

ELMIRA BOARD OF EDUCATION
SOUTH ELMIRA
WELL NO.1

LAYNE-NEW YORK CO., INC.
ROCHESTER, NEW YORK

LAYNE-NEW YORK CO., INC.

1250 WEST ELIZABETH AVE.

LINDEN, N. J.

DRILLERS REPORT

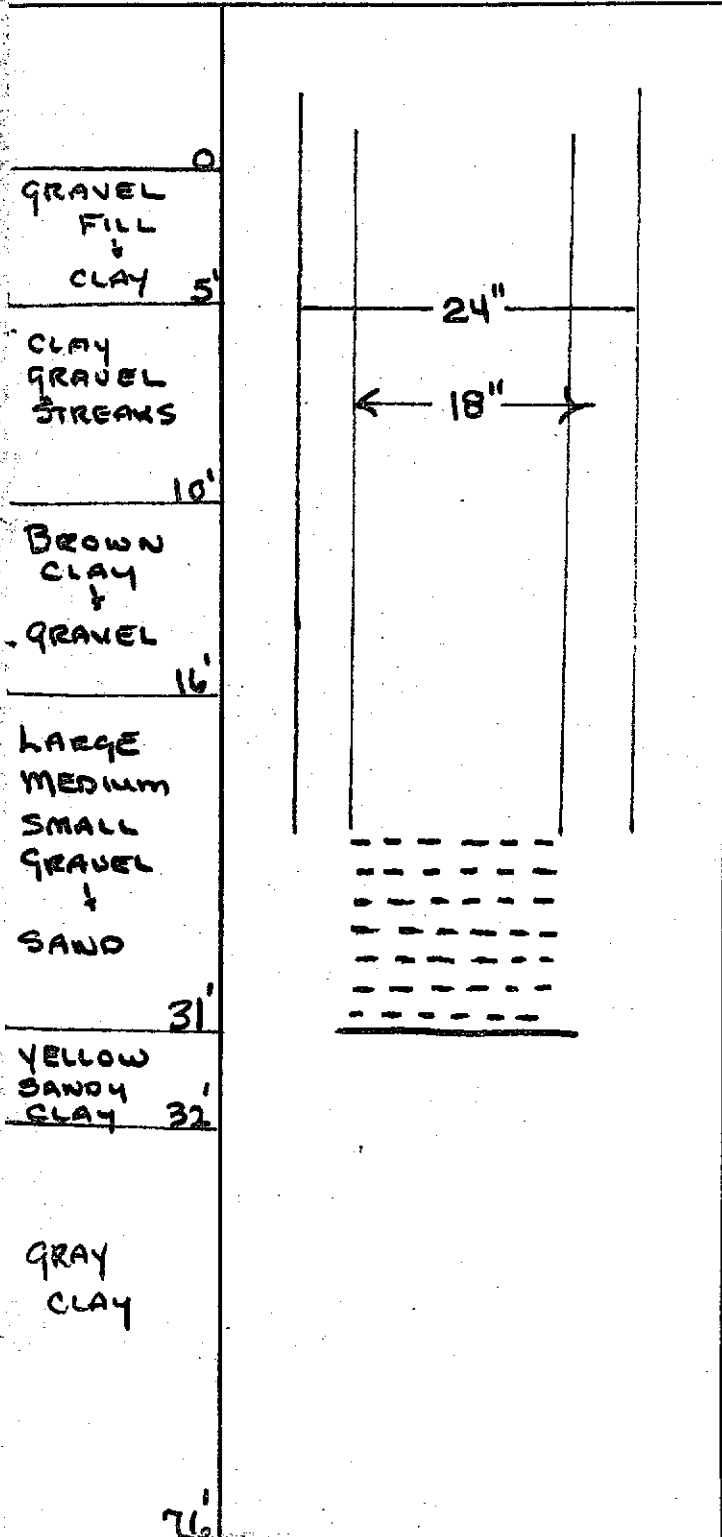
Contract ELMIRA BOARD OF EDUCATION..... WELL NO. 1.....

City ELMIRA..... County CHEMUNG..... State NEW YORK.....

Formation

Sketch of Setting

Remarks



MATERIAL SET

Pipe Length — Size — Metal — T. and C. or Welded

22' 24" STL

21' 18" STL

Screen 10' 18" { Armco Everdur Stainless S.

Diameter Top—Diameter Bottom—Length

Cone

Plug STL

Amount Gravel Used 4 BBL..... Size No. 5.....

" Clay Used { Bags Powdered Reg. Bags Laynite B-3

Date Work Started 9-29-77 Date Pumped 1-11-78

On sketch show

- (1) Parts { Std. Rotated Reverse Rotated Cable Tool or Bailed
- (2) Depth of pump pit
- (3) Kind of seals
- (4) Distance from surface to each section of well
- (5) Depth of well after plugging

Did Well clear up? YES..... How soon? 5 HR.....

How long agitated? 30 HR.....

How long pumped? 48 HR.....

PRELIMINARY TEST DATA

Static Level 11.02..... Date 1-11-78.....

Capacity 500..... GPM with Pumping Level of 14.4

Fill in and sign other side of this report also.

Norman Kadler.....
Driller.

