	to	Dia.	Wgt. & Kind	from	to	Dia.	Wgt. & Kind	from	to
26"	0	127'				26"	blk. steel	+2'	127'				
23"	127'	345'					3/8" wall						
19"	345'	870'				20"	blk. steel	+2'	345'				
							3/8" wall						

Grout: Kind	from	to
Neat cement	+2'	345'

Samples from 0 to 869' Date received: 1/19/68 Issued: 2/69  
 Examined by: J.M. Warren Date: 6/11/68

Formations: Drift, Platteville-Galena, St. Peter, Prairie du Chien,  
 Cambrian Undifferentiated, Precambrian

Remarks: Well tested for 10 hours at 700 gpm with 234'10" of drawdown. E log run by PGO & MEO of WGS, 1/22/68. Located on the east side of Highway 151 approximately 4400' south west of US 41 interchange. Driller reports depth 870'. \*Blasting record

LOG OF WELL:

Depth (ft)	Interval (ft)	Description
0-5	5	Cl, pl rd bn, P srtg, hd, calcus; ltl Vfn/M snd, tr C snd/fn gvl
5-10	5	Cl, pl rd bn, F srtg, hd, calcus; tr st/VC snd
10-25	15	Cl, pl rd bn, P srtg, hd, calcus; tr st/fn gvl
25-30	5	Cl, pl rd bn, P srtg, calcus, hd; ltl fn gvl, tr Vfn snd/Vfn gvl
30-40	10	Cl, pl rd bn, P srtg, calcus, hd; tr Vfn snd/fn gvl
40-55	15	Cl, pl rd, P srtg, calcus; ltl Vfn/M snd, tr C snd/fn gvl
55-60	5	Cl, lt ol gry, P srtg, calcus; mch fn/C snd, ltl Vfn&VC, ltl fn&Vfn gvl
60-70	10	Cl, lt ol gry, P srtg, calcus; mch fn&Vfn dol gvl, mstly dol, tr pyr mch fn&Vfn snd, ltl M/VC
70-75	5	Cl, lt ol gry, P srtg, calcus, hd; ltl Vfn snd/fn gvl
75-80	5	Cl, lt ol gry, P srtg, calcus; mch Vfn dol gvl, ltl fn, ltl Vfn/VC snd
80-85	5	Cl, lt ol gry, P srtg, calcus; mch Vfn/M snd, ltl C snd/Vfn gvl
85-95	10	Cl, ol gry, P srtg, calcus, hd; ltl Vfn snd/Vfn gvl, tr C gvl
95-120	25	Cl, gry or mot or pnk, P srtg, calcus; mch Vfn snd/Vfn gvl, ltl fn gvl, tr M, mstly dol, tr ltl qtz&ig
120-125	5	Dol? pl yl bn mot lt bn, fn&Vfn, dns, tr fossif; tr xln pyr, fossif cht
125-135	10	Dol, pl yl bn, fn&Vfn, dns, tr M; tr xln & lim spks, tr cvd snd, mch cl pyr, cht&lim spks, tr cvd snd, mch cl
135-140	5	Dol, pl yl bn mot lt ol gry, fn&Vfn, dns, tr M, tr ltl disagg; tr xln pyr, slet, tr lim spks
140-155	15	Dol, pl yl bn mot lt ol gry, fn&Vfn, dns, tr M&C, tr sug tex, tr mot bn, tr xln&dissem pyr
155-160	5	Dol, V pl yl bn mot lt ol gry, fn&Vfn, dns, tr M&C, tr sug tex; tr xln pyr
160-165	5	Dol, V pl gry or mot lt ol gry, fn&Vfn, dns, tr M&C, tr sug tex; tr xln pyr
165-170	5	Dol, V pl gry or, fn&Vfn, dns, tr sug tex; tr xln&dissem pyr, tr foss frn
170-175	5	Dol, V pl gry or mot lt ol gry, fn&Vfn, dns, tr M, tr sug tex; tr dissem pyr&lim spks
175-190	15	Dol, V pl gry or, fn&Vfn, dns, tr sug tex; tr xln pyr

Well name City of Fond du Lac, Wisconsin, Well #19  
Sample Nos. 280862 to 281035

C  
A  
M  
B  
R  
I  
A  
N  
  
U  
N  
D  
I  
F  
E  
R  
E  
N  
T  
I  
A  
T  
E  
D

560-570	10		Ss, pnk ol gry, fn, ang, P srtg, mch G lt ol gry dol-cem, mch M, ltl Vfn mch gry ol, ltl dissem pyr, tr xln pyr, ltl-mch xln dol
570-575	5		Ss, gry or pnk, fn, ltl G pl or pnk dol-cem, mch M, ltl Vfn; mch gry or
575-580	5		Ss, or pnk, fn, tr F-G dol-cem, ltl M&Vfn, tr C; mch or pnk cl, tr hd gn sh, sft dol, xln&dissem pyr
580-605	25		Ss, V pl or pnk, M&fn, ang, P srtg, ltl F V pl pnk dol-cem, mch Vfn, ltl C; mch V pl or dol-cem, tr lim
605-610	5		Ss, or pnk, M, ltl G V pl or dol-cem, mch fn, ltl C&Vfn, tr VC; mch or pnk dol-cem, tr lim&grans
610-625	15		Ss, or pnk, M&fn, ang/rnd, P srtg, tr G dol-cem, mch Vfn, tr C&VC; mch or pnk cl, tr lim
625-630	5		Ss, or pnk, M&fn, tr G dol-cem, ltl C, tr Vfn&VC; mch cl slgt tr lim
630-635	5		Ss, or pnk, M, slgt tr dol-cem, mch C&fn, ltl Vfn; mch cl, tr lim
635-645	10		Ss, yl bn, fn, ang, P srtg, ltl P sft dol-cem, ltl M&Vfn, tr C&VC; ltl st&cl, tr pyr&pl yl gn sh
645-650	5		Ss, V pl yl bn, fn, ang, mch M, ltl Vfn, tr C&VC, ltl cl&st, tr lim, pyr &
650-660	10		Ss, V pl yl bn, M&fn, rnd/ang, P srtg, tr C, VC&Vfn; ltl st&cl, tr qtztgrans, dol&pyr
660-665	5		Ss, V pl yl bn, M&fn, tr G dol-cem, tr C, VC&Vfn; ltl st&cl, tr pyr
665-670	5		Ss, V pl yl bn, fn, tr G-F dol-cem, ltl M&Vfn, tr C&VC; ltl st&cl
670-675	5		Ss, V pl yl bn, M&fn, tr G-F dol-cem, tr C, VC&Vfn; ltl st&cl, tr pyr
675-680	5		Ss, V pl yl bn, M&fn, tr G-F dol-cem, tr Vfn, ltl C&VC; ltl st&cl, tr gr
680-685	5		Ss, V pl yl bn, M, tr G-F dol-cem, mch fn&C, tr Vfn&VC; ltl st&cl, tr gr
685-690	5		Ss, gry or pnk, M&C, tr G-F dol-cem, ltl Vfn&VC, ltl st&cl, few qtztgr
690-695	5		Ss, gry or pnk, M&fn, tr G-F dol-cem, ltl C, VC&Vfn; mch st&cl, tr grans
695-700	5		Ss, pnk gry, M, tr G-F dol-cem, mch fn&C, ltl Vfn&VC, mstly qtzt; ltl st
700-705	5		Ss, gry or pnk, M&C, tr G-F dol-cem, ltl C, VC&Vfn, mstly qtzt; ltl st
705-710	5		Ss, gry or pnk, M&C, tr G-F dol-cem, ltl C, VC&Vfn, mstly qtzt; ltl st
710-720	10		Ss, V pl pnk, M, ang, P srtg, tr dol-&pyr-cem; cl, tr pyr, grans&hd gn sh mch fn, ltl C, tr VC&Vfn, mstly qtzt; mch gry cl, tr qtztgrans
720-725	5		Ss, V pl pnk, fn, ltl F dol-cem, mch M, ltl Vfn, tr C&VC, mstly qtzt;
725-730	5		Ss, gry pnk, M&fn, tr G gry dol-cem, mch Vfn, ltl C&VC, mstly qtzt;
730-735	5		Ss, gry pnk, M, ltl G, gry dol-cem, tr pyr-cem, mch C, fn&Vfn, ltl VC,
735-740	5		Ss, lt bn gry, M&fn, ltl G, gry dol-cem, tr pyr-cem, mch Vfn, ltl C&VC,
740-745	5		Ss, lt bn gry, M&fn, tr gry dol-cem, mch C&Vfn, tr VC, mstly qtzt; mch
745-755	10		Ss, lt bn gry, M, tr gry dol-cem, gry cl, tr gn sh, lim, pyr&qtztgrans mch fn, Vfn&C, tr VC, mstly qtzt; mch gry cl, ltl gn sh, tr lim, pyr
755-760	5		Ss, V pl gry or pnk, M&fn, tr gry dol-cem, mch C&Vfn, ltl VC, mstly qtzt
760-765	5		Ss, gry pnk, M, tr gry dol-cem, mch fn&C, ltl Vfn, tr VC, mstly qtzt; mch gry cl, tr gry&gn sh, qtztgrans
765-790	25		Ss, gry or pnk, M&fn, ang, P srtg, tr gry dol-cem, mch Vfn, ltl C&VC, mstly qtzt; mch gry cl, tr pl bn sh&qtztgrans&lim
790-795	5		Ss, gry or pnk, fn, tr gry dol-cem, mch M, ltl Vfn&C, tr VC, mstly qtzt;
795-800	5		Ss, gry or pnk, fn, tr gry dol-cem, mch M, ltl Vfn, C&VC, mstly qtzt;
800-805	5		Ss, gry or pnk, fn, tr gry dol-cem, mch M, ltl Vfn, C&VC, mstly qtzt;
805-810	5		Ss, gry or pnk, M&fn, tr F gry dol-cem, ltl Vfn&C, tr VC, mstly qtzt;
810-815	5		Ss, gry or pnk, M, tr F gry dol-cem, mch fn&C, ltl Vfn, tr VC, mstly qtzt;
815-820	5		Ss, or pnk, M&fn, tr F gry dol-cem, ltl Vfn&C, tr VC, mstly qtzt; mch r
820-830	10		Ss, or pnk, M, ang, P srtg, slgt tr dol-cem, or cl, tr gn sh&qtztgrans mch fn&C, ltl Vfn&VC, mstly qtzt; mch or pnk cl, tr grans
830-835	5		Ss, or pnk, M&fn, slgt tr dol-cem, mch C, ltl Vfn, tr VC, mstly qtzt;
835-840	5		Ss, pl rd bn, bn, slgt tr dol-cem, ltl M, Vfn, C&VC, mstly qtzt;
840-845	5		Sh, rd bn, P srtg, sft; mch M&fn, snd, ltl Vfn&VC; tr VC, tr qtztgrans
845-850	5		Sh, rd bn, P srtg, vrb, hdns; mch Vfn/M, snd, tr C&VC
850-855	5		Ss, pl rd bn, M, mch fn&C, ltl Vfn&VC, mstly qtzt; mch rd bn cl
855-860	5		Concl pl rd&or pnk, fn&Vfn, mstly qtzt; mch lt rd cl, fn/VC, qtzt
860-869	9		Qtzt pl rd gry rd&rd or, fn/VC; tr ltl ortho qtzt, ltl lt, sh&qtzt gr rd&gry rd sh&cl, ltl Vfn/VC, snd

END OF LOG

Duplicate samples

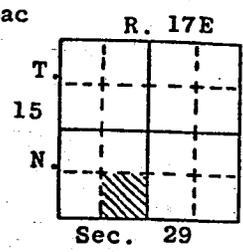
* 265-270	5		C, tr fossif; mch gn gry sh, tr xln&dissem pyr&foss frags
* 730-735	5		mstly qtzt; mch gry cl, tr qtztgrans
* 735-740	5		mstly qtzt; mch gry gn sh, mch gry cl, tr qtztgrans&pyr

Blasting Record \* 100 pound development placed in well as follows:  
First 100# shot at 640', Second 100# shot at 600', Third 100 # shot at 516'

Well name City of Fond du Lac, Wisconsin, Well #19  
Sample Nos. 280862 to 281035

G A L E N A P L A T E V I L L E	190-195	5	/	Dol, gry or mot gry&wh, fn, dns, tr por, ltl Vfn, tr M, ltl sug tex.
	195-205	10	/	Dol, gry or mot gry&lt ol gry, fn, fossif?, ltl xln pyr, tr dissem pyr &Vfn, dns, tr M/VC, tr fossif, tr sug tex; ltl xln&dissem pyr
	205-210	5	/	Dol, gry or, fn, dns, tr por, ltl M&Vfn, tr C, ltl sug tex, tr V fossif;
	210-215	5	/	Dol, gry or, fn, dns, ltl Vfn&M, tr C&V micro xln, tr sug tex, tr fossif;
	215-220	5	/	Dol, gry or, fn, dns, ltl sug tex, tr M, C&Vfn, tr V fossif; tr xln&dissem
	220-225	5	/	Dol, gry or, fn, dns, mch M, tr Vfn&C, ltl sug tex, tr por, tr fossif;
	225-230	5	/	Dol, pl gry or, fn, dns, ltl Vfn, tr M, ltl sug tex, tr fossif; tr xln&dis
	230-235	5	/	Dol, pl gry or, fn, dns, tr Vfn&M, tr sug tex, tr fossif; tr cht
	235-240	5	/	Dol, pl gry or, fn, dns, tr por, ltl Vfn, tr M&C, tr sug tex; tr gry sh
	S T P E T E R	240-265	25	/
265-270		5	/	Dol, gry or, lt ol gry, wh, gry&V pl or, fn, dns, mch Vfn, ltl M, tr C, tr
270-275		5	/	Dol, gry or, lt ol gry, wh, gry&V pl or, fn, dns, mch Vfn, ltl M, tr fossif
275-280		5	/	Dol, gry or, fn, dns, ltl M&Vfn, tr C; slgt tr xln pyr
280-285		5	/	Dol, lt ol gry, fn, dns, ltl M&Vfn, tr C, tr fossif; ltl gn gry sh
285-290		5	/	Dol, lt ol gry, fn, dns, ltl M&Vfn, tr fossif; slgt tr xln pyr
290-295		5	/	Dol, lt ol gry, fn&Vfn, dns, tr M&C, tr fossif; tr xln pyr&gn gry sh
295-300		5	/	Dol, V pl gry or, fn&Vfn, dns, tr M, tr sug tex; tr dissem pyr&lim spks
300-305		5	/	Dol, pl gry or, Vfn, dns, ltl sug tex, tr fossif, ltl fn;
305-335		30	/	Dol, pl gry or mot lt ol gry&gry, fn, dns, ltl fn, tr sug tex; tr dissem pyr&lim spks
P d u C	335-340	5	/	Sh, gn gry, P srtg, hd, sndy(fn/C); ltl pl gry or Vfn grnd dol; tr Vfn/ VC snd&xln pyr
	340-365	25	/	Ss, lt gry, M&fn, Srnd/ang, P srtg, mch F-F dol?-cem, ltl C&Vfn, tr VC; mch gry st, tr pyr-cem&xln pyr, few metal frags
	365-370	5	/	Ss, lt gry, M&fn, ltl G qtz-cem, ltl P dol-cem, mch C, ltl Vfn, tr VC; ltl
	370-380	10	/	Sh, V lt gry, V gry&gry bn qtz?&vlt, tr oolic cht&pyr-cem, mch st dolic, sft; mch dol gvl, mch fn/C snd, tr VC, tr hd gn sh, pyr
	380-385	5	/	Dol, V lt bn, V pl vl bn&pl gry or, fn&Vfn, dns, tr sndy(Vfn/C) tr oolic
	385-390	5	/	Ss, V lt ol gry, M&C, ltl G dol-cem, mch fn&Vfn, ltl VC; mch Vfn xln dol
	390-395	5	/	Ss, V lt ol gry, M&C, ltl G dol-cem, mch fn, Vfn&VC; mch Vfn grnd xln dol
	395-400	5	/	Ss, V lt ol gry, mch fn&Vfn, ltl VC; mch V lt gry cl, ltl V pl vl bn fn
	400-405	5	/	Ss, V pl or, mch fn&Vfn, tr VC; mch V lt gry cl&dol, tr hd gn sh, pyr
	405-410	5	/	Dol, V pl or, M&fn, V dns, ltl C&Vfn, tr sndy(Vfn/C) tr oolic; mch Vfn/C
C A M U N D I F	410-415	5	/	Dol, V pl or, Vfn, dns, ltl fn, M&micro xln; ltl Vfn/C snd, tr VC, tr hd g
	415-420	5	/	Dol, V pl or, Vfn&micro xln, dns, ltl fn; ltl Vfn/C snd, tr VC, tr glauc
	420-425	5	/	Dol, V pl or, Vfn&micro xln, dns, tr por, tr fn&M, tr oolic; ltl Vfn/M snd
	425-430	5	/	Dol, V pl gry or, Vfn, dns, tr fn&micro xln; ltl Vfn/C snd, tr cht
	430-435	5	/	Dol, V pl gry or, fn&Vfn, dns, tr por, tr oolic; tr Vfn/C snd, glauc, cht
	435-440	5	/	Dol, V pl gry or, fn, dns, ltl Vfn&M, tr C; mch V lt gry cl, tr Vfn/M snd
	440-450	10	/	Dol, V pl gry or mot V lt bn&wh, fn, dns, sug tex, tr Vfn; mch V lt gry cl, tr Vfn/C snd, tr pl gn sh, slgt tr pyr&lim
	450-465	15	/	Dol, V pl vl gry mot V pl or, M&fn, dns, tr Vfn&C, tr sug tex, tr sndy (fn/C); mch V lt gry cl, tr hd gn gry sh, fn/C snd&cht
	465-470	5	/	Dol, V pl vl gry, M&fn, dns, tr Vfn&C, ltl sug tex; tr fn/C snd&cht, few vugs w/drusy qtz, mch Vlt gry cl
	470-485	15	/	Dol, V pl or mot wh&V lt ol gry, M&fn, dissag, tr C&Vfn, tr sndy(fn); tr drsy qtz, gn sh, fn/C snd&cht, glauc&pyr&st
485-490	5	/	Dol, V pl or, fn, dns, ltl M&Vfn, tr C, tr sndy(fn/C); tr cht&oolic cht	
490-495	5	/	Ss, V pl or, M, mch F wh, V pl or or pnk dol-cem, mch fn, ltl Vfn&VC;	
495-500	5	/	Dol, V pl or, fn, dns, ltl Vfn, sndy(Vfn/C); mch V pl or cl, mch fn/C snd	
500-510	10	/	Ss, V pl or, M, ang/rnd, P srtg, ltl G V pl or dol-cem, mch fn, Vfn&C, tr VC; mch vl gry cl, tr pyr&lim	
510-515	5	/	Ss, V pl or, M, ltl P dol-cem, mch fn&C, ltl Vfn&VC; mch V pl or cl, tr lim&V pl, gn sh	
515-530	15	/	Ss, V pl or, M&fn, ang/Srnd, P srtg, ltl dol-cem, vrbl hdns, ltl Vfn&C, tr pnk qtz&trans, pyr, lim&V pl, gn sh	
530-535	5	/	Ss, gry or pnk, fn, ltl F dol-cem, mch M, ltl Vfn, tr C; mch gry or pnk c	
535-540	5	/	Ss, pl or pnk, fn, ltl pl rd, or pnk&pl or dol-cem, ltl M&Vfn, tr C;	
540-560	20	/	Ss, V pl or, fn, ltl G dol-cem, mch Vfn, tr M; mch V pl or cl, tr glauc	

Well name Fond du Lac City Well #20 County: Fond du Lac  
 Fond du Lac Township Completed... 10/13/69  
 Owner.... City of Fond du Lac Field check.  
 Address.. Box 151 Altitude.... 835' ETM  
 Fond du Lac, WI 54935 Use..... Municipal  
 Driller.. Miller Well & Pump Co. Static w.l.. 103'  
 Engineer. Donohue & Associates, Inc. Spec. cap... 2.65  
 Sheboygan, Wisconsin



Quad. Campbellsport 15'

Drill Hole						Casing & Liner Pipe or Curbing							
Dia.	from	to	Dia.	from	to	Dia.	Wgt. & Kind	from	to	Dia.	Wgt. & Kind	from	to
26"	0'	264'	19"	364'	911'	26"	New steel Grade B. P. E. .374" Wall A53	0'	137'	20"	New steel .375" wall A 53 Grade B P.E.	+24"	364'

Grout: Kind	from	to
Neat cement	0'	364'

Samples from 0' to 910' Rec'd: 4/10/70 Studied by: M. Roshardt Issued: Jan. 197  
 Formations: Drift, Sinnipee Group, St. Peter Sandstone, Prairie du Chien Group, Trempealeau Group, Tunnel City Group, Elk Mound Group  
 Remarks: Well tested for 16 hours at 700 gpm with 264 feet of drawdown.  
 Driller reports total well depth of 911'.  
 Maquoketa Shale may have been encountered from 100' to 130'.  
 W.G.S. Resistivity and Gamma Logs 9/2/69.

LOG OF WELL:

	Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
					Mode	Range	
D R I F T	0-5		Clay	Red brown	--	--	Calcareous. Trace sand, gravel.
	5-10		"	"	--	--	Same
	10-15		"	"	--	--	"
	15-20		"	"	--	--	Calcareous. Trace sand.
	20-25		"	"	--	--	Calcareous. Trace sand, gravel.
	25-30		"	"	--	--	Same
	30-35		"	"	--	--	Calcareous. Trace sand.
	35-40		"	"	--	--	Same
	40-45		"	"	--	--	Calcareous. Trace sand, gravel.
	45-50		"	"	--	--	Calcareous. Little gravel. Trace sand.
	50-55		"	"	--	--	Calcareous. Much gravel. Trace sand.
	55-60		"	"	--	--	Calcareous. Little gravel, sand.
	60-65		"	"	--	--	Calcareous. Trace gravel, sand.
	65-70		"	"	--	--	Same
	70-75		"	"	--	--	"
	75-80		"	"	--	--	"
	80-85		"	"	--	--	Calcareous. Little gravel. Trace sand.
	85-90		"	"	--	--	Same
90-95		"	"	--	--	Calcareous. Little gravel, sand.	
95-100		"	"	--	--	Little gravel. Trace sand.	
100-105		"	"	--	--	Same	
105-110		"	"	--	--	"	
110-115		"	"	--	--	"	
115-120		"	"	--	--	"	
120-125		"	"	--	--	"	
125-130		"	"	--	--	"	
130 S ZZ	130-135		Dolomite	Brown	M	Fr/M	Trace red speckling, pyrite.
	135-140		"	"	"	"	Little red speckling. Trace pyrite, fossil fragments.
	140-145		"	"	"	"	Same
	145-150		"	"	"	"	"
	150-155		"	"	"	"	"
	155-160		"	"	"	"	"

Well name: Fond du Lac City Well #20

	Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics	
					Mode	Range		
S I N N I P E E G R O U P	160-165		Dolomite	Lt brown	M	--	Trace pyrite.	
	165-170		"	"	"	--	Same	
	170-175		"	"	"	--	"	
	175-180		"	"	"	--	"	
	180-185		"	"	"	--	"	
	185-190		"	"	"	--	"	
	190-195		"	"	"	--	"	
	195-200		"	"	"	--	"	
	200-205		"	"	"	--	"	
	205-210		"	"	"	Fn/M	"	
	210-215		"	"	"	"	"	
	215-220		"	"	"	"	"	
	220-225		"	"	"	"	"	
	225-230		"	"	"	"	"	
	230-235		"	Gray tan	"	"	Trace pyrite, fossil fragments.	
	235-240		"	"	"	"	Same	
	240-245		"	"	"	M/C	Same	
	245-250		"	"	"	"	"	
	250-255		"	"	"	Fn/C	"	
	255-260		"	"	"	"	"	
	260-265		"	"	"	"	"	
	265-270		"	Tan	"	Fn/M	Trace pyrite.	
	270-275		"	"	"	"	Trace pyrite, fossil fragments.	
	275-280		"	"	"	--	Trace pyrite.	
	280-285		"	"	"	--	Same	
	285-290		"	"	"	--	"	
	290-295		"	Gray tan	"	Fn/C	Trace pyrite, fossil fragments, calcite crystals.	
	295-300		"	"	"	"	Same	
	300-305		"	Gray	"	--	Trace pyrite, fossil fragments.	
	305-310		"	Tan	"	Fn/M	Trace pyrite.	
	310-315		"	"	"	"	Same	
	315-320		"	"	"	"	"	
	320-325		"	"	"	"	"	
	325-330		"	"	"	"	"	
	330-335		"	"	"	"	"	
335-340		"	"	"	"	"		
340-345		"	Gray tan	"	"	"		
345-350		"	"	"	"	"		
220	350-355		Sandstone	Gray	M	Fn/VC	Little dolomite. Trace pyrite cement, green shale.	
S T P E R S S	355-360		"	"	"	"	Trace pyrite cement, dolomite.	
	360-365		"	"	M & C	"	Same plus trace green shale.	
	365-370		"	"	M	"	Trace pyrite cement, dolomite.	
	370-375		"	"	"	"	Same	
	375-380		"	"	"	"	"	
	380-385		"	Brown	"	Fn/C	Much dolomite cement. Little dol. Tr pyr cem, wh chert.	
	385-390		"	"	"	Fn/VC	Same	
	390-395		"	Gray	"	M & C	Little dolomite, dolomite cement. Trace pyrite cement.	
	395-400		"	"	"	M	Same plus trace green shale.	
	400-405		"	"	"	"	Same	
I D U C H I E N	405-410		Dolomite	"	M	Fn/M	Trace floating quartz, chert, pyrite.	
	410-415		"	Gray tan	"	"	Little floating quartz. Trace chert, pyrite.	
	415-420		Sandstone	"	"	M & C	Fn/VC	Little dolomite. Trace dolomite-pyrite cem, green shale.
	420-425		"	"	"	"	Fn/VC	Same
	425-430		Dolomite	"	M	Fn/M	Little white-orange chert. Trace glauconite, sand.	
	430-435		"	"	"	"	"	Same plus trace drusy quartz.
	435-440		"	"	"	"	"	Trace white-orange chert, sand, drusy quartz.
	440-445		"	Lt brown	"	"	"	Trace white chert, pyrite, drusy quartz.
	445-450		"	"	"	"	"	Trace white-orange chert, pyrite, drusy quartz.
	450-455		"	"	"	"	"	Same
455-460		"	"	"	"	"	"	
460-465		"	"	"	"	"	Same plus trace glauconite.	
465-470		"	"	"	"	"	Same	
470-475		"	Pink brown	"	--	"	Little limonite fillings. Trace glauconite.	
475-480		"	"	"	--	"	Same plus trace pyrite.	
480-485		"	Tan	"	--	"	Trace white chert.	
485-490		"	"	"	--	"	Little white chert. Trace glauconite, drusy quartz.	

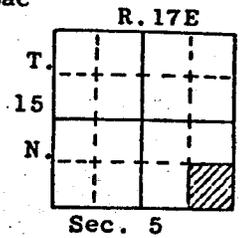
Well name: Fond du Lac City Well #20

	Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics	
					Mode	Range		
P du C.	490-495	△ G /	Dolomite	Tan	M	--	Trace white shert, pyrite, glauconite.	
	495-500	△	"	"	"	--	Trace white shert, floating quartz, sand.	
	500-505	△ / △	"	"	"	--	Trace white shert, sand.	
	505-510	△ /	"	"	"	--	Same plus trace floating quartz.	
90'	510-515	△ /	"	"	"	--	Same	
T e m.	515-520		Sandstone	Gray	M	Fn/VC	Much dolomite cement. Trace glauconite, pyrite.	
	520-525		"	Pink tan	"	"	Same	
	525-530		"	"	C	"	"	
20'	530-535		"	"	"	"	Little dolomite cement. Trace pyrite.	
	535-540		"	Pnk or bn	M	Vfn/VC	Little dolomite cement, glauconite.	
	540-545		"	"	"	Vfn/C	Same plus trace pyrite.	
	545-550		"	"	Fn & M	Vfn/M	Little dolomite cement. Trace glauconite.	
	550-555		"	"	"	"	Same	
	555-560		"	"	"	"	Trace dolomite cement, glauconite.	
	560-565		"	"	M	Fn/C	Same	
	565-570		"	"	"	Vfn/C	"	
	570-575		"	"	"	Vfn/M	Little dolomite cement.	
	575-580		"	"	"	"	Same	
C.	580-585		"	"	"	"	"	
	585-590		"	"	Fn & M	"	"	
	590-595		"	"	"	"	Much dolomite cement. Trace glauconite.	
	595-600		"	Orange gry	M	Fn/VC	Little dolomite cement.	
	600-605		"	"	"	"	Same	
	605-610		"	Pink gray	"	"	"	
	610-615		"	"	"	"	"	
	615-620		"	"	"	Vfn/C	--	
	620-625		"	"	M & C	"	Trace dolomite cement.	
	625-630		"	"	M	Fn/C	Same	
E L K	630-635		"	"	"	"	"	
	635-640		"	"	"	"	Same plus trace red shale.	
	640-645		"	"	"	"	Trace limonite.	
	645-650		"	Pl pink gry	"	"	Same	
	650-655		"	Pnk or gry	"	"	Trace limonite, green shale.	
	655-660		"	"	"	"	Trace limonite.	
	660-665		NO SAMPLE. Driller reports sandstone with lime streaks.					
	665-670		NO SAMPLE. Driller reports sandstone with lime streaks.					
	670-675		Sandstone	Pink gray	M	Fn/C	Trace limonite.	
	675-680		"	"	"	"	Same	
M O U N D	680-685		"	Pl red gry	"	"	Trace limonite, green shale.	
	685-690		"	Pnk or gry	"	Fn/VC	Trace dolomite cement, limonite.	
	690-695		"	"	"	"	Same	
	695-700		"	"	"	M & C	Little dolomite cement. Trace limonite.	
	700-705		"	"	"	M	Trace dolomite cement, limonite.	
	705-710		"	"	"	Fn/VC	Little dolomite cement. Trace limonite.	
	710-715		"	"	"	"	Trace dolomite cement, limonite.	
	715-720		"	"	"	"	Same	
	720-725		"	"	"	"	"	
	725-730		"	"	"	M & C	"	
730-735		"	"	"	Vfn/VC	"		
735-740		"	"	"	C	Fn/VC		
740-745		"	"	"	"	"		
745-750		"	Pnk or bn	M	"	"		
750-755		"	"	"	"	"		
755-760		"	Pnk or gry	"	"	Same plus trace green shale.		
760-765		"	"	"	"	Same		
765-770		"	"	"	"	"		
770-775		"	"	"	"	"		
775-780		"	"	"	"	Same plus trace red shale.		
780-785		"	"	Fn & M	Fn/C	Trace dolomite cement, limonite.		
785-790		"	"	M	Fn/VC	Same plus trace green shale.		
790-795		"	"	"	"	Same		
795-800		"	"	"	"	"		
800-805		"	"	Fn & M	Vfn/C	Trace limonite.		
805-810		"	"	"	Fn/VC	Same		
810-815		"	Pink gray	"	Fn/C	Trace dolomite cement, limonite, pyrite.		
815-820		"	"	"	"	Same		



Well name Fond du Lac City Well #21  
Fond du Lac Township  
Owner.... City of Fond du Lac  
Address.. P.O. Box 150  
Fond du Lac, WI 54935  
Driller.. Egerer-Galloway Well Corp.  
Engineer. Donohue & Associates, Inc.  
Sheboygan, Wisconsin

County: Fond du Lac  
Completed... 5/4/71  
Field check. W.G.S.-R.M.P.  
Altitude.... 765' ETM  
Use..... Municipal  
Static w.l... 90'  
Spec. cap... 2.0



Quad. Fond du Lac 7 1/2'

Drill Hole						Casing & Liner Pipe or Curbing							
Dia.	from	to	Dia.	from	to	Dia.	Wgt. & Kind	from	to	Dia.	Wgt. & Kind	from	to
25"	0'	222'	12"	423'	783'	26"	Steel 3/8"	0'	53'	18"	Steel 3/8"	+2'	222'
17"	222'	423'					A-53-B				A-53-B		
Grout: Kind												from	to
Neat Cement												0'	222'

Samples from 0' to 784' Rec'd: 9/16/70 Studied by: M. Roshardt Issued: 6/71  
Formations: Drift, Sinnipee Group, St. Peter Sandstone, Prairie du Chien Group, Trempealeau Group, Tunnel City Group, Elk Mound Group, Precambrian  
Remarks: Well tested for 16 hours at 580 gpm with 295 feet of drawdown.  
W.G.S. Gamma, Resistivity & Self-Potential Log 10/27/70.

