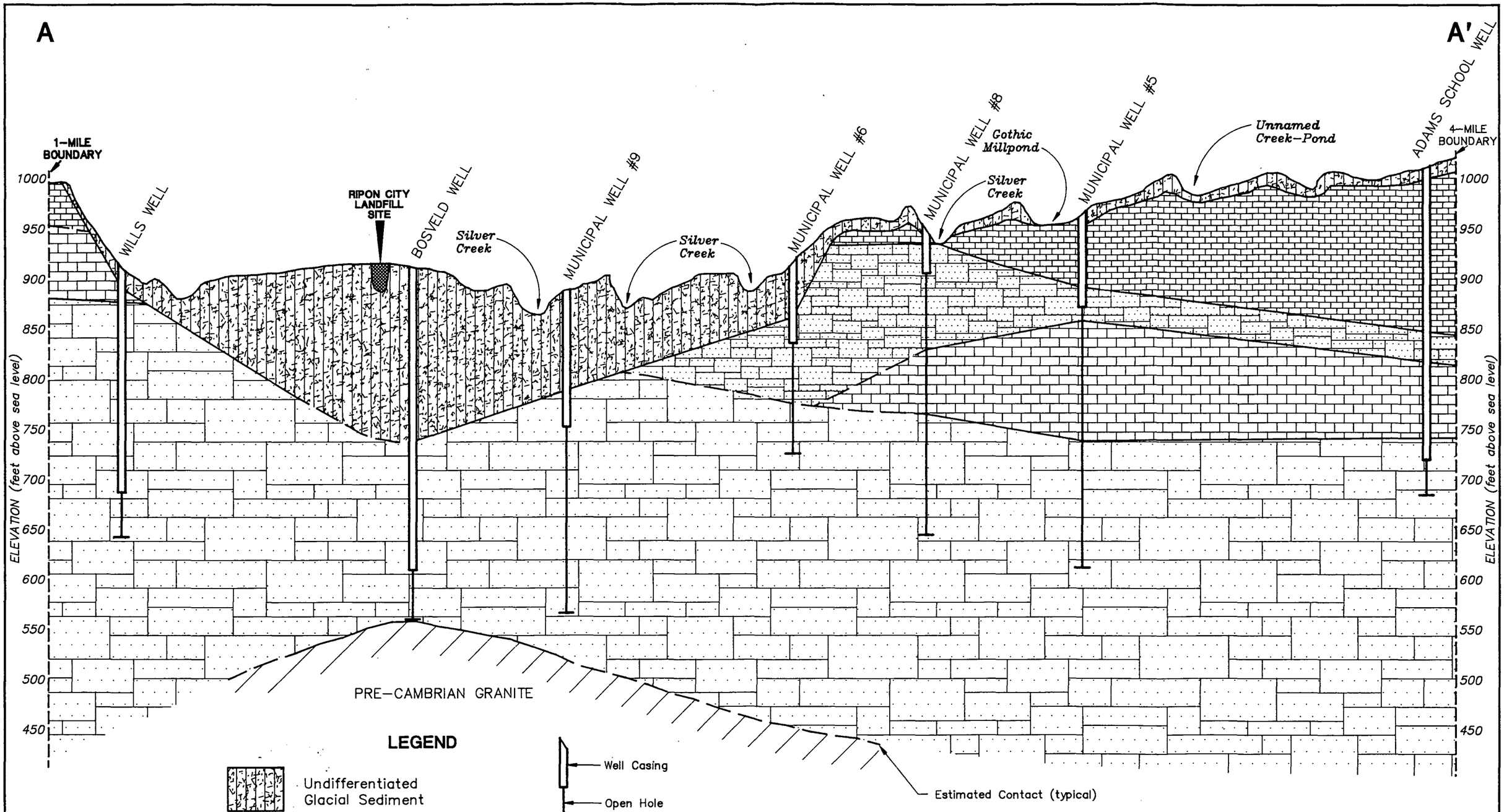
APPENDIX A



HORIZONTAL SCALE: 1" = 2,000 ft.
VERTICAL SCALE: 1" = 94 ft.

RIPON CITY LANDFILL
RIPON CITY, WISCONSIN

GEOLOGIC CROSS-SECTION

PRC ENVIRONMENTAL MANAGEMENT, INC.

RECORD OF SUBSURFACE EXPLORATION

APPENDIX B

GILES ENGINEERING ASSOCIATES, INC.

Boring No. SA 10B

FOUNDATION ENGINEERING

Project: Donohue and Associates, Inc. Date: May 20, 1982

Ripon Land Fill, Ripon, Wis. GEA Project No.: 820328

DESCRIPTION Ground Surface Elevation	Depth Below Surface	Sample No. & Type	N	q_u	q_p	q_s	w	REMARKS
Silty Sand and Gravel with Cobbles		1-AU						
Silty Clay with fine to coarse Sand and Cobbles to Boulders - Moist	5'	2-SS	7					REFERENCE 12 SITE NAME Ripon Landfill SITE ID WFD 980616 30
	10'	3-SS	15					
	15'	4-SS	56					
	20'	5-SS	22					
Brown Silt, fine to coarse Sand, and Gravel with Cobbles and Boulders Damp	25'	6-SS	50					
	30'	7-SS	37					
	35'	8-SS	104					
Drove Boulder - No Sample	40'	9-SS	50/1"					
Drove Boulder- No Sample	45'	10-SS	50/0"					

Changes of strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between boring locations.

GILES ENGINEERING ASSOCIATES, INC.

RECORD OF SUBSURFACE EXPLORATION

162

5A

CONSULTING SOIL AND FOUNDATION ENGINEERS

Boring No. 5A - Page Two

Project: Donohue and Associates, Inc.

Date: May 20, 1982

Ripon Land Fill, Ripon, Wis.

GEA Project No.: 820323

DESCRIPTION	Depth Below Surface	Sample No. & Type	N	q_u	q_p	q_t	w	REMARKS
		10-SS	50/0"					
Drove Limestone Boulders	50'	11-SS	50/0"					
Continuous Limestone Boulders No Sample	55'	12-SS	50/0"					
Gray Silt, fine to coarse Sand, and Gravel - Wet	60'	13-SS	60					
Brown fine to coarse Sand with some coarse to medium Gravel and Clay Wet	65'	14-SS	34					
	70'	15-SS	58					
Boring terminated at 71'								
Well Installed to 69'	75'							
	80'							

97-1783

LOG OF TEST BORING

VERTICAL SCALE 1" = 4'

#S 101

BORING NO 1-B (5)

MONITORING WELLS, RIPON LANDFILL

SOUTHWEST COVER

DESCRIPTION OF MATERIAL SURFACE ELEVATION	GEOLOGIC ORIGIN	N	WL	SAMPLE NO	SAMPLE TYPE	LABORATORY TESTS W	D	LL/PI	Qu
FILL, a mixture of tin cans, cardboard fiber, silty sand, gravel, cobbles	FILL			1	HSA				
SAND, fine-grained, some gravel, a little silt, reddish brown, damp, very dense, with cobbles, a few boulders (SP-SM)		20		2	SB				
Damaged Well		59		3	SB				
		39		4	SB				
SILTY SAND, fine-grained, some gravel, light red, damp, dense (SM)	TILL	24		5	SB				
SAND, fine-grained, some gravel, a little silt, reddish brown, damp, medium dense (SP-SM)		17		6	SB				
		14		7	SB				

(CONTINUED ON NEXT PAGE)

A 2" monitoring wells was installed at this boring - see installation diagram.

LOG OF TEST BORING

#5 101 2 of 2

97-1783 VERTICAL SCALE 1" = 4' BORING NO 1-8 (5)

PROJECT MONITORING WELLS, RIPON LANDFILL

DESCRIPTION OF MATERIAL (SURFACE ELEVATION ____)	GEOLOGIC ORIGIN	N	WL	SAMPLE NO	SAMPLE TYPE	LABORATORY TESTS W	D	LL/PL	Qu
Continued From First Page									
SAND, fine to coarse-grained, with gravel, brown, damp, a few boulders and cobbles, very dense (SW)		100/.5'		8	SB				
A hard limestone slab at 35' and again at 38'									
No Recovery from 39½ to 41'	OUTWASH	34		9	NSR				
SAND, fine-grained, a trace of gravel, yellowish brown, moist to wet, very dense (SP)		-30		10	SB				
				11	SB				
SAND, fine to coarse-grained, with gravel, a little silt, a few ½" seams clayey silt, gray brown, water bearing, dense (SW-SM)	TILL	37		12	SB				
		56		13	SB				
END OF BORING									
(This boring was 21' north and 9' west of staked location)									

WATER LEVEL MEASUREMENTS

START 10-10-81 COMPLETE 10-10-81

TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	BAILED DEPTHS	WATER LEVEL
10 1035	46.5'	44.5'	46.2'	to	45.5'
10 1140	46.5'	44.5	45.9'	to	45.5'
				to 8-6	

METHOD @ 1330

HSA 0-46'

DM 46-55.5'

JOHNSON

97-1783 VERTICAL SCALE 1" = 4' #6 103 BORING NO 2A (6)

MONITORING WELLS, RIPON LANDFILL SOUTHEAST CORNER

DESCRIPTION OF MATERIAL SURFACE ELEVATION	GEOLOGIC ORIGIN	N	WL	SAMPLE NO	SAMPLE TYPE	LABORATORY TESTS W	D	LL/PL	C
No samples - refer to log of Boring 2									
SAND, fine-grained, some gravel, a little silt, brown, a few cobbles, boulders and limestone fragments, damp, very dense (SP-SM)	TILL	100/.5'		1	SB				
		100/.5'		2	SB				
Hard Continuous Limestone slab	LARGE BOULDER								
CONTINUED ON NEXT PAGE									

2" monitoring well was installed at
s boring - see installation diagram.

LOG OF TEST BORING

#6

JOB NO 97-1783 VERTICAL SCALE 1" = 4' BORING NO 2A (6)

PROJECT MONITORING WELLS, RIPON LANDFILL 103

DEPTH IN FEET	DESCRIPTION OF MATERIAL (SURFACE ELEVATION ____)	GEOLOGIC ORIGIN	N	WL	SAMPLE NO.	SAMPLE TYPE	LABORATORY TESTS W	D	LL/PL	Qu
41	Continued From First Page									
	SAND, medium to coarse-grained, with gravel, a little silt, brown, a few limestone fragments, water-bearing, very dense, a limestone slab at 43'	TILL	49		3	SB				
	END OF BORING									
	(This boring was 7' west of staked location)									

WATER LEVEL MEASUREMENTS

TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	BAILED DEPTHS	WATER LEVEL

START 10-9-81 COMPLETE 10-9-81

METHOD @ 1735

GILES ENGINEERING ASSOCIATES, INC.

RECORD OF SUBSURFACE EXPLORATION

Boring No. B7 #7

CONSULTING SOIL AND FOUNDATION ENGINEERS

Project: Donohue and Associates, Inc.

Date: March 31, 1982

Ripon Land Fill, Ripon, Wisconsin

GEA Project No.: 820328

DESCRIPTION Ground Surface Elevation	Depth Below Surface	Sample No. & Type	N	q_u	q_p	q_t	W	REMARKS
Miscellaneous Garbage		1-AU						
Brown Silty Clay, with Gravel and Miscessaneous Garbage Fill Wet	5'	2-SS	3					abandoned well
Brown Silty Clay, with Gravel and Miscellaneous Garbage Fill - Wet	10'	3-SS	9					
Brown fine to medium Gravel with Miscellaneous Garbage Fill - Wet	15'	4-SS	12					
Brown Silty Clay with fine to coarse Sand and Miscellaneous Garbage Fill - Wet	20'	5-SS	12					
Brown Silty Sand and Gravel with Miscellaneous Garbage Fill - Wet	25'	6-SS	7					
Brown fine to coarse Sand and Gravel with Miscellaneous Garbage Fill -Wet	30'	7-SS	17					
Brown Silty fine to coarse Sand and Gravel with Miscellaneous Garbage Fill - Wet	35'	8-SS	35					
Brown fine to coarse Sands and Gravel with Cobbles & Boulders-Wet	40'	9-SS	64					
Gray Silt, fine to coarse Sand and Gravel with Boulders - Wet	45	10-SS	21					

Changes of strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between boring locations.

GILES ENGINEERING ASSOCIATES, INC

CONSULTING SOIL & FOUNDATION ENGINEERS

Boring No. 37 Page Two

#7 104

Project: Donohue and Associates, Inc. Date: March 31, 1982

Ripon Land Fill, Ripon, Wisconsin GEA Project No.: 820328

DESCRIPTION	Depth Below Surface	Sample No. & Type	N	q_u	q_p	q_s	w	REMARKS
		10-SS	21					
Gray Silty fine to coarse Sand with some fine to medium Gravel - Wet	50'	11-SS	30					
Boring terminated at 51'								
Well Installed to 50'	55'							
	60'							

Changes of strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between boring locations.

LOG OF TEST BORING

#8

(Second Attempt)

JOB NO 97-1783 VERTICAL SCALE 1" = 4' BORING NO AA (8)

PROJECT MONITORING WELLS, RIPON LANDFILL NORTHEAST CORNER

DEPTH IN FEET	DESCRIPTION OF MATERIAL (SURFACE ELEVATION)	GEOLOGIC ORIGIN	N	WL	SAMPLE NO	SAMPLE TYPE	LABORATORY TESTS W	D	LL/PI	Qu
	FILL, MOSTLY SILTY SAND, a little gravel and limestone, a few cobbles and boulders, dark brown	FILL			1	HSA				
4	SANDY CLAY, dark brown, seams of silty sand, trace of gravel, very stiff (CL)	POSSIBLE FILL	39		2	SB				
8½	SAND, fine-grained, a little gravel, brown, trace cobbles, a few boulders and limestone fragments, damp, very dense (SP-SM)	TILL			3	HSA				
			65/.2		4	SB				
17½	SAND, fine to coarse-grained, some gravel, a little silt, brown, a few cobbles and limestone fragments, water-bearing, dense (SW-SM)		32		5	SB				
			24		6	SB				
			27							
32	(CONTINUED ON NEXT PAGE)									

LOG OF TEST BORING

#8

JOB NO 97-1783 VERTICAL SCALE 1" = 4' BORING NO 4A (8)

PROJECT MONITORING WELLS, RIPON LANDFILL

DEPTH IN FEET	DESCRIPTION OF MATERIAL (SURFACE ELEVATION ____)	GEOLOGIC ORIGIN	N	WL	SAMPLE NO.	SAMPLE TYPE	LABORATORY TESTS W	D	LL/PL	Qu
	(CONTINUED FROM FIRST PAGE)									
32	SAND, fine to coarse-grained, with gravel, a little silt, brown, a few cobbles and limestone fragments, possible boulders at 32½', water-bearing, very dense (SW-SM)	TILL	47		8 9	SB SB				
36½	END OF BORING									
	(This boring was made at staked location)									
	A 2" monitoring well was installed at this boring - see installation diagram.									