PUMPING TEST RECORD



FOR: Elmira School Board DATES: January 11, 12 1978

LOCATION: South Elmira Facility PUMPING WELL: _____

WELL NO. 1 JOB NO. _____

TIME	AIR PRESS.	PUMPING LEVEL	OBS. WELL	OBS. WELL	OBS. WELL	OBS. WELL	OBS. WELL	OBS. WELL	TEMP.	ORIFICE INCHES	GPM
9 AM	LEVEL	11.02							-	16.5	500
01		13.20								"	"
2		13.32								"	"
3		13.43								"	"
4		13.49								"	"
5		13.38								"	"
6		13.35								"	"
7		13.30								"	"
8		13.36								"	"
9		13.35								"	"
10		13.37								"	"
15		13.45								"	"
20		13.40								"	"
25		13.52								"	"
30		13.57								"	"
40		13.62								"	"
50		13.67								"	"
10 AM		13.71								"	"
15		13.78								"	"
30		13.81								"	"
11 AM		13.85								"	"
Noon											
12:00		13.99								"	"
1:00		14.00								"	"
2:00		14.10								"	"
3:00		14.14								"	"
4:00		14.22								"	"
5:00		14.28								"	"

QUALITY: TIME _____ FE _____ MN _____ HARD _____ PH _____ ODOR _____ TASTE _____

ORIFICE 5 IN. ON 6 IN. PIPE AIR LINE _____ FT.

PUMP TYPE _____ SIZE _____ STAGES _____

SETTING _____ FT. TO SUCTION FLANGE

SUCTION _____ FT. OF _____ IN PIPE/HOSE

OBS. WELL	DIST. FROM PUMP. WELL	ELEV.	OBS. WELL	DIST. FROM PUMP. WELL	ELEV.

FOR PURCHASER

FOR LAYNE - NEW YORK CO., INC.

PUMPING TEST RECORD



FOR: Elmira School Board DATES: January 11, 12 1978

LOCATION: South Elmira Facility PUMPING WELL: _____

WELL NO. 1 JOB NO. _____

TIME	AIR PRESS.	PUMPING LEVEL	OBS. WELL	OBS. WELL	OBS. WELL	OBS. WELL	OBS. WELL	OBS. WELL	TEMP.	ORIFICE INCHES	GPM
STATIC	LEVEL										
6:00		14.36								16.5	500
7:00		14.37								"	"
8:00		14.38								"	"
9:00		14.38								"	"
10:00		14.39								"	"
11:00		14.46								"	"
Mid-Nite											
12:00		14.48								"	"
AM 1		14.50								"	"
2		14.52								"	"
3		14.54								"	"
4		14.56								"	"
5		14.58								"	"
6		14.60								"	"
7		14.62								"	"
8		14.60								"	"
9		14.59								"	"
10		14.58								"	"
11		14.56								"	"
Noon											
12		14.58								"	"
1		14.59								"	"
2		14.63								"	"
3		14.60								"	"
4		14.60								"	"
5		14.62								"	"
6		14.65								"	"
7		14.65								"	"

QUALITY: TIME _____ FE _____ MN _____ HARD _____ PH _____ ODOR _____ TASTE _____

ORIFICE _____ IN. ON _____ IN. PIPE AIR LINE _____ FT.

PUMP TYPE _____ SIZE _____ STAGES _____

SETTING _____ FT. TO SUCTION FLANGE

SUCTION _____ FT. OF _____ IN PIPE/HOSE

OBS. WELL	DIST. FROM PUMP. WELL	ELEV.	OBS. WELL	DIST. FROM PUMP. WELL	ELEV.

FOR PURCHASER

FOR LAYNE - NEW YORK CO., INC.

PUMPING TEST RECORD



FOR: Elmira School Board DATES: January 11, 12 1978

LOCATION: South Elmira Facility PUMPING WELL: _____

WELL NO. 1 JOB NO. _____

TIME	AIR PRESS.	PUMPING LEVEL	OBS. WELL	OBS. WELL	OBS. WELL	OBS. WELL	OBS. WELL	OBS. WELL	TEMP.	ORIFICE INCHES	GPM
STATIC	LEVEL								—	0	0
8		14.66								16.5	500
9		14.66								"	"
10:00		14.65								"	"
11:00		14.66								"	"
Mid-Nite											
12:00		14.65								"	"
AM 1:00		14.65								"	"
2:00		14.65								"	"
3:00		14.65								"	"
4:00		14.65								"	"
5:00		14.66								"	"
6:00		14.65								"	"
7:00		14.65								"	"
8:00		14.65								"	"
9:00		14.65								"	"
	SHUTDOWN		RECOVERY								
AM 9:01		12.32								"	"
9:02		12.23								"	"
9:03		12.18								"	"
9:04		12.12								"	"
9:05		12.09								"	"
9:06		12.07								"	"
9:07		12.03								"	"
9:08		12.00								"	"
9:09		11.98								"	"
9:10		11.95								"	"
9:15		11.85								"	"

QUALITY: TIME _____ FE _____ MN _____ HARD _____ PH _____ ODOR _____ TASTE _____

ORIFICE _____ IN. ON _____ IN. PIPE AIR LINE _____ FT.

PUMP TYPE _____ SIZE _____ STAGES _____

SETTING _____ FT. TO SUCTION FLANGE

SUCTION _____ FT. OF _____ IN PIPE/HOSE

OBS. WELL	DIST. FROM PUMP. WELL	ELEV.	OBS. WELL	DIST. FROM PUMP. WELL	ELEV.