LOG OF WELL:

	Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
					Mode	Range	
D	0-5		Soil	Black	--	--	Trace sand.
R	5-10		Clay	Red brown	--	--	Calcareous. Little gravel. Trace sand.
I	10-15		"	"	--	--	Same
F	15-20		"	Pnk brown	--	--	Dolomitic. Little sand. Trace gravel.
T	20-25		"	"	--	--	Same
35'	25-30		"	"	--	--	Dolomitic. Little gravel. Trace sand.
	30-35		"	Orange bn	--	--	Same
	35-40		Dolomite	Brown	M	Fn/M	Trace pyrite.
	40-45		"	"	"	"	Same
	45-50		"	"	"	"	"
	50-55		"	"	"	"	"
S	55-60		"	"	"	"	"
I	60-65		"	"	"	"	Trace pyrite, calcite crystals.
N	65-70		"	"	"	"	Same
N	70-75		"	Gray & bn	"	"	Trace pyrite, fossil fragments.
	75-80		"	"	"	"	Same
I	80-85		"	Gray	"	"	"
P	85-90		"	"	"	"	"
E	90-95		"	Gray brown	"	"	Trace pyrite.
	95-100		"	"	"	"	Same
E	100-105		"	"	"	"	"
G	105-110		"	"	"	"	"
R	110-115		"	Brown	"	"	"
	115-120		"	"	"	"	Trace pyrite, red speckling.
O	120-125		"	"	"	"	Trace pyrite, green shale.
U	125-130		"	"	"	"	Trace pyrite, calcite crystals.
P	130-135		"	"	"	"	Little pyrite, fossil frags. Tr gn shaly calcite crystals.
	135-140		"	Green gray	"	"	Shaly. Few fossil fragments. Trace pyrite.
	140-145		"	"	"	"	Same
	145-150		"	Gray	Fn & M	"	Trace pyrite.
	150-155		"	Gray brown	"	"	Trace pyrite, green shale.
	155-160		"	"	"	"	Same plus trace fossil fragments.

Well name: Fond du Lac City Well #21

	Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
					Mode	Range	
S I N. Gp.	160-165		Dolomite	Brown	Fn & M	Fn/M	Trace pyrite, red speckling.
	165-170		"	"	"	"	Trace pyrite.
	170-175		"	"	"	"	Trace pyrite, green shale, calcite crystals.
	175-180		"	"	"	"	Trace pyrite, green shale.
	180-185		"	"	"	"	Trace pyrite.
	185-190		"	Gray brown	"	"	Trace pyrite, green shale, fossil fragments.
165'	190-195		"	"	"	"	Trace pyrite, red speckling, fossil fragments.
	195-200		"	"	"	"	Much floating quartz; Trace pyr. red speckling, gn shale.
S T. P E T E R S S	200-205		Sandstone	Gray	YC	M/YC	Trace dolomite cement, green shale, pyrite.
	205-210		"	"	C	Fn/YC	Same
	210-215		"	lt gray	M	Fn/C	Trace pyrite-dolomite cement, green shale.
	215-220		"	"	"	"	Same
	220-225		"	gray or pink	"	"	--
	225-230		"	"	C	"	Trace pyrite cement.
	230-235		"	"	"	"	Same plus trace dolomite.
	235-240		"	"	M	"	Trace pyrite cement.
	240-245		"	"	"	"	Same
	245-250		"	"	C	"	"
	250-255		"	"	"	"	"
	255-260		"	"	"	"	"
	260-265		"	"	"	"	Trace pyrite, green shale.
	265-270		"	"	"	"	Trace limonite.
	270-275		"	"	"	"	Trace pyrite cement, limonite.
275-280		"	"	"	Fn/YC	Trace pyrite-dolomite cement.	
280-285		"	"	M	Vfn/YC	Same plus trace green shale.	
285-290		Shale	Gn red bn	--	--	Trace sand.	
290-295		"	Red brown	--	--	Much silica-cemented sandstone.	
295-300		Sandstone	Orange bn	M & C	Fn/C	Much silica cement. Trace red & green shales, pyrite.	
105'	300-305		Shale	Pink brown	--	--	Little sand, dolomite.
P du C.	305-310		Dolomite	Gray tan	M	Fn/M	Little red & gn shales. Tr floating qtz, tan-yl chert.
	310-315		"	Orange tan	"	"	Same but no floating quartz.
	315-320		"	"	"	"	Trace green and red shales, glauconite.
	320-325		"	"	Fn	"	Little red & green shales. Trace white chert.
	325-330		"	"	"	"	Same
	330-335		"	"	"	"	Trace red and green shales.
	335-340		"	Gray	"	"	Little Vfn glauconite. Trace pyrite, red & green shales.
	340-345		"	Pink gray	M	"	Trace Vfn glauconite, green & red shales.
	345-350		"	Green gray	"	"	Same plus trace floating quartz, drusy quartz.
	50'	350-355		Shale	Red brown	--	--
T R E M P. Gp.	355-360		Sandstone	Orange bn	M	Vfn/C	Much silica-limonite cem. ltl dol. Tr red & green shales.
	360-365		"	"	"	Vfn/YC	Much silica-limonite-pyrite cem. Tr dol, red & gn sh, chert.
	365-370		"	"	M & C	"	Same.
	370-375		"	"	M	"	Little silica-pyrite cement, red & green shales.
	375-380		"	"	"	"	Same but much shale.
	380-385		"	"	Fn	Vfn/C	Same plus trace tan chert.
45'	385-390		Dolomite	"	Fn	Fn/M	Much micaceous red shale. ltl Vfn glauc. Tr sand, fling qtz.
	390-395		"	"	"	"	Little red & green shales, Vfn glauconite. Trace sand.
	395-400		"	"	"	"	Same
30'	400-405		"	Or gn gry	"	"	Much floating qtz. ltl Vfn/M glauc. Tr red & gn sh, chert.
	405-410		"	"	"	"	Same
	410-415		Sandstone	"	M	Vfn/YC	Much dolomite cement. ltl Vfn/M glauc. Tr red & gn sh, chert.
	415-420		"	"	"	"	Much dolomite cement. ltl Vfn/M glauc, red & gn sh. Tr chert.
E L K M O U N D	420-425		"	Pink gray	"	Vfn/C	Little dolomite cement, Vfn/M glauc, red & green shales.
	425-430		"	Red gray	"	Vfn/YC	Same but much shale plus trace chert.
	430-435		"	"	"	Vfn/C	Much silica-dolomite cement. ltl red & gn sh. Tr glauc, chert.
	435-440		"	Orange bn	"	"	Little silica-dolomite cement. Trace shales, glauconite.
	440-445		"	"	"	Vfn/YC	Little silica-dolomite cement, shales.
445-450		"	"	"	Vfn/C	Trace cement, shales.	
450-455		"	"	C	Fn/YC	Same	
455-460		Shale	Red brown	--	--	Micaceous. Little sand.	
460-465		Sandstone	Orange gry	M	Fn/C	Trace green & red shales.	
465-470		"	"	"	"	Little red & green shales.	
470-475		"	"	"	"	--	
475-480		"	"	"	"	Trace green shale.	
480-485		"	"	"	"	Trace green & red shales.	
485-490		"	"	"	Vfn/C	Same	

Well name: Fond du Lac City Well #21

	Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics	
					Mode	Range		
E L K M O U N D	490-495		Sandstone	Orange gry	M	Vfn/C	Little red & green shales. Trace dolomite.	
	495-500		"	Pnk or gry	M & C	"	Little silica cement, red & green shales. Tr chert.	
	500-505		"	"	C	"	Same	
	505-510		"	"	M & C	Vfn/VC	"	
	510-515		"	"	"	"	Little green & red shales. Trace silica cement.	
	515-520		"	"	M	Fn/C	Trace red & green shales.	
	520-525		"	"	"	"	Same plus trace pyrite.	
	525-530		"	"	"	"	Trace red & green shales, dolomite, chert.	
	530-535		"	"	"	Vfn/C	Same	
	535-540		"	Orange gry	M & C	"	"	
	540-545		"	Pnk or gry	Fn AM	"	Trace red & green shales.	
	545-550		"	"	M	Fn/C	Same plus trace pyrite.	
	550-555		"	"	"	"	Same but no pyrite.	
	555-560		"	"	"	"	Same	
	G R O U P	560-565		"	Orange gry	"	"	"
565-570			"	"	"	"	"	
570-575			"	"	"	Fn/VC	"	
575-580			"	"	Fn	Vfn/C	"	
155 580-585			"	"	"	"	"	
P R E C A M B R I A N		585-590		Quartzite	Pink gray	--	--	Trace hematite cement.
		590-595		"	Dk pnk gry	--	--	--
		595-600		"	"	--	--	--
		600-605		"	"	--	--	--
		605-610		"	"	--	--	--
	610-615		"	"	--	--	--	
	615-620		"	"	--	--	--	
	620-625		"	"	--	--	--	
	625-630		"	"	--	--	--	
	630-635		"	"	--	--	--	
	635-640		"	"	--	--	--	
	640-645		"	"	--	--	--	
	645-650		"	"	--	--	--	
	650-655		"	"	--	--	--	
	655-660		"	"	--	--	--	
	660-665		"	"	--	--	--	
	665-670		"	"	--	--	--	
	670-675		"	"	--	--	--	
	675-680		"	"	--	--	--	
	680-685		"	"	--	--	--	
	685-690		"	"	--	--	--	
	690-695		"	"	--	--	--	
	695-700		"	"	--	--	--	
	700-705		"	"	--	--	Trace mica schist.	
	705-710		"	"	--	--	--	
710-715		"	"	--	--	--		
715-720		"	"	--	--	--		
720-725		"	Pink gray	--	--	--		
725-730		"	"	--	--	--		
730-735		"	Pl pur gry	--	--	--		
735-740		"	"	--	--	--		
740-745		"	"	--	--	--		
745-750		"	"	--	--	--		
750-755		"	"	--	--	Trace mica schist.		
755-760		"	"	--	--	--		
760-765		"	"	--	--	--		
765-770		"	"	--	--	--		
770-775		"	"	--	--	--		
775-780		"	"	--	--	--		
199 780-784		"	"	--	--	--		

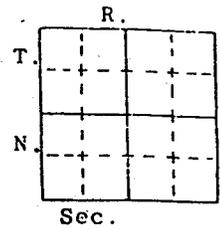
END OF LOG

Well name **Fond du Lac #22**

County:

Owner....  
Address...  
Driller..  
Engineer.

Completed...  
Field check.  
Altitude....  
Use.....  
Static w.l..  
Spec. cap...



Quad.

Drill Hole						Casing & Liner Pipe or Curbing							
Dia.	from	to	Dia.	from	to	Dia.	Wgt. & Kind	from	to	Dia.	Wgt. & Kind	from	to

Drilling method:  
Samples from to Rec'd:

Grout	from	to
-------	------	----

Studied by: **Kathleen Massie-Ferch**

Issued:

Formations:

Remarks:

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LOG OF WELL:

Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
				Mode	Range	
0-5	Diift	Clay & Silt	Dk rd bn	—	—	Calcus. Mch gvl(Gr/MP), sand. Few organics.
5-10		"	"	—	—	Calcus. Much sand. Ltl gravel(Gr/MP). Tr organics.
10-15		Clay	Rd brown	—	—	Calcus. Mch sand, silt. Ltl gravel(Gr/MP).
15-20		"	"	—	—	Calcus. Mch gravel(Gr/MP), sand, silt.
20-25		"	"	—	—	Same.
25-30		Clay & Sand	Rd bn & bn	M	Vfn/VC	Calcus(cl). Mch st(most w/sand. Ltl gvl(Gr/MP). Snd has high
30-35		Silt & Sand	Brown	"	"	Dolic. Mch rd bn cl. Ltl gvl(Gr/MP), gy bn cl. \ carb cont
35-40		"	"	"	"	Dolic. Mch gy'bn cl. Ltl gvl(Gr/MP), rd bn cl.
40-45		Clay & Gvl	Mxd gy bn	M pnb	Gr/LP	Calcus(cl). Dol, grnt, trap. Mch snd, silt.
45-50		"	Mxd dk gy bn	"	"	Same.
50-55		"	"	"	"	Calcus(clay). Dol, grnt, volcanics, trap. Mch snd, st.
55-60		"	"	"	"	Calcus(clay). Dol, trap, meta. Mch sand, silt.
60-65		"	"	"	"	Calcus(clay). Dol, trap, gabbro. Mch sand, silt.
65-70		"	"	"	"	Calcus(clay): Dol, trap. Much sand, silt.
70-75		Gabra Plattin	"	"	"	"
75-80	Dolomite		Gy brown	M	Fn/M	Wea. Mch uncons st & cl. Few fos mol. Ltl uncons snd. Tr v d
80-85	"		"	"	"	Few fos frags/mol. Tr pyr, dk gy stng, dk bn sh \ sh prtgs
85-90	"		"	"	"	Same but many fos frags/mol. \ prtgs, cvd unconsolidated.
90-95	"		"	"	"	Same.
95-100	"		"	"	"	Ltl cvd uncons. Tr fos frags/olds, pyr, dk gy stng, dk bn sh r
100-105	"		"	"	"	Same.
105-110	"		"	"	"	Mny fos frags/mol. Ltl neat cem. Tr pyr, gn gy sh matx, dk bn
110-115	"		"	"	"	Same. \ prtgs, dk gy staining, limonite.
115-120	"		"	"	"	Same but tr neat cem.
120-125	"		"	"	"	Few fos frags/mol. Tr pyr, gn gy sh matx, dk bn sh prtgs, wh cl
125-130	"		"	"	"	Same. gy stng. About 1/2 the ch:os are bn w/only tr fos frags.
130-135	"		"	"	"	"
135-140	"		"	"	"	Tr fos frags/mol, pyr, gn gy sh matx, dk bn sh prtgs, dk gy stn
140-145	"		"	"	"	Same.
145-150	"	Brown	"	"	"	
150-155	"	"	"	"	Same plus tr clear dol xtls.	

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Well name:

2a  
 11/165-190  
 195-200  
 230-235  
 240-245  
 265-270  
 300-305  
 305-310  
 310-315  
 315-320  
 320-325  
 325-330  
 330-335  
 335-340  
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 360-365  
 365-370  
 370-375  
 375-380  
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 385-390  
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 445-450  
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 460-465  
 465-470  
 470-475  
 475-480  
 480-485  
 485-490

Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
				Mode	Range	
160-165		Dolomite	Gy brown	M	Fn/M	Ltl gn gy sh(as matx). Tr fos frags/mol,pyr,dk bn sh prtgs,dk gy
165-170		"	"	"	"	Same. stng,wh cht,clear dol xtls. / dk bn sh prtgs.
170-175		"	Brown	"	"	Same but few fos frags/mol. / Mch gn gy sh matx. Tr pyr,
175-180		"	Bn & Gy	"	"	Bn:Tr fos frags/mol,pyr,dk bn sh prtgs. Gy: Mny fos frags/mol.
180-185		"	"	"	"	Same. / xtls, fos mol/frags.
185-190		"	Brown	"	"	Tr lt bn fossif cht,v dk bn sh prtgs,gn gy sh matx,pyr,clr calc
190-195		"	Gy brown	"	"	Tr v dk bn sh prtgs,gn gy sh matx,pyr, fos mol/frags.
195-200		"	"	"	"	Same but few fos frags/mol(conc in chips).
200-205		"	"	"	"	Tr v dk bn sh prtgs, fos frags/mol,lt bn fossif cht,pyr,cvd bl gy
205-210		"	"	"	"	Same minus chert. / shaly dol,dk gy staining.
210-215		"	"	"	"	Same.
215-220		"	"	"	"	Tr v dk bn sh prtgs, fos frags/mol,pyr,v dk gy stng,v dk bn sh
220-225		"	"	"	"	Same plus tr bn speckling. / matrix.
225-230		"	"	"	"	Same. / bn spklg, free qtz snd,dk gy sh matx.
230-235		Dol & Ss	Gy br & lt gy	M & C	" & Vfn/VC	See end of log. / fos frags,pyr,dk bn sh prtgs,v dk gy stng,
235-240		Dolomite	Gy brown	M	Fn/M	Ltl fltg qtz snd(conc),bl gy sh(some V sndy). Tr sil-cemtd ss,
240-245		Sandstone	Lt bn gy	M/C	Vfn/VC	Srnd to rnd. Mch G to VG sil cem,frstg,bn dol(cvd?). Mny sec qtz
245-250		"	"	"	"	Same. / qrw. Ltl qtz st. Tr pyr cem,bl gy sh,wh sil sh,mfc incl,
250-255		"	"	"	"	Same but much qtz silt. / rust from drllg.
255-260		"	Pl brown	M	"	Srnd. Mch G to F sil cem,frstg. Mny sec qtz qrw. Ltl qtz st. Tr
260-265		"	Lt brown	"	"	Same but ltl G sil cem. / G pyr cem,pyr,wh sil sh,mfc incl,rust
265-270		"	Rd brown	Fn/M	"	Sang to srnd. P srtg. Mch G to VG sil cem,qtz st. / from drllg.
270-275		"	"	M	"	See end of log. / frstg. Ltl drsy cht,lt bl gy sh,rust from drllg.
275-280		"	"	M/C	"	See end of log. / Mny sec qtz qrw. Tr G pyr cem,rd bn hem sh,mfc
280-285		"	"	"	"	Same plus tr wh oolitic chert,dol. / incl,wh sil sh.
285-290		Ss & Dol	Pk ov & rd bn	" & Fn	" & Fn/M	See end of log. / sh is matx in dol.
290-295		"	"	"	"	Same but more free qtz & ss 3%,less hem ss/st 1%. Some of hem
295-300		Dolomite	Lt grey	M	Fn/M	See end of log. / glauc,pl gn sh,pyr,drsy qtz,rust from drllg.
300-305		"	"	"	"	Mch rnd frstg qtz snd(free & fltg). Ltl wh cht(as abv). Tr msv
305-310		"	Pl brown	"	"	Same. / pl gn sh,clr dol xtls,dk bn sh prtgs,pyr,drsy qtz,rust.
310-315		"	Pl bn to bn	"	"	Mch wh to pk cht(qr w/fltg dol xtls). Tr dol cemtd ss,msv glauc
315-320		"	"	"	"	Mch wh to pk cht(tr oolic, tr as matx). Tr msv glauc,pl gn sh,dk
320-325		"	"	"	"	Same. / bn sh prtgs,drsy qtz,dol cemtd ss,rust. / fltg dol xtls.
325-330		"	"	"	"	Same plus tr oolic dol,but most of cht is as a matx or w/mny
330-335		"	"	"	"	Ltl wh to pk cht(most as matx or w/fltg dol xtls). Tr msv/st-
335-340		"	Pl bn to lt bn gy	"	"	See end of log. / glauc,pl gn sh,dk bn sh prtgs,drsy qtz,fltq qtz
340-345		"	Lt bn gy to bn	"	"	Same plus tr ool(cht & dol),minus pl gn sh. / snd,dol ool,rust.
345-350		"	"	"	"	Tr wh cht matx,pk cht, st/Vfn-glauc,dk bn sh prtgs,drsy qtz,pk hem
350-355		"	"	"	"	Same plus tr clr dol xtls. / stng,ool,fltq qtz snd.
355-360		"	"	"	"	Same plus tr pyr. / pyr,stylc,drsy qtz,im ool.
360-365		"	"	"	"	Tr wh cht matx,pk cht,fltq qtz snd,st/Vfn-glauc,dk bn sh prtgs,
365-370		"	"	"	"	Ltl xtl n qtz(drsv),pk stng. Tr wh cht matx,pk cht,fltq qtz snd,
370-375		"	"	"	"	Same. / st/Vfn-glauc,pyr,dk bn sh prtgs,pl gn shale.
375-380		"	Lt bn gy to gn bn	"	"	Same but pk to rd stng,but tr xtl n qtz(drsv).
380-385		"	"	"	"	Same. / pyr,drsv qtz,pl gn sh,dk bn sh prtgs,rd stng.
385-390		"	Lt bn gy	"	"	Ltl fltg qtz snd(M/C conc). Tr wh cht(some oolic),msv/st-glauc,
390-395		"	"	"	"	Same but mch fltg qtz snd.
395-400		Dol & Ss	Lt bn gy & wh	M & M/C	Fn/M & Vfn/VC	Dol is appr 60%,ss is appr 40% of samp. Dol:as abv plus tr qtz
400-405		Sandstone	"	M	Vfn/VC	See end of log. / snd cored ool,im ool. Ss:Srnd to rnd. Mch VG to
405-410		"	Pk white	"	"	See end of log. / G dolie to silcs cem,frstg. Mny sec qtz grw. Tr
410-415		"	"	"	"	Same as 405-410. / pyr,mfc incl,gn gy sil sh,rnd qtz,grans.
415-420		"	"	Fn/M	"	" / mfc incl,rd bn hem ctng,cvd dol.
420-425		"	Pink	M	"	Srnd. Ltl G sil cem. Mch frstg. Mny sec qtz grw. Tr pl gn sh,
425-430		Dolomite	Pk grey	Fn	Fn/M	Mch fltg qtz snd(Fn/M). Tr gn gy sh,mfc incl,rd bn hem sh matx,
430-435		Siltstone	Pk gy & rd bn	"	"	Mch qtz st,grnlr dol(st),fltq qtz snd,rd bn / st/Vfn-glauc,pyr.
435-440		Dolomite	Pk gy to wk rd	"	"	See end of log. / hem sh mtlg/matx. Ltl gn gy sh matx. Tr st/Vfn-
440-445		Sandstone	Pk grey	Fn	Vfn/C	See end of log. / glauc,mic,drsv qtz,cvd dol & ss.
445-450		"	"	"	"	Same but ltl rd bn hem sh(as matx & mottling).
450-455		"	Pk ov & rd bn	"	"	Ang to sang. Mch VG to G dol cem,rd bn hem sh(as matx & mottling).
455-460		"	"	"	"	See end of log. / Ltl qtz st,frstg,pl gn sil sh matx. Tr st/Fn-
460-465		"	"	"	"	Same but less hem sh than abv,plus tr cvd mat. / glauc,Vfn/Fn-zr.
465-470		"	Pk, pk gy & rd bn	Fn/M	Vfn/VC	Ang to sang. Mch G to VG dol cem. Ltl qtz st, / cvd dol(as abv
470-475		"	"	"	"	Same. / frstg,rd bn hem sh matx,pl gn sil sh matx. Tr / St. Law.
475-480		"	"	"	"	" / Vfn/Fn-zr, st/Vfn-glauc,mica. / st/Vfn-glauc.
480-485		"	"	"	"	" / st,frstg. Tr Vfn/Fn-zr,rd bn hem matx,pl gn sil sh matx,
485-490		"	Lt rd bn	"	"	Ang to srnd. Mch G dol cem(considerably less than abv). Ltl qtz

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Well name:

Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
				Mode	Range	
490-495		Sandstone	Lt rd bn	M	Vfn/VC	Same but sang to srnd plus mny sec qtz grw.
495-500		"	"	Fn/M	"	Ang to srnd. Mch G to VG dol cem, frstg. Mny sec qtz grw. Lt1 qtz
500-505		"	Lt rd bn & pk gy	"	"	See end of log. st. Tr Vfn/Fn-zr, st/Vfn-glauc, rd bn hem sh, pl gn
505-510		"	"	"	"	Ang to srnd. Mch VG to G dol cem (some chips are lg) sil sh matx
510-515		"	Pl grey	M/C	"	See end of log. xtl n dol, frstg. Mny sec qtz grw. Lt1 qtz st, rd
515-520		"	"	M	"	See end of log. bn hem sh (as matx), pl gn sil sh matx, mssv/Fn-gla
520-525		"	Pk white	Fn/M	"	Same but lt1 qtz st. Tr fos frags, Vfn/Fn-zr, ang & rnd qtzt grans
525-530		"	"	"	"	Srnd to rnd. Tr G sil cem, rnd/ang qtzt grans, Vfn/Fn-zr, mfc incl.
530-535		"	"	"	"	Same but lt1 G sil cem, but mny sec qtz grw. cvd mat. Mch frstg.
535-540		"	"	"	"	Same. Lt1 qtz st. Few sec
540-545		"	"	M	"	qtz grw.
545-550		"	Pk grey	M/C	"	Srnd to rnd. Mch VG sil cem, frstg. Mny sec qtz grw. Lt1 qtz st.
550-555		"	Lt rd bn	"	"	Same but mch lt gy sh, but Tr ang qtzt grans, Vfn/Fn-zr, mfc incl.
555-560		"	Pink	"	"	See end of log. lt1 rd bn sh. pl gn sh, rd bn hem sh, lt gy sh
560-565		"	Pk grey	"	"	Same. (spkld w/rd bn hem
565-570		"	Pk white	"	"	Srnd to rnd. Lt1 F to G sil cem, qtz st. Mny sec qtz grw. Mch
570-575		"	White	"	"	See end of log. frstg. Tr lt gy sil sh, rd bn hem sh, pl gn sh, Vfn
575-580		"	"	"	"	See end of log. Fn-zr, mfc incl.
580-585		"	"	M	"	Same but mch qtz st. Mny sec qtz grw. Mch frstg. Lt1 qtz st.
585-590		"	"	"	"	Srnd to rnd. Tr G to F sil cem, lt gy sil sh, gn gy sh, mfc incl.
590-595		"	"	"	"	Same plus tr wh sil sh. qtz grw. Mch frstg. Lt1 qtz st.
595-600		"	"	"	"	Same plus tr rnd qtzt grans, qtzt grans. rust from drillg. Mny s
600-605		"	"	"	"	Srnd to rnd. Tr G to F sil cem, gn gy sh, mfc incl, wh sil sh, ang
605-610		"	"	"	"	Same plus tr G pyr cem.
610-615		"	"	"	Vfn/Gr	Srnd to rnd. Lt1 G to F sil cem, qtz st. Mny sec qtz grw. Mch
615-620		"	"	"	"	Same minus calc cem. frstg. Tr G calc cem, lt gy sh, mfc incl, wh
620-625		"	Pk white	"	Vfn/VC	See end of log. sil sh, ang qtzt grans, rust.
625-630		"	Pk grey	"	"	Same but lt1 lt gy sil sh, plus tr pyr.
630-635		"	Pk white	"	"	Srnd to rnd. Lt1 G to F sil cem, qtz st. Mch frstg. Mny sec qtz
635-640		"	"	"	"	Same but mch G to F sil cem, grw. Tr lt gy sh, wh sil sh, mfc incl
640-645		"	"	"	"	See end of log. ang qtzt grans, rd bn hem sh.
645-650		"	White	"	"	Same but tr qtz st, but few sec qtz grw.
650-655		"	"	"	"	Srnd to rnd. Tr G to F sil cem, wh sil sh, mfc incl, qtzt frags. t
Pre E 655-658		Ss & Qtzt	Pk wh to lt rd	M/C&M	"	Apprx 50/50. Ss: Srnd to rnd. frstg. Mny sec qtz grw. Lt1 qtz
			END OF LOG			Tr G calc cem, wh sil sh, mfc incl, lt gy sil sh. Qtzt: Lt1 rd bn
						rd hem stng veins. Tr pyr, mfc incl, dickite. The qtzt is fresh
						& hard.
						"See end of log" samples.
230-235		Dol & Ss	By bn & lt gy	M & C	Fn/M&Vfn/VC	Chips vary from dol to sndy dol to dol cemtd ss. Ss/free qtz s
						apprx 60% of samp, dol aprx 40% of samp. Dol: Lt1 conc fltg qt
						st. Tr fos frags, pyr, dk gy stng, dk bn sh matx & prtgs. Ss: Lt
						G dollic cem. Few sec qtz grw. Mch frstg, bl gy sh. Tr G pyr ce
						pyr incl & ctngs, fos frags/mol, qtz st, mfc incl, mssv glauc.
270-275		Sandstone	Rd brown	M	Vfn/VC	Sang to subrnd. Poor sorting. Color dkr than abv. Mch G to VG
						sil cem, frstg, dk rd bn hem sh. Lt1 qtz st, drsy cht. Few sec
						grw. Tr pyr, bl gy sh, wh sil sh, mfc incl, rust from drilling.
275-280		Sandstone	Rd brown	M/C	Vfn/VC	Srnd to rnd. Mch VG sil cem (some chips of anorthqtzt), dk rd l
						hem sh, frstg. Mny sec qtz grw. Lt1 qtz st. Tr G rd bn hem ce
						drsy cht, qtz ool, bl gy sh, mfc incl, wh sil sh, Fn-zr, lim, G cal
						ce
285-290		Ss & Dol	Pk gy & rd bn	M/C&Fn	Vfn/VC & Fn/M	Srnd to rnd. Aprx breakdown of chips: Dol 35%, free qtz & ss 3
						hem sh/sts 20%, cht 15%. Mch VG sil cem (orthqtzt), rd bn hem
						wh cht (most oolic, some sndy). Mny sec qtz grw (qtz). Lt1 sil
						cemtd sts, hem cemtd sts, fltg qtz snd (dol), qtz st. Tr mssv gl
						bl gy sil sh, dol cemtd sts, mfc incl, drsy qtz, rust from drill
295-300		Dolomite	Lt grey	M	Fn/M	Mch wh cht (some as a matx btwn dol rhombs, some contain varyir
						ants of dol rhombs, tr to mny). Tr pyr, mssv glauc, drsy qtz, f
						qtz snd, pl gn sh, bl gy sh, cvd mat (rd bn sh & sts), rust from
						dri

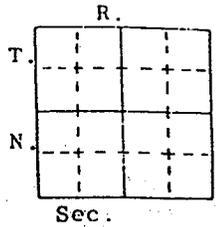
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Well name:

Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
				Mode	Range	
335-340		Dolomite	Lt bn to lgt bn gy	M	Fn/M	Tr wh to pk cht (most as a matx), mssv/silt-glauc, pl gn sh, dk bn sh prtgs, drsy qtz, pk hem staining.
400-405		Sandstone	Lt bn gy & wh	M	Vfn/VC	Srnd. Mch VG dolc to silcs cem, frstg, dol (30% of samp as abv). Mny sec qtz grw. Tr pyr, dk bn sh prtgs, mfc incl, gn gy sh, mssv glauc, dk gy sh, pk stng, Fn-zr, rnd qtzt granules.
405-410		Sandstone	Pk white	M	Vfn/VC	Srnd. Mch VG dolc cem, frstg. Mny sec qtz grw. Tr pyr, pl gn sh, mfc incl, dk bn to gy sh, rnd qtzt grans, cvd dol.
435-440		Dolomite	Pk gy to wk rd	Fn	Fn/M	Chips range from sts to silty dol. Mch qtz st, wk rd to rd bn hem sh mottling/matrix. Ltl fltg qtz snd. Tr mssv/silt-glauc, pl gn sh, pyr cemtd ss, dol cemtd ss.
440-445		Sandstone	Pk grey	Fn	Vfn/C	Ang to sang. Mch VG to G dol cem (dol xtls & qtz grains are apprx same size). Ltl qtz st, frstg, st/Fn-glauc, pl gn sil sh. Tr pyr, rd bn to wk rd hem sh matx, Fn-zr, mica, cvd dol/sts as above.
455-460		Sandstone	Pk gy & rd bn	Fn	Vfn/C	Ang to sang. Mch VG dol cem, rd bn hem sh. Ltl qtz st, st/Fn-glauc, frstg, pl gn: sil sh. Tr Vfn/Fn-zr, mica.
500-505		Sandstone	Lt rd bn to pk gy	Fn/M	Vfn/VC	Ang to srnd. Mch VG to G dol cem, frstg. Mny sec qtz grw. Ltl qtz st, rd bn hem sh matx, pl gn sil sh matx. Tr mssv/silt-glauc, fos frags, Vfn/Fn-zircon.
510-515		Sandstone	Pk grey	M/C	Vfn/VC	Srnd to rnd. Mch VG to G dol cem, frstg. Mny sec qtz grw. Ltl rd bn hem sh matx, pl gn sh matx. Tr rnd/ang qtzt grans, Vfn/Fn-zr, mssv/Fn-glauc. Some of the shaly chips may be cvd from just abv.
515-520		Sandstone	Pk grey	M	Vfn/VC	Srnd to rnd. Tr G sil cem, G dol cem, rnd/ang qtzt grans, Vfn/Fn-zr, mfc incl, pl gn sh. Mch frstg. Few sec qtz grw. Ltl cvd rd bn or gn dolc ss (Tunnel City).
555-560		Sandstone	Pink	M/C	Vfn/VC	Srnd to rnd. Mch F to G sil cem, frstg, qtz st. Mny sec qtz grw. Ltl lt gy sil sh. Tr ang qtzt grans, Vfn/Fn-zr, mfc incl, rd bn hem sh, pl gn sh, mica, bk organic material (w/shales).
570-575		Sandstone	White	M/C	Vfn/VC	Same but mch G to F sil cem, plus trace ang qtzt granules.
575-580		Sandstone	White	M/C	Vfn/VC	Srnd to rnd. Ltl G to F sil cem, qtz st. Mny sec qtz grw. Mch frstg. Tr lt gy sil sh, rd bn hem sh, pyr, mfc incl, ang qtzt grans.
620-625		Sandstone	Pk white	M	Vfn/VC	Srnd to rnd. Mch G to F sil cem, frstg. Mny sec qtz grw. Ltl qtz st. Tr G calc cem, lt gy sh, wh sil sh, mfc incl, ang qtzt grans, rust.
640-645		Sandstone	Pk white	M	Vfn/VC	Srnd to rnd. Tr G to F sil cem, lt gy sh, wh sil sh, mfc incl, qtzt frags. Mch frstg. Mny sec qtz grw. Ltl qtz silt.

