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*Reys*  
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*pesticides*

**New York State Department of Environmental Conservation**

**RECEIVED**

**JAN 28 1982**

**BUREAU OF  
HAZARDOUS SITE CONTROL  
DIVISION OF SOLID WASTE**

**MEMORANDUM**

*file*

**TO:** A. Marc Pellegrino  
**FROM:** Vance Bryant  
**SUBJECT:** Agway-Ballston Spa Site, Saratoga County, Ballston Spa (V)  
 Summary of Construction and Installation Details of Monitoring Wells  
**DATE:** January 28, 1982

Enclosed are a series of diagrams, charts and tables which provide details of the well drilling and monitoring well installation on the subject project. Specifically, these include:

1. A diagram of the location of the drillholes/ monitoring wells and auger hole (A.H. No. I), as constructed.
2. The original chart of proposed procedures/ materials, etc. to be utilized on the project with a column indicating the accomplishment/ use of such items.
3. A table of pertinent information relative to the monitoring wells, as constructed.
4. A diagram of each drillhole/well, as constructed.

For your information, the project commenced on Monday, December 14, 1981, with the steam cleaning of the equipment and was completed on Friday, January 8, 1982, with the welding of hasps and locks on the protective casings and removal of equipment from the site. Due to weather conditions, holidays and weekends, there were actually 12 workdays during this 25-day period. The results obtained in this time frame is an indication that under "normal" conditions a week per hole/installation is a reasonable estimate of time requirements, especially since these holes were somewhat shallower than we will usually be dealing with. For holes of greater depth (50-100 feet) the time frame would be extended proportionately.

As you know, we are in the process of purging and developing the monitoring wells and anticipate obtaining initial water samples during the week of January 25, 1982, for chemical analysis by the State Health Department Laboratory. We will continue to keep you apprised of our progress as we pursue subsequent steps of the project.

cc: John Greenthal  
 Michael Tone  
 Barbara Guibord  
 Kevin Walter  
 Edwin Perkins  
 John Iannotti  
 bcc: ✓Goddard/McCarty

1/28/82

DRILLING PROCEDURES AND PROTOCOLS

FOR

BALLSTON SPA - AGWAY SITE

<u>Work Accomplished</u>	<u>Work To Be Performed</u>	<u>Potential Problems</u>	<u>Responsibility</u>
X	<u>A. Mobilization</u>		
X	1. Steam Clean Portions of Drill Rig that Overhang or Enter borehole		DOT
X	2. Steam Clean All Casing, Rods, Bits & Samplers that enter Borehole		DOT
1	3. Steam Clean Inside of Drilling Water Storage Tank		DOT
1	4. Flush Inside of Hoses with "clean" Water on Site		DOT
			} As Supervised and Approved by DEC
X	<u>B. Protective Equipment</u>		
X	1. Protective Clothing		DOT & DEC
X	a. Standard Work Clothes		
X	b. Rubber Gloves and Boots Are recommended to allow easy cleaning on site		
X	c. Disposable Coveralls will be Provided to Avoid Contamination of Personal Clothing		
2	d. Safety Glasses		
X	e. Hard Hats		
X	2. Flush Personal Equipment with "Clean" Water at End of Each Work Day		DOT & DEC
X	3. Disposal of Disposable Equipment		DEC
2	4. Emergency Equipment		DEC
	a. Respirators Will be Available on an "As Needed" basis		
	b. Portable Eye Wash Station Will Be Available on an "As Needed" basis		
X	<u>C. Drilling Logistics</u>		
1	1. Source of "Clean" Drilling Water		DEC (Approved By Mayor Capasso 9/10/81)
1	2. Storage for "Clean" Drilling Water	Storage Capacity	DOT
1	3. Sampling of "Clean" Drilling Water From End of Bit Prior to Commencing Drilling Operations.	Storage Capacity How Much Needed? (No Recirculation)	DEC

NOTES:

1. Not necessary, hole was drilled dry.
2. Available on site but need did not arise.

<u>Work Accomplished</u>	<u>Work to be Performed</u>	<u>Potential Problem</u>	<u>Responsibility</u>
1	4. Storage and Disposal of Drill Return Water and Suspended Solids		DOT & DEC (Disposal of Liquids into Sewers Approved by County Sewer District 11/10/81)
x	5. Storage and Disposal of Excess Soil From Sampling	Source of 55 Gallon Drums Storage Location Disposal Location	DOT DEC DEC
x	D. <u>Drilling Equipment</u>		
x	1. Skidrig		DOT
3	2. Flush Joint 4 1/2 inch O.D. HW Casing - 5' Sections		DOT
4	3. 6-2 Inch Split Spoon Samplers, 18-24 inches in length		DOT
1	4. Drilling Water Storage Tank & Water Return Collection Tank		DOT
1	5. Pumps & Hoses to Transfer Water From Source to Drilling Water Storage Tank		DOT
1	6. Pumps & Hoses to Transfer Water From Water Return Tank to Saratoga County Sewer System		DOT
x	E. <u>Drilling Procedures</u>		
x	1. Working Hours May Require Adjustment in Residential Area		DOT
x	2. Drill Upgradient Hole First		DOT
x	3. Drill to Bedrock at all Locations (unless otherwise ordered)		DOT
1	4. Drill with "Clean" Water	Storage Capacity	DOT
1	5. Store Drill Return Water	Storage Capacity	DOT
x	6. Careful Use of Lubricants on Rods, Casings, etc.		DOT
x	7. Inspect and Clean Equipment <u>As Necessary</u> between Sampling Runs	Collection of Rinse Water	DOT & DEC
x	8. Inspect and Clean Equipment <u>As Necessary</u> Between Holes	Collection of Rinse Water	DOT & DEC
x	F. <u>Record of Conditions Encountered (Boring Log)</u>		
x	1. Location		DOT (Survey-Benchmark to be
x	2. Elevation		DOT Provided by DEC)
x	3. Depths		DOT
x	4. Blows on Casing and Sampler		DOT
x	5. Description of Materials		DOT
x	6. Ground Water Table (Notation of <u>all</u> Waterbearing Zones)		DOT
x	7. Comments		DOT

NOTES:

1. Not necessary, hole was drilled dry.
3. Requested but not supplied (Couplings allowed Surface Water to Follow Casing Down Borehole).
4. Changed to 3 1/2 inch O.D. Split Spoon Samplers with 18" Stainless Steel Sleeves.

<u>Work Accomplished</u>	<u>Work to be Performed</u>	<u>Potential Problem</u>	<u>Responsibility</u>
X	G. <u>Soil Sampling</u>		
	1. Provide Adequate Number of Split Spoon Samplers (See D-3)		DOT
	2. Sample Every 5 Feet or as Dictated by Conditions Encountered		DOT & DEC
	3. Transfer Sample for Chemical Analysis to Container		DEC
	4. Store Excess Soil (See C.4)		DEC
	5. Preserve and Ship Sample		DEC
	6. Chain of Custody		DEC
X	H. <u>Equipment for Cleaning Samplers</u>		
	1. Tubs		DEC
	2. "Clean" Water (fire hydrant)		DEC
	3. Detergent		DEC Approved (See C.1)
	4. Wire Bushes, Scrub Brushes, etc.		DEC
	5. Hexane		DEC
	6. Oven, Heat Lamps, or Air Dry		DEC
X	I. <u>Well Materials</u>		
X	1. Schedule 40, 2" O.D. PVC Casing (Length as Necessary)		DEC
X	2. Schedule 40, 2" O.D. PVC Screen #10 Slot (Length as Necessary)		DEC
X	3. Length of Screen and Location in Borehole		DEC
5	4. Packing Material (#1 Jersey Sand or Equivalent)		DEC
X	5. Bentonite/Cement Grout		DEC
X	J. <u>Well Installation</u>		
X	1. Place 6 inches ( $\pm$ ) of Grout at Bottom of Hole (as Necessary)	Set up time	DOT & DEC
X	2. Lower Assembled Screen & Casing and Center it Inside 4 1/2" Diameter Casing		DOT & DEC
X	3. Place Packing Material In Annular Space Between Casings to a Point Above Screen (Bump Outer Casing as Pack is Placed)	Allow for Settling of Material	DOT & DEC
X	4. Place Bentonite/Cement Grout in Annular Space Between Casings (Bump outer casing as Grout is placed)		DOT & DEC
X	5. Remove Outer Casing Completely.		DOT
X	6. Place Protective Casing in Grout Near Surface		DOT

See Attached Sketch for Details

NOTES:

5. Actual Packing Material was No. 2 Silica Sand.

## AGWAY - BALLSTON SPA

1/28/82

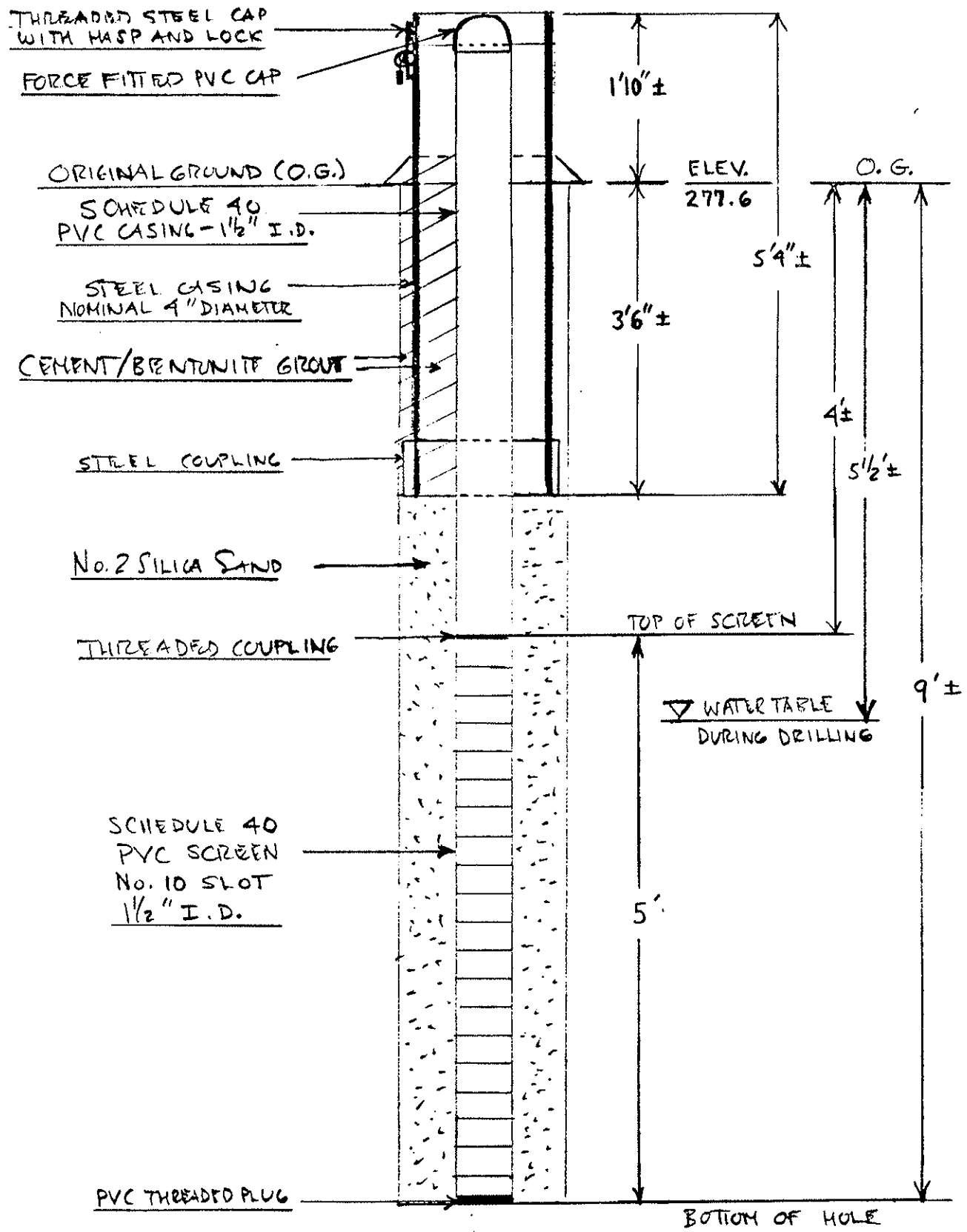
Drillhole/Well	Location	Drillhole Started/ Completed	Well Installation Started/ Completed	Ground Elevation	Approximate Screened Interval		Approximate Depth to Water During Drilling	
					Depth	Elevation	Depth	Elevation
U.G. No. I	Galway Street	12/15/81 thru 12/17/81*	12/21/81	289.6	5-10'±	284.6- 279.6±	4' ±	285.6±
D.G. No. 1	Webb Property	12/24/81	12/28/81	277.6	4-9'±	273.6- 268.6±	5.5'±	272.1±
D.G. No. II	Reeves Property	12/29/81	12/30/81	277.0	4-9'±	273- 268±	5' ±	272.0±
D.G. No. III	Westbrook Property	1/04/82	**	278.5	**	**	2.5'±	276.0±
D.G. No. IV	Claremont Property	1/06/82	1/07/82	278.4	4-9'±	274.4- 269.4±	3' ±	275.4±