PUMPING TEST RECORD



NEW YORK CO., INC.

FOR: Elmira School Board DATES: January 5, 1978

LOCATION: South Elmira Facility PUMPING WELL: _____

WELL NO. 1 Step Test JOB NO. _____

TIME	AIR PRESS.	PUMPING LEVEL	OBS. WELL	OBS. WELL	OBS. WELL	OBS. WELL	OBS. WELL	OBS. WELL	OBS. WELL	TEMP.	ORIFICE INCHES	GPM
PM 1:30	LEVEL	11.34								—	9.5"	200
31		11.73									"	"
32		11.77									"	"
33		11.80									"	"
34		11.81									"	"
35		11.81									"	"
36		11.81									"	"
37		11.82									"	"
38		11.83									"	"
39		11.83									"	"
1:40		11.83									"	"
45		11.83									"	"
50		11.84									"	"
55		11.85									"	"
2:00		11.85									"	"

QUALITY: TIME _____ FE _____ MN _____ HARD _____ PH _____ ODOR _____ TASTE _____

ORIFICE 4 IN. ON 6 IN. PIPE AIR LINE _____ FT.

PUMP TYPE _____ SIZE _____ STAGES _____

SETTING _____ FT. TO SUCTION FLANGE

SUCTION _____ FT. OF _____ IN PIPE/HOSE

OBS. WELL	DIST. FROM PUMP. WELL	ELEV.	OBS. WELL	DIST. FROM PUMP. WELL	ELEV.

FOR PURCHASER

FOR LAYNE - NEW YORK CO., INC.

PUMPING TEST RECORD



NEW YORK CO., INC.

FOR: Elmira School Board DATES: January 5, 1978

LOCATION: South Elmira Facility PUMPING WELL: _____

WELL NO. 1 Step Test JOB NO. _____

TIME	AIR PRESS.	PUMPING LEVEL	OBS. WELL	OBS. WELL	OBS. WELL	OBS. WELL	OBS. WELL	OBS. WELL	TEMP.	ORIFICE INCHES	GPM
PM 2:30	LEVEL	11.30							—	0	0
31		--								16.5	500
32		12.84								"	"
33		12.88								"	"
34		12.91								"	"
35		12.94								"	"
36		12.94								"	"
37		12.97								"	"
38		12.99								"	"
39		13.01								"	"
2:40		13.02								"	"
45		13.08								"	"
50		13.12								"	"
55		13.14								"	"
3:00		13.17								"	"

QUALITY: TIME _____ FE _____ MN _____ HARD _____ PH _____ ODOR _____ TASTE _____

ORIFICE 5 IN. ON 6 IN. PIPE AIR LINE _____ FT.

PUMP TYPE _____ SIZE _____ STAGES _____

SETTING _____ FT. TO SUCTION FLANGE

SUCTION _____ FT. OF _____ IN PIPE/HOSE

OBS. WELL	DIST. FROM PUMP. WELL	ELEV.	OBS. WELL	DIST. FROM PUMP. WELL	ELEV.

FOR PURCHASER

FOR LAYNE - NEW YORK CO., INC.

STANDARD WATER ANALYSIS REPORT



Orlando Laboratories, Inc.

P. O. Box 8008 • Orlando, Florida 32806 • 305/843-1661

Report to: Layne New York Company Inc.

Appearance: Clear

Date: 31 Oct. 77

Sampled by: Client

Report Number: 14104

Identification: Taken after 8 hrs. pumping
Elmira School District,
Southport, N. Y.

METHODS

This water was analyzed according to "Standard Methods for the Examination of Water and Wastewater," Latest Edition, APHA, AWWA and WPCF.

RESULTS

Determination	Date Significance	mg/l	Determination	Date Significance	mg/l
Total Dissolved Solids	x.	<u>340</u>	Total Hardness, as CaCO ₃	x.	<u>204</u>
Phenolphthalein Alkalinity, as CaCO ₃	x.	<u>0</u>	Calcium Hardness, as CaCO ₃	x.	<u>156</u>
Total Alkalinity, as CaCO ₃	x.	<u>144</u>	Magnesium Hardness, as CaCO ₃	x.	<u>48</u>
Carbonate Alkalinity, as CaCO ₃	x.	<u>0</u>	Calcium, as Ca	x.	<u>62</u>
Bicarbonate Alkalinity, as CaCO ₃	x.	<u>144</u>	Magnesium, as Mg	x.	<u>12</u>
Carbonates, as CO ₃	x.	<u>0</u>	Sodium, as Na	x.	<u>30</u>
Bicarbonates, as HCO ₃	x.	<u>176</u>	Iron, as Fe	x.	<u>0.02</u>
Hydroxides, as OH	x.	<u>0</u>	Manganese, as Mn	x.	<u><0.05</u>
Carbon Dioxide, as CO ₂	x.	<u>47</u>	Copper, as Cu	x.	<u><0.1</u>
Chloride, as Cl	x.	<u>54</u>	Silica, as SiO ₂	x.	<u>8.9</u>
Sulfate, as SO ₄	x.	<u>40</u>	Color, PCU	x.	<u>2</u>
Fluoride, as F	x.	<u>0.1</u>	Odor Threshold	x.	<u>0</u>
Phosphate, as PO ₄	x.	<u>1.12</u>	Turbidity, NTU	x.	<u>0.39</u>
pH (Laboratory)	x.	<u>6.8</u>			
pHs	x.	<u>7.6</u>			
Stability Index	x.	<u>8.4</u>			
Saturation Index	x.	<u>-0.8</u>			

Signed: James Lubrich
Chemist

RECEIVED

FEB 13 1978

STREETER ASSOCIATES, INC.

