

USHP000485

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Rev. 2

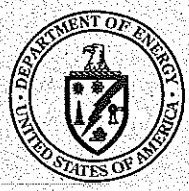


Final Site Observational Work Plan for the Shiprock, New Mexico, UMTRA Project Site

Volume II

September 2000

Prepared by the
U.S. Department of Energy
Grand Junction Office



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Appendix A

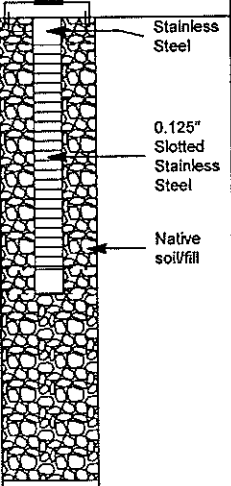
Lithologic and Monitor Well Completion Logs

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WELL POINT CONSTRUCTION LOG SHP01-0601

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103195.24</u>	DATE DRILLED <u>09/29/1984</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251150.35</u>	SURFACE ELEV. (FT NGVD) <u>4890.00</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>6.00</u>	TOP OF CASING (FT) <u>4890.00</u>
WELL NUMBER <u>0601</u>	WELL DEPTH (FT) <u>3.58</u>	MEAS. PT. ELEV. (FT) <u>4890.00</u>
		SLOT SIZE (IN) <u>0.125</u>
		BIT SIZE(S) (IN) _____

	WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD
BLANK CASING:	1.25 in. Stainless Steel	0.0 to 0.35	_____
WELL SCREEN:	1.25 in. Stainless Steel	0.35 to 3.27	SAMPLING METHOD _____
SUMP/END CAP:	1.25 in. Stainless Steel	3.27 to 3.58	DATE DEVELOPED _____
SURFACE SEAL:			WATER LEVEL (FT BGS) _____
			LOGGED BY <u>P. McKenzie</u>
			REMARKS <u>Drillers hit water at 5 ft; well point removed.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
5	4885				 <p>Labels in diagram: - Stainless Steel - 0.125" Slotted Stainless Steel - Native soil/fill</p>	ALLUVIUM	
10	4880						Total Depth 6.0 ft.



WELL POINT CONSTRUCTION LOG SHP01-0602

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102936.86</u>	DATE DRILLED <u>09/29/1984</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250749.31</u>	SURFACE ELEV. (FT NGVD) <u>4890.00</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>7.00</u>	TOP OF CASING (FT) <u>4890.00</u>
WELL NUMBER <u>0602</u>	WELL DEPTH (FT) <u>3.58</u>	MEAS. PT. ELEV. (FT) <u>4890.00</u>
		SLOT SIZE (IN) <u>0.125</u>
		BIT SIZE(S) (IN) _____

	WELL INSTALLATION	INTERVAL (FT)
BLANK CASING:	1.25 in. Stainless Steel	0.0 to 0.35
WELL SCREEN:	1.25 in. Stainless Steel	0.35 to 3.27
SUMP/END CAP:	1.25 in. Stainless Steel	3.27 to 3.58
SURFACE SEAL:		

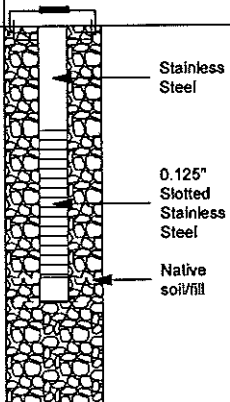

DRILLING METHOD _____
SAMPLING METHOD _____
DATE DEVELOPED _____
WATER LEVEL (FT BGS) _____
LOGGED BY <u>P. McKenzie</u>
REMARKS <u>Drillers hit water at 6.0 ft; well point removed.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
5	4885						ALLUVIUM
10	4880						Total Depth 7.0 ft.

WELL POINT CONSTRUCTION LOG SHP01-0603

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103099.48</u>	DATE DRILLED <u>09/29/1984</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250099.96</u>	SURFACE ELEV. (FT NGVD) <u>4888.00</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>5.00</u>	TOP OF CASING (FT) <u>4888.00</u>
WELL NUMBER <u>0603</u>	WELL DEPTH (FT) <u>3.58</u>	MEAS. PT. ELEV. (FT) <u>4888.00</u>

	WELL INSTALLATION	INTERVAL (FT)	
BLANK CASING:	1.25 in. Stainless Steel	0.0 to 1.35	DRILLING METHOD _____
WELL SCREEN:	1.25 in. Stainless Steel	1.35 to 3.27	SAMPLING METHOD _____
SUMP/END CAP:	1.25 in. Stainless Steel	3.27 to 3.58	DATE DEVELOPED _____
SURFACE SEAL:			WATER LEVEL (FT BGS) _____
			LOGGED BY <u>P. McKenzie</u>
			REMARKS <u>Drillers hit water at 4.0 ft; well point removed.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4885				 <p style="font-size: small;">Stainless Steel 0.125" Slotted Stainless Steel Native soil/fill</p>		ALLUVIUM
5							Total Depth 5.0 ft.
	4880						
10							

WELL POINT CONSTRUCTION LOG SHP01-0604

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103521.29</u>	DATE DRILLED <u>09/29/1984</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249651.66</u>	SURFACE ELEV. (FT NGVD) <u>4888.00</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>6.00</u>	TOP OF CASING (FT) <u>4888.00</u>
WELL NUMBER <u>0604</u>	WELL DEPTH (FT) <u>3.58</u>	MEAS. PT. ELEV. (FT) <u>4888.00</u>
		SLOT SIZE (IN) <u>0.125</u>
		BIT SIZE(S) (IN) _____

	WELL INSTALLATION	INTERVAL (FT)
BLANK CASING:	1.25 in. Stainless Steel	0.0 to 0.35
WELL SCREEN:	1.25 in. Stainless Steel	0.35 to 3.27
SUMP/END CAP:	1.25 in. Stainless Steel	3.27 to 3.58
SURFACE SEAL:		

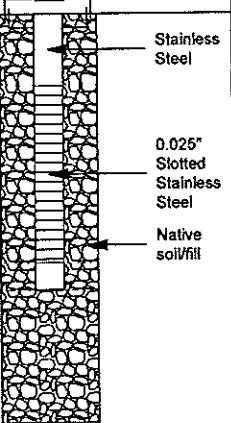

DRILLING METHOD _____
SAMPLING METHOD _____
DATE DEVELOPED _____
WATER LEVEL (FT BGS) 3.5 on 09/29/1984
LOGGED BY P. McKenzie
REMARKS Drillers hit water at 3.5 ft; well point removed.

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
							ALLUVIUM
4885							
5							
4880							Total Depth 6.0 ft.
10							

WELL POINT CONSTRUCTION LOG SHP01-0606

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103248.20</u>	DATE DRILLED <u>10/17/1984</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249451.05</u>	SURFACE ELEV. (FT NGVD) <u>4887.67</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>5.30</u>	TOP OF CASING (FT) <u>4888.57</u>
WELL NUMBER <u>0606</u>	WELL DEPTH (FT) <u>3.58</u>	MEAS. PT. ELEV. (FT) <u>4888.57</u>
		SLOT SIZE (IN) <u>0.025</u>
		BIT SIZE(S) (IN) _____

	WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD _____
BLANK CASING:	1.25 in. Stainless Steel	-0.9 to 0.93	SAMPLING METHOD _____
WELL SCREEN:	1.25 in. Stainless Steel	0.93 to 3.23	DATE DEVELOPED _____
SUMPI/END CAP:	1.25 in. Stainless Steel	3.23 to 3.58	WATER LEVEL (FT BGS) _____
SURFACE SEAL:			LOGGED BY <u>Miller</u>
			REMARKS <u>Well point removed.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4885				 <p style="font-size: small;">Stainless Steel 0.025" Slotted Stainless Steel Native soil/fill</p>		ALLUVIUM
5							Total Depth 5.3 ft.
	4880						
10							

WELL POINT CONSTRUCTION LOG SHP01-0607

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102958.88</u>	DATE DRILLED <u>10/17/1984</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250249.39</u>	SURFACE ELEV. (FT NGVD) <u>4888.00</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>6.60</u>	TOP OF CASING (FT) <u>4890.00</u>
WELL NUMBER <u>0607</u>	WELL DEPTH (FT) <u>3.58</u>	MEAS. PT. ELEV. (FT) <u>4890.00</u>
		SLOT SIZE (IN) <u>0.025</u>
		BIT SIZE(S) (IN) _____

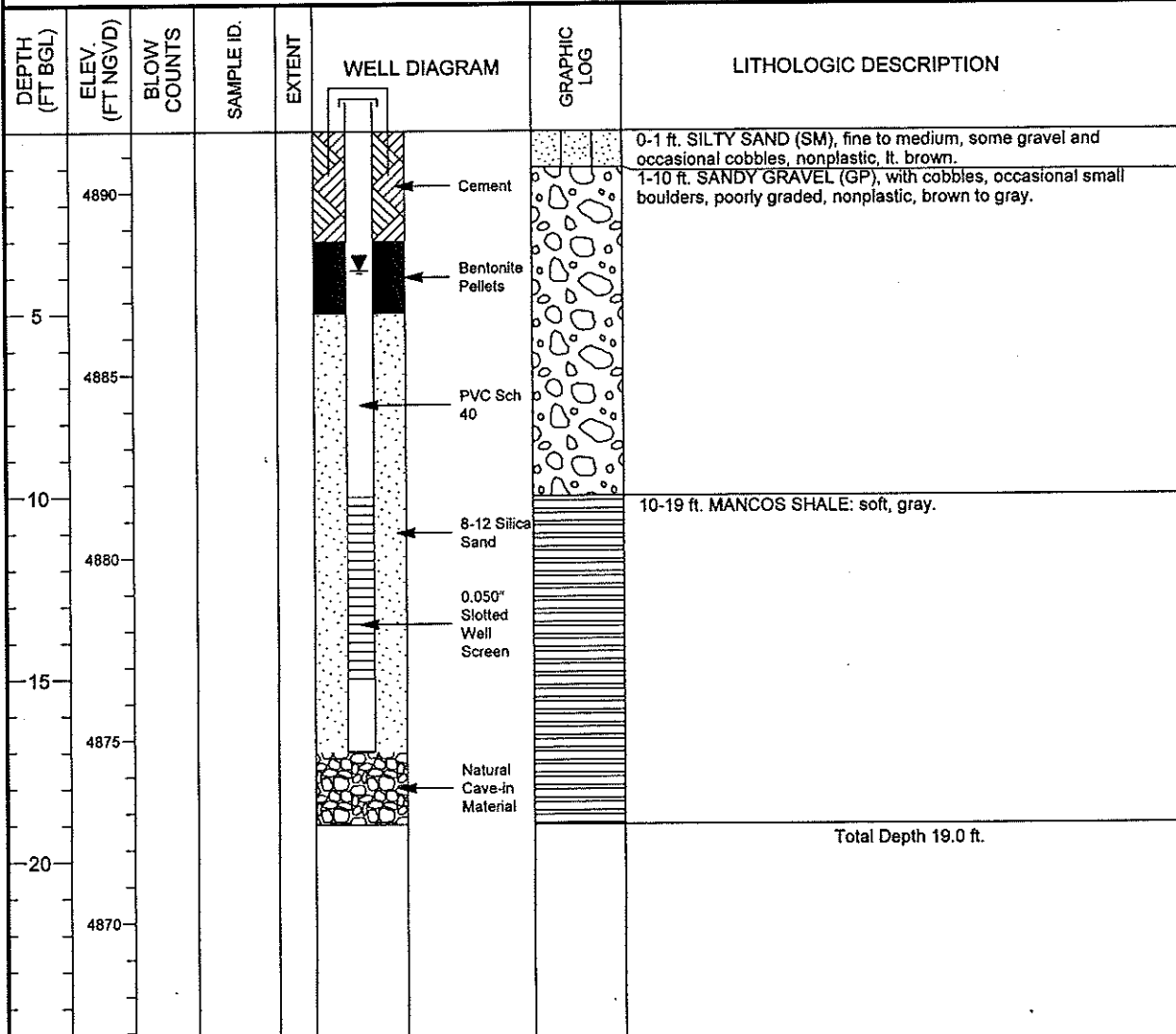
	WELL INSTALLATION	INTERVAL (FT)	
BLANK CASING:	1.25 in. Stainless Steel	-2.0 to 0.93	DRILLING METHOD _____
WELL SCREEN:	1.25 in. Stainless Steel	0.93 to 3.23	SAMPLING METHOD _____
SUMP/END CAP:	1.25 in. Stainless Steel	3.23 to 3.58	DATE DEVELOPED _____
SURFACE SEAL:			WATER LEVEL (FT BGS) _____
			LOGGED BY <u>Miller</u>
			REMARKS <u>Well point removed.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4885				<p style="font-size: small;"> Stainless Steel 0.025" Slotted Stainless Steel Native soil/fill </p>		ALLUVIUM
5							
	4880						Total Depth 6.6 ft.
10							

MONITORING WELL COMPLETION LOG SHP01-0608

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101434.86</u>	DATE DRILLED <u>08/29/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251712.58</u>	SURFACE ELEV. (FT NGVD) <u>4891.67</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>19.00</u>	TOP OF CASING (FT) <u>4893.35</u>
WELL NUMBER <u>0608</u>	WELL DEPTH (FT) <u>17.00</u>	MEAS. PT. ELEV. (FT) <u>4893.35</u>
		SLOT SIZE (IN) <u>0.050</u>
		BIT SIZE(S) (IN) <u>8.75</u>

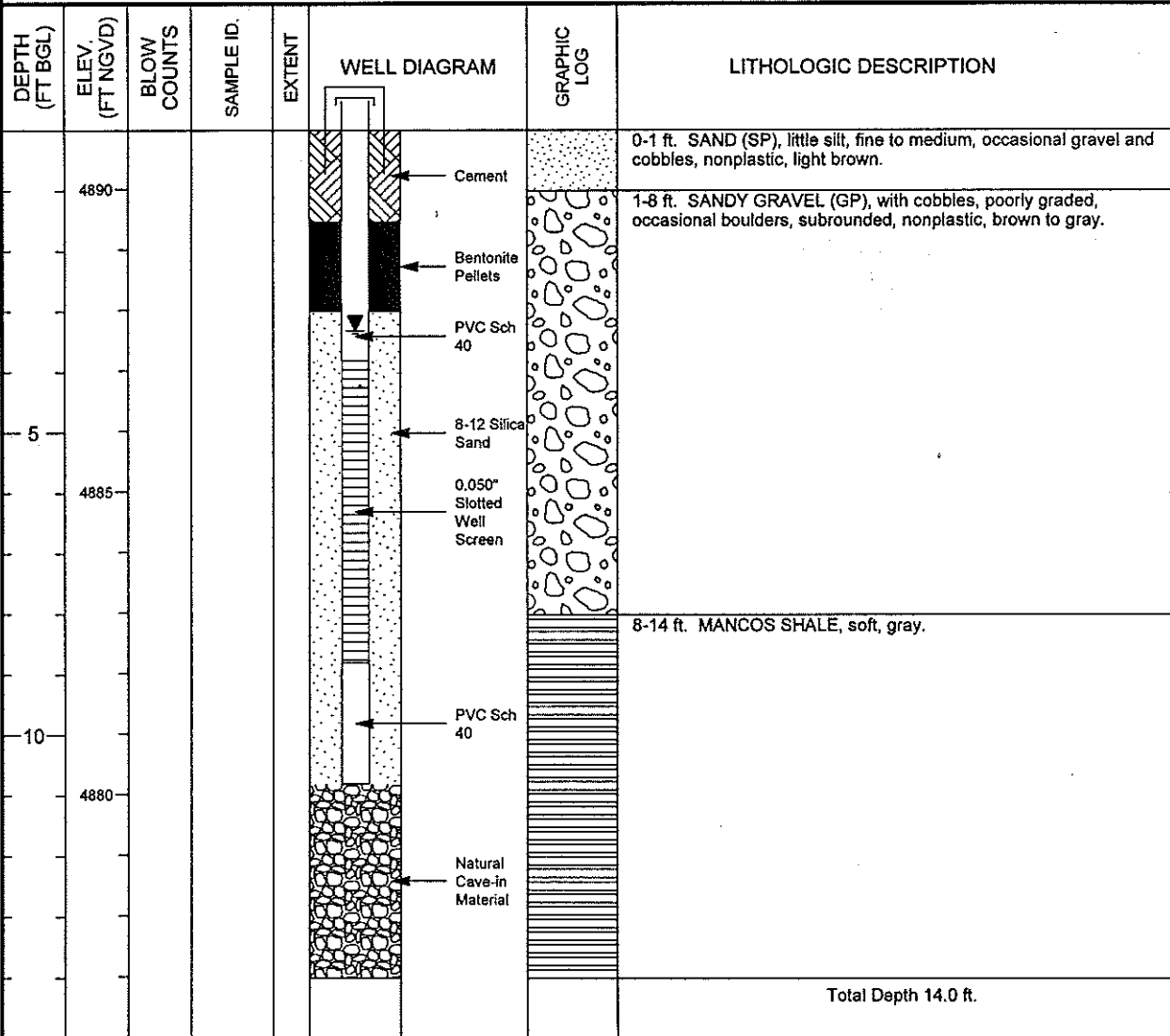
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ROTARY MUD</u>
BLANK CASING:	4 in. PVC Sch 40	-1.68 to 10.0	SAMPLING METHOD _____
WELL SCREEN:	4 in. Machine Slotted PVC	10.0 to 15.0	DATE DEVELOPED <u>09/28/1985</u>
SUMP/END CAP:	4 in. PVC Sch 40	15.0 to 17.0	WATER LEVEL (FT BTOC) <u>5.5 on 09/28/1985</u>
SURFACE SEAL:	Cement	0.0 to 3.0	LOGGED BY <u>R. Crockett</u>
GROUT:			REMARKS _____
SEAL:	Bentonite Pellets	3.0 to 5.0	
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	5.0 to 17.0	



MONITORING WELL COMPLETION LOG SHP01-0609

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101450.02</u>	DATE DRILLED <u>08/29/1985 to 08/30/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251704.91</u>	SURFACE ELEV. (FT NGVD) <u>4890.97</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>14.00</u>	TOP OF CASING (FT) <u>4892.46</u>
WELL NUMBER <u>0609</u>	WELL DEPTH (FT) <u>10.80</u>	MEAS. PT. ELEV. (FT) <u>4892.46</u>

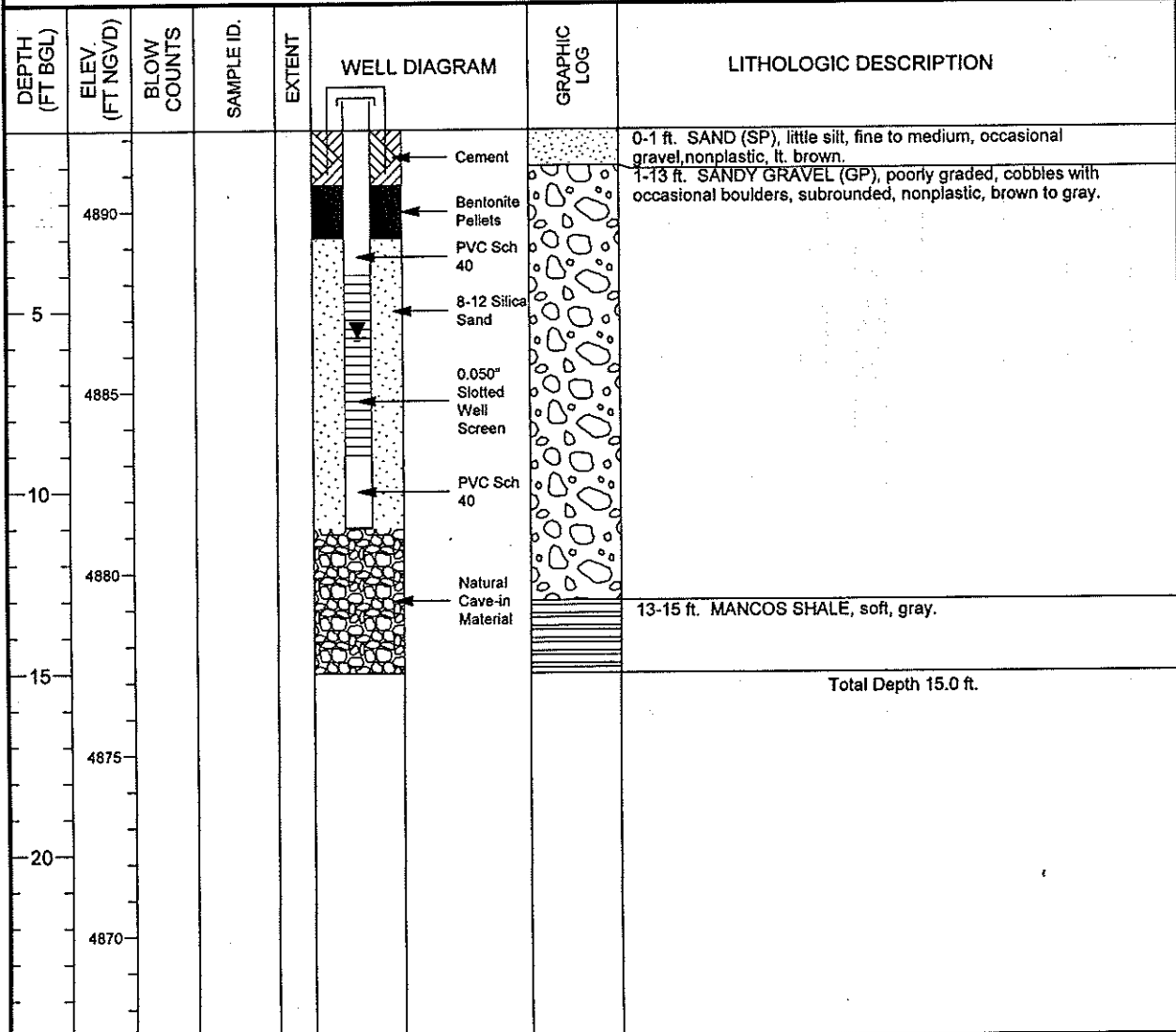
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			
BLANK CASING:	4 in. PVC Sch 40	-1.49 to 3.8	DRILLING METHOD <u>ROTARY MUD</u>
WELL SCREEN:	4 in. Machine Slotted PVC	3.8 to 8.8	SAMPLING METHOD _____
SUMPI/END CAP:	4 in. PVC Sch 40	8.8 to 10.8	DATE DEVELOPED <u>09/29/1985</u>
SURFACE SEAL:	Cement	0.0 to 1.5	WATER LEVEL (FT BTOC) <u>4.8 on 09/29/1985</u>
GROUT:			LOGGED BY <u>R. Crockett</u>
SEAL:	Bentonite Pellets	1.5 to 3.0	REMARKS _____
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	3.0 to 10.8	



MONITORING WELL COMPLETION LOG SHP01-0610

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101686.65</u>	DATE DRILLED <u>08/30/1985 to 09/03/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251334.83</u>	SURFACE ELEV. (FT NGVD) <u>4892.24</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>15.00</u>	TOP OF CASING (FT) <u>4895.70</u>
WELL NUMBER <u>0610</u>	WELL DEPTH (FT) <u>11.00</u>	MEAS. PT. ELEV. (FT) <u>4895.72</u>

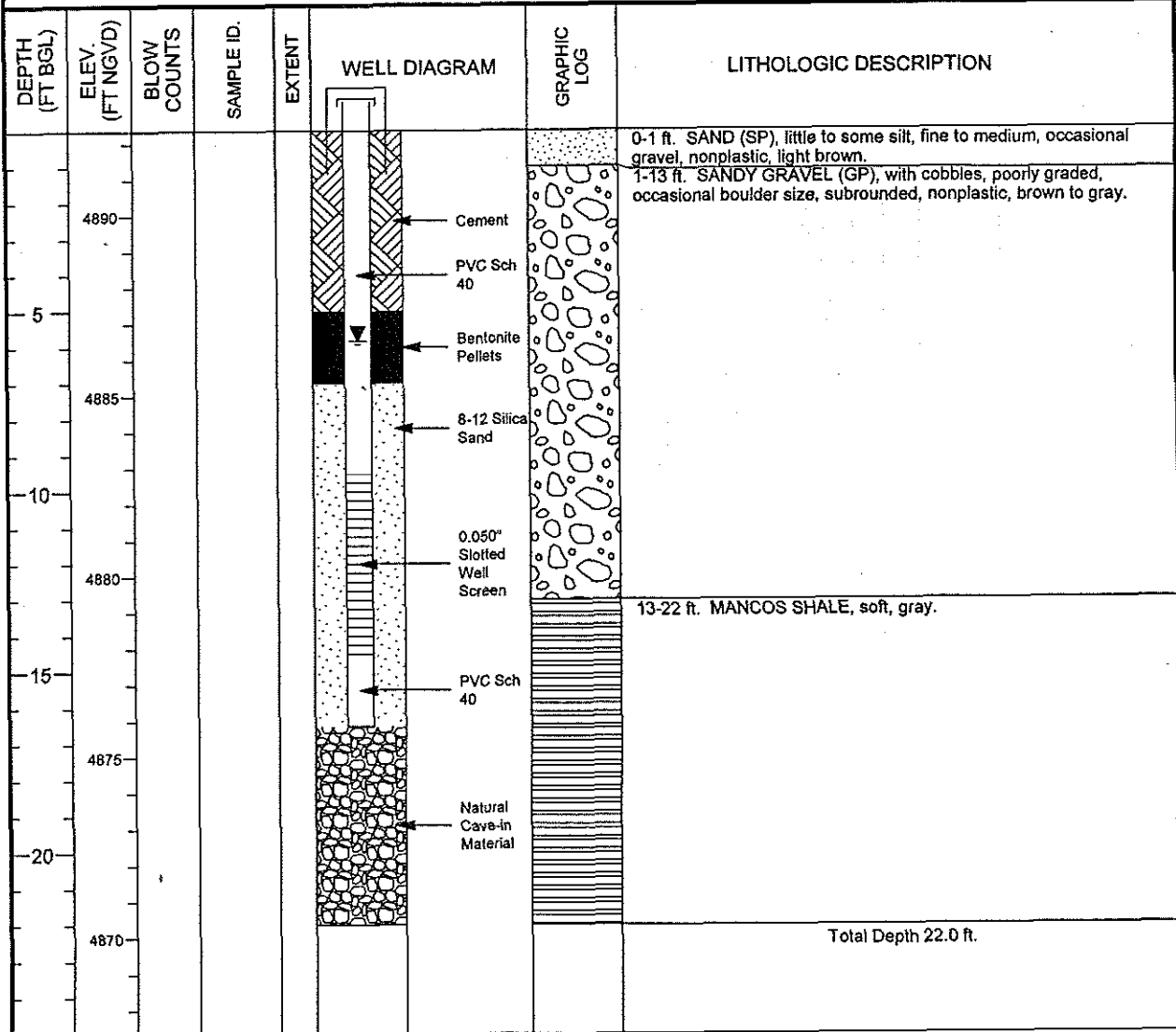
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ROTARY MUD</u>
BLANK CASING:	4 in. PVC Sch 40	-3.46 to 4.0	SAMPLING METHOD _____
WELL SCREEN:	4 in. Machine Slotted PVC	4.0 to 9.0	DATE DEVELOPED <u>09/29/1985</u>
SUMP/END CAP:	4 in. PVC Sch 40	9.0 to 11.0	WATER LEVEL (FT BTOC) <u>9.2 on 09/29/1985</u>
SURFACE SEAL:	Cement	0.0 to 1.5	LOGGED BY <u>R. Crockett</u>
GROUT:			REMARKS _____
SEAL:	Bentonite Pellets	1.5 to 3.0	
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	3.0 to 11.0	



MONITORING WELL COMPLETION LOG SHP01-0611

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101693.09</u>	DATE DRILLED <u>09/03/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251324.05</u>	SURFACE ELEV. (FT NGVD) <u>4892.35</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>22.00</u>	TOP OF CASING (FT) <u>4895.62</u>
WELL NUMBER <u>0611</u>	WELL DEPTH (FT) <u>16.25</u>	MEAS. PT. ELEV. (FT) <u>4895.62</u>
		SLOT SIZE (IN) <u>0.050</u>
		BIT SIZE(S) (IN) <u>8.75</u>

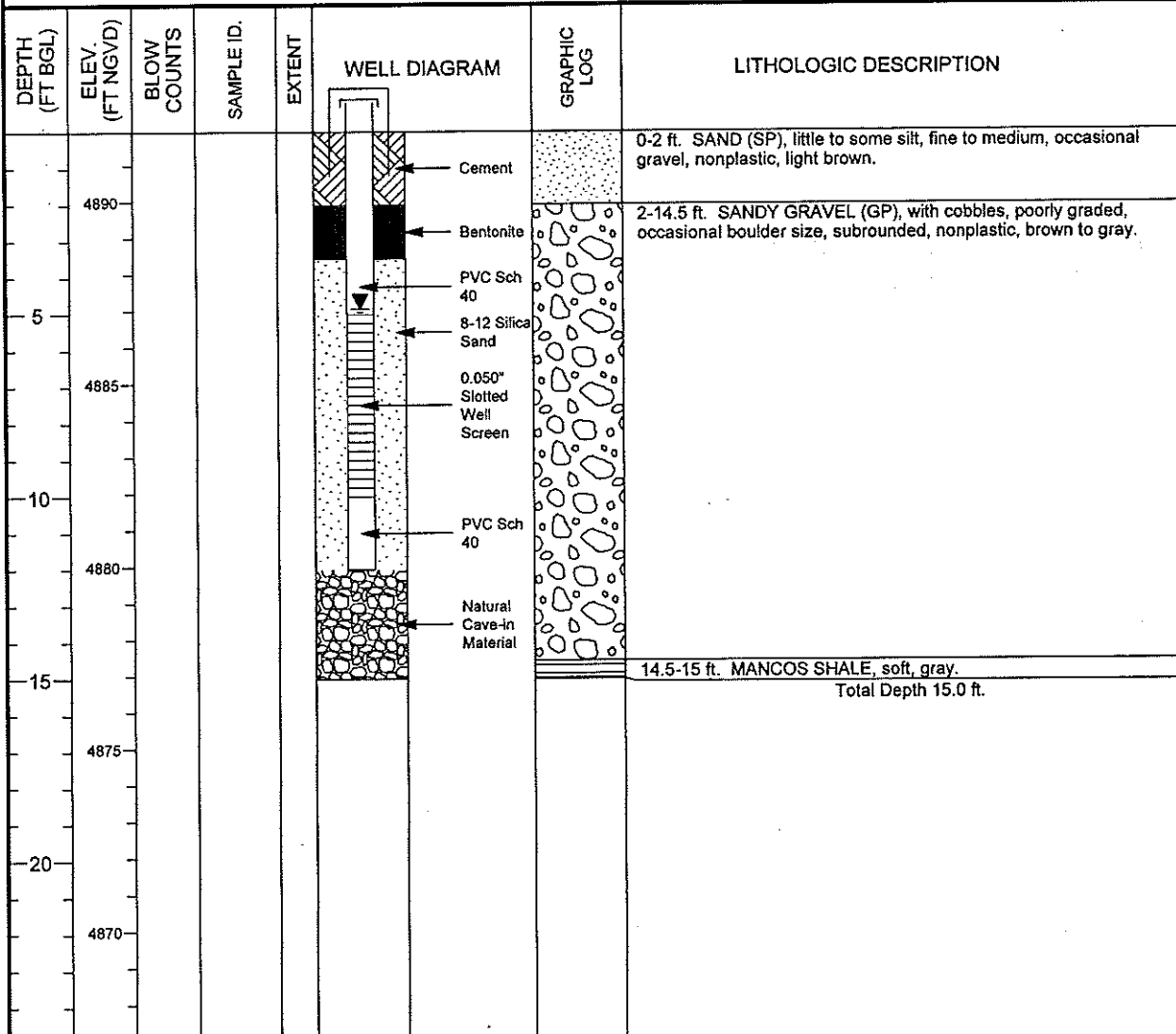
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ROTARY MUD</u>
BLANK CASING:	4 in. PVC Sch 40	-3.27 to 9.5	SAMPLING METHOD _____
WELL SCREEN:	4 in. Machine Slotted PVC	9.5 to 14.5	DATE DEVELOPED <u>09/29/1985</u>
SUMP/END CAP:	4 in. PVC Sch 40	14.5 to 16.5	WATER LEVEL (FT BTOC) <u>9.1 on 09/29/1985</u>
SURFACE SEAL:	Cement	0.0 to 5.0	LOGGED BY <u>R. Crockett</u>
GROUT:			REMARKS _____
SEAL:	Bentonite Pellets	5.0 to 7.0	
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	7.0 to 16.5	



MONITORING WELL COMPLETION LOG SHP01-0612

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101985.43</u>	DATE DRILLED <u>09/04/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251560.91</u>	SURFACE ELEV. (FT NGVD) <u>4891.91</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>15.00</u>	TOP OF CASING (FT) <u>4893.35</u>
WELL NUMBER <u>0612</u>	WELL DEPTH (FT) <u>12.00</u>	MEAS. PT. ELEV. (FT) <u>4893.35</u>

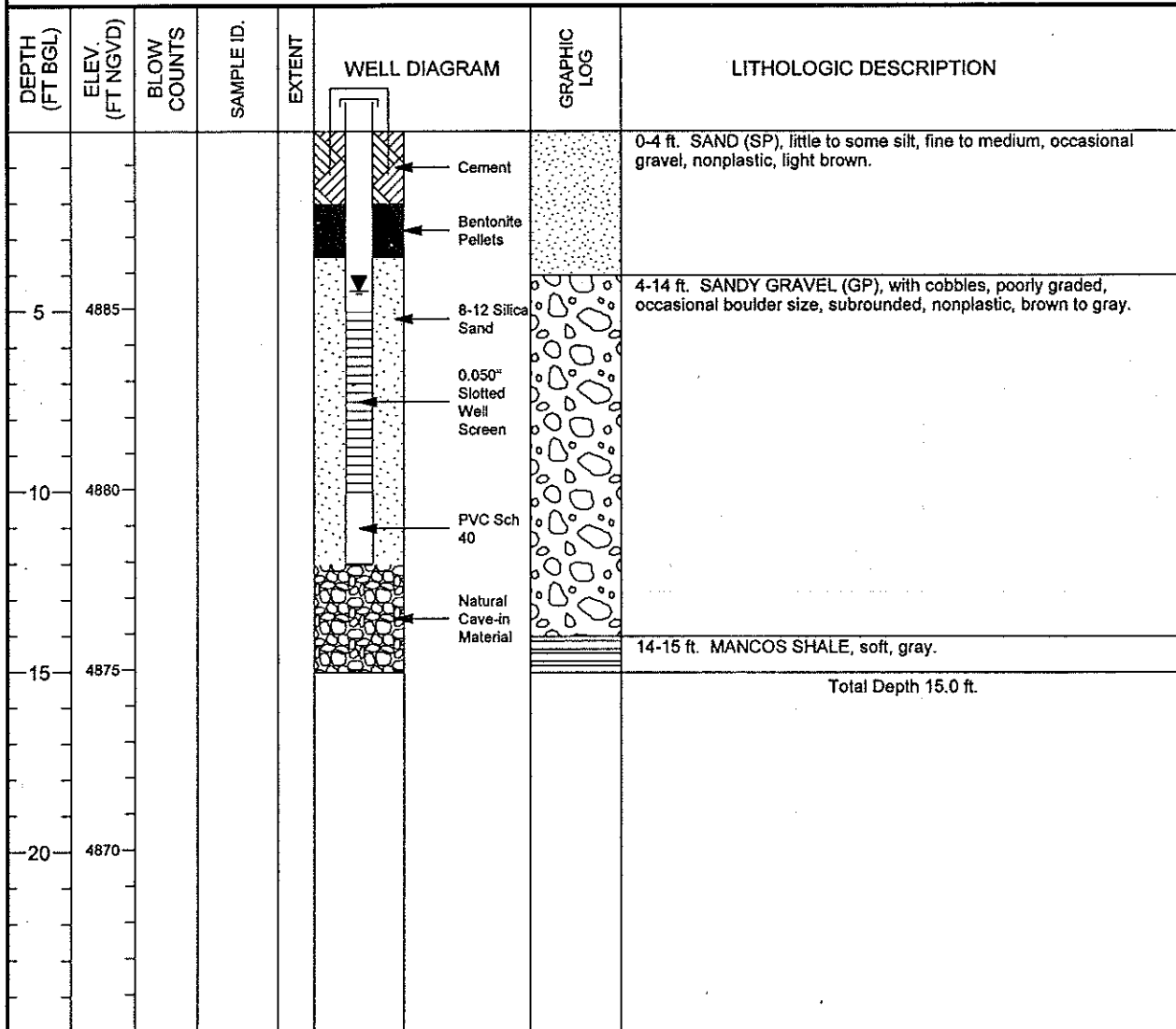
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ROTARY MUD</u>
BLANK CASING:	4 in. PVC Sch 40	-1.44 to 5.0	SAMPLING METHOD _____
WELL SCREEN:	4 in. Machine Slotted PVC	5.0 to 10.0	DATE DEVELOPED <u>09/29/1985</u>
SUMP/END CAP:	4 in. PVC Sch 40	10.0 to 12.0	WATER LEVEL (FT BTOC) <u>6.3 on 09/29/1985</u>
SURFACE SEAL:	Cement	0.0 to 2.0	LOGGED BY <u>R. Crockett</u>
GROUT:			REMARKS _____
SEAL:	Bentonite Pellets	2.0 to 3.5	
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	3.5 to 12.0	



MONITORING WELL COMPLETION LOG SHP01-0613

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101991.72</u>	DATE DRILLED <u>09/04/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250943.68</u>	SURFACE ELEV. (FT NGVD) <u>4889.92</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>15.00</u>	TOP OF CASING (FT) <u>4893.19</u>
WELL NUMBER <u>0613</u>	WELL DEPTH (FT) <u>12.00</u>	MEAS. PT. ELEV. (FT) <u>4893.19</u>

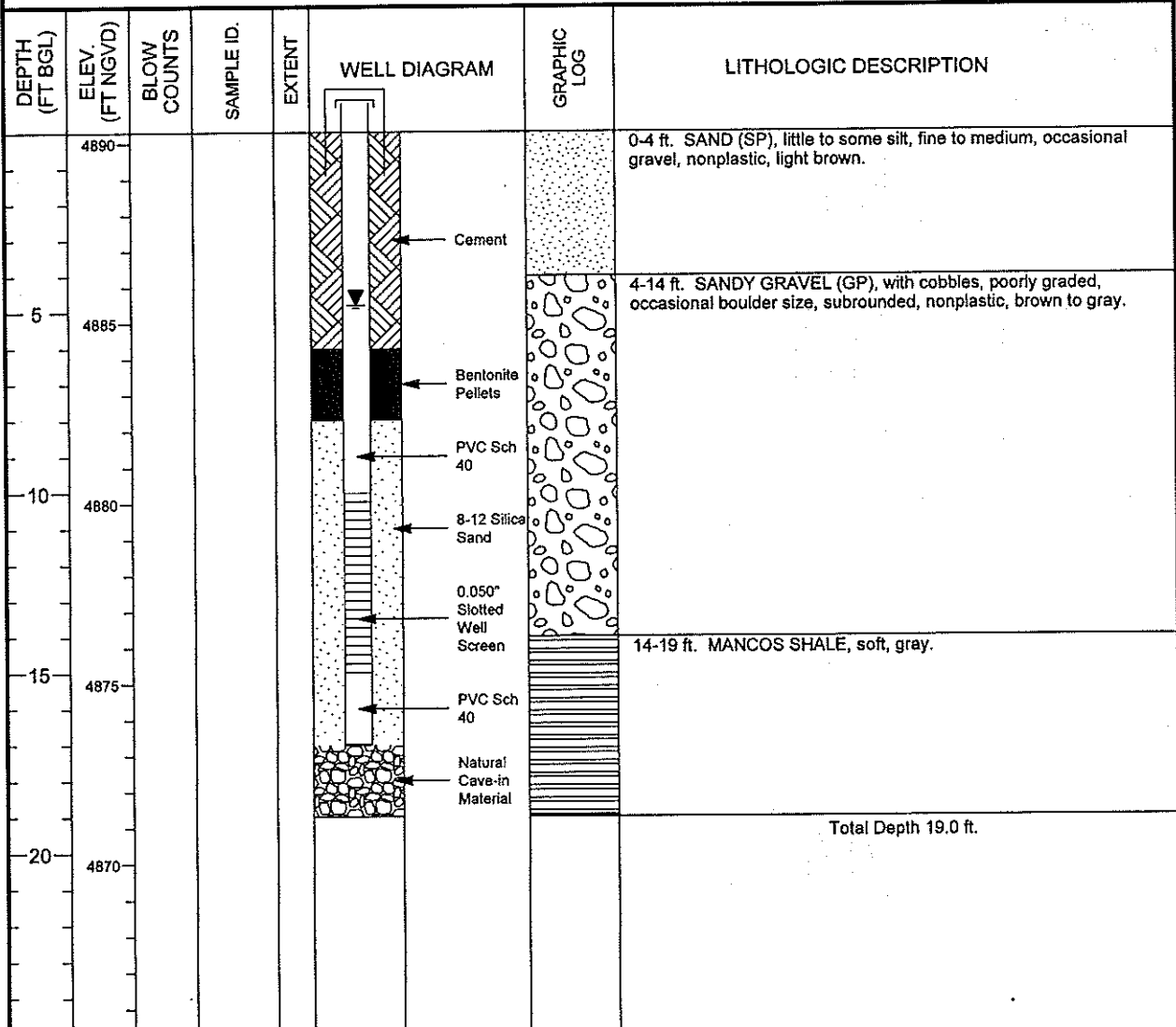
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			
BLANK CASING:	4 in. PVC Sch 40	-3.27 to 5.0	DRILLING METHOD <u>ROTARY MUD</u>
WELL SCREEN:	4 in. Machine Slotted PVC	5.0 to 10.0	SAMPLING METHOD _____
SUMP/END CAP:	4 in. PVC Sch 40	10.0 to 12.0	DATE DEVELOPED <u>09/30/1985</u>
SURFACE SEAL:	Cement	0.0 to 2.0	WATER LEVEL (FT BTOC) <u>7.7 on 09/30/1985</u>
GROUT:			LOGGED BY <u>R. Crockett</u>
SEAL:	Bentonite Pellets	2.0 to 3.5	REMARKS _____
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	3.5 to 12.0	



MONITORING WELL COMPLETION LOG SHP01-0614

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101985.26</u>	DATE DRILLED <u>09/04/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250953.07</u>	SURFACE ELEV. (FT NGVD) <u>4890.30</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>19.00</u>	TOP OF CASING (FT) <u>4892.79</u>
WELL NUMBER <u>0614</u>	WELL DEPTH (FT) <u>17.00</u>	MEAS. PT. ELEV. (FT) <u>4892.79</u>

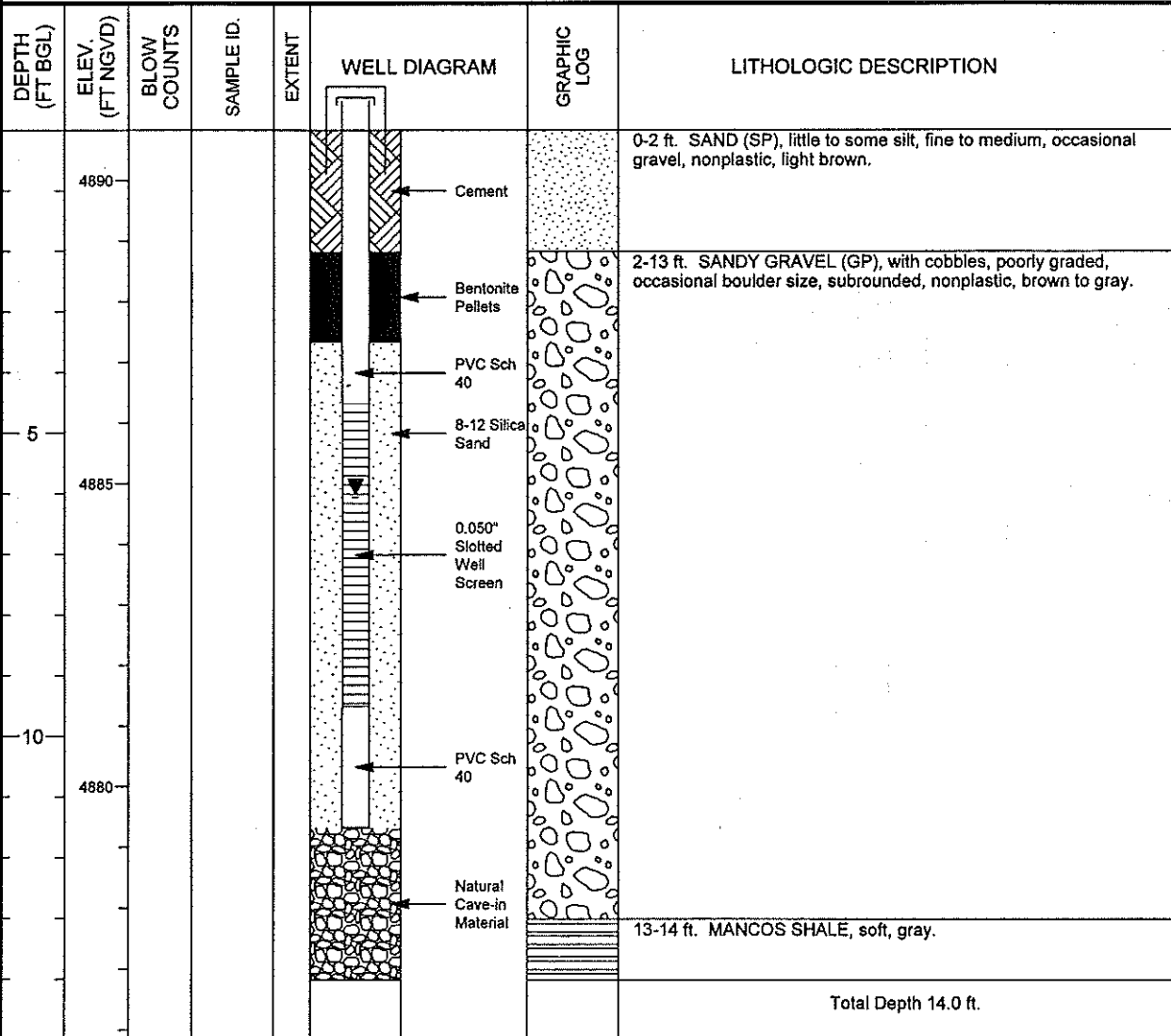
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ROTARY MUD</u>
BLANK CASING:	4 in. PVC Sch 40	-2.49 to 10.0	SAMPLING METHOD _____
WELL SCREEN:	4 in. Machine Slotted PVC	10.0 to 15.0	DATE DEVELOPED <u>09/30/1985</u>
SUMP/END CAP:	4 in. PVC Sch 40	15.0 to 17.0	WATER LEVEL (FT BTOC) <u>7.3 on 09/30/1985</u>
SURFACE SEAL:	Cement	0.0 to 6.0	LOGGED BY <u>R. Crockett</u>
GROUT:			REMARKS _____
SEAL:	Bentonite Pellets	6.0 to 8.0	
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	8.0 to 17.0	



MONITORING WELL COMPLETION LOG SHP01-0615

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102542.15</u>	DATE DRILLED <u>09/06/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250564.45</u>	SURFACE ELEV. (FT NGVD) <u>4890.83</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>14.00</u>	TOP OF CASING (FT) <u>4892.23</u>
WELL NUMBER <u>0615</u>	WELL DEPTH (FT) <u>11.50</u>	MEAS. PT. ELEV. (FT) <u>4892.23</u>
		SLOT SIZE (IN) <u>0.050</u>
		BIT SIZE(S) (IN) <u>8.75</u>

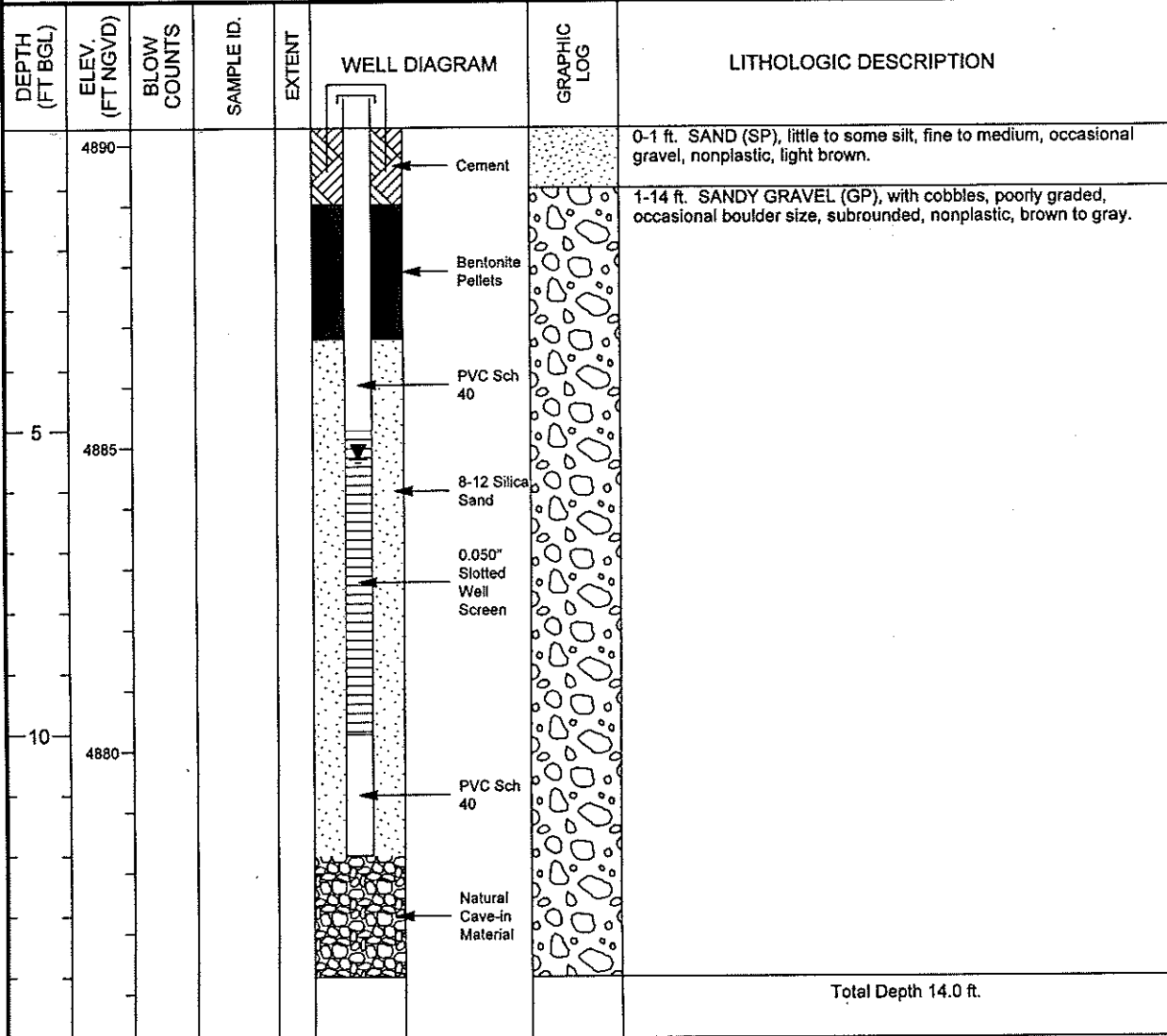
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			
BLANK CASING:	4 in. PVC Sch 40	-1.4 to 4.5	DRILLING METHOD <u>ROTARY MUD</u>
WELL SCREEN:	4 in. Machine Slotted PVC	4.5 to 9.5	SAMPLING METHOD _____
SUMP/END CAP:	4 in. PVC Sch 40	9.5 to 11.5	DATE DEVELOPED <u>10/01/1985</u>
SURFACE SEAL:	Cement	0.0 to 2.0	WATER LEVEL (FT BTOC) <u>7.4 on 10/01/1985</u>
GROUT:			LOGGED BY <u>R. Crockett</u>
SEAL:	Bentonite Pellets	2.0 to 3.5	REMARKS _____
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	3.5 to 11.5	