\*Backfilled hole with grout from 23 1/2 feet to 10 feet± on 12/18/81.

\*\*No monitoring well installed.

MATERIALS + CONSTRUCTION  
DETAILS

DIMENSIONS



42-381 30 SHEETS 3 SQUARE  
42-382 100 SHEETS 3 SQUARE  
42-383 100 SHEETS 3 SQUARE  
NATIONAL

MATERIALS + CONSTRUCTION  
DETAILS

DIMENSIONS

THREADED STEEL CAP  
WITH HASP AND LOCK

FORCE FITTED PVC CAP

ORIGINAL GROUND (O.G.)

SCHEDULE 40  
PVC CASING - 1 1/2" I.D.

STEEL CASING  
NOMINAL 4" DIAMETER

CEMENT/BENTONITE GROUT

STEEL COUPLING

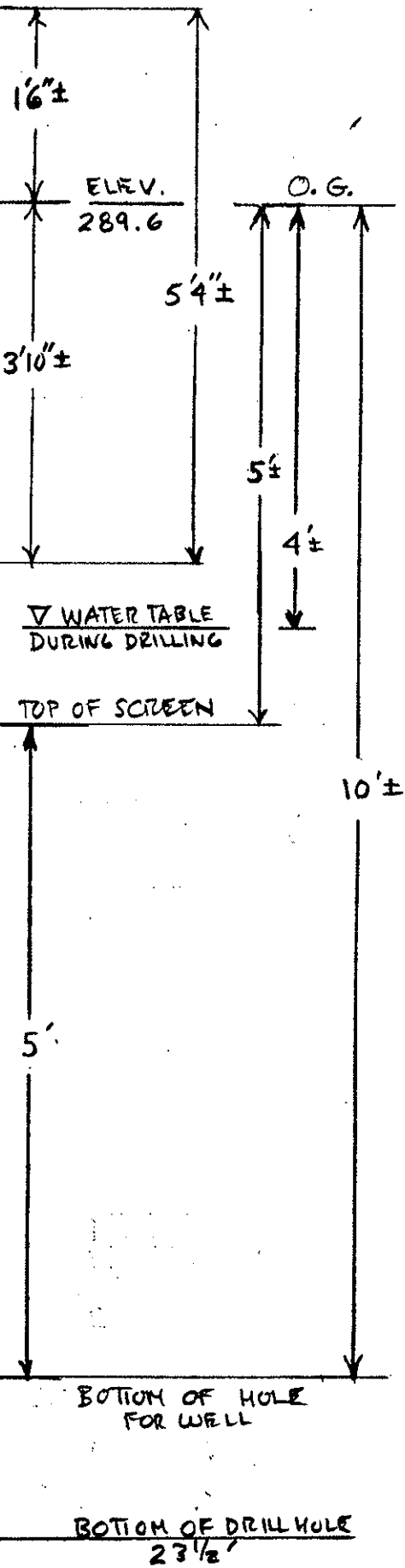
No. 2 SILICA SAND

THREADED COUPLING

SCHEDULE 40  
PVC SCREEN  
No. 10 SLOT  
1 1/2" I.D.