Moody

and Associates Inc. Established 1891

Ground Water and Environmental Professionals-Since 1891

March 7, 2000

Mr. Mike Dunn
ELMIRA SCHOOLS MAINTENANCE
733 Benjamin St.
Elmira, NY 14901

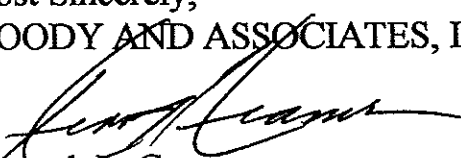
REFERENCE: Southside School Water Well Flow Test Results

Dear Mike,

I have enclosed the results of the flow tests we conducted on the 2 wells used for cooling at the Southside School. The wells and pumps are operating properly and require no further service at this time.

I thank you for providing Moodys with this opportunity to be of service to Elmira Schools. I am looking forward to working with you on future projects.

Most Sincerely,
MOODY AND ASSOCIATES, INC.



Kenneth L. Cramer
Project Manager

Moody

and Associates Inc. Established 1891

Ground Water and Environmental Professionals Since 1891

October 29, 1999

Mr. Mike Dunn
Elmira Schools Maintenance
7333 Benjamin Street
Elmira, NY 14901

Reference: Submersible Motor Cooling for Cooling Wells

Dear Mr. Dunn,

I have ordered the pump for your well and it will be delivered in the next few weeks. I will call ahead to let you know when the pump and motor have arrived so we can schedule on site work.

While setting up the work order for our crew, I reviewed the motor cooling requirements for the 6" submersible motor in your well.

The well has been reported to be either an 18" or 20" well. Based on the well being an 18" casing, the motor cooling is marginal at an estimated 0.60 feet/second flow past the motor. The manufacturer (Franklin Electric) recommends 0.50 feet/second flow. If the well is a 20" casing, then the velocity past the motor is not adequate to cool the motor, and premature failure could occur.


Therefore, I recommend that a flow sleeve (shroud) be installed when the pump is installed to increase the velocity past the motor and provide the required cooling for proper operation. The price for a flow sleeve is \$ 180.00 and it should only take our crew 1 additional hour to install it at the rate of \$ 130.00, for a total price of \$ 310.00. The shroud can be ordered and be delivered with the pump and would be installed at the same time.

Please review the manufacturer's data enclosed and advise if you want a shroud installed with the new pump.

Most Sincerely,
MOODY AND ASSOCIATES, INC.


Kenneth L. Cramer
Project Manager

* 310.00 OK


Paul W. Holm
Acting Sup. Building & Grounds
11-4-99

22 Wincanton Drive, Fairport, New York 14450

716/421-0460 FAX 716/421-0874

RECEIVED
NOV - 1 1999

Maintenance

Moody

and Associates Inc. Established 1891

Ground Water and Environmental Professionals Since 1891

October 29, 1999

Mr. Mike Dunn
Elmira Schools Maintenance
733 Benjamin Street
Elmira, NY 14901

Reference: Replacing Pump in One (1) Well & Flow Testing and Equipment Check of Second Well
Moody Proposal No. 99-535-KC, Revised

Dear Mr. Dunn,

I appreciate you contacting Moody and Associates, Inc. (Moody's) to investigate and quote on replacing the pump and motor in 1 of the wells used for cooling at the High School.

Our field inspection showed that the motor is not functional and the condition of the pump is unknown since the motor could not be operated. We therefore recommend that the pump and motor be replaced. After installing the new pump, the well should be flow tested to measure the well's output. This output would be compared to the output when the well was installed to determine if any well cleaning should be performed.

A well generally needs to be cleaned and serviced after the first ten years of operation and then every 7-8 years thereafter. Since your well only operates seasonally, this time schedule could be extended. The wells were installed in 1979 and it has been 20 years since the wells have been serviced. Except for a few pump replacements, the wells have never been cleaned.

Price for our proposed services are as follows,

- | | |
|---|-------------|
| 1. Mobilization | \$ 850.00 |
| 2. Pull pump, set new pump, conduct down hole video survey, and flow test well
Estimated at 12 hours @ \$ 130.00/hr= | \$ 1,560.00 |
| 3. Flow Testing of second well, est. 6 hours @ \$ 130.00= | \$ 780.00 |
| 3. New Goulds pump, motor, ground wire, and misc. tape, etc. | \$ 3,400.00 |

Estimated Project Total..... \$ 6,590.00

TERMS AND CONDITIONS

The undersigned Client hereby authorizes Moody and Associates, Inc (Moody's) to proceed with the services detailed in this proposal with the understanding that these Terms and Conditions are an integral part of the

proposal. This Proposal is an estimate and should not be considered as a 'not to exceed' value. This is a proposal for reasonably anticipated charges and the Client will be invoiced for all time, equipment provided, and materials utilized and consumed to complete the project. Items that are quoted as lump sum shall be performed and invoiced at the prices quoted.