Well name **Fond du Lac #22**

County:



Owner....  
Address...  
Driller..  
Engineer.

Completed...  
Field check.  
Altitude....  
Use.....  
Static w.l..  
Spec. cap...

Quad.

Drill Hole						Casing & Liner Pipe or Curbing							
Dia.	from	to	Dia.	from	to	Dia.	Wgt. & Kind	from	to	Dia.	Wgt. & Kind	from	to

Drilling method:  
Samples from to Rec'd:

Grout	from	to

Studied by: *Kathleen Massie-Ferch*

Issued:

Formations:

Remarks:

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LOG OF WELL:

Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics	
				Mode	Range		
0-5	Diift	Clay & Silt	Dk rd bn	—	—	Calcus. Mch gvl(Gr/MP), sand. Few organics.	
5-10		"	"	—	—	Calcus. Much sand. Ltl gravel(Gr/MP). Tr organics.	
10-15		Clay	Rd brown	—	—	Calcus. Mch sand, silt. Ltl gravel(Gr/MP).	
15-20		"	"	—	—	Calcus. Mch gravel(Gr/MP), sand, silt.	
20-25		"	"	—	—	Same.	
25-30		Clay & Sand	Rd bn & bn	M	Vfn/VC	Calcus(cl). Mch st(most w/sand. Ltl gvl(Gr/MP). Snd has high carb con	
30-35		Silt & Sand	Brown	"	"	Dolic. Mch rd bn cl. Ltl gvl(Gr/MP), rd bn cl.	
35-40		"	"	"	"	Dolic. Mch gy bn cl. Ltl gvl(Gr/MP), rd bn cl.	
40-45		Clay & Gvl	Mxd gy bn	M	peb	Gr/LP	Calcus(cl). Dol, grnt, trap. Mch snd, silt.
45-50		"	Mxd dk gy bn	"	"	"	Same.
50-55		"	"	"	"	"	Calcus(clay). Dol, grnt, volcanics, trap. Mch snd, st.
55-60		"	"	"	"	"	Calcus(clay). Dol, trap, meta. Mch sand, silt.
60-65		"	"	"	"	"	Calcus(clay). Dol, trap, gabbro. Mch sand, silt.
65-70		"	"	"	"	"	Calcus(clay). Dol, trap. Much sand, silt.
70-75		Galena + Plattin	Dolomite	Gy brown	M	Fn/M	Same.
75-80	Wea. Mch uncons st & cl. Few fos mol. Ltl uncons snd. Tr v						
80-85	Few fos frags/mol. Tr pyr, dk gy stng, dk bn sh sh prtcs						
85-90	Same but many fos frags/mol. prtgs, cvd unconsolidated.						
90-95	Same.						
95-100	Ltl cvd uncons. Tr fos frags/colds, pyr, dk gy stng, dk bn sh						
100-105	Same.						
105-110	Mny fos frags/mol. Ltl neat cen. Tr pyr, gn gy sh matx, dk br						
110-115	Same. prtgs, dk gy staining, limonite.						
115-120	Same but tr neat cen.						
120-125	Few fos frags/mol. Tr pyr, gn gy sh matx, dk bn sh prtgs, wh						
125-130	Same, gy stng. About 1/2 the chips are bn w/only tr fos frag						
130-135	"						
135-140	Tr fos frags/mol, pyr, gn gy sh matx, dk bn sh prtgs, dk gy st						
140-145	Same.						
145-150	"						
150-155	Same plus tr clear dol xtls.						

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Well name:

160-175  
 175-185  
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 485-490

Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
				Mode	Range	
160-165		Dolomite	Gy brown	M	Fn/M	Ltl gn gy sh(as matx). Tr fos frags/mol,pyr,dk bn sh prtgs,dk gy
165-170		"	"	"	"	Same. stng,wh cht,clear dol xtls. / dk bn sh prtgs.
170-175		"	Brown	"	"	Same but few fos frags/mol. / Mch gn gy sh matx. Tr pyr.
175-180		"	Bn & Gy	"	"	Bn:Tr fos frags/mol,pyr,dk bn sh prtgs. Gy: Mny fos frags/mol.
180-185		"	"	"	"	Same. / xtls,fos mol/frags.
185-190		"	Brown	"	"	Tr lt bn fossif cht,v dk bn sh prtgs,gn gy sh matx,pyr,clr calc
190-195		"	Gy brown	"	"	Tr v dk bn sh prtgs,gn gy sh matx,pyr,fos mol/frags.
195-200		"	"	"	"	Same but few fos frags/mol(conc in chips).
200-205		"	"	"	"	Tr v dk bn sh prtgs,fos frags/mol,lt bn fossif cht,pyr,cvd bl gy
205-210		"	"	"	"	Same minus chert. / shaly dol,dk gy staining.
210-215		"	"	"	"	Same.
215-220		"	"	"	"	Tr v dk bn sh prtgs,fos frags/mol,pyr,v dk gy stng,v dk bn sh
220-225		"	"	"	"	Same plus tr bn speckling. / matrix.
225-230		"	"	"	"	Same. / bn spkig,free qtz snd,dk gy sh matx.
230-235		Dol & Ss	Gy br,lt gy	M & C	" & Vfn/VC	See end of log. / fos frags,pyr,dk bn sh prtgs,v dk gy stng,
235-240		Dolomite	Gy brown	M	Fn/M	Ltl fltg qtz snd(conc),bl gy sh(some V sndy). Tr sil-cemtd ss,
240-245		Sandstone	Lt bn gy	M/C	Vfn/VC	Srnd to rnd. Mch G to V6 sil cem,frstg,bn dol(cvd?). Mny sec qtz
245-250		"	"	"	"	Same,grw. Ltl qtz st. Tr pyr cem,bl gy sh,wh sil sh,mfc incl,
250-255		"	"	"	"	Same but much qtz silt. / rust from drllg.
255-260		"	Pl brown	M	"	Srnd. Mch G to F sil cem,frstg. Mny sec qtz grw. Ltl qtz st. Tr
260-265		"	Lt brown	"	"	Same but ltl G sil cem. G pyr cem,pyr,wh sil sh,mfc incl,rust
265-270		"	Rd brown	Fn/M	"	Sang to srnd. P srtg. Mch G to V6 sil cem,qtz st. / from drllg.
270-275		"	"	M	"	See end of log. / frstg. Ltl drsy cht,lt bl gy sh,rust from drllg.
275-280		"	"	M/C	"	See end of log. / Mny sec qtz grw. Tr G pyr cem,rd bn hem sh,mfc
280-285		"	"	"	"	Same plus tr wh oolitic chert,dol. / incl,wh sil sh.
285-290		Ss & Dol	Pk ay & rd bn	" & Fn	" & Fn/M	See end of log. / sh is matx in dol.
290-295		"	"	"	"	Same but more free qtz & ss 35%,less hem ss/st 15%. Some of hem
295-300		Dolomite	Lt grey	M	Fn/M	See end of log. / glauc,pl gn sh,pyr,drsy qtz,rust from drllg.
300-305		"	"	"	"	Mch rnd frstg qtz snd(free & fltg). Ltl wh cht(as abv). Tr mssv
305-310		"	Pl brown	"	"	Same,pl gn sh,clr dol xtls,dk bn sh prtgs,pyr,drsy qtz,rust.
310-315		"	Pl bn to bn	"	"	Mch wh to pk cht(gr w/fltg dol xtls). Tr dol cemtd ss,mssv glauc
315-320		"	"	"	"	Mch wh to pk cht(tr oolic, tr as matx). Tr mssv glauc,pl gn sh,dk
320-325		"	"	"	"	Same, bn sh prtgs,drsy qtz,dol cemtd ss,rust. / fltg dol xtls.
325-330		"	"	"	"	Same plus tr oolic dol,but most of cht is as a matx or w/mny
330-335		"	"	"	"	Ltl wh to pk cht(most as matx or w/fltg dol xtls). Tr mssv/st-
335-340		"	Pl bn to lt bn gy	"	"	See end of log. / glauc,pl gn sh,dk bn sh prtgs,drsy qtz,fltq qtz
340-345		"	Lt bn gy to bn	"	"	Same plus tr ool(cht & dol),minus pl gn sh. / snd,dol ool,rust.
345-350		"	"	"	"	Tr wh cht matx,pk cht,st/Vfn-glauc,dk bn sh prtgs,drsy qtz,pk hem
350-355		"	"	"	"	Same plus tr clr dol xtls, stng,ool,fltq qtz snd.
355-360		"	"	"	"	Same plus tr pyr. / pyr,styl,drsy qtz,im ool.
360-365		"	"	"	"	Tr wh cht matx,pk cht,fltq qtz snd,st/Vfn-glauc,dk bn sh prtgs,
365-370		"	"	"	"	Ltl xtl n qtz(drsy),pk stng. Tr wh cht matx,pk cht,fltq qtz end,
370-375		"	"	"	"	Same, st/Vfn-glauc,pyr,dk bn sh prtgs,pl gn shale.
375-380		"	Lt bn gy to bn	"	"	Same but pk to rd stng,but tr xtl n qtz(drsy).
380-385		"	"	"	"	Same. / pyr,drsy qtz,pl gn sh,dk bn sh prtgs,rd stng.
385-390		"	Lt bn gy	"	"	Ltl fltg qtz snd(M/C conc). Tr wh cht(some oolic),mssv/st-glauc,
390-395		"	"	"	"	Same but mch fltg qtz snd.
395-400		Dol & Ss	Lt bn gy & wh	M & M/C	Fn/M & Vfn/VC	Dol is apprx 60%,ss is apprx 40% of samp. Dol:as abv plus tr qtz
400-405		Sandstone	"	M	Vfn/VC	See end of log. / and cored ool,im ool. Ss:Srnd to rnd. Mch V6 to
405-410		"	Pk white	"	"	See end of log. / G dolie to silcs cem,frstg. Mny sec qtz grw. Tr
410-415		"	"	"	"	Same as 405-410. / pyr,mfc incl,gn gy sil sh,rnd qtz,grans.
415-420		"	"	Fn/M	"	" / mfc incl,rd bn hem ctng,cvd dol.
420-425		"	Pink	M	"	Srnd. Ltl G sil cem. Mch frstg. Mny sec qtz grw. Tr pl gn sh,
425-430		Dolomite	Pk grey	Fn	Fn/M	Mch fltg qtz snd(Fn/M). Tr gn gy sh,mfc incl,rd bn hem sh matx,
430-435		Siltstone	Pk ay & rd bn	"	"	Mch qtz st,grnlr dol(st),fltq qtz snd,rd bn / st/Vfn-glauc,pyr.
435-440		Dolomite	Pk ay to wk rd	"	"	See end of log. / hem sh mtlig/matx. Ltl gn gy sh matx. Tr st/Vfn-
440-445		Sandstone	Pk grey	Fn	Vfn/C	See end of log. / glauc,mic,drsy qtz,cvd dol & ss.
445-450		"	"	"	"	Same but ltl rd bn hem sh(as matx & mottling).
450-455		"	Pk ay & rd bn	"	"	Ang to sang. Mch V6 to G dol cem,rd bn hem sh(as matx & mottling)
455-460		"	"	"	"	See end of log. / Ltl qtz st,frstg,pl gn sil sh matx. Tr st/Vfn-
460-465		"	"	"	"	Same but less hem sh than abv,plus tr cvd mat. / glauc,Vfn/Fn-zr,m.
465-470		"	Pk,pl ay & rd bn	Fn/M	Vfn/VC	Ang to sang. Mch G to V6 dol cem. Ltl qtz st, / cvd dol(as abv
470-475		"	"	"	"	Same. / frstg,rd bn hem sh matx,pl gn sil sh matx. Tr / St. Law.
475-480		"	"	"	"	" / Vfn/Fn-zr,st/Vfn-glauc,mica. / st/Vfn-glauc.
480-485		"	"	"	"	" / st,frstg. Tr Vfn/Fn-zr,rd bn hem matx,pl gn sil sh matx,
485-490		"	Lt rd bn	"	"	Ang to srnd. Mch G dol cem(considerably less than abv). Ltl qtz

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Well name:

Turned  
 CW  
 Elk  
 Mow

Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
				Mode	Range	
490-495		Sandstone	Lt rd bn	M	Vfn/VC	Same but sang to srnd plus mny sec qtz grw.
495-500		"	"	Fn/M	"	Ang to srnd. Mch G to VG dol cem, frstg. Mny sec qtz grw. Lt l c
500-505		"	Lt rd bn & pk	"	"	See end of log. st. Tr Vfn/Fn-zr, st/Vfn-glauc, rd bn hem sh, pl
505-510		"	"	"	"	Ang to srnd. Mch VG to G dol cem (some chips are lg sil sh m
510-515		"	Pl grey	M/C	"	See end of log. xtl dol), frstg. Mny sec qtz grw. Lt l qtz st,
515-520		"	"	M	"	See end of log. bn hem sh (as matx), pl gn sil sh matx, mssv/Fn-
520-525		"	Pk white	Fn/M	"	Same but ltl qtz st. Tr fos frags, Vfn/Fn-zr, ang & rnd qtzt gr
525-530		"	"	"	"	Srnd to rnd. Tr G sil cem, rnd/ang qtzt grans, Vfn/Fn-zr, mfc in
530-535		"	"	"	"	Same but ltl G sil cem, but mny sec qtz grw. cvd mat. Mch frs
535-540		"	"	"	"	Same. Lt l qtz st. Few
540-545		"	"	M	"	qtz g
545-550		"	Pk grey	M/C	"	Srnd to rnd. Mch VG sil cem, frstg. Mny sec qtz grw. Lt l qtz s
550-555		"	L <sup>+</sup> rd bn	"	"	Same but mch lt gy sh, but fr ang qtzt grans, Vfn/Fn-zr, mfc inc
555-560		"	Pink	"	"	See end of log. ltl rd bn sh. pl gn sh, rd bn hem sh, lt gy sh
560-565		"	Pk grey	"	"	Same. (spkld w/rd bn h
565-570		"	Pk white	"	"	Srnd to rnd. Lt l F to G sil cem, qtz st. Mny sec qtz grw. Mch
570-575		"	White	"	"	See end of log. frstg. Tr lt gy sil sh, rd bn hem sh, pl on sh.
575-580		"	"	"	"	See end of log. Fn-zr, mfc incl.
580-585		"	"	M	"	Same but mch qtz st. / Mny sec qtz grw. Mch frstg. Lt l qtz s
585-590		"	"	"	"	Srnd to rnd. Tr G to F sil cem, lt gy sil sh, gn gy sh, mfc incl
590-595		"	"	"	"	Same plus tr wh sil sh. qtz grw. Mch frstg. Lt l qtz st.
595-600		"	"	"	"	Same plus tr rnd qtzt grans, qtzt grans. rust from drillg. Mny
600-605		"	"	"	"	Srnd to rnd. Tr G to F sil cem, gn gy sh, mfc incl, wh sil sh, ar
605-610		"	"	"	"	Same plus tr G pyr cem.
610-615		"	"	"	Vfn/Gr	Srnd to rnd. Lt l G to F sil cem, qtz st. Mny sec qtz grw. Mch
615-620		"	"	"	"	Same minus calc cem. frstg. Tr G calc cem, lt gy sh, mfc incl, v
620-625		"	Pk white	"	Vfn/VC	See end of log. sil sh, ang qtzt grans, rust.
625-630		"	Pk grey	"	"	Same but ltl lt gy sil sh, plus tr pyr.
630-635		"	Pk white	"	"	Srnd to rnd. Lt l G to F sil cem, qtz st. Mch frstg. Mny sec q
635-640		"	"	"	"	Same but mch G to F sil cem, grw. Tr lt gy sh, wh sil sh, mfc
640-645		"	"	"	"	See end of log. ang qtzt grans, rd bn hem sh.
645-650		"	White	"	"	Same but tr qtz st, but few sec qtz grw.
650-655		"	"	"	"	Srnd to rnd. Tr G to F sil cem, wh sil sh, mfc incl, qtzt frags
Pre E 655-658		Ss & Qtzt	Pk wh to lt rd	M/C&M	"	Apprx 50/50. Ss: Srnd to rnd. frstg. Mny sec qtz grw. Lt l
			END OF LOG			Mch G to F sil cem, frstg. Lt l qtz st. Mny sec qtz grw.
						Tr G calc cem, wh sil sh, mfc incl, lt gy sil sh. Qtzt: Lt l rd
						rd hem stng veins. Tr pyr, mfc incl, dickite. The qtzt is fre
						& hard.
						"See end of log" samples.
230-235		Dol & Ss	Gy bn & lt gy	M & C	Fn/M&Vfn/VC	Chips vary from dol to sndy dol to dol cemtd ss. Ss/free qt: apprx 60% of samp, dol apprx 40% of samp. Dol: Lt l conc fltg snd. Tr fos frags, pyr, dk gy stng, dk bn sh matx & prtgs. Ss G dolic cem. Few sec qtz grw. Mch frstg, bl gy sh. Tr G pyr pyr incl & ctngs, fos frags/mol, qtz st, mfc incl, mssv glauc.
270-275		Sandstone	Rd brown	M	Vfn/VC	Sang to subrnd. Poor sorting. Color dkr than abv. Mch G to sil cem, frstg, dk rd bn hem sh. Lt l qtz st, drsy cht. Few se grw. Tr pyr, bl gy sh, wh sil sh, mfc incl, rust from drilling
275-280		Sandstone	Rd brown	M/C	Vfn/VC	Srnd to rnd. Mch VG sil cem (some chips of anorthotzt), dk r hem sh, frstg. Mny sec qtz grw. Lt l qtz st. Tr G rd bn hem drsy cht, qtz ool, bl gy sh, mfc incl, wh sil sh, Fn-zr, lim, G c
285-290		Ss & Dol	Pk gy & rd bn	M/C&Fn	Vfn/VC&Fn/M	Srnd to rnd. Aprx breakdown of chips: Dol 35%, free qtz & s hem sh/sts 20%, cht 15%. Mch VG sil cem (orthotzt), rd bn h wh cht (most oolic, some sndy). Mny sec qtz grw (qtz). Lt l s cemtd sts, hem cemtd sts, fltg qtz snd (dol), qtz st. Tr mssv bl gy sil sh, dol cemtd sts, mfc incl, drsy qtz, rust from dr
295-300		Dolomite	Lt grey	M	Fn/M	Mch wh cht (some as a matx btwn dol rhombs, some contain var ants of dol rhombs, tr to mny). Tr pyr, mssv glauc, drsy qtz qtz snd, pl gn sh, bl gy sh, cvd mat (rd bn sh & sts), rust fr

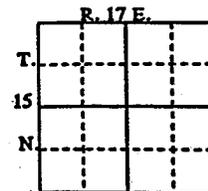
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Well name:

Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
				Mode	Range	
335-340		Dolomite	Pl bn to lt bn gy	M	Fn/M	Tr wh to pk cht (most as a matx), mssv/silt-glauc, pl gn sh, dk bn sh prtgs, drsy qtz, pk hem staining.
400-405		Sandstone	Lt bn gy to wh	M	Vfn/VC	Srnd. Mch VG dolie to silcs cem, frstg, dol (30% of samp as abv). Mny sec qtz grw. Tr pyr, dk bn sh prtgs, mfc incl, gn gy sh, mssv glauc, dk gy sh, pk stng, Fn-zr, rnd qtzt granules.
405-410		Sandstone	Pk white	M	Vfn/VC	Srnd. Mch VG dolie cem, frstg. Mny sec qtz grw. Tr pyr, pl gn sh, mfc incl, dk bn to gy sh, rnd qtzt grans, cvd dol.
435-440		Dolomite	Pk gy to wk rd	Fn	Fn/M	Chips range from sts to silty dol. Mch qtz st, wk rd to rd bn hem sh mottling/matrix. Ltl fltg qtz snd. Tr mssv/silt-glauc, pl gn sh, pyr cemtd ss, dol cemtd ss.
440-445		Sandstone	Pk grey	Fn	Vfn/C	Ang to sang. Mch VG to G dol cem (dol xtls & qtz grains are appr same size). Ltl qtz st, frstg, st/Fn-glauc, pl gn sil sh. Tr pyr, rd bn to wk rd hem sh matx, Fn-zr, mica, cvd dol/sts as above.
455-460		Sandstone	Pk gy & rd bn	Fn	Vfn/C	Ang to sang. Mch VG dol cem, rd bn hem sh. Ltl qtz st, st/Fn-glauc, frstg, pl gn sil sh. Tr Vfn/Fn-zr, mica.
500-505		Sandstone	Lt rd bn to pk gy	Fn/M	Vfn/VC	Ang to srnd. Mch VG to G dol cem, frstg. Mny sec qtz grw. Ltl qtz st, rd bn hem sh matx, pl gn sil sh matx. Tr mssv/silt-glauc, fos frags, Vfn/Fn-zircon.
510-515		Sandstone	Pk grey	M/C	Vfn/VC	Srnd to rnd. Mch VG to G dol cem, frstg. Mny sec qtz grw. Ltl rd bn hem sh matx, pl gn sh matx. Tr rnd/ang qtzt grans, Vfn/Fn-zr, mssv/Fn-glauc. Some of the shaly chips may be cvd from just abv.
515-520		Sandstone	Pk grey	M	Vfn/VC	Srnd to rnd. Tr G sil cem, G dol cem, rnd/ang qtzt grans, Vfn/Fn-zr, mfc incl, pl gn sh. Mch frstg. Few sec qtz grw. Ltl cvd rd bn or gn dolie ss (Tunnel City).
555-560		Sandstone	Pink	M/C	Vfn/VC	Srnd to rnd. Mch F to G sil cem, frstg, qtz st. Mny sec qtz grw. Ltl lt gy sil sh. Tr ang qtzt grans, Vfn/Fn-zr, mfc incl, rd bn hem sh, pl gn sh, mica, bk organic material (w/shales).
570-575		Sandstone	White	M/C	Vfn/VC	Same but mch G to F sil cem, plus trace ang qtzt granules.
575-580		Sandstone	White	M/C	Vfn/VC	Srnd to rnd. Ltl G to F sil cem, qtz st. Mny sec qtz grw. Mch frstg. Tr lt gy sil sh, rd bn hem sh, pyr, mfc incl, ang qtzt grans.
620-625		Sandstone	Pk white	M	Vfn/VC	Srnd to rnd. Mch G to F sil cem, frstg. Mny sec qtz grw. Ltl qtz st. Tr G calc cem, lt gy sil sh, wh sil sh, mfc incl, ang qtzt grans, rust.
640-645		Sandstone	Pk white	M	Vfn/VC	Srnd to rnd. Tr G to F sil cem, lt gy sh, wh sil sh, mfc incl, qtzt frags. Mch frstg. Mny sec qtz grw. Ltl qtz silt.

Site Name: Fond Du Lac City Well #23  
 Owner: City of Fond Du Lac  
 Address: 160 S. Macy  
 Fond du Lac, WI 54935  
 Driller(s): Layne-Northwest Co. 6/12/1992  
 Engineer:  
 Location: SE,NW,  
 Sec. 32, T15N, R17E  
 Topo Name: Fond du Lac  
 Sample Nos: W25  
 Perm No.: 01062  
 WI-Unique ID#:AY 277

County: FOND DU LAC  
 Completed: 6/12/1992  
 Field Check:  
 Elevation: 835'  
 Well Use: Municipal  
 Static Level: 195'



Pump Test:  
 Pumped at 807 GPM for 24 hrs. with 355 ft. of drawdown.  
 Specific Cap: 3.2 GPM /ft.

Samples Rec'd  
 4/3/92 0' to 965'

Studied By:  
 Kathleen M. Massie-Ferch 0' to 965'

Formations:  
 Surface, Kirby Lake Member, Horicon Formation, Maquoketa Formation,  
 Sinnipee Group, Glenwood Formation, Tonti Member, Readstown Member,  
 Prairie Du Chien Group, Coon Valley Member, Jordan Formation,  
 Tunnel City Group, Elk Mound Group, Precambrian

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Published: 6/6/95  
 Printed: 11/1/95

Drill Hole Dimensions			Drilling Method		
Diameter	From	To	Method	From	To
24"	0'	20'	Rotary - Air, mud & foam	0'	965'
19.25"	20'	372'	Grout		
15"	372'	965'	Type	From	To
			Neat Cement	0'	371'

Open Interval Characteristics			
Diameter	From	To	Opening Type
15"	372'	965'	Open Hole

Casing & Liner Information				
Diameter	From	To	Casing	Weight
24"	+4'	20'	Steel	94.621ppf, A53B
16"	0'	371'	Steel	62.581ppf, A53B

Depths	Graphic	Rock Type Mode	Color Range	Miscellaneous Characteristics
SURFACE		Soil	Black	Much sand, silt, Tr grans, clay, organic material.
0				
2		Soil	Black	Much sand, silt, Tr grans, clay, organic material.
5		Clay	Red brown	Calcareous. Ltl silt, soil, Tr gravel(MP), sand.
10		Clay	Red brown	Calcareous. Ltl silt, Tr sand, cvd mat(esp soil).
15		Clay	Red brown	Calcareous. Ltl silt, Tr sand, cvd mat(esp soil).
20		Clay & gravel	Red bn & mx'd lt bn	Calcareous(clay). Dolomite, fossilif dol, trap. Much sand, silt, cvd mat.
25		S pnb	Gr/MP	Calcareous. Much sand, silt, cvd mat/soil. Ltl gravel (Gr/LP).
30		Clay	Red bn	Calcareous. Much sand, silt. Ltl gravel (Gr/LP), cvd mat/soil.
35		Clay	Red bn	Calcareous. Much sand, silt. Ltl cvd mat/soil. Tr gravel(Gr/SP)
40		Clay	Red bn	Calcareous. Much sand, silt. Ltl gravel (Gr/MP), cvd mat/soil.
45		Sand	Brown	Mostly dolie & trap chips. Much silt, clay, Tr grans.
50		C	Vfn/VC	
55		Clay & gravel	Brown & mixed	Dolomitic(clay). Dolomite, trap, qtz, granite. Much dolie sand, silt, Tr cvd soil.
60		Grans	Gr/SP	Dolomitic(clay). Dolomite, chert, qtz, granite, trap. Much dolie sand, silt, Tr cvd soil, cvd rd bn clay.
65		Clay & gravel	Brown & mixed	Dolomitic(clay). Dolomite, chert, qtz, granite, trap. Much dolie sand, silt.
70		S pnb	Gr/MP	Dolomitic(clay). Maq shale, dolomite, chert, qtz, granite, trap. Much dolie sand, silt.
75		Clay & gravel	Brown & mixed	
80		M pnb	Gr/MP	

Depth (ft)	Formation	Lithology	Description
70	MAQUOKETA FORMATION	Clay & sand	Mixed brown Dolomitic (clay). Many dolomite & shale chips. Much silt. Tr gravel (Gr/SP).
75		C	Vfu/VC
75		Clay & sand	Mixed brown Dolomitic (clay). Many dolomite chips. Much silt. gn gy Maq shale. Ltl gravel (Gr/MP).
80		C	Vfu/VC
80		Clay & sand	Brown Dolomitic (clay). Many dolomite & Maq shale chips. Much silt. Tr gravel (Gr/SP).
85		C	Vfu/VC
85		Clay & sand	Brown Dolomitic (clay). Many dolomite & Maq shale chips. Much silt. cvd rd bn clay. Tr gravel (Gr/SP).
90		C	Vfu/VC
90		Clay & sand	Brown Dolomitic (clay). Many dolomite & Maq shale chips. Much silt. cvd rd bn clay & soil. Tr gravel (Gr/SP).
95		C	Vfu/VC
95		Clay & sand	Brown Dolomitic (clay). Many dolomite & Maq shale chips. Much silt. cvd rd bn clay & soil. Tr gravel (Gr/SP).
100		C	Vfu/VC
100		Clay & sand	Brown Dolomitic (clay). Much soft Maq shale (80% of sample), silt. Tr gravel (Gr/SP), cvd mat.
105		C	Vfu/VC
105		Clay & sand	Brown Dolomitic (clay). Much soft Maq shale (60% of sample), silt. Tr gravel (Gr/SP), cvd mat.
110	C	Vfu/VC	
110	Clay & sand	Brown Dolomitic (clay). Much soft Maq shale (50% of sample), silt. Tr gravel (Gr/LP), cvd mat.	
115	C	Vfu/VC	
115	Clay & sand	Brown Dolomitic (clay). Much soft Maq shale (80% of sample), silt. Tr gravel (Gr/SP), cvd mat.	
120	C	Vfu/VC	
120	Clay & sand	Brown Dolomitic (clay). Much soft Maq shale (60% of sample), silt. Ltl gravel (Gr/SP), cvd mat.	
125	C	Vfu/VC	
125	Clay & sand	Brown Dolomitic (clay). Much soft Maq shale (60% of sample), silt. Tr gravel (Gr/SP), cvd mat.	
130	C	Vfu/VC	
130	Clay & sand	Brown Dolomitic (clay). Much soft Maq shale (60% of sample), silt. Ltl cvd mat (clay, soil & slag). Tr gravel (Gr/SP).	
135	C	Vfu/VC	
135	Dolomite	Gv bn to dk gy bn	Ltl dk bn sh (most as partings), cvd organics. Tr clear cal xtals, bn speckling, fossil frags, gy Maq sh.
140	M	Fu/M	
140	Dolomite	Gv bn	Ltl bn speckling, cvd organics. Tr clear cal xtals, dk bn sh partings, fossil frags, gy Maq sh.
145	M	Fu/M	
145	Dolomite	Gv bn	Ltl cvd material. Tr clear cal xtals, dk bn sh partings, fossil frags, dk gy staining, bn speckling, pyrite.
150	M	Fu/M	
150	Dolomite	Gv bn	Ltl cvd material. Tr clear cal xtals, dk bn sh partings, fossil frags, dk gy staining, bn speckling, pyrite.
155	M	Fu/M	
155	Dolomite	Gv bn	Tr dk bn sh partings, fossil frags, dk gy staining, bn speckling, pyrite, cvd material.
160	M	Fu/M	
160	Dolomite	Gv bn	Tr dk bn sh partings, fossil frags, dk gy staining, clear dol xtals, pyrite, cvd material, drilling mud.
165	M	Fu/M	
165	Dolomite	Gv bn	Tr dk bn sh partings, fossil frags, dk gy staining, clear dol xtals, pyrite, bn speckling, cvd material.
170	M	Fu/M	
170	Dolomite	Gv bn	Tr dk bn sh partings, fossil frags, dk gy staining, clear dol xtals, pyrite, bn speckling, cvd material.
175	M	Fu/M	
175	Dolomite	Gv bn	Tr dk bn sh partings, fossil frags, dk gy staining, pyrite, bn speckling, cvd material.
180	M	Fu/M	
180	Dolomite	Gv bn	Tr dk bn sh partings, fossil frags, dk gy staining, pyrite, bn speckling, cvd material.
185	M	Fu/M	
185	Dolomite	Gv bn	Tr dk bn sh partings, fossil frags, dk gy staining, pyrite, bn speckling, cvd material.
190	M	Fu/M	
190	Dolomite	Gv bn	Tr dk bn sh partings, fossil frags, dk gy staining, pyrite, bn speckling, stylolites, cvd material.
195	M	Fu/M	
195	Dolomite	Gv bn	Tr dk bn sh partings, fossil frags, dk gy staining, pyrite, bn speckling, stylolites, cvd material.
200	M	Fu/M	
200	Dolomite	Gv bn	Tr dk bn sh partings, fossil frags, dk gy staining, pyrite, bn speckling, stylolites, cvd material.
205	M	Fu/M	
205	Dolomite	Gv bn	Tr dk bn sh partings, fossil frags, dk gy staining, pyrite, cvd material.
210	M	Fu/M	
210	Dolomite	Gv bn	Tr dk bn sh partings, fossil frags, dk gy staining, pyrite, gn gy sh partings, cvd material.
215	M	Fu/M	
215	Dolomite	Gv bn	Tr dk bn sh partings, fossil frags, dk gy staining, pyrite, cvd material.
220	M	Fu/M	
220	Dolomite	Gv bn	Tr dk bn sh partings, fossil frags, dk gy staining, pyrite, cvd material.
225	M	Fu/M	
225	Dolomite	Gv bn	Tr dk bn sh partings, fossil frags, dk gy staining, pyrite, cvd material.
230	M	Fu/M	
230	Dolomite	Gv bn	Tr dk bn sh partings, fossil frags, dk gy staining, pyrite, cvd material.
235	M	Fu/M	
235	Dolomite	Gv bn	Few fossil frags. Tr pyrite, dk gy staining, dk bn sh partings, cvd mat.
240	M	Fu/M	
240	Dolomite	Gv bn	Few fossil frags. Tr pyrite, dk gy staining, dk bn sh partings, cvd mat.
245	M	Fu/M	
245	Dolomite	Gv bn	Few fossil frags. Tr pyrite, dk gy staining, dk bn sh partings, cvd mat.
250	M	Fu/M	
250	Dolomite	Gv bn	Tr fossil frags, pyrite, dk gy staining, dk bn sh partings, cvd mat.
255	M	Fu/M	