PVC THREADED PLUG

DRILLHOLE BACKFILLED WITH  
CEMENT/BENTONITE GROUT



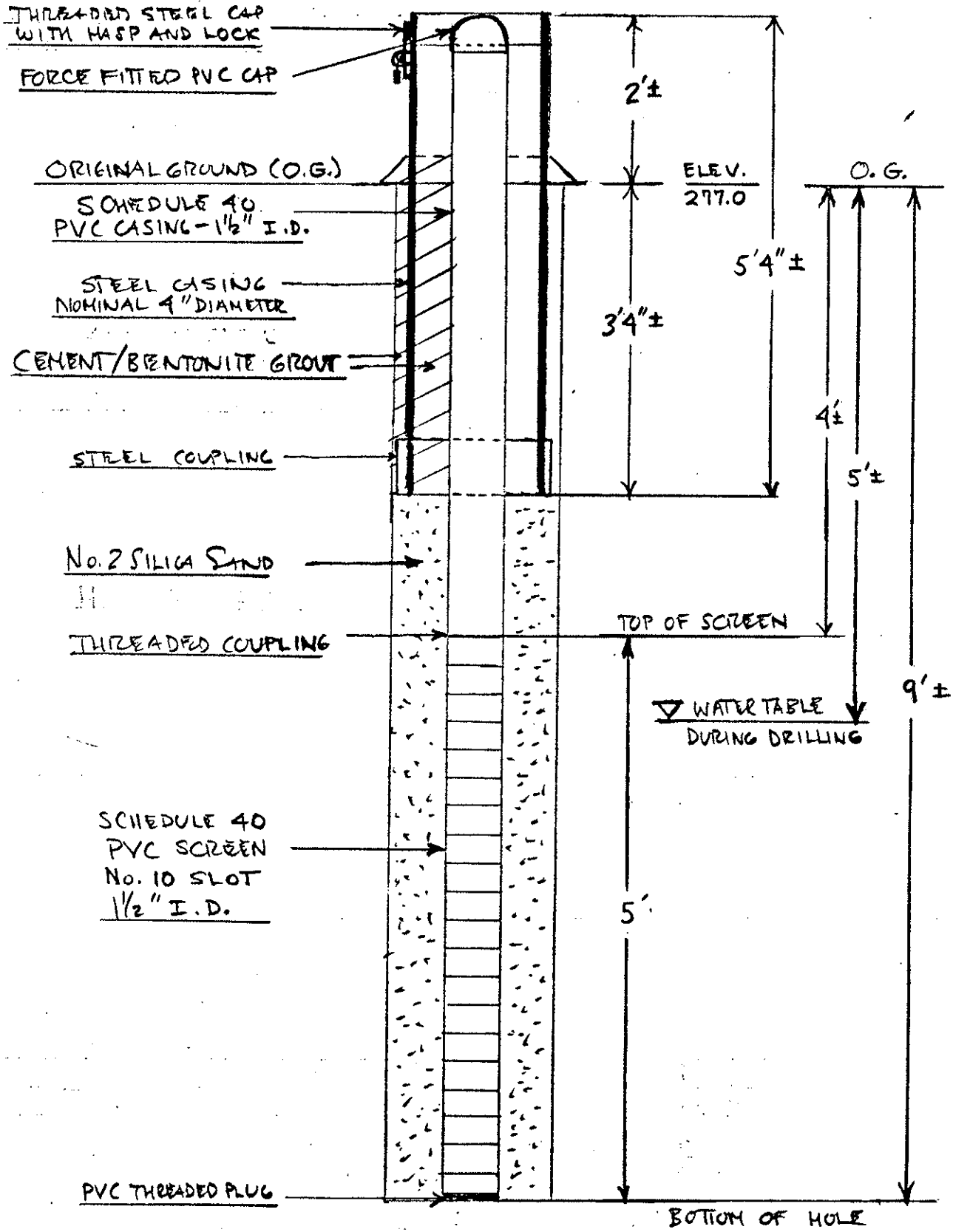
42.381 50 SHEETS 5 SQUARE  
42.382 100 SHEETS 5 SQUARE  
42.383 150 SHEETS 5 SQUARE  
42.384 200 SHEETS 5 SQUARE  
NATIONAL

BOTTOM OF HOLE  
FOR WELL

BOTTOM OF DRILL HOLE  
23 1/2'