Invoices will be submitted monthly for work completed with payment due 30 days from date of the invoice. A late charge at the rate of 2% per month, or highest rate permitted by law, whichever is lowest, shall be added to all amounts outstanding after 30 days. Client agrees to pay for all costs associated with collection of past due amounts.

Labor estimates for this project have been prepared utilizing Moodys regular pay scale. Should prevailing wage rates be applicable, the prices for the labor portions for the construction related services detailed in the proposal must be increased by 30%. If prevailing wager rates are applicable, please advise Moodys in writing and the project price(s) will be adjusted to reflect the increased labor costs.

Delivery of additional materials or equipment not originally quoted or incorporated into the project shall be invoiced at the rate of \$ 60.00/hour. If items ordered specifically for the project are returned, the vendors restocking charges shall also be invoiced.

Insurance shall be maintained in effect by Moody for General Liability, Automobile Liability, and Worker Compensation. A certificate of insurance can be provided to the Client upon request.

Client shall provide Moody with the following,

- a. suitable ingress and egress to the project location. Should the site be inaccessible by truck mounted equipment or water well service rig, and associated support equipment, the Client shall provide temporary roads, as needed.
- b. Location and protection of all utilities, underground or overhead, including but not limited to electric, gas, fiber optics, and telephone.
- c. All applicable permits as required by local, county, state or federal agencies to perform the work.
- d. A supply of potable water for clean up.
- e. Site restoration

Taxes are not included in the prices quoted. All applicable taxes will be added at the time of invoicing. If the work to be performed under this contract is to be tax exempt, tax exempt certificates must be provided.

CLIENT, ELMIRA SCHOOLS

BY: Paul W. Holm

MOODY AND ASSOCIATES, INC.

BY: _____

TITLE: Acting supervisor Building Grounds

KENNETH L. CRAMER
PROJECT MANAGER

DATE: 11-4-99

DATE: _____

PROJECT/LOCATION:	NYSDEC/Miller Pond	PROJECT No.	96020
CLIENT:	NYSDEC Region 8 - Scott Rodabaugh	WELL No.	MW15
DATE COMPLETED:	12/11/97	SUPERVISED BY:	Chris Treese

REFERENCE POINT
Elevation/Depth: 855.19

SURFACE SEAL
Type/Depth: Concrete/1.5'

DEPTH OF SURFACE CASING: 1.0'

RISER PIPE Size/Type: 2" diameter SCH 40 PVC

DIAMETER OF BOREHOLE: 8.25"

TYPE OF FILL: Drill cuttings

TOP OF SEAL Elevation/Depth: 7.50'
TYPE OF SEAL: Bentonite

TOP OF FILTER PACK Elevation/Depth: 8.50'
FILTER PACK MATERIAL: #1 Sand

TOP OF SCREEN Elevation/Depth: 9.50'
SCREEN SIZE/TYPE: .020 slot SCH 40 PVC

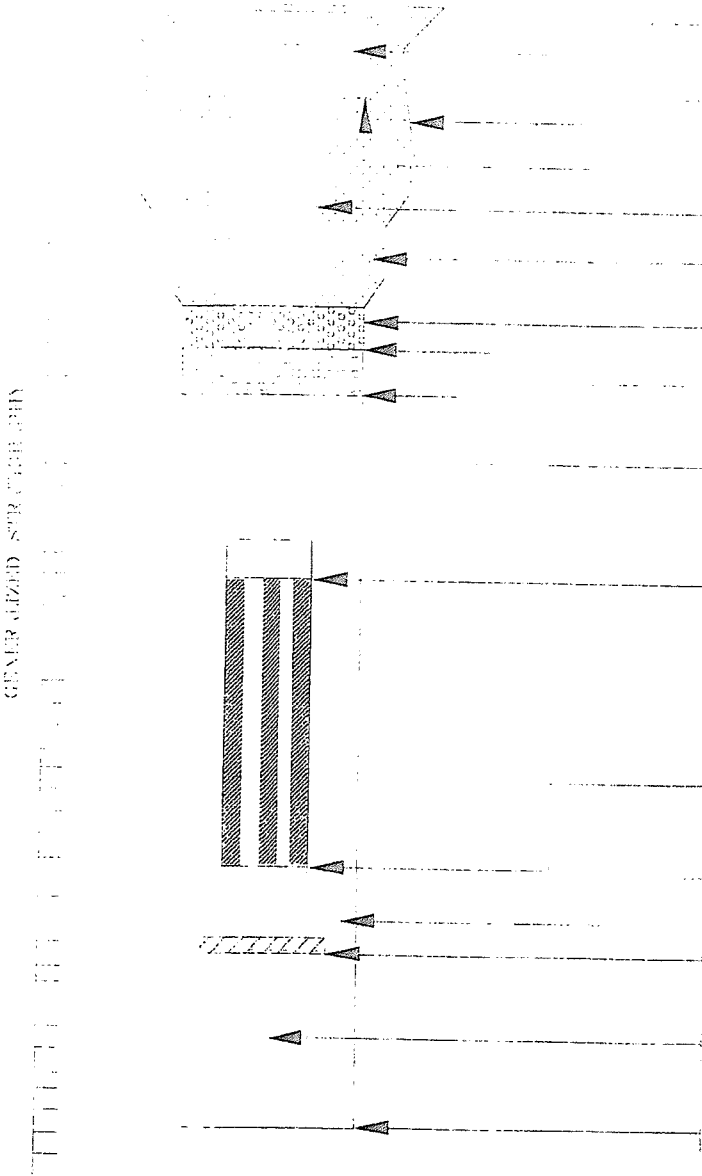
BOTTOM OF SCREEN Elevation/Depth: 18.60'