DEPTH (ft)	UNIT	LITHOLOGY	MINERALOGY	DESCRIPTION
255	SINNIPIER GROUP	Dolomite	Gv bn	Tr fossil frags, pyrite, dk gy staining, dk bn sh partings, clear dol stale, cvd mat.
260		M	Fa/M	
260		Dolomite	Gv bn	Tr fossil frags, pyrite, dk gy staining, dk bn sh partings, cvd mat.
265		M	Fa/M	
265		Dolomite	Gv bn	Tr fossil frags, pyrite, dk gy staining, dk bn sh partings, cvd mat.
270		M	Fa/M	
270		Dolomite	Gv bn	Tr fossil frags, pyrite, dk gy staining, dk bn sh partings, cvd mat.
275		M	Fa/M	
275		Dolomite	Gv bn	Tr fossil frags, pyrite, dk gy staining, dk bn sh partings, cvd mat.
280		M	Fa/M	
280		Dolomite	Gv bn	Tr fossil frags, pyrite, dk gy staining, dk bn sh partings, cvd mat.
285		M	Fa/M	
285		Dolomite	Gv bn	Tr fossil frags, pyrite, dk gy staining, dk bn sh partings, dk gy gn sh, cvd mat, rust.
290		M	Fa/M	
290		Dolomite	Gv bn	Tr fossil frags, pyrite, dk gy staining, dk bn sh partings, dk gy gn sh, cvd mat.
295		M	Fa/M	
295		Dolomite	Gv bn	Tr fossil frags, pyrite, dk gy staining, dk bn sh partings, dk gy gn sh, cvd mat.
300		M	Fa/M	
300		Dolomite	Gv bn & dk gy gn	Many fossil frags. Much dk gy gn sh (sh & sh matrix). Tr pyrite, dk gy staining, dk bn sh partings, cvd mat.
305		M	Fa/M	
305		Dolomite	Gv bn & dk gy	Few fossil frags. Tr dk gy gn sh (sh & sh matrix), pyrite, dk gy staining, dk bn sh partings, cvd mat.
310		M	Fa/M	
310		Dolomite	Gv bn & dk gy	Tr fossil frags, dk gy gn sh (sh & sh matrix), pyrite, dk gy staining, dk bn sh partings, cvd mat.
315		M	Fa/M	
315		Dolomite	Gv bn & dk gy	Few fossil frags. Tr dk gy gn sh (sh & sh matrix), pyrite, dk gy staining, dk bn sh partings, cvd mat.
320		M	Fa/M	
320		Dolomite	Gv bn & dk gy	Tr fossil frags, dk gy gn sh (sh & sh matrix), pyrite, dk gy staining, dk bn sh partings, cvd mat.
325		M	Fa/M	
325		Dolomite	Gv bn & dk gy	Tr fossil frags, dk gy gn sh (sh & sh matrix), pyrite, dk gy staining, dk bn sh partings, cvd mat.
330		M	Fa/M	
330		Dolomite	Gv bn & dk gy	Tr fossil frags, dk gy gn sh (sh & sh matrix), pyrite, dk gy staining, dk bn sh partings, cvd mat.
335		M	Fa/M	
335		Dolomite	Gv bn	Tr fossil frags, dk gy gn sh, pyrite, dk gy staining, dk bn sh partings, cvd mat.
340		M	Fa/M	
340		Dolomite	Gv bn	Tr fossil frags, dk gy gn sh matrix, pyrite, dk gy staining, dk bn sh partings, bn speckling, cvd mat.
345	M	Fa/M		
345	Dolomite	Gv bn	Tr fossil frags, dk gy gn sh matrix, pyrite, dk gy staining, dk bn sh partings, bn speckling, cvd mat, cvd soil.	
350	M	Fa/M		
350	Dolomite	Gv bn	Tr fossil frags, dk gy gn sh matrix, pyrite, dk gy staining, dk bn sh partings, bn speckling, cvd mat.	
355	M	Fa/M		
355	Dolomite	Gv bn	Much as (dol to sil cemat, tr pyrite cem, Fa/M), free qtz sand. Ltl cvd mat. Tr fossil frags, gy sh, pyrite, dk gy staining, dk bn sh partings, bn speckling, gy fossilif chert.	
360	M	Fa/M		
360	Dolomite	Gv bn	Much as (dol to sil cemat, tr pyrite cem, Fa/M), free qtz sand. Ltl cvd mat. Tr fossil frags, gy sh, pyrite, dk gy staining, dk bn sh partings, bn speckling, floating qtz sand.	
365	M	Fa/M		
365	Dolomite	Gv bn	Much as (dol to sil cemat, tr pyrite cem, Fa/M), free qtz sand. Ltl cvd mat. Tr fossil frags, gy sh, pyrite, dk gy staining, dk bn sh partings, bn speckling, floating qtz sand.	
370	M	Fa/M		
370	Dolomite	Gv bn	Much as (dol to sil cemat, tr pyrite cem, Fa/M), free qtz sand. Ltl cvd mat. Tr fossil frags, gy sh, pyrite, dk gy staining, dk bn sh partings, bn speckling, floating qtz sand.	
375	M	Fa/M		
375	Sandstone	Lt gy bn	Rnd. Tr G silces cem, mafic incl, qtz silt, pyrite. Much frosting. Few sec qtz growths. Ltl cvd mat (mafic frag, dol, rust & neat cem).	
380	M	Vfn/VC		
380	Sandstone	Pale bn	Subrad to rd. Ltl G silces cem. Tr pyrite, mafic incl, qtz silt, cvd mat. Much frosting. Few sec qtz growths.	
385	M	Vfn/VC		
385	Sandstone	Pale bn	Subrad to rd. Tr G silces cem, pyrite, mafic incl, qtz silt, cvd mat. Much frosting. Few sec qtz growths. Ltl rust.	
390	M	Vfn/VC		
390	Sandstone	Pale bn	Subrad to rd. Tr G silces cem, pyrite, mafic incl, qtz silt, cvd mat. Much frosting, rust. Few sec qtz growths.	
395	M	Vfn/VC		
395	Sandstone	Pale bn	Subrad to rd. Tr G silces cem, pyrite, mafic incl, cvd mat. Much frosting, rust (more than above, 40%). Few sec qtz growths. Ltl qtz silt.	
400	M	Vfn/VC		
400	Sandstone	Pale bn	Subang to rd. Tr G silces cem, pyrite, mafic incl, cvd mat. Much frosting, rust (approx 30%). Few sec qtz growths. Ltl qtz silt.	
405	M	Vfn/VC		
405	Sandstone	Pale bn	Subang to rd. Tr G silces cem, pyrite, mafic incl, cvd mat. Much frosting, rust (approx 30%). Few sec qtz growths. Ltl qtz silt.	
410	M	Vfn/VC		
410	Sandstone	V pl bn	Subang to rd. Tr G silces cem, pyrite, mafic incl, cvd mat, rust. Much frosting. Many sec qtz growths. Ltl qtz silt.	
415	M	Vfn/VC		
415	Sandstone	V pl bn	Subang to rd. Tr G silces cem, pyrite, mafic incl, cvd mat, rust. Much frosting. Many sec qtz growths. Ltl qtz silt.	
420	M	Vfn/VC		
420	Sandstone	Light bn	Subang to rd. Tr G silces cem, pyrite, mafic incl, wh chert, cvd mat. Much frosting, dolie sand. Many sec qtz growths. Ltl qtz silt, rust.	
425	M	Vfn/VC		
425	Sandstone	Light bn	Subrad to rd. Tr G silces cem, pyrite, mafic incl, wh chert, cvd mat. Much frosting, dolie sand. Many sec qtz growths. Ltl qtz silt, rust.	
430	M/C	Vfn/VC		
430	Dolomite	Light bn gy	Sample consists of sand size grains. Much free qtz sand, rust. Tr pyrite, wh chert, cvd mat.	
435	M	Fa/M		
435	Dolomite	Pale brown	Sample consists of sand size grains. Much wh chert, rust. Ltl free qtz sand. Tr pyrite, cvd mat.	
440	M	Fa/M		

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P R A I R I E  d u C H I E N G R P	440	Dolomite	Pale brown	Sample consists of sand size grains. Lt wh chert, free qtz sand, rust. Tr pyrite, cvd mat.
	445	M	Fn/M	
	445	Dolomite	Lt bn gy	Sample consists of sand size grains. Lt rust/cvd mat. Tr pyrite, wh chert, free qtz sand.
	450	M	Fn/M	
	450	Dolomite	Lt bn gy	Sample consists of sand size grains. Much rust/cvd mat. Tr pyrite, wh chert, free qtz sand.
	455	M	Fn/M	
	455	Dolomite	Lt bn gy	Sample consists of sand size grains. Much rust/cvd mat. Tr silt/Vfn-glauc, pyrite, wh chert, free qtz sand.
	460	M	Fn/M	
	460	Dolomite	Lt bn gy	Sample consists of sand size grains. Lt rust/cvd mat. Tr silt/Vfn-glauc, pyrite, wh chert, free qtz sand.
	465	M	Fn/M	
465	Dolomite	Lt bn gy	Sample consists of sand size grains. Lt rust/cvd mat. Tr silt/Vfn-glauc, pyrite, wh chert, free qtz sand.	
470	M	Fn/M		
470	Dolomite	Lt bn gy	Much of the sample consists of sand size grains. Much neat cement. Lt rust/cvd mat. Tr pyrite, wh chert, free qtz sand, pl gn sh.	
475	M	Fn/M		
475	Dolomite	Pink gy	Much of the sample consists of sand size chips. Lt rd bn hemic staining, rust/cvd mat. Tr pyrite, wh chert, free qtz sand, silt/Vfn-glauc.	
480	M	Fn/M		
480	Dolomite	Pink gy	Much of the sample consists of sand size chips. Lt rd bn hemic staining, free qtz sand, rust/cvd mat. Tr pyrite, wh chert, silt/Vfn-glauc.	
485	M	Fn/M		
485	Sandstone	Lt gy bn	Subrd to rd. Tr F dolie cem, pyrite, wh chert, mafic incl. Much frosting, dolie sand. Lt rust/cvd mat.	
C O O N V A L L E Y  M E M B E R	490	M	Vfn/VC	
	490	Sandstone	Lt gy bn	Subrd to rd. Tr F dolie cem, pyrite, wh chert, mafic incl. Much frosting, dolie sand. Lt rust/cvd mat. Few sec qtz growths.
	495	M	Vfn/VC	
	495	Sandstone	Lt gy bn	Subrd to rd. Tr F dolie cem, pyrite, wh chert, pl gn sh, mafic incl. Much frosting, dolie sand. Lt rust/cvd mat. Few sec qtz growths.
	500	M	Vfn/VC	
	500	Sandstone	Lt gy bn	Subrd to rd. Tr F dolie cem, pyrite, wh chert, pl gn sh, mafic incl. Much frosting, dolie sand. Lt rust/cvd mat. Few sec qtz growths.
	505	M	Vfn/VC	
	505	Dolomite	Lt gy bn	Sample consists of sand size chips. Much free qtz sand, drusy qtz, rust. Tr pyrite, wh chert, pl gn sh, cvd mat.
	510	M	Fn/M	
	510	Sandstone	Lt gy bn	Subrd to rd. Tr F dolie cem, pyrite, wh chert, drusy qtz, pl gn sh, mafic incl. cvd mat. Much frosting, dolie sand, rust.
515	M	Vfn/VC		
515	Sandstone	Lt gy bn	Subrd to rd. Tr F dolie cem, pyrite, wh chert, mass glauc, drusy qtz, pl gn sh, mafic incl, cvd mat. Much frosting, dolie sand, rust.	
520	M	Vfn/VC		
520	Dolomite	Lt gy bn	Most of the sample consists of sand size chips. Lt free qtz sand, rust. Tr drusy qtz, mass glauc, gypsum, pyrite, wh chert.	
525	M	Fn/M		
525	Sandstone	White	Subrd to wrnd. Tr G pyric cem, qtz silt, mafic incl, cvd mat, rust. Much frosting. Few sec qtz growths.	
530	M/C	Vfn/VC		
530	Sandstone	Pink grey	Subrd to rd. Much G to F dolie cem, frosting. Tr qtz silt, mafic incl, cvd mat. Many sec qtz growths. Lt rust.	
535	M/C	Vfn/VC		
535	Sandstone	Pink grey	Subrd to rd. Much F to G dolie cem, frosting. Many sec qtz growths. Lt rust. Tr pyrite, wh chert, mass glauc, mafic incl, pl gn sh, qtz silt, cvd mat.	
540	M/C	Vfn/VC		
540	Sandstone	Pink grey	Subrd to rd. Much F to G dolie cem, frosting, dol (w/ lt silt-glauc), rust. Many sec qtz growths. Tr pyrite, wh chert, mass glauc, mafic incl, pl gn sh, qtz silt, cvd mat.	
545	M/C	Vfn/VC		
545	Sandstone	Pink grey	Subng to rd. Much F to G dolie cem, frosting, rust. Many sec qtz growths. Tr pyrite, wh chert, silt/Vfn-glauc, mafic incl, pl gn sh, qtz silt, cvd mat.	
550	Fn/M	Vfn/VC		
550	Sandstone	Pink grey	Subng to subrd. Much G to F dolie cem, frosting, rust. Many sec qtz growths. Tr pyrite, wh silcs sh, silt/Vfn-glauc, mafic incl, pl gn sh, qtz silt, cvd mat.	
555	Fn	Vfn/VC		
555	Sandstone	Pink grey	Subng to subrd. Much G to F dolie cem, frosting, rust. Many sec qtz growths. Tr pyrite, wh silcs sh, silt/Vfn-glauc, mafic incl, pl gn sh, qtz silt, cvd mat.	
560	Fn	Vfn/VC		
560	Sandstone	Pink grey	Subng to subrd. Much G dolie cem, frosting, rust. Many sec qtz growths. Tr pyrite, wh silcs sh, silt/Vfn-glauc, mafic incl, qtz silt, cvd mat.	
565	Fn	Vfn/VC		
565	Sandstone	Pink grey	Subng to subrd. Much G dolie cem (less than above), frosting. Many sec qtz growths. Tr pyrite, wh silcs sh, silt/Vfn-glauc, mafic incl, pl gn sh, qtz silt, cvd mat. Lt rust.	
570	Fn/M	Vfn/VC		
J O R D A N  F O R M A T I O N	570	Sandstone	Grey brown	Subng to subrd. Much G dolie cem, frosting. Many sec qtz growths. Tr pyrite, wh silcs sh, silt/Vfn-glauc, mafic incl, pl gn sh, qtz silt, cvd mat. Lt rust.
	575	Fn	Vfn/VC	
	575	Sandstone	Grey brown	Subng to subrd. Much G dolie cem, frosting. Many sec qtz growths. Tr pyrite, wh silcs sh, silt/Vfn-glauc, mafic incl, pl gn sh, qtz silt, cvd mat. Lt rust.
	580	Fn	Vfn/VC	
	580	Sandstone	Grey brown	Ang to subrd. Much VG dolie cem, frosting. Few sec qtz growths. Tr pyrite, wh silcs sh, silt/Vfn-glauc, mafic incl, pl gn sh, dk gy staining (of cem), clear cal xtals, qtz silt, cvd mat. Lt rust.
	585	Vfn/Fn	Vfn/C	
	585	Sandstone	Lt gy bn	Ang to subrd. Much G dolie cem (less than above), frosting. Few sec qtz growths. Tr pyrite, wh silcs sh, silt/Vfn-glauc, mafic incl, dk gy staining (of cem), qtz silt, cvd mat. Lt rust.
	590	Vfn/Fn	Vfn/C	
	590	Sandstone	Lt gy bn	Ang to subrd. Much G dolie cem, frosting. Few sec qtz growths. Tr pyrite, wh silcs sh, silt/Vfn-glauc, mafic incl, dk gy staining (of cem), qtz silt, cvd mat. Lt rust.
	595	Vfn/Fn	Vfn/C	
595	Sandstone	Lt gy bn	Ang to subrd. Much VG dolie cem, frosting. Few sec qtz growths. Tr pyrite, wh silcs sh, mass glauc, mafic incl, dk gy staining (of cem), rk hemic staining, qtz silt, cvd mat, rust.	
600	Vfn/Fn	Vfn/C		
600	Sandstone	Red brown	Subng to subrd. Much VG dolie cem, frosting. Few sec qtz growths. Lt hemic staining. Tr wh silcs sh, mafic incl, hemic sh, qtz silt, cvd mat, rust.	
605	Fn	Vfn/C		
605	Sandstone	Lt red brown	Subng to rd. Much VG dolie cem, frosting. Few sec qtz growths. Lt hemic staining. Tr pyrite, mass-glauc, rd qtz, grey, wh silcs sh, mafic incl, hemic sh, qtz silt, cvd mat, rust.	
610	Fn/M	Vfn/Gr		
610	Sandstone	Pink	Ang to subng. Much G dolie cem, frosting. Few sec qtz growths. Lt qtz silt. Tr mass-glauc, wh silcs sh, mafic incl, rd bn hemic staining, rust.	
615	Vfn/Fn	Vfn/C		
615	Sandstone	Pink	Ang to rd. Much VG dolie cem, frosting. Many sec qtz growths. Tr qtz silt, mass-glauc, wh silcs sh, mafic incl, rd bn hemic sh, rust.	
620	Fn/M	Vfn/VC		
620	Sandstone	Pink	Subng to rd. Much VG dolie cem, frosting. Many sec qtz growths. Tr qtz silt, mass-glauc, wh silcs sh, mafic incl, rd bn hemic sh, rust.	
625	M	Vfn/VC		
T U N E L  C I T Y  G R O U P	625	Sandstone	Pink	

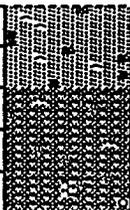
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Depth (ft)	Group	Rock Type	Color	Description
625	TUNNEL CITY GROUP	Sandstone	Lt grey	Red to wrnd. Lt G dolie cem, rust. Much frosting. Many sec qtz growths. Tr mafic incl, rd bn hem sh/staining, pyrite, wh silca sh, qtz silt.
630		M	Vfn/VC	
630		Sandstone	Lt gy to dk bn gy	Subrd to rd. Much G dolie cem, frosting, dk bn staining (of cem). Many sec qtz growths. Lt silt-glauc, qtz silt, rust. Tr mafic incl, pl gn sh matrix, pyrite, wh silca sh.
635		Fu/M	Vfn/VC	
635		Sandstone	Lt gy to dk bn gy	Subrd to rd. Much G dolie cem, frosting, dk bn staining (of cem). Many sec qtz growths. Tr silt-glauc, qtz silt, mafic incl, pl gn sh matrix, pyrite, wh silca sh, rd qtz grains. Lt rust.
640		Fu/M	Vfn/Gr	
640		Sandstone	Pale brown	Red to wrnd. Much G dolie cem, frosting, rust. Many sec qtz growths. Tr silt-glauc, qtz silt, mafic incl, pl gn sh matrix, pyrite, wh silca sh, dk rd bn hem sh. Lt drilling cem/cvd mat.
645		M/C	Vfn/VC	
645		Sandstone	V pl bn	Red to wrnd. Tr G dolie cem, qtz silt, mafic incl, pl gn sh, pyrite, wh silca sh. Many sec qtz growths. Much frosting. Lt rust/cvd mat.
650		M	Vfn/VC	
650	Sandstone	V pl bn	Red to wrnd. Tr G dolie cem, G pyrite cem, qtz silt, mafic incl, pl gn sh, wh silca sh. Many sec qtz growths. Much frosting. Lt rust/cvd mat.	
655	M	Vfn/VC		
655	Sandstone	V pl bn	Subrd to rd. Tr G dolie cem, G pyrite cem, qtz silt, mafic incl, pl gn sh, wh silca sh, qtzite sand, rust. Many sec qtz growths. Much frosting.	
660	M/C	Vfn/VC		
660	Sandstone	Brown	Subang to subrd. Lt G silca cem, pl gn sh, qtz silt, rust/cvd mat. Tr G dolie cem, G pyrite cem, mafic incl, wh silca sh, qtzite sand. Many sec qtz growths. Much frosting.	
665	Vfn/Fn	Vfn/VC		
665	Sandstone	Lt rd bn	Subang to subrd. Lt G silca cem, qtz silt. Tr G dolie cem, pyrite, pl gn sh, mafic incl, wh silca sh, rd bn hemic sh, qtzite sand, rust, cvd mat. Many sec qtz growths. Much frosting.	
670	Vfn/Fn	Vfn/VC		
670	Sandstone	Lt rd bn	Subang to rd. Lt G silca cem, qtz silt. Tr Vfn-glauc, pyrite, pl gn sh, mafic incl, wh silca sh, rd bn hemic sh, qtzite sand/grans, rust, cvd mat. Many sec qtz growths. Much frosting.	
675	Fu/M	Vfn/VC		
675	Sandstone	V pl bn	Subang to subrd. Much G silca cem, frosting, rust. Lt qtz silt. Tr pyrite, pl gn sh, mafic incl, wh silca sh, rd bn hemic sh, qtzite sand, cvd mat. Many sec qtz growths.	
680	Vfn/Fn	Vfn/VC		
680	Sandstone	Lt rd bn	Subang to rd (but irregular). Tr G silca cem, qtz silt, pyrite, mafic incl, wh silca sh, rd bn hemic sh, qtzite sand, cvd mat. Many sec qtz growths. Much frosting. Lt rust.	
685	M/C	Vfn/VC		
685	Sandstone	Pink	Subang to rd (but irregular). Tr G silca cem, qtz silt, pyrite, mafic incl, wh silca sh, rd bn hemic sh, qtzite sand, rd grains, rust. Many sec qtz growths. Much frosting. Lt dk rd bn hemic staining of qtz grains.	
690	M/C	Vfn/Gr		
690	Sandstone	Lt rd bn	Subang to rd (but irregular). Tr G silca cem, qtz silt, pyrite, mafic incl, wh silca sh, rd bn hemic sh, qtzite sand, dk rd bn hemic staining of qtz grains, cvd mat. Much frosting, rust. Many sec qtz growths.	
695	M	Vfn/VC		
695	Sandstone	Lt rd bn	Ang to rd (but irregular). Tr G silca cem, qtz silt, pyrite, mafic incl, wh silca sh, rd bn hemic sh, qtzite sand, dk rd bn hemic staining of qtz grains, cvd mat. Much frosting, rust. Many sec qtz growths.	
700	M	Vfn/VC		
700	Sandstone	Lt rd bn	Ang to rd (but irregular). Tr G silca cem, qtz silt, pyrite, mafic incl, wh sh, rd bn hemic sh, qtzite sand, rd qtz/qtzite grains, dk rd bn hemic staining of qtz grains, cvd mat. Much frosting, rust. Many sec qtz growths.	
705	M/C	Vfn/VC		
705	Sandstone	Dark pink	Vang to subrd (but irregular). Much G silca cem, frosting, rust. Tr qtz silt, mafic incl, wh sh, rd bn hemic sh, qtzite sand, dk rd bn hemic staining of qtz grains, cvd mat. Many sec qtz growths.	
710	M	Vfn/VC		
710	Sandstone	Pink	Vang to subrd (but irregular). Much VG silca to dolie (slightly) cem, frosting, rust. Tr qtz silt, mafic incl, wh sh, rd qtz/qtzite grains, qtzite sand, dk rd bn hemic staining of qtz grains, cvd mat. Many sec qtz growths.	
715	Fu/M	Vfn/VC		
715	Sandstone	Pink	Ang to subrd (but irregular). Much VG silca to dolie (slightly) cem, frosting, rust. Few rd qtz/qtzite grains. Tr qtz silt, mafic incl, wh sh, qtzite sand, dk rd bn hemic staining of qtz grains, cvd mat. Many sec qtz growths.	
720	M	Vfn/VC		
720	Sandstone	Pink	Ang to rd (but irregular). Much VG silca to dolie (slightly) cem, frosting, rust. Few rd qtz/qtzite grains. Tr qtz silt, mafic incl, wh sh, qtzite sand, dk rd bn hemic staining of qtz grains, cvd mat. Many sec qtz growths.	
725	M/C	Vfn/VC		
725	Sandstone	Pink	Ang to subrd (but irregular). Much VG silca to dolie cem, frosting, rust. Tr rd qtz/qtzite grains, qtz silt, mafic incl, wh sh, qtzite sand, dk rd bn hemic staining of qtz grains, cvd mat. Many sec qtz growths.	
730	Fu/M	Vfn/VC		
730	Sandstone	Pink	Ang to subrd (but irregular). Much VG dolie cem, frosting, rust. Tr rd qtz/qtzite grains, pyrite, qtz silt, mafic incl, wh sh, qtzite sand, dk rd bn hemic staining of qtz grains, cvd mat. Many sec qtz growths.	
735	Fu/M	Vfn/VC		
735	Sandstone	Lt rd bn	Ang to subrd (but irregular). Much G silca to dolie cem, frosting, rust. Tr rd qtz/qtzite grains, pyrite, qtz silt, mafic incl, wh sh, qtzite sand, dk rd bn hemic staining of qtz grains, cvd mat. Many sec qtz growths.	
740	M	Vfn/VC		
740	Sandstone	Lt rd bn	Subang to subrd (but irregular). Much G silca to dolie cem, frosting, rust. Tr rd qtz/qtzite grains, pyrite, qtz silt, mafic incl, wh sh, qtzite sand, dk rd bn hemic staining of qtz grains, cvd mat. Many sec qtz growths.	
745	M/C	Vfn/VC		
745	Sandstone	Lt rd bn	Ang to subrd (but irregular). Much G silca to dolie cem, frosting. Lt rust. Tr rd qtz/qtzite grains, qtz silt, mafic incl, wh sh, qtzite sand, dk rd bn hemic staining of qtz grains, cvd mat. Many sec qtz growths.	
750	M/C	Vfn/VC		
750	Sandstone	Lt rd bn	Ang to subrd (but irregular). Much G silca to dolie cem, frosting, rust. Tr rd qtz/qtzite grains, qtz silt, mafic incl, wh sh, qtzite sand, dk rd bn hemic staining of qtz grains, cvd mat. Many sec qtz growths.	
755	M/C	Vfn/VC		
755	Sandstone	Pink	Ang to subrd (but irregular). Much G silca to dolie cem, frosting, rust. Tr rd qtz/qtzite grains, qtz silt, mafic incl, wh sh, qtzite sand, dk rd bn hemic staining of qtz grains, cvd mat. Many sec qtz growths.	
755	Sandstone	Dk rd bn	Subang to rd. Lt G silca to dolie cem. Much rd bn spec hemic coating, frosting, rust. Tr qtz silt, mafic incl, wh sh, qtzite sand, cvd mat. Few sec qtz growths.	
760	M	Vfn/VC		
760	Sandstone	Dk rd bn & k gy	Ang to rd. Much VG dolie cem, dk rd bn hemic mottling (and sh matrix), frosting, qtz silt, rust. Tr mafic incl, wh sh, wh fossil frags, cvd mat. Few sec qtz growths.	
765	Vfn & M	Vfn/VC		
765	Sandstone	Red brown	Subrd to wrnd. Much G dolie cem, rd bn spec hemic coating, frosting, rust. Tr qtz silt, pl gn sh, mafic incl, wh sh, wh fossil frags, cvd mat. Few sec qtz growths.	
770	M/C	Vfn/VC		
770	Sandstone	Pink	Subang to rd (but irregular). Much VG dolie cem, frosting, rust. Many sec qtz growths. Tr qtz silt, pl gn sh matrix, mafic incl, wh sh, rd bn hemic sh, qtzite sand, rd bn hemic staining of qtz grains, cvd mat.	
775	M/C	Vfn/VC		
775	Sandstone	Pink	Subang to rd (but irregular). Much VG dolie cem, frosting, rust. Many sec qtz growths. Tr qtz silt, pl gn sh matrix, mafic incl, wh sh, rd bn hemic sh, qtzite sand, rd qtz grains, rd bn hemic staining of qtz grains, cvd mat.	
780	M/C	Vfn/VC		