WATER LEVEL MEASUREMENTS

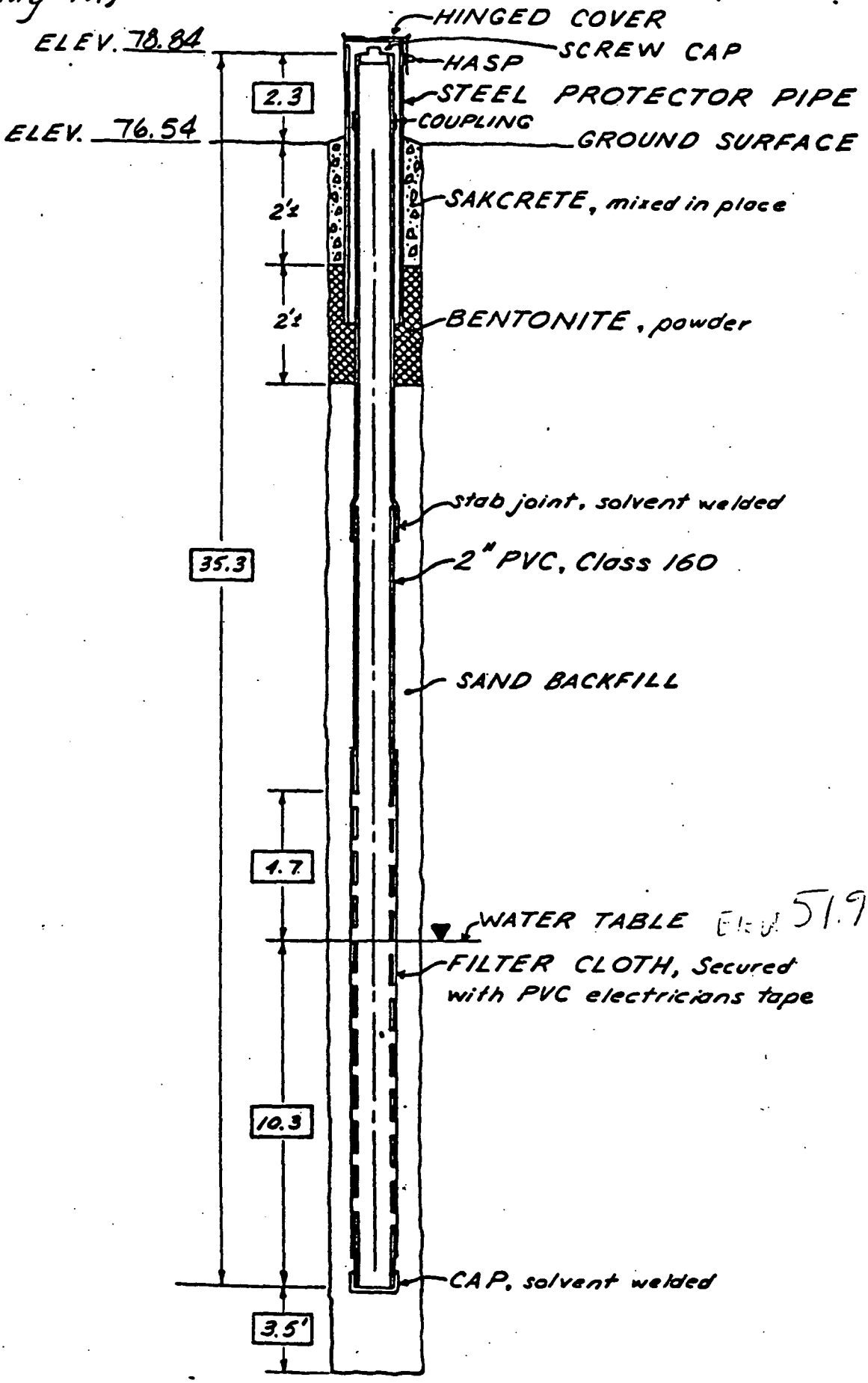
DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	BAILED DEPTHS	WATER LEVEL
10-8	1525	26.5'	24.5'	24.3'	to	22.5'
10-8	1545	31.5'	29.5'	29.8'	to	22.8'

START 10-8-81 COMPLETE 10-8-81 @ 1615

METHOD HSA 0-34.5'

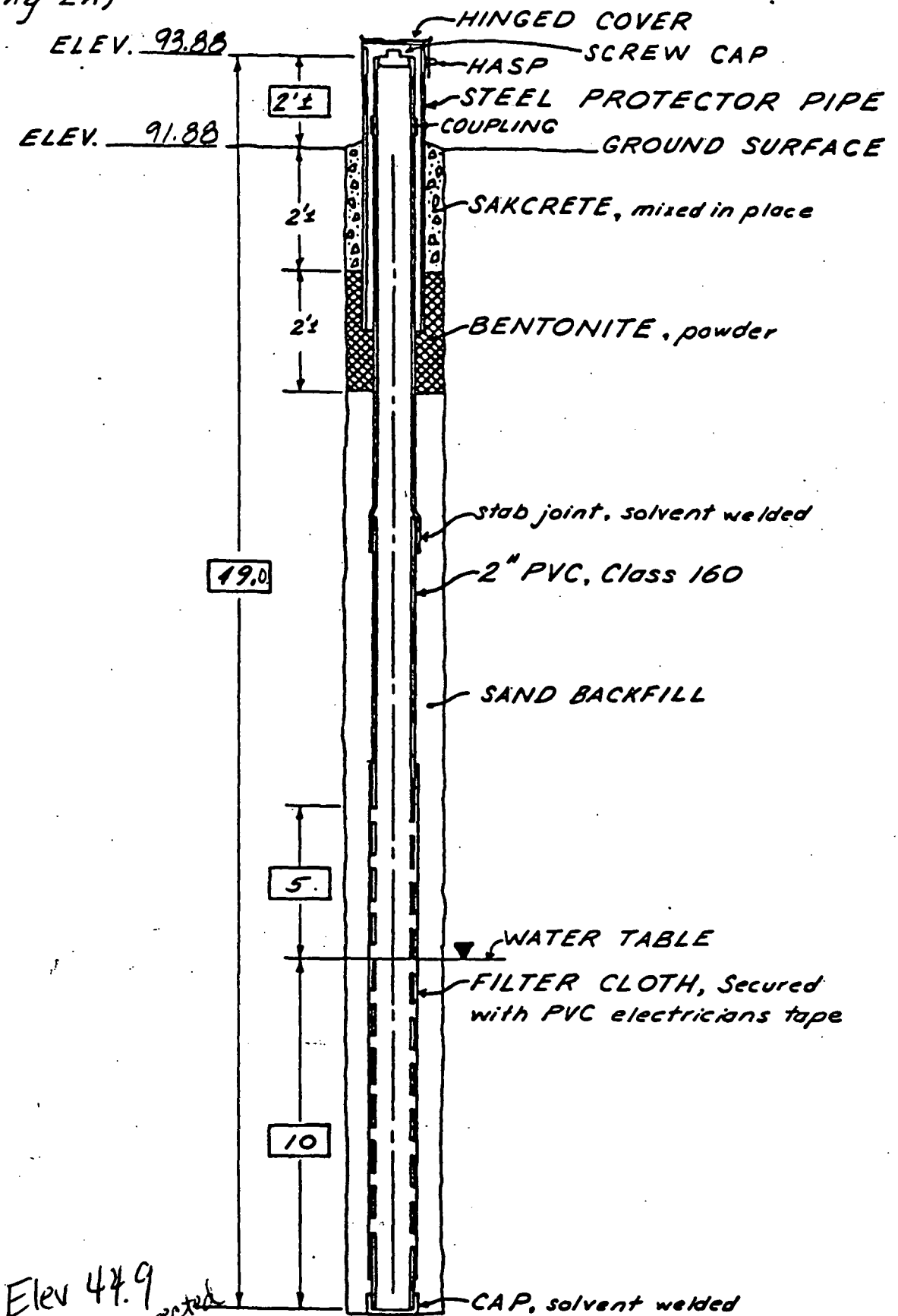
DC

WELL 4 - RIPON
(Boring 4A)



WELL 2 - RIPON
(Boring 2A)

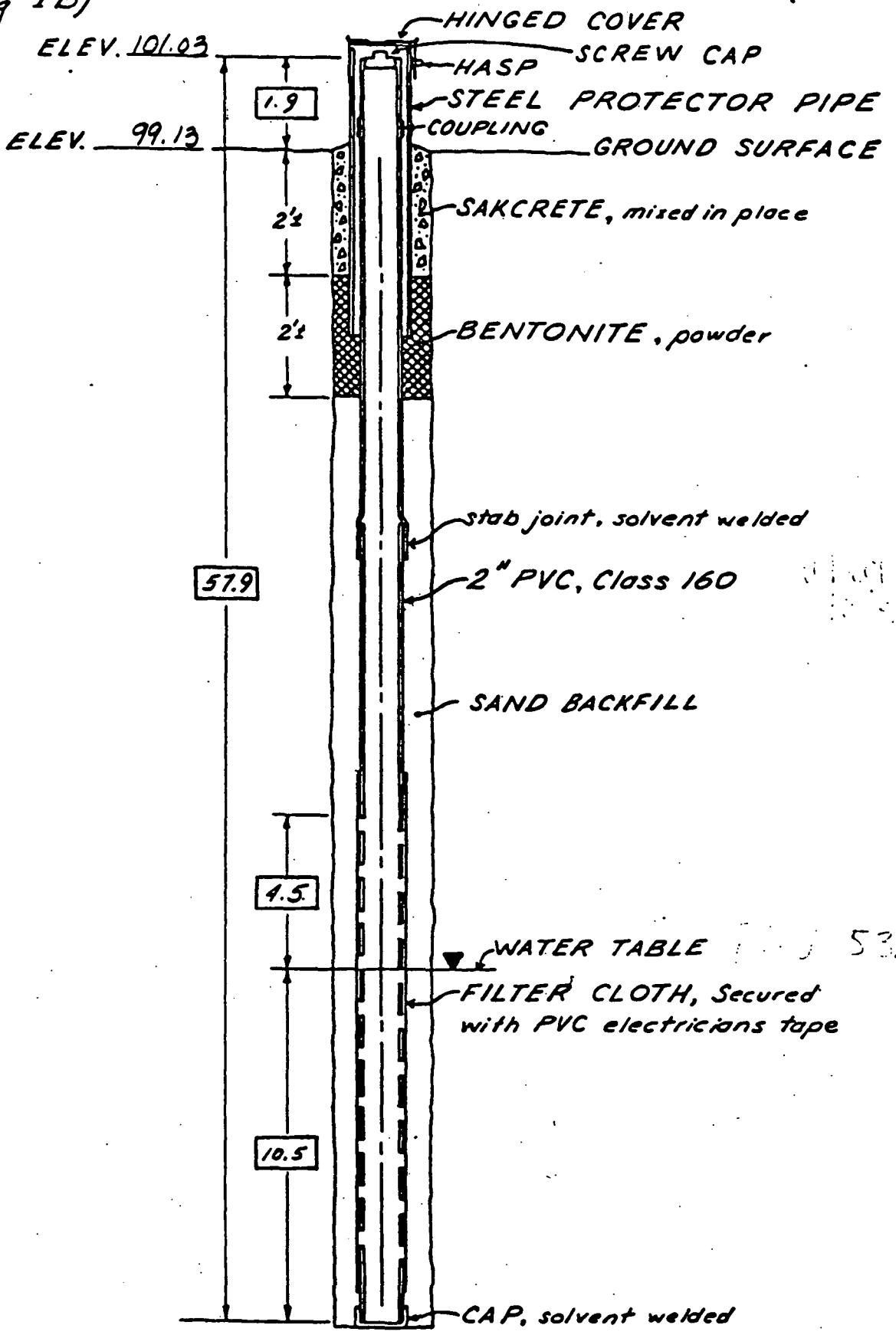
DC



Elev 44.9
(~~REV~~ corrected in Jan 29, 82 letter)

SOIL TEST BORINGS	JOB NO. 97-1783	SCALE: None	DRAWN BY HALE	CHECK

WELL #1 - RIPON
(Boring 1B)



SOIL TEST BORINGS	JOB NO. 97-1783	SCALE: None	DRAWN BY BMI	CHECKED BY

APPENDIX C

WISCONSIN UNIQUE WELL NUMBER GD 351

Property Owner: Kenneth Bosveld — Telephone Number: 414-748-2016

Mailing Address: N8863 Koro Rd.