MONITORING WELL COMPLETION LOG SHP01-0616

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103008.96</u>	DATE DRILLED <u>09/05/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251039.92</u>	SURFACE ELEV. (FT NGVD) <u>4890.28</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>14.00</u>	TOP OF CASING (FT) <u>4891.90</u>
WELL NUMBER <u>0616</u>	WELL DEPTH (FT) <u>12.00</u>	MEAS. PT. ELEV. (FT) <u>4891.90</u>
		SLOT SIZE (IN) <u>0.050</u>
		BIT SIZE(S) (IN) <u>8.75</u>

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ROTARY MUD</u>
BLANK CASING:	4 in. PVC Sch 40	-1.62 to 5.0	SAMPLING METHOD _____
WELL SCREEN:	4 in. Machine Slotted PVC	5.0 to 10.0	DATE DEVELOPED <u>10/01/1985</u>
SUMP/END CAP:	4 in. PVC Sch 40	10.0 to 12.0	WATER LEVEL (FT BTOC) <u>7.1 on 10/01/1985</u>
SURFACE SEAL:	Cement	0.0 to 1.5	LOGGED BY <u>R. Crockett</u>
GROUT:			REMARKS _____
SEAL:	Bentonite Pellets	1.5 to 3.5	
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	3.5 to 12.0	

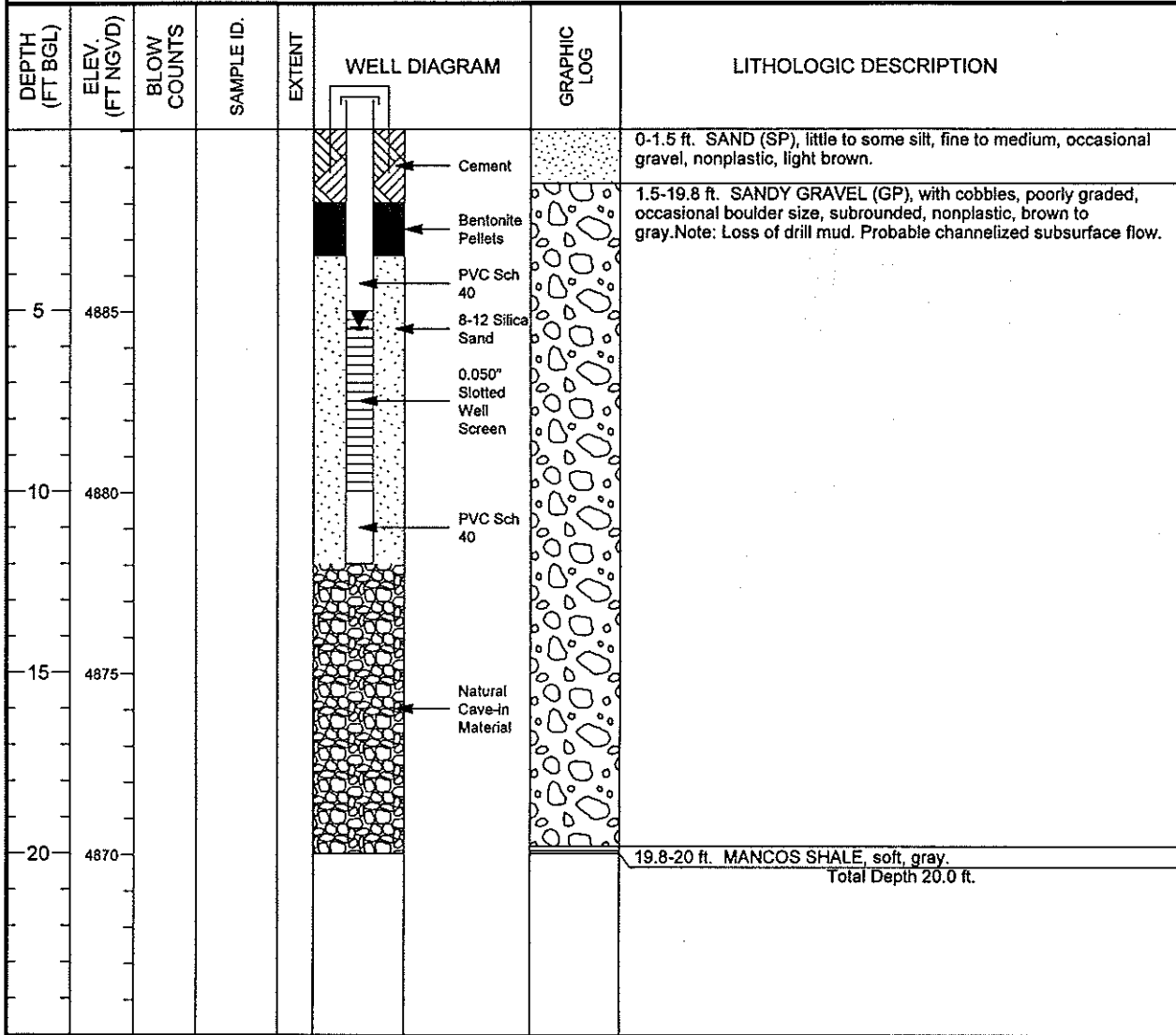


U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION OFFICE, COLORADO

MONITORING WELL COMPLETION LOG SHP01-0617

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102937.07</u>	DATE DRILLED <u>09/05/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250761.09</u>	SURFACE ELEV. (FT NGVD) <u>4890.05</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>20.00</u>	TOP OF CASING (FT) <u>4891.90</u>
WELL NUMBER <u>0617</u>	WELL DEPTH (FT) <u>12.00</u>	MEAS. PT. ELEV. (FT) <u>4891.90</u>

WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD <u>ROTARY MUD</u>
SURFACE CASING:		SAMPLING METHOD _____
BLANK CASING: 4 in. PVC Sch 40	-1.85 to 5.0	DATE DEVELOPED <u>10/01/1985</u>
WELL SCREEN: 4 in. Machine Slotted PVC	5.0 to 10.0	WATER LEVEL (FT BTOC) <u>7.3 on 10/01/1985</u>
SUMP/END CAP: 4 in. PVC Sch 40	10.0 to 12.0	LOGGED BY <u>R. Crockett</u>
SURFACE SEAL: Cement	0.0 to 2.0	REMARKS _____
GROUT:		
SEAL: Bentonite Pellets	2.0 to 2.5	
UPPER PACK: 8-12 Silica Sand	3.5 to 12.0	
LOWER PACK:		

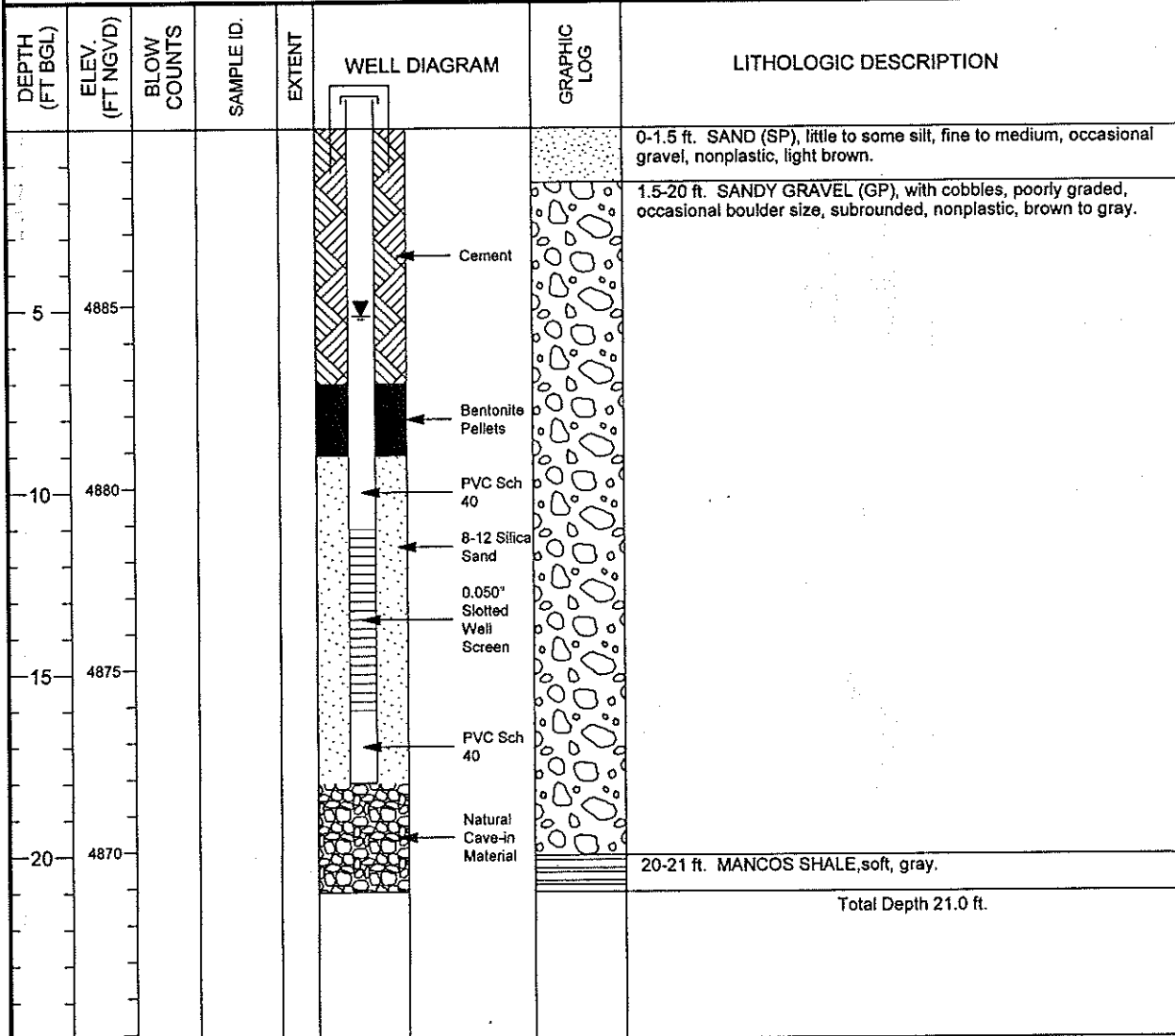


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GRAND JUNCTION OFFICE, COLORADO

MONITORING WELL COMPLETION LOG SHP01-0618

PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2102934.43	DATE DRILLED	09/05/1985
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	250748.52	SURFACE ELEV. (FT NGVD)	4889.87
SITE	SHIPROCK	HOLE DEPTH (FT)	21.00	TOP OF CASING (FT)	4891.51
WELL NUMBER	0618	WELL DEPTH (FT)	18.00	MEAS. PT. ELEV. (FT)	4891.51

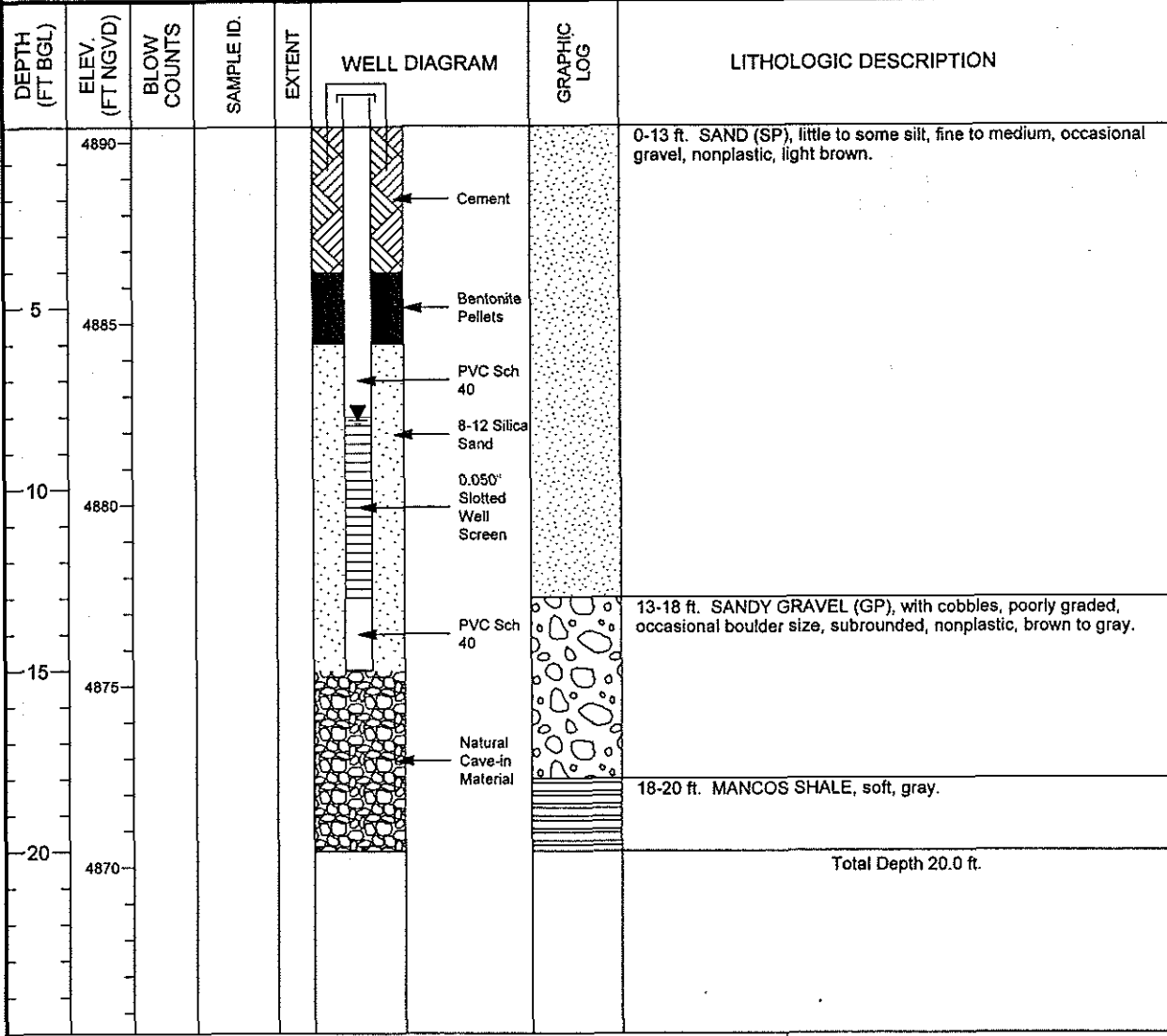
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD ROTARY MUD
BLANK CASING:	4 in. PVC Sch 40	-1.64 to 11.0	SAMPLING METHOD
WELL SCREEN:	4 in. Machine Slotted PVC	11.0 to 16.0	DATE DEVELOPED 10/01/1985
SUMP/END CAP:	4 in. PVC Sch 40	16.0 to 18.0	WATER LEVEL (FT BTOC) 6.8 on 10/01/1985
SURFACE SEAL:	Cement	0.0 to 7.0	LOGGED BY R. Crockett
GROUT:			REMARKS
SEAL:	Bentonite Pellets	7.0 to 9.0	
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	9.0 to 18.0	



MONITORING WELL COMPLETION LOG SHP01-0619

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103321.90</u>	DATE DRILLED <u>09/06/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250401.87</u>	SURFACE ELEV. (FT NGVD) <u>4890.42</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>20.00</u>	TOP OF CASING (FT) <u>4892.19</u>
WELL NUMBER <u>0619</u>	WELL DEPTH (FT) <u>15.00</u>	MEAS. PT. ELEV. (FT) <u>4892.19</u>

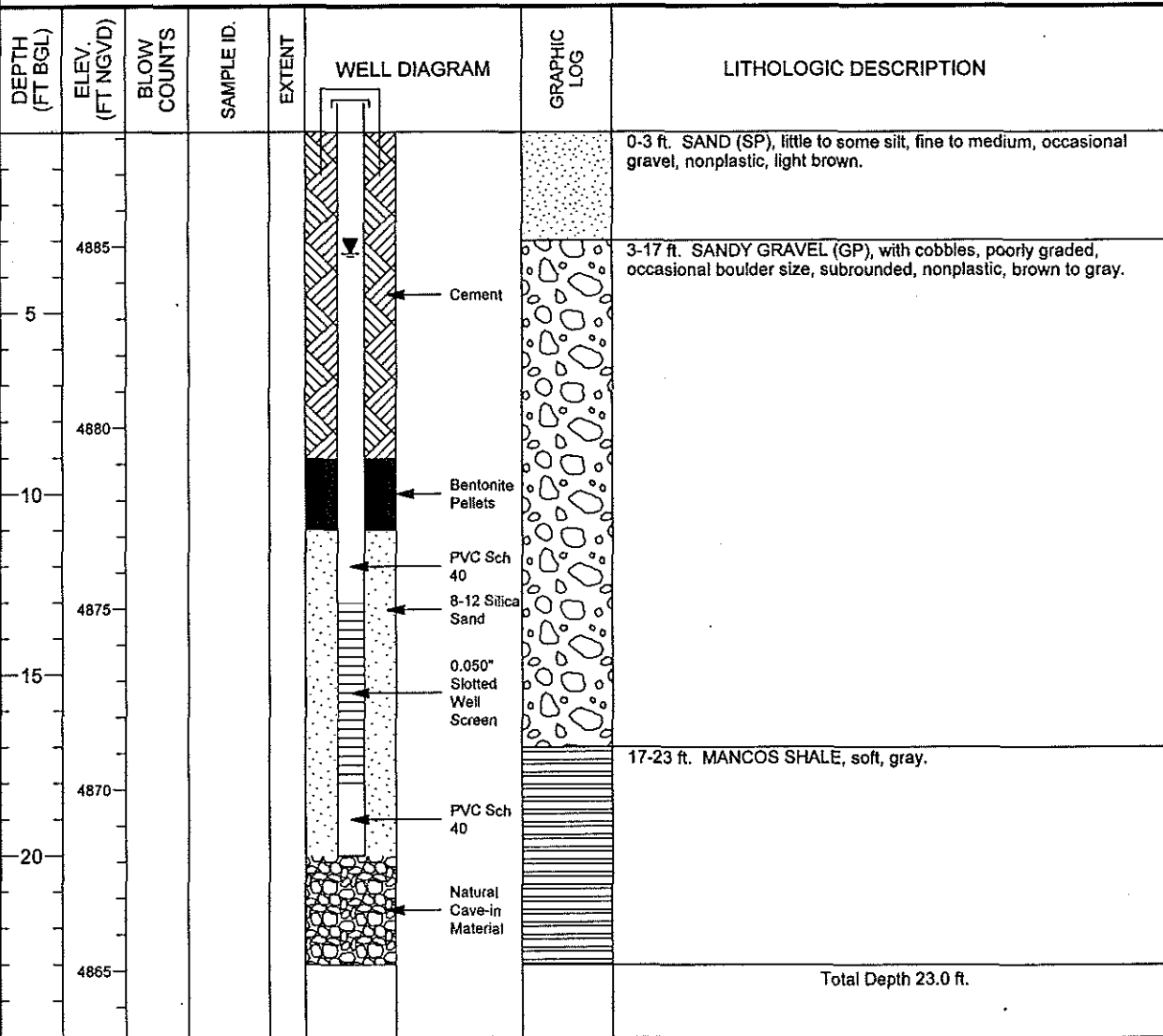
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			
BLANK CASING:	4 in. PVC Sch 40	-1.77 to 8.0	DRILLING METHOD <u>ROTARY MUD</u>
WELL SCREEN:	4 in. Machine Slotted PVC	8.0 to 13.0	SAMPLING METHOD _____
SUMP/END CAP:	4 in. PVC Sch 40	13.0 to 15.0	DATE DEVELOPED <u>10/02/1985</u>
SURFACE SEAL:	Cement	0.0 to 4.0	WATER LEVEL (FT BGS) <u>8.1 on 10/02/1985</u>
GROUT:			LOGGED BY <u>R. Crockett</u>
SEAL:	Bentonite Pellets	4.0 to 6.0	REMARKS _____
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	6.0 to 15.0	



MONITORING WELL COMPLETION LOG SHP01-0620

PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2102960.74	DATE DRILLED	08/27/1985
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	250243.13	SURFACE ELEV. (FT NGVD)	4888.18
SITE	SHIPROCK	HOLE DEPTH (FT)	23.00	TOP OF CASING (FT)	4889.72
WELL NUMBER	0620	WELL DEPTH (FT)	20.00	MEAS. PT. ELEV. (FT)	4889.72
				SLOT SIZE (IN)	0.050
				BIT SIZE(S) (IN)	8.75

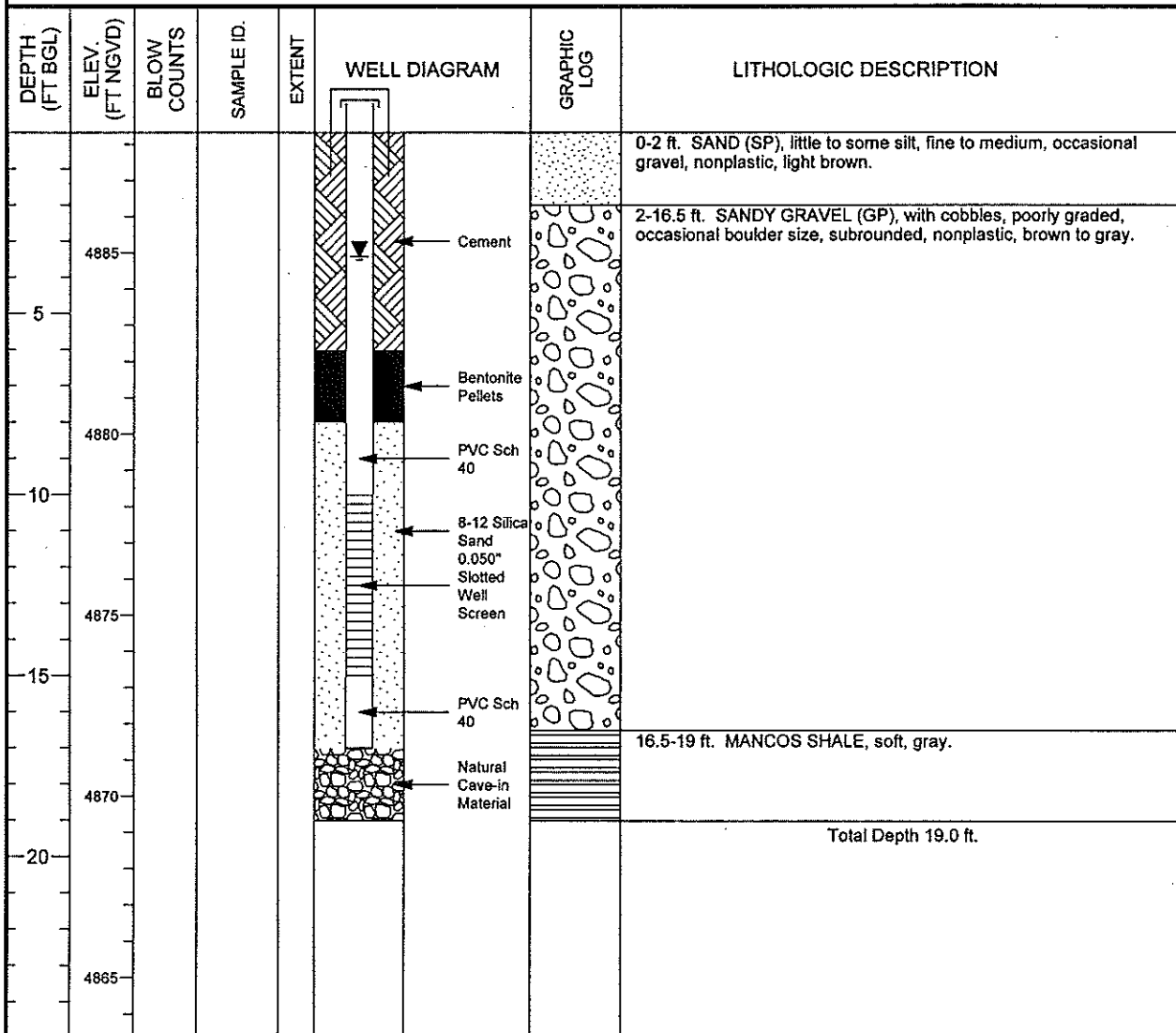
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			
BLANK CASING:	4 in. PVC Sch 40	-1.54 to 13.0	DRILLING METHOD ROTARY MUD
WELL SCREEN:	4 in. Machine Slotted PVC	13.0 to 18.0	SAMPLING METHOD
SUMP/END CAP:	4 in. PVC Sch 40	18.0 to 20.0	DATE DEVELOPED 10/02/1985
SURFACE SEAL:	Cement	0.0 to 9.0	WATER LEVEL (FT BTOC) 4.9 on 10/02/1985
GROUT:			LOGGED BY R. Crockett
SEAL:	Bentonite Pellets	9.0 to 11.0	REMARKS
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	11.0 to 20.0	



MONITORING WELL COMPLETION LOG SHP01-0621

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102960.06</u>	DATE DRILLED <u>08/28/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250252.85</u>	SURFACE ELEV. (FT NGVD) <u>4888.33</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>19.00</u>	TOP OF CASING (FT) <u>4890.20</u>
WELL NUMBER <u>0621</u>	WELL DEPTH (FT) <u>17.00</u>	MEAS. PT. ELEV. (FT) <u>4890.20</u>
		SLOT SIZE (IN) <u>0.050</u>
		BIT SIZE(S) (IN) <u>8.75</u>

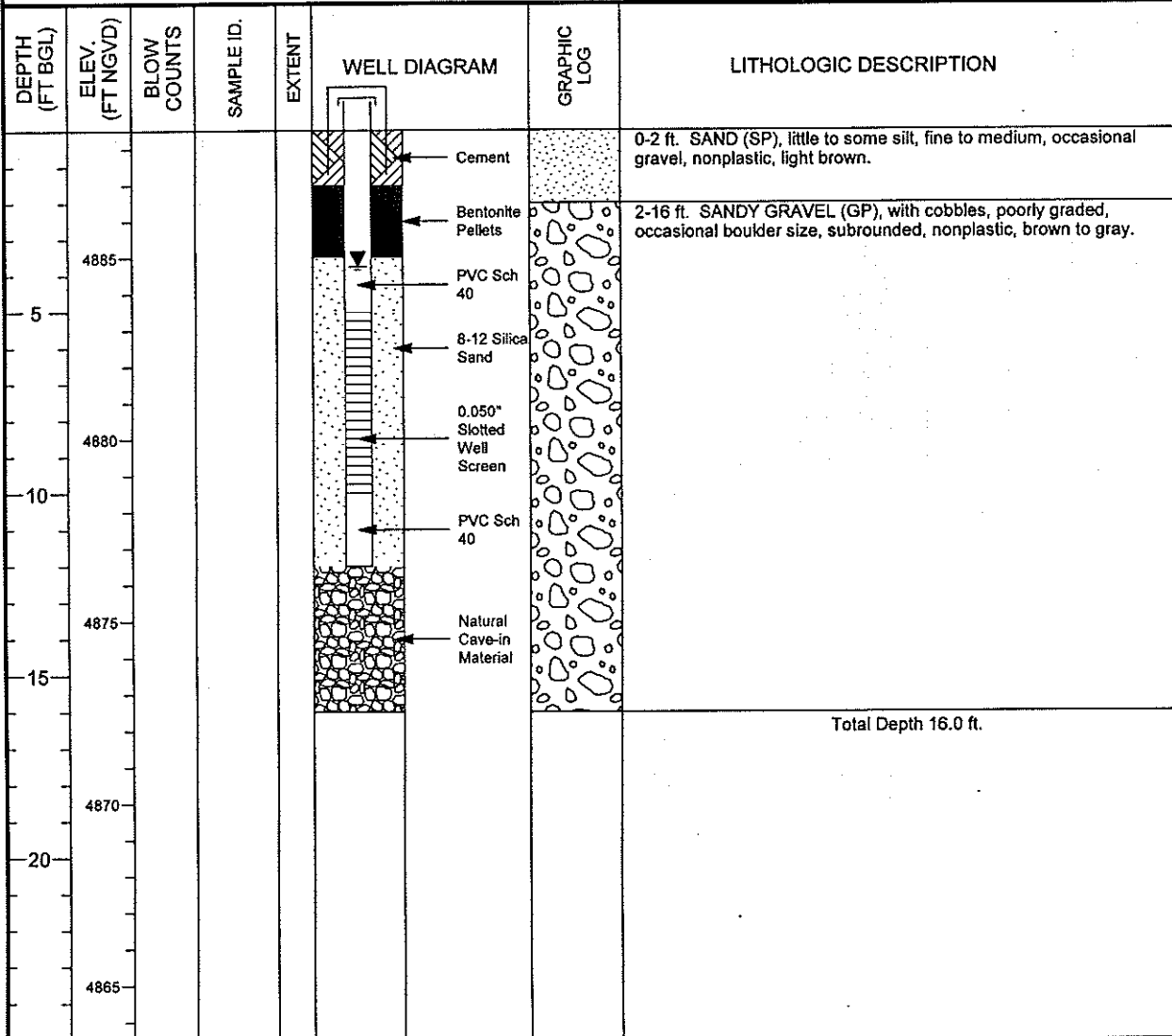
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			
BLANK CASING:	4 in. PVC Sch 40	-1.87 to 10.0	DRILLING METHOD <u>ROTARY MUD</u>
WELL SCREEN:	4 in. Machine Slotted PVC	10.0 to 15.0	SAMPLING METHOD _____
SUMP/END CAP:	4 in. PVC Sch 40	15.0 to 17.0	DATE DEVELOPED <u>10/02/1985</u>
SURFACE SEAL:	Cement	0.0 to 6.0	WATER LEVEL (FT BTOC) <u>5.3 on 10/02/1985</u>
GROUT:			LOGGED BY <u>R. Crockett</u>
SEAL:	Bentonite Pellets	6.0 to 8.0	REMARKS _____
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	8.0 to 17.0	



MONITORING WELL COMPLETION LOG SHP01-0622

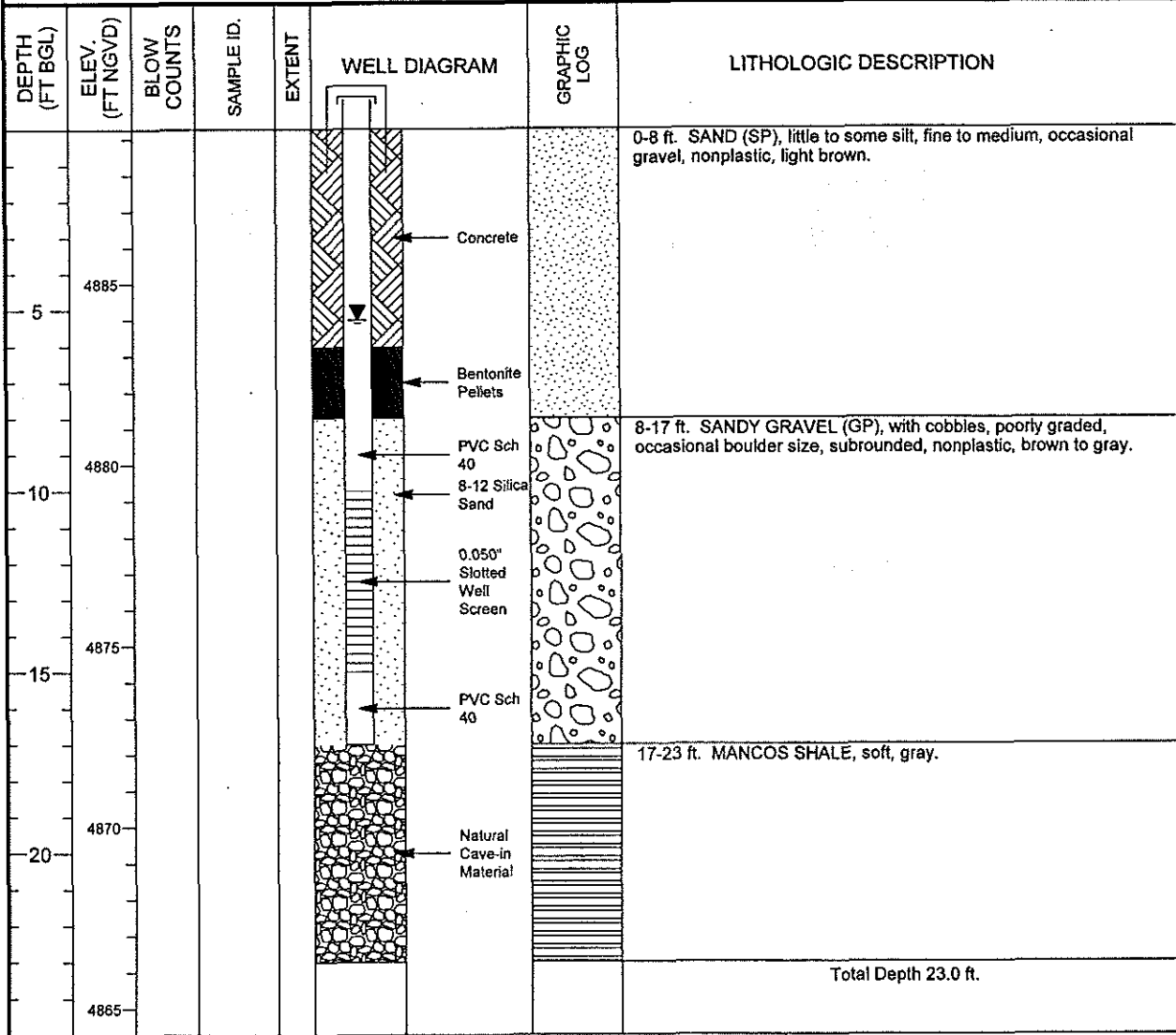
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102958.94</u>	DATE DRILLED <u>08/28/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250263.63</u>	SURFACE ELEV. (FT NGVD) <u>4888.51</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>16.00</u>	TOP OF CASING (FT) <u>4890.06</u>
WELL NUMBER <u>0622</u>	WELL DEPTH (FT) <u>12.00</u>	MEAS. PT. ELEV. (FT) <u>4890.06</u>
		SLOT SIZE (IN) <u>0.050</u>
		BIT SIZE(S) (IN) <u>8.75</u>

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ROTARY MUD</u>
BLANK CASING:	4 in. PVC Sch 40	-1.55 to 5.0	SAMPLING METHOD _____
WELL SCREEN:	4 in. Machine Slotted PVC	5.0 to 10.0	DATE DEVELOPED <u>10/02/1985</u>
SUMP/END CAP:	4 in. PVC Sch 40	10.0 to 12.0	WATER LEVEL (FT BTOC) <u>5.3 on 10/02/1985</u>
SURFACE SEAL:	Cement	0.0 to 1.5	LOGGED BY <u>R. Crockett</u>
GROUT:			REMARKS _____
SEAL:	Bentonite Pellets	1.5 to 3.5	
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	3.5 to 12.0	



MONITORING WELL COMPLETION LOG SHP01-0623

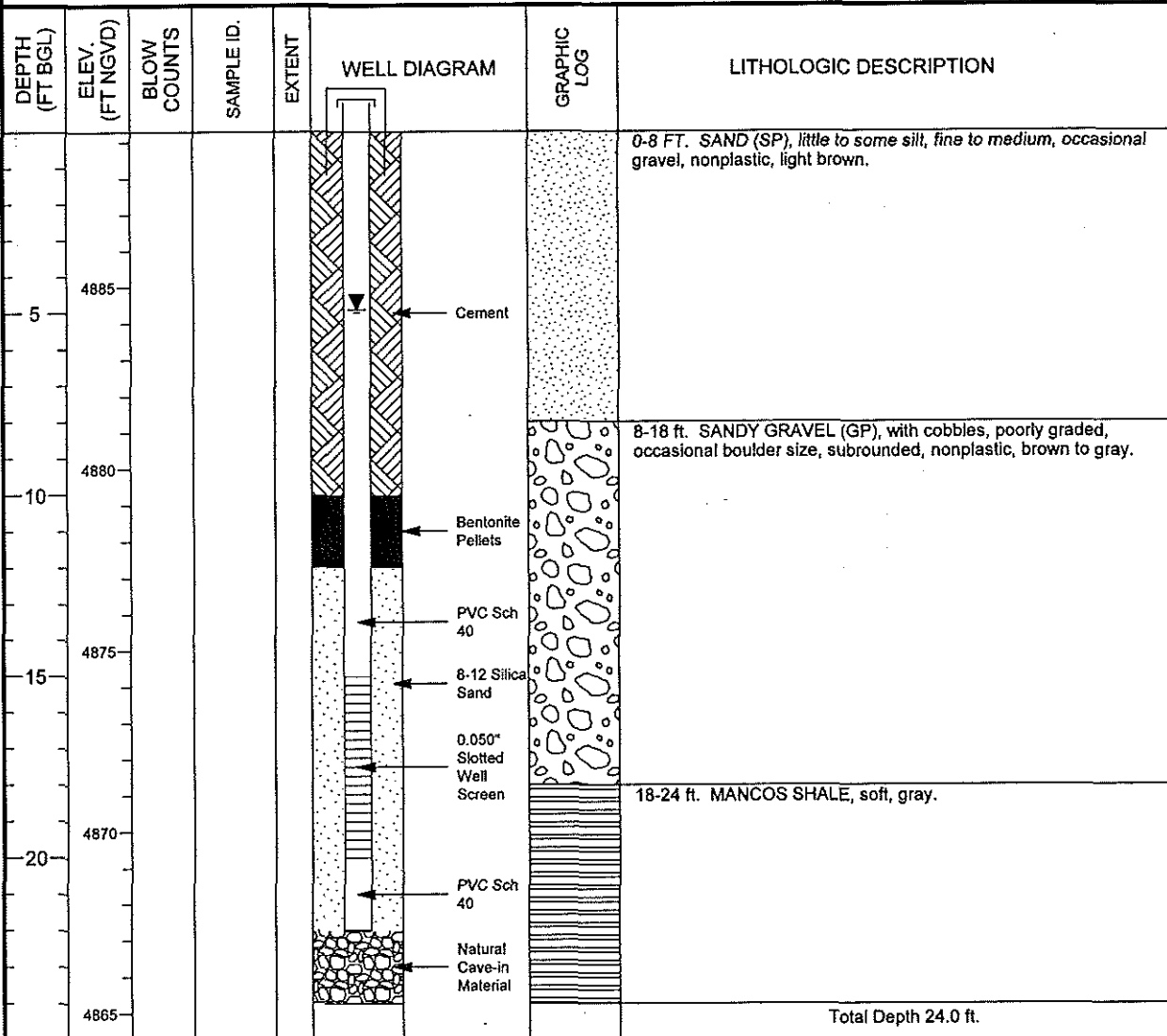
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103409.01</u>	DATE DRILLED <u>09/07/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250256.67</u>	SURFACE ELEV. (FT NGVD) <u>4889.27</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>23.00</u>	TOP OF CASING (FT) <u>4891.19</u>
WELL NUMBER <u>0623</u>	WELL DEPTH (FT) <u>17.00</u>	MEAS. PT. ELEV. (FT) <u>4891.19</u>
		SLOT SIZE (IN) <u>0.050</u>
		BIT SIZE(S) (IN) <u>8.75</u>
WELL INSTALLATION INTERVAL (FT)		
SURFACE CASING:		DRILLING METHOD <u>ROTARY MUD</u>
BLANK CASING: 4 in. PVC Sch 40	-1.92 to 10.0	SAMPLING METHOD _____
WELL SCREEN: 4 in. Machine Slotted PVC	10.0 to 15.0	DATE DEVELOPED <u>10/03/1985</u>
SUMP/END CAP: 4 in. PVC Sch 40	15.0 to 17.0	WATER LEVEL (FT BTOC) <u>7.2</u> on <u>10/03/1985</u>
SURFACE SEAL: Cement	0.0 to 6.0	LOGGED BY <u>R. Crockett</u>
GROUT:		REMARKS _____
SEAL: Bentonite Pellets	6.0 to 8.0	
UPPER PACK:		
LOWER PACK: 8-12 Silica Sand	8.0 to 17.0	



MONITORING WELL COMPLETION LOG SHP01-0624

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103396.91</u>	DATE DRILLED <u>09/07/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250252.71</u>	SURFACE ELEV. (FT NGVD) <u>4889.29</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>24.00</u>	TOP OF CASING (FT) <u>4891.49</u>
WELL NUMBER <u>0624</u>	WELL DEPTH (FT) <u>22.00</u>	MEAS. PT. ELEV. (FT) <u>4891.49</u>

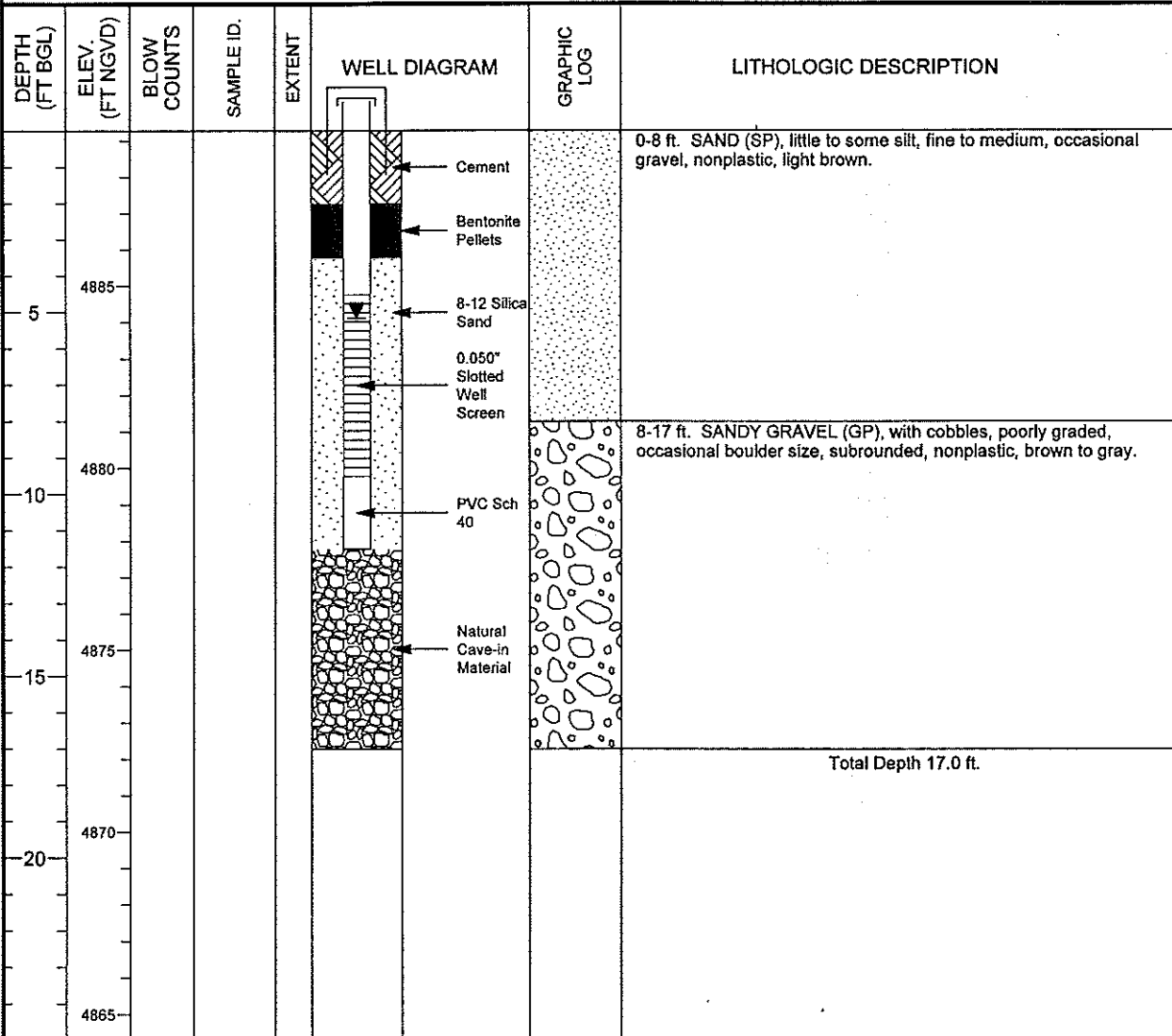
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ROTARY MUD</u>
BLANK CASING:	4 in. PVC Sch 40	-2.2 to 15.0	SAMPLING METHOD
WELL SCREEN:	4 in. Machine Slotted PVC	15.0 to 20.0	DATE DEVELOPED <u>10/03/1985</u>
SUMP/END CAP:	4 in. PVC Sch 40	20.0 to 22.0	WATER LEVEL (FT BTOC) <u>7.1 on 10/03/1985</u>
SURFACE SEAL:	Cement	0.0 to 10.0	LOGGED BY <u>R. Crockett</u>
GROUT:			REMARKS
SEAL:	Bentonite Pellets	10.0 to 12.0	
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	12.0 to 22.0	



MONITORING WELL COMPLETION LOG SHP01-0625

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103384.86</u>	DATE DRILLED <u>09/07/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250249.62</u>	SURFACE ELEV. (FT NGVD) <u>4889.28</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>17.00</u>	TOP OF CASING (FT) <u>4891.23</u>
WELL NUMBER <u>0625</u>	WELL DEPTH (FT) <u>11.50</u>	MEAS. PT. ELEV. (FT) <u>4891.23</u>

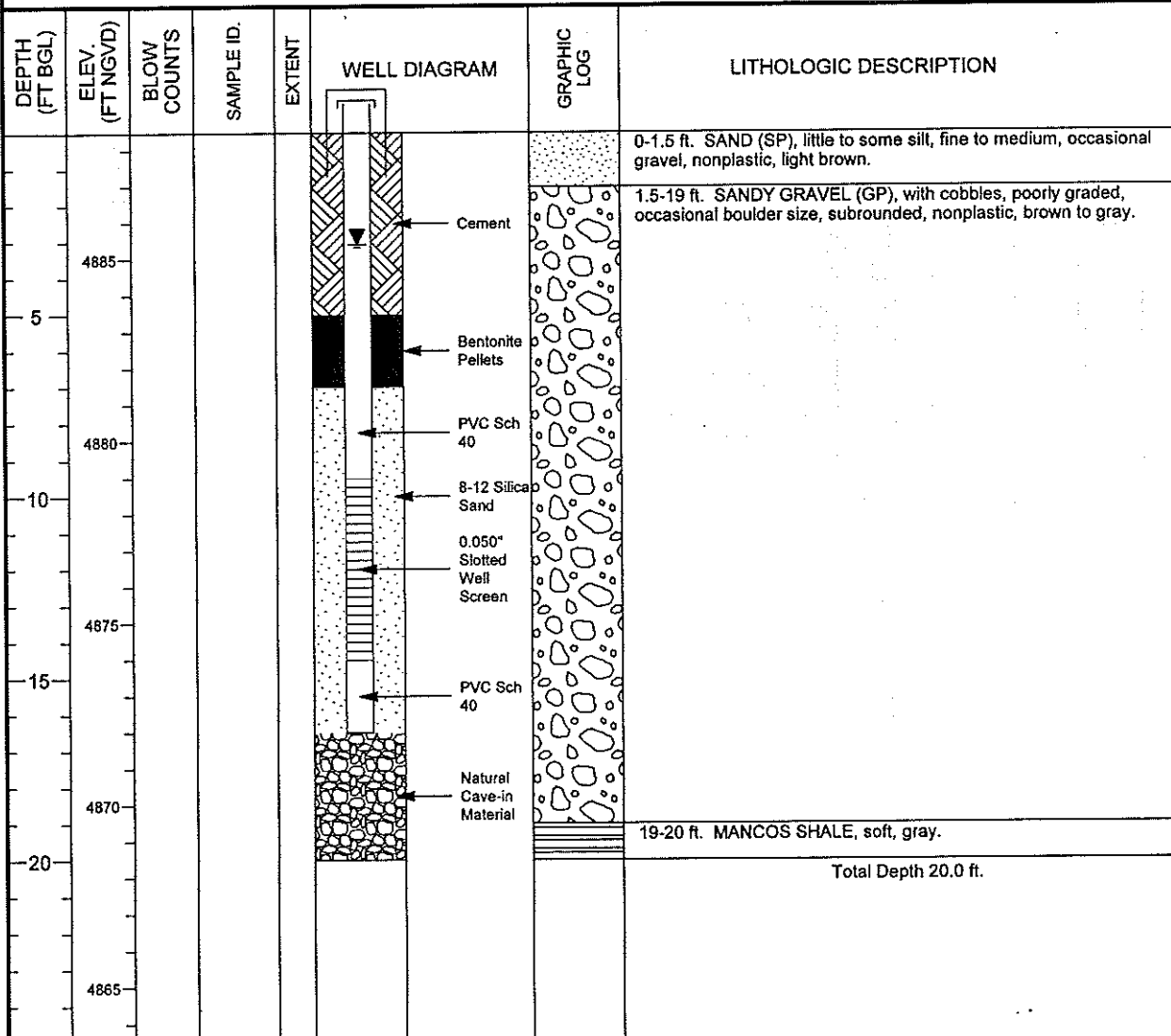
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			
BLANK CASING:	4 in. PVC Sch 40	-1.95 to 4.5	DRILLING METHOD <u>ROTARY MUD</u>
WELL SCREEN:	4 in. Machine Slotted PVC	4.5 to 9.5	SAMPLING METHOD _____
SUMP/END CAP:	4 in. PVC Sch 40	9.5 to 11.5	DATE DEVELOPED <u>10/03/1985</u>
SURFACE SEAL:	Cement	0.0 to 2.0	WATER LEVEL (FT BTOC) <u>7.1 on 10/03/1985</u>
GROUT:			LOGGED BY <u>R. Crockett</u>
SEAL:	Bentonite Pellets	2.0 to 3.5	REMARKS _____
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	3.5 to 11.5	