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E L K H O U N D G R O U P	780	Sandstone	Lt rd bn	Subrd to rd. Much G silcs ocm, frosting, rust. Many sec qtz growths. Tr G rd bn hemic ocm, qtz silt, mafic incl, wh sh, rd bn hemic sh, qtzite sand, rd bn hemic staining of qtz grains, cvd mat.
	785	M	Vfn/VC	
	785	Sandstone	Red brown	Subrd to rd (but irregular). Much G dolc to calcus ocm, frstg, rust. Many sec qtz growths. Tr G rd bn hem ocm, qtz silt, mafic incl, wh sh, rd bn hem sh, qtzite sand, rd bn hem staining of qtz grains, rd qtz/qtzite grains, gn sv sh, cvd mat.
	790	M/C	Vfn/VC	
	790	Sandstone	Red brown	Subang to rd (but irregular). Lt G dolc ocm, rust. Much frosting. Many sec qtz growths. Tr G rd bn hem ocm, qtz silt, mafic incl, wh sh, rd bn hem sh, qtzite sand, rd bn hem staining of qtz grains, rd qtz/qtzite grains, gn sv sh, cvd mat.
	795	M	Vfn/VC	
	795	Sandstone	Red brown	Ang to rd (but irregular). Much G dolc ocm, frosting. Many sec qtz growths. Lt rust. Tr G rd bn hemic ocm, qtz silt, mafic incl, wh sh, rd bn hem sh, qtzite sand, rd qtz/qtzite grains, gn sv sh, cvd mat.
	800	M/C	Vfn/VC	
	800	Sandstone	Lt rd bn	Ang to rd (but irregular). Lt G dolc ocm, rust. Much frosting. Many sec qtz growths. Tr G rd bn hem ocm, qtz silt, mafic incl, wh sh, qtzite sand, rd qtz/qtzite grains, gn sv sh, rd hem staining of qtz grains, cvd mat.
	805	M/C	Vfn/VC	
	805	Sandstone	Pink	Ang to rd (but V irregular). Tr G silcs ocm, G rd bn hem ocm, qtz silt, mafic incl, wh sh, rd qtz/qtzite grains, gn sv sh, rd hem staining of qtz grains, cvd mat. Much frosting. Many sec qtz growths. Few qtz grains. Lt rust.
	810	M/C	Vfn/VC	
	810	Sandstone	Pink	Subang to rd (but irregular). Tr G silcs ocm, G rd bn hem ocm, qtz silt, mafic incl, wh sh, rd qtz/qtzite grains, gn sv sh, rd hem staining of qtz grains, cvd mat. Much frosting, gy Vfn ss/sts, rust. Many sec qtz growths. Few qtz grains.
	815	M	Vfn/VC	
	815	Sandstone	Pink	Subang to rd (but irregular). Tr G silcs ocm, G rd bn hem ocm, qtz silt, mafic incl, wh sh, rd qtz/qtzite grains, gn sv sh, rd hem staining of qtz grains, cvd mat. Much frosting, gy Vfn ss/sts, rust. Many sec qtz growths. Few qtz grains.
	820	M	Vfn/VC	
	820	Sandstone	Pink grey	Ang to subrd (but irregular). Much G to VG dolc to calcus ocm, frosting. Many sec qtz growths. Lt qtz silt, dk gy staining (of ocm), rust. Tr pyrite, mafic incl, wh sh, dk rd hem staining of qtz grains, qtzite sand.
	825	Fn/M	Vfn/VC	
	825	Sandstone	Pale brown	Ang to subrd (but irregular). Much G to VG dolc to calcus ocm, frosting, rust. Many sec qtz growths. Lt qtz silt, dk gy staining (of ocm). Tr pyrite, mafic incl, wh sh, dk rd hemic staining of qtz grains, qtzite sand, bk fossil frags.
	830	Fn/M	Vfn/VC	
	830	Sandstone	Brown	Ang to subrd (but irregular). Much G to VG dolc to calcus ocm, frstg, rust. Many sec qtz grw. Few qtzite frags (and/SP). Lt dk gy sh, ang to rd gvl (Gr/SP). Tr qtz silt, dk gy stng (of ocm). Tr pyrite, mafic incl, wh sh, dk rd hem stng of qtz grains, qtzite sand, bk fos frags.
	835	Fn/M	Vfn/VC	
	835	Siltstone	Dark grey	Siliceous. Much VG to G silcs ocm, qtz silt, dk gy sh, floating & free qtz sand, rust. Lt finely disseminated pyrite. Tr qtzite sand, mica, fos frags.
	840	-	-	
	840	Sandstone	Pale brown	Ang to subrd. Much G silcs ocm, frosting, rust. Many sec qtz growths. Lt qtzite sand, gy sh/sts. Tr pyrite, mafic incl, qtz silt, wh sh, dk rd staining of qtz grains.
	845	Fn/M	Vfn/VC	
	845	Sandstone	Pale brown	Ang to subrd. Much G silcs ocm, frosting, rust. Many sec qtz growths. Lt qtzite sand, gy sh/sts. Tr pyrite, mafic incl, qtz silt, wh sh, dk rd staining of qtz grains, bk fos frags, ang qtzite grains.
	850	Fn/M	Vfn/VC	
	850	Sandstone	Brown	Ang to subrd. Much G silcs ocm, frosting, gy sh/sts layers, rust. Many sec qtz growths. Lt qtz silt. Tr pyrite, mafic incl, qtzite sand, wh sh, Fn wrod pyrite nodules, bk fossil frags.
	855	Fn/M	Vfn/VC	
855	Sandstone	Pale brown	Ang to rd (but irregular). Lt G silcs ocm, dk rd staining of sand grains. Much frosting, rust. Many sec qtz growths. Tr qtz silt, pyrite, mafic incl, qtzite sand, wh sh, ang qtzite grains, gy sh/sts.	
860	M/C	Vfn/VC		
860	Sandstone	Pink grey	Ang to rd. Much G to VG dolc ocm, frosting, rust. Many sec qtz growths. Lt dk gy staining of ocm. Tr qtz silt, pyrite, mafic incl, qtzite sand, wh sh, ang qtz/qtzite grains, dk gy sh, dk rd staining of sand.	
865	Fn/M	Vfn/VC		
865	Sandstone	Pk gy to lt gy bn	Ang to rd. Much G to VG dolc ocm, frosting, rust. Many sec qtz growths. Lt dk gy staining of ocm. Tr qtz silt, pyrite, mafic incl, qtzite grains, wh sh, qtz/qtzite grains, dk gy sh, dk rd staining of sand.	
870	Fn/M	Vfn/VC		
870	Sandstone	Gy to gy bn	Ang to subrd. Much VG dolc ocm, frosting, rust. Many sec qtz growths. Lt dk gy staining of ocm, qtz silt. Tr pyrite, mafic incl, qtzite grains, wh sh, dk gy sh, bk fossil frags. Vfn-zircon.	
875	Fn	Vfn/VC		
875	Sandstone	Gy to gy bn	Ang to subrd. Much G to VG dolc ocm, frosting, rust. Many sec qtz growths. Lt dk gy staining of ocm, qtz silt. Tr pyrite, mafic incl, qtzite grains, wh sh, dk gy sh, bk fossil frags, qtzite grains/SP.	
880	Fn/M	Vfn/VC		
880	Sandstone	Pink grey	Vang to rd. Tr G dolc ocm, G silcs ocm, G pyrite ocm, qtz silt, mafic incl, wh sh, dk gy sh. Much frosting. Many sec qtz growths, ang to rd qtzite sand/MP. Lt vki(Gr/MP), rust.	
885	M/C	Vfn/VC		
885	Sandstone	Pink grey	Subang to rd. Tr G dolc ocm, G silcs ocm, G pyrite ocm, qtz silt, mafic incl, wh sh, dk gy sh. Much frosting. Many sec qtz growths. Lt ang to rd qtzite sand/Grans, rust.	
890	Fn/M	Vfn/VC		
890	Sandstone	Pink grey	Vang to rd. Much G dolc ocm, frosting, rust. Many sec qtz growths, ang to rd qtzite sand/Grans. Tr G silcs ocm, G pyrite ocm, rd pyrite nodules (some qtz sand cored), qtz silt, mafic incl, wh sh.	
895	M/C	Vfn/VC		
895	Sandstone	Lt rd brown	Vang to rd. Much G dolc ocm, frosting. Many sec qtz growths, ang to rd qtzite sand/Grans. Tr G silcs ocm, G pyrite ocm, rd pyrite nodules (some qtz sand cored), qtz silt, mafic incl, wh sh, ang to rd grains, gy bn sh, pl gn sh, rust.	
900	M/C	Vfn/VC		
900	Sandstone	Pink	Vang to rd. Tr G dolc ocm, G silcs ocm, pyrite, qtz silt, mafic incl, wh sh, gy bn sh, pl gn sh, rust. Many sec qtz growths. Much frosting. Few ang to rd qtzite sand grains.	
905	M/C	Vfn/VC		
905	Sandstone	Lt gy	Vang to rd. Much G dolc ocm, frosting. Many sec qtz growths. Few ang to rd qtzite sand grains. Lt dk gy sh, qtz silt. Tr black fossil frags, wh sh, pyrite, rust.	
910	Fn/M	Vfn/VC		
910	Sandstone	Pink	Ang to rd. Tr G dolc ocm, G silcs ocm, qtz silt, dk gy sh, pyrite, pl gn sh, rust. Many sec qtz growths. Much frosting, ang to rd qtzite (sand/SP).	
915	M/C	Vfn/VC		
915	Sandstone	Lt gy	Ang to rd. Much G dolc ocm, dk gn gy sh, qtz silt, frosting, ang to rd qtzite (sand/MP). Many sec qtz growths. Tr wh sh, pyrite, rust.	
920	Fn/M	Vfn/VC		
920	Sandstone	Lt rd bn	Ang to rd. Lt G dolc ocm, qtz silt. Much frosting, gn gy to pl gn silcs sh. Many sec qtz growths. Tr ang to rd qtzite sand, dk rd bn hemic sh (interlayered w/ gn sv), wh sh, pyrite, rust.	
925	Fn/M	Vfn/VC		
925	Sandstone	Dk rd bn	Ang to rd. Much G silcs ocm, qtz silt, frosting, pl gn silcs sh, dk rd bn hem sh. Few sec qtz growths. Tr ang to rd qtzite sand/SP, wh sh, pyrite, rust. The two shales are interlayered.	
930	Fn	Vfn/VC		
930	Sh & sandstone	V pl gn & pl pk	Siliceous (sh). Subang to rd. Much VG silcs ocm (some is almost a chert), frosting. Lt qtz silt. Few sec qtz growths. Tr ang to rd qtzite sand/Gr, dk rd bn sh, rust.	
935	Fn	Vfn/VC		
935	Sandstone	White	Subang to wrnd (but irregular). Lt G silcs ocm, wh silcs sh, ang to rd qtzite sand/Gr. Much frosting. Many sec qtz growths. Tr qtz silt, mafic incl, pl gn sh, rust.	
940	C	Vfn/VC		

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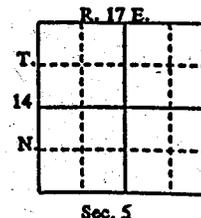
E.M. GRP	940		Sandstone	White	Subrad to wrrnd (but irregular). Much VG silcs com, wh silcs sh, frosting. Many sec qtz growths. LH ang to
	945		C	Vfa/VC	rd qtzite sand/Gr. Tr qtz silt mafic incl, rust.
270'	945		Sandstone	White	Subrad to wrrnd (but irregular). Much VG silcs com, wh silcs sh, frosting, ang to rd qtzite sand/SP. Many
	950		C	Vfa/VC	sec qtz growths. Tr qtz silt mafic incl, rust, cvd mat.
PC	950		Quartzite	Fk t k rd bn t pur	Weathered. Grain size difficult to determine. Much dk rd bn hemic staining, free qtz sand. Tr metallic
	955		C	Vfa/VC	hem cem/inclusions, sericite, cvd mat, rust.
	955		Quartzite	Fk t k rd bn t pur	Weathered. Grain size difficult to determine. Much dk rd bn hemic staining, free qtz sand. Tr metallic
	960		C	Vfa/VC	hem cem/inclusions, sericite, cvd mat, rust.
15'	960		Quartzite	Fk t k rd bn t pur	Weathered. Grain size difficult to determine. Much dk rd bn hemic staining, free qtz sand. Tr metallic
	965		C	Vfa/VC	hem cem/inclusions, sericite, cvd mat, rust.

End Of Log

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Site Name: Fond du Lac City Well #24  
 Owner: City of Fond Du Lac  
 Address: 160 S. Macy  
 Fond du Lac, WI 54935  
 Driller(s): Layno-Northwest Co. 6/12/1992  
 Engineer:  
 Location: SE,NW,  
 Sec. 5, T14N, R17E  
 Topo Name: Byron  
 Sample Nos: W33  
 Perm No.: 01063  
 WI-Unique ID#:AY 378

County: FOND DU LAC  
 Completed: 6/12/1992  
 Field Check:  
 Elevation: 837'  
 Well Use: Municipal  
 Static Level:



Samples Rec'd  
5/19/92 0' to 1055'

Studied By:  
Kathleen M. Massie-Ferch 0' to 1055'

Formations:  
Kirby Lake Member, Horicon Formation, Maquoketa Formation,  
Sinipee Group, Glenwood Formation, Tonti Member,  
Prairie Du Chien Group, Coon Valley Member, Jordan Formation,  
Tunnel City Group, Elk Mound Group, Precambrian

Log Comments:  
The shale is soft. These are intact chips of shale that I doubt could have survived weathering as is (plus the drilling) The majority of sample is shale, rather than clay (It looks like a good shale)

Published: 6/6/95  
Printed: 11/1/95

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Drill Hole Dimensions			Drilling Method		
Diameter	From	To	Method	From	To
36"	0'	95'	Rotary - Air, mud & foam	0'	1055'
19.25"	95'	384'			
15"	384'	1055'			

Grout		
Type	From	To
Concrete	0'	95'
Neat Cement	0'	383'

Open Interval Characteristics			
Diameter	From	To	Opening Type
16"	383'	1055'	Open Hole

Casing & Liner Information				
Diameter	From	To	Casing	Weight
24"	+4'	95'	Steel	63.41ASTMA53B PE
16"	+4'	383'	Steel	62.58 A53B .375wa

	Depths	Graphic	Rock Type Mode	Color Range	Miscellaneous Characteristics	
K.B. Mbr	0		Clay	Red brown	Calcareous. Ltl silt, gy clay. Tr sand, soil, organic material.	
	5		Clay	Red brown	Calcareous. Ltl silt, cnd soil/organics. Tr gravel(Gr/SP), sand.	
	10		No Sample			
	15					
	15'					
HORICON FORM	15		Silt	Dk gy bn	Dolomitic. Much qtz silt, rd bn clay, organic material (fibrous/woody). Ltl sand. Tr gravel(Gr/MP).	
	20		Silt	Dk gy bn	Dolomitic. Much qtz silt, rd bn clay, organic material (fibrous/woody). Ltl sand. Tr gravel(Gr/LP).	
	25					
	30		Clay	Dk gy brown	Dolomitic. Much sand, silt. Ltl gravel (Gr/MP). Tr rd bn clay.	
	35		Clay	Dk gy brown	Dolomitic. Much sand, silt. Ltl gravel (Gr/MP). Tr rd bn clay.	
	40		Clay	Dk gy brown	Dolomitic. Much silt. Ltl sand. Tr gravel(Gr/SP), cnd mat.	
	45		Clay	Dk gy brown	Dolomitic. Much silt. Ltl sand. Tr gravel(Gr/SP), cnd mat.	
	50		Clay	Brown	Dolomitic. Much gravel (Gr/SP, LP), silt. Ltl sand. Tr dk gy sh.	
	35'					
	M&F M		50		Shale	Dark grey
55		Shale	Dark grey		Siliceous. Much dolio silt, cnd mat (esp clay). Few fossil frags. Tr pyrite.	
60						
65		Shale	Dark grey		Siliceous. Much dolio silt, cnd mat (esp clay). Few fossil frags. Tr pyrite.	
65		No Sample				
70						

MAQUOKETA FORMATION	70	Shale	Dark grey	Siliceous. Much dolio silt, cvd mat (esp clay). Few fossil frags. Tr pyrite.
	75	Shale	Dark grey	Siliceous. Much dolio silt, cvd mat (esp clay). Few fossil frags. Tr pyrite.
	80	Shale	Dark grey	Siliceous. Much dolio silt, cvd mat (esp clay). Few fossil frags. Tr pyrite.
	85	Shale	Dark grey	Siliceous. Some harder chips than above. Much dol silt/grains, cvd mat (esp clay). Tr fossil frags, pyrite.
	90	Shale	Dark grey	Siliceous. Some harder chips than above. Much dol silt/grains, cvd mat (esp clay). Tr fossil frags, pyrite.
	95	Shale	Dark grey	Siliceous. Soft. Much dol silt/grains. Ltl cvd mat (esp clay). Tr fossil frags, pyrite.
	100	Shale	Dark grey	Siliceous. Soft. Much dol silt/grains. Tr fossil frags, pyrite, cvd mat.
	105	Shale	Dark grey	Siliceous. Soft. Much dol silt/grains. Tr fossil frags, pyrite, cvd mat.
	110	Shale	Dark grey	Siliceous. Soft. Much dol silt/grains. Tr fossil frags, pyrite, cvd mat.
	115	Shale	Dark grey	Siliceous. Soft. Much dol silt/grains. Ltl cvd clay & gvl (Gr/MP). Tr fossil frags, pyrite.
	120	Shale	Dark grey	Siliceous. Soft. Much dol silt/grains. Few fossil frags. Tr pyrite, cvd mat.
	125	Shale	Dark grey	Siliceous. Soft. Much dol silt/grains. Tr fossil frags, pyrite, cvd mat.
	130	Shale	Dark grey	Siliceous. Soft. Much dol silt/grains. Tr fossil frags, pyrite, cvd mat.
	135	Shale	Dark grey	Siliceous. Soft. Much dol silt/grains. Ltl cvd mat. Tr fossil frags, pyrite.
	SINKIPEE GROUP	140	Shale	Dark grey
145		Shale	Dark grey	Siliceous. Soft. Much dol silt/grains. Tr fossil frags, pyrite, cvd mat.
150		Sh & dolomite	Dk gy & dk bn	Sh: Siliceous. Soft. Much dol silt/grains. Tr fossil frags, pyrite, cvd mat. Dolomite: Tr fossil frags, dk bn sh partings, clear cal xtals, bn speckling.
155		M	Fu/M	Tr fossil frags, dk bn sh partings, clear cal xtals, bn speckling, cvd mat.
160		Dolomite	Dk gy bn	Tr fossil frags, dk bn sh partings, pyrite, bn speckling, dk gy staining, cvd mat (esp soil).
165		M	Fu/M	Tr fossil frags, dk bn sh partings, bn speckling, dk gy staining, pyrite, cvd mat (esp soil).
170		Dolomite	Bn to gy bn	Tr fossil frags, dk bn sh partings, dk gy staining, pyrite, cvd mat (esp soil).
175		M	Fu/M	Tr fossil frags, dk bn sh partings, dk gy staining, pyrite, cvd mat (esp soil).
180		Dolomite	Bn to gy bn	Tr fossil frags, dk bn sh partings, dk gy staining, pyrite, clear cal xtals, bn speckling, cvd mat (esp soil).
185		M	Fu/M	Tr fossil frags, dk bn sh partings, dk gy staining, pyrite, bn speckling, cvd mat (esp soil).
190		Dolomite	Bn to gy bn	Tr fossil frags, dk bn sh partings, dk gy staining, pyrite, bn speckling, clear cal xtals, cvd mat (esp soil & shale), rust.
195		M	Fu/M	Tr fossil frags, dk bn sh partings, dk gy staining, pyrite, bn speckling, clear cal xtals, cvd mat (esp soil & shale), rust.
200		Dolomite	Bn to gy bn	Tr fossil frags, dk bn sh partings, dk gy staining, pyrite, bn speckling, clear cal xtals, cvd mat (esp soil & shale), rust.
205		M	Fu/M	Tr fossil frags, dk bn sh partings, dk gy staining, pyrite, bn speckling, cvd shale, rust.
210		Dolomite	Grey brown	Tr fossil frags, dk bn sh partings, dk gy staining, pyrite, bn speckling, clear cal xtals, cvd shale, rust.
215		M	Fu/M	Tr fossil frags, dk bn sh partings, dk gy staining, pyrite, bn speckling, clear cal xtals, cvd shale, rust.
220		Dolomite	Grey brown	Tr fossil frags, dk bn sh partings, dk gy staining, pyrite, bn speckling, cvd shale, rust.
225		M	Fu/M	Tr fossil frags, dk bn sh partings, dk gy staining, pyrite, bn speckling, cvd shale, rust.
230		Dolomite	Grey brown	Tr fossil frags, dk bn sh partings, dk gy staining, pyrite, bn speckling, clear cal xtals, cvd shale, rust.
235		M	Fu/M	Tr fossil frags, dk bn sh partings, dk gy staining, pyrite, bn speckling, clear cal xtals, cvd shale, rust.
240		Dolomite	Grey brown	Tr fossil frags, dk bn sh partings, dk gy staining, pyrite, bn speckling, clear cal xtals, cvd shale, rust.
245		M	Fu/M	Few bk fossil frags (conc). Tr dk bn sh partings, dk gy staining, pyrite, bn speckling, clear cal xtals, cvd shale, rust.
250		Dolomite	Grey brown	Many bk fossil frags (conc). Tr dk bn sh partings, dk gy staining, pyrite, cvd shale, rust.
255		M	Fu/M	

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255 260 260 265 265 270 270 275 275 280 280 285 285 290 290 295 295 300 300 305 305 310 310 315 315 320 320 325 325 330 330 335 335 340 340 345 345 350 350 355 355 360 360 365 365 215' 370 370 375 375 13' 380 380 383 383 385 385 390 390 395 395 400 400 405 405 32' 410 410 415 415 420 420 425 425 430 430 435		Dolomite	Grey brown	Few bk fossil frags(ooac). Tr dk ba sh partings, dk gy staining, pyrite, cvd shale, rust.
		M	Fu/M	
		Dolomite	Grey brown	Few bk fossil frags(ooac). Tr dk ba sh partings, dk gy staining, pyrite, dk gy sh matrix, cvd shale, rust.
		M	Fu/M	
		Dolomite	Grey brown	Few bk fossil frags(ooac). Tr dk ba sh partings, dk gy staining, pyrite, dk gy sh matrix, cvd shale, rust.
		M	Fu/M	
		Dolomite	Grey brown	Few bk fossil frags(ooac). Tr dk ba sh partings, dk gy staining, pyrite, cvd shale, rust.
		M	Fu/M	
		Dolomite	Grey brown	Few bk fossil frags(ooac). Tr dk ba sh partings, dk gy staining, pyrite, cvd shale, rust.
		M	Fu/M	
		Dolomite	Brown	Lil cvd shale/clay. Tr bk fossil frags, dk ba sh partings, dk gy staining, pyrite, qtz stals.
		M	Fu/M	
		Dolomite	Brown	Lil cvd shale/clay. Tr bk fossil frags, dk ba sh partings, dk gy staining, pyrite, dk gn gy sh matrix.
		M	Fu/M	
		Dolomite	Brown	Lil cvd shale/clay. Tr bk fossil frags, dk ba sh partings, dk gy staining, pyrite, dk gn gy sh matrix.
		M	Fu/M	
		Dolomite	Grey brown	Lil cvd shale/clay. Tr bk fossil frags, dk ba sh partings, dk gy staining, pyrite, dk gy sh matrix.
		M	Fu/M	
		Dolomite	Grey brown	Lil gn gy sh matrix. Tr bk fossil frags, dk ba sh partings, dk gy staining, pyrite, cvd sh/clay.
		M	Fu/M	
		Dolomite	Dk gy to gn gy	Much gn gy sh/sh matrix. Many bk fossil frags. Tr dk ba sh partings, dk gy staining, pyrite, cvd sh/clay.
		M	Fu/M	
		Dolomite	Grey brown	Tr gn gy sh/sh matrix, bk fossil frags, dk ba sh partings, dk gy staining, pyrite, cvd sh/clay.
		M	Fu/M	
		Dolomite	Grey brown	Tr gn gy sh/sh matrix, bk fossil frags, dk ba sh partings, dk gy staining, pyrite, cvd sh/clay.
		M	Fu/M	
		Dolomite	Grey brown	Tr gn gy sh/sh matrix, bk fossil frags, dk ba sh partings, dk gy staining, pyrite, cvd sh/clay.
		M	Fu/M	
		Dolomite	Grey brown	Lil gn gy sh/sh matrix. Tr bk fossil frags, dk ba sh partings, dk gy staining, pyrite, cvd sh/clay.
		M	Fu/M	
		Dolomite	Grey brown	Lil gn gy sh/sh matrix. Few ooac bk fossil frags. Tr dk ba sh partings, dk gy staining, pyrite, cvd sh/clay.
		M	Fu/M	
		Dolomite	Grey brown	Few ooac bk fossil frags. Tr gn gy sh/sh matrix, dk ba sh partings, dk gy staining, pyrite, cvd sh/clay.
		M	Fu/M	
		Dolomite	Grey brown	Few ooac bk fossil frags. Tr gn gy sh/sh matrix, dk ba sh partings, dk gy staining, pyrite, cvd sh/clay.
		M	Fu/M	
		Dolomite	Gy to gy bn	Tr ooac bk fossil frags, gn gy sh/sh matrix, dk ba sh partings, pyrite, cvd sh/clay. Lil dk gy staining.
		M	Fu/M	
		Dolomite	Gy to gy bn	Tr ooac bk fossil frags, gn gy sh/sh matrix, dk ba sh partings, dk gy staining, pyrite, cvd mat.
		M	Fu/M	
		Dolomite	Gy to gy bn	Tr ooac bk fossil frags, gn gy sh/sh matrix, dk ba sh partings, dk gy staining, pyrite, ooac floating qtz sand. Lil cvd mat.
		M	Fu/M	
		Dolomite	Gy to gy bn	Tr bk fossil frags, gn gy sh/sh matrix, dk ba sh partings, dk gy staining, pyrite, ooac floating qtz sand, dolie oemtd ss, pyr oemtd ss. Lil free qtz sand, cvd mat.
		M	Fu/M	
		Dolomite	Gy to gy bn	Tr bk fossil frags, gn gy sh/sh matrix, dk ba sh partings, dk gy staining, pyrite, ooac floating qtz sand, dolie oemtd ss, pyr oemtd ss. Much free qtz sand, cvd mat.
M	Fu/M			
Sandstone	Gy bn	Subrd. Much P to F dolie oem, dol, frosting, silt, cvd mat. Tr pyrite, mafic incl, wh sh, gn gy sh.		
M	Vfu/VC			
Sandstone	Gy bn	Subrd. Much P to F dolie oem, dol, frosting, silt, cvd mat. Tr pyrite, mafic incl, wh sh, gn gy sh. Few sec qtz growths.		
M	Vfu/VC			
Sandstone	Gy bn	Subrd. Much P to F dolie oem, dol, frosting, silt, cvd mat. Tr pyrite, mafic incl, wh sh, gn gy sh, Vfu-glauc.		
M	Vfu/VC			
Sandstone	Ll gy bn	Few sec qtz growths.		
M	Vfu/VC			
Sandstone	Ll gy bn	Subng to subrd. Tr G silcs oem, pyrite, mafic incl, wh sh, qtz silt, cvd mat. Many sec qtz growths. Much frosting, rust.		
M	Vfu/VC			
Sandstone	Ll gy bn	Subng to subrd. Tr G silcs oem, pyrite, mafic incl, wh sh, qtz silt, cvd mat. Many sec qtz growths. Much frosting, rust.		
M	Vfu/VC			
Sandstone	Ll gy bn	Subng to subrd. Tr G silcs oem, qtz silt. Tr G pyrite oem, mafic incl, wh sh, rust, cvd mat. Many sec qtz growths. Much frosting.		
M	Vfu/VC			
Dolomite	Ll bn gy	Much VG silcs oemtd ss, floating/free qtz sand. Tr oolitic chert (wh & or), immature oolites, dk ba sh partings, pl gn sh, mass glauc, drusy qtz, pyrite, rust.		
M	Fu/M			
Dolomite	Ll bn gy	Much G silcs oemtd ss, floating/free qtz sand. Tr oolitic chert (wh & or), immature oolites, dk ba sh partings, pl gn sh, mass glauc, drusy qtz, pyrite.		
M	Fu/M			
Dolomite	Ll bn gy	Much G silcs oemtd ss, floating/free qtz sand. Tr wh oolitic chert, drusy qtz, pyrite, gn gy sh, dk ba sh partings.		
M	Fu/M			
Sandstone	Ll gy	Subrd to rd. Lil G silcs oem, qtz silt. Much dolomite, frosting. Few sec qtz growths. Tr wh oolitic chert, drusy qtz, pyrite, gn gy sh, mafic incl, rust.		
M	Vfu/VC			

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Depth (ft)	Stratigraphic Unit	Lithology	Notes
435	Sandstone	Lt gy	Subang to md. Lt G siliceous, qtz silt. Much dolomite, frosting. Few sec qtz growths. Tr mass glauc, wh oolitic chert, drusy qtz, pyrite, en gy sh, mafic incl, rust.
440	Fa/M	Vfa/VC	
440	Sandstone	Lt gy	Subang to wrad. Lt G siliceous. Much dolomite, frosting. Few sec qtz growths. Tr qtz silt, wh chert, drusy qtz, pyrite, en gy sh, mafic incl, rust.
445	M/C	Vfa/VC	
445	Sandstone	Lt gy	Subang to wrad. Lt G siliceous. Much dolomite, frosting. Few sec qtz growths. Tr qtz silt, wh chert, drusy qtz, pyrite, en gy sh, mafic incl, rust.
450	M/C	Vfa/VC	
450	Sandstone	Lt gy	Subang to wrad. Lt G siliceous. Much dolomite, frosting, wh chert (some oolitic). Few sec qtz growths. Tr mass glauc, qtz silt, drusy qtz, pyrite, en gy sh, mafic incl, rust.
455	M/C	Vfa/VC	
455	Dolomite	Lt gy	Much floating/froo qtz sand. Lt G siliceous, wh chert (some w/ floating dol xtals, tr oolitic). Tr mass glauc, drusy qtz, pyrite, en gy sh, rust.
460	M	Fa/M	
460	Dolomite	Lt gy	Much floating/froo qtz sand. Lt G siliceous, wh chert (some w/ floating dol xtals, tr oolitic). Tr mass glauc, drusy qtz, pyrite, en gy sh, dk, gy sh partings, rust.
465	M	Fa/M	
465	Dolomite	Lt gy	Much floating/froo qtz sand. Tr G siliceous, wh chert (some w/ floating dol xtals, oolitic), mass glauc, drusy qtz, pyrite, en gy sh, rust.
470	M	Fa/M	
470	Dolomite	Lt ba gy	Much froo qtz sand. Tr floating qtz sand, wh chert (some w/ floating dol xtals), silt/Vfa-glauc, pyrite, en gy sh, ba sh partings, rust.
475	M	Fa/M	
475	Dolomite	Lt ba gy	Much froo qtz sand. Tr floating qtz sand, wh chert (some w/ floating dol xtals), silt/Vfa-glauc, pyrite, en gy sh, rust.
480	M	Fa/M	
480	Dolomite	Lt ba gy	Much froo qtz sand. Tr floating qtz sand, wh chert (some w/ floating dol xtals), silt/Vfa-glauc, pyrite, en gy sh, ba sh partings, rust.
485	M	Fa/M	
485	Dolomite	Lt ba gy	Slightly sugary. Tr froo qtz sand, silt/Vfa-glauc, pyrite, en gy sh, ba sh partings, rust.
490	M	Fa/M	
490	Dolomite	Lt ba gy	Slightly sugary. Tr rd ba hem sh/mottling, froo qtz sand, silt/Vfa-glauc, pyrite, en gy sh, ba sh partings, rust.
495	M	Fa/M	
495	Dolomite	Lt ba gy & dk rd ba	Much rd ba hem sh/mottling. Tr floating qtz sand, silt/Vfa-glauc, pyrite, en gy sh, rust.
500	M	Fa/M	
500	Dolomite	Lt ba gy	Tr rd ba hem sh/mottling, floating qtz sand, silt/Vfa-glauc, pyrite, en gy sh, clear dol xtals, rust.
505	M	Fa/M	
505	Dolomite	V pl ba	Much floating qtz sand (some chips are a ss). Tr wh chert, pyrite, clear dol xtals, rust.
510	M	Fa/M	
510	Dolomite	V pl ba	Much floating qtz sand (some chips are a ss). Tr wh chert, pyrite, clear dol xtals, neat cement. Lt rust.
515	M	Fa/M	
515	Dolomite	V pl ba	Lt floating qtz sand (some chips are a ss). Tr wh chert, pyrite, clear dol xtals, neat cement, rust.
520	M	Fa/M	
520	Dolomite	V pl ba	Much floating qtz sand (some chips are a ss), rust. Tr wh chert, pyrite, clear dol xtals.
525	M	Fa/M	
525	Dolomite	V pl ba	Much floating qtz sand (some chips are a ss), rust. Tr wh chert, pyrite, clear dol xtals.
530	M	Fa/M	
530	Dolomite	Lt ba gy	Much floating qtz sand (some chips are a ss). Tr wh chert, pyrite, clear dol xtals, mass/silt-glauc, rust.
535	M	Fa/M	
535	Dolomite	Lt ba gy	Much floating qtz sand (some chips are a ss, more than above). Tr wh chert, pyrite, clear dol xtals, mass/silt-glauc, pk hem staining, rust.
540	M	Fa/M	
540	Sandstone	Lt gy	Subang to md. Lt G to F doliceous. Much frosting. Many sec qtz growths. Tr wh chert, pyrite, wh sh, pl ga sh, mafic incl, rust.
545	M/C	Vfa/VC	
545	Sandstone	Lt grey	Subang to md. Lt G to F doliceous. Much frosting. Many sec qtz growths. Tr wh sh, pl ga to ga sh, mafic incl, pyrite, qtz silt, rust.
550	M/C	Vfa/VC	
550	Sandstone	Lt grey	Subang to md. Much G to F doliceous, frosting. Many sec qtz growths. Tr wh sh, pl ga to ga sh, mafic incl, pyrite, qtz silt, rust.
555	M/C	Vfa/VC	
555	Sandstone	Lt gy ba	Subang to md. Much F to G doliceous, frosting. Many sec qtz growths. Tr mass/silt-glauc, wh sh, pl ga to ga sh, mafic incl, pyrite, qtz silt, Lt rust.
560	M/C	Vfa/VC	
560	Sandstone	Lt gy ba	Subang to subang. Much F to G doliceous, frosting. Many sec qtz growths. Tr mass/Vfa-glauc, wh sh, pl ga to ga sh, mafic incl, pyrite, qtz silt, rust. Lt neat cem.
565	Fa/M	Vfa/VC	
565	Sandstone	Pink grey	Subang to subang. Much F to G doliceous, frosting. Many sec qtz growths. Tr mass/Vfa-glauc, wh chert, pk hem staining, wh sh, pl ga to ga sh, mafic incl, pyrite, qtz silt, neat cem. Lt rust.
570	Fa/M	Vfa/VC	
570	Sandstone	Pink grey	Ang to subang. Much F to G doliceous, frosting. Many sec qtz growths. Tr mass/Vfa-glauc, wh chert, pk hem staining, wh sh, pl ga to ga sh, mafic incl, pyrite, qtz silt, neat cem. Lt rust.
575	Vfa/Fa	Vfa/VC	
575	Sandstone	Pink grey	Ang to subang. Much G doliceous, frosting. Many sec qtz growths. Tr silt/Vfa-glauc, pk hem staining, wh sh, pl ga to ga sh, mafic incl, pyrite, qtz silt, neat cem, rust.
580	Vfa/Fa	Vfa/VC	
580	Sandstone	Pink grey	Ang to subang. Much VG doliceous, frosting. Many sec qtz growths. Tr silt/Vfa-glauc, qtz silt, pk hem staining, wh sh, pl ga to ga sh, mafic incl, pyrite, neat cem, rust.
585	Vfa/Fa	Vfa/VC	
585	Sandstone	Pink grey	Ang to subang. Much VG doliceous (more than above), frosting. Many sec qtz growths. Lt silt/Vfa-glauc, qtz silt. Tr rd ba hem sh, pk hem staining, wh sh, pl ga to ga sh, mafic incl, pyrite, neat cem, rust.
590	Vfa/Fa	Vfa/VC	
590	Sandstone	Pk gy & k en gy	Ang to subang. Much VG doliceous (more than above), frosting. Many sec qtz growths. Lt silt/Vfa-glauc, qtz silt. Tr rd ba hem sh, pk hem staining, wh sh, pl ga to ga sh, mafic incl, pyrite, wh fossil frags, Vfa-zircon, neat cem, rust.
595	Vfa/Fa	Vfa/VC	
595	Sandstone	Lt ba gy	Ang to subang. Much VG doliceous, frosting. Many sec qtz growths. Tr silt/Vfa-glauc, qtz silt, rd ba hem sh, pk hem staining, wh sh, pl ga to ga sh, mafic incl, pyrite, Vfa-zircon, neat cem, rust.
600	Fa/M	Vfa/VC	
600	Sandstone	Lt ba gy	Ang to subang. Much VG doliceous (more than above), frosting. Many sec qtz growths. Lt silt/Vfa-glauc, qtz silt, rd ba hem sh, pk hem staining, wh sh, pl ga to ga sh, mafic incl, pyrite, Vfa-zircon, mica, rust.
605	Vfa/Fa	Vfa/VC	
605	Sandstone	Lt rd gy	Ang to subang. Much VG doliceous, frosting. Many sec qtz growths. Lt silt/Vfa-glauc. Tr qtz silt, rd ba hem sh, pk hem staining, wh sh, pl ga to ga sh, mafic incl, pyrite, mica, rust.
610	Vfa/Fa	Vfa/VC	
610	Sandstone	Brown grey	Ang to subang. Much VG doliceous, frosting. Many sec qtz growths. Lt dk gy staining (from pyrite). Tr ba sandy dol, silt/Vfa-glauc, qtz silt, dk gy sh matrix, wh sh, bk fossil frags, mafic incl, pyrite, mica, rust.
615	Vfa/Fa	Vfa/VC	

