

## Installation of Monitoring Wells at the North Post Site, Fort Wainwright, June 2003

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Tim Gould/ ANC  
DATE: June 25, 2003

This memorandum summarizes the installation of three monitoring wells completed as part of the Fort Wainwright Groundwater Sampling Program. This work was done under Contract No. DAPC49-01-F-0328, Modification 5, Subtask 0002AF.

### Field Activities

Three monitoring wells were installed at North Post site at Fort Wainwright in support of the Fort Wainwright Groundwater Sampling Program. These wells were installed to replace existing driven-point probes that were no longer producing reliable analytical data. The locations of the newly installed wells and the old driven probes are shown in Figure 1, attached.

The new monitoring wells were installed at the North Post site on June 21, 2003. Drilling was done by Discovery Drilling of Anchorage, and analytical samples were submitted to CT&E/SGS of Fairbanks.

Installed wells were of PVC construction, 2 inches in diameter, with 10 feet of pre-packed 0.010 slotted screen with 10/20 sand. All three installed wells were screened from 7-17 feet below ground surface (bgs). PVC riser was installed to 3 feet above ground surface, and the wells were completed with steel overcasings. Soil samples from each well were collected from 8-10 feet bgs (approximate water table level) and were submitted for analysis for GRO/BTEX, DRO/RRO, and PAHs. Complete analytical data will be provided to DPW when they are received from the laboratory.

### Observations

All three wells (MW-1, MW-2, and MW-3) were observed to have noticeable petroleum odor when the water table was encountered.

Geology from just above the water table to 17 feet at all three wells was loose, moist, fine-grained sand. Geology above the water table was a mixture of sandy gravel and silty sands.

Installed monitoring wells were not developed and will need to be developed prior to groundwater sampling.

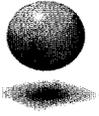
Based on a conversation with Therese Deardorff and Cristal Fosbrook of DPW on June 20, MW-3 was to be installed approximately 20 feet southeast of the southern edge of the treatment connex. When trying to get the drill rig in position to install MW-3, it was only possible to get 10 feet southeast of the connex because trees are in the proposed location.

**Attachments**

Figure 1 - Monitoring Well Locations

Excel file: Soil Boring Logs, Well Installation Diagrams, Sample Tracking Log





**CH2MHILL**

PROJECT NUMBER <b>167906.F2.02</b>	BORING NUMBER <b>MW-1</b>	SHEET 1 OF 1
<b>SOIL BORING LOG</b>		

PROJECT : Ft. Wainwright Groundwater Monitoring Program      LOCATION : North Post, Ft WW  
 ELEVATION :      DRILLING CONTRACTOR : Discovery Drilling  
 DRILLING METHOD AND EQUIPMENT USED : CME-45 Hollow Stem Auger  
 WATER LEVELS :      START : 845      END : 930      LOGGER : A. Pennino

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)		RECOVERY (IN)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm):      %G %S %F
	Sample ID					
	Sample ID	Sample ID				
5						
8'					Groundwater encountered	
10	8'-10'	24"	03NP001SL	2-2-3-3 5	Poorly graded Sand (SP), loose, moist, gray to brown, fine grained	12.3 ppm
15						
20					Installed Monitoring Well MW-1, screened from 7'-17'	
25						

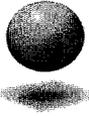


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<b>PROJECT NUMBER</b> 167906.F2.02	<b>BORING NUMBER</b> MW-2	SHEET 1 OF 1
<b>SOIL BORING LOG</b>		

PROJECT : Ft. Wainwright Groundwater Monitoring Program      LOCATION : North Post, Ft WW  
 ELEVATION :      DRILLING CONTRACTOR : Discovery Drilling  
 DRILLING METHOD AND EQUIPMENT USED : CME-45 Hollow Stem Auger  
 WATER LEVELS :      START : 945      END : 1020      LOGGER : A. Pennino

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)		RECOVERY (IN) Sample ID	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm):      %G %S %F
	RECOVERY (IN)					
	Sample ID					
5	8'	24"	03NP002SL	2-4-3-3 7	Groundwater encountered	23.8 ppm
10	8'-10'	24"	03NP002SL	2-4-3-3 7	Poorly graded Sand (SP), loose, moist, gray to brown, fine grained	
15					Installed Monitoring Well MW-2, screened from 7'-17'	
20						
25						