City: Ripon — State: Wi — Zip Code: 54971

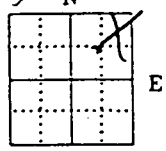
County of Well Location: Fond du Lac — County Well Location Permit No.: W — Well Completion Date: 6-31-99 (M M D D Y Y)

Well Constructor (Business Name): Zoellner Central Well Drilling — Registration #: 2578

Address: P.O. Box 405

City: Brandon — State: Wi — Zip Code: 53919

2. Mark well location in correct 40-acre parcel of section.



1. Location (Please type or print using a black pen.)

☒ Town ☐ City ☐ Village of Ripon — Fire # (if available)

Grid or Street Address or Road Name and Number (if available)

Subdivision Name — Lot # — Block #

Gov't Lot # ___ or NE ¼ of NE ¼ of Section 18 : T 16 N; R 14 ☒ E ☐ W

3. Well Type ☐ New ☒ Replacement ☐ Reconstruction

of unique well # _____ constructed in 19 ____

Reason for new, replaced or reconstructed well? Old Well Contaminated

4. Well serves 1 # of homes and/or _____ (ex: barn, restaurant, church, school, industry, etc.)

High Capacity Well? ☐ Yes ☒ No

High Capacity Property? ☐ Yes ☒ No

☒ Drilled ☐ Driven Point ☐ Jetted ☐ Other _____

5. Well Located on Highest Point of Property, Consistent with the General Layout and Surroundings? ☐ Yes ☐ No If no, explain on back side.

Well Located in Floodplain? ☐ Yes ☐ No

Distance In Feet From Well To Nearest:

420 1. Landfill Variance Recieved
227 2. Building Overhang
50 3. Septic or Holding Tank
75 4. Sewage Absorption Unit
___ 5. Nonconforming Pit
___ 6. Buried Home Heating Oil Tank
___ 7. Buried Petroleum Tank
___ 8. Shoreline/Swimming Pool
___ 9. Downspout/Yard Hydrant
___ 10. Privy
___ 11. Foundation Drain to Clearwater
___ 12. Foundation Drain to Sewer
___ 13. Building Drain ☐ Cast Iron or Plastic ☐ Other
___ 14. Building Sewer ☐ Gravity ☐ Pressure ☐ Cast Iron or Plastic ☐ Other
___ 15. Collector or Street Sewer
___ 16. Clearwater Sump
___ 17. Wastewater Sump
___ 18. Paved Animal Barn Pen
___ 19. Animal Yard or Shelter
___ 20. Silo — Type _____
___ 21. Barn Gutter
___ 22. Manure Pipe ☐ Gravity ☐ Pressure ☐ Cast Iron or Plastic ☐ Other
___ 23. Other Manure Storage _____ Other NR 112 Waste Source
___ 24. _____

6. Drillhole Dimensions

Dia. (in.)	From (ft.)	To (ft.)
8 3/4	surface	301
6	301	350

Method of constructing upper enlarged drillhole only.

☒ 1. Rotary — Mud Circulation
☐ 2. Rotary — Air
☐ 3. Rotary — Foam
☐ 4. Reverse Rotary
☐ 5. Cable-tool Bit ____ in. dia.
☐ 6. Temp. Outer Casing ____ in. dia. Removed? ☐ Yes ☐ No If no, explain _____
☐ 7. Other _____

7. Casing, Liner, Screen

Dia. (in.)	Material, Weight, Specification Mfg. & Method of Assembly	From (ft.)	To (ft.)
6	New Black Steel 18.97 # per ft 1780 PSI API 5L Welded Lapweld	surface	301

Dia. (in.)	screen type and material	From	To

8. Grout or Other Sealing Material

Method / Kind of Sealing Material	From (ft.)	To (ft.)	Sacks Cement
Pressure Mud + Cuttings	surface	6	
Cement	6	301	65

DNR USE ONLY

9. Geology — Type, Caving/Noncaving, Color, Hardness, Etc.

From (ft.)	To (ft.)	
surface	6	Clay
6	26	Gravel
26	49	Sand + Gravel
49	52	Shale
52	91	Sand & Gravel
91	129	Clay
129	142	Sandy Clay
142	175	Clay
175	225	Sandstone
225	227	Shale Layer

10. Static Water Level: ____ ft. above ground level; 52 ft. below ground surface

11. Pump Test: Pumping Level 75 ft. below surface; Pumping at 15 GPM for 3 hours

12. Well Is: 12 in. ☒ Above ☐ Below Grade; Developed? ☒ Yes ☐ No; Disinfected? ☒ Yes ☐ No; Capped? ☒ Yes ☐ No

13. Did you permanently seal all unused, noncomplying, or unsafe wells? ☐ Yes ☐ No If no, explain _____

14. Signature of Point Driver or Registered Driller: Larry J. Slager — Date Signed: 6-5-99

Signature of Drill Rig Operator: Same — Date Signed

Make additional comments on reverse side about geology, etc.

WELL CONSTRUCTION REPORT

Dept. of Natural Resources — Form 3300-5 — Rev. 7-91

(1) GENERAL INFORMATION

Well/Drillhole Location

County: Fond Du Lac

NE 1/4 of NE 1/4 of Sec. 18 ; T. 16 N; R. 14 ☒ E ☐ W

(If applicable) Gov't Lot ____ Grid Number ____

Civil Town Name: Ripon

Street Address of Well: N8863 Knox Rd

City, Village:

Date of Abandonment: 7/12/90

(2) FACILITY NAME

Original Well Owner (If Known):

Present Well Owner: Kenneth Rosseld

Street or Route: N8863 Knox Rd

City, State, Zip Code: Ripon Wis 54971

Well Number and or Name (If Applicable): CB 577

Reason For Abandonment: Well is Contaminated

WELL/DRILLHOLE INFORMATION

(3) Original Well/Drillhole Construction Completed on (Date) 6/3/89

☒ Water Well ☐ Drillhole

Construction Report Available? ☒ Yes ☐ No

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (Specify)

Well Type:
☐ Unconsolidated Formation Well ☒ Bedrock Well

Total Well Depth (ft.) 350 Casing Diameter (ins.) 6"

Casing Depth (ft.) 301

Was Well Annular Space Grouted? ☒ Yes ☐ No ☐ Unknown
If Yes, To What Depth? 301 Feet

(4) Depth to Water (Feet) 55

Pump & Piping Removed?	☒ Yes	☐ No	☐ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☒ Yes	☐ No	

If No, Explain

Was Casing Cut Off Below Surface?	☐ Yes	☒ No
Did Sealing Material Rise to Surface?	☒ Yes	☐ No
Did Material Settle After 24 Hours?	☐ Yes	☒ No
If Yes, Was Drillhole Retopped?	☐ Yes	☐ No

(5) Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☒ Conductor Pipe-Pumped
☐ Dump Bailer ☐ Other (Explain)

(6) Acceptable Sealing Materials
(Neat Cement Grout) Concrete Grout; Concrete; Clay Slurry; Sodium Bentonite Slurry

(7) Kind of Sealing Material	From (Ft.)	To (Ft.)	No. Yards or Sacks Sealant	Mix Ratio or Mud Weight
Neat Cement Grout	Surface	350	68	

(8) Comments:

(9) Name of Person or Firm Doing Sealing Work: Boettcher Centaur Well Drilling

Signature of Person Doing Work: Tom Oft — Date Signed: 7/12/90

Street or Route: P.O. Box 405 — Telephone Number: (414) 346-5114

City, State, Zip Code: Brandon Wis 53919

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected	District/County
Reviewer/Inspector	
Follow-up Necessary	

DNR/COUNTY

DNR/COUNTY

3/4 mile well

APPENDIX D

WELL CONSTRUCTOR'S REPORT

Wel-6

JUN 22 1972

WHITE COPY - DIVISION'S COPY
GREEN COPY - DRILLER'S COPY
YELLOW COPY - OWNER'S COPY

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
Box 450
Madison, Wisconsin 53701

1. COUNTY: Fond du lac

CHECK ONE: ☐ Town ☐ Village ☒ City

NAME: Ripon

2. LOCATION (Number and Street or ¼ section, section, township and range. Also give subdivision name, lot and block numbers when available.)

NW ¼ of NW ¼ of SW ¼, Section 17, Town 16N, Range 14E.

3. OWNER AT TIME OF DRILLING

Wisconsin Power & Light Company

4. OWNER'S COMPLETE MAIL ADDRESS

Ripon, Wisconsin

5. Distance in feet from well to nearest: (Record answer in appropriate block)

BUILDING	SANITARY SEWER C. I.	SANITARY SEWER TILE	FLOOR DRAIN C. I.	FLOOR DRAIN TILE	FOUNDATION DRAIN SEWER CONNECTED	FOUNDATION DRAIN INDEPENDENT	WASTE WATER DRAIN C. I.	WASTE WATER DRAIN TILE

CLEAR WATER DRAIN C. I.	CLEAR WATER DRAIN TILE	SEPTIC TANK	PRIVY	SEEPAGE PIT	ABSORPTION FIELD	BARN	SILO	ABANDONED WELL	SINK HOLE

OTHER POLLUTION SOURCES (Give description such as dump, quarry, drainage well, stream, pond, lake, etc.)

6. Well is intended to supply water for:

Municipality (Ripon, Wisconsin)

7. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
24"	Surface	114'	23"	114'	320'

8. CASING, LINER, CURBING, AND SCREEN

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
24"	3/8 wall steel black A53 Grade B welded	Surface	114'
16"	3/8 wall black A53 Grade B welded	6"+ 12"+	135'

9. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
Neat Cement	Surface	135'

10. FORMATIONS

Kind	From (ft.)	To (ft.)
Clay	Surface 0'	3'
Sand, gravel with streaks of clay	3'	40'
Hardpan	40'	43'
Fine muddy sand streaks with clay and large rock	43'	58'
Hardpan and boulders	58'	101'
Streaks of hardpan, muddy sand and broken sandstone	101'	114'
Sandstone with streaks of shale	114'	118'
Shale	122'	127'
Sandstone with streaks of shale	127'	133'
Red sandstone	133'	154'
Yellow sandstone	154'	170'
Yellow-brown sandstone	170'	215'
White to pink sandstone	215'	275'
Red sandstone with shale	275'	295'
Red and pink sandstone	295'	320'

Well construction completed on June 19 72

Well is terminated 12 inches ☒ above ☐ below final grade

Well disinfected upon completion ☒ Yes ☐ No

Well sealed watertight upon completion ☒ Yes ☐ No

11. MISCELLANEOUS DATA

Yield test: 12 Hrs. at 395 GPM

Depth from surface to normal water level 19' 5" ft.

Depth to water level when pumping 130 ft.

Water sample sent to State laboratory on: May 23, 19 72

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, type of casing joints, method of finishing the well, amount of cement used in grouting, blasting, subsurface pumprooms, access pits, etc., should be given on reverse side.

SIGNATURE: T. E. Leicht

LAYNE-NORTHWEST COMPANY
Registered Well Driller

COMPLETE MAIL ADDRESS
6005 West Martin Drive

Please do not write in space below T. E. LEICHT/ls 6-2

GAS - 24 HRS GAS - 48 HRS CONFIRMED REMARKS

WELL CONSTRUCTOR'S REPORT

Wel–6

MAR 25 1971

WHITE COPY – DIVISION'S COPY
GREEN COPY – DRILLER'S COPY
YELLOW COPY – OWNER'S COPY

STATE OF WISCONSIN FL-360
DEPARTMENT OF NATURAL RESOURCES
Box 450
Madison, Wisconsin 53701

37

1. COUNTY: Fond du Lac

CHECK ONE: ☐ Town ☐ Village ☒ City

NAME: Ripon

2. LOCATION (Number and Street or ¼ section, section, township and range. Also give subdivision name, lot and block numbers when available.)

Sec. 17 T.16 N. - R. 14 E. N.W. 1/4 of the S.W. 1/4

3. OWNER AT TIME OF DRILLING

Wisconsin Power & Light Company

4. OWNER'S COMPLETE MAIL ADDRESS

Ripon, Wisconsin

5. Distance in feet from well to nearest: (Record answer in appropriate block)

BUILDING	SANITARY SEWER C. I.	SANITARY SEWER TILE	FLOOR DRAIN C. I.	FLOOR DRAIN TILE	FOUNDATION DRAIN SEWER CONNECTED	FOUNDATION DRAIN INDEPENDENT	WASTE WATER DRAIN C. I.	WASTE WATER DRAIN TILE

CLEAR WATER DRAIN C. I.	CLEAR WATER DRAIN TILE	SEPTIC TANK	PRIVY	SEEPAGE PIT	ABSORPTION FIELD	BARN	SILO	ABANDONED WELL	SINK HOLE

OTHER POLLUTION SOURCES (Give description such as dump, quarry, drainage well, stream, pond, lake, etc.)

6. Well is intended to supply water for:

Test Well

7. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
8 3/4	Surface	133			
6	133	343			

8. CASING, LINER, CURBING, AND SCREEN

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
6	New, Black, Steel	Surface	133
	18.97 lbs. per. ft.		
	P.E.		
	Rotary		

9. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
Neat Cement - - - - Unable to grout below 120' because shale squeezed in on the casing, unable to get grouting pipe below this.	Surface	120

10. FORMATIONS

Kind	From (ft.)	To (ft.)
(SEE OTHERSIDE FOR FORMATIONS)	Surface	

Well construction completed on 1 - 26 1971

Well is terminated 18 inches ☒ above ☐ below final grade

11. MISCELLANEOUS DATA

Yield test: 72 Hrs. at 288 GPM

Depth from surface to normal water level 19 ft.

Depth to water level when pumping 83 ft.

Well disinfected upon completion ☒ Yes ☐ No

Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to Madison laboratory on: 2 - 16 1971

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, type of casing joints, method of finishing the well, amount of cement used in grouting, blasting, subsurface pumprooms, access pits, etc., should be given on reverse side.

SIGNATURE: Howard S. Zellner Registered Well Driller

COMPLETE MAIL ADDRESS: Brandon, Wisconsin

Please do not write in space below

COLIFORM TEST RESULT	GAS – 24 HRS.	GAS – 48 HRS.	CONFIRMED	REMARKS
File – S.G.S. – LM Dist.				