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615	620	Sandstone	Brown grey	Ang to subang. Much VG dolio oem, frosting. Many sec qtz growths. Ltl dk gy staining (from pyrite), ba fossilif sandy dol. Tr silt/Vfn-glauc, qtz silt, dk gy sh matrix, wh sh, bk fossil frags, mafic incl, pyrite, mica, rust.
		Vfn/Fn	Vfn/C	
620	625	Sandstone	Brown grey	Ang to subrad. Much VG dolio oem, frosting. Many sec qtz growths. Ltl dk gy staining (from pyrite), ba sandy dol. Tr silt/Vfn-glauc, qtz silt, dk gy sh matrix, wh sh, bk fossil frags, mafic incl, pyrite, mica, rust.
		Fn	Vfn/C	
625	630	Sandstone	Lt bn gy to gy	Subang to subrad. Much VG dolio oem, frosting. Many sec qtz growths. Ltl dk gy staining (from pyrite), ba sandy dol. Tr silt/Vfn-glauc, qtz silt, dk gy sh matrix, lim, wh sh, fossil molds/frags, mafic incl, pyrite, rust.
		Fn/M	Vfn/VC	
630	635	Sandstone	Pink	Subang to subrad. Much G dolio oem, frosting. Many sec qtz growths. Tr rd bn hem staining, qtz silt, wh sh, fossil molds/frags, mafic incl, pyrite, rust.
		M	Vfn/VC	
635	640	Sandstone	Lt rd bn	Subang to rad. Much VG dolio oem, frosting. Many sec qtz growths. Ltl rd bn hem staining. Tr silt/Vfn-glauc, rd bn hem sh, qtz silt, wh sh, pl gn sh matrix, mafic incl, pyrite, rust.
		M/C	Vfn/VC	
640	645	Sandstone	Lt rd bn	Subang to rad. Much VG dolio oem, frosting. Many sec qtz growths. Ltl rd bn hem staining, sandy dol. Tr silt/Vfn-glauc, rd bn hem sh, qtz silt, wh sh, pl gn sh matrix, mafic incl, pyrite, rust.
		M/C	Vfn/VC	
645	650	Sandstone	Dk gy w/ lt gy	Subang to rad. Much VG dolio oem, frosting. Many sec qtz growths. Ltl dk gy sh matrix/staining (from pyrite). Tr silt/Vfn-glauc, rd bn hem sh, qtz silt, wh sh, pl gn sh matrix, mafic incl, pyrite, fossil frags/molds, rust.
		M	Vfn/VC	
650	655	Sandstone	Dk gy w/ lt gy	Subang to rad. Much VG dolio oem (some chips are a sandy dol), frosting. Many sec qtz growths. Ltl dk gy sh matrix/staining (from pyrite), silt/Vfn-glauc. Tr ba spockeling, qtz silt, wh sh, mafic incl, pyrite, fossil frags/molds, rust.
		M	Vfn/VC	
655	660	Sandstone	Grey	Subang to rad. Much VG dolio oem (some chips are a sandy dol), frosting, silt/Vfn-glauc. Many sec qtz growths. Tr dk gy sh matrix/staining (from pyrite), ba spockeling, qtz silt, wh sh, mafic incl, pyrite, fossil frags/molds, rust.
		Fn/M	Vfn/VC	
660	665	Sandstone	Grey & white	Grey-Subang to rad. Much VG dolio oem (some chips are a sandy dol), frosting, silt/Vfn-glauc. Many sec qtz growths. Tr dk gy sh matrix/staining (from pyrite), ba spockeling, qtz silt, wh sh, mafic incl, pyrite, fossil frags/molds, pl gn sh matrix, rust. White: Subrad to rad. Ltl G dolio oem. Few sec qtz growths. Tr mafic incl, qtz silt.
		Fn/M & M	Vfn/VC	
665	670	Sandstone	White	Subrad to wrnd. Ltl G to F dolio oem. Much frosting, glaucic ss (as above). Many sec qtz growths. Tr qtz silt, wh sh, mafic incl, pyrite.
		M/C	Vfn/VC	
670	675	Sandstone	White	Subrad to wrnd. Ltl G to F dolio oem. Much frosting, glaucic ss (as above). Many sec qtz growths. Tr qtz silt, wh sh, mafic incl, pyrite.
		M/C	Vfn/VC	
675	680	Sandstone	White	Subrad to wrnd. Ltl G to F dolio oem. Much frosting, pl gn silces sh, glaucic ss (as above). Many sec qtz growths. Tr G dolio oem, qtz silt, wh sh, mafic incl, pyrite, ang qtz grains.
		M/C	Vfn/VC	
680	685	Sandstone	White	Subang to rad. Much VG silces oem, frosting, gn gy silces sh, cvd glaucic ss (as above). Many sec qtz growths. Tr G dolio oem, qtz silt, wh sh, mafic incl, pyrite, ang qtz grains, dk bn silces sh.
		Fn/M	Vfn/VC	
685	690	Sandstone	White	Subang to rad. Much VG silces oem, frosting, gn gy to dk gy silces sh. Many sec qtz growths. Ltl cvd glaucic ss. Tr G dolio oem, qtz silt, wh sh, mafic incl, pyrite, ang qtzite gvl(Gr/SP), dk bn silces sh, ba fossil frags(w/sh).
		Fn/M	Vfn/VC	
690	695	Sandstone	White	Subang to rad. Much VG silces oem, frosting, gn gy to dk gy silces sh. Many sec qtz growths. Tr G dolio oem, silt/Vfn-glauc, qtz silt, wh sh, mafic incl, pyrite, ang qtzite gvl(Gr/SP), dk bn silces sh, ba fossil frags(w/sh), cvd glaucic ss.
		Fn/M	Vfn/VC	
695	700	Sandstone	White	Subrad to wrnd. Much VG silces oem, frosting, dk gn gy to dk gy silces sh. Many sec qtz growths. Tr qtz silt, wh sh, mafic incl, pyrite, ang qtzite grains, ba fossil frags(w/sh), rd pyrite ooliths(Fn/C).
		M/C	Vfn/VC	
700	705	Sandstone	White to pk	Subrad to wrnd. Much VG silces oem, frosting, dk gn gy to dk gy silces sh, ang pk qtzite sand/SP. Many sec qtz growths. Ltl VG dolio oem. Tr qtz silt, mafic incl, pyrite, ba fossil frags(w/sh), rd pyrite ooliths(Fn/C).
		M/C	Vfn/VC	
705	710	Sandstone	White & dk gy	Ang to rad. Much VG dolio oem, G silces oem, frosting, dk gn gy to dk gy silces sh, dk gy sh matrix, ang pk qtzite sand/SP. Many sec qtz growths. Tr qtz silt, mafic incl, pyrite, ba fossil frags(w/sh).
		Fn/M	Vfn/VC	
710	715	Sandstone	Pink & dk gy	Ang to wrnd. Much G to VG dolio oem, frosting, sandy dol, dk gy sh matrix (assoc w/ dol). Many sec qtz growths. Ltl dk rd hemic staining (of qtz), pk qtzite sand. Tr rd qtz grains, fossil frags(w/ dol), pyrite, mafic incl, gn gy sh, rust.
		M/C	Vfn/Gr	
715	720	Sandstone	Pink & dk gy	Subang to wrnd. Much G to VG dolio oem, frosting, pk qtzite sand/grains, pk to dk gy sandy dol. Many sec qtz growths. Ltl dk gy sh matrix (w/ dol), rd hemic staining (of grains). Tr G silces oem, clear cal xals, pyrite, gn gy sh, fossil frags(w/ dol), mafic incl, qtz silt.
		M/C	Vfn/Gr	
720	725	Sandstone	Pink	Subang to wrnd. Much G to VG dolio oem, frosting, pk qtzite sand/grains. Many sec qtz growths. Ltl pk to dk gy sandy dol, rd hemic staining (of grains). Tr dk gy sh/sh matrix (w/ dol), pyrite, gn gy sh, fossil frags(w/ dol), mafic incl, qtz silt, rust.
		M/C	Vfn/Gr	
725	730	Sandstone	Pink	Subang to wrnd. Much G to VG dolio oem, frosting, pk qtzite sand/grains. Many sec qtz growths. Ltl pk to dk gy sandy dol, rd hemic staining (of grains), dk gy sh/sh matrix. Tr pyrite, gn gy sh, fossil frags(w/ dol), mafic incl, qtz silt, rust.
		M/C	Vfn/Gr	
730	735	Sandstone	Pink	Subang to wrnd. Much G to VG dolio oem, frosting, pk qtzite sand/SP, qtz/qtzite gvl(Gr/SP). Many sec qtz growths. Ltl pk to dk gy sandy dol, rd hemic staining (of grains). Tr dk gy sh/sh matrix, pyrite, gn gy sh, fossil frags(w/ dol), mafic incl, qtz silt, rust.
		M/C	Vfn/Gr	
735	740	Sandstone	Pink	Subang to wrnd. Much G to VG dolio oem, frosting, pk qtzite sand/SP. Many sec qtz growths. Ltl qtz/qtzite gvl(Gr/SP), pk to dk gy sandy dol, rd hemic staining (of grains). Tr dk gy sh/sh matrix, pyrite, gn gy sh, fossil frags(w/ dol), mafic incl, qtz silt, rust.
		M/C	Vfn/Gr	
740	745	Sandstone	Pink	Subang to wrnd. Much VG dolio oem, frosting, pk qtzite sand/SP. Many sec qtz growths. Ltl qtz/qtzite gvl(Gr/SP), rd hemic staining (of grains). Tr pk to dk gy sandy dol, dk gy sh/sh matrix, pyrite, gn gy sh, fossil frags(w/ dol), mafic incl, qtz silt, rust.
		M/C	Vfn/Gr	
745	750	Sandstone	Pink	Subang to wrnd. Much G dolio oem, frosting, pk qtzite sand/Gr. Many sec qtz growths. Ltl rd hemic staining (of grains). Tr qtz/qtzite grains, pk to dk gy sandy dol, dk gy sh/sh matrix, pyrite, gn gy sh, fossil frags(w/ dol), mafic incl, qtz silt, rust.
		M/C	Vfn/Gr	

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750	Sandstone	Pink	Subang to wind. Much VG dolio ocm, frosting, pk qtzite sand/SP. Many sec qtz growths. Ltl qtz/ztzite gv(Gr/SP), red hemic staining(of grains). Tr pk to dk gy sandy dol, dk gy sh/sh matrix, pyrite, gn gy sh, mafic incl, qtz silt, rust.
755	M/C	Vfn/Gr	
755	Sandstone	Pink	Subang to wind. Much G to VG dolio ocm, frosting, pk qtzite sand/Gr. Many sec qtz growths. Ltl qtz/ztzite gv(Grana), red hemic staining(of grains). Tr dk gy sh/sh matrix, pyrite, gn gy sh, mafic incl, qtz silt, rust.
760	M/C	Vfn/Gr	
760	Sandstone	Pink	Subang to wind. Much G to VG dolio ocm, frosting, pk qtzite sand/Gr. Many sec qtz growths. Ltl qtz/ztzite gv(Grana), red hemic staining(of grains). Tr dk gy sh/sh matrix, pyrite, gn gy sh, mafic incl, qtz silt, rust.
765	M/C	Vfn/Gr	
765	Sandstone	Pink	Subang to wind. Much G to VG dolio ocm, frosting, pk qtzite sand/Gr. Many sec qtz growths. Ltl qtz/ztzite gv(Grana), red hemic staining(of grains). Tr dk gy sh/sh matrix, pyrite, gn gy sh, mafic incl, qtz silt, rust.
770	M/C	Vfn/Gr	
770	Sandstone	Pink	Ang to rad. Much G to VG dolio ocm, frosting, pk qtzite sand/Gr. Many sec qtz growths. Few qtz/ztzite gv(Grana), red hemic staining(of grains). Tr dk gy sh matrix, pyrite, gn gy sh, mafic incl, qtz silt, rust.
775	M/C	Vfn/VC	
775	Sandstone	Pink	Ang to rad. Much G to VG dolio ocm, frosting, pk qtzite sand/Gr. Many sec qtz growths. Few qtz/ztzite gv(Grana), red hemic staining(of grains), gy sh matrix. Tr pyrite, gn gy sh, mafic incl, qtz silt, rust.
780	M/C	Vfn/VC	
780	Sandstone	Pink	Ang to rad. Much G to VG dolio ocm, frosting, pk qtzite sand/SP, qtz/ztzite gv(Gr/SP). Many sec qtz growths. Ltl rd hemic staining(of grains), gy sh matrix, dk gn gy sh. Tr pyrite, bn specketing(on dolio ocm), mafic incl, qtz silt, rust.
785	C/V/C	Vfn/VC	
785	Sandstone	Pink	Ang to rad. Ltl G dolio ocm, rd hemic staining(of grains), rust. Much frosting, pk qtzite sand/Gr. Many sec qtz growths. Tr gy sh matrix, dk gn gy sh, pyrite, qtz/ztzite gv(Grana), mafic incl, qtz silt, Vfn-zircon.
790	M	Vfn/VC	
790	Sandstone	Pink	Ang to rad. Ltl G dolio ocm, rd hemic staining(of grains), rust. Much frosting, pk qtzite sand/Gr. Many sec qtz growths. Tr gy sh matrix, dk gn gy sh, pyrite, qtz/ztzite gv(Grana), mafic incl, qtz silt, Vfn-zircon.
795	M	Vfn/VC	
795	Sandstone	Pink	Ang to rad. Ltl G dolio ocm, rd hemic staining(of grains), rust. Much frosting, pk qtzite sand/Gr. Many sec qtz growths. Tr gy sh matrix, dk gn gy sh, pyrite, qtz/ztzite gv(Grana), mafic incl, qtz silt, Vfn-zircon.
800	M	Vfn/VC	
800	Sandstone	Pink	Ang to rad. Ltl F to G dolio ocm, rd hemic staining(of grains). Much frosting, pk qtzite sand, rust. Many sec qtz growths. Tr gy sh matrix, dk gn gy sh, pyrite, mafic incl, qtz silt, Vfn-zircon.
805	M	Vfn/VC	
805	Sandstone	Pink	Ang to rad. Ltl F to G dolio ocm, rd hemic staining(of grains). Much frosting, pk qtzite sand, rust. Many sec qtz growths. Tr gy sh matrix, dk gn gy sh, pyrite, mafic incl, qtz silt, Vfn-zircon.
810	M	Vfn/VC	
810	Sandstone	Pink	Ang to rad. Ltl F to G dolio ocm, rd hemic staining(of grains), rust. Much frosting, pk qtzite sand, rust. Many sec qtz growths. Tr gy sh matrix, dk gn gy sh, pyrite, mafic incl, qtz silt, Vfn-zircon.
815	M	Vfn/VC	
815	Sandstone	Pink	Ang to rad. Ltl F to G dolio ocm, rd hemic staining(of grains). Much frosting. Many sec qtz growths. Tr gy sh matrix, dk gn gy sh, pyrite, mafic incl, qtz silt, pk qtzite sand, neat cement, rust.
820	M	Vfn/VC	
820	Sandstone	Pink	Ang to rad. Tr F to G dolio ocm, gy sh matrix, dk gn gy sh, pyrite, mafic incl, qtz silt, neat cement. Much frosting. Many sec qtz growths. Ltl rd hemic staining(of grains), pk qtzite sand, rust.
825	M	Vfn/VC	
825	Sandstone	Pink grey	Ang to rad. Tr F to G dolio ocm, gy sh matrix, dk gn gy sh, pyrite, mafic incl, qtz silt, neat cement. Much frosting. Many sec qtz growths. Ltl rd hemic staining(of grains), pk qtzite sand, rust.
830	M	Vfn/VC	
830	Sandstone	Pink	Ang to rad. Tr F to G dolio ocm, gy sh matrix, dk gn gy sh, pyrite, mafic incl, qtz silt. Much frosting. Many sec qtz growths. Ltl rd hemic staining(of grains), pk qtzite sand, rust, neat cement.
835	M	Vfn/VC	
835	Sandstone	Pink	Ang to rad. Tr F to G dolio ocm, gy sh matrix, dk gn gy sh, pyrite, mafic incl, qtz silt. Much frosting. Many sec qtz growths. Ltl rd hemic staining(of grains), pk qtzite sand, rust, neat cement.
840	M	Vfn/VC	
840	Sandstone	Pink grey	Ang to rad. Tr F to G dolio ocm, gy sh matrix, dk gn gy sh, pyrite, mafic incl, qtz silt, neat cement. Much frosting. Many sec qtz growths. Ltl rd hemic staining(of grains), pk qtzite sand, rust.
845	M	Vfn/VC	
845	Sandstone	Grey brown	Subang to rad. Tr F to G dolio ocm, gy sh matrix, pyrite, mafic incl, qtz silt, rd hemic staining(of grains), neat cement. Much frosting, rust. Many sec qtz growths. Ltl pk qtzite sand, dk gy sh.
850	Fu/M	Vfn/VC	
850	Sandstone	Pink grey	Subang to rad. Tr F to G dolio ocm, gy sh matrix, pyrite, mafic incl, qtz silt, rd hemic staining(of grains), dk gy sh, neat cement. Much frosting, rust. Many sec qtz growths. Ltl pk qtzite sand.
855	M	Vfn/VC	
855	Sandstone	Pink grey	Subang to rad. Tr F to G dolio ocm, gy sh matrix, pyrite, mafic incl, qtz silt, rd hemic staining(of grains), dk gy sh, neat cement. Much frosting, rust. Many sec qtz growths. Ltl pk qtzite sand.
860	M	Vfn/VC	
860	Sandstone	Pink grey	Subang to rad. Tr F to G dolio ocm, gy sh matrix, pyrite, mafic incl, qtz silt, rd hemic staining(of grains), dk gy sh, neat cement. Much frosting, rust. Many sec qtz growths. Ltl pk qtzite sand, rust.
865	M	Vfn/VC	
865	Sandstone	Grey brown	Subang to rad. Tr F to G dolio ocm, gy sh matrix, pyrite, mafic incl, qtz silt, rd hemic staining(of grains), neat cement. Much frosting, rust. Many sec qtz growths. Ltl pk qtzite sand, dk gy sh.
870	M	Vfn/VC	
870	Sandstone	Grey brown	Subang to rad. Tr F to G dolio ocm, gy sh matrix, pyrite, mafic incl, qtz silt, rd hemic staining(of grains), dk gy sh, neat cement. Much frosting, rust. Many sec qtz growths. Ltl pk qtzite sand.
875	M	Vfn/VC	
875	Sandstone	Grey brown	Subang to rad. Tr F to G dolio ocm, gy sh matrix, pyrite, mafic incl, qtz silt, rd hemic staining(of grains), pk qtzite sand, dk gy sh, neat cement. Much frosting, rust. Many sec qtz growths.
880	M	Vfn/VC	
880	Sandstone	Lt ba gy	Subang to rad. Tr F to G dolio ocm, gy sh matrix, pyrite, mafic incl, qtz silt, dk gy sh, neat cement. Ltl rd hemic staining(of grains), pk qtzite sand, Much frosting, rust. Many sec qtz growths.
885	M	Vfn/VC	
885	Sandstone	Lt ba gy	Subang to rad. Tr F to G dolio ocm, gy sh matrix, pyrite, mafic incl, qtz silt, dk gy sh, neat cement. Ltl rd hemic staining(of grains), pk qtzite sand, Much frosting, rust. Many sec qtz growths.
890	Fu/M	Vfn/VC	
890	Sandstone	Pink grey	Subang to rad. Tr F to G dolio ocm, gy sh matrix, pyrite, mafic incl, qtz silt, dk gy sh. Ltl rd hemic staining(of grains), pk qtzite sand, neat cement. Much frosting, rust. Many sec qtz growths.
895	Fu/M	Vfn/VC	
895	Sandstone	Pink grey	Subang to rad. Tr F to G dolio ocm, gy sh matrix, pyrite, mafic incl, qtz silt, dk gy sh, neat cement. Ltl rd hemic staining(of grains), pk qtzite sand, Much frosting, rust. Many sec qtz growths.
900	Fu/M	Vfn/VC	
900	Sandstone	Pink	Subang to rad. Tr F to G dolio ocm, gy sh matrix, pyrite, mafic incl, qtz silt, dk gy sh, neat cement. Ltl rd hemic staining(of grains), rust. Much pk qtzite sand, frosting, rust. Many sec qtz growths.
905	M	Vfn/VC	
905	Sandstone	Pink grey	Subang to rad. Tr F to G dolio ocm, gy sh matrix, pyrite, mafic incl, qtz silt, dk gy sh, neat cement. Ltl rd hemic staining(of grains), rust. Much pk qtzite sand, frosting, rust. Many sec qtz growths.
910	Fu/M	Vfn/VC	
910	Sandstone	Grey	Ang to rad. Much G dolio ocm, pk qtzite sand, frosting, neat ocm/contamination. Many sec qtz growths. Ltl rd hemic staining(of grains), pk qtzite sand, Tr gy sh matrix, dk gy sh, mafic incl, qtz silt, pyrite, pyrite coillite(qtz sand cores), rust.
915	M/C	Vfn/VC	

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ELK NO. 10 GROUP	915	Sandstone	Pink	Ang to rad. Tr G dolie oom, gy sh matrix, dk gy sh, mafic incl, qtz silt, pyrite, pyrite ooliths (qtz and oored). Much frosting. Many sec qtz growths. Lt rd hemic staining (of grains), qtzite sand, rust.
	920	Fu/M	Vfu/VC	
	920	Sandstone	Pink grey	Ang to rad. Tr G dolie oom, gy sh matrix, dk gy sh, mafic incl, qtz silt, pyrite, pyrite ooliths (qtz and oored), neat cement. Much frosting, rust. Many sec qtz growths. Lt rd hemic staining (of grains), pk qtzite sand.
	925	M	Vfu/VC	
	925	Sandstone	Pink grey	Ang to rad. Lt G dolie oom, rd hemic staining (of grains), pk qtzite grains. Tr gy sh matrix, gn gy sh, mafic incl, qtz silt, pyrite, pyrite ooliths (qtz and oored), neat cement. Much frosting, rust. Many sec qtz growths.
	930	M	Vfu/VC	
	930	Sandstone	Pink grey	Ang to rad. Tr G dolie oom, gy sh matrix, gn gy sh, mafic incl, qtz silt, pyrite, pyrite ooliths (qtz and oored), neat cement. Much frosting, rust. Many sec qtz growths. Lt rd hemic staining (of grains), pk qtzite sand.
	935	M	Vfu/VC	
	940	Sandstone	Red brown	Ang to rad. Tr G dolie oom, gy sh matrix, rd ba hemic sh, mafic incl, qtz silt, pyrite, neat cement. Much frosting, rust. Many sec qtz growths. Lt rd hemic staining (of grains), pk qtzite sand, gn gy sh (interlayered w/ rd bn).
	940	M	Vfu/VC	
945	Sandstone	Red brown	Ang to rad. Tr G dolie oom, gy sh matrix, dk rd ba hemic sh, mafic incl, qtz silt, pyrite, gn gy sh. Much frosting, rust. Many sec qtz growths. Lt rd hemic staining (of grains), pk qtzite sand.	
945	Fu/M	Vfu/VC		
945	Sandstone	Lt rd bn	Ang to rad. Tr G dolie oom, gy sh matrix, dk rd ba hemic sh, mafic incl, qtz silt, pyrite, gn gy sh, rd hemic staining (of grains). Much frosting, rust. Many sec qtz growths. Lt pk qtzite sand.	
950	Fu/M	Vfu/VC		
950	Sandstone	Lt rd bn	Ang to rad. Tr G dolie oom, gy sh matrix, dk rd ba hemic sh, mafic incl, qtz silt, pyrite, wh sh, rd hemic staining (of grains). Much frosting, rust. Many sec qtz growths. Lt pk qtzite sand, neat cement.	
955	M/C	Vfu/VC		
955	Sandstone	Pink	Ang to rad. Tr G dolie oom, gy sh matrix, pk qtzite sand, mafic incl, qtz silt, pyrite, wh sh, rd hemic staining (of grains), neat cement. Much frosting. Many sec qtz growths. Lt rust.	
960	M/C	Vfu/VC		
960	Sandstone	Pink	Ang to rad. Tr G dolie oom, gy sh matrix, pk qtzite sand, mafic incl, qtz silt, pyrite, wh sh, rd hemic staining (of grains), neat cement. Much frosting, rust. Many sec qtz growths.	
965	Fu/M	Vfu/VC		
965	Sandstone	Lt rd bn	Well sorted. Ang to subang. Much G silcs oom, frosting. Many sec qtz growths. Lt neat oom. Tr pk qtzite sand, pyrite, wh sh, qtz silt.	
970	Fu	Vfu/C		
970	Sandstone	Red yellow	Well sorted. Ang to subang. Tr G silcs oom, pk qtzite sand, pyrite, wh sh, qtz silt. Much frosting, rust. Many sec qtz growths.	
975	Fu	Vfu/C		
975	Sandstone	Pink	G sorting. Ang to subang. Tr G silcs oom, pk qtzite sand, pyrite, wh sh, qtz silt, rust, neat cement. Much frosting. Many sec qtz growths.	
980	Fu/M	Vfu/VC		
980	Sandstone	White	Subang to subrd. Tr G silcs oom, pk qtzite sand, pyrite, wh sh, qtz silt, mafic incl, rust, neat cement.	
985	M	Vfu/VC		
985	Sandstone	Lt pk gy	Much frosting. Many sec qtz growths.	
990	M/C	Vfu/VC		
990	Sandstone	Yellow red	Subang to subrd. Tr G silcs oom, pyrite, wh sh, qtz silt, mafic incl, rust. Much frosting, purple qtzite sand, neat cement. Many sec qtz growths.	
995	M/C	Vfu/VC		
995	Sandstone	Yellow red	Subang to subrd. Tr F silcs oom, pyrite, wh sh, qtz silt, mafic incl, Fu-zircon. Much frosting, rd ba qtzite sand, rust. Many sec qtz growths.	
1000	Sandstone	Pink	Subang to subrd. Tr F silcs oom, wh sh, pyrite, mafic incl, qtz silt. Much frosting. Many sec qtz growths.	
1000	Fu/M	Vfu/VC		
1000	Sandstone	Pink	Subang to subrd. Tr F silcs oom, wh sh, pyrite, mafic incl, qtz silt, Vfu-zircon, neat cement. Much frosting. Many sec qtz growths. Lt qtzite sand, rust.	
1005	Fu/M	Vfu/VC		
1005	Sandstone	Pink	Subang to subrd. Tr F silcs oom, wh sh, pyrite, mafic incl, qtz silt, Vfu-zircon, neat cement. Much frosting. Many sec qtz growths. Lt qtzite sand, rust.	
1009	Fu/M	Vfu/VC		
1009	Sandstone	Red brown	Subrd to rad. Lt P hem oom, rust. Tr rd ba hemic sh, wh sh, pyrite, mafic incl, qtz silt, Vfu-zircon, qtzite sand. Much frosting. Few sec qtz growths.	
1011.5	M/C	Vfu/VC		
1011.5	Quartzite	Weak red	Disaggregated. Ang to subrd. Tr VG silcs oom, bk metallic hemic, sericite, cvd hemic sh, rd sa, rust. Much frosting, qtzite sand. Many sec qtz growths. Lt rd hemic staining. This maybe an ortho-quartzite because of the various qtzite colors.	
1014	M/C	Vfu/VC		
1014	Quartzite	Pink to dk pk	Disaggregated. Ang to subang. Tr VG silcs oom, bk metallic hem, sericite, cvd mat. Much frosting, ang/rd qtzite sand/gvk(Gr/MP). Many sec qtz growths. Lt rd hemic staining. (This is probably an ortho-quartzite because of the wide range of gvl colors (wh to pk to rd to dk purple).	
1017	M/C	Vfu/VC		
1017	Quartzite	Dk purple grey	Disaggregated. Ang to subrd. Tr VG silcs oom, sericite, mica, rd sa. Much frosting, qtz silt (this is almost a sts-qtzite), rust. Lt bk metallic hem.	
1019	Vfu	Vfu/C		
1019	Quartzite	Dk purple grey	Disaggregated. Ang to subrd. Tr VG silcs oom, sericite, mica. Much frosting, qtz silt (this is almost a sts-qtzite). Lt bk metallic hem, rust.	
1025	Vfu	Vfu/C		
1023	Quartzite	Dk purple grey	Disaggregated. Ang to subang. Tr VG silcs oom, mica. Much frosting, qtz silt (almost a sts-qtzite). Lt bk metallic hem, sericite, rust.	
1023	Vfu/Fu	Vfu/C		
1023	No Sample			
1025	No Sample			
PRECAMBRIAN	1025	Quartzite	Dk purple grey	Disaggregated. Ang to subrd. Much VG silcs oom, frosting, qtz silt (this is almost a sts-qtzite), rust. Lt bk metallic hem, sericite, Tr mica.
	1030	Vfu/Fu	Vfu/C	
	1030	Quartzite	Dk purple grey	Disaggregated. Ang to subrd. Much VG silcs oom, frosting, qtz silt (this is almost a sts-qtzite), rust. Lt bk metallic hem, sericite, Tr mica.
	1035	Vfu/Fu	Vfu/C	
	1035	Quartzite	Dk purple grey	Disaggregated. Ang to subang. Tr VG silcs oom, mica. Much frosting, qtz silt (almost a sts-qtzite), sericite. Lt bk metallic hem, rust.
	1034	Vfu/Fu	Vfu/C	
	1034	No Sample		
	1035	No Sample		
	1035	Quartzite	Dk purple grey	Disaggregated. Ang to subrd. Much VG silcs oom, frosting, qtz silt (this is almost a sts-qtzite), rust. Lt bk metallic hem, sericite, Tr mica.
	1040	Vfu	Vfu/C	
1040	Quartzite	Dk purple grey	Disaggregated. Ang to subrd. Much VG silcs oom, frosting, qtz silt (this is almost a sts-qtzite), rust. Lt bk metallic hem, sericite, Tr mica.	
1045	Vfu/Fu	Vfu/C		
1045	Quartzite	Dk purple grey	Disaggregated. Ang to subrd. Lt VG silcs oom, bk metallic hem. Much frosting, qtz silt (this is almost a sts-qtzite), rust. Tr sericite, mica.	
1050	Vfu	Vfu/C		
1050	Quartzite	Dk purple grey	Disaggregated. Ang to subrd. Lt VG silcs oom, bk metallic hem. Much frosting, qtz silt (this is almost a sts-qtzite), rust. Tr sericite, mica.	
44'	1055	Vfu/Fu	Vfu/C	

End Of Log

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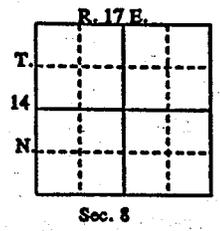
Duplicate Samples

1014		Quartzite	Pink to dk pk	Disaggregated. Ang to subang. Tr VG silcs com, bk metallic hem, sericite, cxd mat. Much frosting, ang/rnd qtzite and/gv(Gr/MP). Many soso qtz growths. Lft rd hemat staining. (This is probably an ortho-quartzite because of the wide range of gvl colors/wh to pk to rd to dk pur, each is a chip of quartzite).
1017		M/C	Vfr/VC	

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Site Name: Fond du Lac City Well #25  
 Owner: City of Fond du Lac  
 Address: 160 S. Macy  
 Fond du Lac, WI 54935  
 Driller(s): Layno-Northwest Co. 6/12/1992  
 Engineer:  
 Location: NE,NE,NW,SE,  
 Sec. 8, T14N, R17E  
 Topo Name: Byron  
 Sample Nos: W38  
 Perm No.: 01064  
 WI-Unique ID#:AY 379

County: FOND DU LAC  
 Completed: 6/12/1992  
 Field Check:  
 Elevation: 845'  
 Well Use: Municipal  
 Static Level: 170'



Pump Test:  
 Pumped at 807 GPM for 24 hrs. with 190 ft. of drawdown.  
 Specific Cap: 4.2 GPM /ft.