MONITORING WELL COMPLETION LOG SHP01-0626

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103324.50</u>	DATE DRILLED <u>09/08/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249941.38</u>	SURFACE ELEV. (FT NGVD) <u>4888.48</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>20.00</u>	TOP OF CASING (FT) <u>4891.40</u>
WELL NUMBER <u>0626</u>	WELL DEPTH (FT) <u>16.50</u>	MEAS. PT. ELEV. (FT) <u>4891.40</u>

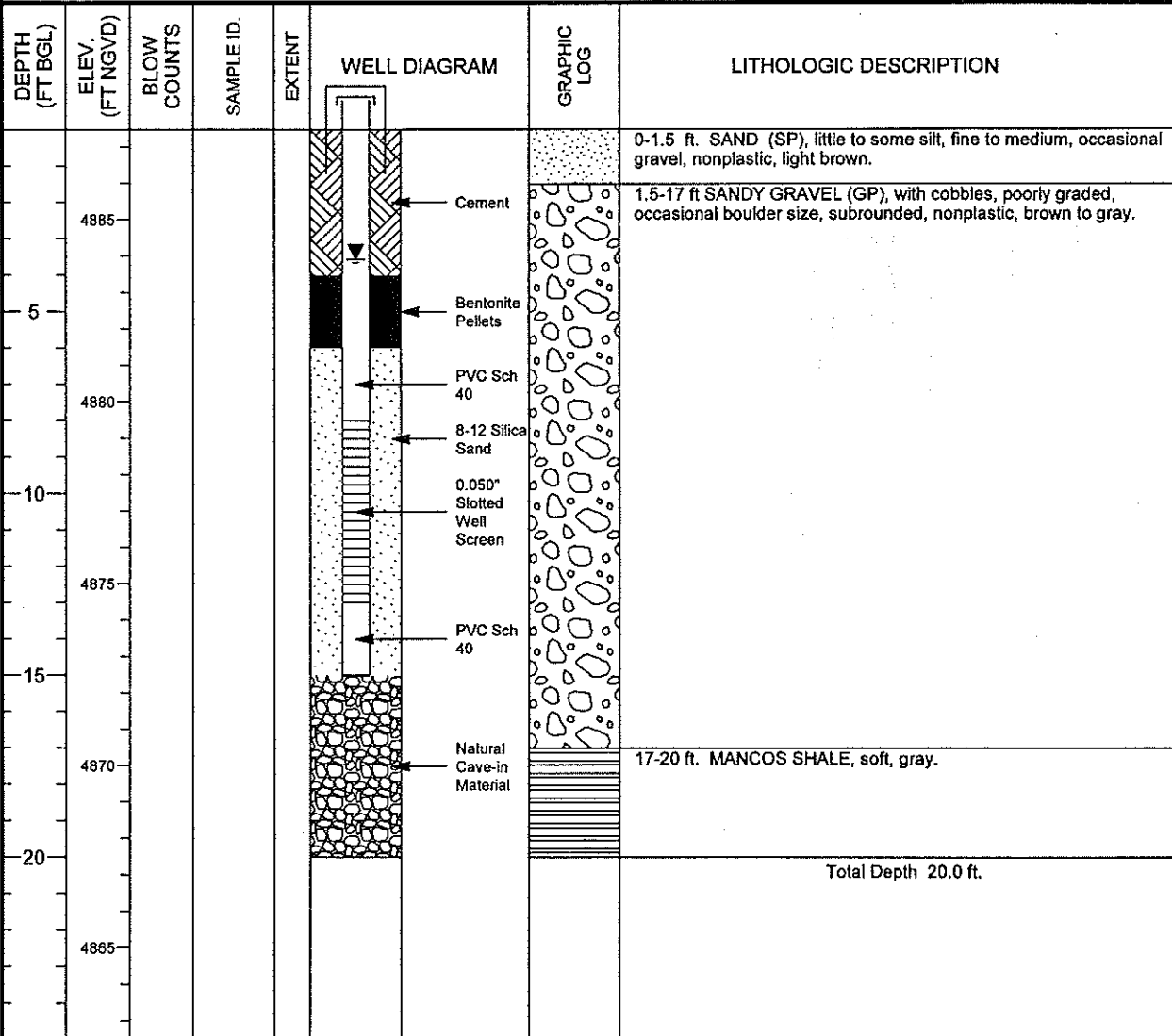
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ROTARY MUD</u>
BLANK CASING:	4 in. PVC Sch 40	-2.92 to 9.5	SAMPLING METHOD _____
WELL SCREEN:	4 in. Machine Slotted PVC	9.5 to 14.5	DATE DEVELOPED <u>10/03/1985</u>
SUMP/END CAP:	4 in. PVC Sch 40	14.5 to 16.5	WATER LEVEL (FT BTOC) <u>6.0 on 10/03/1985</u>
SURFACE SEAL:	Cement	0.0 to 5.0	LOGGED BY <u>R. Crockett</u>
GROUT:			REMARKS _____
SEAL:	Bentonite Pellets	5.0 to 7.0	
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	7.0 to 16.5	



MONITORING WELL COMPLETION LOG SHP01-0627

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103526.75</u>	DATE DRILLED <u>09/08/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249650.71</u>	SURFACE ELEV. (FT NGVD) <u>4887.48</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>20.00</u>	TOP OF CASING (FT) <u>4889.41</u>
WELL NUMBER <u>0627</u>	WELL DEPTH (FT) <u>15.00</u>	MEAS. PT. ELEV. (FT) <u>4889.41</u>
		SLOT SIZE (IN) <u>0.050</u>
		BIT SIZE(S) (IN) <u>8.75</u>

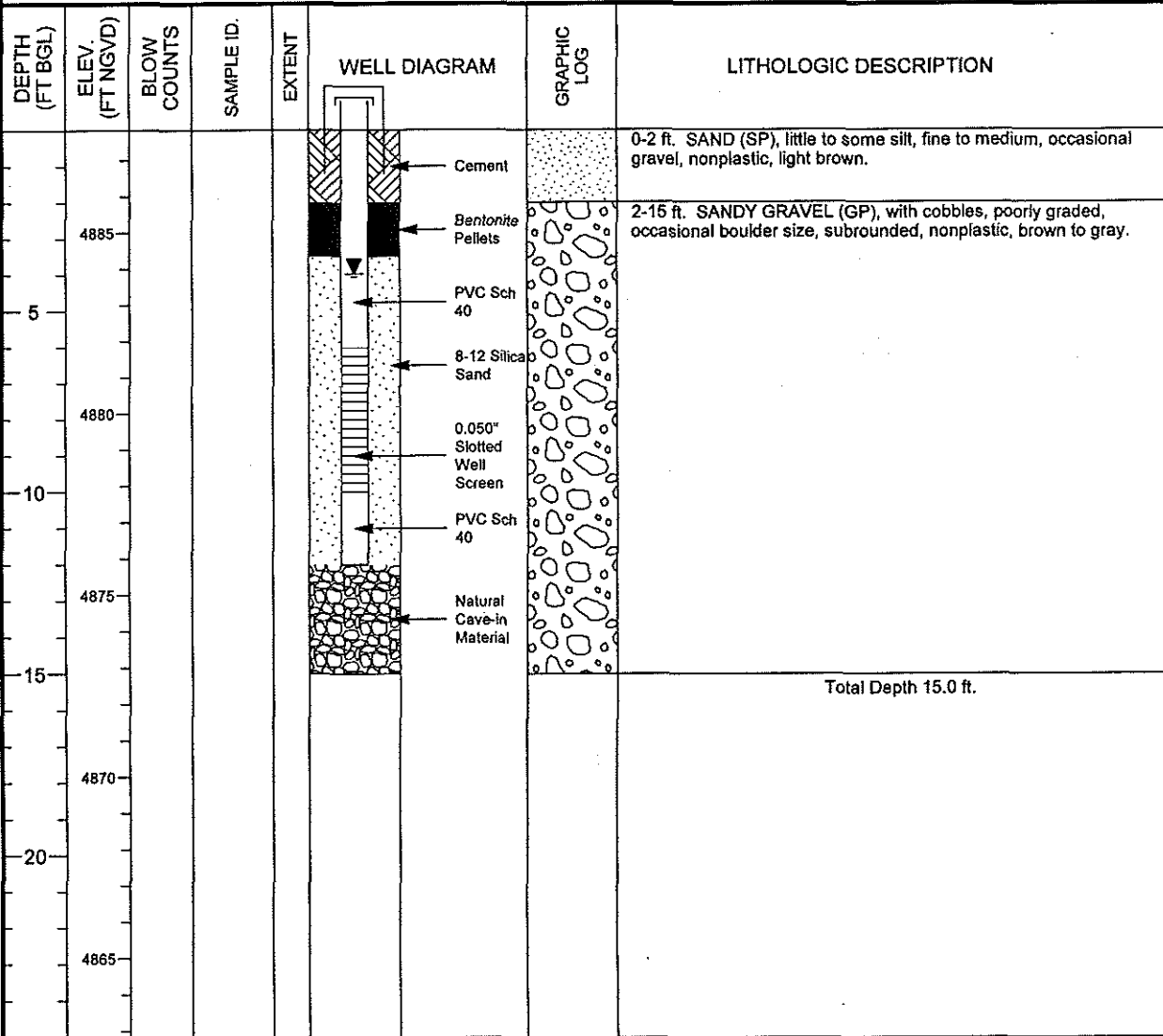
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ROTARY MUD</u>
BLANK CASING:	4 in. PVC Sch 40	-1.93 to 8.0	SAMPLING METHOD _____
WELL SCREEN:	4 in. Machine Slotted PVC	8.0 to 13.0	DATE DEVELOPED <u>10/03/1985</u>
SUMP/END CAP:	4 in. PVC Sch 40	13.0 to 15.0	WATER LEVEL (FT BTOC) <u>5.5 on: 10/03/1985</u>
SURFACE SEAL:	Cement	0.0 to 4.0	LOGGED BY <u>R. Crockett</u>
GROUT:			REMARKS _____
SEAL:	Bentonite Pellets	4.0 to 6.0	
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	6.0 to 15.0	



MONITORING WELL COMPLETION LOG SHP01-0628

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103517.40</u>	DATE DRILLED <u>09/09/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249660.32</u>	SURFACE ELEV. (FT NGVD) <u>4887.84</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>15.00</u>	TOP OF CASING (FT) <u>4889.87</u>
WELL NUMBER <u>0628</u>	WELL DEPTH (FT) <u>12.00</u>	MEAS. PT. ELEV. (FT) <u>4889.87</u>

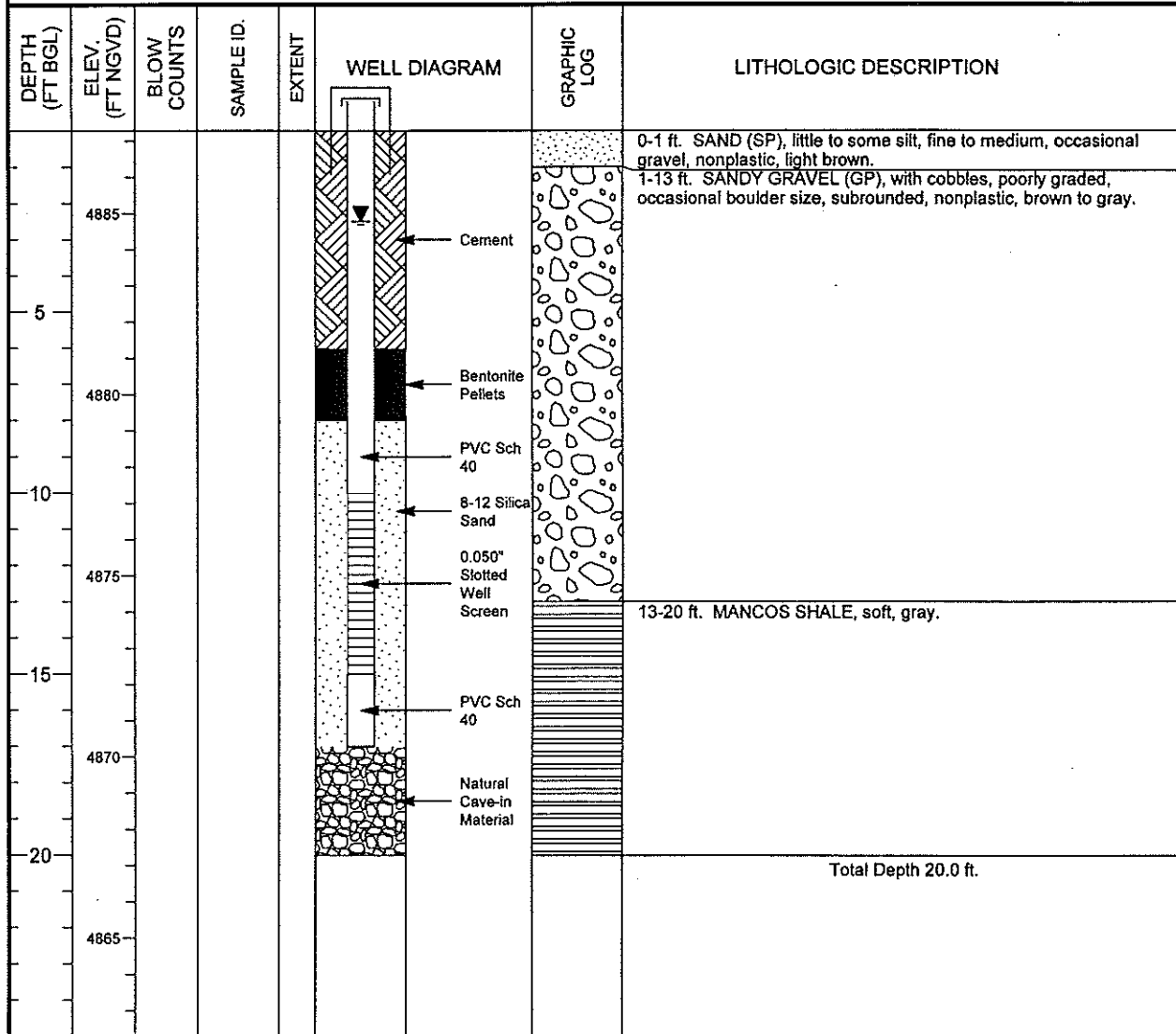
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ROTARY MUD</u>
BLANK CASING:	4 in. PVC Sch 40	-2.03 to 6.0	SAMPLING METHOD _____
WELL SCREEN:	4 in. Machine Slotted PVC	6.0 to 10.0	DATE DEVELOPED <u>10/04/1985</u>
SUMP/END CAP:	4 in. PVC Sch 40	10.0 to 12.0	WATER LEVEL (FT BTOC) <u>6.0 on 10/04/1985</u>
SURFACE SEAL:	Cement	0.0 to 2.0	LOGGED BY <u>R. Crockett</u>
GROUT:			REMARKS _____
SEAL:	Bentonite Pellets	2.0 to 3.5	
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	3.5 to 12.0	



MONITORING WELL COMPLETION LOG SHP01-0629

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103359.79</u>	DATE DRILLED <u>09/09/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249378.67</u>	SURFACE ELEV. (FT NGVD) <u>4887.29</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>20.00</u>	TOP OF CASING (FT) <u>4887.49</u>
WELL NUMBER <u>0629</u>	WELL DEPTH (FT) <u>17.00</u>	MEAS. PT. ELEV. (FT) <u>4887.49</u>

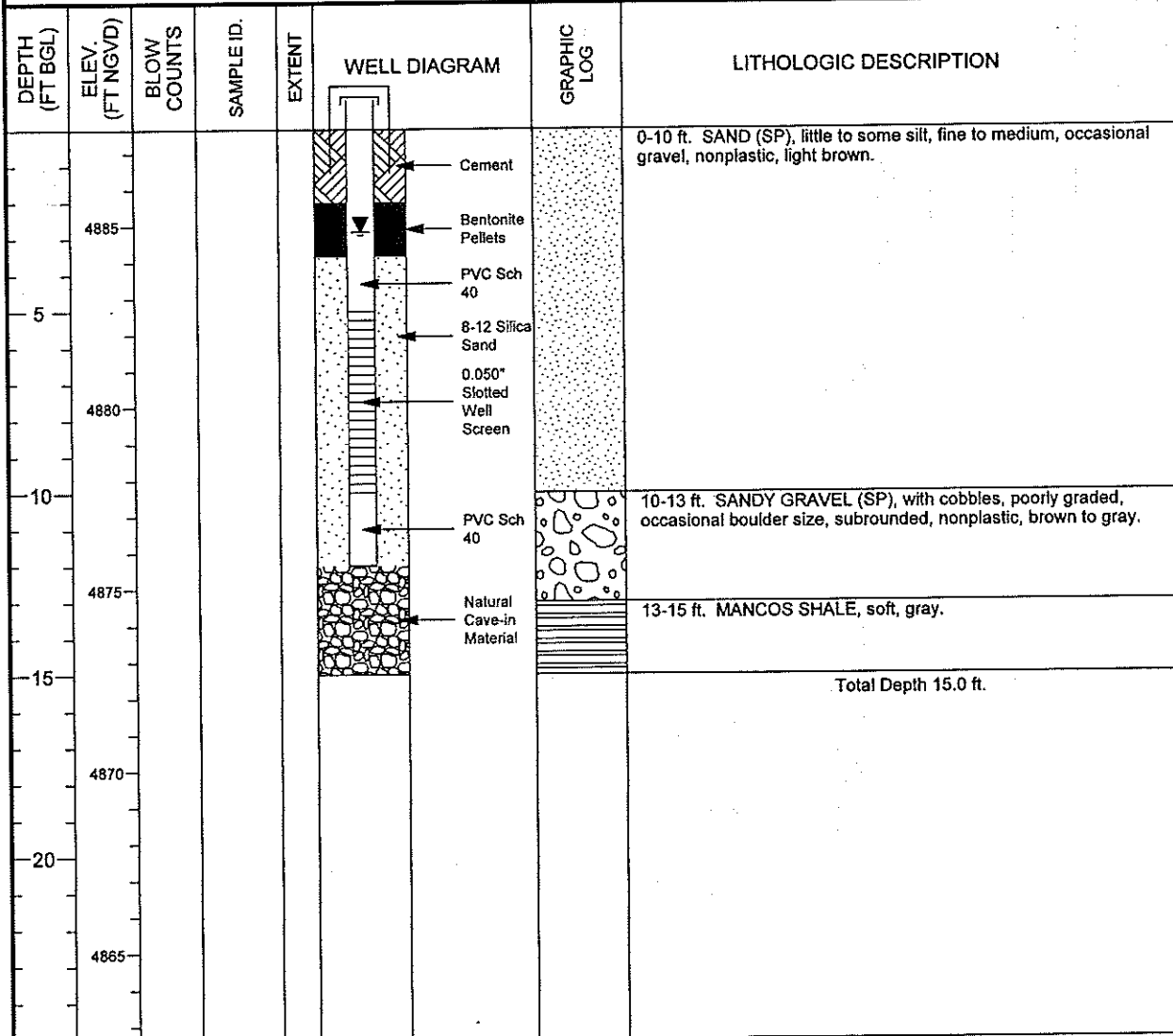
	WELL INSTALLATION	INTERVAL (FT)	SLOT SIZE (IN) <u>0.050</u>
			BIT SIZE(S) (IN) <u>8.75</u>
SURFACE CASING:			DRILLING METHOD <u>ROTARY MUD</u>
BLANK CASING: 4 in. PVC Sch 40	-0.2	to 10.0	SAMPLING METHOD _____
WELL SCREEN: 4 in. Machine Slotted PVC	10.0	to 15.0	DATE DEVELOPED <u>10/03/1985</u>
SUMP/END CAP: 4 in. PVC Sch 40	15.0	to 17.0	WATER LEVEL (FT BTOC) <u>2.7 on 10/03/1985</u>
SURFACE SEAL: Cement	0.0	to 6.0	LOGGED BY <u>R. Crockett</u>
SEAL: Bentonite Pellets	6.0	to 8.0	REMARKS _____
UPPER PACK:			
LOWER PACK: 8-12 Silica Sand	8.0	to 17.0	



MONITORING WELL COMPLETION LOG SHP01-0630

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103349.44</u>	DATE DRILLED <u>09/09/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249382.75</u>	SURFACE ELEV. (FT NGVD) <u>4887.65</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>15.00</u>	TOP OF CASING (FT) <u>4887.62</u>
WELL NUMBER <u>0630</u>	WELL DEPTH (FT) <u>12.00</u>	MEAS. PT. ELEV. (FT) <u>4887.62</u>

	WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD <u>ROTARY MUD</u>
SURFACE CASING:			SAMPLING METHOD _____
BLANK CASING:	4 in. PVC Sch 40	0.03 to 5.0	DATE DEVELOPED <u>10/04/1985</u>
WELL SCREEN:	4 in. Machine Slotted PVC	5.0 to 10.0	WATER LEVEL (FT BTOC) <u>2.8 on 10/04/1985</u>
SUMP/END CAP:	4 in. PVC Sch 40	10.0 to 12.0	LOGGED BY <u>R. Crockett</u>
SURFACE SEAL:	Cement	0.0 to 2.0	REMARKS _____
GROUT:			
SEAL:	Bentonite Pellets	2.0 to 3.5	
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	3.5 to 12.0	

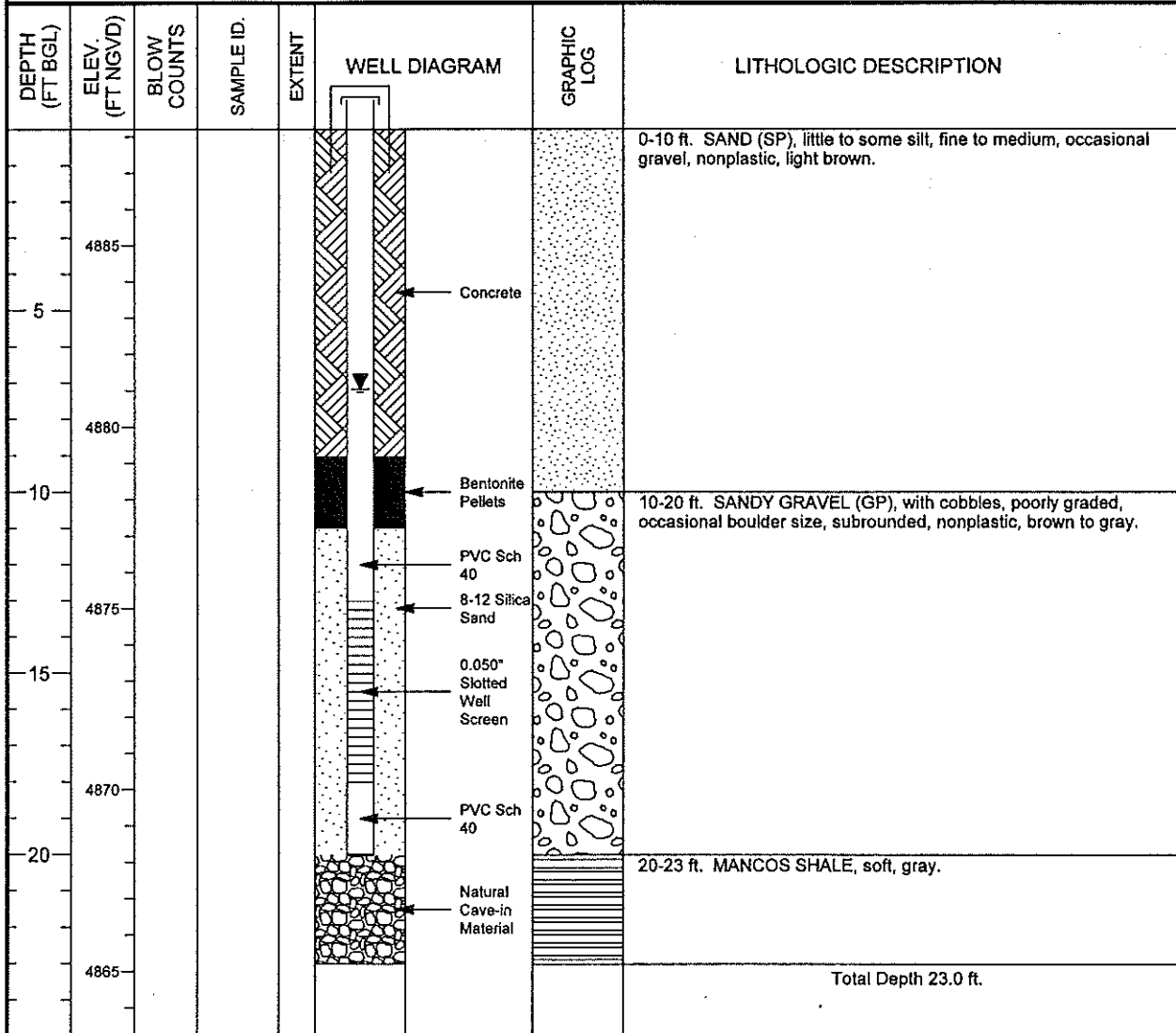


U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION OFFICE, COLORADO

MONITORING WELL COMPLETION LOG SHP01-0631

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2105158.16</u>	DATE DRILLED <u>09/11/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249038.59</u>	SURFACE ELEV. (FT NGVD) <u>4888.21</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>23.00</u>	TOP OF CASING (FT) <u>4889.95</u>
WELL NUMBER <u>0631</u>	WELL DEPTH (FT) <u>20.00</u>	MEAS. PT. ELEV. (FT) <u>4889.95</u>
		SLOT SIZE (IN) <u>0.050</u>
		BIT SIZE(S) (IN) <u>8.75</u>

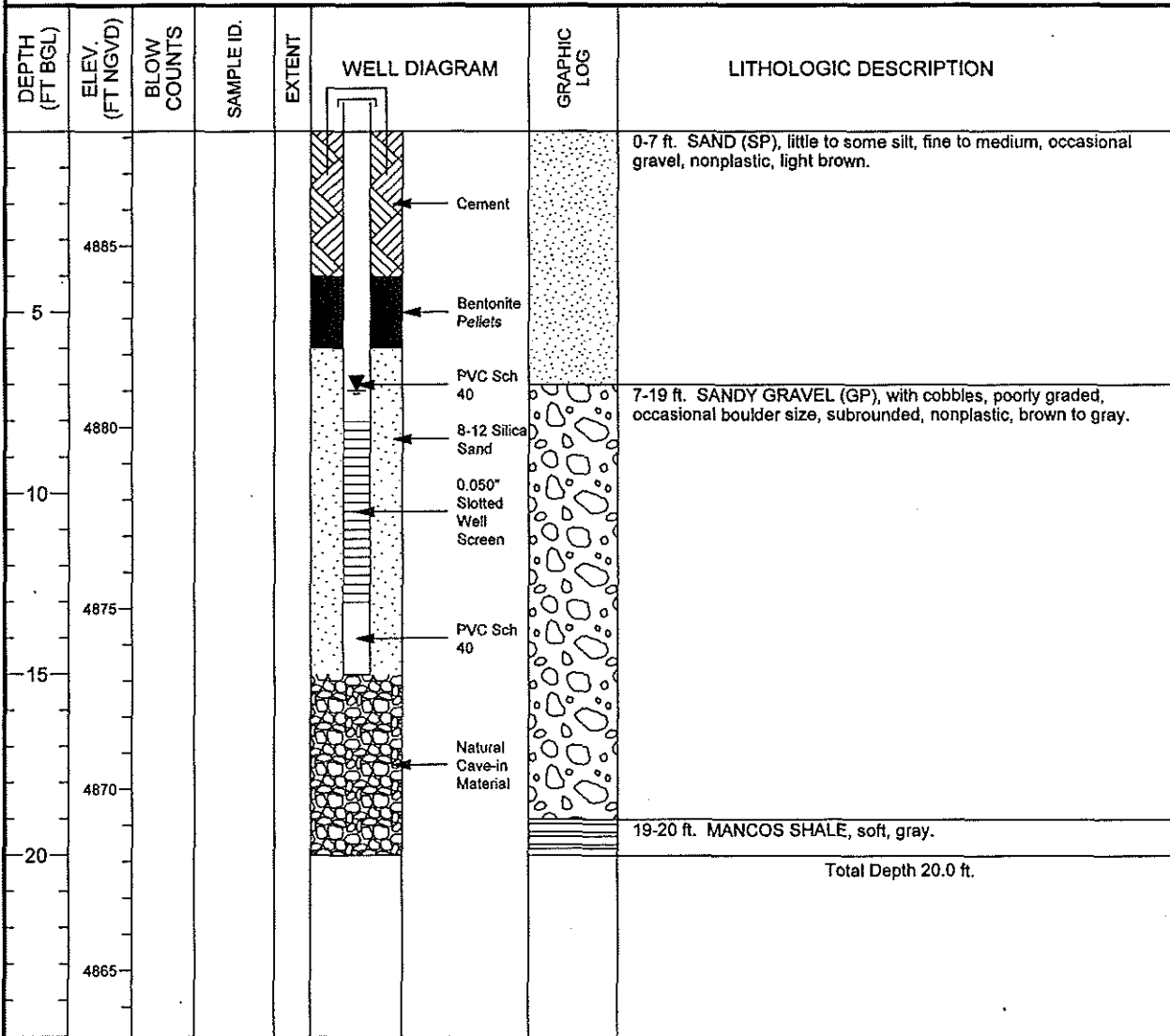
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			
BLANK CASING:	4 in. PVC Sch 40	-1.74 to 13.0	DRILLING METHOD <u>ROTARY MUD</u>
WELL SCREEN:	4 in. Machine Slotted PVC	13.0 to 18.0	SAMPLING METHOD _____
SUMP/END CAP:	4 in. PVC Sch 40	18.0 to 20.0	DATE DEVELOPED <u>09/30/1985</u>
SURFACE SEAL:	Cement	0.0 to 9.0	WATER LEVEL (FT BTOC) <u>8.9 on 09/30/1985</u>
GROUT:			LOGGED BY <u>R. Crockett</u>
SEAL:	Bentonite Pellets	9.0 to 11.0	REMARKS _____
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	11.0 to 20.0	



MONITORING WELL COMPLETION LOG SHP01-0632

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2105146.77</u>	DATE DRILLED <u>09/11/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249045.09</u>	SURFACE ELEV. (FT NGVD) <u>4888.17</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>20.00</u>	TOP OF CASING (FT) <u>4890.01</u>
WELL NUMBER <u>0632</u>	WELL DEPTH (FT) <u>15.00</u>	MEAS. PT. ELEV. (FT) <u>4890.01</u>

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ROTARY MUD</u>
BLANK CASING:	4 in. PVC Sch 40	-1.84 to 8.0	SAMPLING METHOD _____
WELL SCREEN:	4 in. Machine Slotted PVC	8.0 to 13.0	DATE DEVELOPED <u>09/29/1985</u>
SUMP/END CAP:	4 in. PVC Sch 40	13.0 to 15.0	WATER LEVEL (FT BTOC) <u>9.0 on 09/29/1985</u>
SURFACE SEAL:	Cement	0.0 to 4.0	LOGGED BY <u>R. Crockett</u>
GROUT:			REMARKS _____
SEAL:	Bentonite Pellets	4.0 to 6.0	
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	6.0 to 15.0	



MONITORING WELL COMPLETION LOG SHP01-0634

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102727.63</u>	DATE DRILLED <u>09/26/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>252113.40</u>	SURFACE ELEV. (FT NGVD) <u>4896.20</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>24.00</u>	TOP OF CASING (FT) <u>4896.90</u>
WELL NUMBER <u>0634</u>	WELL DEPTH (FT) <u>24.00</u>	MEAS. PT. ELEV. (FT) <u>4896.90</u>

SURFACE CASING: BLANK CASING: WELL SCREEN: SUMP/END CAP: SURFACE SEAL: GROUT: SEAL: UPPER PACK: LOWER PACK:	WELL INSTALLATION INTERVAL (FT)	SLOT SIZE (IN) _____ BIT SIZE(S) (IN) _____ DRILLING METHOD _____ SAMPLING METHOD _____ DATE DEVELOPED _____ WATER LEVEL (FT BGS) _____ LOGGED BY _____ REMARKS <u>Well on north side of San Juan River.</u> <u>Unknown construction/lithology.</u>
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
5	4895						
	4890						
10	4885						
15	4880						
20	4875						

MONITORING WELL COMPLETION LOG SHP01-0635

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103503.93</u>	DATE DRILLED <u>09/26/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251674.62</u>	SURFACE ELEV. (FT NGVD) <u>4893.01</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>12.00</u>	TOP OF CASING (FT) <u>4895.01</u>
WELL NUMBER <u>0635</u>	WELL DEPTH (FT) <u>12.00</u>	MEAS. PT. ELEV. (FT) <u>4895.01</u>

SURFACE CASING: _____ BLANK CASING: _____ WELL SCREEN: _____ SUMP/END CAP: _____ SURFACE SEAL: _____ GROUT: _____ SEAL: _____ UPPER PACK: _____ LOWER PACK: _____	WELL INSTALLATION _____ INTERVAL (FT) _____ DRILLING METHOD _____ SAMPLING METHOD _____ DATE DEVELOPED _____ WATER LEVEL (FT BGS) _____ LOGGED BY _____ REMARKS <u>Well on north side of San Juan River.</u> <u>Unknown construction/lithology.</u>
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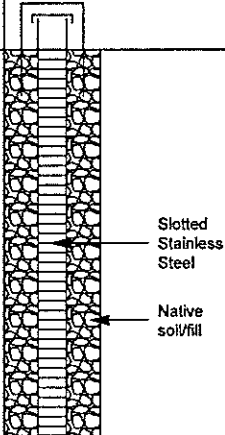

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
5	4890						
10	4885						
15	4880						
20	4875						
	4870						



WELL POINT CONSTRUCTION LOG SHP01-0638

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2104780.10</u>	DATE DRILLED <u>03/11/1987</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>248983.91</u>	SURFACE ELEV. (FT NGVD) <u>4882.17</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>5.00</u>	TOP OF CASING (FT) <u>4884.37</u>
WELL NUMBER <u>0638</u>	WELL DEPTH (FT) <u>5.00</u>	MEAS. PT. ELEV. (FT) <u>4884.37</u>

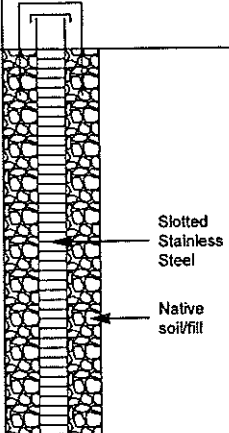

	WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD _____
BLANK CASING:	2 in. Stainless Steel	-2.2 to 0.0	SAMPLING METHOD _____
WELL SCREEN:	2 in. Stainless Steel	0.0 to 5.0	DATE DEVELOPED _____
SUMP/END CAP:			WATER LEVEL (FT BGS) _____
SURFACE SEAL:			LOGGED BY _____
			REMARKS <u>North side of San Juan River just west of intake structure; well point removed.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
							0-5 ft. ALLUVIAL, gravels and sand.
4880							
5							
4875							
10							
4870							

WELL POINT CONSTRUCTION LOG SHP01-0640

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2104446.71</u>	DATE DRILLED <u>03/11/1987</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>248636.45</u>	SURFACE ELEV. (FT NGVD) <u>4881.37</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>5.00</u>	TOP OF CASING (FT) <u>4883.97</u>
WELL NUMBER <u>0640</u>	WELL DEPTH (FT) <u>5.00</u>	MEAS. PT. ELEV. (FT) <u>4883.97</u>

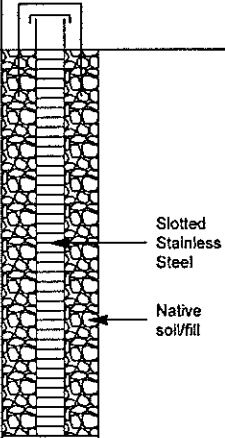

	WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD _____
BLANK CASING:	2 in. Stainless Steel	-2.6 to 0.0	SAMPLING METHOD _____
WELL SCREEN:	2 in. Stainless Steel	0.0 to 5.0	DATE DEVELOPED _____
SUMP/END CAP:			WATER LEVEL (FT BGS) _____
SURFACE SEAL:			LOGGED BY _____
			REMARKS <u>East of US Hwy. 666 bridge and south of well 734; well point removed.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
5	4880				 <p style="font-size: small;">Slotted Stainless Steel Native soil/fill</p>		0-5 ft. ALLUVIAL, gravel and sand.
	4875						
	4870						

WELL POINT CONSTRUCTION LOG SHP01-0641

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103910.58</u>	DATE DRILLED <u>03/11/1987</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249690.43</u>	SURFACE ELEV. (FT NGVD) <u>4884.21</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>5.00</u>	TOP OF CASING (FT) <u>4887.41</u>
WELL NUMBER <u>0641</u>	WELL DEPTH (FT) <u>5.00</u>	MEAS. PT. ELEV. (FT) <u>4887.41</u>

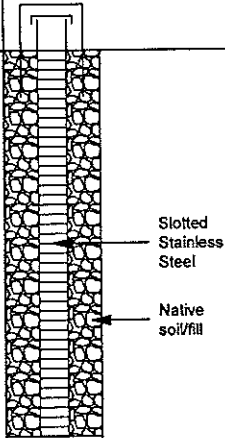

	WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD _____
BLANK CASING:	2 in. Stainless Steel	-3.2 to 0.0	SAMPLING METHOD _____
WELL SCREEN:	2 in. Stainless Steel	0.0 to 5.0	DATE DEVELOPED _____
SUMP/END CAP:			WATER LEVEL (FT BGS) _____
SURFACE SEAL:			LOGGED BY _____
			REMARKS <u>North of drainage ditch on floodplain;</u>
			<u>well point removed.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
							0-5 ft. ALLUVIAL, gravel and sand.
5	4880						
10	4875						

WELL POINT CONSTRUCTION LOG SHP01-0642

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2104375.10</u>	DATE DRILLED <u>03/11/1987</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249931.82</u>	SURFACE ELEV. (FT NGVD) <u>4883.87</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>5.00</u>	TOP OF CASING (FT) <u>4886.37</u>
WELL NUMBER <u>0642</u>	WELL DEPTH (FT) <u>5.00</u>	MEAS. PT. ELEV. (FT) <u>4886.37</u>

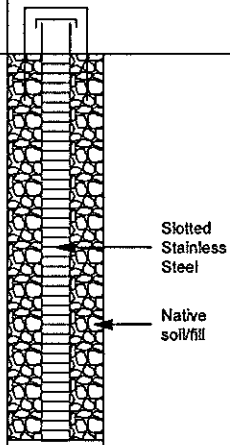

	WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD _____
BLANK CASING:	2 in. Stainless Steel	-2.5 to 0.0	SAMPLING METHOD _____
WELL SCREEN:	2 in. Stainless Steel	0.0 to 5.0	DATE DEVELOPED _____
SUMP/END CAP:			WATER LEVEL (FT BGS) _____
SURFACE SEAL:			LOGGED BY _____
			REMARKS <u>East of well 736; well point removed.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
5	4880				 <p style="font-size: small;">Slotted Stainless Steel</p> <p style="font-size: small;">Native soil/kill</p>		0-5 ft. ALLUVIAL, gravel and sand.
10	4875						

WELL POINT CONSTRUCTION LOG SHP01-0643

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2104440.83</u>	DATE DRILLED <u>03/11/1987</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249162.13</u>	SURFACE ELEV. (FT NGVD) <u>4882.73</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>5.00</u>	TOP OF CASING (FT) <u>4885.63</u>
WELL NUMBER <u>0643</u>	WELL DEPTH (FT) <u>5.00</u>	MEAS. PT. ELEV. (FT) <u>4885.63</u>

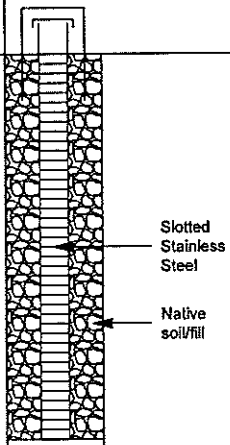

	WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD _____
BLANK CASING:	2 in. Stainless Steel	-2.9 to 0.0	SAMPLING METHOD _____
WELL SCREEN:	2 in. Stainless Steel	0.0 to 5.0	DATE DEVELOPED _____
SUMP/END CAP:			WATER LEVEL (FT BGS) _____
SURFACE SEAL:			LOGGED BY _____
			REMARKS <u>Northeast of well 856; well point removed.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4880				 <p style="font-size: small;">Slotted Stainless Steel Native soil/fill</p>		0-5 ft. ALLUVIAL, gravel and sand.
5							
	4875						
10							

WELL POINT CONSTRUCTION LOG SHP01-0644

PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2104136.15	DATE DRILLED	03/11/1987
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	250519.01	SURFACE ELEV. (FT NGVD)	4884.97
SITE	SHIPROCK	HOLE DEPTH (FT)	5.00	TOP OF CASING (FT)	4886.96
WELL NUMBER	0644	WELL DEPTH (FT)	5.00	MEAS. PT. ELEV. (FT)	4886.96

	WELL INSTALLATION	INTERVAL (FT)	
BLANK CASING:	2 in. Stainless Steel	-1.99 to 0.0	DRILLING METHOD
WELL SCREEN:	2 in. Stainless Steel	0.0 to 5.0	SAMPLING METHOD
SUMP/END CAP:			DATE DEVELOPED
SURFACE SEAL:			WATER LEVEL (FT BGS)
			LOGGED BY
			REMARKS
			Northwest of well 854; well point removed.