0	- 5	-	Clay
5	- 50	-	Gravel & Boulders
50	- 60	-	Clay
60	- 80	-	Gravel, Clay & Boulders
80	- 92	-	Limerock
92	- 100	-	Gravel
100	- 105	-	Sand
105	- 120	-	Sandstone Soft (Green)
120	- 126	-	Shale (Red)
126	- 145	-	Sandstone Soft (Green)
145	- 150	-	Sandstone (Green)
150	- 160	-	Sandstone (Red)
160	- 173	-	Sandstone (Yellow)
173	- 175	-	Sandstone (Pink)
175	- 205	-	Sandstone (Yellow)
205	- 208	-	Sandstone (Red)
208	- 210	-	Sandstone (Green)
210	- 213	-	Sandstone (White)
213	- 230	-	Sandstone (Green)
230	- 248	-	Sandstone (White)
248	- 270	-	Sandstone (Pink)
270	- 280	-	Sandstone (White)
280	- 283	-	Sandstone (White-Red layers)
283	- 285	-	Sandstone (White)
285	- 290	-	Sandstone (Pink)
290	- 295	-	Sandstone (White-Red layers)
295	- 316	-	Sandstone (White)
316	- 317	-	Sandstone (Yellow)
317	- 335	-	Sandstone (White)
335	- 343	-	Sandstone (Red)

UNIVERSITY OF WISCONSIN GEOLOGICAL & NATURAL HISTORY SURVEY
1815 University Avenue, Madison, Wisconsin 53706

3/4 mile west

Log No D119-FL-603 (62)

Well name Wisconsin Power & Light Co. Well #9

County: Fond du Lac

R 14E.

T 16 N

Sec. 17

Owner.... Wisconsin Power & Light Co.
Address.. 112 Watson St., P.O. Box 203
Ripon, WI 54971
Driller.. Layne-Northwest Co.
Engineer. Wisconsin Power & Light Co.
Madison, Wisconsin

Completed... 6/72
Field check.
Altitude.... 843' ETM
Use..... Municipal
Static w.l.. 19' 5"
Spec. cap... 3.5 GPM/ft.

Quad. Ripon 7½'

Drill Hole

Dia.	from	to
24"	0	114'
23"	114'	320'

Casing & Liner Pipe or Curbing

Dia.	Wgt.& Kind	from	to
24"	3/8 wall steel bk A53 Grade B welded	+6"	114'
16"	3/8 wall bk A53 Grade B welded	+12"	135'

Grout	from	to
Neat Cement	0	135'

Drilling method:
Samples from 0 to 320' Rec'd:1/5/73

Studied by: Kathleen Massie

Issued: 5/6/83

Formations: Surface, Drift, St. Peter Sandstone.

Remarks: Well tested for 12 hours at 395 GPM with 110' 7" of drawdown.

LOG OF WELL:

	Depths	Graphic Section	Rock Type	Color	Grain Size Mode	Grain Size Range	Miscellaneous Characteristics
SLT.	0-5		Soil	Dk brown	—	—	Little gravel. Trace organic material.
DRIFT	5-10		Gravel	Mxd brown	L peb	Gran/VL peb	Fos dolomite,dol,quartz,cht,dol cem ss,trap,granite, Ltl sand.
	10-15		"	Mxd grey	M peb	Gran/L peb	Same but much sand.
	15-20		Sand	"	C	Vfn/VC	Many dolomite frags. Much gravel. Ltl silt. Trace clay.
	20-25		Gravel	"	M peb	Gran/L peb	Fos dol,dol,qtz,cht,grnt,trap. Much sand(most dolic). Tr silt.
	25-30		Sand	"	C	Vfn/VC	Many dolomite fragments. Much gravel. Trace silt.
	30-35		Gravel	"	L peb	Gran/VL peb	Fos dolomite,dolomite,quartz,chert,trap,granite. Much sand.
	35-40		Sand	Brown	Fn	Vfn/VC	Dolomitic. Much silt. Little clay. Trace gravel.
	40-45		"	"	C	"	Many dolomite fragments. Much gravel. Trace silt.
	45-50		Clay	Gry brown	—	—	Calcareous. Much silt. Little sand.
	50-55		Silt & cl	"	—	—	Calcareous. Little sand. Trace gravel.
	55-60		Snd & silt	"	Fn	Vfn/VC	Calcareous. Much gravel, clay.
	60-65		"	"	"	"	Same.
	65-70		"	"	"	"	"
	70-75		"	"	Fn/M	"	Same but little gravel.
	75-80		Silt & cl	"	—	—	Calcareous. Much sand. Little gravel.
	80-85		Snd & silt	"	M	Vfn/VC	Calcareous. Much clay. Little gravel.
	85-90		Gravel	Bk & grey	Gran	Gran/M peb	Gab, dior, fos dol, dol, qtz, grnt. Much sand.
	90-95		Snd & silt	Gry brown	M	Vfn/VC	Calcareous. Much clay. Little gravel.
	95-100		"	"	"	"	Same but much gravel.
100	100-105		"	Brown	"	"	Little dolomitic clay. Trace gravel.
ST. PETER	105-110		Sandstone	Pl gry bn	M/C	"	Rounded. Much caved gravel.
	110-115		"	V pl bn	M	"	Rounded, Tr G sil cem assoc w/pnk chert. Trace caved gvl & sand.
	115-120		"	Red	Fn	Vfn/VC	Srnd. Ltl V G sil cem,st. Mch hemic sh. Tr cvd gvl & snd,wh siliceous matx.
	120-125		"	Yl red	M	"	See end of log.
	125-130		"	Red	"	"	Same but much hematitic shale.
	130-135		"	Yl red	"	"	Srnd, Mch yl rd shale, Tr dk rd bn ss as above(cvd?),st,Fn glauconite.
	135-140		"	"	"	"	Same, glauconite.
	140-145		"	Dull yl rd	"	"	Srnd. Ltl dull yl rd sh. Tr dk rd bn ss as above(cvd?),st,Fn/M glauconite.
	145-150		"	"	"	"	Same. glauconite.
	150-155		"	Lt brown	"	"	Srnd to sang. Tr sil cem,Fn/M glauc,st,dk rd bn ss(as above,cvd).
	155-160		"	Yl red	"	"	Srnd. Mch yl rd dolic sh, Ltl yl calcus sh(occ in layers?). st. Ltl pl yl shale. Trace Fn/M glauconite.

#9

(63)

Well name: Wisconsin Power & Light Co. Well #9

	Depths	Graphic Section	Rock Type	Color	Grain Size Mode	Grain Size Range	Miscellaneous Characteristics
	[illegible]		Sandstone	Yl red	Fn	Vfn/VC	Srnd. Mch yl rd dolic sh,st. Tr dol cem,Fn glauconite.
	[illegible]		"	Rd yellow	M	"	Srnd. Mch red yellow dolic shale. Ltl silt. Tr Fn-glauconite.
	[illegible]		"	"	Fn	"	Same plus trace good silica cement.
	[illegible]		"	"	Fn&C	"	Srnd. Tr dol & lim cem,pnk cht,Fn glauc. Mch rd yl dolic sh,st.
	[illegible]		"	"	C	"	Same plus trace pale yellow green dolomitic shale.
	[illegible]		"	"	"	"	Same but no glauconite.
	[illegible]		"	"	"	"	Srnd. Trace dolomite cem, pnk chert. Mch rd yl dolic sh, silt.
	[illegible]		"	"	Fn&C	"	Same.
	[illegible]		"	Strg bn	M	"	Same but strong brown shale.
	[illegible]		"	Brown	C	"	Srnd. Tr G dol cem, Fn/M glauc, pl gn sh, pnk cht. Much dolic shale.
	[illegible]		"	"	"	"	Same.
	[illegible]		"	V pl brown	"	"	Srnd to sang. Tr P dol cem,Fn/M-glauc,mfc incl,pnk cht. Ltl silt,shale.
	[illegible]		"	"	M/C	"	Srnd. Tr sil cem,Fn-glauc,mfc incl,pnk cht,silt.
	[illegible]		"	"	"	"	Same.
	[illegible]		"	"	"	"	Same but no cement.
	[illegible]		"	"	C	"	Srnd. Tr pnk cht(w/tr fltg snd),Fn-glauc,mfc incl,pl gn micus shale. Ltl silt.
	[illegible]		"	"	M/C	"	Same but much silt.
	[illegible]		"	Lt rd brown	C	"	Srnd. Mch pnk dolic sh,pnk cht(w/tr rd bn hemic stng,bk hem,thin qtz layers,micus incl). Tr calc xls.
	[illegible]		"	"	"	"	Same plus tr pl gn shale.
	[illegible]		Ss & chert	Rd yellow	M/C	"	See end of log.
	[illegible]		"	"	"	"	Same plus tr mssv glauc, but tr dk rd bn hemic stng.
	[illegible]		Chert	"	—	—	Ltl ss(as above),fltg snd,siliceous pnk sh. Few thin qtz layers.
	[illegible]		Sandstone	Pink	M	Vfn/C	Srnd. Tr G to F Tr st,mssv glauc,bk hem,dk rd bn hemic stng.
	[illegible]		"	"	"	"	Same. sil cem,mssv glauc. Mch pnk sh,st. Ltl cht(as above).
	[illegible]		"	Rd yellow	"	Vfn/VC	Srnd. Tr G silcem,dol,rd yl cht. Mch siliceous rd yl sh. Ltl
	[illegible]		"	Lt red	"	"	Same plus tr wh siliceous & rd bn hemic shale. silt.
	[illegible]		"	"	"	"	Same but much silt.
	[illegible]		"	Rd yellow	M/C	"	Srnd. Mch rd yl siliceous cl. Ltl st. Tr wh siliceous & rd bn
	[illegible]		"	"	"	"	Same. hemic shale.
	[illegible]		"	Pink	M	"	Srnd. Tr G sil cem, dol, pl gn shale. Ltl pnk siliceous shale.
	[illegible]		"	Rd yellow	"	"	Srnd. Mch wh silceous sh,pl gn micus sh,rd bn hemic sh. Tr st.
215	[illegible]		"	Pnk white	"	"	Subrounded. Little caved red yellow shale & sandstone. Trace silt, one quartz granule.

STPETER SANDSTONE

END OF LOG

120-125	Sandstone	Yl red	M	Vfn/VC	Subangular. Little good silica cement. Trace hematitic shale. Much hard dark red brown hematitic very glauconitic Fn sandstone with trace fossil fragments, also with trace silica cemented micaceous & glauconitic sandstone.
255-260	Ss & chert	Rd yellow	M/C	Vfn/VC	Subrounded. Trace calcite cement, black hematite & floating sand (chert), pale green shale. Few quartz layers (chert). Little dark red brown hematitic staining. Much dolomitic pink shale.

FL-153

[illegible] WISCONSIN POWER AND LIGHT CO. WELL, RIPON, WIS.
[illegible] Sec. 21, T. 16 N., R. 14 E.
[illegible] and Seastone, Engineers
[illegible] Contractor, 1931
[illegible] examined by F. T. Thwaites, Nos. 86031-86077
Elevation 925

Formation	Thickness	Depth	Ft.	Description
D	15	0-15	15	Drift, no samples
G-P	65	15-60	45	Dolomite, light gray
		60-80	20	Dolomite, light blue-gray; some sand, shale
St. P	30	80-100	20	Sandstone, coarse to fine, yellowish gray, dol.
		100-110	10	Conglomerate, chert pebs. in hard pink ss.
Lower Mag	130	110-170	60	Dolomite, pinkish gray, cherty, pyritic
		170-200	30	Dolomite, light gray; chert, white
		200-230	30	Dolomite, light gray
		230-240	10	Dolomite, light gray, sandy; shale, green
Tremp	65	240-300	60	Sandstone, coarse to fine, white
		300-305	5	Dolomite, yellowish gray, purple, sandy, glau.
Franconia	185	305-325	20	Sandstone, fine, light yellow-gray, dol, glauc.
		325-335	10	Sandstone, fine to medium, lt. yel.-gray, dol.
		335-385	50	Sandstone, fine, light gray, dolomitic
		385-395	10	No sample
		395-400	5	Dolomite, dark red, sandy, glauconitic
		400-410	10	Sandstone, fine, dark red, dol., glauconitic
		410-420	10	Sandstone, fine to medium, yellowish gray, dol.
		420-425	5	Sandstone, medium to fine, white
		425-430	5	Sandstone, very fine, pink
		430-440	10	No sample
		440-445	5	Sandstone, medium to fine, light pink
		445-450	5	No sample
		450-455	5	Sandstone, medium, light gray
		455-465	10	No samples
		465-470	5	Sandstone, medium to very fine, lt. yel-gray.
		470-490	20	No samples

16" od. pipe
20'3"
13" od. pipe
50
grout
12" hole
10" pipe
97
10" hole

Formations: Drift; Galena-Platteville; St. Peter; Lower Magnesian (Prairie du Chien); Trempealeau; Franconia (may have reached Dresbach)

DRILLED IN 1931 TO 490'
IN LATE 1930'S WAS BACKFILLED
TO ABOUT 380' AND A CONCRETE CAP WAS
PUT DOWN. RECENT MEASUREMENTS
PUT DEPTH AT 357' (E.R. WILLIS - WP&L)

#5

TEST HOLE NO. 1, WISCONSIN POWER AND LIGHT CO., RIPON, WIS.
300' N. of creek on extension of Union St.; SE¼SE¼ sec. 17, T. 16 N., R. 14 E.
I. E. Brown, Driller, 1948 C. H. Dobson, Engineer
Samples examined by F. T. Thwaites, Nos. 140521-140565
Alt. = 850'

DRIFT		0-5	5	Soil, black
		5-10	5	Till, brown-gray, leached
		10-20	10	Till, yellow-gray, dolomitic
		20-30	10	Gravel, stony, gray
	40	30-40	10	Gravel, some sand, pink
ST PETER		40-45	5	Sandstone, fine, pink
		45-50	5	Dolomite, light gray, pink; sh, red; ss, pink
		50-60	10	Sandstone, quartzitic, light gray; shale, red
		60-75	15	Sandstone, medium to fine, light gray, yellow-gray, part quartzitic
		75-95	20	Sandstone, medium to fine, light gray
		95-100	5	Sandstone, medium to fine, light pink
		100-110	10	Sandstone, fine to medium, light pink
		110-115	5	Sandstone, medium to fine, red; shale, red
		115-120	5	Sandstone, fine to medium, pink
		120-130	10	Sandstone, fine to medium, light gray
		130-145	15	Sandstone, medium to fine, light gray
		145-150	5	Sandstone, medium to fine, light gray, dol.
		150-160	10	Sandstone, fine to medium, light pink, dol.
		160-175	15	Sandstone, medium to fine, light gray, dol.
		175-185	10	Sandstone, fine to medium, light gray, dol.
		185-195	10	Shale, red; chert, gray, pink; dolomite, lt.gy
		195-200	5	Sandstone, medium to fine, pink; chert, gy, pk
	185	200-225	25	Chert, gray, pink; some shale, red

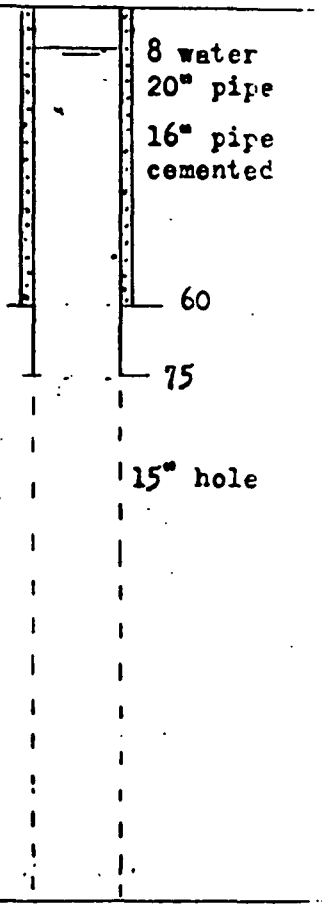
4" hole. Water at 6 Tested at 300 g.p.m. specific capacity = 8.6 g.p.m./ft.