BOTTOM OF FILTER PACK
Elevation/Depth: 19.10'

BOTTOM OF PLUGGED BLANK SECTION
Elevation/Depth: 19.10'

TYPE OF FILLER
BELOW PLUGGED BLANK: #1 Sand

BOTTOM OF BOREHOLE
Elevation/Depth: 19.10'



NOTES

EARTH TECH 40 British American Boulevard Latham, New York 12110	PROJECT: Southside High School Elmira, New York	BORING NUMBER MW-15D SHEET <u>1</u> OF <u>4</u> PROJECT # <u>66837</u> FILE _____
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BORING COMPANY	GeoLogic, Inc.	BORING LOCATION	West side of school bldg.
FOREMAN	Scott	GROUND ELEVATION	
EARTH TECH INSPECTOR	Paul Sleasman	DATE STARTED	4/29/03
		DATE ENDED	4/30/03

SIZE	CASING		TYPE	SAMPLER		OTHER:	GROUNDWATER READINGS			
	NA			2" Split Spoon			DATE	DEPTH	CASING	STABILIZATION TIME
HAMMER	NA		HAMMER	140 lb		4 1/2" I.D. Augers	5/7/03	17.0'	2" PVC	
FALL	NA		FALL	30"			09:00	Top of Casing		


SAMPLE					SAMPLE DESCRIPTION	STRATA CHANGE AND GENERAL DESCRIPTION	FIELD TESTING OVM (ppm)	EQUIPMENT OR WELL INSTALLED
	NO.	REC.	DEPTH	BLOWS				
0'	1	1.5'	0-2'	4-7-9-10	LOAM, damp. Brown fine(+)-med SAND, some fine-crs Gravel, damp.	0-0.7' 0.7'-1.5'	0	P V C R I S E R P I P E
	2	0	2'-4'	11-24-8-9	No Recovery.			
5'	3	1.5'	4'-6'	9-6-6-6	Brown fine SAND, and (-) fine-crs Gravel (red brick, concrete - evidence of fill material), damp.	4'-5.5'	0	
	4	0.4'	6'-8'	8-12-9-9	Brown silty-fine SAND, and (-) fine-crs Gravel (red brick, concrete - evidence of fill material), damp.	6'-6.4'	0	
	5	1.1'	8'-10'	14-17-19-19	Brown-black fine(+)-med SAND, some(-) fine-crs Gravel (red brick particles observed), dry-damp.	8'-9.1'	1.3	
10'	(FILL)							
	6	0.9'	10'-12'	8-4-4-5	Red, tan, black fine-crs(+) GRAVEL, and (+) brown-black fine-crs Sand, dry-damp.	10'-10.9'	64	
	7	0.5'	12'-14'	14-16-23-100/0.4'	Red brick. Fine-crs GRAVEL and fine-crs gray-white Sand, some(+) fine-crs gravel, dry-damp.	12'-12.2' 12.2'-12.5'	1.0	
15'	8	0.3'	14'-16'	100/0.3	Black-brown silty-fine SAND, some(+) fine-crs Gravel, moist.	14'-14.3'	0	
	9	1.1'	16'-18'	16-23-27-20	Black-gray fine-crs GRAVEL, little brown silty-fine Sand, wet.	16'-17.1'	0	
	10	0.5'	18'-20'	20-24-17-20	Fine-crs gravel, little brown silty-fine SAND, wet.	18'-18.5'	0	
20'	(GLACIAL OUTWASH)							

PROPORTIONS USED		PENETRATION RESISTANCE		WELL CONSTRUCTION LEGEND			
		140 LB WT FALLING 30" ON 2" O.D. SAMPLER					
		COHESIONLESS DENSITY		COHESIVE CONSISTENCY			
TRACE	0 TO 10%	0-4	VERY LOOSE	0-2	VERY SOFT	BENTONITE	EEEE
LITTLE	10 TO 20%	5-9	LOOSE	3-4	SOFT	CONCRETE	*****
SOME	20 TO 35%	10-29	MED. DENSE	5-8	M/STIFF	SILICA SAND	XXXXXX
AND	35 TO 50%	30-49	DENSE	9-15	STIFF	NATURAL BACKFILL	XXXXXX
		50+	VERY DENSE	16-30	V-STIFF	BEDROCK	+++++
				31+	HARD		

EARTH TECH 40 British American Boulevard Latham, New York 12110	PROJECT: Southside High School Elmira, New York	BORING NUMBER MW-15D SHEET <u>4</u> OF <u>4</u> PROJECT # <u>66837</u> FILE _____
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BORING COMPANY	GeoLogic, Inc.	BORING LOCATION	West side of school bldg.
FOREMAN	Scott	GROUND ELEVATION	
EARTH TECH INSPECTOR	Paul Sleasman	DATE STARTED	4/29/03
		DATE ENDED	4/30/03

SIZE	CASING		TYPE	SAMPLER		OTHER:	GROUNDWATER READINGS			
	NA			2" Split Spoon			DATE	DEPTH	CASING	STABILIZATION TIME
HAMMER	NA		HAMMER	140 lb		4 1/4" I.D. Augers	5/7/03	17.0'	2" PVC	
FALL	NA		FALL	30"			09:00	Top of Casing		