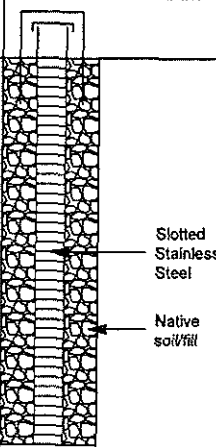

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
5	4880						0-5 ft. ALLUVIAL, gravel and sand.
10	4875						



WELL POINT CONSTRUCTION LOG SHP01-0645

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2100670.51</u>	DATE DRILLED <u>03/11/1987</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>252104.62</u>	SURFACE ELEV. (FT NGVD) <u>4898.70</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>5.00</u>	TOP OF CASING (FT) <u>4901.30</u>
WELL NUMBER <u>0645</u>	WELL DEPTH (FT) <u>5.00</u>	MEAS. PT. ELEV. (FT) <u>4901.30</u>

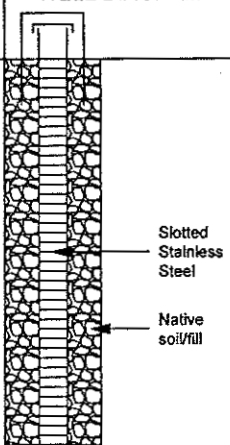

	WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD _____
BLANK CASING:	2 in. Stainless Steel	-2.6 to 0.0	SAMPLING METHOD _____
WELL SCREEN:	2 in. Stainless Steel	0.0 to 5.0	DATE DEVELOPED _____
SUMP/END CAP:			WATER LEVEL (FT BGS) _____
SURFACE SEAL:			LOGGED BY _____
			REMARKS <u>West of San Juan River and east of disposal cell; well point removed.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
					 <p style="font-size: small;">Slotted Stainless Steel</p> <p style="font-size: small;">Native soil/fill</p>		0-5 ft. ALLUVIAL, gravel and sand.
5	4895						
	4890						
10							

WELL POINT CONSTRUCTION LOG SHP01-0646

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2100610.00</u>	DATE DRILLED <u>03/11/1987</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>252118.00</u>	SURFACE ELEV. (FT NGVD) <u>4898.63</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>5.00</u>	TOP OF CASING (FT) <u>4902.33</u>
WELL NUMBER <u>0646</u>	WELL DEPTH (FT) <u>5.00</u>	MEAS. PT. ELEV. (FT) <u>4902.33</u>

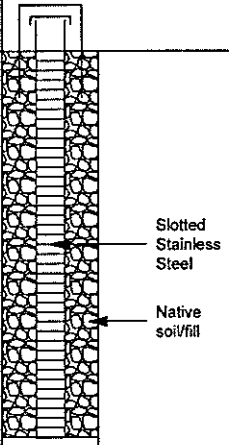

	WELL INSTALLATION	INTERVAL (FT)	
BLANK CASING:	2 in. Stainless Steel	-3.7 to 0.0	DRILLING METHOD _____
WELL SCREEN:	2 in. Stainless Steel	0.0 to 5.0	SAMPLING METHOD _____
SUMP/END CAP:			DATE DEVELOPED _____
SURFACE SEAL:			WATER LEVEL (FT BGS) _____
			LOGGED BY _____
			REMARKS <u>West of San Juan River and east of diposal cell; well point removed.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4895						0-5 ft. ALLUVIAL, gravel and sand
5							
	4890						
10							

WELL POINT CONSTRUCTION LOG SHP01-0647

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2100547.36</u>	DATE DRILLED <u>03/11/1987</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>252118.53</u>	SURFACE ELEV. (FT NGVD) <u>4898.02</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>5.00</u>	TOP OF CASING (FT) <u>4902.32</u>
WELL NUMBER <u>0647</u>	WELL DEPTH (FT) <u>5.00</u>	MEAS. PT. ELEV. (FT) <u>4902.32</u>

	WELL INSTALLATION	INTERVAL (FT)	
BLANK CASING:	2 in. Stainless Steel	-4.3 to 0.0	DRILLING METHOD _____
WELL SCREEN:	2 in. Stainless Steel	0.0 to 5.0	SAMPLING METHOD _____
SUMP/END CAP:			DATE DEVELOPED _____
SURFACE SEAL:			WATER LEVEL (FT BGS) _____
			LOGGED BY _____
			REMARKS <u>West of San Juan River and east of disposal cell; well point removed.</u>

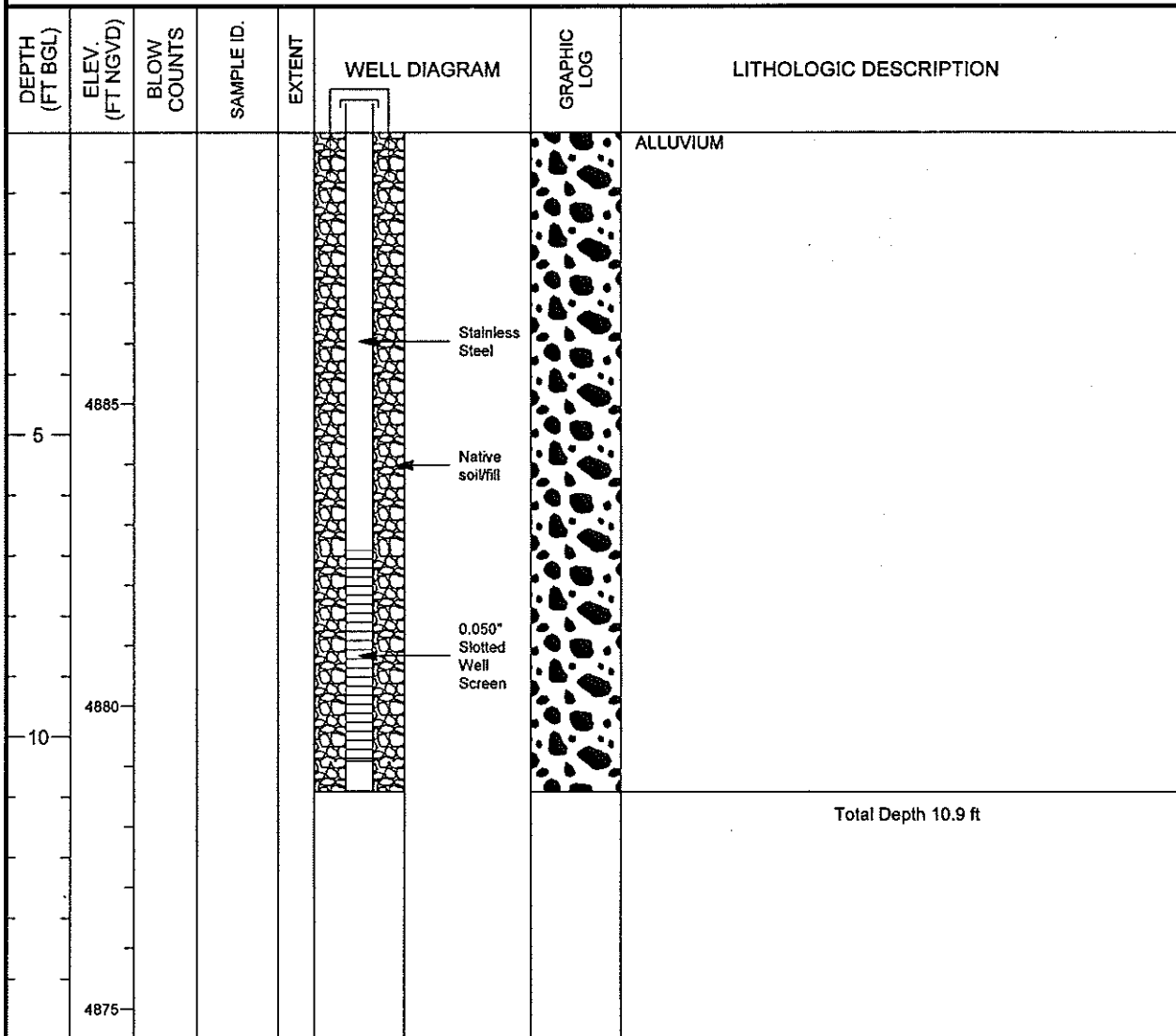
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
							0-5 ft. ALLUVIAL, gravel and sand.
5	4895						
	4890						
10							



WELL POINT CONSTRUCTION LOG SHP01-0671

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2104418.59</u>	DATE DRILLED <u>01/19/1988</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250662.29</u>	SURFACE ELEV. (FT NGVD) <u>4889.49</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>10.90</u>	TOP OF CASING (FT) <u>4892.65</u>
WELL NUMBER <u>0671</u>	WELL DEPTH (FT) <u>10.90</u>	MEAS. PT. ELEV. (FT) <u>4892.65</u>

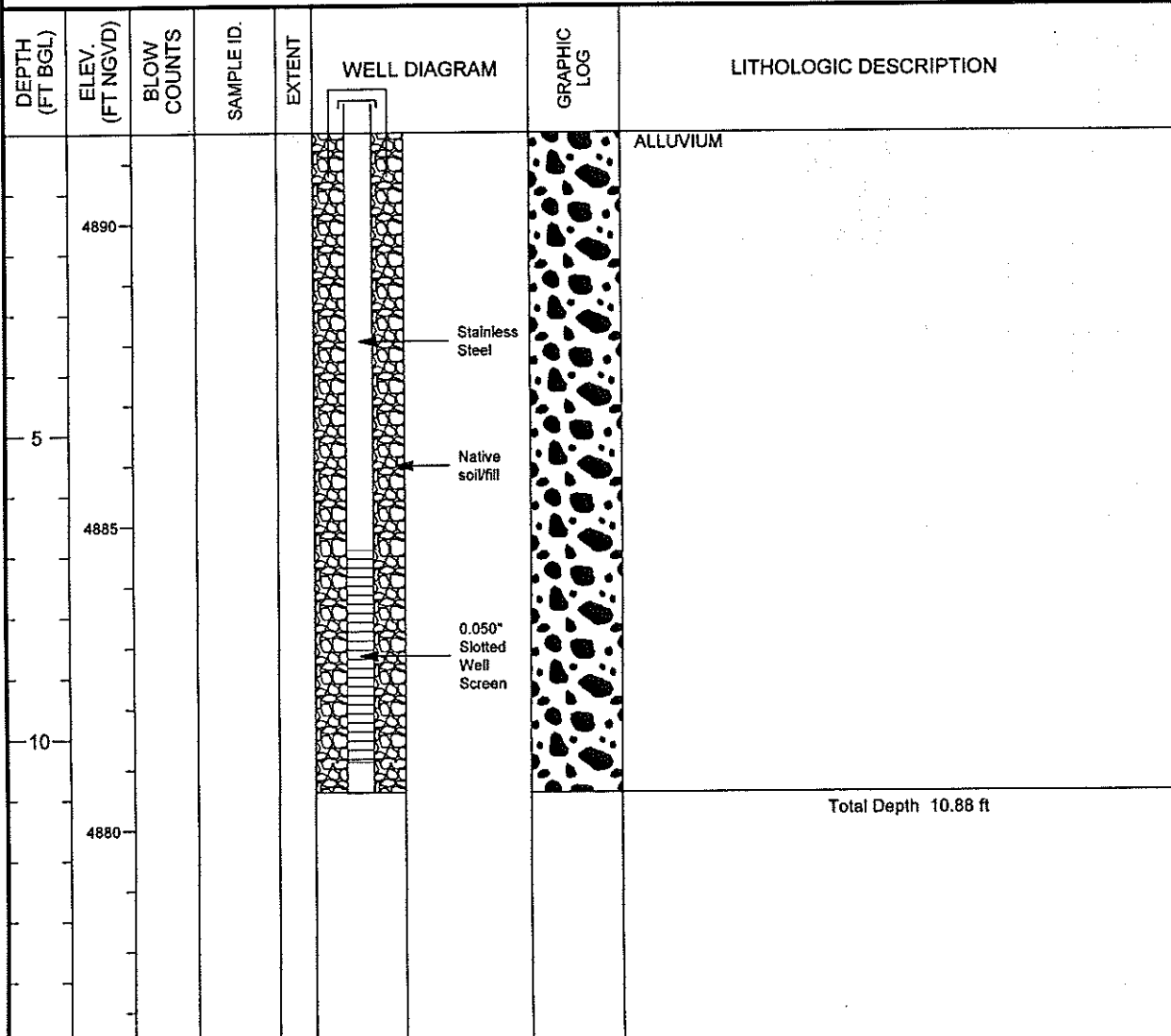
	WELL INSTALLATION	INTERVAL (FT)	
BLANK CASING:	2 in. Stainless Steel	-3.16 to 6.9	DRILLING METHOD <u>BACKHOE</u>
WELL SCREEN:	2 in. Stainless Steel	6.9 to 10.4	SAMPLING METHOD _____
SUMP/END CAP:	2 in. Stainless Steel	10.4 to 10.9	DATE DEVELOPED _____
SURFACE SEAL:			WATER LEVEL (FT BGS) _____
			LOGGED BY <u>J. Fritts</u>
			REMARKS <u>Hole dug with a Backhoe. North of San Juan River.</u>



WELL POINT CONSTRUCTION LOG SHP01-0672

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103823.00</u>	DATE DRILLED <u>01/19/1988</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251489.00</u>	SURFACE ELEV. (FT NGVD) <u>4891.50</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>10.88</u>	TOP OF CASING (FT) <u>4894.41</u>
WELL NUMBER <u>0672</u>	WELL DEPTH (FT) <u>10.88</u>	MEAS. PT. ELEV. (FT) <u>4894.41</u>

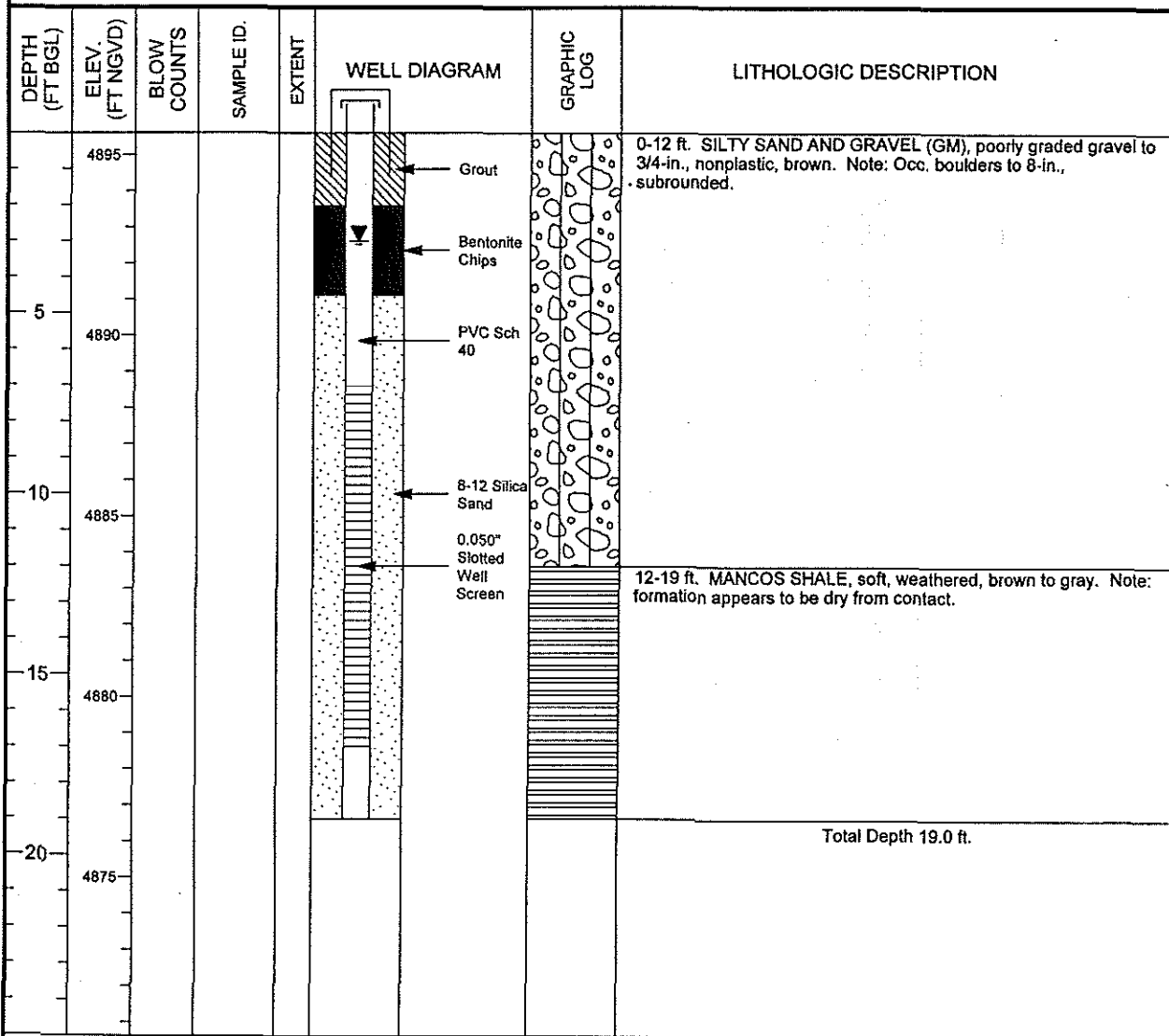
	WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD <u>BACKHOE</u>
BLANK CASING:	2 in. Stainless Steel	-2.91 to 6.88	SAMPLING METHOD _____
WELL SCREEN:	2 in. Stainless Steel	6.88 to 10.38	DATE DEVELOPED _____
SUMP/END CAP:	2 in. Stainless Steel	10.38 to 10.88	WATER LEVEL (FT BGS) _____
SURFACE SEAL:			LOGGED BY <u>J. Fritts</u>
			REMARKS <u>Hole dug with a Backhoe. East of San Juan River. Well point removed.</u>



MONITORING WELL COMPLETION LOG SHP01-0732

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2099626.94</u>	DATE DRILLED <u>03/29/1993</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>252632.79</u>	SURFACE ELEV. (FT NGVD) <u>4895.62</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>19.00</u>	TOP OF CASING (FT) <u>4897.55</u>
WELL NUMBER <u>0732</u>	WELL DEPTH (FT) <u>19.00</u>	MEAS. PT. ELEV. (FT) <u>4897.55</u>

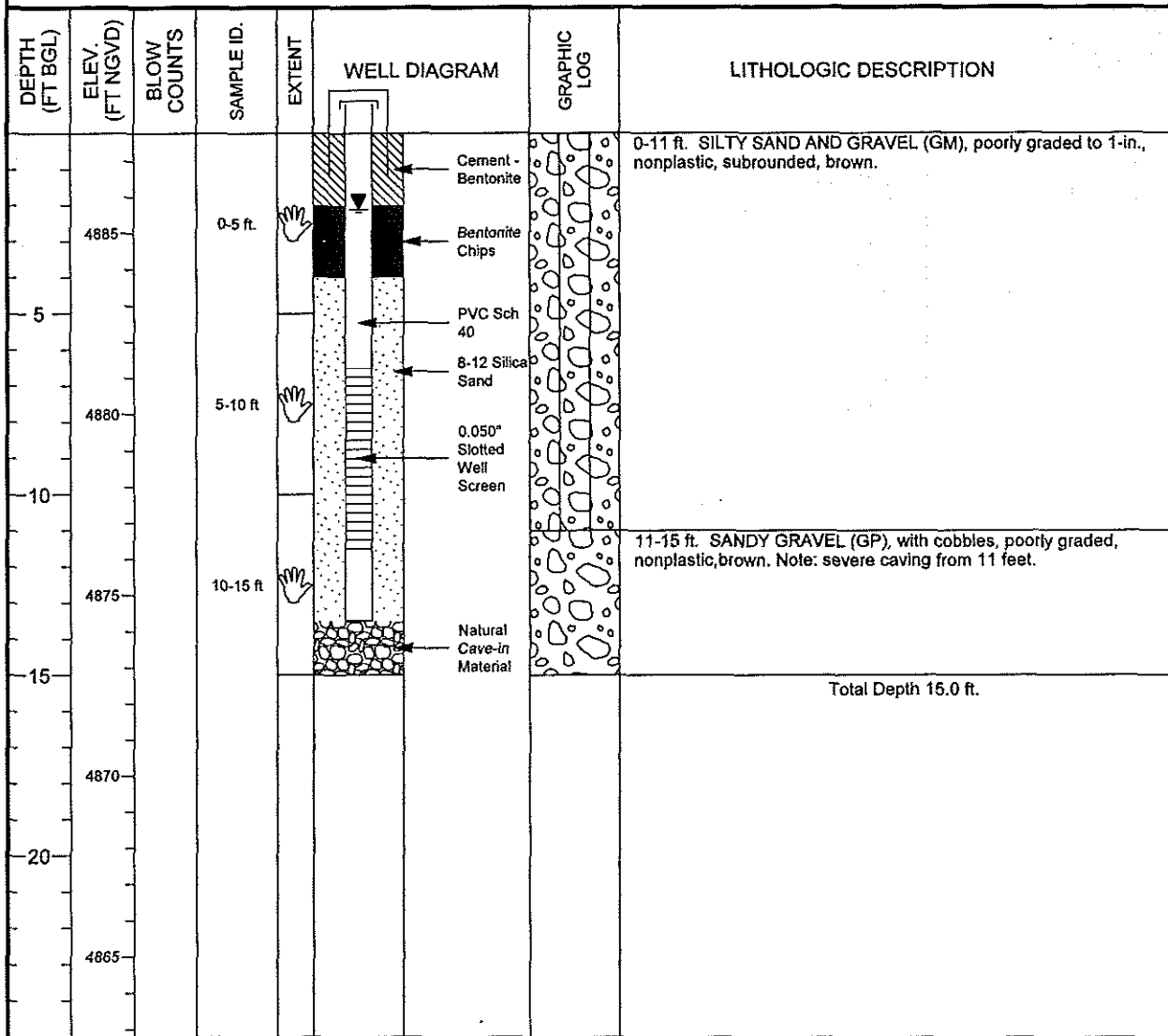
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ODEX/AIR ROTARY</u>
BLANK CASING:	2 in. PVC Sch 40	-1.93 to 7.0	SAMPLING METHOD
WELL SCREEN:	2 in. Machine Slotted PVC	7.0 to 17.0	DATE DEVELOPED <u>03/29/1993</u>
SUMP/END CAP:	2 in. PVC Sch 40	17.0 to 19.0	WATER LEVEL (FT BGS) <u>3.0 on 03/29/1993</u>
SURFACE SEAL:	Grout	0.0 to 2.0	LOGGED BY <u>W. Wood</u>
GROUT:			REMARKS <u>Drilled East of San Juan River.</u>
SEAL:	Bentonite Chips	2.0 to 4.5	
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	4.5 to 19.0	



MONITORING WELL COMPLETION LOG SHP01-0733

PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2104885.18	DATE DRILLED	03/25/1993
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	249564.17	SURFACE ELEV. (FT NGVD)	4887.78
SITE	SHIPROCK	HOLE DEPTH (FT)	15.00	TOP OF CASING (FT)	4889.67
WELL NUMBER	0733	WELL DEPTH (FT)	13.50	MEAS. PT. ELEV. (FT)	4889.67

WELL INSTALLATION		INTERVAL (FT)			
SURFACE CASING:				DRILLING METHOD	ODEX/AIR ROTARY
BLANK CASING:	2 in. PVC Sch 40	-1.89	to 6.5	SAMPLING METHOD	GRAB
WELL SCREEN:	2 in. Machine Slotted PVC	6.5	to 11.5	DATE DEVELOPED	03/25/1993
SUMP/END CAP:	2 in. PVC Sch 40	11.5	to 13.5	WATER LEVEL (FT BTOC)	4.0 on 03/25/1993
SURFACE SEAL:	Cement - Bentonite	0.0	to 2.0	LOGGED BY	W. Wood
GROUT:				REMARKS	Drilled North of San Juan River.
SEAL:	Bentonite Chips	2.0	to 4.0		
UPPER PACK:					
LOWER PACK:	8-12 Silica Sand	4.0	to 13.5		



MONITORING WELL COMPLETION LOG SHP01-0734

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2104505.13</u>	DATE DRILLED <u>03/25/1993</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>248608.49</u>	SURFACE ELEV. (FT NGVD) <u>4886.00</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>7.00</u>	TOP OF CASING (FT) <u>4886.55</u>
WELL NUMBER <u>0734</u>	WELL DEPTH (FT) <u>7.00</u>	MEAS. PT. ELEV. (FT) <u>4886.55</u>

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>BACKHOE</u>
BLANK CASING:	2 in. Stainless Steel	-0.55 to 2.0	SAMPLING METHOD _____
WELL SCREEN:	2 in. Stainless Steel	2.0 to 4.0	DATE DEVELOPED <u>03/25/1993</u>
SUMP/END CAP:	2 in. Stainless Steel	6.0 to 7.0	WATER LEVEL (FT BTOC) <u>4.0 on 03/25/1993</u>
SURFACE SEAL:	Native soil/fill	0.0 to 1.0	LOGGED BY <u>D. Tarbox</u>
GROUT:			REMARKS <u>Hole dug with backhoe.</u>
SEAL:	Bentonite	1.0 to 1.5	
UPPER PACK:			
LOWER PACK:			

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4885						0-7 ft. SAND (SP), light brown medium to fine sand with trace of silt, some roots near surface.
5	4880						Total Depth 7.0 ft.
10	4875						

MONITORING WELL COMPLETION LOG SHP01-0735

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2099904.08</u>	DATE DRILLED <u>03/26/1993</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>252193.67</u>	SURFACE ELEV. (FT NGVD) <u>4894.53</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>9.00</u>	TOP OF CASING (FT) <u>4895.85</u>
WELL NUMBER <u>0735</u>	WELL DEPTH (FT) <u>9.00</u>	MEAS. PT. ELEV. (FT) <u>4895.85</u>

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>BACKHOE</u>
BLANK CASING:	4 in. PVC	-1.32 to 3.0	SAMPLING METHOD _____
WELL SCREEN:	4 in. Machine Slotted PVC	3.0 to 8.0	DATE DEVELOPED <u>03/26/1993</u>
SUMP/END CAP:	4 in. PVC	8.0 to 9.0	WATER LEVEL (FT BTOC) <u>4.0</u> on <u>03/26/1993</u>
SURFACE SEAL:	Native soil/fill	0.0 to 2.0	LOGGED BY <u>D. Tarbox</u>
GROUT:			REMARKS <u>Hole dug with backhoe.</u>
SEAL:	Bentonite	2.0 to 2.5	
UPPER PACK:			
LOWER PACK:			

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
							0-4 ft. SAND (SP), light brown, medium to fine sand, little silt.
5	4890						4-9 ft. GRAVEL WITH SAND (GW), well graded gravel, coarse to fine sand, trace of silt, cobbles and boulders (up to 2 ft).
10	4885						Total Depth 9.0 ft.
	4880						

MONITORING WELL COMPLETION LOG SHP01-0736

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2104420.64</u>	DATE DRILLED <u>03/24/1993</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249808.04</u>	SURFACE ELEV. (FT NGVD) <u>4887.20</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>7.00</u>	TOP OF CASING (FT) <u>4887.99</u>
WELL NUMBER <u>0736</u>	WELL DEPTH (FT) <u>7.00</u>	MEAS. PT. ELEV. (FT) <u>4887.99</u>

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>BACKHOE</u>
BLANK CASING:	2 in. Stainless Steel	-0.79 to 3.0	SAMPLING METHOD _____
WELL SCREEN:	2 in. Machine Slotted PVC	3.0 to 5.0	DATE DEVELOPED _____
SUMP/END CAP:	2 in. Stainless Steel	5.0 to 7.0	WATER LEVEL (FT BTOC) <u>3.0 on 03/24/1993</u>
SURFACE SEAL:	Native soil/fill	0.0 to 2.0	LOGGED BY <u>D. Tarbox</u>
GROUT:			REMARKS <u>Hole dug with backhoe.</u>
SEAL:	Bentonite	2.0 to 2.5	
UPPER PACK:			
LOWER PACK:			

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4885						0-7 ft. SILTY SAND (SM), light brown, medium to fine sand, trace of silt.
5							
	4880						Total Depth 7.0 ft.
10							
	4875						

WELL POINT CONSTRUCTION LOG SHP01-0766

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103964.44</u>	DATE DRILLED <u>10/27/1999 to 10/28/1999</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250686.97</u>	SURFACE ELEV. (FT NGVD) <u>4888.68</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>9.00</u>	TOP OF CASING (FT) <u>4892.55</u>
WELL NUMBER <u>0766</u>	WELL DEPTH (FT) <u>9.00</u>	MEAS. PT. ELEV. (FT) <u>4892.55</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) _____

	WELL INSTALLATION	INTERVAL (FT)
BLANK CASING:	2 in. PVC Sch 40	-3.87 to 6.25
WELL SCREEN:	2 in. Slotted PVC	6.25 to 8.75
SUMP/END CAP:	2 in. PVC Sch 40	8.75 to 9.0
SURFACE SEAL:		

DRILLING METHOD BACKHOE
 SAMPLING METHOD _____
 DATE DEVELOPED 10/28/1999
 WATER LEVEL (FT BGS) 6.58 on 10/28/1999
 LOGGED BY M. Kautsky
 REMARKS Well Points were installed with backhoe.

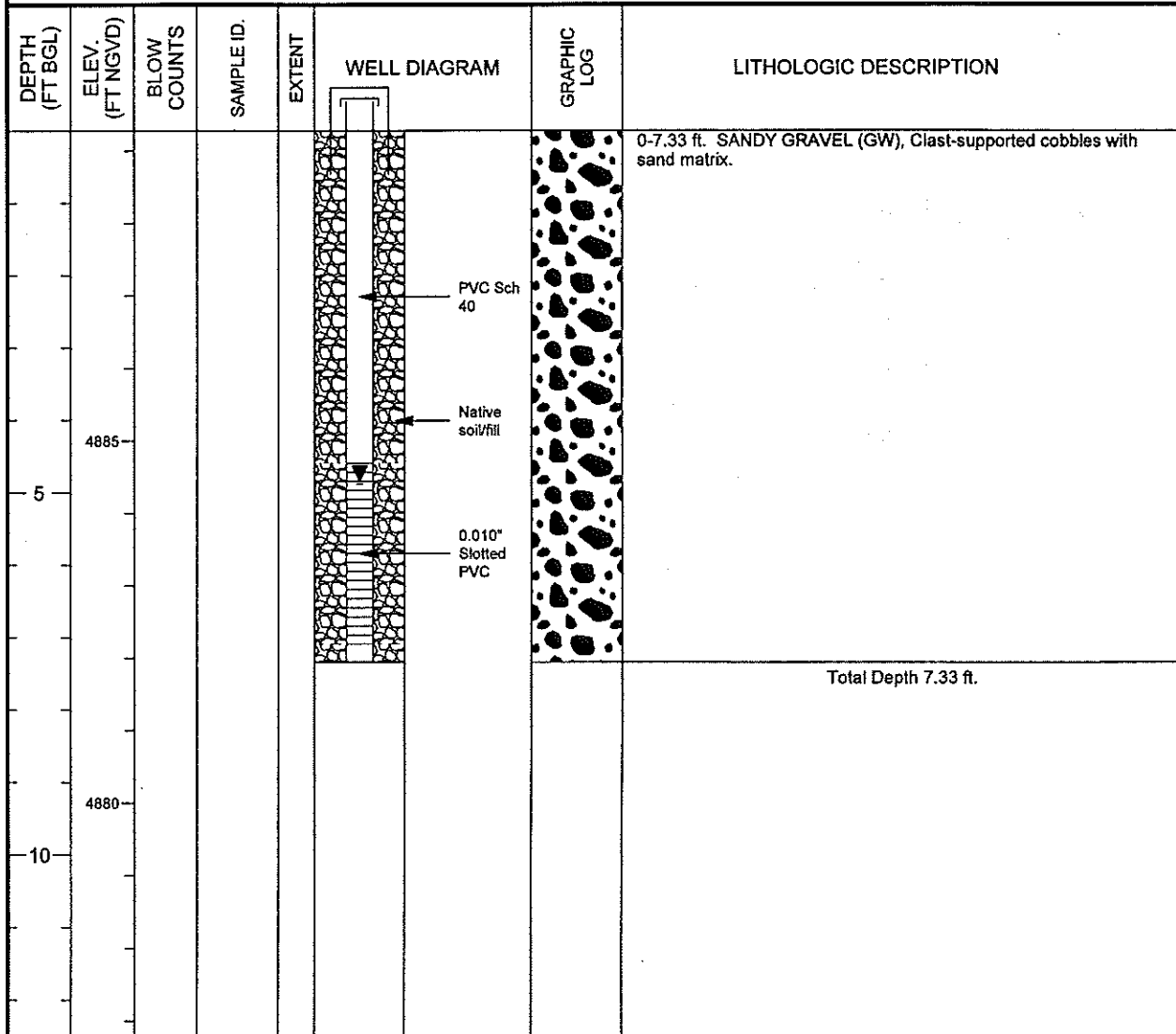
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4885						0-9 ft. SANDY GRAVEL (GW), Clast-supported cobbles with sand matrix.
5							
	4880						
10							Total Depth 9.0 ft.



WELL POINT CONSTRUCTION LOG SHP01-0768

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103147.09</u>	DATE DRILLED <u>10/27/1999 to 10/28/1999</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250340.45</u>	SURFACE ELEV. (FT NGVD) <u>4889.28</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>7.33</u>	TOP OF CASING (FT) <u>4892.33</u>
WELL NUMBER <u>0768</u>	WELL DEPTH (FT) <u>7.33</u>	MEAS. PT. ELEV. (FT) <u>4892.32</u>

	WELL INSTALLATION	INTERVAL (FT)	
BLANK CASING:	2 in. PVC Sch 40	-3.05 to 4.58	DRILLING METHOD <u>BACKHOE</u>
WELL SCREEN:	2 in. Slotted PVC	4.58 to 7.08	SAMPLING METHOD _____
SUMP/END CAP:	2 in. PVC Sch 40	7.08 to 7.33	DATE DEVELOPED <u>10/28/1999</u>
SURFACE SEAL:			WATER LEVEL (FT BGS) <u>4.83 on 10/28/1999</u>
			LOGGED BY <u>M. Kautsky</u>
			REMARKS <u>Well Points were installed with backhoe.</u>

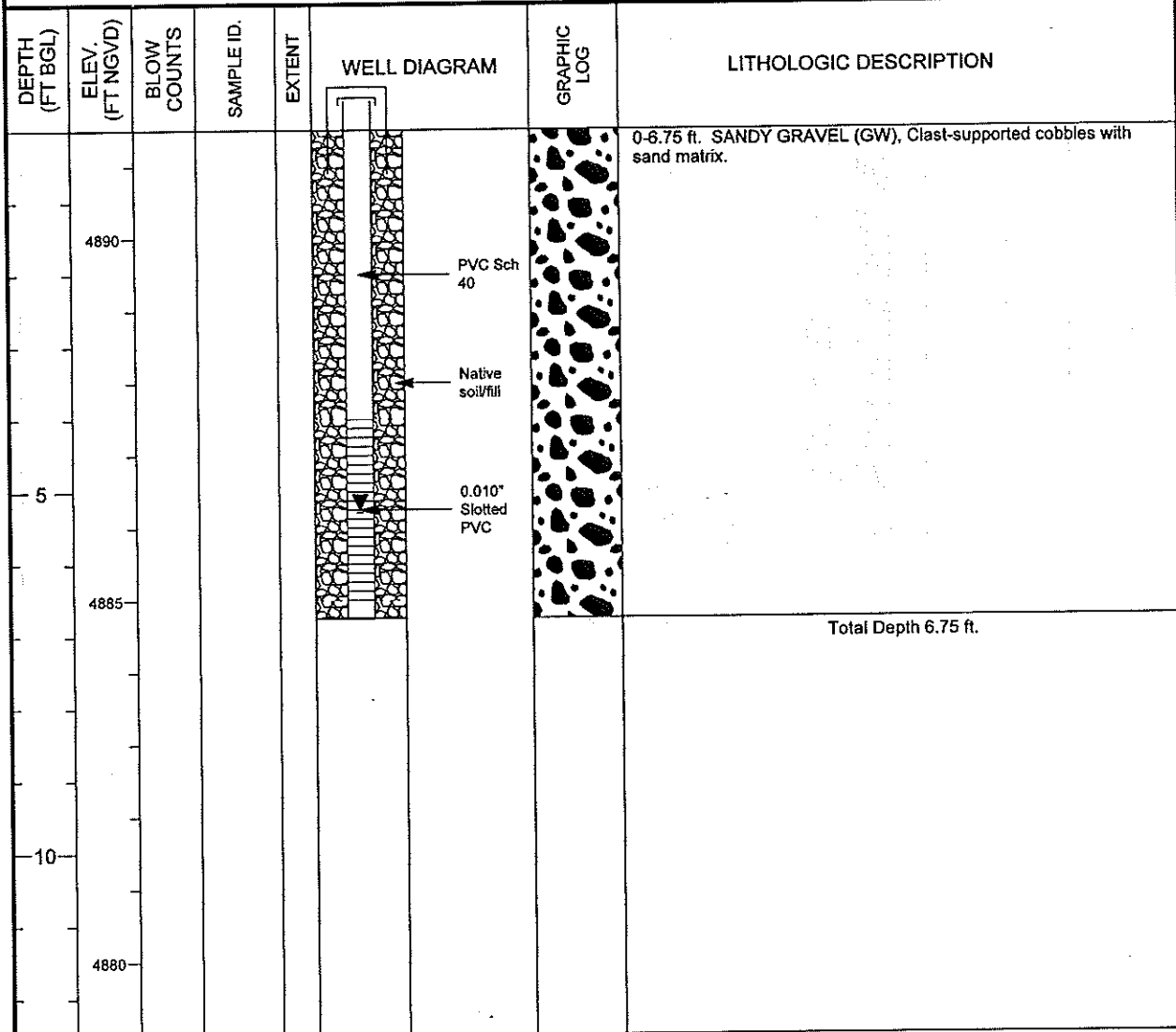


WELL POINT CONSTRUCTION LOG SHP01-0773

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101742.40</u>	DATE DRILLED <u>10/27/1999 to 10/28/1999</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251394.19</u>	SURFACE ELEV. (FT NGVD) <u>4891.50</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>6.75</u>	TOP OF CASING (FT) <u>4894.87</u>
WELL NUMBER <u>0773</u>	WELL DEPTH (FT) <u>6.75</u>	MEAS. PT. ELEV. (FT) <u>4894.87</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) _____

	WELL INSTALLATION	INTERVAL (FT)
BLANK CASING:	2 in. PVC Sch 40	-3.37 to 4.0
WELL SCREEN:	2 in. Slotted PVC	4.0 to 6.5
SUMP/END CAP:	2 in. PVC Sch 40	6.5 to 6.75
SURFACE SEAL:		

DRILLING METHOD BACKHOE
 SAMPLING METHOD _____
 DATE DEVELOPED 10/28/1999
 WATER LEVEL (FT BGS) 5.25 on 10/28/1999
 LOGGED BY M. Kautsky
 REMARKS Well Points were installed with backhoe.



WELL POINT CONSTRUCTION LOG SHP01-0775

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103476.13</u>	DATE DRILLED <u>10/27/1999 to 10/28/1999</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250663.37</u>	SURFACE ELEV. (FT NGVD) <u>4888.92</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>7.00</u>	TOP OF CASING (FT) <u>4892.20</u>
WELL NUMBER <u>0775</u>	WELL DEPTH (FT) <u>7.00</u>	MEAS. PT. ELEV. (FT) <u>4892.20</u>

	WELL INSTALLATION	INTERVAL (FT)	
BLANK CASING:	2 in. PVC Sch 40	-3.28 to 4.25	DRILLING METHOD <u>BACKHOE</u>
WELL SCREEN:	2 in. Slotted PVC	4.25 to 6.75	SAMPLING METHOD _____
SUMP/END CAP:	2 in. PVC Sch 40	6.75 to 7.0	DATE DEVELOPED <u>10/28/1999</u>
SURFACE SEAL:			WATER LEVEL (FT BGS) <u>4.83 on 10/28/1999</u>
			LOGGED BY <u>M. Kautsky</u>
			REMARKS <u>Well Points were installed with backhoe.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
							0-7 ft. SANDY GRAVEL (GW), Clast-supported cobbles with sand matrix.
5	4885						
10	4880						Total Depth 7.0 ft.



U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION OFFICE, COLORADO

WELL POINT CONSTRUCTION LOG SHP01-0779

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103162.67</u>	DATE DRILLED <u>10/27/1999 to 10/28/1999</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251034.71</u>	SURFACE ELEV. (FT NGVD) <u>4890.93</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>9.75</u>	TOP OF CASING (FT) <u>4893.86</u>
WELL NUMBER <u>0779</u>	WELL DEPTH (FT) <u>9.75</u>	MEAS. PT. ELEV. (FT) <u>4893.86</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) _____

	WELL INSTALLATION	INTERVAL (FT)
BLANK CASING:	2 in. PVC Sch 40	-2.93 to 7.0
WELL SCREEN:	2 in. Slotted PVC	7.0 to 9.5
SUMP/END CAP:	2 in. PVC Sch 40	9.5 to 9.75
SURFACE SEAL:		

DRILLING METHOD <u>BACKHOE</u>
SAMPLING METHOD _____
DATE DEVELOPED <u>10/28/1999</u>
WATER LEVEL (FT BGS) <u>7.33 on 10/28/1999</u>
LOGGED BY <u>M. Kautsky</u>
REMARKS <u>Well Points were installed with backhoe.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4890				<p style="font-size: small;">PVC Sch 40</p> <p style="font-size: small;">Native soil/fill</p> <p style="font-size: small;">0.010" Slotted PVC</p>		0-9.75 ft. SANDY GRAVEL (GW), Clast-supported cobbles with sand matrix.
5	4885						
10	4880						
Total Depth 9.75 ft.							

WELL POINT CONSTRUCTION LOG SHP01-0782

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2105138.22</u>	DATE DRILLED <u>10/27/1999 to 10/28/1999</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>247772.85</u>	SURFACE ELEV. (FT NGVD) <u>4882.24</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>6.75</u>	TOP OF CASING (FT) <u>4885.68</u>
WELL NUMBER <u>0782</u>	WELL DEPTH (FT) <u>6.75</u>	MEAS. PT. ELEV. (FT) <u>4885.69</u>

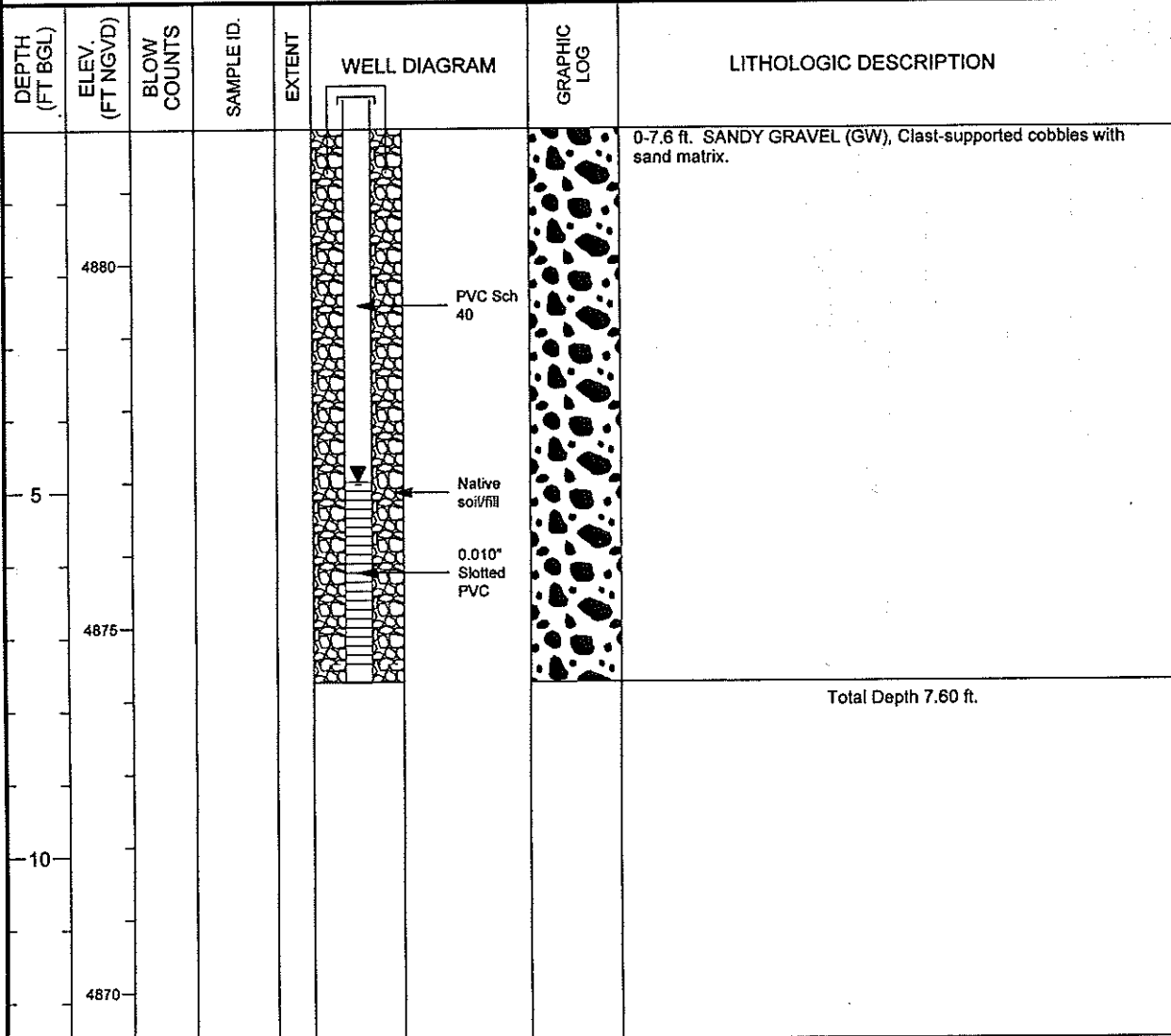
	WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD <u>BACKHOE</u>
BLANK CASING:	2 in. PVC Sch 40	-3.44 to 4.0	SAMPLING METHOD _____
WELL SCREEN:	2 in. Slotted PVC	4.0 to 6.5	DATE DEVELOPED <u>10/28/1999</u>
SUMP/END CAP:	2 in. PVC Sch 40	6.5 to 6.75	WATER LEVEL (FT BGS) <u>4.42 on 10/28/1999</u>
SURFACE SEAL:			LOGGED BY <u>M. Kautsky</u>
			REMARKS <u>Well Points were installed with backhoe.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4880						0-6.75 ft. SANDY GRAVEL (GW), Clast-supported cobbles with sand matrix.
5							
	4875						Total Depth 6.75 ft.
10							
	4870						

WELL POINT CONSTRUCTION LOG SHP01-0783

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2105116.90</u>	DATE DRILLED <u>10/27/1999 to 10/28/1999</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>247564.91</u>	SURFACE ELEV. (FT NGVD) <u>4881.86</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>7.60</u>	TOP OF CASING (FT) <u>4884.48</u>
WELL NUMBER <u>0783</u>	WELL DEPTH (FT) <u>7.60</u>	MEAS. PT. ELEV. (FT) <u>4884.53</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) _____

	WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD <u>BACKHOE</u>
BLANK CASING:	2 in. PVC Sch 40	-2.62 to 4.85	SAMPLING METHOD _____
WELL SCREEN:	2 in. Slotted PVC	4.85 to 7.35	DATE DEVELOPED <u>10/28/1999</u>
SUMP/END CAP:	2 in. PVC Sch 40	7.35 to 7.6	WATER LEVEL (FT BGS) <u>4.85 on 10/28/1999</u>
SURFACE SEAL:			LOGGED BY <u>M. Kautsky</u>
			REMARKS <u>Well Points were installed with backhoe.</u>



WELL POINT CONSTRUCTION LOG SHP01-0784

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2105420.96</u>	DATE DRILLED <u>10/27/1999 to 10/28/1999</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>247021.94</u>	SURFACE ELEV. (FT NGVD) <u>4879.22</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>7.25</u>	TOP OF CASING (FT) <u>4882.21</u>
WELL NUMBER <u>0784</u>	WELL DEPTH (FT) <u>7.25</u>	MEAS. PT. ELEV. (FT) <u>4882.12</u>

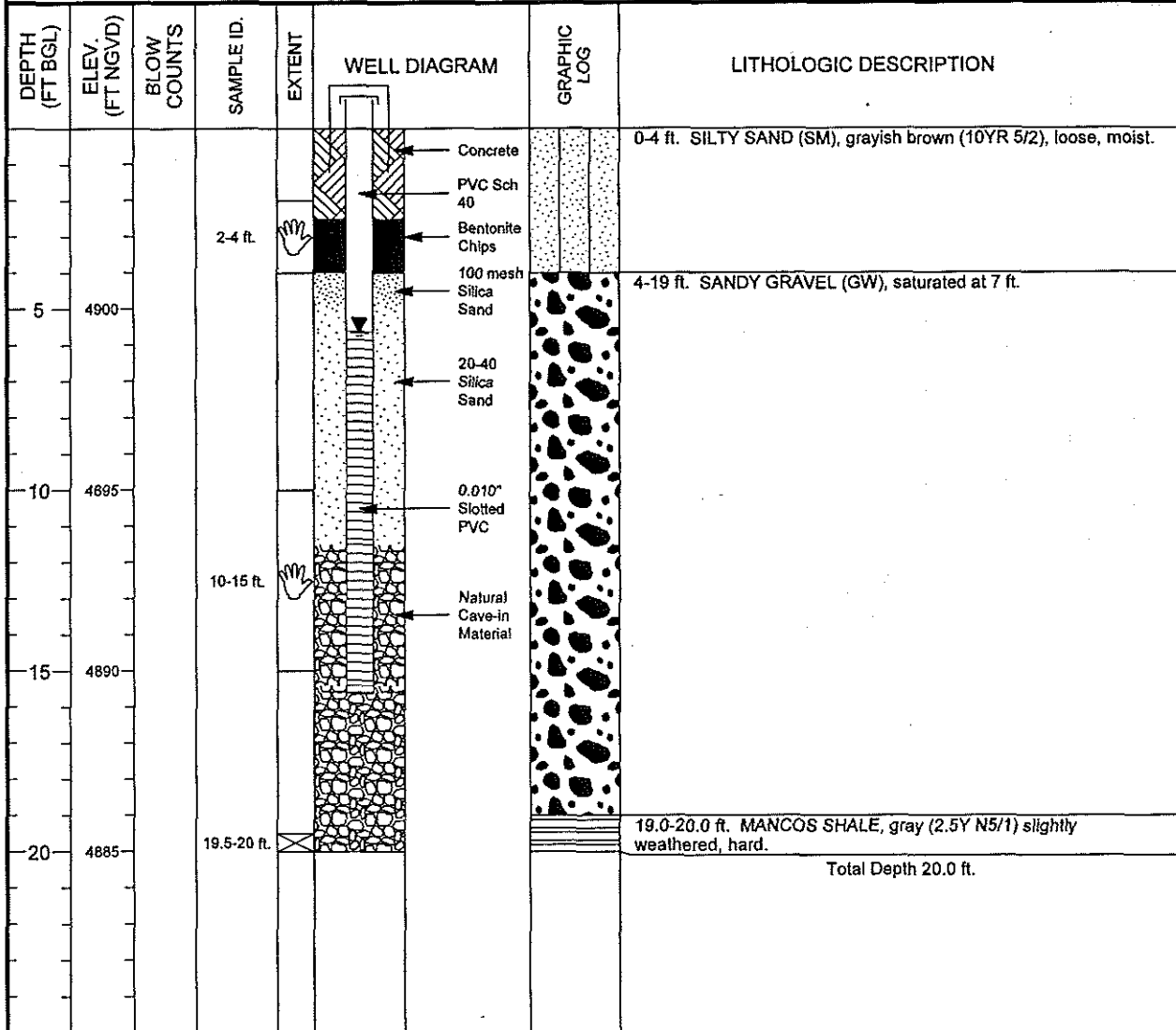
	WELL INSTALLATION	INTERVAL (FT)	
BLANK CASING:	2 in. PVC Sch 40	-2.99 to 4.5	DRILLING METHOD <u>BACKHOE</u>
WELL SCREEN:	2 in. Slotted PVC	4.5 to 7.0	SAMPLING METHOD _____
SUMP/END CAP:	2 in. PVC Sch 40	7.0 to 7.25	DATE DEVELOPED <u>10/28/1999</u>
SURFACE SEAL:			WATER LEVEL (FT BGS) <u>3.67 on 10/28/1999</u>
			LOGGED BY <u>M. Kautsky</u>
			REMARKS <u>Well Points were installed with backhoe.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
							0-7.25 ft. SANDY GRAVEL (GW), Clast-supported cobbles with sand matrix.
5	4875						
10	4870						Total Depth 7.25 ft.