Test No. 1 is ~~now~~ test hole for well #6; see FL-48.

(66)

UNIT WELL NO. 6, WISCONSIN POWER AND LIGHT CO., RIPON, WIS.
SE¼SE¼ sec. 17, T. 16 N., R. 14 E. 10' from test hole
C. F. Dobson, Engineer I. E. Brown, Driller, 1949
Samples examined by J. T. Thwaites, Nos. 147271-147307.
Alt. = 850'

DRIFT		0-5	5		Soil, black, sandy
		5-10	5		Till, rusty gray, weathered
		10-35	25		Gravel, stony to sandy, some coarse
	45	35-45	10		Gravel, stony, red, some clay
ST PETER		45-65	20		Conglomerate, sandstone, fine, red; pebbles dolomite, chert; some shale, red
		65-77	12		Sandstone, medium to fine, light gray, pink
		77-85	8		Sandstone, fine to medium, light gray
		85-90	5		Sandstone, fine to medium, pink, dolomitic
		90-95	5		No sample
		95-100	5		Sandstone, medium to fine, light gray
		100-105	5		Sandstone, medium to fine, light pink
		105-120	15		Sandstone, medium to fine, light pink; shale, red
		120-130	10		Sandstone, fine to medium, light gray
		130-145	15		Sandstone, medium to fine, light gray
		145-155	10		Sandstone, medium to fine, pink
		155-175	20		Sandstone, fine to medium, light gray, dolomitic
	140	175-180	5		Sandstone, fine to medium, lt.gy, red, dol.
		180-185	5		Dolomite, sandy, gray, glauconitic



Tested 5 hours at 550 g.p.m. specific capacity = 10.5 g.p.m./ft.

#6

WISCONSIN GEOLOGICAL SURVEY, Science Hall, University of Wisconsin, Madison, Wis. Log No. P1-351

(67)

Wisconsin Power & Light Well #9, Ripon, Wisconsin
NW, SE, Sec. 21, T 16N, R 14E
Egerer-Galloway Well Corp, Driller - ~~April 24, 1963~~ 3-28-63
Sample Nos. 238564-238603, Examined by M. E. Ostrom - Jan, 1964

	0-5	5		St,dk bn,dolic;P,trMgvl,dol	+2'
	5-15	5		Dol,Myl bn,fn,dns,tr st,tr cl,pyr,snd	13' Water Lvl.
	15-20	5		Dol,Myl bn,fn,dns,mxd,tr cl,st,Mgvl	20"Steel
	20-45	25		Dol,Myl bn,fn,dns,mxd,tr cl,pyr,Mgvl	31' 32' Pipe 19"Hole
	45-60	15		Dol,Myl bn,fn,dsn,mxd,tr cl,pyr,tr snd	16"Temper Steel Pipe 57'
	60-70	10		Dol,Myl bn,mot dk gry,fn,dns,mch cl,tr pyr	67'
	70-75	5		Dol,Myl bn,mot dk gry,M&fn,dsn,mch cl,tr pyr	
75	75-80	5		Dol,dk gry,M&fn,dns,tr yl bn,tr cl,pyr	
5	80-85	5		Sh,lt bl gn,dolic:P,mch dol,tr pyr,snd	
	85-90	5		Dol,Mgry,M,por,tr yl bn,mch pyr,tr snd	
	90-95	5		Dol,Mgry,mot yl bn,M,dns,tr pyr,cl&snd	
	95-100	5		Dol,Mgry,mot yl bn,M&fn,dns,mch pyr,tr cl,snd	
	100-105	5		Dol,Myl bn,mot lt gry,M&fn,dns,tr pyr,cl&snd	
	105-115	10		Dol,Myl bn,mot lt gry,M&fn,dns,tr pyr,cl&snd	
	115-120	5		Dol,Myl bn,mot lt gry,M&fn,dns,mch pyr,tr cl,snd	
	120-125	5		Dol,lt yl bn,M&fn,por,oolc,mch cl,tr pyr	
	125-130	5		Dol,lt yl bn,M&fn,por,oolc,tr rd cl,pyr,snd	
	130-135	5		Dol,lt yl bn,M&fn,por,tr cl,pyr,snd	
	135-140	5		Dol,lt yl bn,M&fn,dns,tr cl,pyr,snd	15"Hole
	140-145	5		Dol,lt yl bn,M&fn,dns,mch pyr	
	145-155	10		Dol,lt yl bn,M&fn,dns,mch pyr,tr cl,snd	
	155-170	15		Dol,lt yl bn,M&fn,dns,tr pyr,tr cl,snd	
	170-175	5		Dol,lt yl bn,M&fn,dns,mch pyr,tr cl	
	175-200	25		Dol,lt yl bn,M&fn,dns,mch pyt,tr cl,snd	
115					200'

Formations: Galena-Platteville, Glenwood, Prairie du Chien

Well tested for 6 hrs. at 380 gpm with 154 feet of drawdown.
Specific capacity = 2.5 gpm per foot of drawdown.

(68)

Wisconsin Power and Light Co., Ripon, Wis.
NE 1/4, Sec. 21, T 16N, R 14E
I. E. Brown, Driller - Nov. 1, 1963
Sample Nos. 243127-243191, Examined by M.E. Ostrom - June, 1964

		0-5	5	St, Mrd bn, Dol, P, mch cl, tr dol	+1'
D	10	5-10	5	St, Myl bn, Dol, P, mch cl, snd, dol	10' 10" Hole, 6" Pipe
		10-20	10	Ss, or bn, M, fn, Sang, Partg, Si, F, trVfn, C, mch st, tr dol	
		20-25	5	Ss, or bn, M, fn, Sang, trVfn, C, mch st, tr stnd pyr	
		25-35	10	Ss, Myl or, M, fn, Sang, trVfn, C, mch st, cem, dol	drill cuttings
		35-45	10	Ss, lt yl or, M, fn, Sang, Partg, Si, P, trVfn, C, tr fe-cem st,	
		45-55	10	Ss, Vlt yl bn, M, C, Sang, Partg, Si, P, trVfn, fn, tr fe-cem	cement grout
S		55-60	5	Ss, Vlt yl bn, M, C, Si, VP, slt tr fn, Vfn, tr Fe-cem gry sts	
T		60-70	10	Ss, lt yl, M, fn, Sang, Partg, Si, VP, trC, tr stnd pyr,	61'59' Water Lvl
		70-75	5	Ss, lt pnk, mot coral yl, M, C, tr fn, trFe-cem, sts	
P		75-80	5	Ss, Vlt yl, M, Srnd, Srnd, tr fn, C, trFe-cem, sts	
		80-85	5	Ss, lt coral, M, fn, Srnd, trC, tr Fe-cem, sts, calc	
E		85-95	10	Ss, Vlt yl, mot pnk, M, Srnd, Partg, Si, P, trC, fn, Fe-cem, sts, calc	
T		95-105	10	Ss, lt yl, mot coral, M, fn, Srnd, Partg, Si, P, trVfn, Fe-cem, dol	
		105-115	10	Ss, lt yl, mot coral, fn, Srnd, Partg, trVfn, M, Fe-cem	
E		115-120	5	Ss, Vlt yl, mot Vlt pnk, M, fn, trVfn, trFe-cem, foss	
		120-130	10	Ss, lt coral, (mxd), M, fn, Srnd, Partg, Si, P, trVfn, tr stnd pyr, C, mst mxd, sh,	6" Hole
R		130-135	5	Sh, mxd, Si, VG, mch snd, calc	
	135	135-145	10	Sh, mxd, Si, VG, mst calc, tr snd	
P		145-150	5	Dol, mxd, Vfn, fn, dns, mch mxd sh, tr calc, snd	
d		150-155	5	Dol, mxd, fn, Sang, Partg, trC, mst sh, calc	
c	15	155-160	5	Dol, mxd, fn, dns, mst mxd, sh, ch, tr snd, calc	
		160-165	5	Ss, rd mxd, M, C, Sang, tr fn, mst mxd sh, calc	
T		165-175	10	Sh, rd mxd, Si, VG, mst snd, calc	
R		175-185	10	Ss, rd mxd, M, C, Sang, Partg, Fe, P, trVC, fn, mch calc sh, sts,	
E		185-195	10	Ss, Mrd, C, VC, Srnd, Partg, trM, tr sh, st	
M		195-205	10	Ss, Mrd, C, VC, Srnd, Partg, trM, fn, tr gn sh, st	
P		205-220	15	Ss, Mrd, fn, C, Sang, Partg, trM, Vfn, tr sh, ch, Fe-cem st,	
E		220-225	5	Ss, Mrd, fn, Vfn, Sang, trC, M, trFe-cem, sh, st	
A		225-230	5	Ss, lt rd, mot dk rd, fn, Vfn, Sang, trC, M, trFe-cem sh, st	
L		230-235	5	Ss, Mrd, Vfn, Sang, Partg, trC, M, fn, trFe-cem, sh, sts	
E	80	235-240	5	Ss, yl rd mxd, Vfn, Sang, trC, M, fn, trFe-cem, sh, sts,	
A		240-245	5	Ss, yl bn mxd, Vfn, Sang, tr fn, M, mch sts, glauc	
U		245-255	10	Ss, lt Myl, M, fn, Ang, Partg, trVfn, tr calc, Fe-cem glauc,	
		255-265	10	Ss, lt Myl, M, fn, Ang, Partg, Calc, P, trVfn, C, tr calc, glauc, Fe-cem	
F		265-270	5	No Sample	
R		270-275	5	Ss, lt pnk, M, fn, Ang, Partg, trVfn, mch calc, trFe-cem	
A		275-285	10	No Sampel	
N		285-295	10	Ss, Vlt yl, M, C, Ang, Partg, Calc, P, tr fn, trFe-cem	
C		295-300	5	Ss, Vlt yl, M, fn, Ang, Partg, Calc, P, trVfn, tr Fe-cem	
O		300-305	5	No Sample	
N		305-310	5	Ss, Mdk rd, Vfn, fn, Ang, Calc, P, mch calc, tr Fe-cem	
I		310-320	10	No Sample	
A	85	320-325	5	Ss, dk rd purp bn, Vfn, fn, trM, mst calc, sts,	325'

Formations: Drift, St. Peter, Prairie du Chien, Trempealeau, Franconia

Well tested for 24 hrs. at 230 gpm with 26 feet of drawdown.
Specific capacity = 8.8 gpm per ft. of drawdown.