Samples Rec'd  
 5/27/92 0' to 1140'

Studied By:  
 Kathleen M. Massio-Ferch 0' to 1140'

Formations:  
 Horicon Formation, Maquoketa Formation, Sinipee Group,  
 Glenwood Formation, Tonti Member, Readstown Member,  
 Prairie Du Chien Group, Jordaa Formation, Tunnel City Group,  
 Elk Mound Group, Precambrian

Log Comments:  
 Identification of the interval 115-144 feet as in-place Maquoketa Formation is questionable.

Published: 6/6/95  
 Printed: 11/1/95

Drill Hole Dimensions			Drilling Method		
Diameter	From	To	Method	From	To
36"	0'	89'	Rotary - Air, mud & foam	0'	1150'
19.5"	89'	375'	Grout		
15"	375'	1135'	Type	From	To
			Concrete	0'	89'
			Neat Cement	0'	373'

Open Interval Characteristics			
Diameter	From	To	Opening Type
16"	373'	1150'	Open Hole

Casing & Liner Information				
Diameter	From	To	Casing	Weight
24"	+4'	89'	Steel	63.41ASTMA53B PE
16"	+4'	373'	Steel	62.58 A53B .375wa

Depths	Graphic	Rock Type Mode	Color Range	Miscellaneous Characteristics
0		Clay	Brown	Dolomitic. Much silt. Ltl gravel(Gr/LP), sand.
5		---	---	---
5		Clay	Brown	Dolomitic. Much silt. Ltl gravel(Gr/MP), sand.
10		---	---	---
10		Clay	Brown	Dolomitic. Much silt. Ltl gravel(Gr/MP), sand, gy bn clay.
15		---	---	---
15		Clay	Grey brown	Limy. Much silt. Ltl gravel(Gr/MP), sand.
20		---	---	---
20		Clay	Grey brown	Limy. Much silt. Ltl gravel(Gr/MP), sand.
25		---	---	---
25		Clay	Grey brown	Limy. Much silt. Tr sand.
30		---	---	---
30		Clay	Grey brown	Limy. Much silt. Tr sand.
35		---	---	---
35		Clay	Grey brown	Limy. Much silt. Tr sand.
40		---	---	---
40		Clay	Grey brown	Limy. Much silt. Tr sand.
45		---	---	---
45		Clay	Grey brown	Limy. Much silt. Ltl ovd soil. Tr sand.
50		---	---	---
50	Clay	Grey brown	Limy. Much silt. Tr sand.	
55	---	---	---	
55	Clay	Grey brown	Limy. Much silt. Tr sand.	
60	---	---	---	
60	Clay	Grey brown	Limy. Much silt. Ltl sand.	
65	---	---	---	
65	Clay	Grey brown	Limy. Much sand, silt. Tr grav.	
70	---	---	---	

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DEPTH (ft)	FORMATION	LITHOLOGY	COLOR	DESCRIPTION
70	HORIZON FROMATION	Clay	Grey brown	Limy. Much silt. Ltl sand.
75		Clay	Grey brown	Limy. Much silt. Ltl sand. Tr gravel(Gr/SP).
80		Clay	Grey brown	Limy. Much sand, silt. Tr gravel(Gr/MP), cvd soil.
85		Clay	Grey brown	Limy. Much sand, silt. Tr cvd soil.
90		Sand	Mxd grey brown	Composition is main ang rock frags, esp carbonates. Much rust. Ltl silt, clay. Trace grans.
95		CVC	Vfn/VC	Composition is main ang rock frags, esp carbonates. Much rust. Ltl silt, clay. Trace grans.
100		Gravel	Mxd grey brown	Dolomite, granite, gabbro, chert, trap. Much sand, contamination (mostly grass and straw). Ltl silt, clay.
105		Grans	Gr/SP	Dolomite, granite, gabbro, chert, qtzite, ss, trap. Much sand, contamination (mostly grass and straw). Ltl silt, clay.
110		Gravel	Mxd grey brown	Dolomite, granite, gabbro, chert, qtzite, ss, trap. Much sand. Ltl silt, clay, contamination (mostly grass and straw).
115		Grans	Gr/SP	Dolomite, granite, gabbro, chert, qtz, trap. Much sand, silt, clay, dk gy Maquoketa shalo.
120	MAQUOKETA	Dolomite	Lt gy bn	Tr pyrite, floating qtz sand, dk gy staining, dk bn sh partings, fossil frags, rust, cvd mat.
125		M	Fa/M	Driller reports grey clay.
130		Clay	Grey brown	Limy. Much sand, silt, Maquoketa shalo. Tr gravel(Gr/SP), cvd soil, contamination.
135		Clay & silt	Grey brown	Limy. Much sand. Tr gravel(Gr/SP), Maquoketa shalo, cvd soil, contamination.
140		Clay & silt	Grey brown	Limy. Much sand. Ltl cvd soil. Tr granules, Maquoketa shalo, contamination.
144		Dolomite	Grey brown	Much dk gy sh. Ltl cvd mat. Tr fossil frags, wh chert, pyrite, v dk bn sh partings.
147		M	Fa/M	Ltl cvd mat. Tr fossil frags, pyrite, v dk bn sh partings, bn speckeling.
150		Dolomite	Gv bn to dk gy bn	Ltl cvd mat/contamin (esp grass/straw). Tr fossil frags, pyrite, v dk bn sh partings, bn speckeling.
155		M	Fa/M	Ltl cvd mat/contamin (esp grass/straw). Tr fossil frags, pyrite, v dk bn sh partings, bn speckeling.
160		Dolomite	Gv bn	Tr fossil frags, pyrite, v dk bn sh partings, bn speckeling, cvd mat/contam.
165	SINKIPEE GROUP	M	Fa/M	Driller reports brown limestone.
170		Dolomite	Brown	Much cvd material. Tr fossil frags, pyrite, v dk bn sh partings, bn speckeling.
175		M	Fa/M	Ltl cvd material. Tr fossil frags, pyrite, v dk bn sh partings, bn speckeling.
180		Dolomite	Brown	Much cvd material. Tr fossil frags, pyrite, v dk bn sh partings, bn speckeling.
185		M	Fa/M	Much cvd material. Tr fossil frags, pyrite, v dk bn sh partings, wh chert.
190		Dolomite	Brown	Much cvd material. Tr fossil frags, pyrite, dk bn sh partings.
195		M	Fa/M	Ltl cvd material. Tr fossil frags, pyrite, dk bn sh partings.
200		Dolomite	Brown	Ltl cvd material. Tr fossil frags, pyrite.
205		M	Fa/M	Ltl cvd material. Tr fossil frags, pyrite.
210		Dolomite	Brown	Ltl cvd material. Tr fossil frags, pyrite.
215	M	Fa/M	Tr fossil frags, pyrite, bn sh partings, cvd material.	
220	Dolomite	Brown	Few fossil frags. Tr pyrite, bn sh partings, cvd material.	
225	M	Fa/M	Much cvd material. Tr fossil frags, pyrite, bn sh partings.	
230	Dolomite	Grey brown	Tr fossil frags, pyrite, bn sh partings, cvd material.	
235	M	Fa/M	Tr fossil frags, pyrite, bn sh partings, cvd material.	
240	Dolomite	Grey brown	Few fossil frags/molds. Tr pyrite, bn sh partings, cvd material.	
245	M	Fa/M	Tr fossil frags/molds, pyrite, bn sh partings, cvd material.	
250	Dolomite	Grey brown	Tr fossil frags/molds, pyrite, bn sh partings, cvd material.	

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DEPTH (ft)	UNIT	LITHOLOGY	DESCRIPTION
250	Dolomite	Grey brown	Tr fossil frags/molds, pyrite, bn sh partings, ovd material.
255	M	Fa/M	
255	Dolomite	Grey brown	Tr fossil frags/molds, pyrite, bn sh partings, gn gy sh, ovd material.
260	M	Fa/M	
260	Dolomite	Grey brown	Tr fossil frags/molds, pyrite, bn sh partings, gn gy sh, ovd material.
265	M	Fa/M	
265	Dolomite	Grey brown	Few fossil frags/molds. Tr pyrite, bn sh partings, gn gy sh, ovd material.
270	M	Fa/M	
270	Dolomite	Grey brown	Few fossil frags/molds. Tr pyrite, bn sh partings, gn gy sh, dk gy staining, ovd material.
275	M	Fa/M	
275	Dolomite	Grey brown	Few fossil frags/molds. Tr pyrite, bn sh partings, gn gy sh, dk gy staining, ovd material.
280	M	Fa/M	
280	Dolomite	Grey brown	Few fossil frags/molds. Tr pyrite, bn sh partings, gn gy sh, dk gy staining, ovd material.
285	M	Fa/M	
285	Dolomite	Gy bn to bn	Ltl gn gy sh. Tr fossil frags/molds, pyrite, bn sh partings, dk gy staining, ovd material.
290	M	Fa/M	
290	Dolomite	Gy bn to bn	Tr gn gy sh, fossil frags/molds, pyrite, bn sh partings, dk gy staining, ovd material.
295	M	Fa/M	
295	Dolomite	Gy bn to bn	Tr gn gy sh, fossil frags/molds, pyrite, bn sh partings, dk gy staining, ovd material.
300	M	Fa/M	
300	Dolomite	Dark grey	Many fossil frags/molds. Ltl gn gy sh (most as matrix). Tr pyrite, bn sh partings, ovd material.
305	M	Fa/M	
305	Dolomite	Dark grey	Many fossil frags/molds. Ltl gn gy sh (most as matrix). Tr pyrite, bn sh partings, ovd material.
310	M	Fa/M	
310	Dolomite	Dark grey	Many fossil frags/molds. Ltl gn gy sh (most as matrix). Tr pyrite, bn sh partings, ovd material.
315	M	Fa/M	
315	Dolomite	Grey brown	Tr fossil frags/molds, gn gy sh matrix, pyrite, dk bn sh partings.
320	M	Fa/M	
320	Dolomite	Grey brown	Tr fossil frags/molds, gn gy sh matrix, pyrite, dk bn sh partings.
325	M	Fa/M	
325	Dolomite	Grey brown	Tr fossil frags/molds, gn gy sh matrix, pyrite, dk bn sh partings.
330	M	Fa/M	
330	Dolomite	Grey brown	Tr fossil frags/molds, gn gy sh matrix, pyrite, dk bn sh partings, ovd material.
335	M	Fa/M	
335	Dolomite	Grey brown	Tr fossil frags/molds, gn gy sh matrix, pyrite, dk bn sh partings, ovd material.
340	M	Fa/M	
340	Dolomite	Grey brown	Tr fossil frags/molds, gn gy sh matrix, pyrite, dk bn sh partings, ovd material.
345	M	Fa/M	
345	Dolomite	Gy bn to dk gy	Tr fossil frags/molds, gy sh, pyrite, dk bn gy sh partings, bn speckling, ovd material.
350	M	Fa/M	
350	Dolomite	Gy bn to dk gy	Tr fossil frags/molds, gy sh, pyrite, dk bn gy sh partings, bn speckling, ovd material.
355	M	Fa/M	
355	Dolomite	Dark gy bn	Ltl conc floating qtz sand. Few fossil frags/molds. Tr gy sh, pyrite, dk bn gy sh partings, bn speckling, VG pyrite cement, G dolie cement, gn gy pyrite sh, clear calcite xtls, ovd mat.
360	M	Fa/M	
360	Dolomite	Dk gy bn	Few fossil frags/molds. Tr conc floating qtz sand, VG pyrite cement, gn gy sh, pyrite, gn gy pyrite sh, bn speckling, clear calcite, free qtz sand, ovd mat.
365	M	Fa/M	
365	Sandstone	Light grey	Subrad to wrnd. Tr VG pyrite cem, G silcs cem, G dolie cem, pyrite inclusions, mafic inclusions, qtz silt. Much frosting. Ltl dolomite, neat cement. Few sec qtz growths.
370	M	Vfa/VC	
370	Sandstone	Light grey	Subrad to wrnd. Tr VG pyrite cem, G silcs cem, G dolie cem, pyrite inclusions, mafic inclusions, qtz silt, ovd dol. Much frosting. Ltl neat cement. Few sec qtz growths.
375	M	Vfa/VC	
375	Sandstone	Light bn gy	Subrad to wrnd. Ltl G silcs cem. Tr VG pyrite cem, G dolie cem, pyrite inclusions, mafic inclusions, qtz silt, ovd dol. Much frosting, neat cement. Few sec qtz growths.
380	M/C	Vfa/VC	
380	Sandstone	Light bn gy	Subrad to wrnd. Tr G silcs cem, VG pyrite cem, pyrite inclusions, mafic inclusions, qtz silt, ovd dol. Much frosting. Ltl neat cement. Few sec qtz growths.
385	M	Vfa/VC	
385	Sandstone	Light bn gy	Subrad to wrnd. Ltl G silcs cem. Tr VG pyrite cem, pyrite inclusions, mafic inclusions, qtz silt, ovd dol. Much frosting, neat cement. Few sec qtz growths.
390	M	Vfa/VC	
390	Sandstone	Pink	Subrad to wrnd. Much G silcs cem, frosting. Tr VG pyrite cem, mafic inclusions, qtz silt. Ltl neat cement. Few sec qtz growths.
395	M	Vfa/VC	
395	Sandstone	Pink white	Subrad to wrnd. Much G silcs cem, frosting. Tr VG pyrite cem, VG calcite cem, mafic inclusions, qtz silt, neat cement. Few sec qtz growths.
400	M/C	Vfa/VC	
400	Sandstone	Lt grey	Subrad to wrnd. Much VG silcs cem (more than above), k gy silcs sh, frosting. Many sec qtz growths. Tr VG pyrite cem, dk bn sh partings (w/ sh fossil remains?), mafic inclusions, qtz silt.
405	M/C	Vfa/VC	
405	Sandstone	Lt grey	Subrad to wrnd. Much VG silcs cem, k gy silcs sh, frosting. Many sec qtz growths. Tr VG pyrite cem, dk bn sh partings (w/ sh fossil remains?), mafic inclusions, qtz silt, qtz grains.
410	M/C	Vfa/VC	
410	Shale & dol	Ga gy & k bn gy	Sh: Silcs. Tr dk bn sh prtgs (fos remains?), fltg qtz sand, pyrite, mass-glass. Dol: Ltl pk chert (tr im oolites). Tr fltg qtz sand, im oolites, free qtz sand, silcs cement as Sh. dol sand as are interlayered.
415	M	Fa/M	
415	Dolomite	Pk gy to k bn gy	Ltl floating qtz sand. Tr wh chert, pl gn sh, free qtz sand, wh silcs cement as, ovd mat.
420	M	Fa/M	
420	Dolomite	Pk gy to k bn gy	Tr floating qtz sand, wh chert, pl gn sh, free qtz sand, wh silcs cement as, wh to tan oolitic chert, immature oolites, clear dol xtls.
425	M	Fa/M	
425	Dolomite	Lt bn gy	Much free qtz sand/as, gn gy sh. Tr floating qtz sand, wh chert, pl gn sh, free qtz sand, wh silcs cement as, wh to tan oolitic chert, immature oolites, clear dol xtls.
430	M	Fa/M	
430	Dolomite	Lt bn gy	Much silcs cement as/free as, gn gy sh. Tr floating qtz sand, wh chert, pl gn sh, free qtz sand, wh silcs cement as, wh to tan oolitic chert, wh chert oolites, clear dol xtls, oolites, drusy qtz.
435	M	Fa/M	

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P R A I R I E D U C H I E N G R O U P	435	Sandstone	Light grey	Subrad to wrnd. Much G dolio ocm, frosting, dol(as above), wh to orange chert(some oolitic). Lt G silica
	440	M/C	Vfn/VC	cem. Tr pyrite, wh chert oolitic/centd by drusy qtz). pk rnd qtz/rtite crans, mafic incl, qtz silt.
	440	Dolomite	Lt bn gy to pl bn	Lt froo qtz sand, wh chert(some oolitic, some contains floating dol xtls), gn gy sh. Tr floating
	445	M	Fa/M	qtz sand, mass glauc, clear qtz xtls, rnd pk qtz silt(Gr/SP), dk bn sh partings, oolitic, drusy qtz, pyrite.
	445	Dolomite	Lt bn gy to pl bn	Lt wh chert(tr oolitic, most contains floating dol xtls). Tr gn gy sh, froo/floating qtz sand, mass
	450	M	Fa/M	glauc, rd drusy qtz, dk bn sh partings, dolo centd as, pyrite.
	450	Dolomite	Lt bn gy to pk gy	Lt pyrite(mostly w/ the drusy dol xtls). Tr pl gn gy sh, froo qtz sand, mass glauc, pk staining, dk bn
	455	M	Fa/M	sh partings, wh chert(some oolitic).
	455	Dolomite	Lt bn gy to k gy	Tr pyrite, gn gy sh, froo qtz sand, mass glauc, pk staining, dk bn sh partings, wh chert(some contains
	460	Fa	Fa/M	floating dolio xtls).
	460	Dolomite	Lt bn gy to k gy	Tr pyrite, gn gy sh, mass/silt-glauc, dk bn sh partings, wh chert.
	465	M	Fa/M	
	465	Dolomite	Lt gy	Slightly sugary. Tr pyrite, mass/silt-glauc, dk bn sh partings.
	470	M	Fa/M	
	470	Dolomite	Lt gy	Slightly sugary. Tr pyrite, mass/silt-glauc, dk bn sh partings, wh chert matrix, pk staining, floating qtz
	475	M	Fa/M	sand.
	475	Dolomite	Lt gy	Sugary. Tr pyrite, mass/silt-glauc, dk bn sh partings, wh chert matrix, pk staining, floating qtz sand, k
	480	M	Fa/M	gy to gn gy sh.
	480	Dolomite	Lt gy	Sugary. Tr pyrite, mass/silt-glauc, dk bn sh partings, pk staining, floating qtz sand, pl gn gy sh.
	485	M	Fa/M	
485	Dolomite	Lt bn gy	Lt rd bn hemio sh matrix/staining. Tr pyrite, mass/silt-glauc, dk bn sh partings, floating/froo	
490	M	Fa/M	qtz sand, pl gn gy sh.	
490	Dolomite	Lt bn gy	Lt rd bn hemio sh matrix/staining. Tr pyrite, mass/silt-glauc, dk bn sh partings, floating/froo qtz	
495	M	Fa/M	sand, pl gn gy sh.	
495	Dolomite	Lt bn gy	Lt rd bn hemio sh matrix/staining. Tr pyrite, mass/silt-glauc, dk bn sh partings, floating/froo	
500	M	Fa/M	qtz sand, pl gn gy sh, wh chert, drusy qtz.	
500	Dolomite	Lt bn gy	Lt rd bn hemio sh matrix/staining. Tr pyrite, mass/silt-glauc, dk bn sh partings, floating/froo	
505	M	Fa/M	qtz sand, pl gn gy sh, wh chert, wh chert matrix(surrounding dolo xtls), drusy qtz.	
505	Dolomite	Lt bn gy	Lt rd bn hemio to pk staining, floating qtz sand. Tr pyrite, mass/silt-glauc, dk bn sh partings, froo	
510	M	Fa/M	qtz sand, pl gn gy sh, wh chert, drusy qtz.	
510	Dolomite	Lt bn gy	Tr rd bn hemio to pk staining, floating qtz sand, pyrite, mass/silt-glauc, dk bn sh partings, froo	
515	M	Fa/M	qtz sand, gn gy sh, wh chert, drusy qtz.	
515	Dolomite	Lt bn gy	Tr rd staining, rd bn hemio to pk staining, floating qtz sand, pyrite, mass/silt-glauc, dk bn sh partings,	
520	M	Fa/M	froo qtz sand, gn gy sh, wh chert, drusy qtz.	
520	No Sample		Driller reports limestone to 522 feet and sandstone 522-526 feet.	
525				
525	Sandstone	White	Subrad to wrnd. Much VG silica cem(an orthoqtzite), frosting, dol(as above). Many sec qtz growths. Lt VG	
530	C	Vfn/VC	dolico cem. Tr drusy qtz, mass glauc, pyrite.	
530	No Sample		Driller reports limestone and sandstone.	
535				
535	Sandstone	Lt grey	Subrad to rd. Lt VG silica cem, VG dolico cem. Much frosting, cvd dol. Many sec qtz growths. Tr pyrite,	
540	M/C	Vfn/VC	mafic incl, qtz silt.	
540	Sandstone	Lt grey	Subrad to rd. Lt VG silica cem, VG dolico cem. Much frosting, cvd dol. Many sec qtz growths. Tr pyrite,	
545	M/C	Vfn/VC	mafic incl, qtz silt, pl gn sh.	
545	Sandstone	Lt bn gy	Subang to rd. Much VG dolico cem(almost a sandy dol), frosting, cvd dol, cvd as. Few sec qtz growths. Lt	
550	Fa/M	Vfn/VC	silt/Vfn-glauc. Tr pyrite, mafic incl, qtz silt, pl gn sh.	
550	Sandstone	Lt bn gy	Subang to rd. Much VG dolico cem(some chips are a sandy dol), frosting. Lt cvd dol, cvd as. Few sec	
555	Fa/M	Vfn/VC	qtz growths. Tr mass/Vfn-glauc, pk staining, pyrite, mafic incl, qtz silt, pl gn sh.	
555	Sandstone	Pale brown	Ang to subang. Much G to F dolico cem, frosting. Many sec qtz growths. Lt qtz silt. Tr mass/Vfn-glauc, pk	
560	Fa	Vfn/VC	staining, pyrite, mafic incl, pl gn sh, cvd mat.	
560	Sandstone	Pale brown	Ang to subang. Much G dolico cem, frosting. Many sec qtz growths. Lt qtz silt. Tr mass/Vfn-glauc, pk	
565	Fa/M	Vfn/VC	staining, pyrite, mafic incl, pl gn sh, mica, Fe-feldspar, ang qtz crans, cvd mat.	
565	Sandstone	Pale brown	Ang to subang. Much G to F dolico cem, frosting. Many sec qtz growths. Lt qtz silt. Tr mass/Vfn-glauc, pk	
570	Fa/M	Vfn/VC	staining, pyrite, mafic incl, pl gn sh, Fe-zircon, cvd mat.	
570	Sandstone	Pale brown	Ang to subang. Much VG dolico cem, frosting. Many sec qtz growths. Lt qtz silt. Tr mass/Vfn-glauc, pk	
575	Fa/M	Vfn/VC	staining, pyrite, mafic incl, pl gn sh, Fe-zircon, cvd mat.	
575	Sandstone	Pl bn to k gy	Ang to subrad. Much G to F dolico cem, frosting. Many sec qtz growths. Lt qtz silt. Tr mass/Vfn-glauc, dk	
580	Fa/M	Vfn/VC	pk staining, pyrite, mafic incl, pl gn sh, Fe-zircon, k gy sh matrix, cvd mat.	
580	Sandstone	Grey brown	Ang to subrad. Much VG dolico cem, frosting. Many sec qtz growths. Lt qtz silt, mass/Vfn-glauc, dk pk	
585	Fa/M	Vfn/VC	staining, k gy sh matrix. Tr pyrite, mafic incl, pl gn sh, Fe-zircon, cvd mat.	
585	Sandstone	Gy bn & k rd bn	Ang to subrad. Much VG dolico cem, frosting. Many sec qtz growths. Lt qtz silt, mass/Vfn-glauc, rd bn	
590	Fa	Vfn/VC	hemio sh matrix, k gn gy sh matrix. Tr pyrite, mafic incl, Fe-zircon, cvd mat.	
590	Sandstone	Pk gy & k rd bn	Ang to subang. Much VG dolico cem, frosting. Many sec qtz growths. Lt qtz silt, mass/Vfn-glauc, rd bn	
595	Fa	Vfn/VC	hemio sh matrix. Tr k gn gy sh matrix, pyrite, mafic incl, Fe-zircon, cvd mat.	
595	Sandstone	Red brown	Vang to subang. Much VG dolico cem, frosting. Many sec qtz growths. Lt qtz silt, mass/Vfn-glauc, rd bn	
600	Vfn/Fa	Vfn/VC	hemio sh. Tr k gn gy sh matrix, pyrite, mafic incl, mica, wh fossil frags, cvd mat.	
600	Sandstone	Rd bn to dk rd bn	Vang to subang. Much VG dolico cem, frosting. Many sec qtz growths. Lt qtz silt, mass/Vfn-glauc, rd bn	
605	Vfn/Fa	Vfn/VC	hemio sh. Tr k gn gy sh matrix, pyrite, mafic incl, mica, bn to wh fossil frags, cvd mat.	
605	Sandstone	Rd bn to dk rd bn	Vang to subang. Much VG dolico cem, frosting. Many sec qtz growths. Lt qtz silt, mass/Vfn-glauc, rd bn	
610	Vfn/Fa	Vfn/VC	hemio sh. Tr k gn gy sh matrix, pyrite, mafic incl, mica, wh fossil frags, cvd mat.	
610	Sandstone	Dk rd bn & k gy bn	Vang to subang. Much VG dolico cem, frosting. Many sec qtz growths. Lt qtz silt, rd bn hemio sh. Tr	
615	Vfn/Fa	Vfn/VC	silt/Vfn-glauc, k gn gy sh matrix, pyrite, mafic incl, mica, wh & bk fossil frags, cvd mat.	
615	Sandstone	Grey	Ang to subrad. Much VG dolico cem, frosting, rd bn as(as above). Many sec qtz growths. Lt qtz silt, dk gy	
620	Fa	Vfn/VC	sh matrix. Tr silt/Vfn-glauc, dk gy staining, pyrite, mafic incl, mica, bk fossil frags, qtz crans, cvd mat.	