MONITORING WELL COMPLETION LOG SHP01-0850

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2098486.21</u>	DATE DRILLED <u>10/23/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>256685.04</u>	SURFACE ELEV. (FT NGVD) <u>4904.99</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>20.00</u>	TOP OF CASING (FT) <u>4907.51</u>
WELL NUMBER <u>0850</u>	WELL DEPTH (FT) <u>15.60</u>	MEAS. PT. ELEV. (FT) <u>4907.51</u>

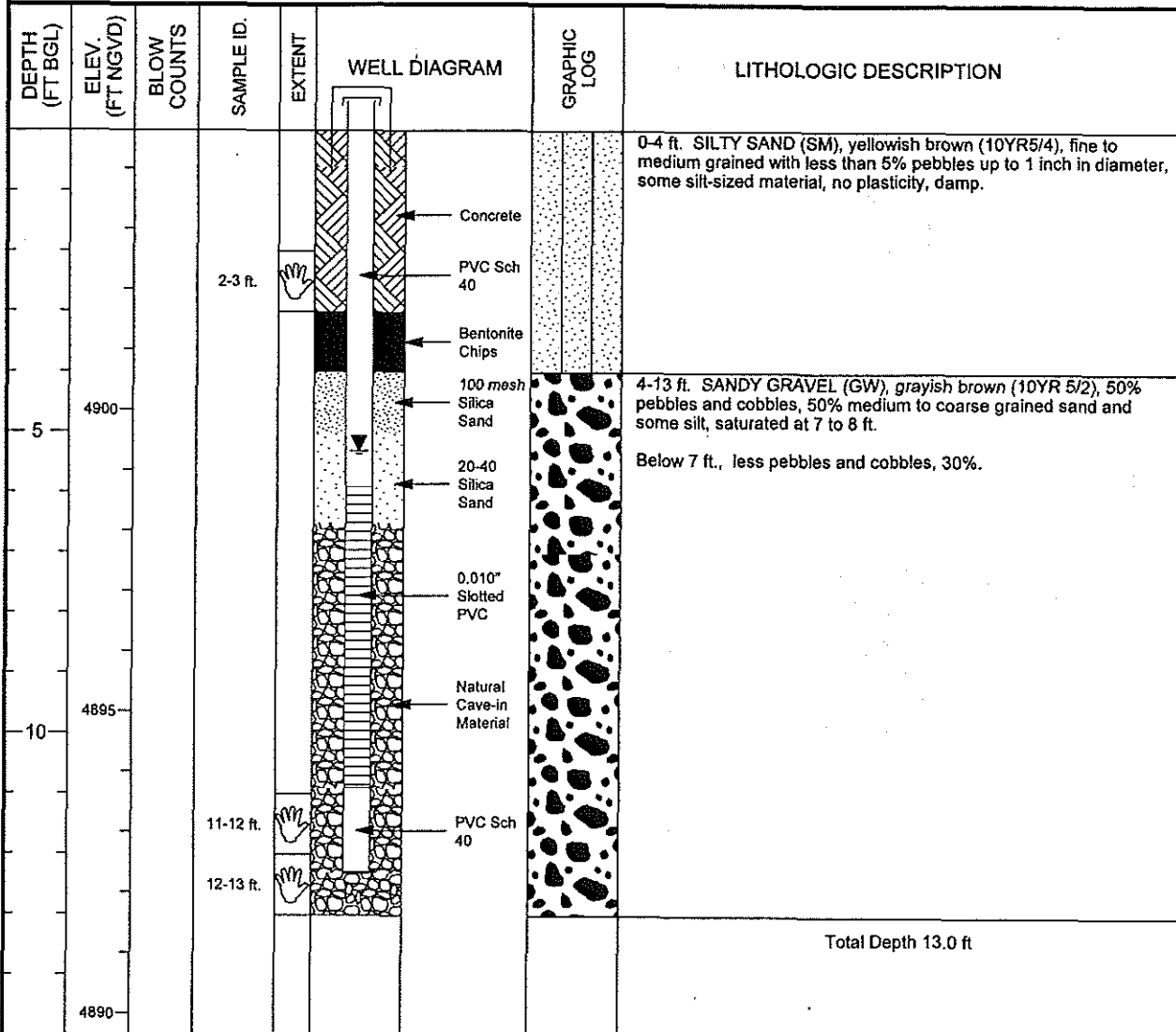
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>HOLLOW STEM AUGER</u>
BLANK CASING:	2 in. PVC Sch 40	-2.52 to 5.6	SAMPLING METHOD <u>GRAB, SPLIT SPOON</u>
WELL SCREEN:	2 in. Machine Slotted PVC	5.6 to 15.4	DATE DEVELOPED <u>10/23/1998</u>
SUMP/END CAP:	2 in. PVC Sch 40	15.4 to 15.6	WATER LEVEL (FT BTOC) <u>8.17 on 11/20/1998</u>
SURFACE SEAL:	Concrete	-0.5 to 2.5	LOGGED BY <u>M. Kautsky</u>
GROUT:			REMARKS <u>Natural formation cave-in material from 11.5 ft. to 20 ft.</u>
SEAL:	Bentonite Chips	2.5 to 4.0	
UPPER PACK:	100 mesh Silica Sand	4.0 to 5.0	
LOWER PACK:	20-40 Silica Sand	5.0 to 11.5	



MONITORING WELL COMPLETION LOG SHP01-0851

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2098473.35</u>	DATE DRILLED <u>10/21/1998 to 10/22/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>256679.18</u>	SURFACE ELEV. (FT NGVD) <u>4904.63</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>13.00</u>	TOP OF CASING (FT) <u>4906.45</u>
WELL NUMBER <u>0851</u>	WELL DEPTH (FT) <u>12.30</u>	MEAS. PT. ELEV. (FT) <u>4906.45</u>

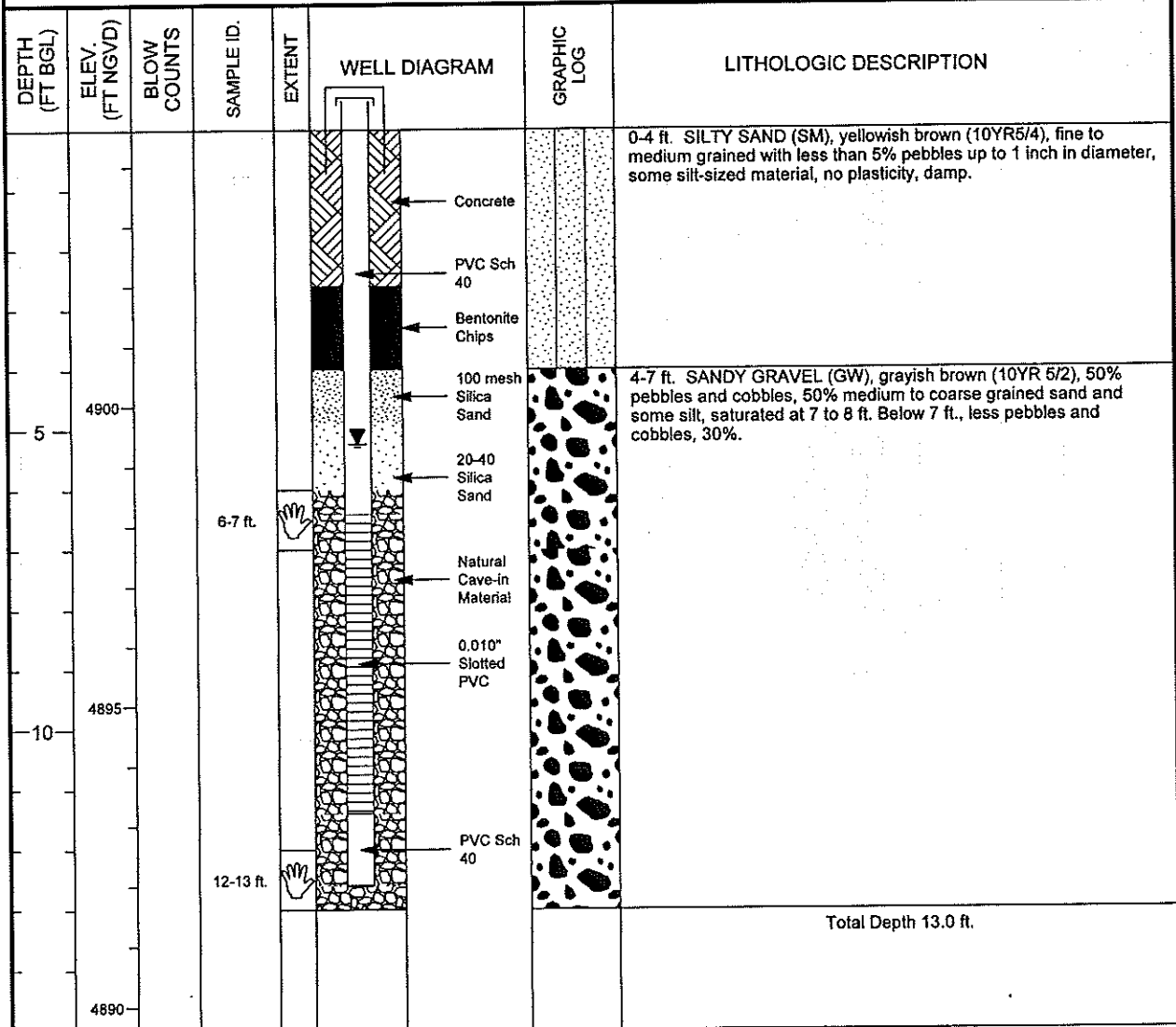
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			
BLANK CASING:	2 in. PVC Sch 40	-1.82 to 6.0	DRILLING METHOD <u>HOLLOW STEM AUGER</u>
WELL SCREEN:	2 in. Machine Slotted PVC	6.0 to 11.0	SAMPLING METHOD <u>GRAB</u>
SUMP/END CAP:	2 in. PVC Sch 40	11.0 to 12.3	DATE DEVELOPED <u>10/23/1998</u>
SURFACE SEAL:	Concrete	-0.5 to 3.0	WATER LEVEL (FT BTOC) <u>7.13 on 11/20/1998</u>
GROUT:			LOGGED BY <u>C. Goodknight</u>
SEAL:	Bentonite Chips	3.0 to 4.0	REMARKS <u>Natural formation cave-in material from 6.5 to 13 ft.</u>
UPPER PACK:	100 mesh Silica Sand	4.0 to 5.0	
LOWER PACK:	20-40 Silica Sand	5.0 to 6.5	



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MONITORING WELL COMPLETION LOG SHP01-0852

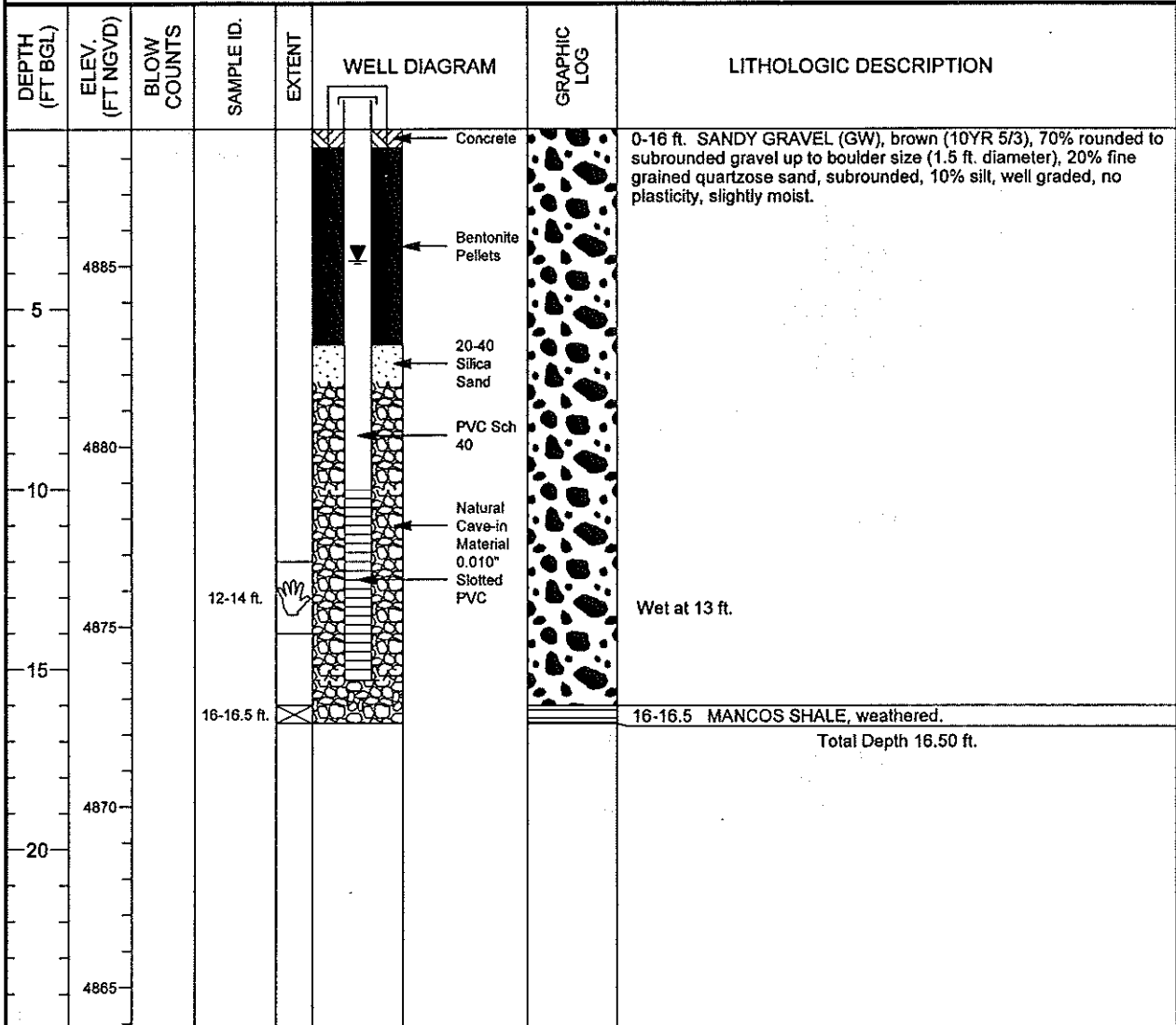
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2098472.49</u>	DATE DRILLED <u>10/22/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>256707.25</u>	SURFACE ELEV. (FT NGVD) <u>4904.61</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>13.00</u>	TOP OF CASING (FT) <u>4907.37</u>
WELL NUMBER <u>0852</u>	WELL DEPTH (FT) <u>12.60</u>	MEAS. PT. ELEV. (FT) <u>4907.37</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>8.0</u>
WELL INSTALLATION		INTERVAL (FT)
SURFACE CASING:		
BLANK CASING:	2 in. PVC Sch 40	-2.76 to 6.4
WELL SCREEN:	2 in. Machine Slotted PVC	6.4 to 11.4
SUMP/END CAP:	2 in. PVC Sch 40	11.4 to 12.6
SURFACE SEAL:	Concrete	-0.5 to 2.6
GROUT:		
SEAL:	Bentonite Chips	2.6 to 4.0
UPPER PACK:	100 mesh Silica Sand	4.0 to 4.9
LOWER PACK:	20-40 Silica Sand	4.9 to 6.0
		DRILLING METHOD <u>HOLLOW STEM AUGER</u>
		SAMPLING METHOD <u>GRAB</u>
		DATE DEVELOPED <u>10/23/1998</u>
		WATER LEVEL (FT BTOC) <u>8.0 on 11/20/1998</u>
		LOGGED BY <u>C. Goodknight</u>
		REMARKS <u>Natural formation cave-in material from 6 ft. to 13 ft.</u>



MONITORING WELL COMPLETION LOG SHP01-0853

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102501.58</u>	DATE DRILLED <u>10/11/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251196.38</u>	SURFACE ELEV. (FT NGVD) <u>4888.81</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>16.50</u>	TOP OF CASING (FT) <u>4891.41</u>
WELL NUMBER <u>0853</u>	WELL DEPTH (FT) <u>15.30</u>	MEAS. PT. ELEV. (FT) <u>4891.41</u>

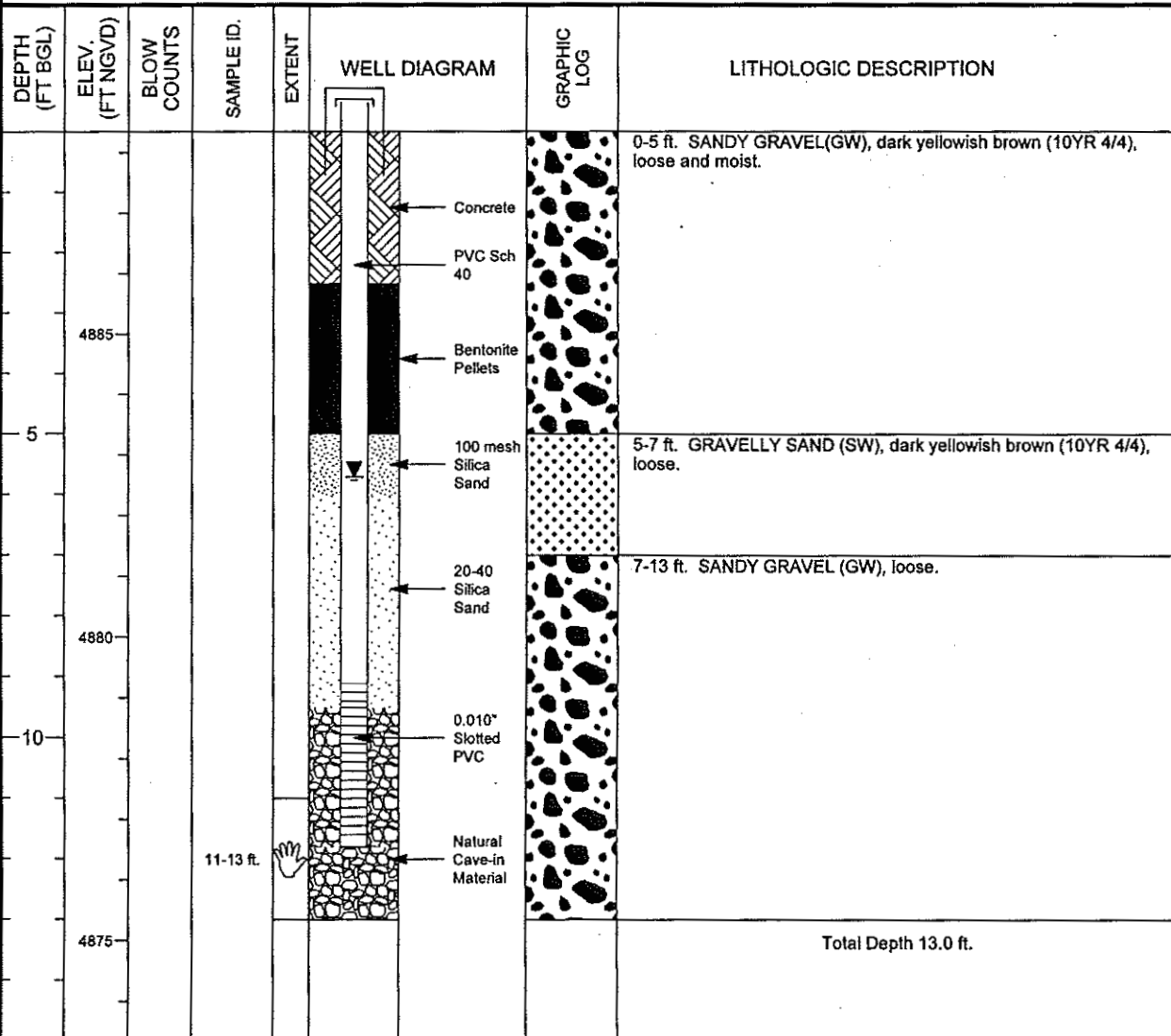
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>HOLLOW STEM AUGER</u>
BLANK CASING:	<u>2 in. PVC Sch 40</u>	<u>-2.6 to 10.0</u>	SAMPLING METHOD <u>GRAB, SPLIT SPOON</u>
WELL SCREEN:	<u>2 in. Machine Slotted PVC</u>	<u>10.0 to 15.0</u>	DATE DEVELOPED <u>10/27/1998</u>
SUMP/END CAP:	<u>2 in. PVC Sch 40</u>	<u>15.0 to 15.3</u>	WATER LEVEL (FT BTOC) <u>6.26 on 10/28/1998</u>
SURFACE SEAL:	<u>Concrete</u>	<u>-0.5 to 0.5</u>	LOGGED BY <u>C. Goodknight</u>
GROUT:			REMARKS <u>Natural formation cave-in material from 7.0 ft. to 16.5 ft.</u>
SEAL:	<u>Bentonite Pellets</u>	<u>0.5 to 6.0</u>	
UPPER PACK:	<u>20-40 Silica Sand</u>	<u>6.0 to 7.0</u>	
LOWER PACK:	<u>Natural Formation Cave-in</u>	<u>7.0 to 16.5</u>	



MONITORING WELL COMPLETION LOG SHP01-0854

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103848.58</u>	DATE DRILLED <u>10/25/1998</u>	
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250820.77</u>	SURFACE ELEV. (FT NGVD) <u>4888.35</u>	
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>13.00</u>	TOP OF CASING (FT) <u>4890.75</u>	
WELL NUMBER <u>0854</u>	WELL DEPTH (FT) <u>11.80</u>	MEAS. PT. ELEV. (FT) <u>4890.75</u>	

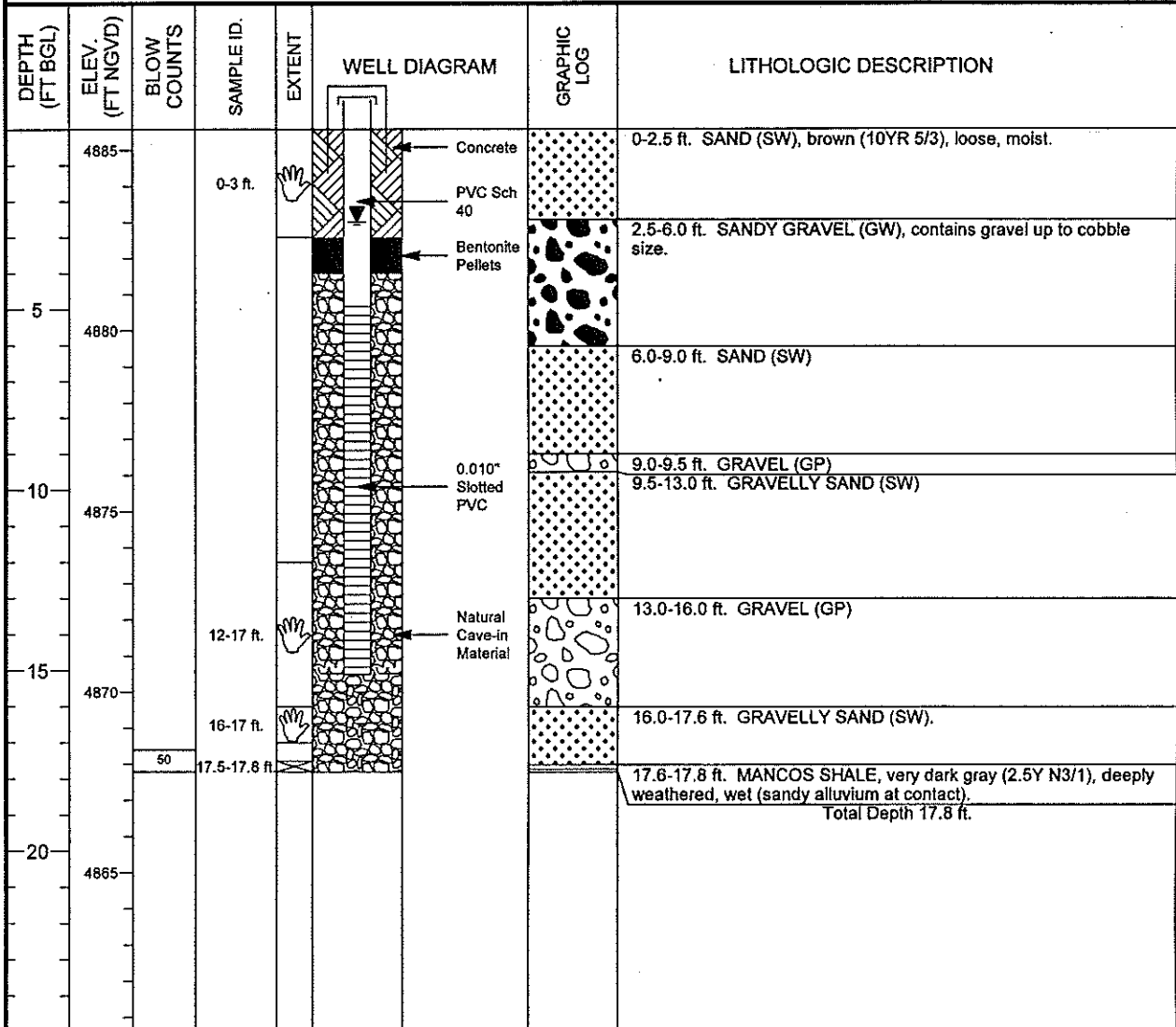
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			
BLANK CASING:	2 in. PVC Sch 40	-2.4 to 9.1	DRILLING METHOD <u>HOLLOW STEM AUGER</u>
WELL SCREEN:	2 in. Machine Slotted PVC	9.1 to 11.6	SAMPLING METHOD <u>GRAB</u>
SUMP/END CAP:	2 in. PVC Sch 40	11.6 to 11.8	DATE DEVELOPED <u>10/28/1998</u>
SURFACE SEAL:	Concrete	-0.5 to 2.5	WATER LEVEL (FT BTOC) <u>8.11 on 10/27/1998</u>
GROUT:			LOGGED BY <u>M. Kautsky, L. Spencer</u>
SEAL:	Bentonite Pellets	2.5 to 5.0	REMARKS <u>Natural formation cave-in material from 9.5 ft. to 13 ft.</u>
UPPER PACK:	100 mesh Silica Sand	5.0 to 6.0	
LOWER PACK:	20-40 Silica Sand	6.0 to 9.5	



MONITORING WELL COMPLETION LOG SHP01-0855

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103849.57</u>	DATE DRILLED <u>10/24/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249057.21</u>	SURFACE ELEV. (FT NGVD) <u>4885.59</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>17.80</u>	TOP OF CASING (FT) <u>4888.18</u>
WELL NUMBER <u>0855</u>	WELL DEPTH (FT) <u>15.10</u>	MEAS. PT. ELEV. (FT) <u>4888.18</u>

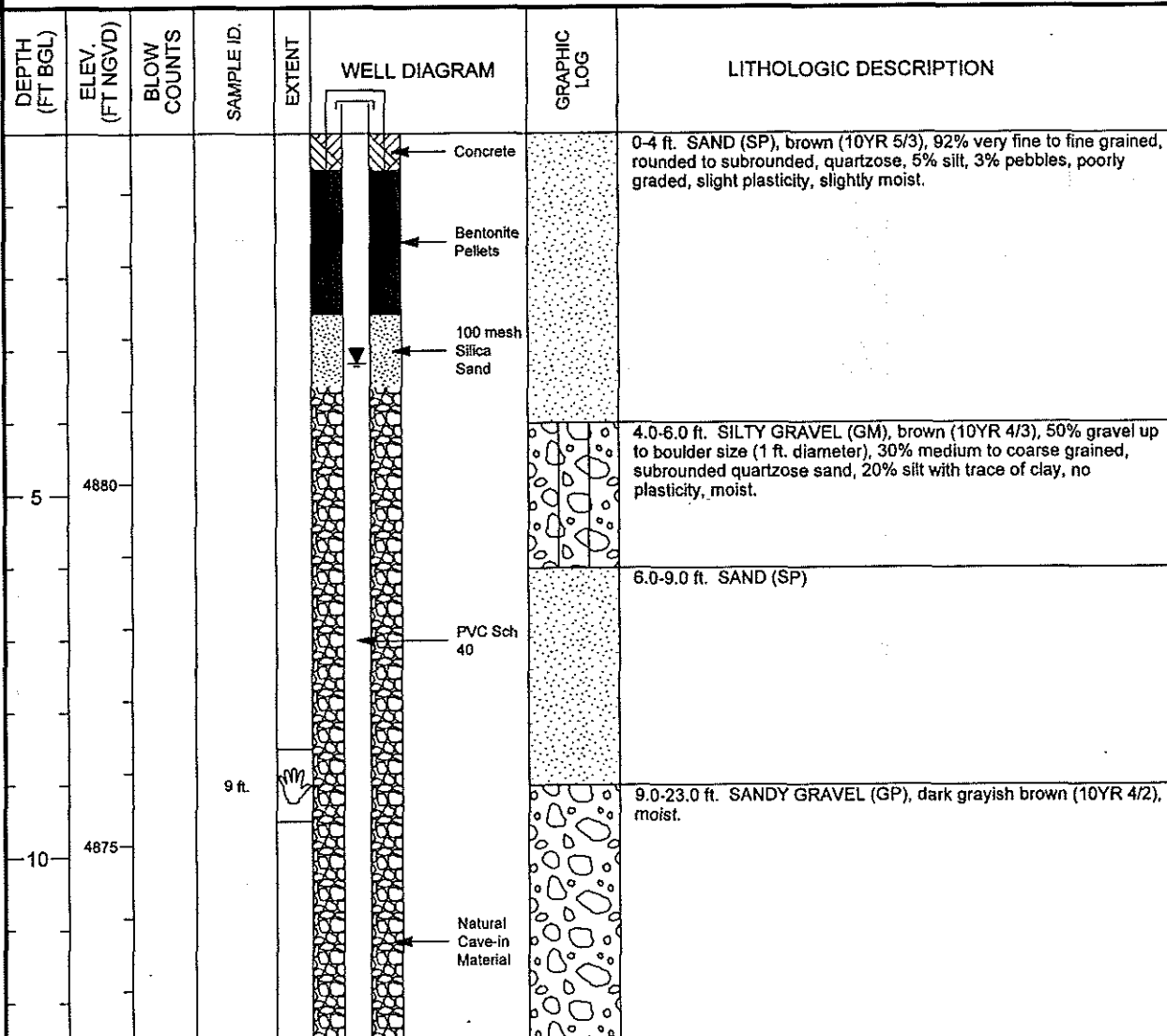
SURFACE CASING:	WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD
BLANK CASING:	2 in. PVC Sch 40	-2.59 to 4.9	HOLLOW STEM AUGER
WELL SCREEN:	2 in. Machine Slotted PVC	4.9 to 14.9	SAMPLING METHOD <u>GRAB, SPLIT SPOON</u>
SUMP/END CAP:	2 in. PVC Sch 40	14.9 to 15.1	DATE DEVELOPED <u>12/07/1998</u>
SURFACE SEAL:	Concrete	-0.5 to 3.0	WATER LEVEL (FT BTOC) <u>5.16 on 12/05/1998</u>
GROUT:			LOGGED BY <u>M. Kautsky</u>
SEAL:	Bentonite Pellets	3.0 to 4.0	REMARKS <u>Natural formation cave-in material from 4.0 ft. to 17.8 ft.</u>
UPPER PACK:			
LOWER PACK:	Natural Formation Cave-in	4.0 to 17.8	



MONITORING WELL COMPLETION LOG SHP01-0856

PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2104395.65	DATE DRILLED	10/12/1998
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	249110.63	SURFACE ELEV. (FT NGVD)	4884.83
SITE	SHIPROCK	HOLE DEPTH (FT)	24.50	TOP OF CASING (FT)	4887.57
WELL NUMBER	0856	WELL DEPTH (FT)	24.10	MEAS. PT. ELEV. (FT)	4887.57
				SLOT SIZE (IN)	0.010
				BIT SIZE(S) (IN)	8.0

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD HOLLOW STEM AUGER
BLANK CASING:	2 in. PVC Sch 40	-2.74 to 18.8	SAMPLING METHOD GRAB, SPLIT SPOON
WELL SCREEN:	2 in. Machine Slotted PVC	18.8 to 23.8	DATE DEVELOPED 10/26/1998
SUMP/END CAP:	2 in. PVC Sch 40	23.8 to 24.1	WATER LEVEL (FT BTOC) 5.92 on 10/27/1998
SURFACE SEAL:	Concrete	-0.5 to 0.5	LOGGED BY C. Goodknight
GROUT:			REMARKS Natural formation cave-in material from 3.5 ft. to 24.5 ft.
SEAL:	Bentonite Pellets	0.5 to 2.5	
UPPER PACK:	100 mesh Silica Sand	2.5 to 3.5	
LOWER PACK:	Natural Formation Cave-in	3.5 to 24.5	



MONITORING WELL COMPLETION LOG SHP01-0856

PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>0856</u>
SITE <u>SHIPROCK</u>	DATES DRILLED <u>10/12/1998</u>

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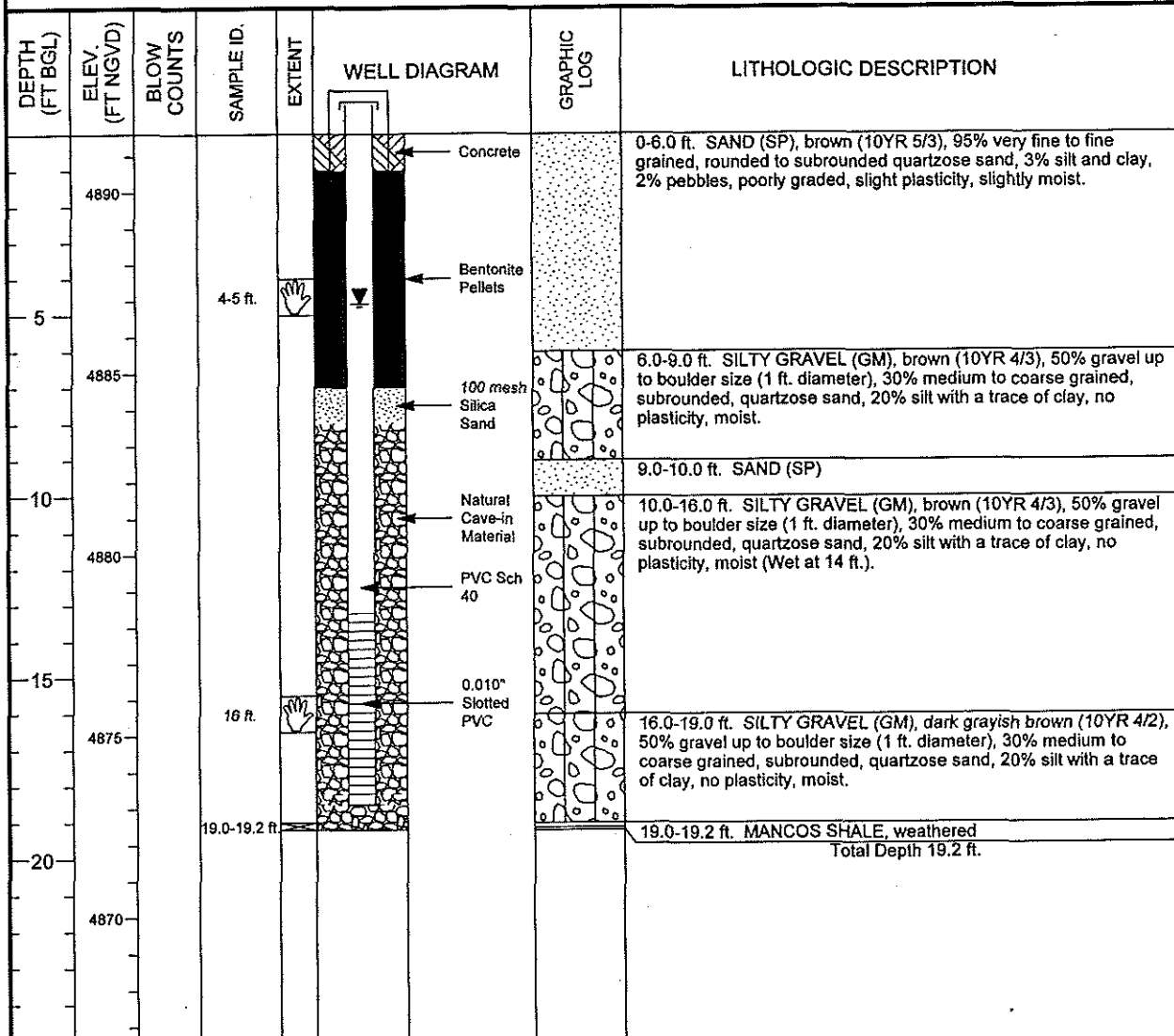
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
15	4870			14 ft.	<p style="font-size: small;">PVC Sch 40</p> <p style="font-size: small;">Natural Cave-in Material</p> <p style="font-size: small;">0.010" Slotted PVC</p>		
20	4865						23.0-24.0 ft. SAND (SP), dark grayish brown (10YR 4/2), 80% medium to coarse grained, 20% gravel up to cobble size.
25	4860			24.0-24.5 ft.			24.0-24.5 ft. MANCOS SHALE, dark gray, weathered, fissile.
Total Depth 24.5 ft.							



MONITORING WELL COMPLETION LOG SHP01-0857

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103029.83</u>	DATE DRILLED <u>10/11/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251160.35</u>	SURFACE ELEV. (FT NGVD) <u>4891.61</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>19.20</u>	TOP OF CASING (FT) <u>4894.02</u>
WELL NUMBER <u>0857</u>	WELL DEPTH (FT) <u>18.50</u>	MEAS. PT. ELEV. (FT) <u>4894.02</u>

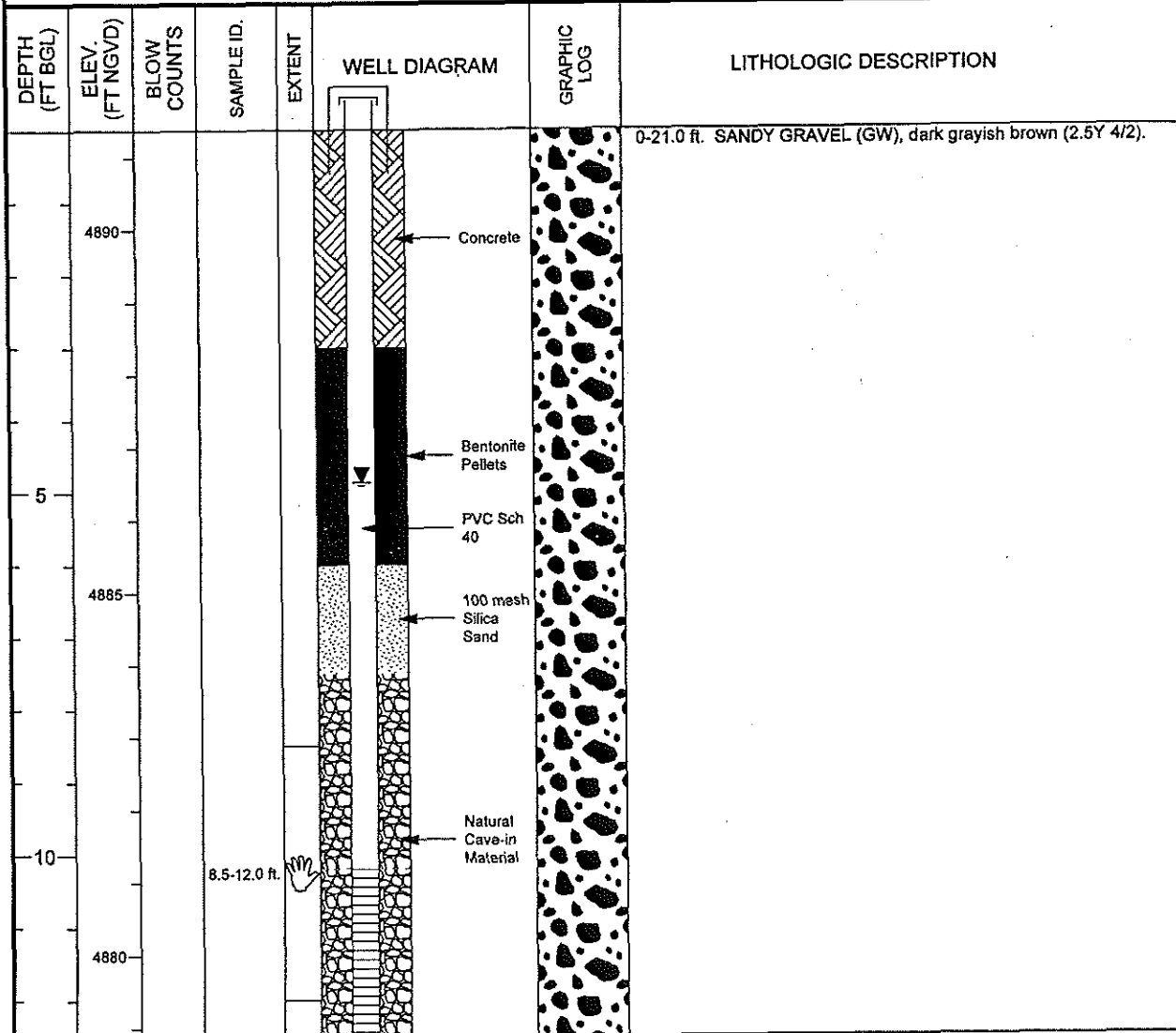
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>HOLLOW STEM AUGER</u>
BLANK CASING:	2 in. PVC Sch 40	-2.41 to 13.2	SAMPLING METHOD <u>GRAB, SPLIT SPOON</u>
WELL SCREEN:	2 in. Machine Slotted PVC	13.2 to 18.2	DATE DEVELOPED <u>10/27/1998</u>
SUMP/END CAP:	2 in. PVC Sch 40	18.2 to 18.5	WATER LEVEL (FT BTOC) <u>7.1 on 10/26/1998</u>
SURFACE SEAL:	Concrete	-0.5 to 1.0	LOGGED BY <u>C. Goodknight</u>
GROUT:			REMARKS <u>Natural formation cave-in material from 8.0 ft. to 19.2 ft.</u>
SEAL:	Bentonite Pellets	1.0 to 7.0	
UPPER PACK:	100 mesh Silica Sand	7.0 to 8.0	
LOWER PACK:	Natural Formation Cave-in	8.0 to 19.2	



MONITORING WELL COMPLETION LOG SHP01-0858

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101963.30</u>	DATE DRILLED <u>09/25/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251540.03</u>	SURFACE ELEV. (FT NGVD) <u>4891.38</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>25.30</u>	TOP OF CASING (FT) <u>4893.50</u>
WELL NUMBER <u>0858</u>	WELL DEPTH (FT) <u>20.60</u>	MEAS. PT. ELEV. (FT) <u>4893.50</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>8.75</u>

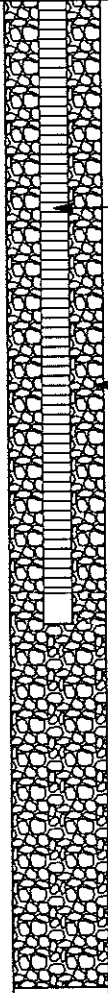


	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
BLANK CASING:	5 in. PVC Sch 40	-2.12 to 10.2	SAMPLING METHOD <u>GRAB</u>
WELL SCREEN:	5 in. Vee Wire Wrapped	10.2 to 20.2	DATE DEVELOPED <u>10/27/1998</u>
SUMP/END CAP:	5 in. PVC Sch 40	20.2 to 20.6	WATER LEVEL (FT BTOC) <u>6.99 on 10/28/1998</u>
SURFACE SEAL:	Concrete	-0.5 to 3.0	LOGGED BY <u>M. Kautsky</u>
GROUT:			REMARKS <u>Natural formation cave-in material from 7.5 ft. to 25.3 ft.</u>
SEAL:	Bentonite Pellets	3.0 to 6.0	
UPPER PACK:	100 mesh Silica Sand	6.0 to 7.5	
LOWER PACK:	Natural Formation Cave-in	7.5 to 25.3	



MONITORING WELL COMPLETION LOG SHP01-0858

PROJECT UMTRA GROUND WATER WELL NUMBER 0858
 SITE SHIPROCK DATES DRILLED 09/25/1998

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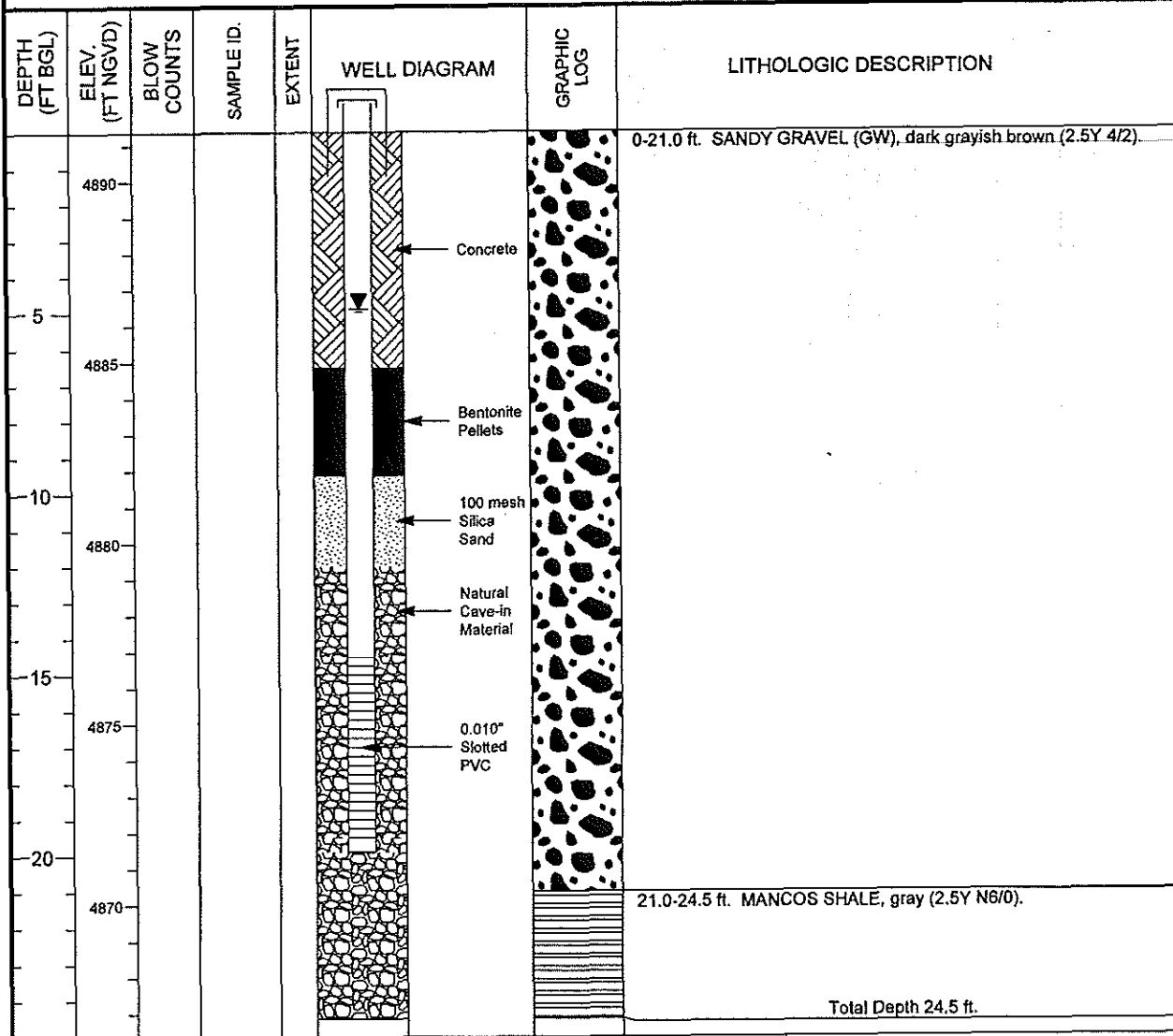
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
15	4875				 <p style="margin-left: 100px;">0.010 Vee Wire Wrapped Screen</p> <p style="margin-left: 100px;">Natural Cave-in Material</p>		
20	4870						21.0-25.3 ft. MANCOS SHALE
25	4865						Total Depth 25.3 ft.