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Wisconsin Power & Light Well #8, Ripon, Wis.
Pacific Street, Sec. 21, T16N, R14E
Driller, I.E. Brown - Fall, 1964
Sample Nos. 251501-251565, Examined by M.E. Ostrom - 2-8-65

D	0-45	45		Snd&st, Myl bn, P, Dolc, mch dol	
P	45-6	15		Dol, Myl bn, fn, M, dns	
	6-15	9		Ss, stnd yl rd, M, C, Srnd, Psrtg, tr fn, mch caved dol	
	15-20	5		Ss, Vlt yl, M, C, rnd, Gsrtg, stnd Fe-P, tr lim	
	20-35	15		Ss, Myl, M, C, rnd, Gsrtg, stnd Fe-P, tr lim	
S	35-80	45		Ss, lt yl, M, C, rnd, Gsrtg, Si:P, trFe-cem	
T	80-85	5		Ss, lt yl, M, C, rnd, Psrtg, Si:P, tr fn, Vfn	
P	85-95	10		Ss, lt yl, M, C, rnd, Psrtg, Si:P, tr fn, Vfn	
E	95-100	5		Ss, lt yl, M, fn, rnd, Psrtg, trVfn, C	
T	100-105	5		Ss, lt yl, M, fn, rnd, Psrtg, Si:P, trC, tr stnd pyr	
E	105-110	5		Ss, Vlt or pnk, M, fn, rnd, Psrtg, Si:P, trC	
R	110-115	5		Ss, Vlt yl bn, M, fn, Srnd, Gsrtg, Si:F, trC, tr sh	
	115-120	5		Sh&Sts, Vmxd, Si:G, trVC, cem, rd Ss	
119	120-125	5		Ss, Vlt-lt rd, M, fn, Srnd, Psrtg, Si:F, mch mxd sh	
	125-130	5		Dol, lt gry bn, fn, M, dns, trC, tr mxd sh	
	130-135	5		Dol, lt gry bn, fn, M, dns, trC, tr lt rd, tr mxd sh	
	135-140	5		Dol, lt gry bn, fn, M, dns, trC, tr lt rd, mxd Ss, tr mxd sh	
P	140-145	5		Dol, lt gry bn, fn, M, dns, trC, mch mxd sh	
	145-150	5		Dol, lt gry bn, fn, M, dns, trC, mch mxd sh, tr pools	
d	150-155	5		Ss, lt gry bn, M, C, Srnd, Psrtg, tr fn, mch dol, tr pools	
	155-160	5		Cht, mostly wh&gry, ltl bn, tr dol, Ss, sh, calc	
u	160-175	15		Cht, stnd rd, tr calc	
	175-180	5		Cht, stnd rd, tr calc, sh	
C	180-185	5		Ss, mxd rd, fn, C, Sang, Psrtg, Si:F, trM, tr pools, sh, ch	
60	185-190	5		Ss, lt rd, M, C, Srnd, Psrtg, Si:P, tr fn, VC	
	190-215	25		Ss, Vlt rd, M, C, Srnd, Psrtg, Si:P, tr fn, VC	
T	215-225	10		Ss, Vlt rd, fn, C, Srnd, Psrtg, Si:P, trM, VC, tr sh	
R	225-232	7		No Sample	
E	232-240	8		Ss, Mrd, fn, Vfn, Srnd, Psrtg, VG:Si, tr M	
M	240-245	5		Ss, Myl bn, mxd, fn, Vfn, Srnd, Psrtg, VG:Si, trM, mch glauc	
P	245-250	5		Ss, Vlt yl rd, M, fn, Srnd, Psrtg, mch calc, glauc, dol	
	250-255	5		Ss, Vlt yl rd, M, fn, Srnd, Psrtg, trVfn, tr calc, dol	
	255-260	5		Ss, Vlt yl, M, Srnd, Gsrtg, tr glauc	
F	260-265	5		Ss, lt yl, M, C, Srnd, Psrtg, Calc:F, tr fn, Vfn, VC	
R	265-270	5		Ss, lt yl, M, C, Srnd, Calc:F, tr fn, tr glauc	
A	270-275	5		Ss, lt yl, C, VC, Srnd, Psrtg, Calc:F, trM, fn	
N	275-285	10		Ss, Vlt yl rd, M, fn, Srnd, Psrtg, Calc:F, trVfn, C	
C	285-290	5		Ss, Vlt yl rd, M, C, Srnd, Psrtg, Calc, F, trVfn, fn	
O	290-295	5		Ss, lt yl, M, fn, Srnd, Psrtg, Calc:F, trVfn	
N	295-302	7		Ss, lt yl, M, fn, Srnd, Psrtg, Calc:F, trVfn, C, tr foss	
I	302-308	6		"Washed out" No Sample	
A	308-310	2		Ss, lt rd, M, fn, Srnd, Psrtg, Calc:G, trCs, tr foss	
72	310-312	2		Ss, lt yl rd, M, fn, Srnd, Psrtg, Calc:F, trCs, tr foss	

+? 3"hole ce... 6, 23"cas-... ing 16"O.D., 3/... wal... 45'water level 15" hole 312'

Formations: Drift, Platteville, St. Peter, Prairie du Chien, Trempealeau, Franconia,
Well tested for 3 hours at 790 gpm with 465 feet of drawdown.
Specific capacity = 16.97 gpm per foot of drawdown.
Driller reports a total depth of 300' ±

#8

1815 University Avenue, Madison, Wisconsin 53706 Sample Nos.Selective Retention

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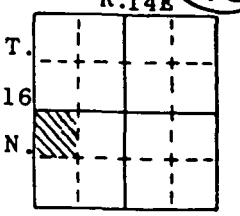
Well name Wisconsin Power & Light Co. Test Hole #9-A
Ripon Township
Owner.... Wisconsin Power & Light Co.
Address.. Ripon, Wisconsin

Driller.. Zoellner Well Drilling Co.
Engineer.

County: Fond du Lac
Completed... 1/26/71
Field check.
Altitude.... 840' ETM
Use..... Test
Static w.l.. 19'
Spec. cap... 4.5



Quad. Ripon 7½'

Drill Hole						Casing & Liner Pipe or Curbing							
Dia.	from	to	Dia.	from	to	Dia.	Wgt.& Kind	from	to	Dia.	Wgt.& Kind	from	to
8 3/4"	0'	133'	6"	133'	343'	6"	New Black, Steel 18.97 lbs. per ft. P.E. Rotary	+18"	133'				

Grout: Kind	from	to
Neat Cement	0'	120'

Samples from 0' to 343' Rec'd: 3/29/71 Studied by: M. Roshardt Issued: 1/5/72

Formations: Drift, Jordan Formation, Sandstone (Tunnel City Group and older formations)

Remarks: Well tested 72 hours at 288 gpm with 64 feet of drawdown.
Formations revised - 12/7/82 - RMP.

LOG OF WELL:

	Depths	Graphic Section	Rock Type	Color	Grain Size Mode	Grain Size Range	Miscellaneous Characteristics
	0-5 S		Silt	Brown	--	--	Clayey. Trace sand.
	5-10		Gravel	Mixed	S peb	Gran/S peb	Little sand, calcareous clay.
	10-15 S		"	"	"	"	--
D	15-20		"	"	Gran	"	--
R	20-25		"	"	S peb	"	--
I	25-30		"	"	Gran	"	--
F	30-35		"	"	"	"	--
T	35-40		"	"	S peb	"	Little calcareous clay, sand.
	40-45		"	"	"	"	--
	45-50 S		"	"	"	"	--
	50-55 S		Clay	Pnk brown	--	--	Calcareous. Little sand. Trace gravel.
	55-60		"	"	--	--	Same
	60-65 S		Gravel	Mixed	Gran	Gran/S peb	Trace calcareous clay.
	65-70 S		"	"	S peb	"	Same
	70-75 S		"	"	"	"	"
	75-80 S		"	"	"	"	"
	80-85 S		"	"	"	--	--
	85-90 S		"	"	"	--	--
	90-95 S		"	"	"	--	--
105'	95-100S		"	"	"	--	--
	100-105S		Sand	Orange gry	M & C	Pn/C	--
Jor.	105-110S		Sandstone	Pink gray	C	Pn/VC	Trace dolomite cement. M glauconite.
15'	110-115		"	"	"	"	Same
	115-120		"	"	"	"	"
S	120-125S		Shale	Red brown	--	--	Little sand, hematitic-glauconitic dolomite.
A	125-130S		Sandstone	Pale gray	M	Fn/C	Trace M/C glauconite.
N	130-135		"	"	"	"	Little M/C glauconite.
D	135-145		"	"	M & C	"	Same
S	145-148		"	"	M	"	"
T	148-150S		"	Yellow gry	"	"	Same plus trace white chert.
O	150-151S		"	Pl pur gry	"	"	Little M/C glauconite. Trace hematite coatings.
N	151-180S		"	Orange bn	Fn & M	"	Little hematitic dolomite cement. Trace green shale.
E							

Well name: Wisconsin Power & Light Co. Test Hole #9-A

(71)

Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
				Mode	Range	
160-170S		Sandstone	Pl yl gry	M	Fn/C	Trace dolomite cement.
170-173		"	"	"	"	Same
173-175		"	Yl or gry	C	"	Trace dolomite cement, orange chert, green micaceous sh.
175-180		"	"	"	"	Same but no shale.
180-185S		"	"	"	"	Same plus few feldspar grains.
185-195		"	"	"	Fn/VC	Same but no feldspar.
195-200		"	"	M &VC	"	Same plus trace green shale.
200-205S		"	"	M & C	"	Same but no shale.
205-208S		"	Red brown	"	Fn/C	Much dolomite cement, M/C glauconite.
208-210S		"	Yl gn gry	C	Fn/VC	Much M/C glauconite. Trace dolomite cement.
210-215S		"	Pl yl gry	C &VC	M/VC	--
215-220		"	"	C	"	Little M/C glauconite, orange & cream cherts.
220-225		"	"	"	"	Trace glauconite, chert.
225-230S		"	"	M & C	Fn/VC	Same
230-235S		"	"	"	Fn/C	Trace chert.
235-240S		"	"	"	"	Trace chert, glauconite.
240-248S		"	"	C	"	Trace chert.
248-250S		"	Purple bn	M	"	Much orange chert. Little red shale.
250-255S		"	Orange tan	"	"	Much orange chert. Trace red shale, muscovite.
255-265S		"	"	"	"	Much orange chert.
265-270S		"	"	M & C	"	Same
270-275S		"	Yellow gry	M	"	Little orange & white cherts.
275-280S		"	"	"	Fn/VC	Same
280-283S		"	Pink gray	"	"	Trace orange & white cherts, hematite coatings.
283-285S		"	Yellow gry	"	"	Little orange & white cherts.
285-290S		"	"	"	Fn/C	Same
290-295S		"	Pink gray	C	M/C	--
295-305S		"	Pl yl gry	M & C	Fn/C	Trace orange & white cherts.
305-310S		"	Pink gray	"	"	Same
310-315S		"	"	"	"	Trace white chert.
315-316S		"	"	M	"	Same
316-317S		"	Yellow gry	"	"	Trace white chert, purple-red mottled micaceous shale.
317-325S		"	"	M & C	"	Same
325-330S		"	"	C	Fn/VC	"
330-335S		"	"	M & C	Fn/C	"
335-340S		"	Red brown	M	"	Same plus much hematite coatings.
340-343S		"	Purple bn	"	"	Much siliceous mottled red-white shale. Tr white chert.

SANDSTONE

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END OF LOG

*Unable to define sandstone formation on basis of samples without study of the area. The sandstone contains glauconite characteristic of the Tunnel City Group.

APPENDIX E

WISCONSIN GEOLOGICAL SURVEY, Science Hall, Madison, Wisconsin — Log No. Gl-28

GREEN LAKE VILLAGE WELL NO. 1, GREEN LAKE, WISCONSIN
NE¼, SW¼, NE¼, Sec. 21, T 16N, R 13E, City Park, Green Lake, Wis. Clarence Hoffman Util. Supt.
Layne-Northwest Co., Driller, February 1959
Sample Nos. 210146-210225 - Examined by M. E. Ostrom

	0- 10	10		Clay & silt, moderately brown, rare white chert pebbles & granules, sandy	—	8' water
	10- 15	5		Clay & silt, light brown, little fn wh cht gvl		18" hole
	15- 25	10		Clay & silt, pale brown, dolomitic		18" pipe
	25- 35	10		Sand, dark yellowish brown, silty & gravelly, mch dolomite		
40	35- 40	5		Gravel, DkYl bn, fn gvl to M snd, sme, P srtg		39'
	40- 50	10		Sandstone, pale reddish brown, M-C, rnd, G srtg, mch rd glauconitic siltstone		12" pipe
	50- 55	5		Ss, pl rd bn, C-fn, rnd, mch rd glauconitic sts		17" hole
	55- 65	10		Sandstone, pl rd bn, C-fn, rnd, G srtg, 80% rd glauconitic siltstone		
	65- 70	5		Ss, bn, C-fn, rnd, G srtg, 80% glauc stn, ltl yl sh		70'
	70- 85	15		Siltstone, rd gry, glauconitic, & sandstone, bn, C-fn, rnd, G srtg, some greenish shale		72'
85	85-100	15		Sandstone, moderate yellowish brown, coarse to very fine grained, well rounded, poorly sorted, P cem-col, glauconitic, silty		
	100-110	10		Sandstone, mod yl bn, C-V fn, Srnd, P srtg, P cem dol, glauconitic, silty		
	110-135	25		Sandstone, mod yl bn, C-V fn, Srnd, P srtg, scattered aggregates, dolomitic, silty		12" hole
	135-145	10		Sandstone, mod bn, C-V fn, rnd, P srtg, mch rd bn glauconitic aggregates of fine sand, silty		
	145-150	5		Ss, mod bn, C-Vfn, G srtg, rnd, mch glauconite		
	150-155	5		Ss, mod bn, C-Vfn, rnd, P srtg, mch bn glauconite		
80	155-165	10		Sandstone, mod bn, C-V fn, rnd, P srtg, G cem col, cherty		
	165-175	10		Sandstone, pl yl bn, C-V fn, P srtg, rnd, cherty		
	175-190	15		Sandstone, pl yl bn, C-V fn, P srtg, rnd, cherty, with rare reddish aggregates of very fine quartz grains		
	190-205	15		Sandstone, pl yl bn, C-V fn, P srtg, Sang, cherty, with rare reddish sand aggregates of V fn qtz		
	205-220	15		Sandstone, pl yl bn, C-V fn, P srtg, Srnd, some silica cemented sand aggregates		

PRECAMBRIAN

UNIVERSITY OF WISCONSIN GEOLOGICAL & NATURAL HISTORY SURVEY
1815 University Avenue, Madison, Wisconsin 53706

Log No. J9-GL-52

Well name Green Lake City Well #2

Owner.... City of Green Lake
Address.. 534 Mill St.
Green Lake, WI 54941
Driller.. Milsoger Well & Pump Co.
Engineer.

County: Green Lake

Completed... 8/5/78
Field check.
Altitude.... 835' ETM
Use..... Municipal
Static w.l.. 39'
Spec. cap... 10 GPM/ft

R.13 E.
T. 16 N.
Sec. 22

Quad. Green Lake 7½'

Drill Hole						Casing & Liner Pipe or Curbing					
Dia.	from	to	Dia.	from	to	Dia.	Wgt.& Kind	from	to	Dia.	Wgt.& Kind	from	to
18"	0	25'	12"	108'	396'	18"	steel-3/8"-70#/ft.	0	~~20'~~ 25'				
17"	25'	108'				12"	steel-3/8"-50#/ft. ASTM-53 Grade B	+18"	108'				

Drilling method: Cable Tool
Samples from 0 to 400' Rec'd: 5/25/79

Studied by: Kathleen Massie

Grout	from	to
Neat Cement	0	108'

Issued: 12/23/82

Formations: Drift, Prairie du Chien Group, Jordan Formation, St. Lawrence Formation (Lodi Siltstone), Tunnel City Group, Elk Mound Group.