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SCORE 130'	620	Sandstone	Grey	Ang to subrad. Much VG dolio oom, frosting. Many sec qtz growths. Lt qtz silt, dk gy staining. Tr silt/Vfn-glauc, dk gy sh matrix, pyrite, mafic incl, bk fossil frags, cnd mat.
	625	Fa	Vfn/VC	
	625	Sandstone	Grey	Ang to subrad. Much VG dolio oom, frosting. Many sec qtz growths. Lt qtz silt, dk gy staining. Tr silt/Vfn-glauc, dk gy sh matrix, pyrite, mafic incl, bk fossil frags, ba speckling, cnd mat.
	630	Fa/M	Vfn/VC	
	630	Sandstone	Grey	Ang to subrad. Much VG dolio oom, frosting. Many sec qtz growths. Lt qtz silt, dk gy staining. Tr silt/Vfn-glauc, dk gy sh matrix, pyrite, mafic incl, bk fossil frags, ba speckling, cnd mat.
	635	Fa/M	Vfn/VC	
	635	Sandstone	Light grey	Subrad to rad. Lt F to G dolio oom, pk qtzite sand. Few sec qtz growths. Much frosting. Tr qtz silt, dk gy staining, dk ba sh prte (fossil remains), dk gy sh matr, pyrite, mafic incl, ba sckle, cnd mat.
	640	M	Vfn/VC	
	645	Sandstone	Grey	Subang to rad. Much VG dolio oom, frug. Few sec qtz grw. Tr pk qtzite sand, silt/Vfn-glauc, qtz silt, dk gy stng, dk ba sh prte (fossil remains), dk gy sh/sh matr, pyr, maf incl, ba sckle, cnd mat.
	645	Fa/M	Vfn/VC	
650	Sandstone	Grey	Subang to rad. Much VG dolio oom, frug. Few sec qtz grw. Tr pk qtzite sand, silt/Vfn-glauc, qtz silt, dk gy stng, dk ba sh prte (fossil remains), dk gy sh/sh matr, pyr, mafic incl, ba sckle, sec qtz grans, cnd mat.	
650	Fa/M	Vfn/VC		
655	Sandstone	Grey	Subang to rad. Much VG dolio oom, frug. Few sec qtz grw. Lt v glis Fa-M. Tr pk qtzite sand, qtz silt, dk gy stng, silt/Vfn-glauc, dk ba sh prte (fossil remains), dk gy sh/sh matr, pyr, mafic incl, ba sckle, sec qtz grans, cnd mat.	
655	M	Vfn/VC		
655	Sandstone	Light grey	Rad to wrnd. Tr G dolio oom, mafic incl, sec qtz growths. Much frosting, gy ss (as above).	
660	M/C	Vfn/VC		
660	Sandstone	Lt gy & dk gy	Subang to rad. Much G silos oom, frosting, dk gy silos sh (interlayered w/ ss). Lt qtz silt. Few sec qtz growths. Tr gn gy sh, mafic incl, pyrite, pk qtzite sand.	
665	Vfn/Fa	Vfn/VC		
665	Sandstone	Light grey	Rad to wrnd. Tr G dolio oom, mafic incl, sec qtz growths. Much frosting, gy ss (as above, 650 foot).	
670	M/C	Vfn/VC		
670	Sandstone	Lt gy to wh	Rad to wrnd. Much G silos oom, frosting, gn gy silos sh, cnd ss (glauic ss, dolio oomd ss). Few sec qtz growths. Tr G pyrite oom, mafic incl, qtz silt, pk qtzite pieces (sand/SP).	
675	M	Vfn/VC		
675	Sandstone	White	Rad to wrnd. Much G to F silos oom, frosting, gn gy silos sh. Few sec qtz growths. Tr G pyrite oom, mafic incl, qtz silt, pk qtzite sand, wh sh, cnd ss.	
680	M	Vfn/VC		
680	Sh & sandstone	Gn gy & white	Sh: Silos. Tr fos frags, pyr. Ss: Ang to subang. Much G to VG silos oom, frug. Few sec qtz grw. Lt qtz silt. Tr pyr, mafic incl, fos frags, pk qtzite sand, wh sh, cnd ss. Sh & ss are interlayered.	
685	Fa	Vfn/VC		
685	Sh & sandstone	Gn gy/dk gy bn & wh	Sh: Silos. Tr fos frags, pyr. Ss: Ang to subang. Much G to VG silos oom, frug. Few sec qtz grw. Lt qtz silt. Tr pyr, mafic incl, fos frags, pk qtzite sand, qtz grans, cnd ss. Sh & ss are interlayered.	
690	Fa	Vfn/VC		
690	Sh & sandstone	Gn gy/dk gy bn & wh	Samp assumed same as above, 99% cnd dolio ss & glauic ss. Sh: Silos. Tr fos frags, pyr. Ss: Ang to subang. Much G to VG silos oom, frug. Few sec qtz grw. Lt qtz silt. Tr pyr, mafic incl, fos frags, pk qtzite sand.	
695	Fa	Vfn/VC		
695	Sh & sandstone	Dk gn gy & wh/lt gy	Sh: Silos. Many pyritized fos molds/frags. Lt pyr. Ss: Ang to subang. Much VG silos oom, G dolio oom, frug. Few sec qtz grw. Lt qtz silt. Tr pyr, mafic incl, fos frags, pk qtzite sand/gr. Sh & ss are interlayered.	
700	Vfn/Fa	Vfn/VC		
700	Sandstone	Dk gn gy & lt gy	Ang to subang. Much VG dolio oom, dk gn gy fossilif sh, frosting, qtz silt. Few sec qtz growths, fossil frags/molds. Tr pyrite, qtzite sand/gran.	
705	Vfn/Fa	Vfn/VC		
705	Sandstone	Dk gn gy to gy	Ang to subang. Much VG dolio oom (almost a sandy dol), frosting, qtz silt. Few sec qtz growths, fossil frags/molds. Lt dy gy bn sh matrix. Tr mass-glauc, pyrite, qtzite sand/gran.	
710	Vfn/Fa	Vfn/VC		
710	Sandstone	Pale pink	Subang to rad. Much G dolio oom, frosting, cnd ss (as just above). Many sec qtz growths. Tr rd ba hemio staining, pyrite, qtzite sand/gran, qtz silt.	
715	Fa/M	Vfn/VC		
715	Sandstone	Pk to pk gy	Subang to rad. Much G dolio oom, frosting, dk gy staining (of oom). Many sec qtz growths. Tr rd ba hemio staining, pyrite, qtzite sand/gran, qtz silt, dk gy sh matrix, cnd ss/sh.	
720	M/C	Vfn/Gr		
720	Sandstone	Pk to pk gy	Subang to rad. Much G dolio oom, frosting, dk gy staining (of oom). Many sec qtz growths. Tr rd ba hemio staining, pyrite, qtzite sand/gran, qtz silt, dk gy sh matrix, cnd ss/sh.	
725	M/C	Vfn/Gr		
725	Sandstone	Pk gy to gy	Subang to rad. Much G dolio oom, frosting, dk gy staining (of oom). Many sec qtz growths. Tr rd ba hemio staining, pyrite, qtzite sand/gran, qtz silt, dk gy sh matrix, cnd ss/sh.	
730	M/C	Vfn/Gr		
730	Sandstone	Pk to pk gy	Subang to rad. Much G dolio oom, frosting, dk gy staining (of oom). Many sec qtz growths. Tr rd ba hemio staining, pyrite, qtzite sand/gran, qtz silt, dk gy sh matrix, cnd ss/sh.	
735	M/C	Vfn/Gr		
735	Sandstone	Pk gy & gy to dk gy	Subang to rad. Much G dolio oom, frosting, dk gy staining (of oom). Many sec qtz growths. Tr rd ba hemio staining, pyrite, qtzite sand, fossil frags/molds, qtz silt, dk gy sh matrix, cnd ss/sh.	
740	M/C	Vfn/Gr		
740	Sandstone	Pk gy & gy to dk gy	Subang to rad. Much G dolio oom, frosting, dk gy staining (of oom). Many sec qtz growths. Tr rd ba hemio staining, pyrite, qtzite sand/gran, fossil frags/molds, qtz silt, dk gy sh matrix, cnd ss/sh.	
745	M/C	Vfn/Gr		
745	Sandstone	Gy to dk gy	Subang to rad. Much VG dolio oom, sandy dol, frosting, dk gy stng (of oom). Many sec qtz growths. Lt dk gy sh matrix. Tr rd ba hemio staining, pyrite, qtzite sand/gran, fossil frags/molds, qtz silt, cnd ss/sh.	
750	M/C	Vfn/Gr		
750	Sandstone	Gy to dk gy	Subang to rad. Much VG dolio oom, sandy dol, frosting, dk gy stng (of oom). Many sec qtz growths. Lt dk gy sh matrix, qtzite sand/gran. Tr rd ba hemio stng, pyr, fos frags/molds, qtz silt, cnd ss/sh.	
755	M/C	Vfn/Gr		
755	Sandstone	Pk gy & gy to dk gy	Subang to rad. Much G dolio oom, frosting, dk gy stng (of oom), sandy dol, qtzite sand/gran. Many sec qtz grw. Tr rd ba hemio stng, pyrite, fossil frags/molds, qtz silt, dk gy sh matrix, cnd ss/sh.	
760	M/C	Vfn/Gr		
760	Sandstone	Gy to dk gy	Subang to rad. Much G dolio oom, frosting, dk gy staining (of oom), sandy dol. Lt qtzite sand/gran. Many sec qtz grw. Tr rd ba hemio stng, pyr, fossil frags/molds, qtz silt, dk gy sh matr, cnd ss/sh.	
765	M	Vfn/Gr		
765	Sandstone	Gy to dk gy & pk	Subang to rad. Much G dolio oom, frug, dk gy stng (of oom), sandy dol, qtzite sand/gran. Many sec qtz grw. Tr rd ba hemio stng, pyr, fos frags/molds, qtz silt, dk gy sh matrix, cnd ss/sh.	
770	M/C	Vfn/Gr		
770	Sandstone	Gy to dk gy & pk	Subang to rad. Much G dolio oom, frug, dk gy stng (of oom), sandy dol, qtzite sand/gran. Many sec qtz grw. Lt dk gy sh matr. Tr rd ba hemio staining, pyrite, fossil frags/molds, qtz silt, cnd ss/sh.	
775	M & VC	Vfn/Gr		
775	Sandstone	Gy to pk gy	Ang to rad. Much G dolio oom, frug, dk gy stng (of oom), qtzite sand/gran. Many sec qtz grw. Lt sandy dol, gn gy sh, rd ba hemio stng. Tr pyrite, fossil frags/molds, qtz silt, cnd mat, rust.	
780	M & VC	Vfn/Gr		
780	Sandstone	Grey	Ang to rad. Much G dolio oom, sandy dol, frosting, dk gy stng (of oom), qtzite sand/gran. Many sec qtz grw. Few grans. Lt gn gy sh, rd ba hemio stng. Tr pyr, fos frags/molds, qtz silt, cnd mat, rust.	
785	M & VC	Vfn/Gr		
785	Sandstone	Grey	Ang to rad. Much G dolio oom, sandy dol, frug, dk gy stng (of oom), qtzite sand/gran, gn gy to ol sh. Many sec qtz grw. Few grans. Lt rd ba hemio staining. Tr pyr, fos frags/molds, qtz silt, cnd mat, rust.	
790	M & VC	Vfn/Gr		
790	Sandstone	Grey	Ang to rad. Much G dolio oom, sandy dol, frosting, dk gy stng (of oom), qtzite sand/gran, gn gy to ol sh. Many sec qtz grw. Few grans. Lt rd ba hemio stng. Tr pyr, fos frags/molds, qtz silt, cnd mat, rust.	
795	M & VC	Vfn/Gr		
795	Sandstone	Grey	Ang to rad. Much G dolio oom, frug, dk gy stng (of oom), qtzite sand/gran, gn gy to ol sh. Many sec qtz grw. Few grans. Lt rd ba hemio stng, sandy dol. Tr pyr, fos frags/molds, qtz silt, cnd mat, rust.	
800	M/C	Vfn/Gr		
800	Sandstone	Grey to pk gy	Ang to rad. Much G dolio oom, frug, dk gy stng (of oom), qtzite sand/gran, gn gy to ol sh. Many sec qtz grw. Lt rd ba hemio stng, sandy dol. Tr pyr, fos frags/molds, qtz silt, cnd mat, rust.	
805	M/C	Vfn/Gr		

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E L K H O U N D G R O U P	805	Sandstone	Grey to pk gy	Ang to md. Much G dolie ocm, frstg, dk gy stng (of ocm), qtzite sml/gran, ga gy to ol sh. Many sec qtz grw. Ltl rd bn hemic stng, sdy dol. Tr pyr, fos frags/molds, qtz silt, cnd mat, rust.
	810	M/C	Vfn/Gr	
	810	Sandstone	Grey to pk gy	Ang to md. Much G dolie ocm (less than above), frstg, ga gy to ol sh. Ltl dk gy stng (of ocm), qtzite sml/gr. May sec qtz grw. Tr rd bn hemic stng, sdy dol, pyr, fos frags/molds, qtz silt, cnd mat, rust.
	815	M/C	Vfn/Gr	
	820	Sandstone	Grey	Ang to md. Much G dolie ocm (less than abv), frstg, dk gy stng (of ocm), qtzite sml/gran, ga gy to ol sh. Many sec qtz grw. Few qtz gr. Ltl rd bn hemic stng, sdy dol. Tr pyr, fos frags/molds, qtz silt, cnd mat, rust.
	820	M/C	Vfn/Gr	
	820	Sandstone	Pink grey	Ang to md. Much G dolie ocm, frstg, qtzite sml/gran. Many sec qtz grw. Ltl dk gy to ga gy sh/sh matr. Tr pyr, pyr ooliths, fos frags/molds, qtz silt, rd bn hemic stng, dk gy stng of ocm.
	825	M/C	Vfn/VC	
	825	Sandstone	Pink grey	Ang to md. Much G dolie ocm, frstg, qtzite sml/gran. Many sec qtz grw. Ltl dk gy to ga gy sh/sh matr. Tr pyr, pyr ooliths, fos frags/molds, qtz silt, rd bn hemic stng, dk gy stng of ocm.
	830	M/C	Vfn/VC	
	830	Sandstone	Lt gy	Ang to md. Much G dolie ocm, frstg, dk gy sh/sh matr. Many sec qtz grw. Ltl qtzite sml/gran. Tr pyr, pyr ooliths, fos frags/molds, qtz silt, rd bn hemic stng, dk gy stng of ocm, ga gy sh.
	835	Fu/M	Vfn/VC	
	835	Sandstone	Lt gy	Ang to md. Much G dolie ocm, frstg. Many sec qtz grw. Ltl qtzite sml/gran, dk gy sh/sh matr. Tr pyr, fos frags/molds, qtz silt, rd bn hemic stng, dk gy stng of ocm, ga gy sh.
	840	Fu/M	Vfn/VC	
	840	Sandstone	Lt gy	Ang to md. Much G dolie ocm, frstg. Many sec qtz grw. Ltl qtzite sml/gran, dk gy sh/sh matr. Tr pyr, fossil frags/molds, qtz silt, rd bn hemic stng, dk gy stng of ocm, ga gy sh.
	845	Fu/M	Vfn/VC	
	845	Sandstone	Lt gy	Ang to md. Much G dolie ocm, frstg. Many sec qtz grw. Ltl qtzite sml/gran, dk gy sh/sh matr. Tr pyr, fos frags/molds, qtz silt, rd bn hemic stng, dk gy stng of ocm, ga gy sh.
	850	M	Vfn/VC	
	850	Sandstone	Lt gy	Ang to md. Much G dolie ocm, frstg. Many sec qtz grw. Ltl qtzite sml/gran, dk gy sh/sh matr. Tr pyr, fos frags/molds, qtz silt, rd bn hemic stng, dk gy stng of ocm, ga gy sh, Fu-zircon.
	855	M/C	Vfn/VC	
	855	Sandstone	Lt gy	Ang to md. Much G dolie ocm, frstg. Many sec qtz grw. Ltl qtzite sml/gran, dk gy sh/sh matr. Tr pyr, fos frags/molds, qtz silt, rd bn hemic stng, dk gy stng of ocm, ga gy sh, Fu-zircon.
	860	M	Vfn/VC	
	860	Sandstone	Lt gy	Ang to md. Much G dolie ocm, frstg, qtzite sml/gran. Many sec qtz grw. Ltl dk gy sh/sh matr. Tr pyr, fos frags/molds, qtz silt, rd bn hemic stng, dk gy stng of ocm, ga gy sh, Fu-zircon.
	865	M/C	Vfn/VC	
	865	Sandstone	Lt gy	Ang to md. Much VG dolie ocm, frstg, qtzite sml/gran. Many sec qtz grw. Ltl dk gy sh/sh matr. Tr pyr, fos frags/molds, qtz silt, rd bn hemic stng, dk gy stng of ocm, ga gy sh.
	870	M/C	Vfn/VC	
	870	Sandstone	Lt gy	Ang to md. Much VG dolie ocm, frstg, qtzite sml/gran, dk gy sh/sh matr. Many sec qtz grw. Tr pyr, pyr ooliths, fossil frags/molds, qtz silt, rd bn hemic stng, dk gy stng of ocm, ga gy sh.
	875	M/C	Vfn/VC	
	875	Sandstone	Lt gy	Ang to md. Much VG dolie ocm, frstg, qtzite sml/gran. Many sec qtz grw. Ltl dk gy sh/sh matr. Tr pyr, pyr ooliths, fossil frags/molds, qtz silt, rd bn hemic stng, dk gy stng of ocm, ga gy sh.
	880	M/C	Vfn/VC	
	880	Sandstone	Lt gy to pk gy	Ang to md. Much G to VG dolie ocm, frstg, qtzite sml/gran. Many sec qtz grw. Ltl dk gy sh/sh matr. Tr pyr, pyr ooliths, fos frags/molds, qtz silt, rd bn hemic stng, dk gy stng of ocm, ga gy sh.
	885	M/C	Vfn/VC	
	885	Sandstone	Lt gy to pk gy	Ang to md. Much G to VG dolie ocm, frstg, qtzite sml/gran. Many sec qtz grw. Ltl dk gy sh/sh matr. Tr pyr, pyr ooliths, fos frags/molds, qtz silt, rd bn hemic stng, dk gy stng of ocm, ga gy sh.
	890	M/C	Vfn/VC	
	890	Sandstone	Lt gy to pk gy	Ang to md. Much G to VG dolie ocm, frstg, qtzite sml/gran. Many sec qtz grw. Ltl dk gy sh/sh matr. Few pyr ooliths. Tr pyr, pyr ooliths, fos frags/molds, qtz silt, rd bn hemic stng, dk gy stng of ocm, ga gy sh.
	895	M/C	Vfn/VC	
	895	Sandstone	Lt gy to pk gy	Ang to md. Much G dolie ocm, frstg, qtzite sml/gran. Many sec qtz grw. Ltl dk gy sh/sh matr. Few pyr ooliths. Tr pyr, fos frags/molds, qtz silt, rd bn hemic stng, dk gy stng of ocm, ga gy sh.
	900	M/C	Vfn/VC	
	900	Sandstone	Lt gy	Ang to md. Much G to VG dolie ocm, frstg, qtzite sml/gran, dk gy sh/sh matr. Many sec qtz grw. Tr pyr ooliths, pyr, fos frags/molds, qtz silt, rd bn hemic stng, dk gy stng of ocm, ga gy sh.
	905	M/C	Vfn/VC	
	905	Sandstone	Lt gy	Ang to md. Much G to VG dolie ocm, frstg, qtzite sml/gr, dk gy sh/sh matr, sdy dol (as to sdy dol). May sec qtz grw. Tr pyr ooliths, pyr, fos frags/molds, qtz silt, rd bn hemic stng, dk gy stng (of ocm), ga gy sh.
	910	M/C	Vfn/VC	
	910	Sandstone	Pk gy	Ang to md. Much G dolie ocm, frstg, qtzite sml/gran. Many sec qtz grw. Ltl gy to ga gy sh/sh matr. Tr pyr ooliths, pyr, fossil frags/molds, qtz silt, rd bn hemic stng, dk gy stng of ocm, rd bn hemic sh.
	915	M	Vfn/VC	
	915	Sandstone	Pk gy	Ang to md. Much G dolie ocm, frstg, qtzite sml/gran. Many sec qtz grw. Ltl gy to ga gy sh/sh matr. Tr pyr ooliths, pyr, fos frags/molds, qtz silt, rd bn hemic stng, dk gy stng of ocm, rd bn hemic sh, pl ga sh.
920	M/C	Vfn/VC		
920	Sandstone	Lt rd bn	Ang to md. Much G dolie ocm, frstg, qtzite sand/SP (more than above). Many sec qtz grw. Ltl gy to ga gy sh/sh matr. Tr pyr, qtz silt, rd bn hemic stng, dk gy stng of ocm, rd bn hemic sh, pl ga sh.	
925	M & VC	Vfn/VC		
925	Sandstone	Lt rd bn	Ang to md. Much G dolie ocm, frstg, qtzite sml/gran. Many sec qtz grw. Ltl gy to ga gy sh/sh matr. Tr pyr, qtz silt, rd bn hemic stng, dk gy stng of ocm, rd bn hemic sh, pl ga sh.	
930	C	Vfn/VC		
930	Sandstone	Lt rd bn	Ang to md. Much G dolie ocm, frstg, qtzite sml/gran (mostly gran). Many sec qtz grw. Ltl gy to ga gy sh/sh matr. Tr pyr, qtz silt, rd bn hemic stng, dk gy stng of ocm, rd bn hemic sh, pl ga sh.	
935	C	Vfn/VC		
935	Sandstone	Lt rd bn	Ang to md. Much G to F dolie ocm, frstg, qtzite sml/gran. Many sec qtz grw. Ltl gy to ga gy sh/sh matr. Tr pyr, qtz silt, rd bn hemic stng, dk gy stng of ocm, rd bn hemic sh, pl ga sh.	
940	M/C	Vfn/VC		
940	Sandstone	Lt grey	Ang to md. Much G to F dolie ocm, frstg, qtzite sml/gran. Many sec qtz grw. Ltl gy to k ga gy sh/sh matr. Tr pyr, qtz silt, rd bn hemic stng, rd bn hemic sh, cnd mat.	
945	M/C	Vfn/VC		
945	Sandstone	Pink white	Ang to md. Much G to F dolie ocm, frstg, qtzite sml/gran. Many sec qtz grw. Ltl gy to k ga gy sh, cnd mat. Tr pyr, qtz silt, rd bn hemic stng, rd bn hemic sh.	
950	M/C	Vfn/VC		
950	Sandstone	Pk wh & pl orange	Subord to wrnd. Much G silice ocm, frstg. Few qtzite sand/gran, sec qtz grw. Ltl rd hemic clay coating (of grains). Tr pyr, qtz silt, mafic incl, wh sh, cnd mat.	
955	C	Vfn/VC		
955	Sandstone	Lt rd vl bn	Subord to wrnd. Much G silice ocm (less above), frstg. Few qtzite sand/gran, sec qtz grw. Tr rd hemic clay coating (of grains), rd bn hemic sh, qtz silt, mafic incl, wh sh, cnd mat.	
960	C	Vfn/VC		
960	Sandstone	Lt rd bn to pk	Subord to wrnd. Much G silice ocm (less above), frstg, qtzite sand/gran. Few sec qtz grw. Tr rd hemic clay coating (of grains), rd bn hemic sh, qtz silt, mafic incl, wh sh, cnd mat.	
965	C/VC	Vfn/VC		
965	Sandstone	Lt rd bn	Subord to wrnd. Tr G silice ocm (less above), rd hemic clay coating, rd bn hemic sh, qtz silt, mafic incl, wh sh, cnd mat. Much frstg. Ltl qtzite sml/gran. Few sec qtz grw.	
970	C	Vfn/VC		
970	Sandstone	White	Ang to wrnd. Tr G silice ocm, rd hemic clay coating, rd bn hemic sh, qtz silt, mafic incl, wh sh, qtzite sml/gran, cnd mat. Many sec qtz grw. Much frstg.	
975	M/C	Vfn/VC		
975	Sandstone	Lt rd bn	Subang to md. Ltl G silice ocm, rd hemic sh. Tr G rd bn hemic ocm, qtz silt, mafic incl, wh sh, qtzite sml/gran, mafic incl, cnd mat. Much frstg. Few sec qtz grw.	
980	Fu/M	Vfn/VC		
980	Quartzite	Pur & white	Disaggregated. Ang. Much F to G silice ocm, qtz silt, shale (composed of sordite?) and pur hemicite (silt/Vfn grains), pur hemicite, rd bn hemic ocm, as. Ltl cnd mat.	
985	Fu	Vfn/VC		
985	Quartzite	Pur & white	Disaggregated. Ang. Much G to VG silice ocm, shale (as above though less), pur to bk hemicite. Ltl cnd mat.	
990	Fu/M	Vfn/VC		
990	Quartzite	Pur & white	Tr rd bn hemic staining.	

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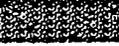
PRECAMBRIAN	990	Quartzite	Pur & white	Disaggregated Ang. Much G to VG silcs ocm, shalo (as above), pur to bk hemite. Ltl cnd mat. Tr rd ba hemie staining.
	995	Fu/M	Vfu/VC	
	995	Quartzite	Pur & white	Subang. Much G to VG silcs ocm, shalo (as above, but most as a matrix), pur to bk hemite. Tr rd ba hemie staining, cnd mat.
	1000	Fu/M	Vfu/VC	
	1000	Quartzite	Purple	Subang to rad. Much VG silcs ocm, shalo (as above, but most as a matrix), pur to bk hemite. Tr rd ba hemie staining, cnd mat.
	1005	M/C	Vfu/VC	
	1005	Quartzite	Purple	Subang to rad. Much VG silcs ocm, shalo (as above, but most as a matrix), pur to bk hemite. Tr rd ba hemie staining, cnd mat.
	1010	M	Vfu/VC	
	1010	Quartzite	Purple	Subang to rad. Much VG silcs ocm, shalo (as above, but most as a matrix), pur to bk hemite (less than above). Ltl rd ba hemie staining. Tr cnd mat.
	1015	M/C	Vfu/VC	
	1015	Quartzite	Purple & rd ba	Subang to rad. Much VG silcs ocm, shalo (as above, but most as a matrix), pur to bk hemite. Ltl rd ba hemie staining. Tr cnd mat.
	1020	M/C	Vfu/VC	
	1020	Quartzite	Purple & rd ba	Subang to rad. Much VG silcs ocm, shalo (as above, but most as a matrix), pur to bk hemite. Ltl rd ba hemie staining. Tr cnd mat.
	1025	M/C	Vfu/VC	
	1025	Quartzite	Purple & rd ba	Subang to rad. Much VG silcs ocm, shalo (as above, but most as a matrix). Ltl pur to bk hemite, rd ba hemie staining. Tr cnd mat.
	1030	M/C	Vfu/VC	
	1030	Quartzite	Purple & rd ba	Subang to rad. Much VG silcs ocm, shalo (as above, but most as a matrix). Ltl pur to bk hemite, rd ba hemie staining. Tr cnd mat.
	1035	M/C	Vfu/VC	
	1035	Quartzite	Purple & rd ba	Subang to rad. Much VG silcs ocm, shalo (as above, but most as a matrix). Ltl pur to bk hemite, rd ba hemie staining. Tr cnd mat.
	1040	M/C	Vfu/VC	
	1040	Quartzite	Purple & rd ba	Subang to rad. Much VG silcs ocm, shalo (as above, but most as a matrix). Ltl pur to bk hemite, rd ba hemie staining. Tr cnd mat.
	1045	Fu & C	Vfu/VC	
	1045	Quartzite	Purple & rd ba	Subang to rad. Much VG silcs ocm, shalo (as above, but most as a matrix). Ltl pur to bk hemite, rd ba hemie staining. Tr cnd mat.
	1050	Fu	Vfu/VC	
	1050	Quartzite	Purple	Subang to rad. Much VG silcs ocm, shalo (as above, but most as a matrix). Ltl pur to bk hemite, rd ba hemie staining. Tr purple silcs sh, cnd mat.
	1055	Fu	Vfu/VC	
	1055	Quartzite	Purple	Subang to rad. Much VG silcs ocm, shalo (as above, but most as a matrix). Ltl pur to bk hemite, rd ba hemie staining. Tr purple silcs sh, cnd mat.
	1060	Fu	Vfu/VC	
	1060	Quartzite	Purple	Subang to rad. Much VG silcs ocm, shalo (as above, but most as a matrix). Ltl pur to bk hemite, rd ba hemie staining. Tr purple silcs sh, cnd mat.
	1065	Fu/M	Vfu/VC	
	1065	Quartzite	Purple	Ang to rad. Much VG silcs ocm, shalo (as above, but most as a matrix). Ltl pur to bk hemite, rd ba hemie staining. Tr purple silcs sh, vein qtz, cnd mat.
	1070	Vfu/Fu	Vfu/VC	
	1070	Quartzite	Purple & rd ba	Ang to rad. Much VG silcs ocm, shalo (as above, but most as a matrix), rd ba hemie staining. Ltl pur to bk hemite. Tr purple silcs sh, drusy calcite, vein qtz.
	1075	Fu/M	Vfu/VC	
	1075	Quartzite	Purple to rd ba	Ang to rad. Much VG silcs ocm, sh (as above, most as matrix), rd ba hemie stng. Ltl pur to bk hem. Tr purple silcs sh, drusy cal, vein qtz. (Chips either M grained or Vfu/Fu grained).
	1080	Vfu/M	Vfu/VC	
	1080	Quartzite	Purple to rd ba	Ang to rad. Much VG silcs ocm, sh (as above, most as matrix), rd ba hemie stng. Ltl pur to bk hem. Tr purple silcs sh, drusy cal, vein qtz. (Chips either M grained or Vfu/Fu grained).
	1085	M	Vfu/VC	
	1085	Quartzite	Purple to rd ba	Ang to rad. Much VG silcs ocm, sh (as above, most as matrix), rd ba hemie stng. Ltl pur to bk hem. Tr purple silcs sh, drusy cal, vein qtz. (Chips either M grained or Vfu/Fu grained).
	1090	Vfu/Fu	Vfu/VC	
1090	Quartzite	Purple to rd ba	Ang to rad. Much VG silcs ocm, sh (as above, most as matrix), rd ba hemie stng. Ltl pur to bk hem. Tr purple silcs sh, drusy cal, vein qtz. (Chips either M grained or Vfu/Fu grained).	
1095	Fu	Vfu/VC		
1095	Quartzite	Purple to pur grey	Ang to rad. Much VG silcs ocm, sh (as above, but gy to wh & most as a matrix), rd ba hemie stng, qtz silt. Ltl pur to bk hem. Tr purple silcs sh, vein qtz. (Chips either M grained or Vfu/Fu grained).	
1100	Vfu/Fu	Vfu/VC		
1100	Quartzite	Pur gy to grey	Ang to rad. Much VG silcs ocm, qtz silt. Ltl sh (as above, but gy to wh & most as a matrix), rd ba hemie stng, pur to bk hem. Tr pur silcs sh, vein qtz. (Chips either M grained or Vfu/Fu grained).	
1105	Vfu/Fu	Vfu/VC		
1105	Quartzite	Pur gy to grey	Ang to rad. Much VG silcs ocm, qtz silt. Ltl sh (as above, but gy to wh & most as a matrix), Tr rd ba hemie stng, pur to bk hemite, purple silcs sh.	
1110	Vfu/Fu	Vfu/VC		
1110	Quartzite	Pur gy to grey	Ang to rad. Much VG silcs ocm, qtz silt. Ltl shalo (as above, but gy to wh & most as a matrix). Tr rd ba hemie staining, pur to bk hemite, purple silcs sh.	
1115	Vfu	Vfu/VC		
1115	Quartzite	Pur gy to grey	Ang to rad. Much VG silcs ocm, qtz silt (many chips are a sta), shalo (as above, but gy to wh & most as a matrix). Tr rd ba hemie staining, pur to bk hemite, purple silcs sh.	
1120	Silt/Vfu	Vfu/VC		
1120	Quartzite	Pur gy to grey	Ang to rad. Much VG silcs ocm, qtz silt (many chips are a sta), shalo (as above, but gy to wh & most as a matrix). Tr rd ba hemie staining, pur to bk hemite, purple silcs sh, cnd mat.	
1125	Silt/Vfu	Vfu/VC		
1125	Quartzite	Pur gy to grey	Ang to rad. Much VG silcs ocm, qtz silt (many chips are a sta), shalo (as above, but gy to wh & most as a matrix). Tr rd ba hemie staining, pur to bk hemite, purple silcs sh, vein qtz, cnd mat.	
1130	Silt/Vfu	Vfu/VC		
1130	Quartzite	Pur gy to grey	Ang to rad. Much VG silcs ocm, qtz silt (may chips are a sta), sh (as above, but gy & wh, half as matrix, half as wh pericite chips). Tr rd ba hemie stng, pur to bk hem, pur silcs sh, vein qtz, cnd mat.	
1135	Silt/Vfu	Vfu/VC		
1135	Quartzite	Pur gy to grey	Ang to rad. Much VG silcs ocm, qtz silt (many chips are a sta), sh (as above, but gy & wh, half as matrix, half as wh pericite chips). Ltl pur to bk hem. Tr rd ba hemie stng, vein qtz, cnd mat.	
1140	Silt/Vfu	Vfu/VC		
1140	Quartzite	Pur gy & rd ba	Ang to rad. Much VG silcs ocm, qtz silt (many chips are a sta), shalo (as above, but gy & wh, most as a matrix). Ltl pur to bk hemite, or feldspar (w/ rd ba chine), cnd mat.	

End Of Log

Duplicate Samples

0		Dolomite	Grey brown	Much cnd mat. Tr pyrite, fossil frags, dk ba sh partings, ba speckling.
0		M	Fu/M	
0		Sand	Med grey brown	Much carbonate sand, silt. Little clay. Trace grass, cnd soil.
0		M	Vfu/VC	
0		Quartzite	Pur & rd ba	Ang to rad. Much VG silcs ocm, shalo (wh sericite, but most as a matrix), rd ba hemie staining. Little pur to bk hemite. Trace vein qtz.
0		M	Vfu/VC	

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20 25		Sand M/C	Grey brown Vfa/VC	Much gravel(Gr/SP),silt,clay.
120 125		Sand M	Mxd grey brown Vfa/VC	Much carbonate sand,silt.Little clay.Trace gravel(Gr/SP),cvd soil.
135 140		Clay & silt --	Grey brown --	Limy.Much sand.Little caved soil.Tr gravel(Gr/MP),Maquoketa shale,contamination.
230 235		Dolomite M	Grey brown Fa/M	Tr fossil frags,pyrite,bn sh partings,cvd material.
1120 1125		Quartzite Silt/Vfa	Pur gy to grey Vfa/VC	Ang to md.Much VG silcs ocm,qtz silt(many chips are a sts),shale(as above,but gy to wh,most as a matrix).Tr rd bn hemic staining,pur to bk hematite,vein qtz,cvd mat.

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