MATERIALS + CONSTRUCTION  
DETAILS

DIMENSIONS



42.381 50 SHEETS 5 SQUARE  
42.382 100 SHEETS 5 SQUARE  
42.383 200 SHEETS 5 SQUARE  
NATIONAL



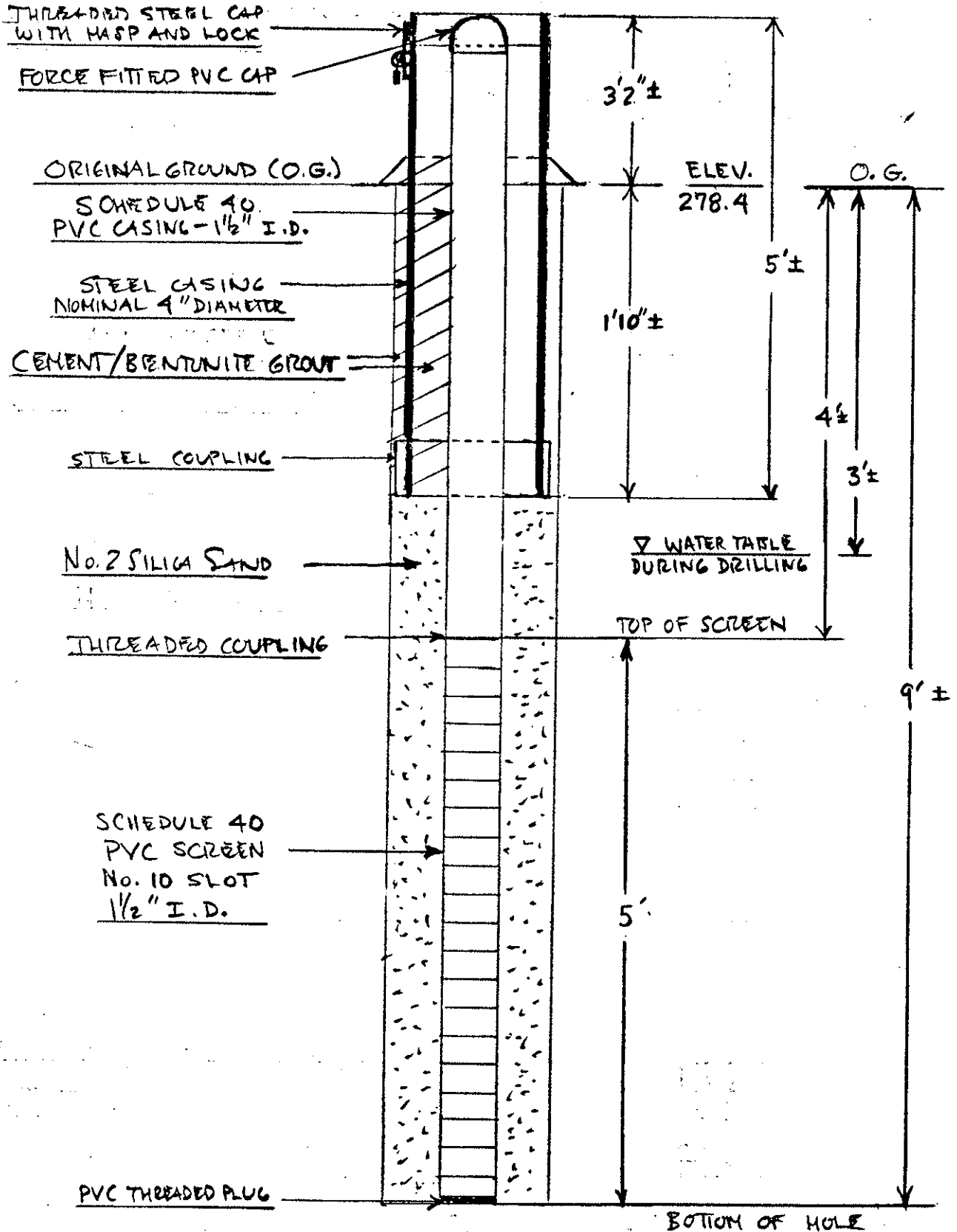
AGWAY-BALLSTON SPA  
SITE

MONITORING WELL DETAILS  
DOWNGRADIENT No. IV  
(AS CONSTRUCTED)

VANCE BRYANT  
1/28/82

MATERIALS + CONSTRUCTION  
DETAILS

DIMENSIONS



42 SHEETS 5 SQUARE  
43 SHEETS 5 SQUARE  
44 SHEETS 5 SQUARE  
45 SHEETS 5 SQUARE  
46 SHEETS 5 SQUARE  
47 SHEETS 5 SQUARE  
48 SHEETS 5 SQUARE  
49 SHEETS 5 SQUARE  
50 SHEETS 5 SQUARE  
NATIONAL  
MANUFACTURING U.S.A.