SAMPLE					SAMPLE DESCRIPTION	STRATA CHANGE AND GENERAL DESCRIPTION	FIELD TESTING OVM (ppm)	EQUIPMENT OR WELL INSTALLED
	NO.	REC.	DEPTH	BLOWS				
70'	36	2.0'	70'-72'	3-4-8-5	Gray Silty CLAY, moist.	70'-72'	NR	
	37	1.1'	72'-74'	6-9-15-15	Same. (GLACIO LACUSTRINE)	72'-72.6'	NR	
75'	38	0.8'	74'-76'	35-30-18-90	Gray SILT and fine-med Sand, and fine-crs gravel, wet.	72.6'-73.1'	NR	
	39	0.8'	76'-78'	30-100/0.4'	Gray Silty CLAY, and (+) fine-crs Gravel (abundant shale fragments).	74'-74.8'	NR	
					Gray fine-crs gravel, and Silty Clay. (GLACIAL TILL OR WEATHERED BEDROCK)	76'-76.8'	NR	76.5'-77.0'
80'					END OF BORING TOTAL BORING DEPTH = 77.0' 4/30/03 12:15		0-61.6: Grout 61.6'-65.5': Bentonite Seal 65.0'-65.5': #00 Silica Choke Sand 65.5'-77.0': #0 Silica Filter Pack 0-66.5: 2" I.D. PVC Riser Pipe 66.5'-76.5': 2" I.D. PVC Well Screen (0.01" slot)	
85'								
90'								

PROPORTIONS USED		PENETRATION RESISTANCE		WELL CONSTRUCTION LEGEND			
		140 LB WT FALLING 30" ON 2" O.D. SAMPLER					
		COHESIONLESS DENSITY		COHESIVE CONSISTENCY			
TRACE	0 TO 10%	0-4	VERY LOOSE	0-2	VERY SOFT	BENTONITE	
LITTLE	10 TO 20%	5-9	LOOSE	3-4	SOFT	CONCRETE	
SOME	20 TO 35%	10-29	MED. DENSE	5-8	M/STIFF	SILICA SAND	
AND	35 TO 50%	30-49	DENSE	9-15	STIFF	NATURAL BACKFILL	
		50+	VERY DENSE	16-30	V-STIFF	BEDROCK	
				31+	HARD	GROUT	

engineers | scientists | innovators

CLIENT Unisys **PROJECT NAME** Former Sperry Remington North
PROJECT NUMBER MN0832 **PROJECT LOCATION** Elmira, New York
DATE STARTED 4/13/17 **COMPLETED** 4/13/17 **NORTHING** 754159.1028 ft **EASTING** 762127.0696 ft
DRILLER Cascade Technical Services, LLC **GROUND ELEVATION** --- **BORING DIAMETER** 2 in
DRILLING METHOD Direct Push **TOP OF CASING ELEVATION** ---
SAMPLING METHOD 2" x 5' Macrocore **UTILITY CONTRACTOR** ---
RIG TYPE Geoprobe **LOGGED BY** E.Buelow **CHECKED BY** DRAFT
NOTES _____






DEPTH (ft)	RUN RECOVERY GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0		Fill, wood chips	
		Stiff, SILT, SILT, moist, brown, Topsoil	
		Stiff, GRAVELLY SILT, SILT, some gravel, and coarse sand, moist, dark brown, non plastic	3.7
2.5			2.5
			4
		Light orange, Cement	
5.0		Brown, Wood	
		LEAN CLAY, LEAN CLAY, moist, gray, medium plasticity	5.6
		Loose, WELL GRADED GRAVEL, GRAVEL, dry, gray to brown	
		Dense, SILTY GRAVEL WITH SAND, GRAVEL, some silt, and sand, moist, dark brown	
		Red brick	
7.5			3.3
		Mixture of soil, wood, cement, and brick (interpreted as fill)	
		Medium dense, SILTY SAND WITH GRAVEL, SAND, with fine gravel, fine to coarse grained, moist, dark brown, low to medium plasticity	5.7

PAULS BH / TP / WELL - DEFAULT.GDT - 5/12/17 09:13 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\ELMIRA - MN0832.GPJ

(Continued Next Page)

CLIENT Unisys PROJECT NAME Former Sperry Remington North

PROJECT NUMBER MN0832 PROJECT LOCATION Elmira, New York

DEPTH (ft)	RUN RECOVERY GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
		Medium dense, SILTY SAND WITH GRAVEL, SAND, with fine gravel, fine to coarse grained, moist, dark brown, low to medium plasticity <i>(continued)</i>	10.0
			5
12.5		Medium dense, CLAYEY SAND, SAND, with clay, fine to coarse grained, moist to wet, dark brown	12.5
9.5			9.5
15.0		Dense, SILTY GRAVEL WITH SAND, GRAVEL, with silt, and fine to coarse sand, moist to wet, dark brown to gray	4.7
17.5			15.0
17.5		Loose, POORLY GRADED GRAVEL, GRAVEL, wet, dark brown	4.9
20.0			17.5
20.0		Medium dense, WELL GRADED GRAVEL WITH SILT AND SAND, GRAVEL, with silt, and fine to coarse sand, wet, brown	3
		Bottom of borehole at 20.0 feet.	20.0