MONITORING WELL COMPLETION LOG SHP01-0859

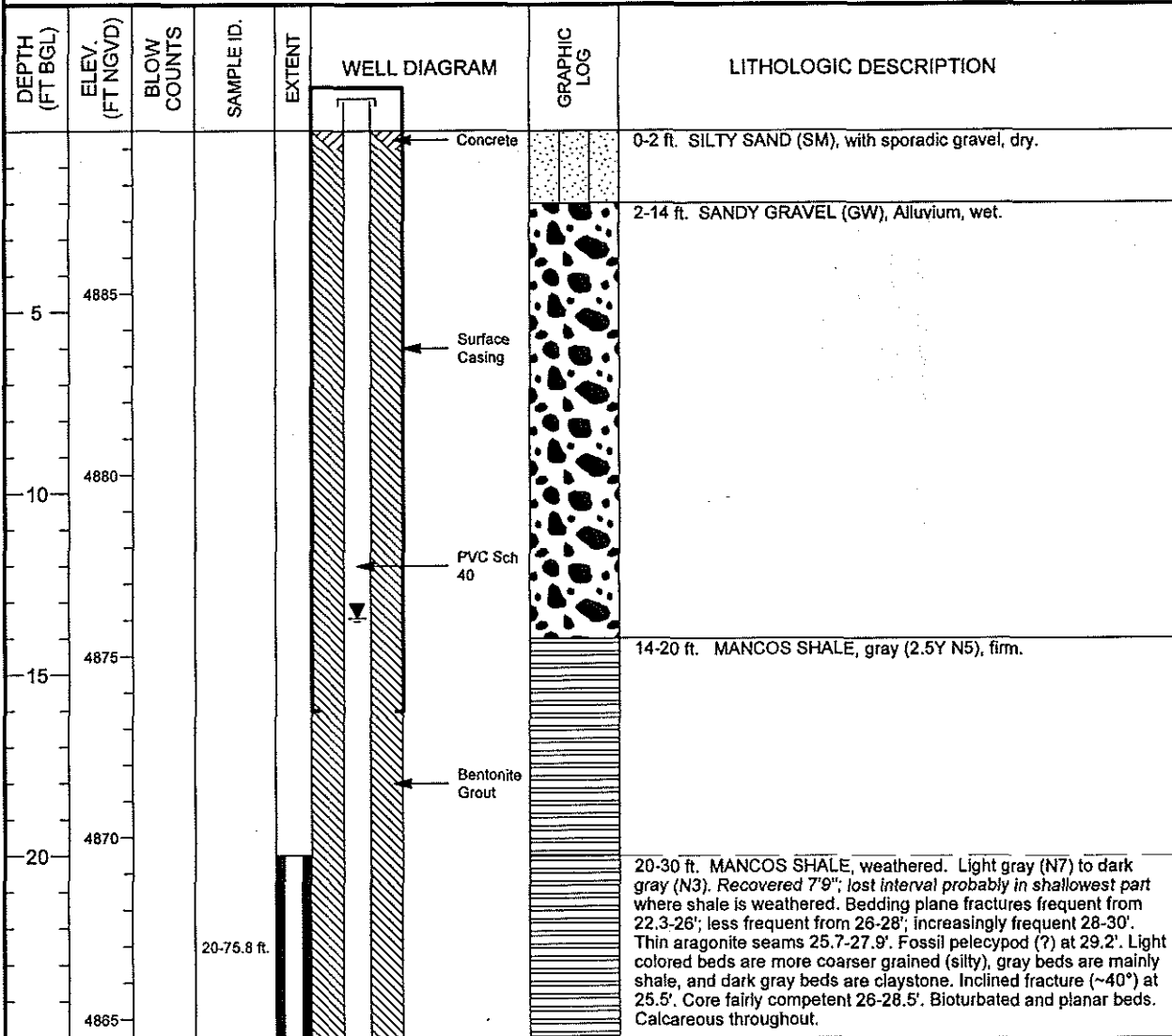
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101971.57</u>	DATE DRILLED <u>09/26/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251528.87</u>	SURFACE ELEV. (FT NGVD) <u>4891.37</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>24.50</u>	TOP OF CASING (FT) <u>4893.68</u>
WELL NUMBER <u>0859</u>	WELL DEPTH (FT) <u>19.90</u>	MEAS. PT. ELEV. (FT) <u>4893.68</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>8.75</u>

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
BLANK CASING:	2 in. PVC Sch 40	-2.31 to 14.5	SAMPLING METHOD _____
WELL SCREEN:	2 in. Machine Slotted PVC	14.5 to 19.5	DATE DEVELOPED <u>10/26/1998</u>
SUMP/END CAP:	2 in. PVC Sch 40	19.5 to 19.9	WATER LEVEL (FT BTOC) <u>7.2 on 10/26/1998</u>
SURFACE SEAL:	Concrete	-0.5 to 6.5	LOGGED BY <u>M. Kautsky</u>
GROUT:			REMARKS <u>Natural formation cave-in material from</u>
SEAL:	Bentonite Pellets	6.5 to 9.5	<u>12.0 ft. to 24.5 ft.</u>
UPPER PACK:	100 mesh Silica Sand	9.5 to 12.0	
LOWER PACK:	Natural Formation Cave-in	12.0 to 24.5	



MONITORING WELL COMPLETION LOG SHP01-0860

PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2102538.99	DATE DRILLED	09/21/1998 to 10/28/1998
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	250576.01	SURFACE ELEV. (FT NGVD)	4889.50
SITE	SHIPROCK	HOLE DEPTH (FT)	91.00	TOP OF CASING (FT)	4892.28
WELL NUMBER	0860	WELL DEPTH (FT)	87.24	MEAS. PT. ELEV. (FT)	4892.28
				SLOT SIZE (IN)	0.010
				BIT SIZE(S) (IN)	8.75 / 5.88 / 3.0
	WELL INSTALLATION	INTERVAL (FT)			
SURFACE CASING:	8.625 in. Steel	-1.5 to 16.0		DRILLING METHOD	CORE/ROTARY
BLANK CASING:	2 in. PVC Sch 40	-2.78 to 84.57		SAMPLING METHOD	CONTINUOUS CORE
WELL SCREEN:	2 in. Machine Slotted PVC	84.57 to 87.07		DATE DEVELOPED	11/08/1998
SUMP/END CAP:	2 in. PVC Sch 40	87.07 to 87.24		WATER LEVEL (FT BTOC)	16.22 on 11/08/1998
SURFACE SEAL:	Concrete	-0.5 to 0.5		LOGGED BY	C. Goodknight
GROUT:	Bentonite Grout	0.0 to 74.5		REMARKS	Well started on 9/21 with casing drive, cored 10/9 and rotary reamed 10/28/98, well installed 10/29.
SEAL:	Bentonite Chips	74.5 to 80.8			
UPPER PACK:	100 mesh Silica Sand	80.8 to 81.8			
LOWER PACK:	20-40 Silica Sand	81.8 to 87.24			



MONITORING WELL COMPLETION LOG SHP01-0860

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0860
SITE	SHIPROCK	DATES DRILLED	09/21/1998 to 10/28/1998

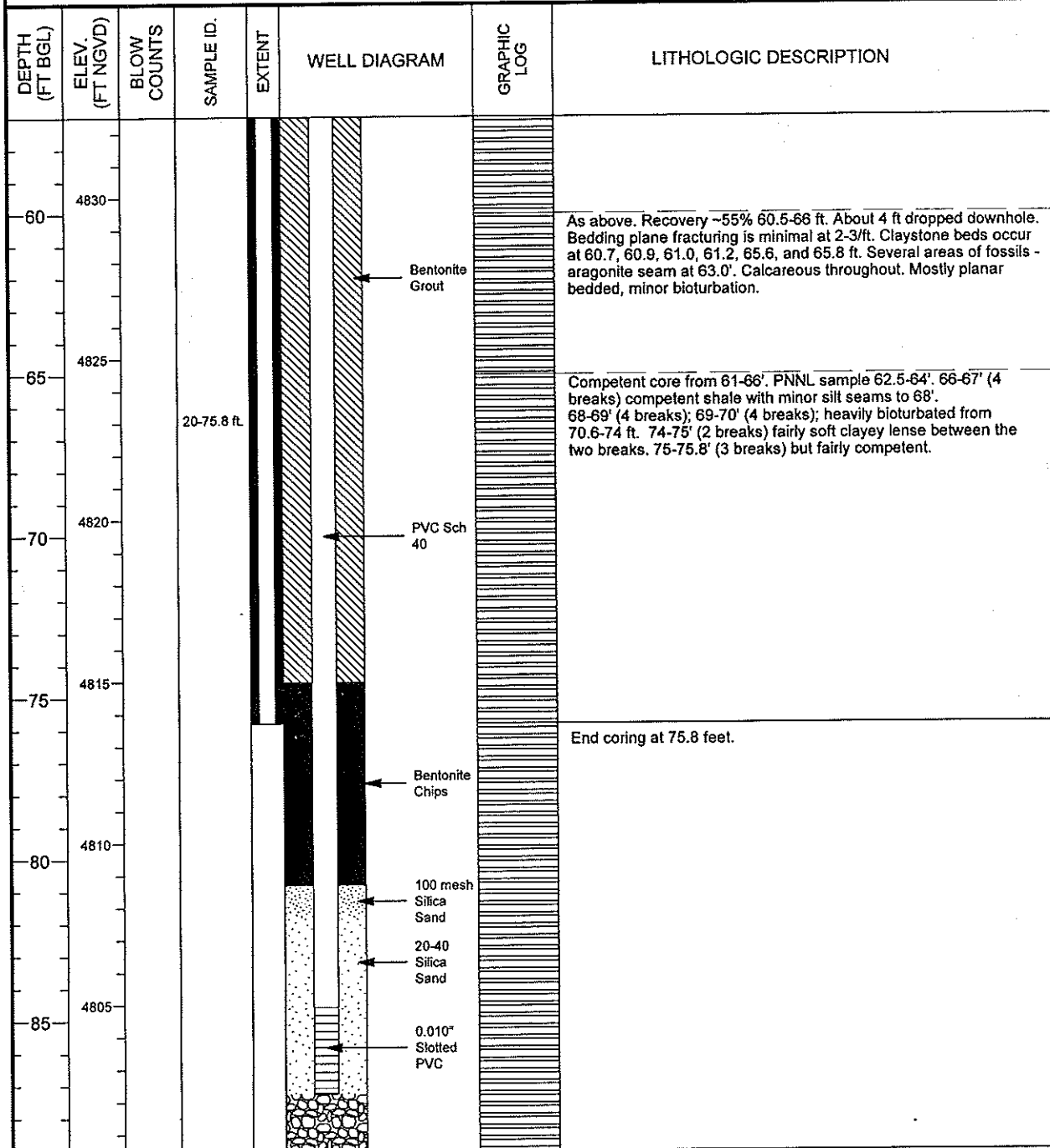
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	
30	4860						<p>Sample for Kd analysis 25.6-26.0'; PNNL sample 26-27.5'.</p> <p>As above. Bedding plane fractures numerous throughout (>10/ft). Thin claystone seams at 31.1, 31.3, 31.8, 32.0, 33.0, and 38.9 feet. Infrequent vertical fracturing 37.8-38.0, 38.2-38.4, and 39.2-39.4 feet. Calcareous throughout. Mainly planar bedding, some bioturbated bedding at 35.9, 38.4, and 39.0 feet. Trace carbonaceous material and trace finely disseminated pyrite. Core competent from 39.6-40.8 feet.</p>	
35	4855							
40	4850			20-75.8 ft.				<p>As above. Bedding plane fracturing less numerous from 40.8-45.2 feet. From 45.2 to ~50.0 ft fracturing is very frequent averaging 10-15/ft. Some vertical fracturing 46.2- 46.4, 48.6-48.8, 49.2-49.6, and 49.7-49.9 ft. Mostly planar bedding, but some bioturbation at 45.6'. Claystone seams more common - some at 40.8, 41.1, 41.4, 42.8, 43.0, 43.2, 43.9, 45.0, and 47.2 ft. Core very fractured from 49-50'. Calcareous throughout. Core competent ~50-50.4'. PNNL sample 44-45.5 ft.</p>
45	4845							
50	4840							
55	4835						<p>As above. Recovery 100% and down to estimated 60.5' depth. Bedding plane fracturing continues numerous from 50.5-51.5' averaging about 10-12/ft. Fracturing decreases for rest of core interval to 60.5 ft to ~2-3/ft. Claystone seams are rare - several thin seams from 50.5-51.5' and one at 55.5'. Most bedding is planar. Some bioturbated beds. Calcareous throughout. Core competent from 51.5-60.5'.</p>	

MONITORING WELL COMPLETION LOG SHP01-0860

PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>0860</u>
SITE <u>SHIPROCK</u>	DATES DRILLED <u>09/21/1998 to 10/28/1998</u>

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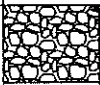



U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION OFFICE, COLORADO

MONITORING WELL COMPLETION LOG SHP01-0860

PROJECT UMTRA GROUND WATER WELL NUMBER 0860
 SITE SHIPROCK DATES DRILLED 09/21/1998 to 10/28/1998

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
90	4800				 Slough		
95	4795						Total depth 91.0 ft.
100	4790						
105	4785						
110	4780						
115	4775						
120	4770						

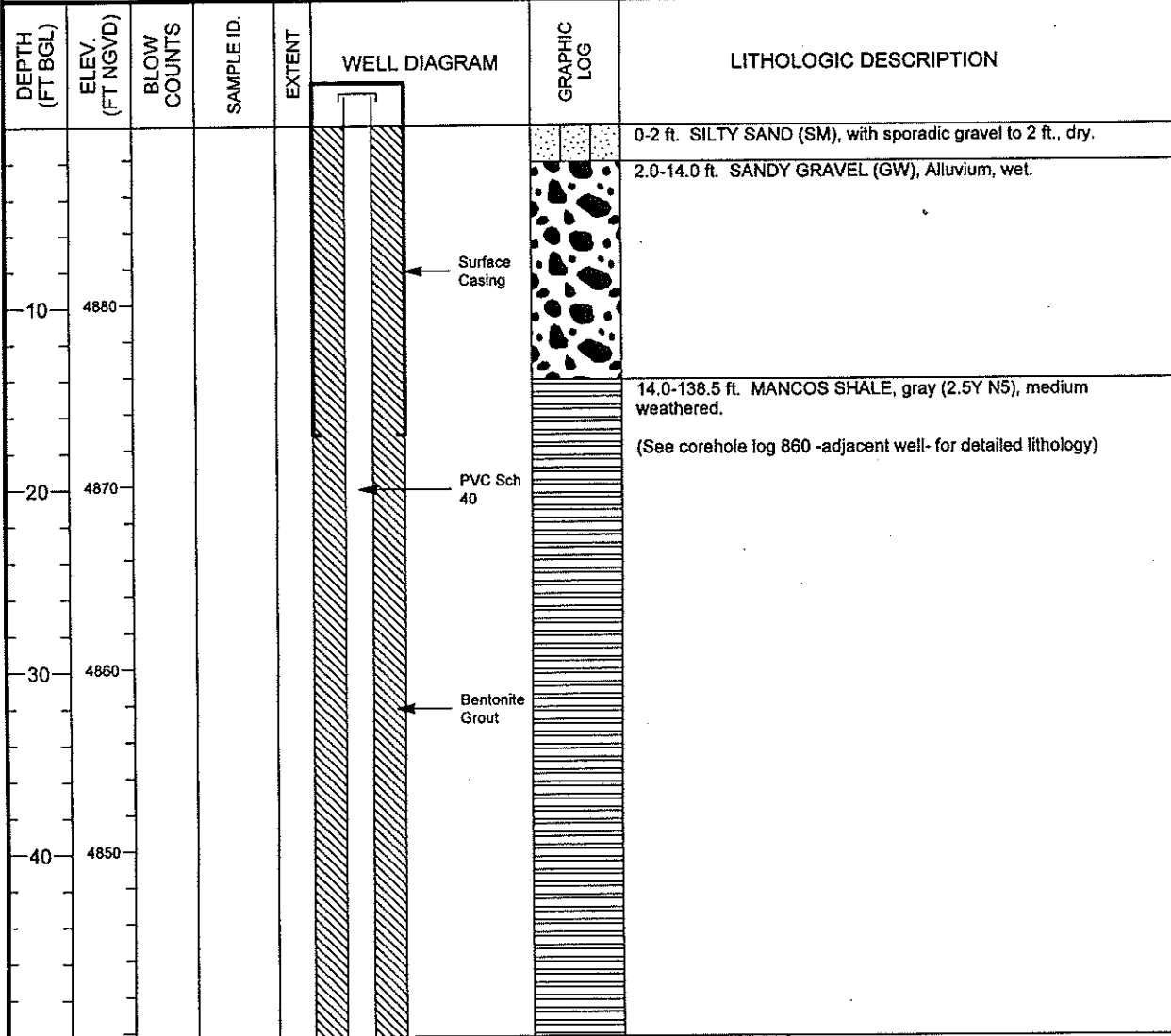


U.S. DEPARTMENT OF ENERGY
 GRAND JUNCTION OFFICE, COLORADO

MONITORING WELL COMPLETION LOG SHP01-0861

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102546.90</u>	DATE DRILLED <u>11/22/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250570.59</u>	SURFACE ELEV. (FT NGVD) <u>4889.80</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>138.50</u>	TOP OF CASING (FT) <u>4891.32</u>
WELL NUMBER <u>0861</u>	WELL DEPTH (FT) <u>138.35</u>	MEAS. PT. ELEV. (FT) <u>4891.32</u>

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING: 8.625 in. Steel		-1.5 to 17.0	
BLANK CASING: 2 in. PVC Sch 40		-1.52 to 135.5	DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
WELL SCREEN: 2 in. Machine Slotted PVC		135.5 to 138.0	SAMPLING METHOD _____
SUMP/END CAP: 2 in. PVC Sch 40		138.0 to 138.35	DATE DEVELOPED _____
SURFACE SEAL: Concrete		-0.5 to 1.5	WATER LEVEL (FT BTOC) <u>Dry</u>
GROUT: Bentonite Grout		1.5 to 127.0	LOGGED BY <u>M. Kautsky</u>
SEAL: Bentonite Chips		127.0 to 131.5	REMARKS _____
UPPER PACK:			
LOWER PACK: 20-40 Silica Sand		131.5 to 138.5	



MONITORING WELL COMPLETION LOG SHP01-0861

PROJECT UMTRA GROUND WATER WELL NUMBER 0861
 SITE SHIPROCK DATES DRILLED 11/22/1998

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
60	4830				<p style="margin-left: 100px;">PVC Sch 40</p> <p style="margin-left: 100px;">Bentonite Grout</p>		
70	4820						
80	4810						
90	4800						
100	4790						
110	4780						



MONITORING WELL COMPLETION LOG SHP01-0861

PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>0861</u>
SITE <u>SHIPROCK</u>	DATES DRILLED <u>11/22/1998</u>

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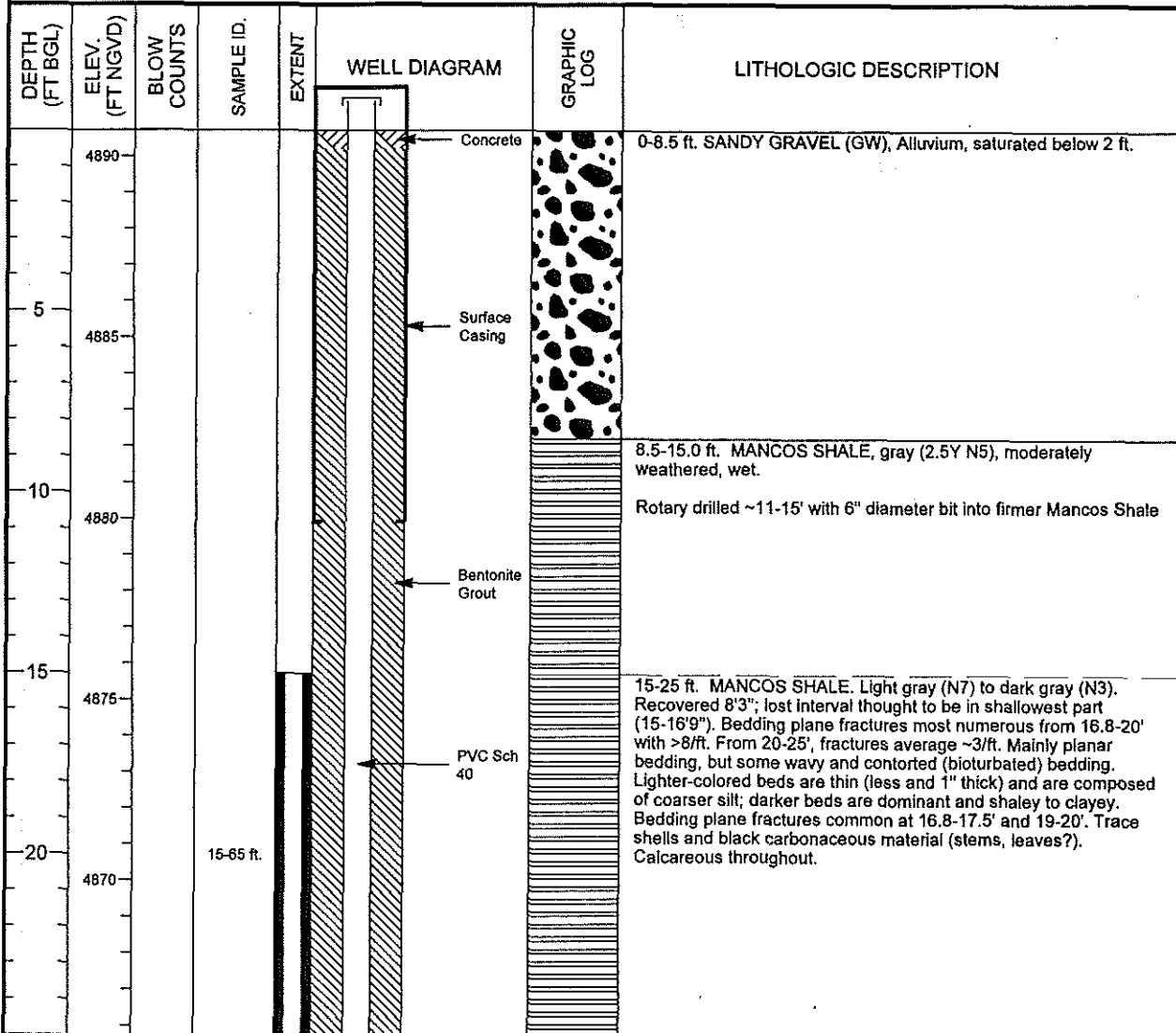
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	
120	4770				<p style="font-size: small;"> Bentonite Grout PVC Sch 40 Bentonite Chips 20-40 Silica Sand 0.010" Slotted PVC </p>			
130	4760							
140	4750							Total Depth 138.5 ft.
150	4740							
160	4730							
170	4720							



MONITORING WELL COMPLETION LOG SHP01-0862

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101451.27</u>	DATE DRILLED <u>09/21/1998 to 11/05/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251713.33</u>	SURFACE ELEV. (FT NGVD) <u>4890.73</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>91.80</u>	TOP OF CASING (FT) <u>4893.83</u>
WELL NUMBER <u>0862</u>	WELL DEPTH (FT) <u>91.57</u>	MEAS. PT. ELEV. (FT) <u>4893.83</u>

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:	8.625 in. Steel	-1.0 to 10.8	DRILLING METHOD <u>CORE/ROTARY</u>
BLANK CASING:	2 in. PVC Sch 40	-3.1 to 88.9	SAMPLING METHOD <u>CONTINUOUS CORE</u>
WELL SCREEN:	2 in. Machine Slotted PVC	88.9 to 91.4	DATE DEVELOPED <u>11/08/1998</u>
SUMP/END CAP:	2 in. PVC Sch 40	91.4 to 91.57	WATER LEVEL (FT BTOC) <u>Dry</u>
SURFACE SEAL:	Concrete	-0.5 to 0.5	LOGGED BY <u>C. Goodknight</u>
GROUT:	Bentonite Grout	0.5 to 79.5	REMARKS <u>Well started on 9/21 with casing drive,</u>
SEAL:	Bentonite Chips	79.5 to 83.5	<u>cored on 10/7, rotary reamed 10/29, 10/30 and</u>
UPPER PACK:	100 mesh Silica Sand	83.5 to 84.33	<u>11/4/98</u>
LOWER PACK:	20-40 Silica Sand	84.33 to 91.57	



MONITORING WELL COMPLETION LOG SHP01-0862

PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>0862</u>
SITE <u>SHIPROCK</u>	DATES DRILLED <u>09/21/1998 to 11/05/1998</u>

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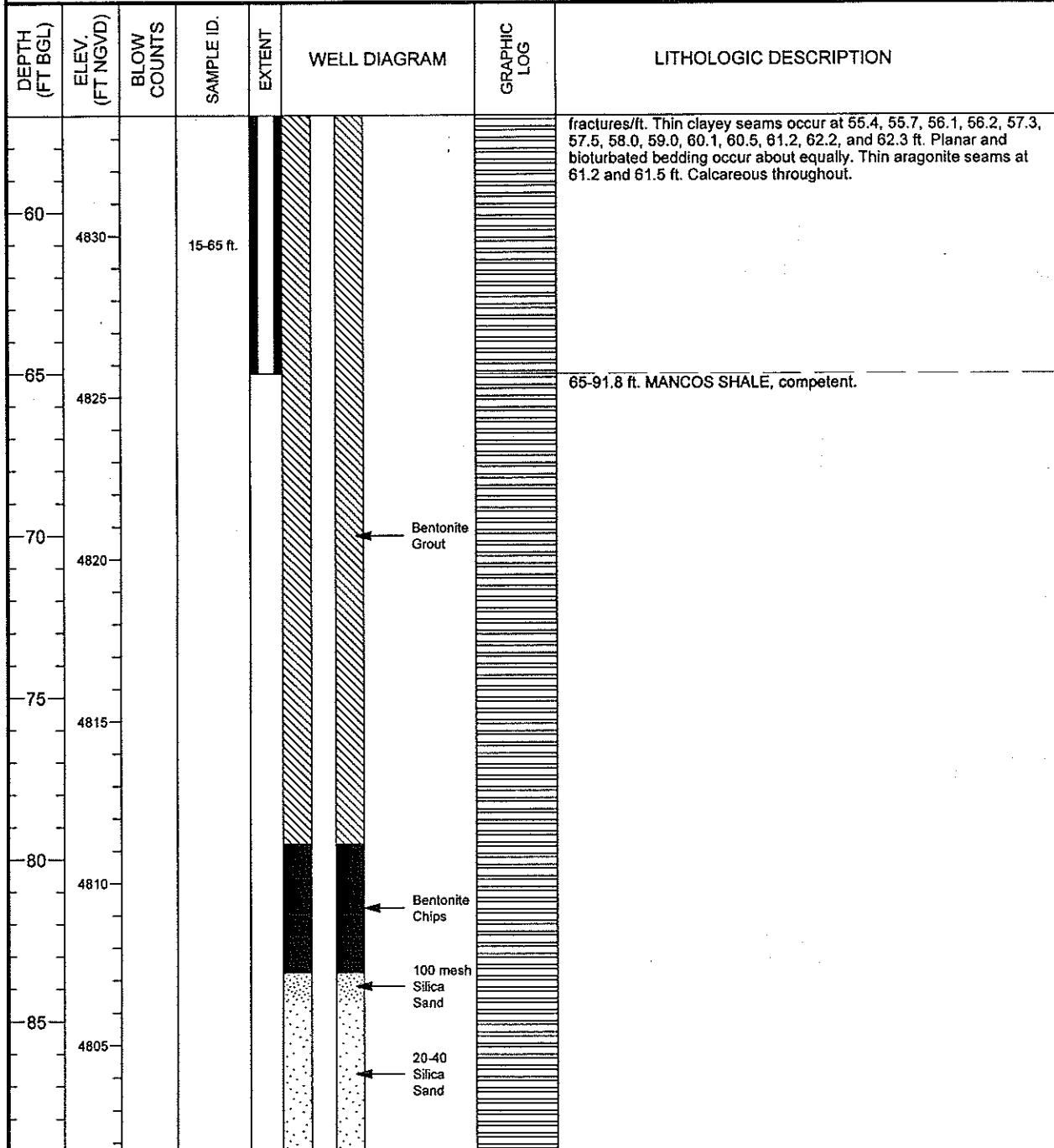
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	
30	4865						<p>25-35 ft. As above. Increasing bioturbated bedding. Increasing amount of thin (~1/2") clayey seams. Bedding plane fracturing averaging about 5/ft. Calcareous throughout. Clayey seams at 25.2, 25.5, 25.8, 26.2, 27.7, 29.3, 32.2, 33.1, 33.3, and 34.2 ft. These clayey seams swell in core. Fibrous aragonite (white) seams occur at 32.0, 33.4, and 34.5 ft and probably represent fossil pelecypods. Bioturbation particularly common 31-35'.</p>	
35	4860							<p>35-45 ft. As above. Bedding plane fracturing more numerous 35.0-39.5' with 5-8/ft. Fracturing less frequent from 39.5-42.5' with 2-4/ft. High angle to near vertical fractures at 42.7-44' and 44.6-45'. Thin clayey seams at 35.5, 35.8, 36.0, 36.2, 36.6, 37.8, 38.8, 39.2, and 42.0'. Clay seams less frequent below 39.0 ft. Bioturbated bedding is less common - some at 37-38 ft. Most bedding is planar. Several thin aragonite seams indicating fossils at 38.3'. Calcareous throughout.</p>
40	4855			15-85 ft.		Bentonite Grout		
45	4850					PVC Sch 40	<p>45-55 ft. As above. Bedding plane fractures are numerous from 45-53.5', averaging about 8/ft. From 53.5-55' only 3 fractures. Bioturbated bedding occurs commonly from 47.3-53.2 ft. Thin clayey seams are common and average about 5/ft from 47.0-54.0 ft. Thin aragonite seam at 50.8 ft and several seams at 53.0-53.2 ft. Trace fossil material. Calcareous throughout. Core competent from 53.7-55'.</p>	
50	4845							
55	4840							
55	4835						<p>55-65 ft. As above. Bedding plane fracturing more common from 55-59 ft where an average of 5-9/ft occur. From 59-61.5 ft fractures decrease, and from 61.5-65' the core is competent with only ~3</p>	



MONITORING WELL COMPLETION LOG SHP01-0862

PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>0862</u>
SITE <u>SHIPROCK</u>	DATES DRILLED <u>09/21/1998 to 11/05/1998</u>

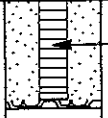

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MONITORING WELL COMPLETION LOG SHP01-0862

PROJECT UMTRA GROUND WATER WELL NUMBER 0862
 SITE SHIPROCK DATES DRILLED 09/21/1998 to 11/05/1998

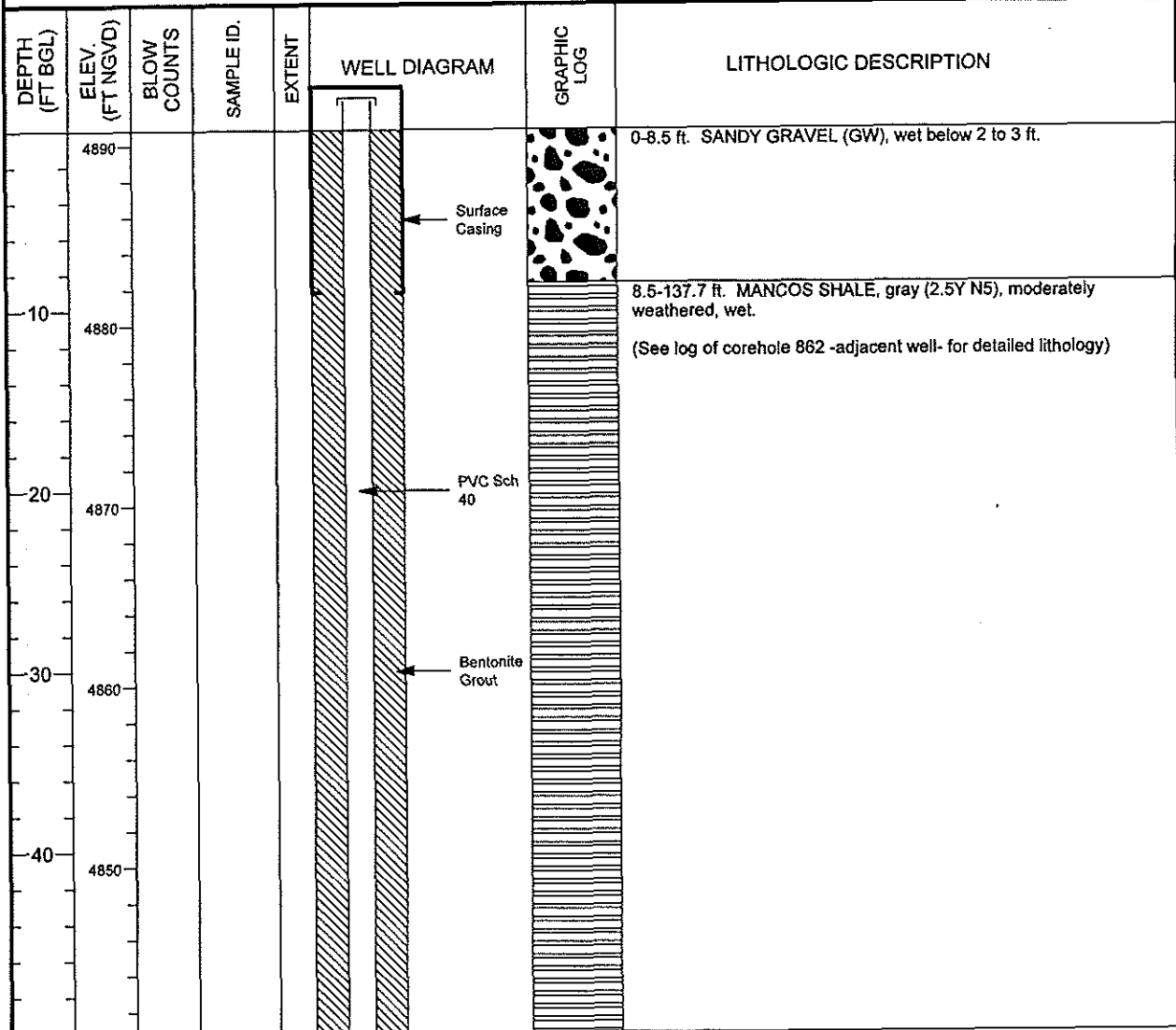
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
90	4800				 0.010" Slotted PVC		65-91.8 ft. MANCOS SHALE, as above, competent.
95	4795						Total depth 91.8 ft.
100	4790						
105	4785						
110	4780						
115	4775						
120	4770						



MONITORING WELL COMPLETION LOG SHP01-0863

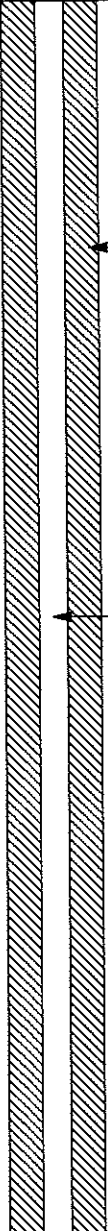
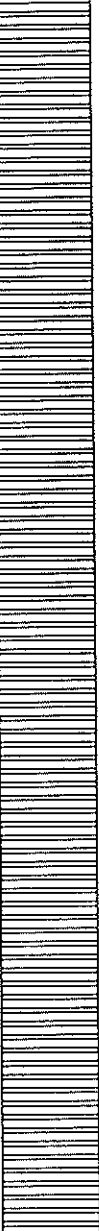
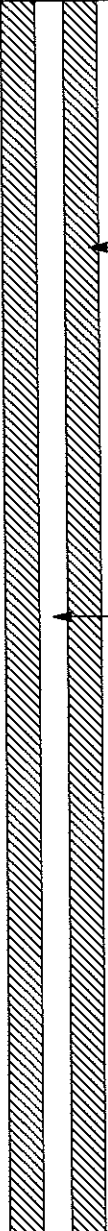
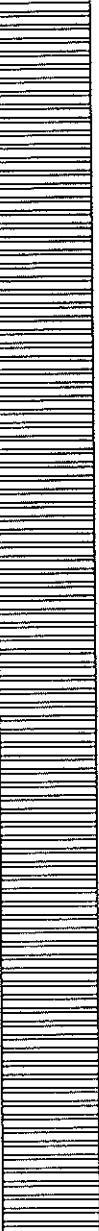
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101459.13</u>	DATE DRILLED <u>11/22/1998</u>	
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251711.10</u>	SURFACE ELEV. (FT NGVD) <u>4890.85</u>	
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>137.70</u>	TOP OF CASING (FT) <u>4893.00</u>	
WELL NUMBER <u>0863</u>	WELL DEPTH (FT) <u>137.70</u>	MEAS. PT. ELEV. (FT) <u>4893.00</u>	
		SLOT SIZE (IN) <u>0.010</u>	
		BIT SIZE(S) (IN) <u>8.75 / 5.88</u>	
WELL INSTALLATION		INTERVAL (FT)	
SURFACE CASING:	8.625 in. Steel	-1.0	to 9.0
BLANK CASING:	2 in. PVC Sch 40	-2.15	to 135.1
WELL SCREEN:	2 in. Machine Slotted PVC	135.1	to 137.6
SUMP/END CAP:	2 in. PVC Sch 40	137.6	to 137.7
SURFACE SEAL:	Concrete	-0.5	to 0.5
GROUT:	Bentonite Grout	0.5	to 125.7
SEAL:	Bentonite Chips	125.7	to 130.4
UPPER PACK:	100 mesh Silica Sand	130.4	to 130.8
LOWER PACK:	20-40 Silica Sand	130.8	to 137.7
		DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>	
		SAMPLING METHOD _____	
		DATE DEVELOPED <u>12/06/1998</u>	
		WATER LEVEL (FT BTOC) <u>Dry</u>	
		LOGGED BY <u>M. Kautsky</u>	
		REMARKS _____	



MONITORING WELL COMPLETION LOG SHP01-0863

PROJECT UMTRA GROUND WATER WELL NUMBER 0863
 SITE SHIPROCK DATES DRILLED 11/22/1998

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
60	4830				 <p style="margin-left: 100px;">Bentonite Grout</p>		
70	4820				 <p style="margin-left: 100px;">PVC Sch 40</p>		
80	4810						
90	4800						
100	4790						
110	4780						



MONITORING WELL COMPLETION LOG SHP01-0863

PROJECT UMTRA GROUND WATER WELL NUMBER 0863
 SITE SHIPROCK DATES DRILLED 11/22/1998

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	
120	4770				<p style="font-size: small;">Bentonite Chips 100 mesh Silica Sand 20-40 Silica Sand 0.010" Slotted PVC</p>			
130	4760							
140	4750							
150	4740							
160	4730							
170	4720						Total Depth 137.7 ft.	

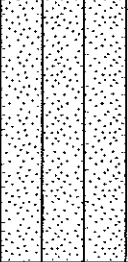





BOREHOLE LOG SHP01-0864

PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4885.85</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>8.0</u>
SITE <u>SHIPROCK</u>	DRILLING METHOD <u>HOLLOW STEM AUGER</u>
WELL NUMBER <u>0864</u>	SAMPLING METHOD <u>GRAB, SPLIT SPOON</u>
NORTH COORD. (FT) <u>2104405.37</u>	WATER LEVEL (FT BGS) <u>5.0 on 11/18/1998</u>
EAST COORD. (FT) <u>249891.07</u>	LOGGED BY <u>L. Spencer</u>
HOLE DEPTH (FT) <u>15.30</u>	REMARKS <u>Natural formation cave-in material from 0 ft. to 15.3 ft.</u>
DATE DRILLED <u>11/18/1998</u>	

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4885					0-7.0 ft. SILTY SAND (SM), yellowish brown (10YR 5/4), 70% fine to medium grained subrounded to subangular sand, 30% silt, poorly graded, no plasticity, saturated below 5 ft.
5	4880	2 2 2 3	5-7 ft.	X		
10	4875	50	10-10.16 ft.	—		7.0-15.0 ft. SANDY GRAVEL (GP), brown (10YR 5/3), 60% subrounded gravel up to boulder size, 30% fine to coarse grained subrounded to subangular sand, 5% clay, well graded, slight plasticity, saturated.
15	4870	75	14.5-15.0 ft. 15.0-15.3 ft.	X		
						Total Depth of boring 15.3 ft.
20	4865					

BOREHOLE LOG SHP01-0890

PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4886.18</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>8.0</u>
SITE <u>SHIPROCK</u>	DRILLING METHOD <u>HOLLOW STEM AUGER</u>
WELL NUMBER <u>0890</u>	SAMPLING METHOD <u>GRAB, SPLIT SPOON</u>
NORTH COORD. (FT) <u>2103877.96</u>	WATER LEVEL (FT BGS) <u>2.0 on 11/19/1998</u>
EAST COORD. (FT) <u>249575.00</u>	LOGGED BY <u>L. Spencer</u>
HOLE DEPTH (FT) <u>7.00</u>	REMARKS <u>Natural formation cave-in material from 0 ft. to 7.0 ft.</u>
DATE DRILLED <u>11/19/1998</u>	

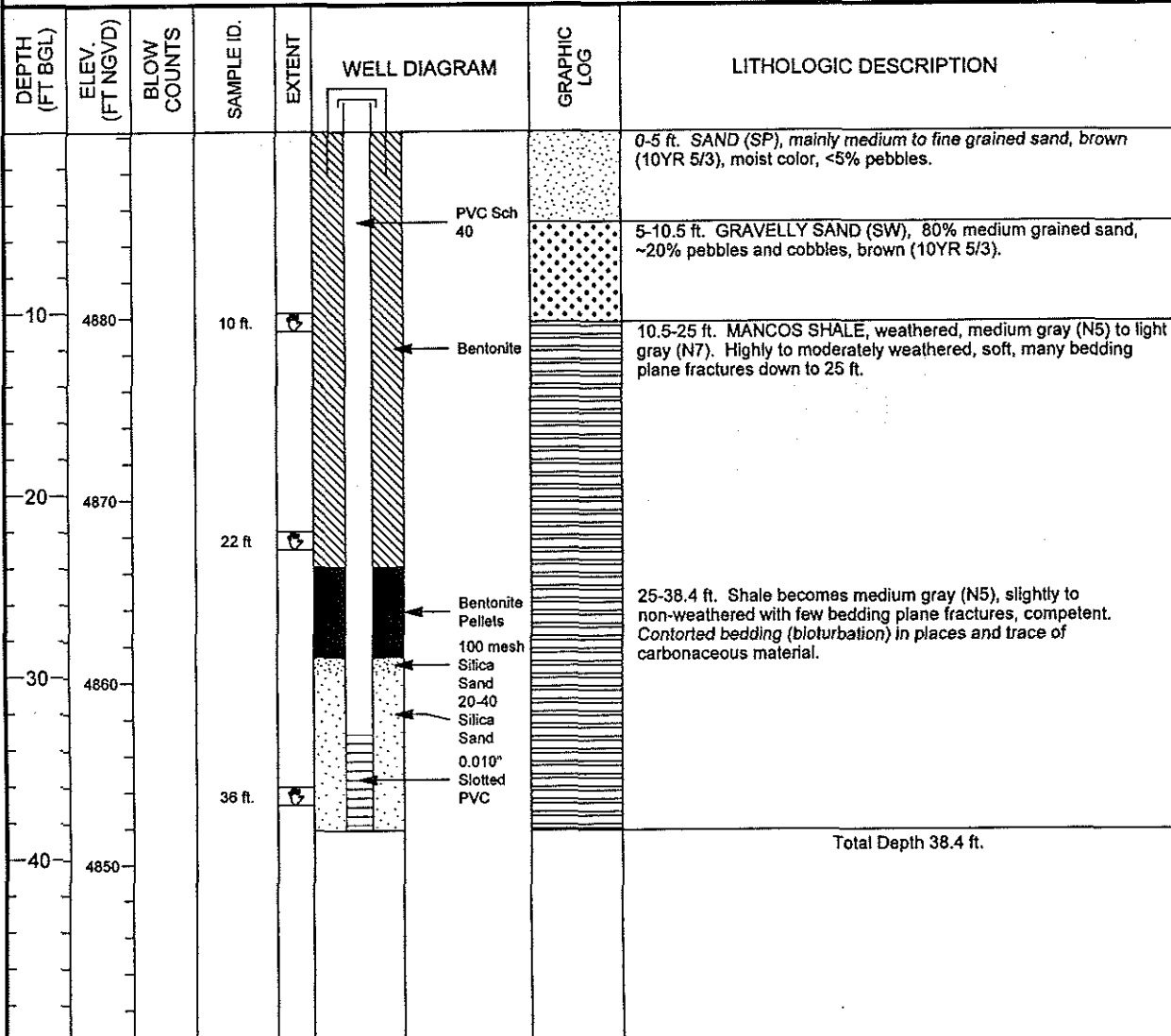
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4885					0-3 ft. SILTY SAND (SM), yellowish brown (10YR 5/4), 70% fine to medium grained sand, 30% silt, poorly graded, saturated at 2.0 ft.
		50	2.0-2.5 ft.			
			3.0-6.0 ft.			3.0-7.0 ft. SANDY GRAVEL (GW), brown (10YR 5/3) 60% subrounded gravel up to boulder size, 30% fine to coarse grained subrounded to subangular sand, 5% silt, 5% clay, slight plasticity, saturated, well graded.
5		50	5.0-5.5 ft.			
			5.5-6 ft.			
	4880					
						Total Depth of boring 7.0 ft.
10						
	4875					



MONITORING WELL COMPLETION LOG SHP01-1000

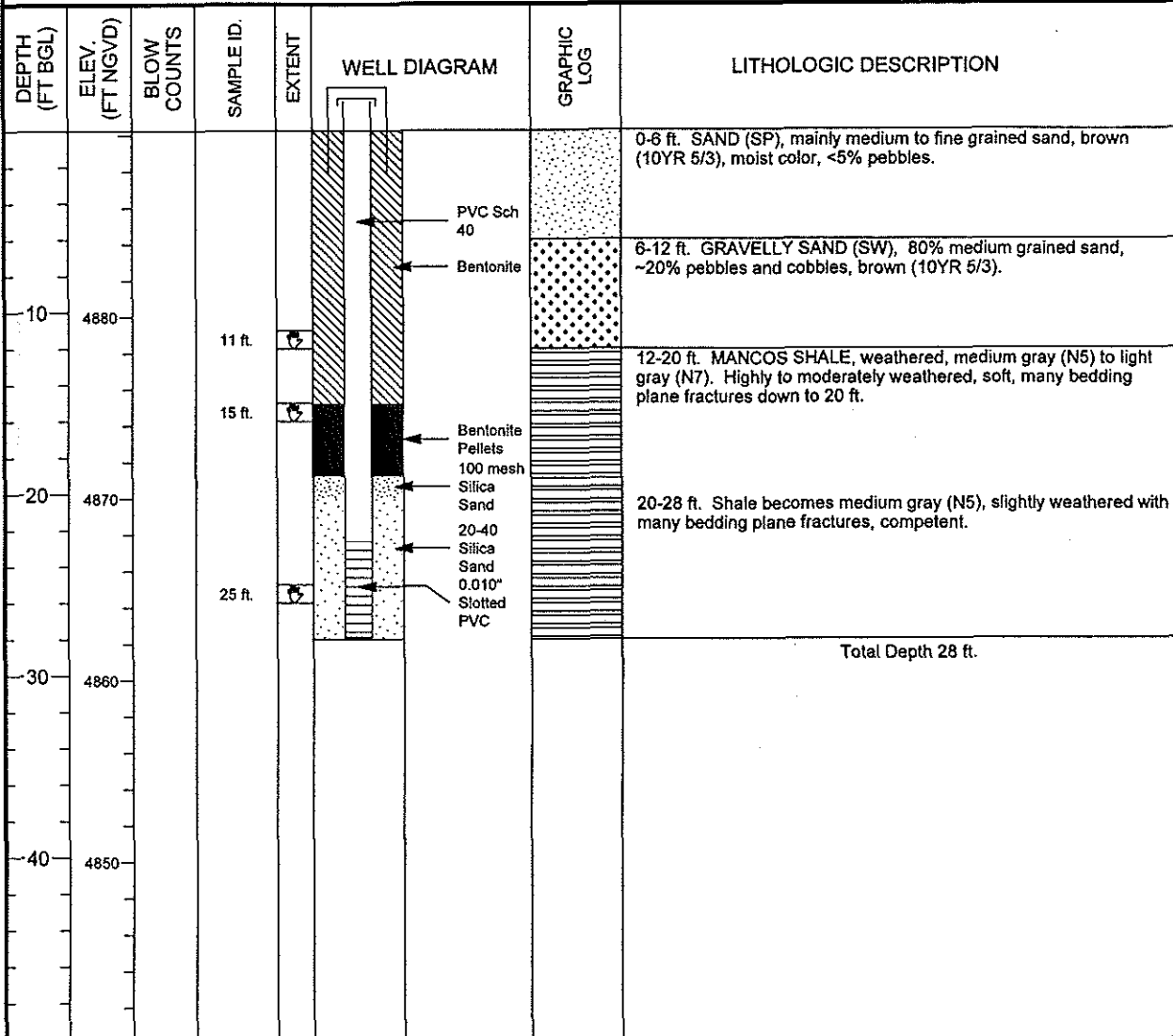
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102013.35</u>	DATE DRILLED <u>04/08/2000 to 04/09/2000</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250969.35</u>	SURFACE ELEV. (FT NGVD) <u>4890.27</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>38.40</u>	TOP OF CASING (FT) <u>4892.17</u>
WELL NUMBER <u>1000</u>	WELL DEPTH (FT) <u>38.40</u>	MEAS. PT. ELEV. (FT) <u>4892.17</u>

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ROTASONIC</u>
BLANK CASING:	2 in. PVC Sch 40	-1.9 to 33.1	SAMPLING METHOD <u>GRAB</u>
WELL SCREEN:	2 in. Slotted PVC	33.1 to 38.1	DATE DEVELOPED <u>04/12/2000</u>
SUMP/END CAP:	2 in. PVC Sch 40	38.1 to 38.4	WATER LEVEL (FT BGS) _____
SURFACE SEAL:			LOGGED BY <u>C. Goodknight</u>
GROUT:	Bentonite	0.0 to 23.9	REMARKS <u>Screen depth matches that (same</u>
SEAL:	Bentonite Pellets	23.9 to 28.9	<u>elevation) of well 1002 in well nest on terrace above.</u>
UPPER PACK:	100 mesh Silica Sand	28.9 to 29.7	
LOWER PACK:	20-40 Silica Sand	29.7 to 38.4	



MONITORING WELL COMPLETION LOG SHP01-1001

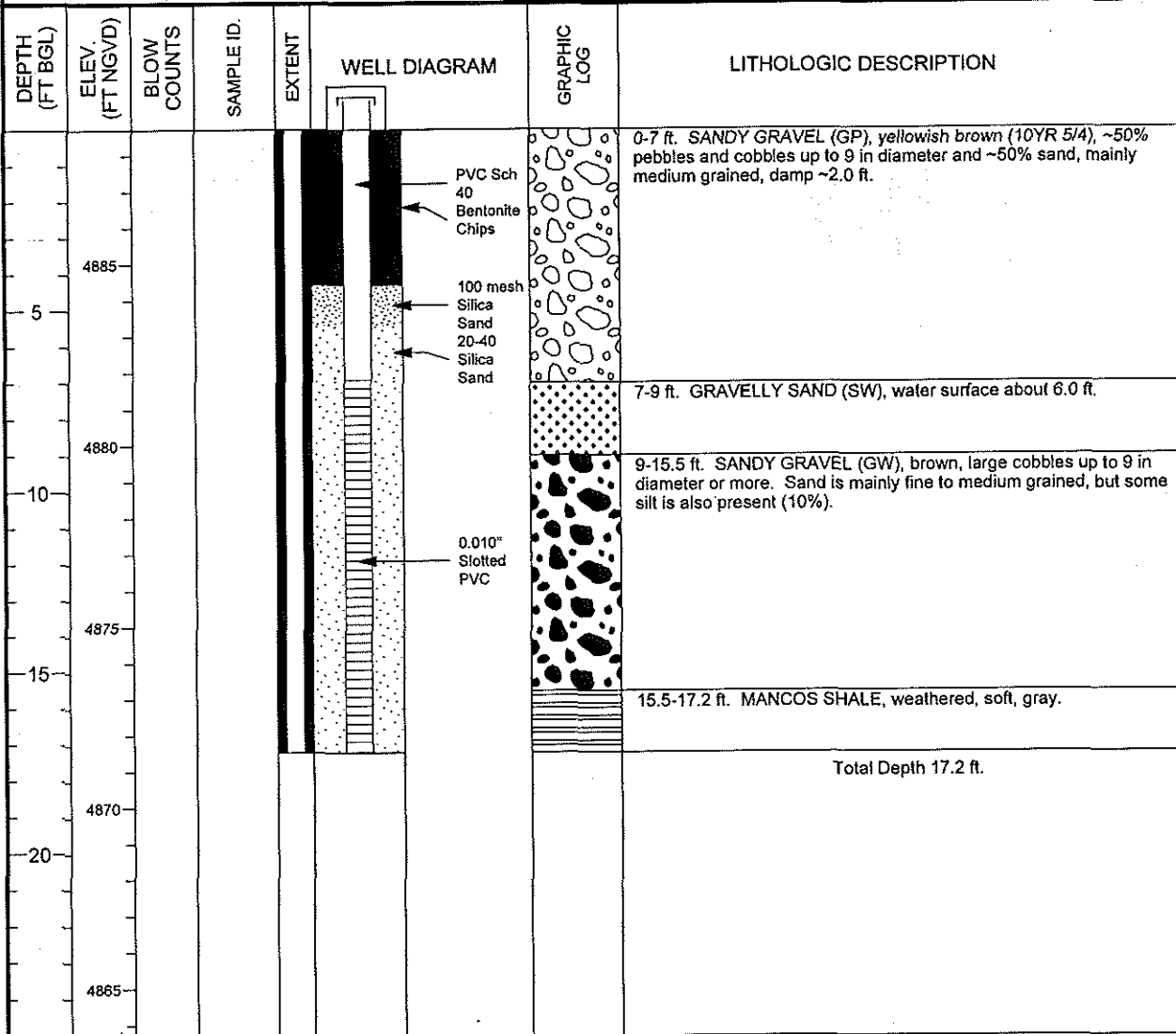
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102020.79</u>	DATE DRILLED <u>04/08/2000</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250960.99</u>	SURFACE ELEV. (FT NGVD) <u>4890.25</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>28.00</u>	TOP OF CASING (FT) <u>4892.44</u>
WELL NUMBER <u>1001</u>	WELL DEPTH (FT) <u>27.90</u>	MEAS. PT. ELEV. (FT) <u>4892.44</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>6.0</u>
WELL INSTALLATION INTERVAL (FT)		
SURFACE CASING:		DRILLING METHOD <u>ROTASONIC</u>
BLANK CASING: 2 in. PVC Sch 40	-2.19 to 22.6	SAMPLING METHOD <u>GRAB</u>
WELL SCREEN: 2 in. Slotted PVC	22.6 to 27.6	DATE DEVELOPED <u>04/12/2000</u>
SUMP/END CAP: 2 in. PVC Sch 40	27.6 to 27.9	WATER LEVEL (FT BGS) _____
SURFACE SEAL:		LOGGED BY <u>C. Goodknight</u>
GROUT: Bentonite	0.0 to 15.0	REMARKS <u>Screen depth matches that (same elevation) of well 1003 in well nest on terrace above.</u>
SEAL: Bentonite Pellets	15.0 to 19.0	
UPPER PACK: 100 mesh Silica Sand	19.0 to 20.2	
LOWER PACK: 20-40 Silica Sand	20.2 to 28.0	