Remarks: Well driller reports total well depth of 396'.
Well tested for 24 hours at 400 GPM with 39 feet of drawdown.
Most of the sandstone shows a secondary quartz growth that give the grains an irregular shape. This was not included in determining grain rounding.

LOG OF WELL:

	Depths	Graphic Section	Rock Type	Color	Grain Size Mode	Grain Size Range	Miscellaneous Characteristics
	0-5		Gravel	Lt yl bn	Gran	Gran/L peb	Dol,sol dol & cht,fos dol & cht,cht,grnt,trap, Mch snd, Ltl st.
Drift	5-10		"	"	S peb	Gran/M peb	Same.
20'	10-15		"	"	"	"	"
	15-20		"	"	Gran	"	Same plus pink silica cemented sandstone.
	20-25	G	Dolomite	"	M	Fn/M	Tr Vfn/Fn fltg snd occuring in layers of high concntrtn, Vfn-glauc,pyrolu,cvd snd & qvl.
P. du C.	25-30	A G	"	Pl brown	"	"	Same plus tr wh cht(some sol).
25'	30-35	G A	"	"	"	"	Same.
	35-40		"	Lt grey	"	"	Trace white to clear quartz crystals associated with pyrite.
	40-45	G	"	"	"	"	Tr wh qtz xls,Vfn-glauc,Vfn-fltg snd, glauc(in all types).
	45-50		Shale	Dusky red	—	—	Hemic, V micaceous, Mch wh to pnk dol,st. Ltl dolic sts. Tr Vfn-
	50-52		Dolomite	"	Fn	Fn/M	Much micaceous hemic shale. Trace dolomite,siltstone,Vfn-glauc.
	52-55		"	Brown	"	"	Much micaceous hemic sh, silt, Ltl dolic sts, Tr Vfn-glauc.
	55-65		Sandstone	Pnk white	M	Vfn/VC	See end of log. hem,cvd glauoic sh,well rnd qtz grans.
	65-70		"	"	"	"	Same, Mch G sU cem. Tr or stng,drsy qtz,cht,cvd
JORDAN	70-75		"	"	Fn&C	"	Srnd & rnd(Grns are irrglr which might show secondary qtz grwth).
	75-80		"	"	"	"	Same but cem assoc w/Fn snd,and mch is frags(45% of samp) introdc
	80-85		"	Lt rd bn	Fn/M	"	See end of log. during drilling?
	85-90		"	"	Fn&C	"	Sang & rnd. Mch v G sil cem(assoc w/Vfn/Fn). Tr cht,Vfn-glauc.
50'	90-95		"	"	Fn	"	See end of log. cvd hemic sh,wh cht is frag.
Lodi 10'	95-100		Siltstone	Rd brn&rd yl	—	—	Calcus. Rd bn is v hemic & micaceous. Mch snd. Tr Vfn-glauc,wh
	100-105		"	"	—	—	Same but ltl limonite(rd yl siltstone). to pnk cht,lim.
TUNNEL CITY	105-110		Sandstone	Lt rd bn	Fn	Vfn/C	Srnd, Mch calcus cem. Ltl st,hem. Tr wh to pnk cht,
	110-115		NO SAMPLE. Driller reports same as following intervals.				w/rd bn),
	115-120		Sandstone	Rd brn&rd yl	Fn	Vfn/C	Srnd, Mch v G dol cem(~45% of sample is dol),Fn-glauc,hem(assoc
	120-125		"	Yellow	M	Vfn/VC	Sang. Mch v G dol cem(~25% of sample),hem, Ltl Fn-glauc, Tr silt
	125-130		"	Brown	M/C	"	Srnd. Mch v G(M-xls)dol cem. Ltl hem,C/VC-glauc, Tr silt.
	130-135		"	"	"	"	Srnd. Mch v G(M-xls)dol cem. Tr M/C glauc,hematite,silt.
	135-140		"	Lt rd yl	M	"	Rnd. Mch v G(M-xls)dol cem. Tr lim cement,Fn-glauc,mfg incl.
	140-145		"	"	M/C	"	Same but little dolomite cement.
	145-150		"	"	"	"	Same but much dolomite cement.
	150-155		"	"	"	"	Same.
	155-160		"	"	"	"	Rounded, Trace good dolomite cement, limonite, silt.

UNIVERSITY OF WISCONSIN GEOLOGICAL & NATURAL HISTORY SURVEY
1815 University Avenue, Madison, Wisconsin 53706

Log No. JG-GL-52

Well name: Green Lake City Well #2

Depths	Graphic Section	Rock Type	Color	Grain Size Mode	Grain Size Range	Miscellaneous Characteristics
160-165		Sandstone	Lt rd yl	M/C	Vfn/VC	Rounded. Trace good dolomite cement, limonite, silt.
165-170		"	"	"	"	Same.
170-175		"	"	"	"	"
175-180		"	Pl yellow	Fn/M	Vfn/C	Srnd. Tr cvd dolomite cement, mafic incl. Ltl fine silt.
180-185		"	"	"	"	Same.
185-190		"	"	"	"	" frags.
190-195		"	Lt brown	C	Vfn/VC	Rnd. Ltl G dol cem(assoc w/Fn/M sand). Tr cvd sts, dol, hem, ig
195-200		"	"	M	"	Rnd to srnd. Ltl G dol & hem cem. Tr lim cem, M-zircon, mfc incl.
200-205		"	"	"	"	Same plus trace cavad igneous fragments. pl on sh.
205-210		Siltstone	Red brown	--	--	Mah rd bn dol, hemic sh, snd(some coarng as layers of ss). Ltl pl
210-215		Sandstone	"	C/VC	Vfn/VC	See end of log. on sh. Tr Fn-glauc, foss frags.
215-220		"	Pink	C	"	Well rounded. Trace siltstone as above, mafic inclusions.
220-225		"	"	"	"	Well rnd. Trace mafic inclusions, cvd sts, wh siliceous shale.
225-230		"	Pnk white	"	"	Well rnd. Tr lim cem, mfc incl, wh sil sh, silt, cvd sts.
230-235		"	"	C/VC	"	Same.
235-240		"	"	"	"	"
240-245		"	White	C	"	Well rnd. Tr mfc incl, wh sil sh, st, cvd sts, M-zircon.
245-250		"	"	"	"	Rnd. Tr F sil cem, mfc & pyr incl, cvd sts, wh sil sh. Mah fine st.
250-255		"	"	"	"	Same.
255-260		"	"	"	"	Rnd. Tr G sil cem, mfc & pyr incl, pyr, wh sil sh. Mah fine silt.
260-265		"	"	"	"	Same.
265-270		"	"	M/C	"	Same plus trace cr stng on cement, plus tr pl on shale.
270-275		"	"	"	"	Rnd. Trace G sil cement, mafic inclusions, fine silt.
275-280		"	"	"	"	Rnd. Tr F sil cem, mfc incl, cvd ig trap, Little fine silt.
280-285		"	"	"	"	Same.
285-290		"	"	M	"	"
290-295		"	"	Fn/M	"	Srnd. Tr F sil cem, mfc incl, wh sil shale, fine silt.
295-300		"	"	"	"	Srnd. Ltl F sil cem, fine silt. Tr mfc incl, wh sil shale, lt gry shale.
300-305		"	"	"	"	Same but trace cement & silt.
305-310		"	"	M	"	Same.
310-315		"	"	"	"	Srnd. Tr F to G sil cem, mfc incl, wh sil sh, lt gry sh, Ltl fine silt.
315-320		"	"	M/C	"	Same.
320-325		"	"	M	"	"
325-330		"	"	"	"	"
330-335		"	"	M/C	"	Srnd. Tr fair silica cement, mafic inclusions, Mah fine silt.
335-340		"	"	"	"	Same plus trace white siliceous shale.
340-345		"	"	"	"	Same.
345-350		"	"	"	"	Srnd. Tr F sil cem, mfc incl, wh sil sh, Ltl fine silt.
350-355		"	"	"	"	Same.
355-360		"	"	"	"	"
360-365		"	"	"	"	Same but trace fine silt.
365-370		"	"	"	"	Srnd. Tr F sil cem, mafic incl, wh sil shale. Little fine st.
370-375		"	"	"	"	Same plus trace pyrite.
375-380		"	"	"	"	Same.
380-385		"	"	"	"	Same but trace fine silt.
385-390		"	"	"	"	Srnd. Tr F sil cem, mfc incl, M-zircon, wh sil sh. Ltl fine st.
390-395		"	"	"	"	Same.
395-400		"	"	"	"	"
		END OF LOG				
55-65		Sandstone	Pnk white	M	Vfn/VC	Subrounded. (Grains are irregular which might indicate extensive secondary quartz growth.) Much good silica cement. Trace orange staining, orange chert, clear druzy quartz, cavad oolitic chert & brown shale, Fn-zircon sand, mafic inclusions, pale green glauconitic shale.
80-85		Sandstone	Lt rd bn	Fn/M	Vfn/VC	Subrounded. Much very good silica cement. Little druzy quartz/chert, igneous fragments (from drilling?), light brown shale, Trace cavad shale/siltstone, silt, mafic inclusions, white siliceous shale.

UNIVERSITY OF WISCONSIN GEOLOGICAL & NATURAL HISTORY SURVEY
1815 University Avenue, Madison, Wisconsin 53706

Log No.J9-GL-52

Well name: Green Lake City Well #2

Depths	Graphic Section	Rock Type	Color	Grain Size		Miscellaneous Characteristics
				Mode	Range	
90-95		Sandstone	lt rd bn	Fn	Vfn/VC	Subangular, little very good silica cement. Trace white chert, Vfn-glauconite, caved hematitic shale, Fn-zircon, mafic inclusions.
210-215		Sandstone	Red brown	C/VC	Vfn/VC	Well rounded. Much siltstone as above but with more dolomite and much M-glauconite.

APPENDIX F

Department of Natural Resources

GROUNDWATER MONITORING INVENTORY FORM
Form 3300-67 Rev. 5-84

File Maintenance Code A — Add (New Facility)
B — Change (Existing Facility)
C — Delete from Inventory

B. GRIGSBY — Form completed and/or submitted by — Date: 10/02/85 (M M D D Y Y)

Directions on reverse side of form. N-NO3

Volatile Organic Sampling Program ☐ Pesticide Program ☐

1. INVENTORY INFORMATION Mandatory Information (See Instructions)

ADAMS ELEMENTARY SCHOOL — Present name of establishment or facility (public system)

42.00.706.40 — Facility I.D. Or check here if new facility ☐

HUB, CHARLES F — Name of owner or manager (Last name first)

414 7486.908 — Area code / Telephone number

METOMEN ST — Address (street or route)

RIPON — Township

RIPON — City

WI — State

54971 — Zip code

FDL — County

20 — Co. code

High cap. permanent well no.

Name of occupant if different than owner (Last name first)

Occupant's address (street or route)

City / State / Zip code

Water system type (check ✓ one)

Non-potable wells
☐ M Monitoring
☐ I Irrigation
☐ X Other

Potable wells
☐ M Community – municipal
☐ O Community – other than municipal
☑ N Non-community
☐ P Private

Well no. / Government lot number

Well location: NW ¼ NW ¼ Sec. 26 T 16 N Town R 14 E Range

2. WELL DATA INCLL CONSTR. REPT

Date well constructed: 8/31/66
Constructed by: R.J. SMARCH & SONS, INC.
Casing depth: 195 ft. Depth to water: 112 ft. Depth to bedrock: 3 ft.
Casing diameter (inches): 6"
Distance casing above or below grade (inches): +/4"
Total well depth: 312.5 ft.
Water bearing formation: ☑ S – Sandstone ☑ L – Limestone ☐ G – Granite ☐ U – Unconsolidated

3. PREDOMINATE LAND USE Mandatory Information (See Instructions)

☐ A – Agricultural ☐ R – Residential ☐ U – Undeveloped
☐ I – Industrial ☐ F – Forestry ☑ C – Commercial

4. ADDITIONAL COMMENTS (Directions To Site, Possible Contaminant Sources, See Back)

RIPON SCHOOL DISTRICT

Well Log

Adams School

NW, NW, Sec 26, T16N, R14E

Sept 1, 1965 report date (well completed 8/31/65)

RE Schafer - driller
RJ

0-5' fill
3-33' broken limestone
33-40 soft limestone
40-55 hard limestone
55-72 lime, thin layers of shale
72-122 lime
122-124 blue shale
124-133 lime
133-144 Green shale
144-179 lime
170-188 sandrock
188-238 lime
238-280 Green shale
280-282 Brown shale
282-275 lime
276-277 shale
277-325 white sandrock
EOB

Adams School (cont)

borehole - 10' to 195'
" " - 6' 195-325

cement grout 0-195
6" steel casing 0-195

well yield 40 gpm at 20 gpm
static water level 112'
pumping water level 151'

Wayside Elem Sch.