**CH2MHILL**

PROJECT NUMBER <b>167906.F2.02</b>	BORING NUMBER <b>MW-3</b>	SHEET 1 OF 1
<b>SOIL BORING LOG</b>		

PROJECT : Ft. Wainwright Groundwater Monitoring Program      LOCATION : North Post, Ft WW  
 ELEVATION :      DRILLING CONTRACTOR : Discovery Drilling  
 DRILLING METHOD AND EQUIPMENT USED : CME-45 Hollow Stem Auger  
 WATER LEVELS :      START : 1030      END : 1120      LOGGER : A. Pennino

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)		RECOVERY (IN)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm):      %G %S %F
	Interval	Sample ID				
5						
8'					Groundwater encountered	
10	8'-10'	24"	03NP003SL	2-2-3-3 5	Poorly graded Sand (SP), loose, moist, gray to brown, fine grained	34.2 ppm
15						
20					Installed Monitoring Well MW-3, screened from 7'-17'	
25						

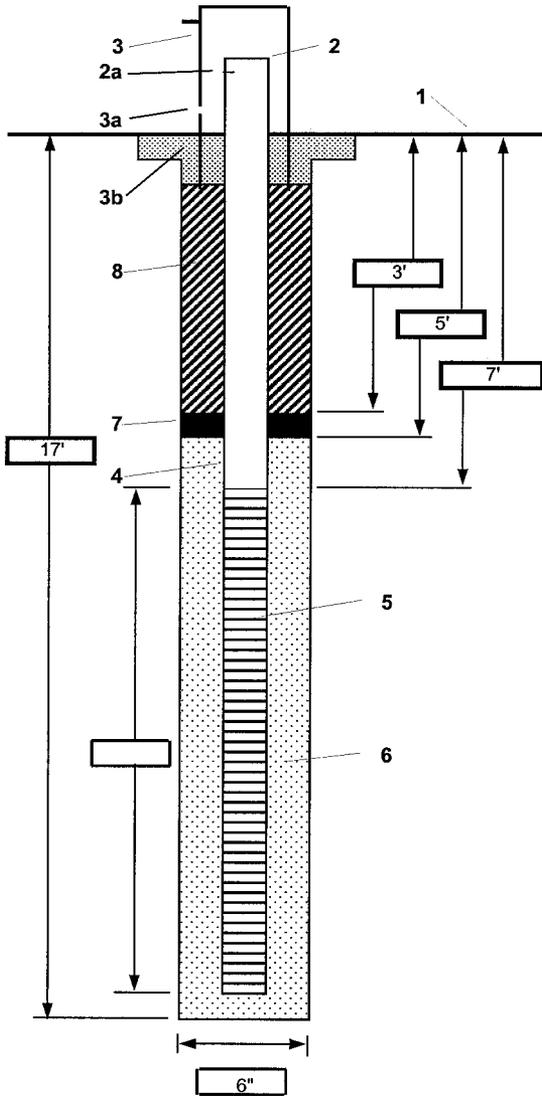






PROJECT NUMBER 167906.F2.02	WELL NUMBER MW-3	SHEET 1	OF 1
<b>WELL INSTALLATION DIAGRAM</b>			

PROJECT : Fort Wainwright Groundwater Sampling Program      LOCATION : North Post  
 DRILLING CONTRACTOR : Discovery Drilling  
 DRILLING METHOD AND EQUIPMENT USED : CME-35 hollow stem auger  
 WATER LEVELS : ~ 8' below ground surface      START : 1030      END : 1120      LOGGER : A. Pennino



1- Ground elevation at well	N/A
2- Top of casing elevation	~ 3' above ground surface
a) vent hole?	Yes
3- Wellhead protection cover type	Steel overcasing
a) weep hole?	Yes
b) concrete pad dimensions	N/A
4- Dia./type of well casing	2" PVC
5- Type/slot size of screen	pre-packed 0.010 slotted screen
6- Type screen filter	10/20 Silica Sand
a) Quantity used	4 bags
7- Type of seal	Bentonite Chips
a) Quantity used	1.5 bags
8- Grout	N/A
a) Grout mix used	N/A
b) Method of placement	N/A
c) Vol. of well casing grout	N/A
Development method	N/A
Development time	N/A
Estimated purge volume	N/A

Comments \_\_\_\_\_  
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