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DRILLING CO.: Cascade Environmental		Status <input type="checkbox"/> Well Installed <input type="checkbox"/> Plugged & Abnd <input type="checkbox"/>		SITE Former Sperry Remington N			Borehole Location Sketch Map		
METHOD & TOOLS: Geoprobe		PROJECT NO.: MN0832E/16/01		N:		E:			
RIG:		SUPERVISOR:		DATE: 5/18/19					
BIT DIAMETER:		DRILLER:		DATE: 5/18/19					
GROUND ELEV.: <input type="checkbox"/> Surveyed <input type="checkbox"/> Estimated									
Top (Depth)	<input type="checkbox"/> Feet <input type="checkbox"/> Meters	Lithology Log	Graphic Log	Depth Scale	Well	SPT Blows/6'	Run (No.)	Rec (%)	Drilling Log
14									24/24
16		Brown silty gravel, wet loose, some sand.	0.1	0.6					24/24
			0.1						
18		SAA	0.2						6/24
20									6/24
X-3 Step test performed for 18-20' interval. → enough material for test.									

5/16/19

BORING LOG

BORING NO. SSSS-B-2816

SHEET 1 OF 1

Top (Depth)	<input type="checkbox"/> Feet <input type="checkbox"/> Meters	Lithology Log	Graphic Log	Depth Scale	Well	SPT Blows/6*	Run (No.)	Rec (%)	Drilling Log
14		Brown silt w/ sand & gravel moist. m. st. ss.	29.3						24/18
			8.7						
16		Brown gravel. wet. loose, fine coarse	4.3						
			4.4						
18		2 Step offs.							

5/18/19



BORING LOG

BORING NO. SSHS-B 2315
SHEET OF

DRILLING CO.: Cascade Environmental		Status <input type="checkbox"/> Well Installed <input type="checkbox"/> Plugged & Abndd		SITE Former Sperry Remington N		Borehole Location Sketch Map				
METHOD & TOOLS: Geoprobe				PROJECT NO.: MN0832E/16/01						
RIG:				N: E:						
BIT DIAMETER:		DRILLER:		SUPERVISOR:						
GROUND ELEV.: <input type="checkbox"/> Surveyed <input type="checkbox"/> Estimated				DATE:						
Top (Depth)	<input type="checkbox"/> Feet <input type="checkbox"/> Meters	Lithology Log		Graphic Log	Depth Scale	Well	SPT Blows/6"	Run (No)	Rec (%)	Drilling Log
14		Brown sand w/ silt + gravel moist to wet m. dense to loose. fine coarse		0.1						12/24
				0.1						
10		Brown fine-coarse gravel wet loose w/ sandy some silt.		0.1						12/24
				0.1						
16		2 step offs								

5/16/19

BORING LOG

BORING NO. SSHA-B 2814

SHEET 1 OF 1

Top (Depth)	<input type="checkbox"/> Feet <input type="checkbox"/> Meters	Lithology Log	Graphic Log	Depth Scale	Well	SPT Blows/6"	Run (No.)	Rec (%)	Drilling Log
12		Brown sand w/ gravel. moist to wet loose. trace silt.	0.1				12/24		
16		Brown gravel w/ sand wet loose. trace silt.	0.1				12/24		
18		3 step off	0.0						

2760



BORING LOG

BORING NO. ~~SSHS-B-2861~~
SHEET 1 OF 1

DRILLING CO.: Cascade Environmental		Status: <input type="checkbox"/> Well Installed <input type="checkbox"/> Plugged & Aband	SITE Former Sperry Remington N		Borehole Location Sketch Map
METHOD & TOOLS: Geoprobe			PROJECT NO.: MN0832E/16/01		
RIG:			N: E:		
BIT DIAMETER:	DRILLER:	SUPERVISOR:			
GROUND ELEV.: <input type="checkbox"/> Surveyed <input type="checkbox"/> Estimated		DATE: 5/18/19			

Top (Depth)	<input type="checkbox"/> Feet <input type="checkbox"/> Meters	Lithology Log	Graphic Log	Depth Scale	Well	SPT Blows/6"	Run (No)	Rec (%)	Drilling Log
14		Brown gravel w/ sand + some silt. loose. wet	0.0						15/48
			0.1						
			0.1						
18		Stop offs considering no recovery from 16-18.							

5/18/19

BORING LOG

BORING NO. SSHA-B 2803
SHEET 1 OF 2

Top (Depth)	<input type="checkbox"/> Feet <input type="checkbox"/> Meters	Lithology Log	Graphic Log	Depth Scale	Well	SPT Blows/6"	Run (No.)	Rec. (%)	Drilling Log
14		Approx gravel, loose, wet w/ sand + some silt	0.1 0.1 0.1				24/44		
18		3 step offs performed							

5/19/19

BORING LOG

BORING NO. SSS-B 2754.

SHEET ___ OF ___

Top (Depth)	Lithology Log		Graphic Log	Depth Scale	Well	SPT Blows/6"	Run (No.)	Rec. (%)	Drilling Log
	<input type="checkbox"/> Feet	<input type="checkbox"/> Meters							
14	Gray silty gravel, med. s.t. loose. w/ sand + silty.		0.3 0.2					22/24 FD-24	
16	SAA wet.		0.1 0.1					18/24	
18									