MONITORING WELL COMPLETION LOG SHP01-1008

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103812.23</u>	DATE DRILLED <u>04/13/2000</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250769.64</u>	SURFACE ELEV. (FT NGVD) <u>4888.72</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>17.20</u>	TOP OF CASING (FT) <u>4890.80</u>
WELL NUMBER <u>1008</u>	WELL DEPTH (FT) <u>17.20</u>	MEAS. PT. ELEV. (FT) <u>4890.81</u>

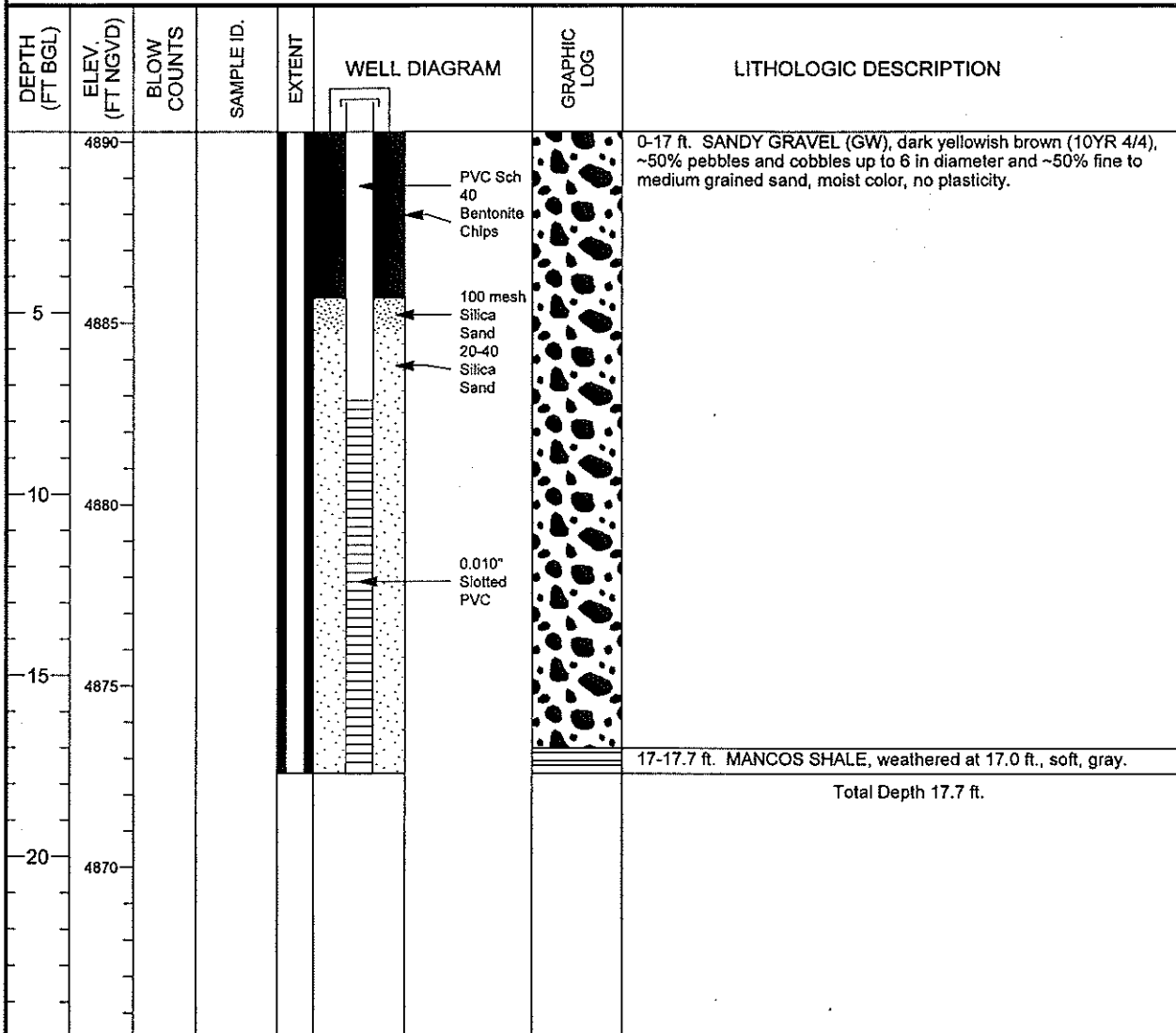
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ROTASONIC</u>
BLANK CASING:	4 in. PVC Sch 40	-2.08 to 6.9	SAMPLING METHOD <u>CONTINUOUS CORE (4")</u>
WELL SCREEN:	4 in. Slotted PVC	6.9 to 16.9	DATE DEVELOPED <u>04/15/2000</u>
SUMP/END CAP:	4 in. PVC Sch 40	16.9 to 17.2	WATER LEVEL (FT BGS) _____
SURFACE SEAL:			LOGGED BY <u>C. Goodknight</u>
GROUT:			REMARKS <u>Well is about 80 ft. SW of well 854.</u>
SEAL:	Bentonite Chips	0.0 to 4.3	<u>Several core intervals taken by NABIR for analysis.</u>
UPPER PACK:	100 mesh Silica Sand	4.3 to 5.4	
LOWER PACK:	20-40 Silica Sand	5.4 to 17.2	



MONITORING WELL COMPLETION LOG SHP01-1009

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102533.18</u>	DATE DRILLED <u>04/12/2000</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250818.64</u>	SURFACE ELEV. (FT NGVD) <u>4890.29</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>17.70</u>	TOP OF CASING (FT) <u>4892.10</u>
WELL NUMBER <u>1009</u>	WELL DEPTH (FT) <u>17.70</u>	MEAS. PT. ELEV. (FT) <u>4892.10</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>8.0</u>

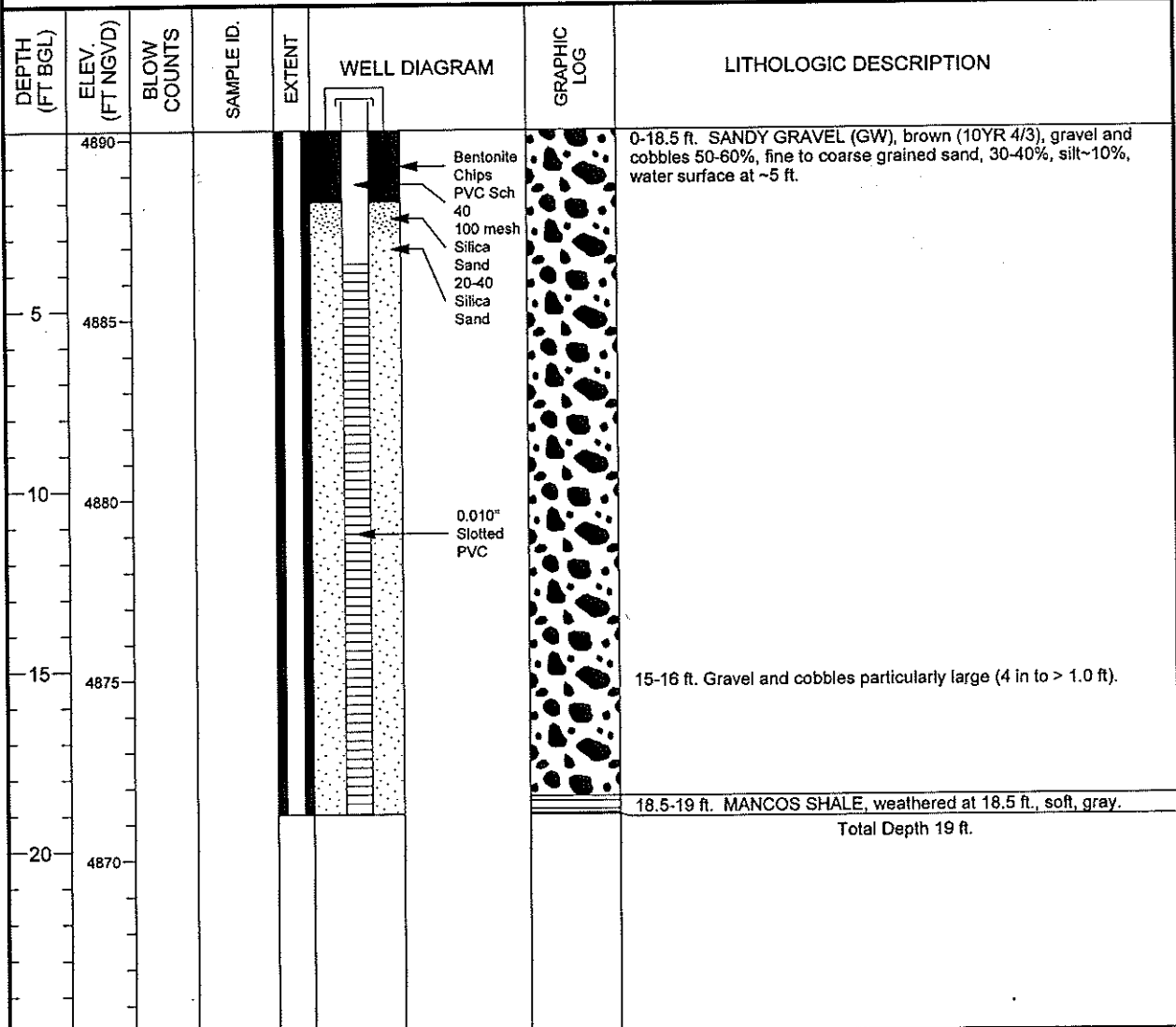
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			
BLANK CASING:	4 in. PVC Sch 40	-1.81 to 7.4	DRILLING METHOD <u>ROTASONIC</u>
WELL SCREEN:	4 in. Slotted PVC	7.4 to 17.4	SAMPLING METHOD <u>CONTINUOUS CORE (4")</u>
SUMP/END CAP:	4 in. PVC Sch 40	17.4 to 17.7	DATE DEVELOPED <u>04/14/2000</u>
SURFACE SEAL:			WATER LEVEL (FT BGS) _____
GROUT:			LOGGED BY <u>C. Goodknight</u>
SEAL:	Bentonite Chips	0.0 to 4.6	REMARKS <u>Well is situated between 615 and 853.</u>
UPPER PACK:	100 mesh Silica Sand	4.6 to 5.5	<u>Several core intervals taken by NABIR for analysis.</u>
LOWER PACK:	20-40 Silica Sand	5.5 to 17.7	



MONITORING WELL COMPLETION LOG SHP01-1010

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103016.57</u>	DATE DRILLED <u>04/12/2000</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251086.63</u>	SURFACE ELEV. (FT NGVD) <u>4890.25</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>19.00</u>	TOP OF CASING (FT) <u>4892.32</u>
WELL NUMBER <u>1010</u>	WELL DEPTH (FT) <u>19.00</u>	MEAS. PT. ELEV. (FT) <u>4892.39</u>

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ROTASONIC</u>
BLANK CASING: 4 in. PVC Sch 40	-2.07	to 3.7	SAMPLING METHOD <u>CONTINUOUS CORE (4")</u>
WELL SCREEN: 4 in. Slotted PVC	3.7	to 18.7	DATE DEVELOPED <u>04/15/2000</u>
SUMP/END CAP: 4 in. PVC Sch 40	18.7	to 19.0	WATER LEVEL (FT BGS) _____
SURFACE SEAL:			LOGGED BY <u>C. Goodknight</u>
GROUT:			REMARKS <u>Well is situated between 616 and 857.</u>
SEAL: Bentonite Chips	0.0	to 2.0	<u>Several core intervals taken by NABIR for analysis.</u>
UPPER PACK: 100 mesh Silica Sand	2.0	to 2.9	
LOWER PACK: 20-40 Silica Sand	2.9	to 19.0	

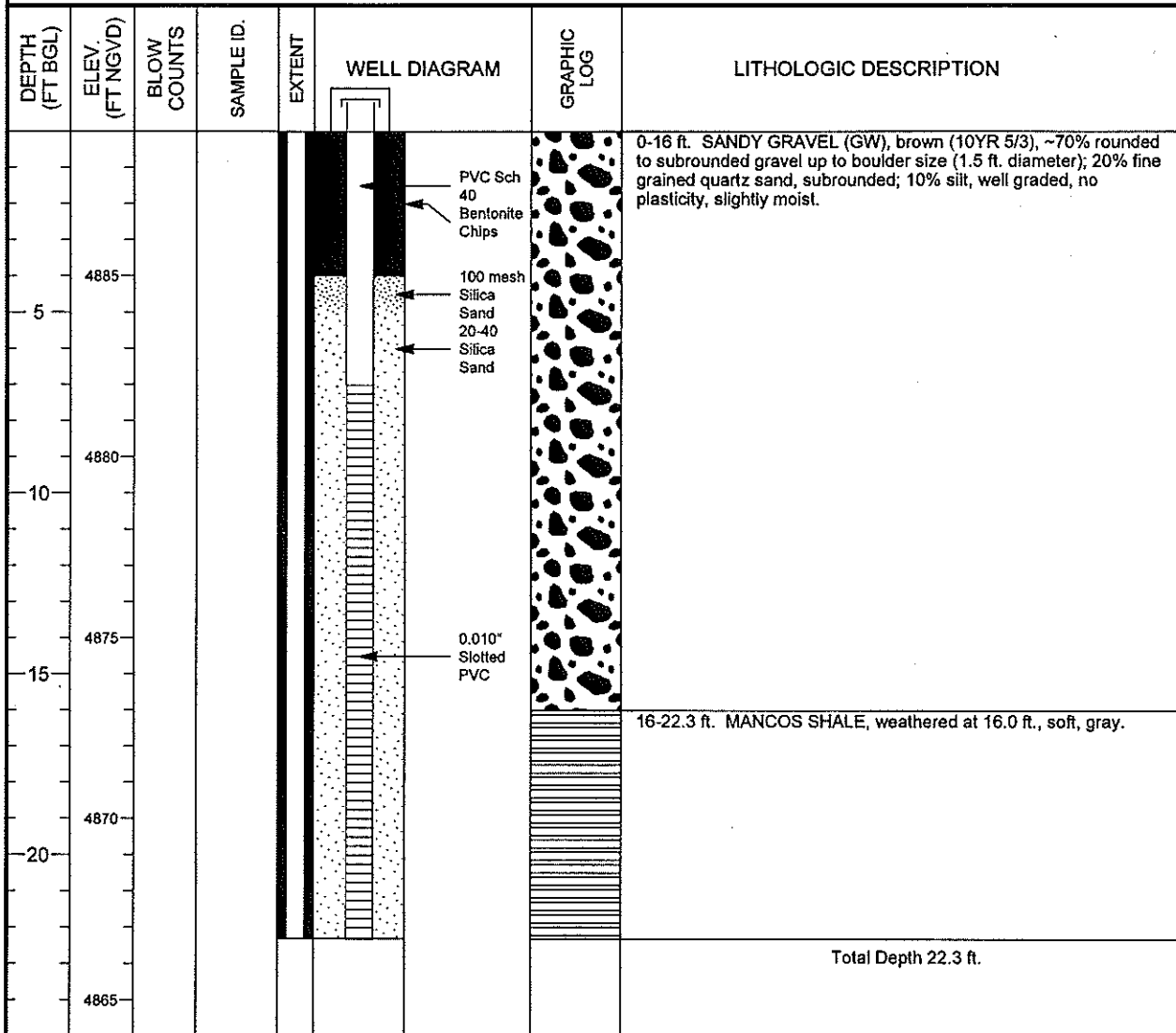


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MONITORING WELL COMPLETION LOG SHP01-1013

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102517.14</u>	DATE DRILLED <u>04/11/2000</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251129.67</u>	SURFACE ELEV. (FT NGVD) <u>4889.00</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>22.30</u>	TOP OF CASING (FT) <u>4890.89</u>
WELL NUMBER <u>1013</u>	WELL DEPTH (FT) <u>22.30</u>	MEAS. PT. ELEV. (FT) <u>4890.89</u>

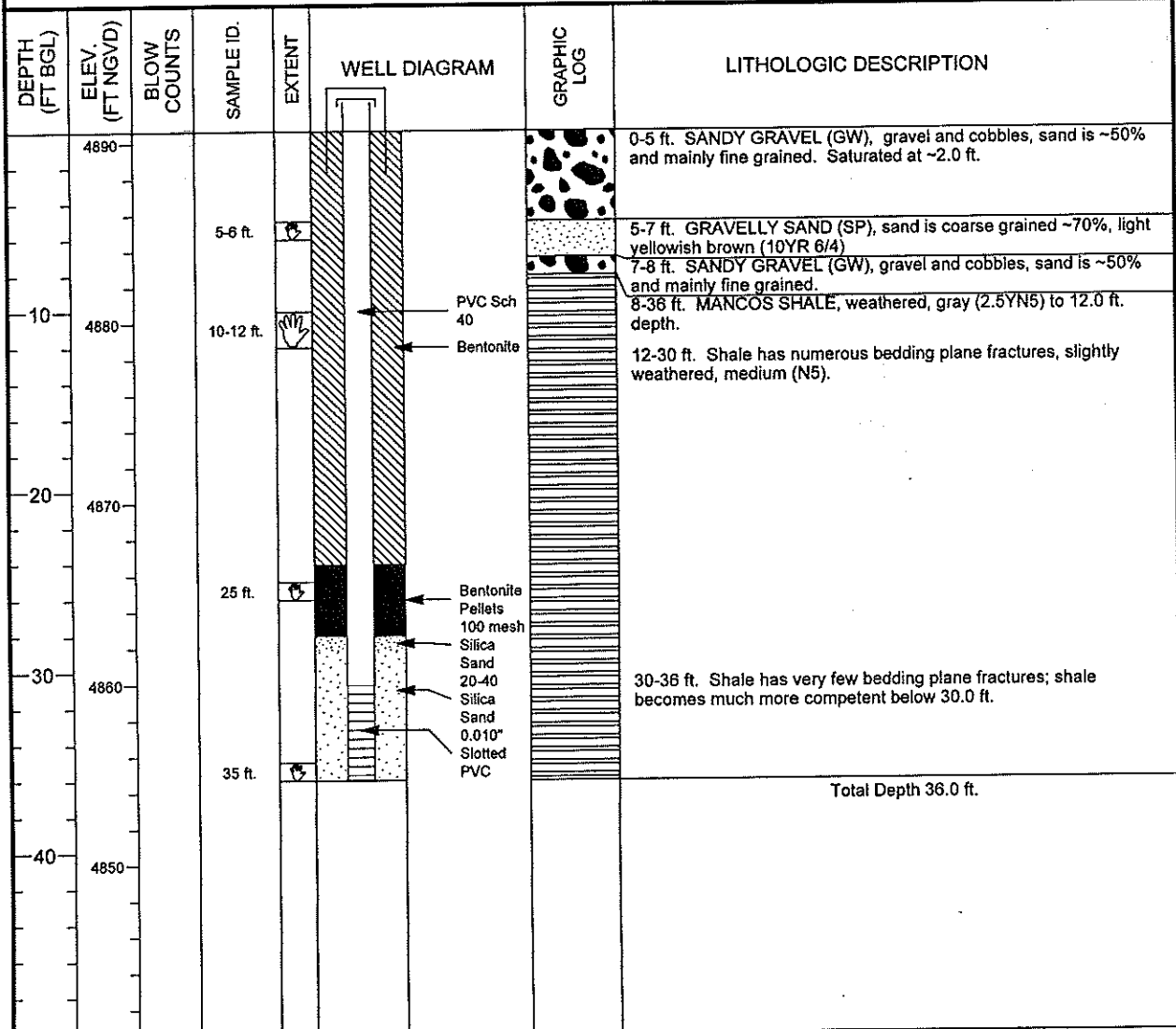
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			
BLANK CASING:	4 in. PVC Sch 40	-1.89 to 7.0	DRILLING METHOD <u>ROTASONIC</u>
WELL SCREEN:	4 in. Slotted PVC	7.0 to 22.0	SAMPLING METHOD <u>CONTINUOUS CORE (4")</u>
SUMP/END CAP:	4 in. PVC Sch 40	22.0 to 22.3	DATE DEVELOPED <u>04/14/2000</u>
SURFACE SEAL:			WATER LEVEL (FT BGS) _____
GROUT:			LOGGED BY <u>C. Goodknight</u>
SEAL:	Bentonite Chips	0.0 to 4.0	REMARKS <u>Well installed on 4/12/00. Well is</u>
UPPER PACK:	100 mesh Silica Sand	4.0 to 5.0	<u>approximately 80 ft. west of well 853. Lithologic</u>
LOWER PACK:	20-40 Silica Sand	5.0 to 22.3	<u>description taken from well 853.</u>



MONITORING WELL COMPLETION LOG SHP01-1062

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101439.45</u>	DATE DRILLED <u>04/07/2000</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251715.33</u>	SURFACE ELEV. (FT NGVD) <u>4890.66</u>
SITE <u>SHIPROCK</u>	HOLE DEPTH (FT) <u>36.00</u>	TOP OF CASING (FT) <u>4892.51</u>
WELL NUMBER <u>1062</u>	WELL DEPTH (FT) <u>36.00</u>	MEAS. PT. ELEV. (FT) <u>4892.51</u>

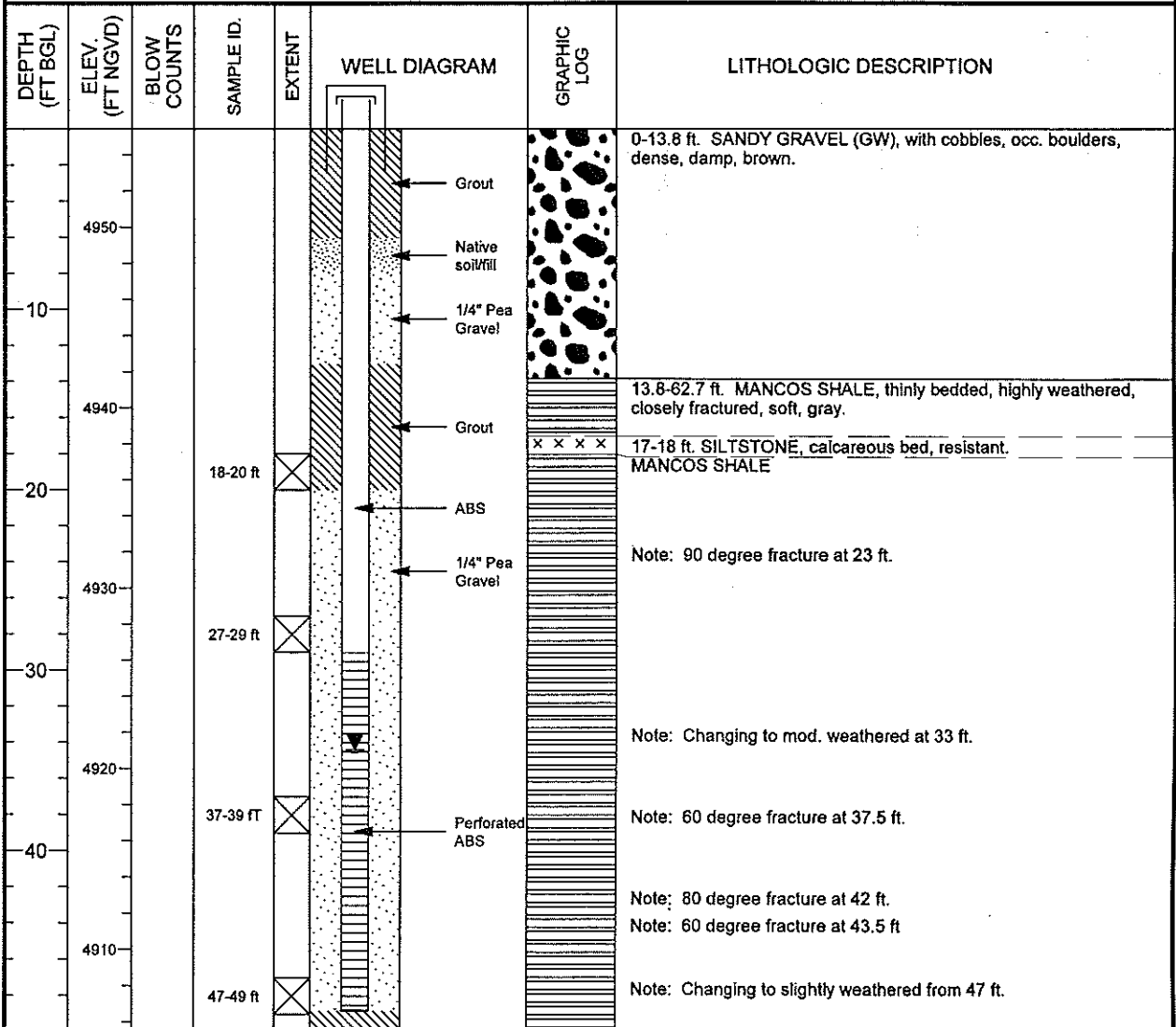
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ROTASONIC</u>
BLANK CASING:	2 in. PVC Sch 40	-1.85 to 30.7	SAMPLING METHOD <u>GRAB</u>
WELL SCREEN:	2 in. Slotted PVC	30.7 to 35.7	DATE DEVELOPED <u>04/12/2000</u>
SUMP/END CAP:	2 in. PVC Sch 40	35.7 to 36.0	WATER LEVEL (FT BGS) _____
SURFACE SEAL:			LOGGED BY <u>C. Goodknight</u>
GROUT:	Bentonite	0.0 to 24.0	REMARKS <u>Screen depth matches that (same elevation) of well 823 in well nest on terrace above.</u>
SEAL:	Bentonite Pellets	24.0 to 28.0	
UPPER PACK:	100 mesh Silica Sand	28.0 to 28.8	
LOWER PACK:	20-40 Silica Sand	28.8 to 36.0	



MONITORING WELL COMPLETION LOG SHP02-0600

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102012.65</u>	DATE DRILLED <u>01/13/1982</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250674.90</u>	SURFACE ELEV. (FT NGVD) <u>4955.45</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>62.70</u>	TOP OF CASING (FT) <u>4955.87</u>
WELL NUMBER <u>0600</u>	WELL DEPTH (FT) <u>48.80</u>	MEAS. PT. ELEV. (FT) <u>4955.87</u>

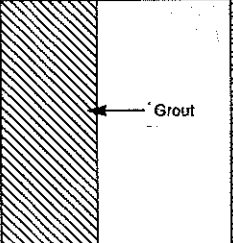
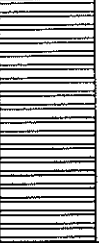
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>CABLE/ROTARY</u>
BLANK CASING:	4 in. ABS	-0.42 to 29.0	SAMPLING METHOD <u>SPLIT SPOON</u>
WELL SCREEN:	4 in. Perforated ABS	29.0 to 48.8	DATE DEVELOPED _____
SUMP/END CAP:			WATER LEVEL (FT BTOC) <u>34.8 on 02/02/1982</u>
SURFACE SEAL:	Grout	0.0 to 6.0	LOGGED BY _____
GROUT:	Native soil/fill	6.0 to 8.0	REMARKS <u>Hole also known as DM-1. Piezometer installed.</u>
SEAL:	Bentonite Grout	13.0 to 20.0	
UPPER PACK:			
LOWER PACK:	1/4" Pea Gravel	20.0 to 48.8	



MONITORING WELL COMPLETION LOG SHP02-0600

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0600
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	01/13/1982

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
60	4900						<p>Note: 45 deg. fracture filled with gypsum.</p>
70	4890						<p>Total Depth 62.7 ft.</p>
80	4880						
90	4870						
100	4860						
110	4850						

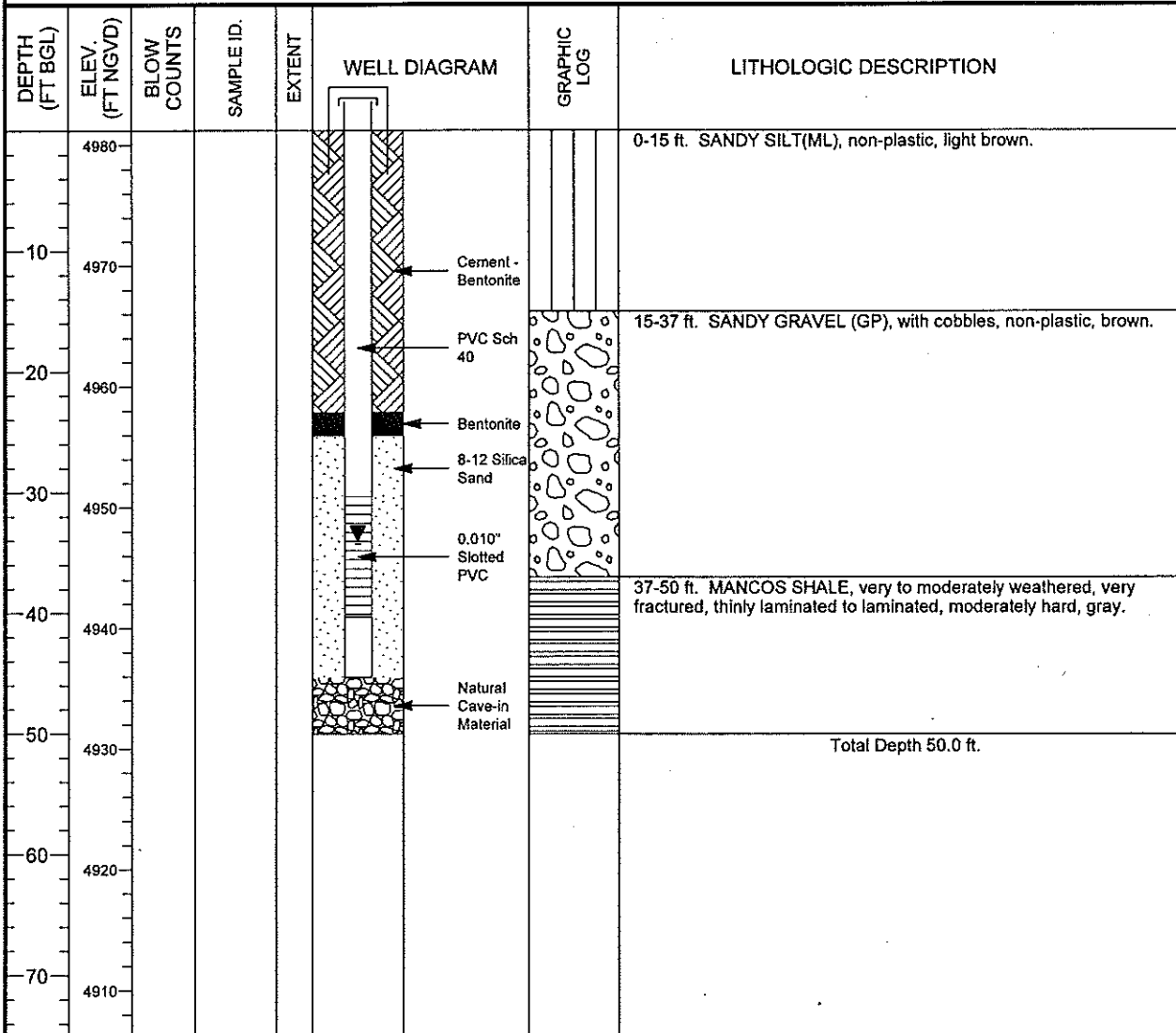


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MONITORING WELL COMPLETION LOG SHP02-0601

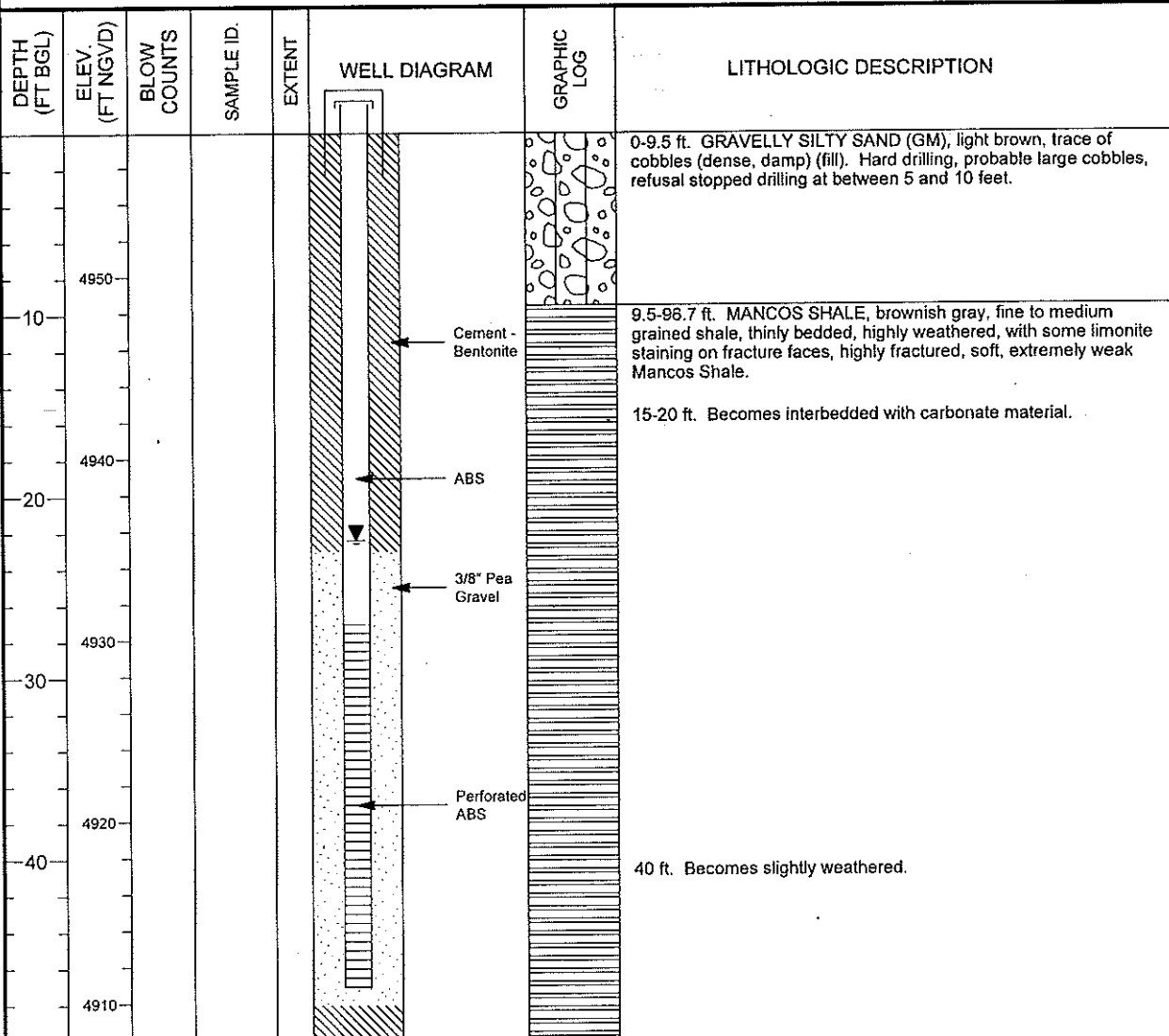
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2099020.00</u>	DATE DRILLED <u>06/05/1983</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250816.00</u>	SURFACE ELEV. (FT NGVD) <u>4981.24</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>50.00</u>	TOP OF CASING (FT) _____
WELL NUMBER <u>0601</u>	WELL DEPTH (FT) <u>45.30</u>	MEAS. PT. ELEV. (FT) _____

	WELL INSTALLATION	INTERVAL (FT)		
SURFACE CASING:				
BLANK CASING:	2 in. PVC Sch 40	-1.0 to 30.3	DRILLING METHOD	<u>ROTARY MUD</u>
WELL SCREEN:	2 in. Machine Slotted PVC	30.3 to 40.3	SAMPLING METHOD	_____
SUMP/END CAP:	2 in. PVC Sch 40	40.3 to 45.3	DATE DEVELOPED	<u>06/20/1983</u>
SURFACE SEAL:	Cement	0.0 to 23.3	WATER LEVEL (FT BTOC)	<u>35.0 on 06/20/1983</u>
GROUT:			LOGGED BY	_____
SEAL:	Bentonite	23.3 to 25.3	REMARKS	<u>Hole also known as 6GT. Monitor well removed.</u>
UPPER PACK:				
LOWER PACK:	8-12 Silica Sand	25.3 to 45.3		



MONITORING WELL COMPLETION LOG SHP02-0602



PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2100887.57</u>	DATE DRILLED <u>12/12/1981</u>	
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249786.07</u>	SURFACE ELEV. (FT NGVD) <u>4957.89</u>	
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>96.70</u>	TOP OF CASING (FT) <u>4956.89</u>	
WELL NUMBER <u>0602</u>	WELL DEPTH (FT) <u>47.00</u>	MEAS. PT. ELEV. (FT) <u>4956.89</u>	
		SLOT SIZE (IN)	
		BIT SIZE(S) (IN)	<u>6.75</u>
WELL INSTALLATION		INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>AUGER/ROTARY/CORE</u>
BLANK CASING: 4 in. ABS	1.0 to 27.0		SAMPLING METHOD
WELL SCREEN: 4 in. Perforated ABS	27.0 to 47.0		DATE DEVELOPED
SUMP/END CAP:			WATER LEVEL (FT BTOC) <u>21.4 on 03/16/1982</u>
SURFACE SEAL:			LOGGED BY
GROUT: Cement - Bentonite	0.0 to 23.0		REMARKS <u>Hole also known as DM-5. Piezometer installed</u>
SEAL:			
UPPER PACK:			
LOWER PACK: 3/8" Pea Gravel	23.0 to 48.0		



MONITORING WELL COMPLETION LOG SHP02-0602

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0602
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	12/12/1981

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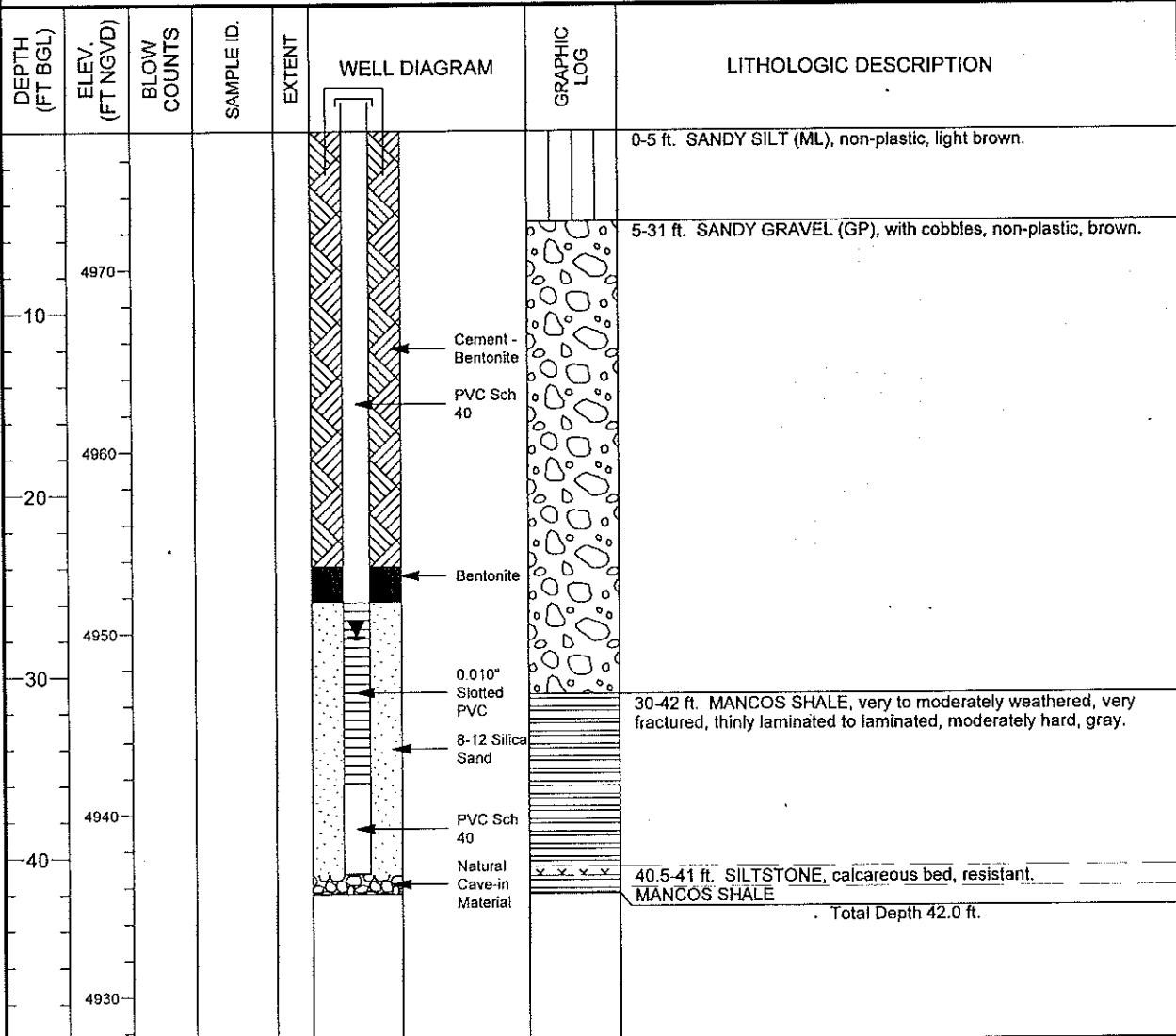
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	
60	4900				 <p style="margin-left: 100px;">Cement - Bentonite</p>			
70	4890							
80	4880							
90	4870							
100	4860						Total Depth 96.7 ft.	
110	4850							



MONITORING WELL COMPLETION LOG SHP02-0603

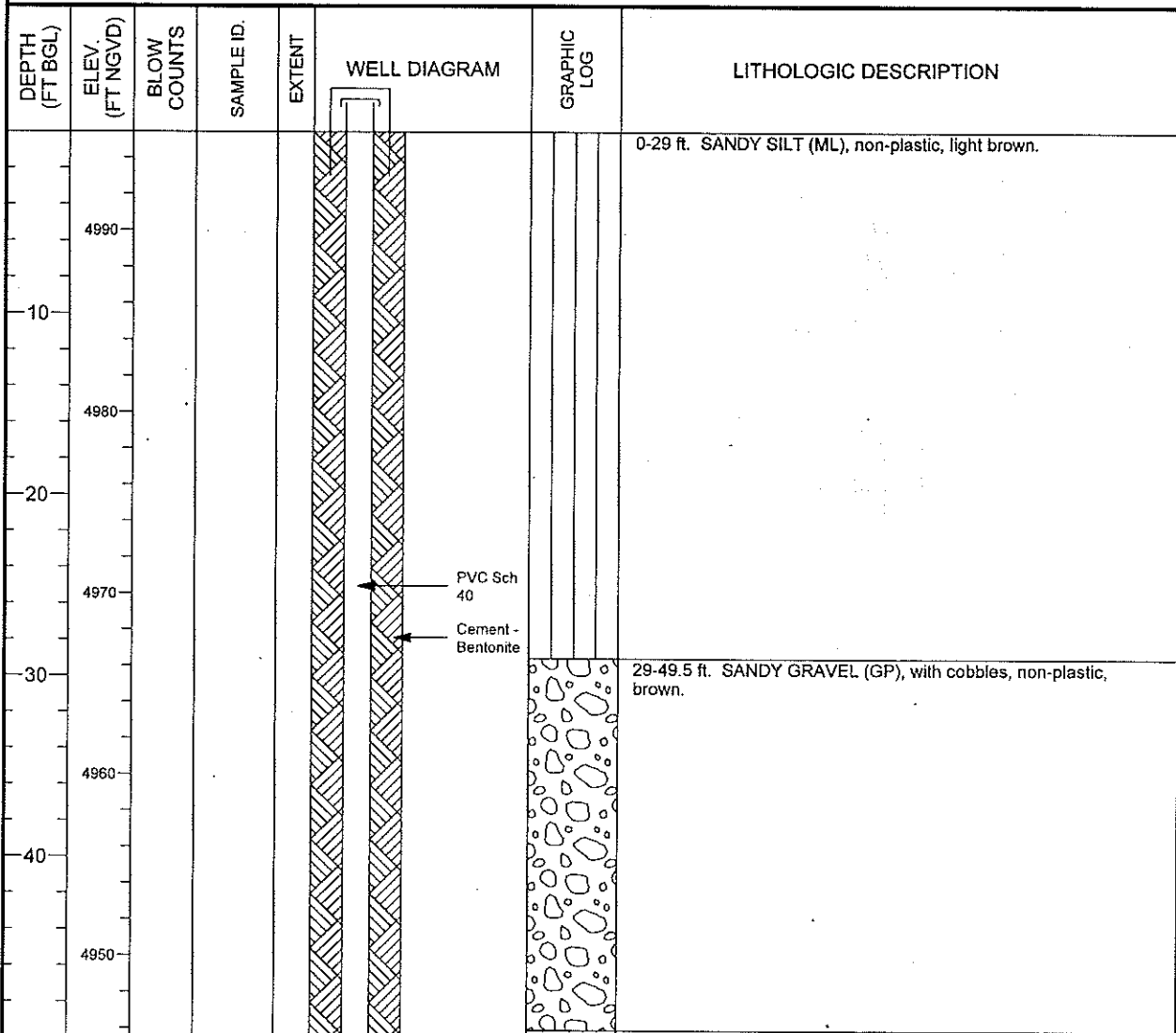
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2098739.34</u>	DATE DRILLED <u>06/03/1983</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251189.95</u>	SURFACE ELEV. (FT NGVD) <u>4977.61</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>42.00</u>	TOP OF CASING (FT) <u>4978.62</u>
WELL NUMBER <u>0603</u>	WELL DEPTH (FT) <u>40.90</u>	MEAS. PT. ELEV. (FT) <u>4978.62</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>6.0</u>

SURFACE CASING:	WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD
BLANK CASING:	2 in. PVC Sch 40	-1.01 to 25.9	<u>ROTARY MUD</u>
WELL SCREEN:	2 in. Machine Slotted PVC	25.9 to 35.9	SAMPLING METHOD _____
SUMP/END CAP:	2 in. PVC Sch 40	35.9 to 40.9	DATE DEVELOPED <u>06/20/1983</u>
SURFACE SEAL:	Cement	0.0 to 23.9	WATER LEVEL (FT BTOC) <u>28.8</u> on <u>06/20/1983</u>
GROUT:			LOGGED BY _____
SEAL:	Bentonite	23.9 to 25.9	REMARKS <u>Hole also known as 9GT</u>
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	25.9 to 40.9	



MONITORING WELL COMPLETION LOG SHP02-0604

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2098538.57</u>	DATE DRILLED <u>05/27/1983</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249216.98</u>	SURFACE ELEV. (FT NGVD) <u>4995.43</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>80.00</u>	TOP OF CASING (FT) <u>4995.87</u>
WELL NUMBER <u>0604</u>	WELL DEPTH (FT) <u>77.70</u>	MEAS. PT. ELEV. (FT) <u>4995.87</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>6.0</u>
WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD <u>ROTARY MUD</u>
SURFACE CASING:		SAMPLING METHOD _____
BLANK CASING: 2 in. PVC Sch 40	-0.44 to 62.7	DATE DEVELOPED <u>06/20/1983</u>
WELL SCREEN: 2 in. Machine Slotted PVC	62.7 to 72.7	WATER LEVEL (FT BTOC) <u>55.45 on 06/20/1983</u>
SUMP/END CAP: 2 in. PVC Sch 40	72.7 to 77.7	LOGGED BY _____
SURFACE SEAL: Cement	0.0 to 55.7	REMARKS <u>Hole also known as 4H</u>
GROUT:		
SEAL: Bentonite	55.7 to 57.7	
UPPER PACK:		
LOWER PACK: 8-12 Silica Sand	57.7 to 77.7	



MONITORING WELL COMPLETION LOG SHP02-0604

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0604
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	05/27/1983

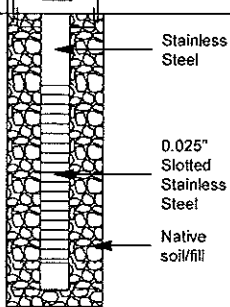

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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
							49.5-54 ft. SAND (SP), predominately fine grained, non-plastic, brown.
	4940						54-58 ft. SANDY GRAVEL (GP), with cobbles, non-plastic, brown.
-60							58-80 ft. MANCOS SHALE, very weathered, very fractured, thinly laminated to laminated, moderately hard, gray, moderately weathered.
	4930						
-70							
	4920						
-80							Total Depth 80.0 ft.
	4910						
-90							
	4900						
-100							
	4890						
-110							

WELL POINT CONSTRUCTION LOG SHP02-0605

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102920.00</u>	DATE DRILLED <u>10/17/1984</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249219.00</u>	SURFACE ELEV. (FT NGVD) <u>4898.77</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>3.80</u>	TOP OF CASING (FT) <u>4898.77</u>
WELL NUMBER <u>0605</u>	WELL DEPTH (FT) <u>3.58</u>	MEAS. PT. ELEV. (FT) <u>4898.77</u>
		SLOT SIZE (IN) <u>0.025</u>
		BIT SIZE(S) (IN) _____

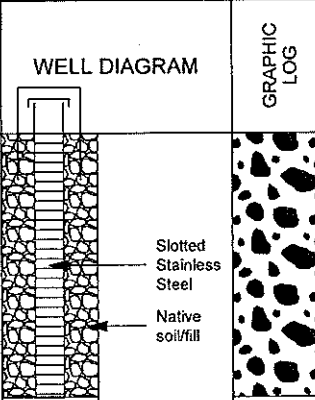
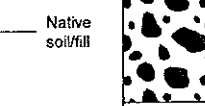
	WELL INSTALLATION	INTERVAL (FT)	
BLANK CASING:	1.25 in. Stainless Steel	0.0 to 0.93	DRILLING METHOD _____
WELL SCREEN:	1.25 in. Stainless Steel	0.93 to 3.23	SAMPLING METHOD _____
SUMP/END CAP:	1.25 in. Stainless Steel	3.23 to 3.58	DATE DEVELOPED _____
SURFACE SEAL:			WATER LEVEL (FT BGS) _____
			LOGGED BY <u>Miller</u>
			REMARKS <u>Well point removed.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4895				 <p style="font-size: small;">Stainless Steel 0.025" Slotted Stainless Steel Native soil/fill</p>		ALLUVIUM
5							Total Depth 3.8 ft.
	4890						
10							