(6)

May 15, 1958 R. J. Schafer + Sons

(located in the T1N. R14E, S - unlocatables)

10" 0 - 90'
6" 90 - 240

6" casing 0 - 155'

clay slurry 0 - 90'

3 hrs @ 28 gpm

S ~76'
P - 87'

clay + stones	0 - 18'
hardpan + clay	18 - 56
LS	56 - 60
SS	60 - 220
SS + shale	220 - 230'
SS	230 - 240'

Wayside Elementary School

T76N, R14E
Well completed May 15, 1958
Driller - R J Slager and Sons
Drill hole 10' 0-90'
6" 90-240'

Casing 6" 0-155'

Grout - clay slurry 0-90'

well yield 3 hours at 28 gpm
static water level 76'
pumping water level 87'

Well Log
0-18' clay and stones
18-56' hardpan and clay
56-60' limestone
60-220' sandstone
220-230' sandstone and shale
230-240' sandstone

WISCONSIN GEOLOGICAL SURVEY, Science Hall, Madison, Wisconsin

APPENDIX G

GREEN GIANT COMPANY WELL, RIPON, WISCONSIN
NW¼, SW¼, Sec. 22, T 16N, R 14E
Bergerson & Caswell Well Driller, Driller, May 1959
Sample Nos. 208691-208790 - Examined by J. H. Steuerwald

D	12	0 - 12	12		Till,bn,dolo.,of silt,lit.s & cl. & sm.stones
P		12 - 27	15		Dolomite,light brown-gray & med.gray,weathered?
L		27 - 62	35		Dolomite, medium gray, little dark gray mottling 47-62
A		62 - 72	10		Dolomite, medium brown-gray
T	75	72 - 87	15		Sandstone,vy fine - med.gr.,some cr.gr.ss 82-87, lt.med.gy,vy dolo.,pyritic,lit.med.gy dol.
T		87 - 107	20		Sandstone,fine & med.gr.,lt gy,slightly dolo., pyritic
E		107 - 155	48		Sandstone, fine grained, light gray
S	73	155 - 160	5		Shale,or-gy,vy dolo.,much ss,some dol.,contaminated
T		160 - 220	60		Dolomite, light medium tan-gray, fine grained, dense, large cuttings
P		220 - 245	25		Dolomite, light medium gray
P	85	245 - 255	10		Sandstone,fine gr.,lit.vy cr.gr.,buff,vy dolo.
d		255 - 285	30		Sandstone,vy fine & fine gr.,lt gy,dolomitic
u		285 - 295	10		Siltstone,buff,vy dolo.,sandy,glauc.,lit.red dol.
C		295 - 300	5		Dolomite,red,sandy,silty,glauconitic
H	60	300 - 305	5		Siltstone,buff,some pale red,dolo.,sandy,glauc.
I		305 - 315	10		Sandstone,fine & vy fine gr.,buff,dolo.,glauc.
E		315 - 320	5		Sandstone,med.grained,orange-gray,dolomitic
N		320 - 345	25		Sandstone,medium grained, light cream-gray, some coarse grained 335-340
T		345 - 370	25		Sandstone, fine grained, light cream gray, dolomitic
R		370 - 380	10		Sandstone,fine & vy fine gr.,lt cr-gy,vy dolo.
E		380 - 395	15		Dolomite, red, sandy, glauconitic
M		395 - 400	5		Sandstone,med.-some cr.gr.,pk,vy dolo.,glauc.
P	100	400 - 405	5		Sandstone,med.-coarse,ruff,dolomitic,glauconitic
F		405 - 420	15		Sandstone,medium & coarse grained,cream-buff
R		420 - 425	5		Sandstone,fine & medium grained, pale red
A		425 - 435	10		Sandstone,fine & medium grained, pink-gray
N		435 - 460	25		Sandstone,very fine to med.grained,pale red-gy
C		460 - 465	5		Sandstone, fine grained, light gray
O		465 - 475	10		Sandstone,fine & medium grained, pale red
N		475 - 480	5		Sandstone,fine to vy fine gr.,light pink-gray
I		480 - 540	60		Sandstone,very fine to little medium grained, light pink-gray, no sample 500-505
A					
D					
R					
E					
S					
B					
A					
C					
H					
G					
R					
U					
N	135				

20"pipe 21'

19½"hole

100'water

12"pipe

cement grout 0-260'

260'

12' hole

Formations: Drift, Platteville, St.Peter, Prairie du Chien, Trempealeau, Franconia, Dresbach Group Undivided

WELL #3 PERM WELL #46821

Tested for 133 hours @ 750 to 900 gpm, specific capacity at end of test = 10.3 gpm/ft. of drawdown.

This is to certify that the geological formations shown on this log are based on samples collected at the time of drilling and that the construction shown is correct in all respects.

Signature

OCT 12 1959

Wol 6

WELL CONSTRUCTOR'S REPORT TO WISCONSIN STATE BOARD OF HEALTH

See Instructions on Reverse Side

1. County Fond du Lac — Town ☒ / Village ☐ / City ☐ Ripon (Check one and give name)

2. Location See 22 Town 16 N Range 14 E — (Name of street and number of premise or Section, Town and Range numbers)

3. Owner ☒ or Agent ☐ Green Giant Co - Beaver Dam Wis (Name of individual, partnership or firm)

4. Mail Address Same (Complete address required)

5. From well to nearest: Building____ft; sewer____ft; drain____ft; septic tank____ft; dry well or filter bed____ft; abandoned well____ft. This info obtainable from report of original construction

6. Well is intended to supply water for: Cannery

7. DRILLHOLE:

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
8"	495	580			
(Deepening of original well)					

8. CASING AND LINER PIPE OR CURBING:

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
8"	Schedule #40 - Steel	Surf.	175'
(Liner placed in original well)			

9. GROUT:

Kind	From (ft.)	To (ft.)
Cement	Surf	250'

10. FORMATIONS:

Kind	From (ft.)	To (ft.)
Red Shaly Sandrock	495	505
Gray shaly Sandrock	505	580

RECEIVED
SEP 3 1958
ENVIRONMENTAL SANITATION

Repair ~~Construction~~ of the well was completed on: 8-18 19 58

The well is terminated 18 inches ☒ above, below ☐ the permanent ground surface.

Was the well disinfected upon completion? Yes ✓ No____

Was the well sealed watertight upon completion? Yes ✓ No____

11. MISCELLANEOUS DATA:

Yield test: 24 Hrs. at 350 GPM.

Depth from surface to water-level: 98 ft.

Water-level when pumping: 128 ft.

Water sample was sent to the state laboratory at: ? on ____ 19____
Sent in by owner

Signature Berglund-Boswell Inc / T. B. Boswell (Registered Well Driller)

13120 Wayzata Blvd Hpls 26 Minn (Complete Mail Address)

Please do not write in space below

Rec'd____ No____

Ans'd____

Interpretation____

	10 ml	10 ml	10 ml	10 ml	10 ml
Gas—24 hrs.					
48 hrs.					
Confirm					
B. Coli					

Examiner____

GREEN GIANT
~~CENTRAL WISCONSIN~~ CANNERIES WELL, RIPON, WIS.
NW¼SW¼ sec. 22, T. 16 N., R. 14 E. Elevation about 930
I. E. Brown, Driller, 1946
Samples examined by F. T. Thwaites, Nos. 134843-134935
(202192-202208)

D	0-25	25		Drift, no samples (log: extends to 20)
PLAST	25-40	15		Dolomite, light gray, light blue-gray
	40-65	25		Dolomite, light gray to gray
	65-70	5		Sandstone, fine to medium, light gray
	70-80	10		Sandstone, medium to fine, light gray
	80-110	30		Sandstone, fine to medium, light gray
P	110-115	5		Shale, light red
LOWER	115-135	20		Dolomite, light gray
	135-145	10		Sandstone, fine to medium, lt.gy, dol; sh, gn
	145-185	40		Dolomite, light gray; chert, white
M	185-210	25		Dolomite, gray and pink
	210-220	10		Dolomite, gray
TREM	220-240	20		Sandstone, medium to fine, pink, gray, dol.
	240-260	20		Siltstone, sandy, light gray, dolomitic
	260-280	20		Siltstone, light gray, dolomitic
FRANCONIA	280-305	25		Sandstone, fine to medium, pink, red, dolomitic, glauconitic
	305-310	5		Sandstone, very fine, lt.gray, very dol.
	310-315	5		Siltstone, sandy, gray, dolomitic
	315-320	5		Sandstone, fine to medium, lt.gray, dolomitic
	320-335	15		Sandstone, fine, lt.gray, pink, dolomitic
	335-340	5		Sandstone, medium to fine, light gray
	340-350	10		Sandstone, fine to medium, light gray, dol.
	350-370	20		Sandstone, medium to fine, light gray, dol.
	370-375	5		Sandstone, fine to medium, light gray, dol.
	375-380	5		Sandstone, very fine, pink, dolomitic
	380-395	15		Shale, sandy, gray, red, dolomitic, glauc.
	395-400	5		Sandstone, fine, silty, pink, dolomitic
	400-410	10		Sandstone, medium to coarse, light gray
DEAUC	410-420	10		Sandstone, fine to medium, light gray
	420-430	10		Sandstone, fine, silty, red
	430-455	25		Sandstone, fine to medium, silty, light gray
	455-465	10		Sandstone, medium to fine, light gray
	465-475	10		Sandstone, fine, silty, pink
	475-480	5		Sandstone, medium to fine, white
	480-495	15		Sandstone, fine to medium, light gray

15" pipe
21
12" hole
10" pipe cemented
80' water (original)
98' water after deepening
10" hole
8" liner
175'
hole cemented to 250' and drilled out to 8" hole
250'
water level was 26' in Dec. 1953, and from 87 to 130' in May - June, 1958 before deepening

Formations: Drift; Platteville: St. Peter ; . Lower Magnesian (Prairie du Chien); Trempealeau; Franconia; Dresbach (Galesville); Eau Claire

WELL #2 PERM WELL # 46820

Deepened in 1958 by Bergerson-Caswell, Inc., Drillers

	495-505	10		Sandstone, med. & fine gr., dark red, dolomitic
	505-540	35		Sandstone, medium grained, light pink-gray
	540-560	20		Sandstone, very fine & fine grained, pink
	560-570	10		Sandstone, fine grained, pink-gray
160	570-580	10		Sandstone, fine & medium grained, pink-gray

8" hole

Dresbach group undifferentiated entered 160'
Tested, after well was deepened, for 24 hours at 350 g.p.m., specific capacity = 11.7 g.p.m./ft. of drawdown. In March 1956 hole was shot at depths from 230' to 475' with a total of 610# of dynamite. Water level dropped from 41' to 72' after shooting at 455'. After shooting well was tested for 24 hours at 470 g.p.m., specific capacity = 7.5 g.p.m./ft. of drawdown.

APPENDIX H

State of Wisconsin
Department of Natural Resources
Private Water Supply
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy - Division's Copy
Green Copy - Driller's Copy
Yellow Copy - Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300-15 Rev. 2-79

APR 14 1982

1. COUNTY: Fond du Lac
CHECK (✓) ONE: ☑ Town ☐ Village ☐ City — Name: Ripon

2. LOCATION: ¼ Section or Gov't. Lot: CENTER OF SW¼ — Section: 29 — Township: 16N — Range: 14E
OR - Grid or Street No. / Street or Road Name
AND - If available subdivision name, lot & block No.

3. NAME ☐ OWNER ☐ AGENT AT TIME OF DRILLING CHECK (✓) ONE: ALG. BROOKS - WELL #1
ADDRESS: Route 1 - PERMAN. WELL #09406
POST OFFICE: Markesan, WI — ZIP CODE: 53946

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building | Sanitary Bldg. Drain (C.I. / Other) | Sanitary Bldg. Sewer (C.I. / Other) | Floor Drain Connected To: (C.I. Sewer / Other Sewer) | Storm Bldg. Drain (C.I. / Other) | Storm Bldg. Sewer (C.I. / Other)

Street Sewer (San. / Storm) | Other Sewers (C.I. / Other) | Foundation Drain Connected to: (Sewer / Sewage Sump / Clearwater Dr. / Clearwater Sump) | Sewage Sump (C.I. / Other) | Clearwater Sump | Septic Tank | Holding Tank | Sewage Absorption Unit: (Seepage Pit / Seepage Bed / Seepage Trench) | Manure Hopper or Retention or Pneumatic Tank

Privy | Pet Waste Pit | Pit: Nonconforming Existing (Well / Pump / Tank) | Subsurface Pumproom Nonconforming Existing | Barn Gutter | Animal Barn Pen | Animal Yard | Silo With Pit | Glass Lined Storage Facility | Silo w/o Pit | Earthen Silage Storage Trench Or Pit | Earthen Manure Basin

FOND DU LAC Co. IRRIG. #6

Temporary Manure Stack or Platform | Watertight Liquid Manure Tank or Basin | Manure Pressure Pipe | Subsurface Gasoline or Oil Tank | Waste Pond or Land Disposal Unit (Specify Type) | Manure Storage Basin (Concrete Floor Only / Concrete Floor and Partial Concrete Walls) | Other (Describe)

5. Well is intended to supply water for: Irrigation

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
17½	Surface	42	12½	340	375
13	42	340			

7. CASING, LINER, CURBING AND SCREEN

Dia. (in.)	Material, Weight, Specification Mfg. & Method of Assembly	From (ft.)	To (ft.)
~~8~~ 14	new .375 wall ~~.250~~ welded jts	Surface	42 ~~340~~

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Sandy Clay	Surface	4
Clay	4	9
Lime Rock	9	215
Sand Rock	215	370
Granite	370	375

APPROVAL DATE: AUG. 27, 1981
~~FILE LOCATION: RIPON~~
CC: TO STATE GEOLOGIST

CHANGES & ADDITIONS TO THIS REPORT WERE MADE SUBSEQUENT TO PHONE CONVERSATION WITH SAM ON 4-14-82 FWR

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
~~[illegible]~~	~~Surface~~	~~[illegible]~~
Cement	Surface	42

10. TYPE OF DRILLING MACHINE USED
☐ Cable Tool ☐ Rotary-air w/drilling mud ☐ Rotary-w/drilling mud ☐ Rotary-hammer w/drilling mud & air ☑ Rotary-hammer & air ☐ Reverse Rotary ☐ Jetting with ☐ Air ☐ Water

Well construction completed on March 17 1982

11. MISCELLANEOUS DATA
Yield Test: 8 Hrs. at 631 GPM
Depth from surface to normal water level 160 ~~[illegible]~~ Ft.
Depth of water level when pumping ~~3~~ 230 Ft. Stabilized ☐ Yes ☐ No
Water sample sent to → Spec. Cap = 9.17 gpm/ft. d.d. laboratory on ——— 19

Well is terminated 13 inches ☑ above ☐ below final grade
Well disinfected upon completion ☐ Yes ☐ No
Well sealed watertight upon completion ☐ Yes ☐ No

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature: [signature] Registered Well Driller
Business Name and Complete Mailing