WELL POINT CONSTRUCTION LOG SHP02-0633

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102392.61</u>	DATE DRILLED <u>10/04/1985</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249198.00</u>	SURFACE ELEV. (FT NGVD) <u>4915.99</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>3.42</u>	TOP OF CASING (FT) <u>4918.24</u>
WELL NUMBER <u>0633</u>	WELL DEPTH (FT) <u>3.42</u>	MEAS. PT. ELEV. (FT) <u>4918.24</u>
		SLOT SIZE (IN) _____
		BIT SIZE(S) (IN) <u>5.88</u>

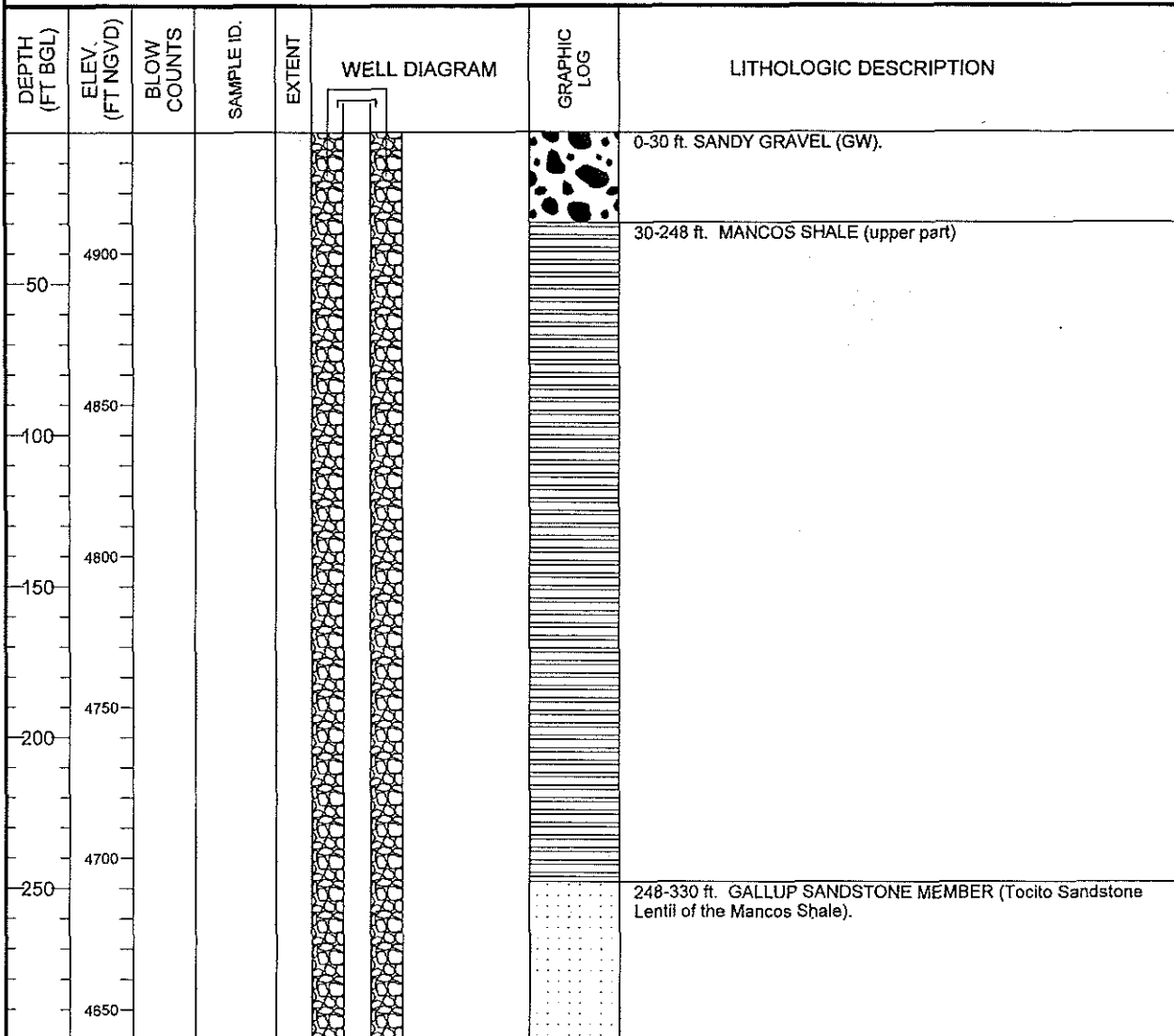
	WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD _____
BLANK CASING:	2 in. Stainless Steel	-2.25 to 0.0	SAMPLING METHOD _____
WELL SCREEN:	2 in. Stainless Steel	0.0 to 3.42	DATE DEVELOPED _____
SUMP/END CAP:			WATER LEVEL (FT BGS) _____
SURFACE SEAL:			LOGGED BY _____
			REMARKS <u>East side of Bob Lee Wash; well point removed.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4915						0-3.42 ft. ALLUVIAL, gravel and sand.
5	4910						
10	4905						

MONITORING WELL COMPLETION LOG SHP02-0648

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102944.07</u>	DATE DRILLED <u>10/29/1960 to 02/07/1961</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>248019.38</u>	SURFACE ELEV. (FT NGVD) <u>4940.18</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>1850.00</u>	TOP OF CASING (FT) <u>4943.80</u>
WELL NUMBER <u>0648</u>	WELL DEPTH (FT) <u>1850.00</u>	MEAS. PT. ELEV. (FT) _____
		SLOT SIZE (IN) _____
		BIT SIZE(S) (IN) <u>12.0</u>

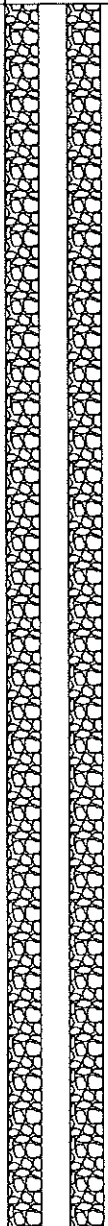
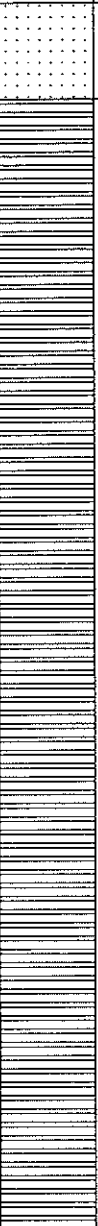
WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD _____
BLANK CASING: 12 in. Stainless Steel	-3.62 to 1482.0	SAMPLING METHOD _____
WELL SCREEN: 12 in. Stainless Steel	1482.0 to 1777.0	DATE DEVELOPED _____
SUMP/END CAP: _____		WATER LEVEL (FT BTOC) <u>Flowing</u>
SURFACE SEAL: _____		LOGGED BY _____
GROUT: _____		REMARKS <u>Well construction unknown. Hole also known as Tribal Well 12T-520.</u>
SEAL: _____		
UPPER PACK: _____		
LOWER PACK: _____		



MONITORING WELL COMPLETION LOG SHP02-0648

PROJECT UMTRA GROUND WATER WELL NUMBER 0648
 SITE SHIPROCK (TAILINGS AREA) DATES DRILLED 10/29/1960 to 02/07/1961

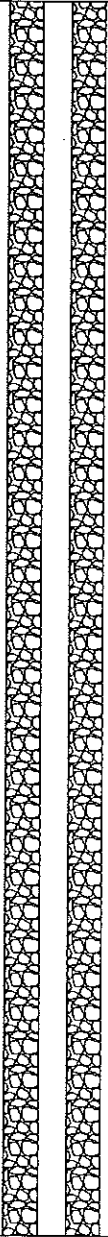

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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">350</div> <div style="margin-bottom: 10px;">400</div> <div style="margin-bottom: 10px;">450</div> <div style="margin-bottom: 10px;">500</div> <div style="margin-bottom: 10px;">550</div> <div style="margin-bottom: 10px;">600</div> <div style="margin-bottom: 10px;">650</div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">4600</div> <div style="margin-bottom: 10px;">4550</div> <div style="margin-bottom: 10px;">4500</div> <div style="margin-bottom: 10px;">4450</div> <div style="margin-bottom: 10px;">4400</div> <div style="margin-bottom: 10px;">4350</div> <div style="margin-bottom: 10px;">4300</div> </div>						<p>330-895 ft. MANCOS SHALE (lower part)</p>

MONITORING WELL COMPLETION LOG SHP02-0648

PROJECT UMTRA GROUND WATER WELL NUMBER 0648
 SITE SHIPROCK (TAILINGS AREA) DATES DRILLED 10/29/1960 to 02/07/1961

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
700	4250						
750	4200						
800	4150						
850	4100						
900	4050						895-1015 ft. GRANEROS SHALE.
950	4000						
1000	3950						
1050	3900						1015-1180 ft. DAKOTA SANDSTONE.



MONITORING WELL COMPLETION LOG SHP02-0648

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0648
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	10/29/1960 to 02/07/1961

Continued from Previous Page

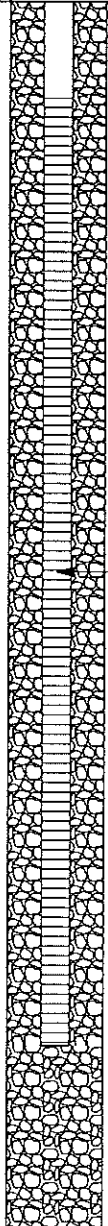
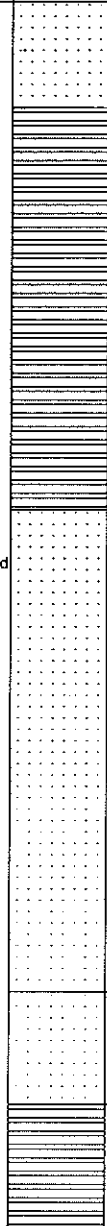
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1100	3850						
1150	3800						
1200	3750						1180-1342 ft. BRUSHY BASIN SHALE MEMBER OF MORRISON FM.
1250	3700						
1300	3650						
1350	3600						1342-1485 ft. WESTWATER CANYON SANDSTONE MEMBER OF MORRISON FM.
1400	3550						
	3500						



MONITORING WELL COMPLETION LOG SHP02-0648

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0648
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	10/29/1960 to 02/07/1961

Continued from Previous Page



DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">1500</div> <div style="margin-bottom: 10px;">1550</div> <div style="margin-bottom: 10px;">1600</div> <div style="margin-bottom: 10px;">1650</div> <div style="margin-bottom: 10px;">1700</div> <div style="margin-bottom: 10px;">1750</div> <div style="margin-bottom: 10px;">1800</div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">3450</div> <div style="margin-bottom: 10px;">3400</div> <div style="margin-bottom: 10px;">3350</div> <div style="margin-bottom: 10px;">3300</div> <div style="margin-bottom: 10px;">3250</div> <div style="margin-bottom: 10px;">3200</div> <div style="margin-bottom: 10px;">3150</div> </div>				 <p style="margin-left: 20px;">Perforated zone</p>		<div style="margin-bottom: 10px;">1485-1610 ft. RECAPTURE SHALE MEMBER OF MORRISON FM.</div> <div style="margin-bottom: 10px;">1610-1760 ft. SALT WASH SANDSTONE MEMBER OF MORRISON FM.</div> <div style="margin-bottom: 10px;">1760-1795 ft. BLUFF SANDSTONE MEMBER OF MORRISON FM.</div> <div style="margin-bottom: 10px;">1795-1850 ft. SUMMERVILLE FORMATION OF SAN RAFAEL GROUP.</div>



MONITORING WELL COMPLETION LOG SHP02-0648

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0648
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	10/29/1960 to 02/07/1961

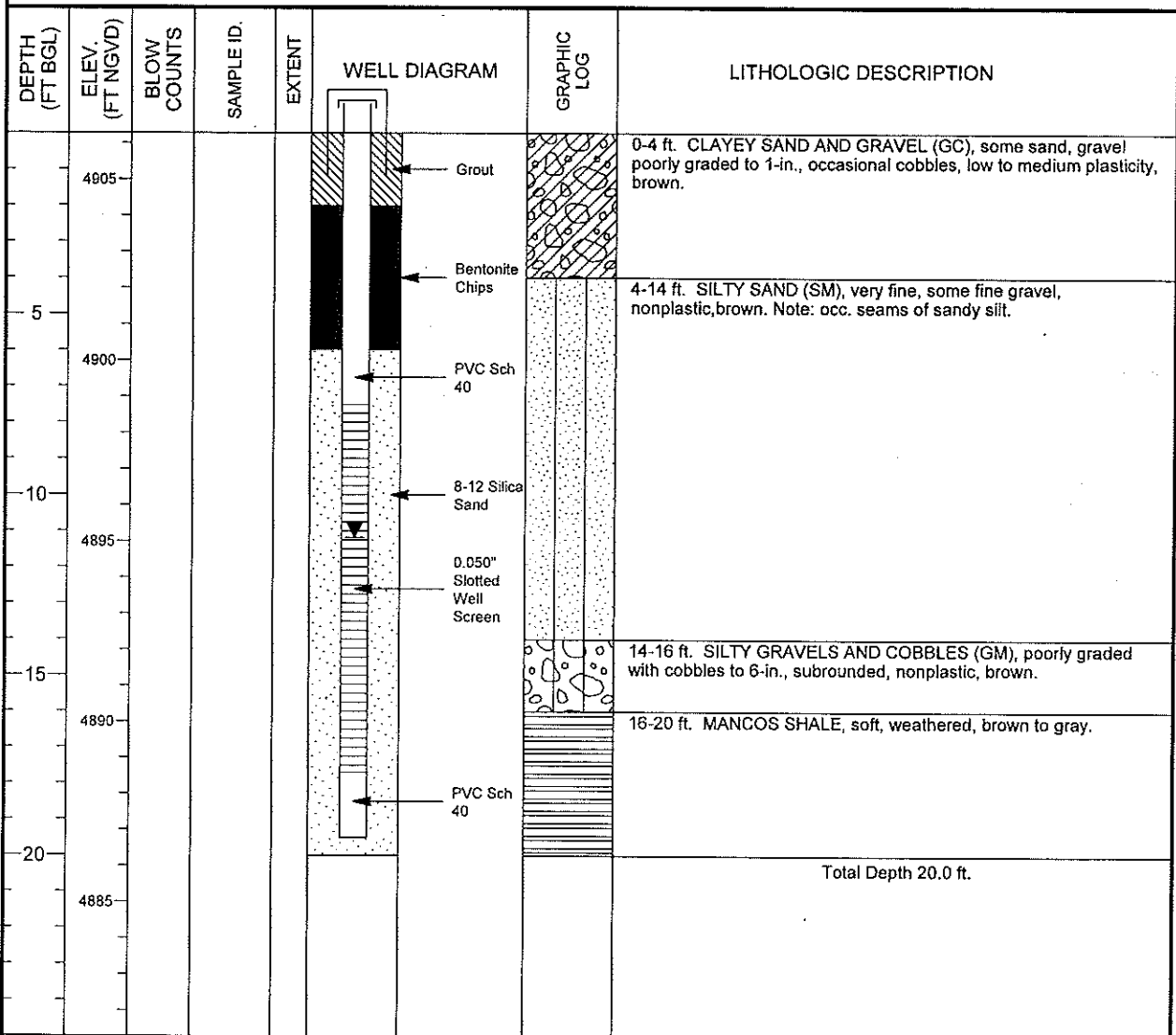
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
1850	3100						Total depth 1850.0 ft.
1900	3050						<p>Note: Log obtained and modified from U.S. Geological Survey database through Navajo UMTRA Program. A flow test yielded 350 gpm for 42 hrs with 380 ft of drawdown.</p>
1950	3000						
2000	2950						
2050	2900						
2100	2850						
2150	2800						
2200	2750						



MONITORING WELL COMPLETION LOG SHP02-0725

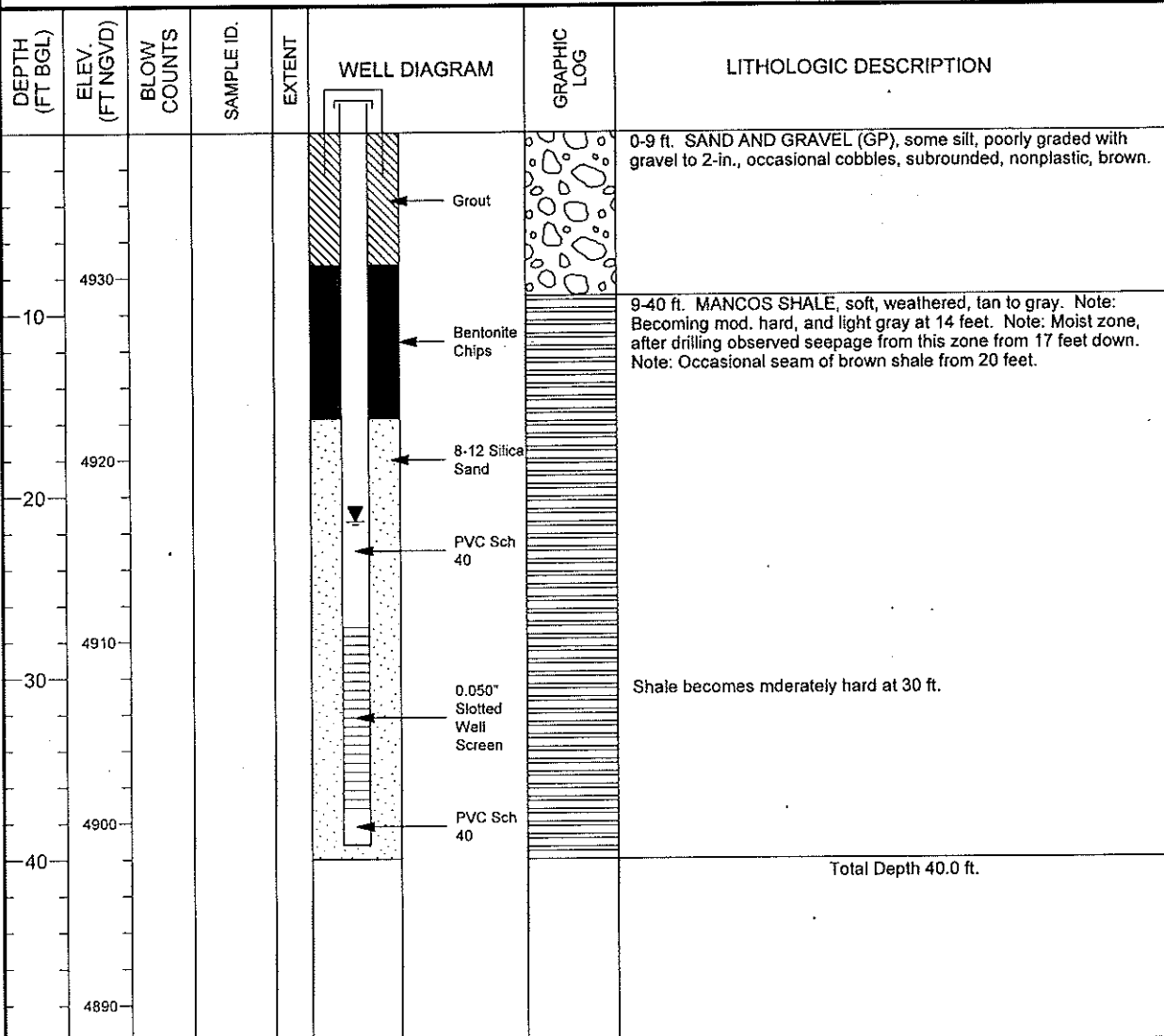
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2103010.18</u>	DATE DRILLED <u>03/28/1993</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249192.23</u>	SURFACE ELEV. (FT NGVD) <u>4906.29</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>20.00</u>	TOP OF CASING (FT) <u>4908.58</u>
WELL NUMBER <u>0725</u>	WELL DEPTH (FT) <u>19.50</u>	MEAS. PT. ELEV. (FT) <u>4908.58</u>
WELL INSTALLATION		SLOT SIZE (IN) <u>0.050</u>
INTERVAL (FT)		BIT SIZE(S) (IN) <u>6.0</u>
SURFACE CASING:		DRILLING METHOD <u>ODEX/AIR ROTARY</u>
BLANK CASING: 2 in. PVC Sch 40	-2.29 to 7.5	SAMPLING METHOD _____
WELL SCREEN: 2 in. Machine Slotted PVC	7.5 to 17.5	DATE DEVELOPED <u>03/28/1993</u>
SUMP/END CAP: 2 in. PVC Sch 40	17.5 to 19.5	WATER LEVEL (FT BTOC) <u>13.47 on 03/28/1993</u>
SURFACE SEAL: Grout	0.0 to 2.0	LOGGED BY _____
GROUT:		REMARKS _____
SEAL: Bentonite Chips	2.0 to 6.0	
UPPER PACK:		
LOWER PACK: 8-12 Silica Sand	6.0 to 20.0	



MONITORING WELL COMPLETION LOG SHP02-0726

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102452.85</u>	DATE DRILLED <u>03/28/1993</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>248972.56</u>	SURFACE ELEV. (FT NGVD) <u>4937.97</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>40.00</u>	TOP OF CASING (FT) <u>4939.95</u>
WELL NUMBER <u>0726</u>	WELL DEPTH (FT) <u>39.20</u>	MEAS. PT. ELEV. (FT) <u>4939.95</u>
		SLOT SIZE (IN) <u>0.050</u>
		BIT SIZE(S) (IN) <u>6.0</u>

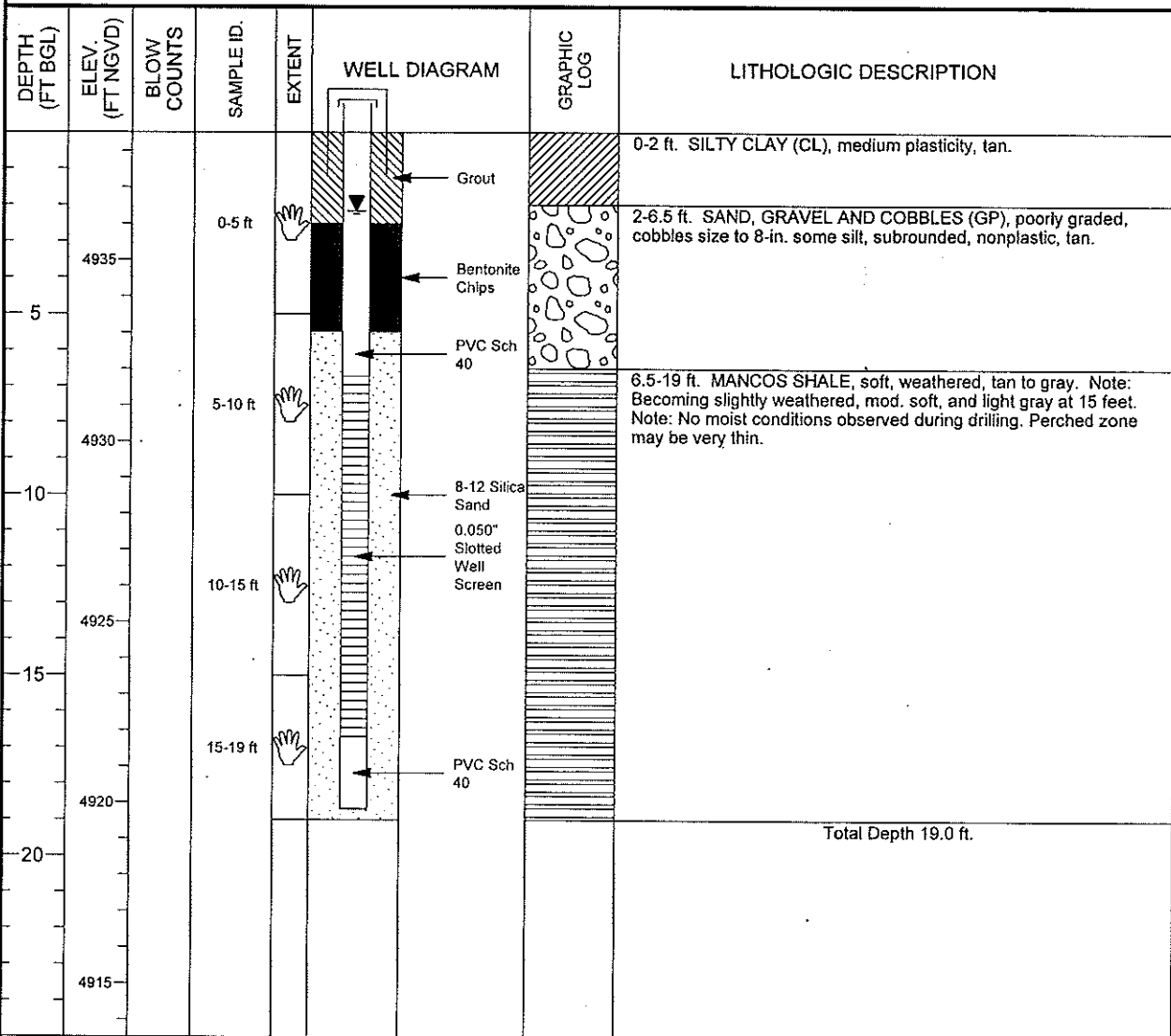
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ODEX/AIR ROTARY</u>
BLANK CASING:	2 in. PVC Sch 40	-1.98 to 27.2	SAMPLING METHOD _____
WELL SCREEN:	2 in. Machine Slotted PVC	27.2 to 37.2	DATE DEVELOPED <u>03/23/1993</u>
SUMP/END CAP:	2 in. PVC Sch 40	37.2 to 39.2	WATER LEVEL (FT BTOC) <u>23.36 on 03/29/1993</u>
SURFACE SEAL:	Grout	0.0 to 7.75	LOGGED BY _____
GROUT:			REMARKS _____
SEAL:	Bentonite Chips	7.75 to 15.75	
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	15.7 to 40.0	



MONITORING WELL COMPLETION LOG SHP02-0727

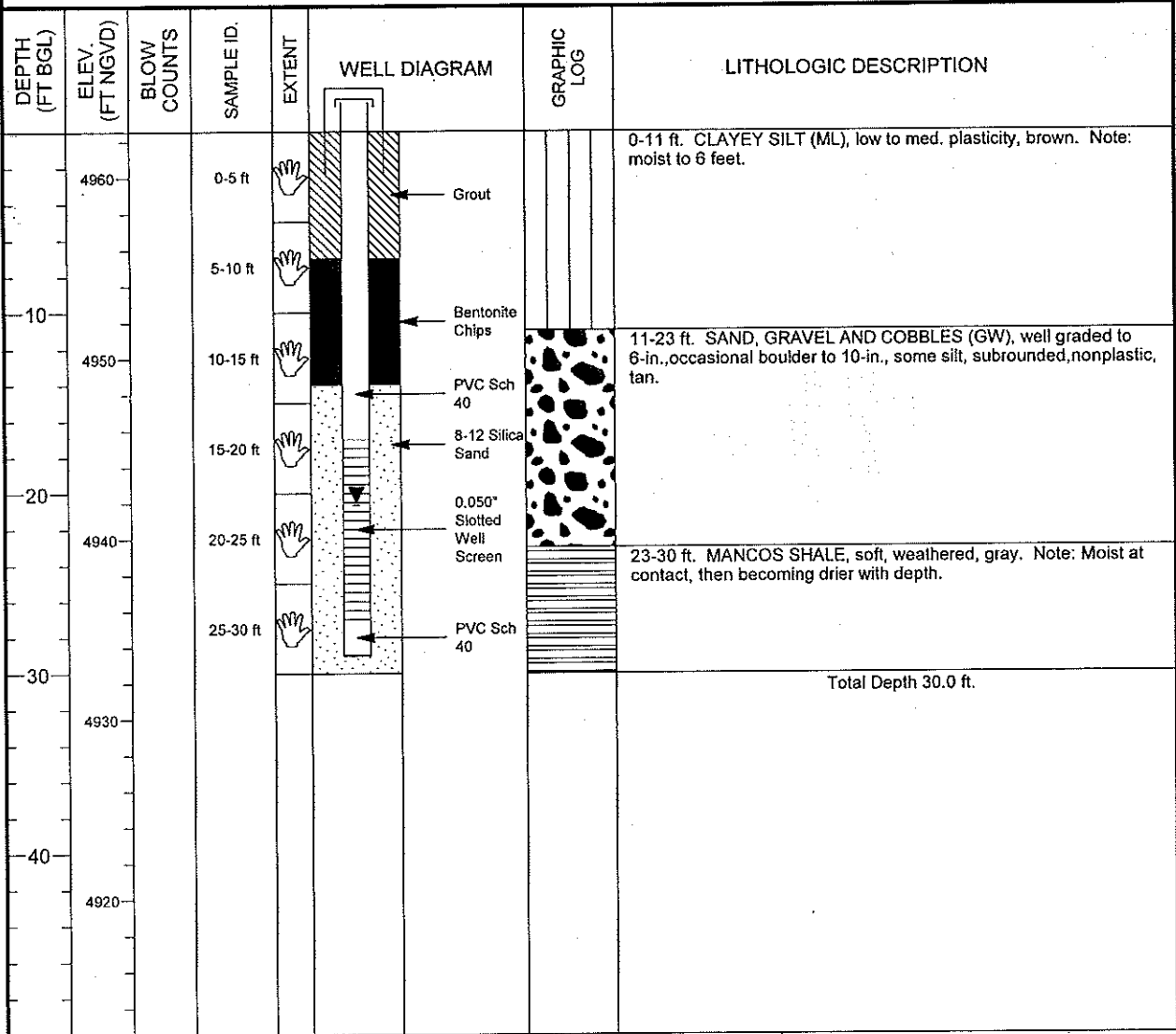
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101721.10</u>	DATE DRILLED <u>03/27/1993</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>248674.51</u>	SURFACE ELEV. (FT NGVD) <u>4938.52</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>19.00</u>	TOP OF CASING (FT) <u>4940.65</u>
WELL NUMBER <u>0727</u>	WELL DEPTH (FT) <u>18.70</u>	MEAS. PT. ELEV. (FT) <u>4940.65</u>

	WELL INSTALLATION	INTERVAL (FT)			
SURFACE CASING:				SLOT SIZE (IN)	<u>0.050</u>
BLANK CASING:	2 in. PVC Sch 40	-2.13 to 6.7		BIT SIZE(S) (IN)	<u>6.0</u>
WELL SCREEN:	2 in. Machine Slotted PVC	6.7 to 16.7		DRILLING METHOD	<u>ODEX/AIR ROTARY</u>
SUMP/END CAP:	2 in. PVC Sch 40	16.7 to 18.7		SAMPLING METHOD	<u>GRAB</u>
SURFACE SEAL:	Grout	0.0 to 2.5		DATE DEVELOPED	<u>03/27/1993</u>
GROUT:				WATER LEVEL (FT BTOC)	<u>4.3 on 03/27/1993</u>
SEAL:	Bentonite Chips	2.5 to 5.5		LOGGED BY	<u>W. Wood</u>
UPPER PACK:				REMARKS	
LOWER PACK:	8-12 Silica Sand	5.5 to 19.0			



MONITORING WELL COMPLETION LOG SHP02-0728

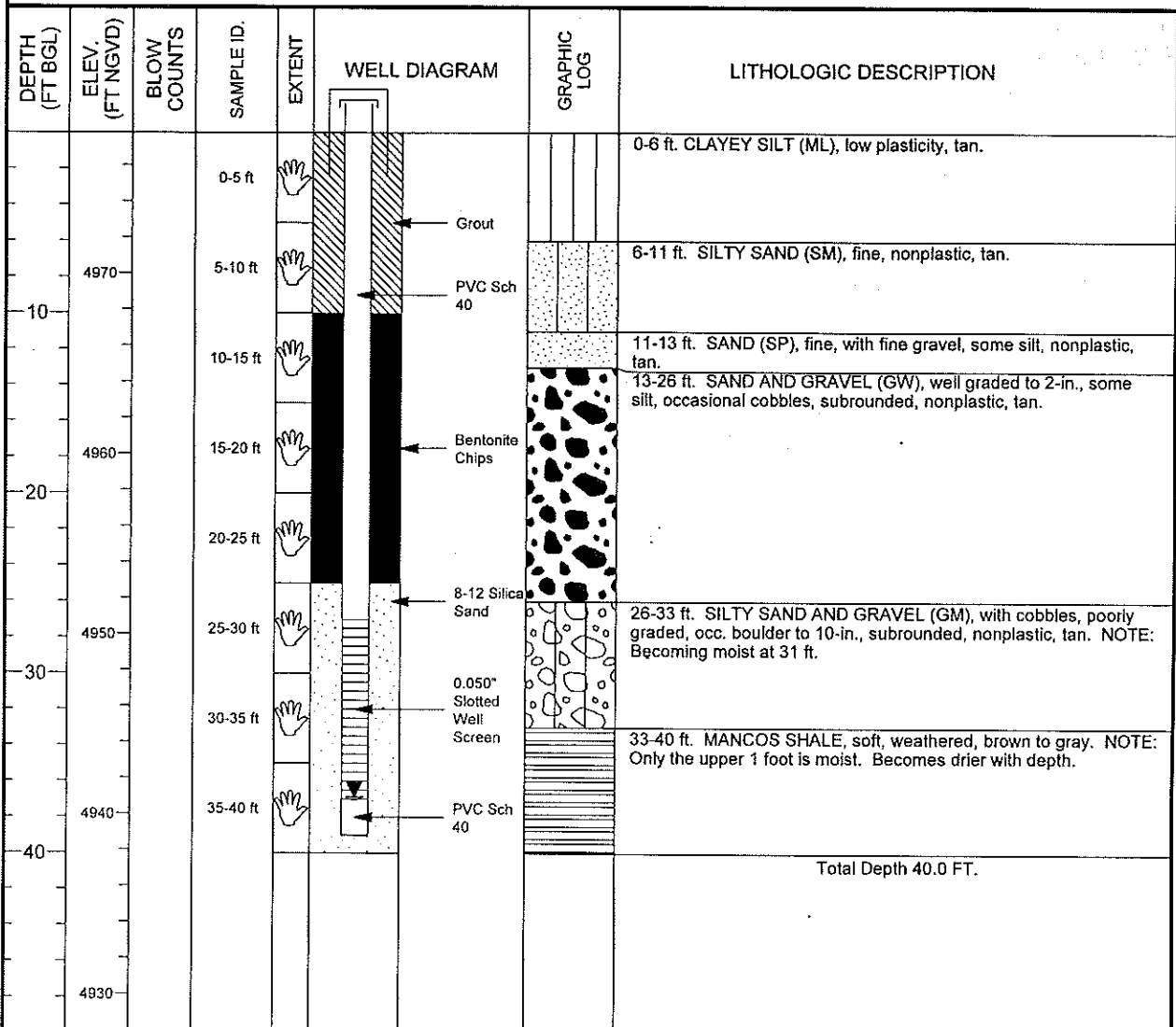
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2100541.89</u>	DATE DRILLED <u>03/25/1995 to 03/26/1993</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>248356.21</u>	SURFACE ELEV. (FT NGVD) <u>4962.55</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>30.00</u>	TOP OF CASING (FT) <u>4964.46</u>
WELL NUMBER <u>0728</u>	WELL DEPTH (FT) <u>29.00</u>	MEAS. PT. ELEV. (FT) <u>4964.46</u>
		SLOT SIZE (IN) <u>0.050</u>
		BIT SIZE(S) (IN) <u>6.0</u>
WELL INSTALLATION INTERVAL (FT)		
SURFACE CASING:		DRILLING METHOD <u>ODEX/AIR ROTARY</u>
BLANK CASING: 2 in. PVC Sch 40	-1.91 to 17.0	SAMPLING METHOD <u>GRAB</u>
WELL SCREEN: 2 in. Machine Slotted PVC	17.0 to 27.0	DATE DEVELOPED <u>03/26/1993</u>
SUMP/END CAP: 2 in. PVC Sch 40	27.0 to 29.0	WATER LEVEL (FT BGS) <u>20.5 on 03/26/1993</u>
SURFACE SEAL: Grout	0.0 to 7.0	LOGGED BY <u>W. Wood</u>
GROUT:		REMARKS _____
SEAL: Bentonite Chips	7.0 to 14.0	
UPPER PACK:		
LOWER PACK: 8-12 Silica Sand	14.0 to 30.0	



MONITORING WELL COMPLETION LOG SHP02-0730

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2099429.89</u>	DATE DRILLED <u>03/26/1993</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249494.92</u>	SURFACE ELEV. (FT NGVD) <u>4977.81</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>40.00</u>	TOP OF CASING (FT) <u>4979.74</u>
WELL NUMBER <u>0730</u>	WELL DEPTH (FT) <u>39.00</u>	MEAS. PT. ELEV. (FT) <u>4979.74</u>

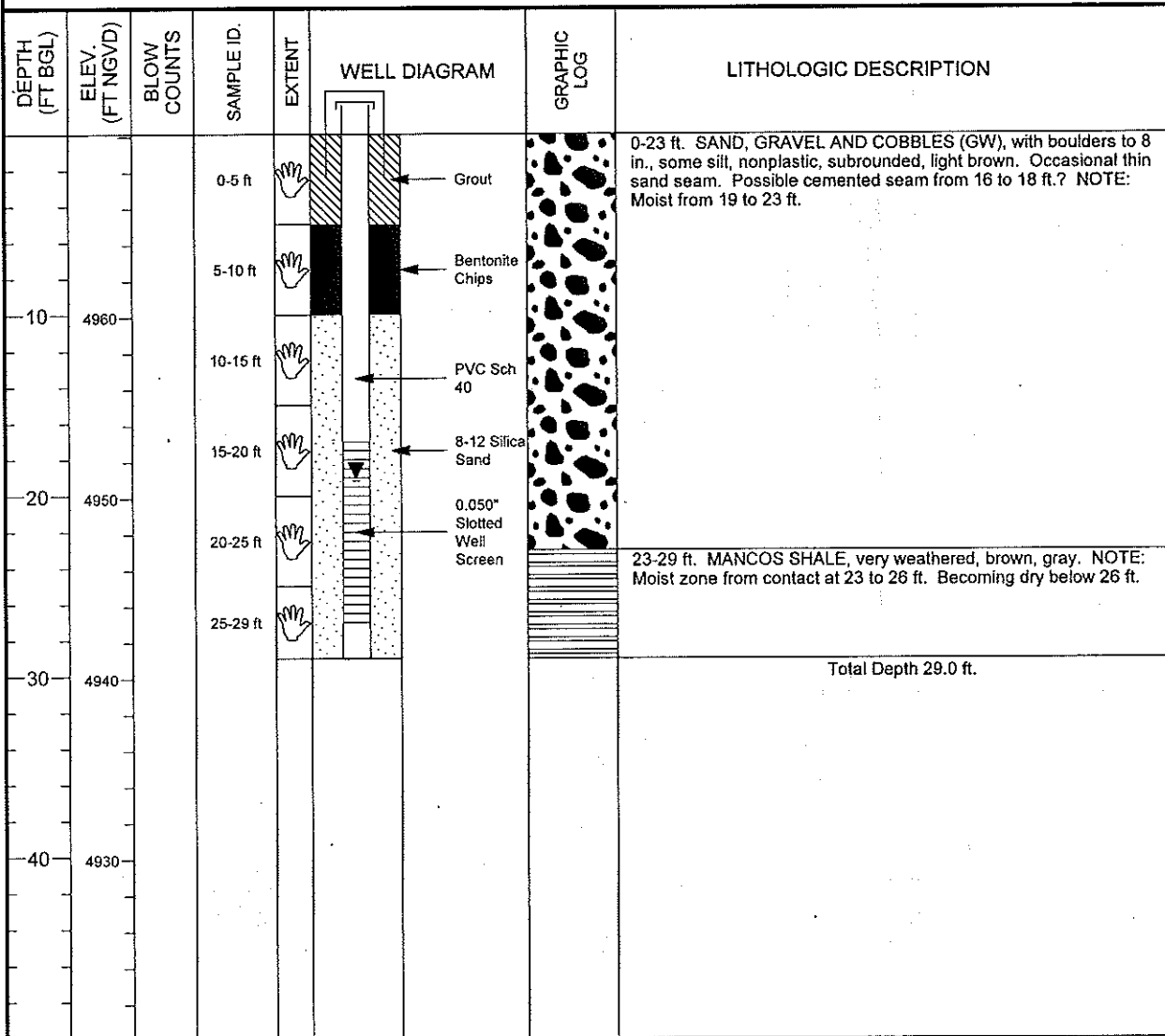
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			SLOT SIZE (IN) <u>0.050</u>
BLANK CASING:	2 in. PVC Sch 40	-1.93 to 27.0	BIT SIZE(S) (IN) <u>6.0</u>
WELL SCREEN:	2 in. Machine Slotted PVC	27.0 to 37.0	DRILLING METHOD <u>ODEX/AIR ROTARY</u>
SUMP/END CAP:	2 in. PVC Sch 40	37.0 to 39.0	SAMPLING METHOD <u>GRAB</u>
SURFACE SEAL:	Grout	0.0 to 10.0	DATE DEVELOPED <u>03/26/1993</u>
GROUT:			WATER LEVEL (FT BGS) <u>36.87 on 03/26/1993</u>
SEAL:	Bentonite Chips	10.0 to 25.0	LOGGED BY <u>W. Wood</u>
UPPER PACK:			REMARKS
LOWER PACK:	8-12 Silica Sand	25.0 to 40.0	



MONITORING WELL COMPLETION LOG SHP02-0731

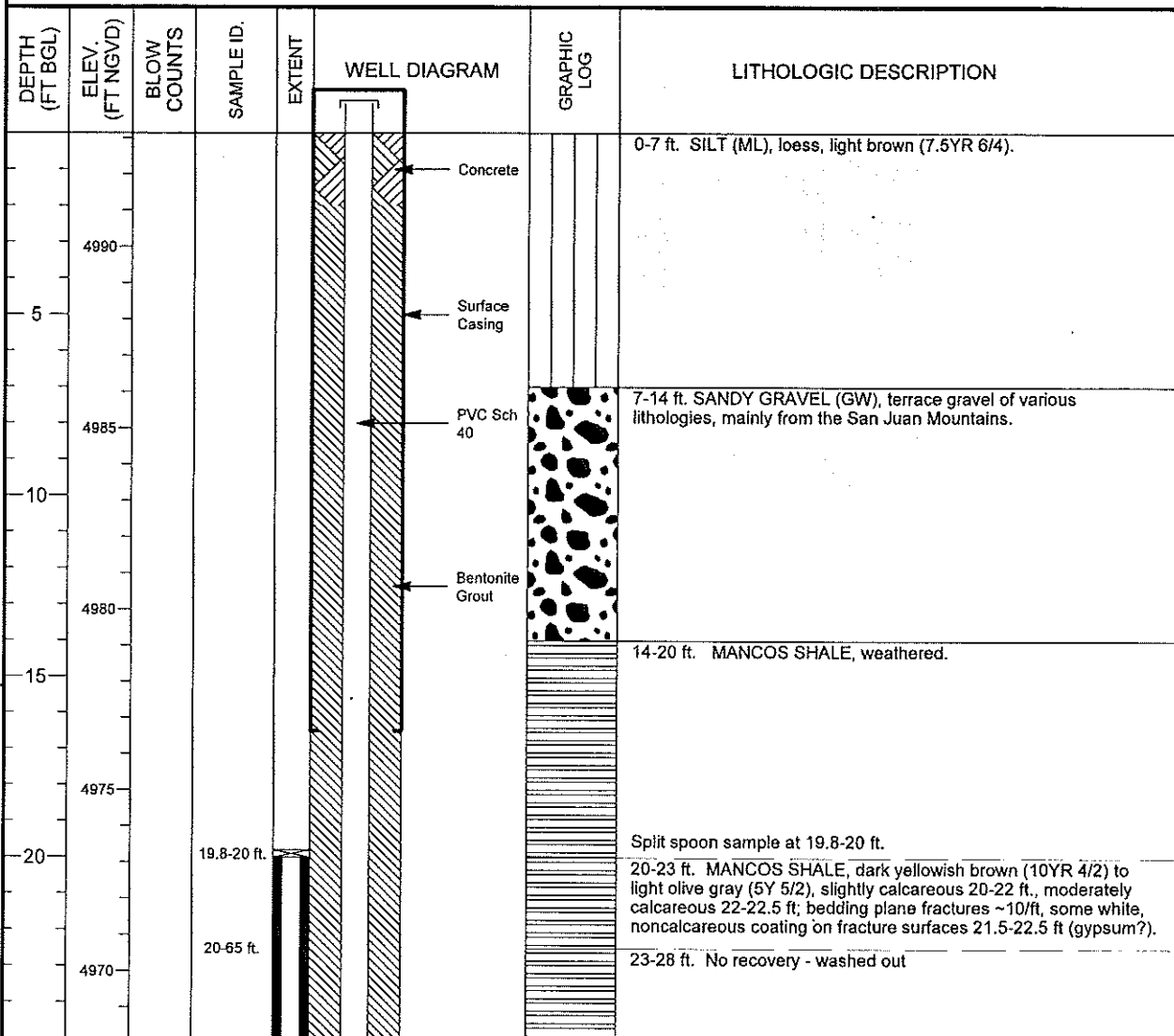
PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2098278.21	DATE DRILLED	03/23/1993 to 03/24/1993
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	251390.35	SURFACE ELEV. (FT NGVD)	4970.15
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	29.00	TOP OF CASING (FT)	4972.15
WELL NUMBER	0731	WELL DEPTH (FT)	29.00	MEAS. PT. ELEV. (FT)	4972.15

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD ODEX/AIR ROTARY
BLANK CASING:	2 in. PVC Sch 40	-2.0 to 17.0	SAMPLING METHOD GRAB
WELL SCREEN:	2 in. Machine Slotted PVC	17.0 to 27.0	DATE DEVELOPED 03/24/1993
SUMP/END CAP:	2 in. PVC Sch 40	27.0 to 29.0	WATER LEVEL (FT BGS) 19.0 on 03/24/1993
SURFACE SEAL:	Grout	0.0 to 5.0	LOGGED BY W. Wood
GROUT:			REMARKS
SEAL:	Bentonite Chips	5.0 to 10.0	
UPPER PACK:			
LOWER PACK:	8-12 Silica Sand	10.0 to 29.0	



MONITORING WELL COMPLETION LOG SHP02-0800

PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2097118.68	DATE DRILLED	09/23/1998 to 09/30/1998
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	261458.17	SURFACE ELEV. (FT NGVD)	4993.14
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	65.00	TOP OF CASING (FT)	4995.76
WELL NUMBER	0800	WELL DEPTH (FT)	62.46	MEAS. PT. ELEV. (FT)	4995.76
				SLOT SIZE (IN)	0.010
				BIT SIZE(S) (IN)	8.75
WELL INSTALLATION		INTERVAL (FT)		DRILLING METHOD CORE/ROTARY/D-THRU DRV	
SURFACE CASING:	6.75 in. Steel	-2.2	to 16.5	SAMPLING METHOD CONT. CORE/SPLIT SPOON	
BLANK CASING:	2 in. PVC Sch 40	-2.62	to 52.3	DATE DEVELOPED 11/07/1998	
WELL SCREEN:	2 in. Machine Slotted PVC	52.3	to 62.3	WATER LEVEL (FT BGS) Dry 11/17/1998	
SUMP/END CAP:	2 in. PVC Sch 40	62.3	to 62.46	LOGGED BY C. Goodknight	
SURFACE SEAL:	Concrete	-0.5	to 2.0	REMARKS	
GROUT:	Bentonite Grout	2.0	to 42.0		
SEAL:	Bentonite Chips	42.0	to 45.5		
UPPER PACK:	100 mesh Silica Sand	45.5	to 46.5		
LOWER PACK:	20-40 Silica Sand	46.5	to 62.46		



MONITORING WELL COMPLETION LOG SHP02-0800

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0800
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	09/23/1998 to 09/30/1998

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
30	4965				<p style="text-align: center;">20-65 ft.</p>		28-31.7 ft. As above. Some limonitic stained surfaces and some white noncalcareous surfaces (gypsum?). Mainly calcareous
	4960						31.7-33 ft. As above. Competent to fractured (weathered), medium gray (N5) to medium dark gray (N4), calcareous
35							33-35 ft. Hole rotary drilled and reamed, coring resumed at 35 ft.
	4955						35-37 ft. Core lost, probably from well-fractured zone
40							37-45 ft. As above. Medium light gray (N6) to dark gray (N3). Claystone seams are dark gray and shale layers are lighter shades of gray. Bedding plane fractures more common from 37-40 ft where they average 7-10/ft. These fractures are less frequent from 40-45 ft where they are 2-3/ft. Calcareous throughout. Thin mudstone seams (<1 in) occur at 37.2, 37.6, 37.8, 38.3, and 39.8 ft. Bioturbation common through section.
45	4950				Bentonite Grout Bentonite Pellets 100 mesh Silica Sand 20-40 Silica Sand 0.010" Slotted PVC		45-55 ft. As above. Claystone seams are rare and occur at 45.1, 45.3, 50.2, 52.7, and 52.9 ft. Bedding plane fracturing is sparse with an average of 2-5/ft. Bioturbation is common throughout; sparse fossils. Light colored layers are slightly coarser grained silty material compared to the finer, darker material composed of shale and clay.
50	4945						
55	4940						55-65 ft. As above. Recovered 100%. Calcareous throughout; bedding plane fracturing is sparse with an average of ~3/ft. Bioturbation is common throughout. Sparse fossils. Claystone



U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION OFFICE, COLORADO

MONITORING WELL COMPLETION LOG SHP02-0800

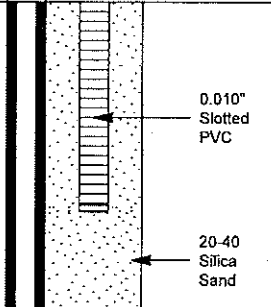
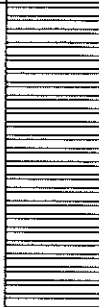
PROJECT UMTRA GROUND WATER

WELL NUMBER 0800

SITE SHIPROCK (TAILINGS AREA)

DATES DRILLED 09/23/1998 to 09/30/1998

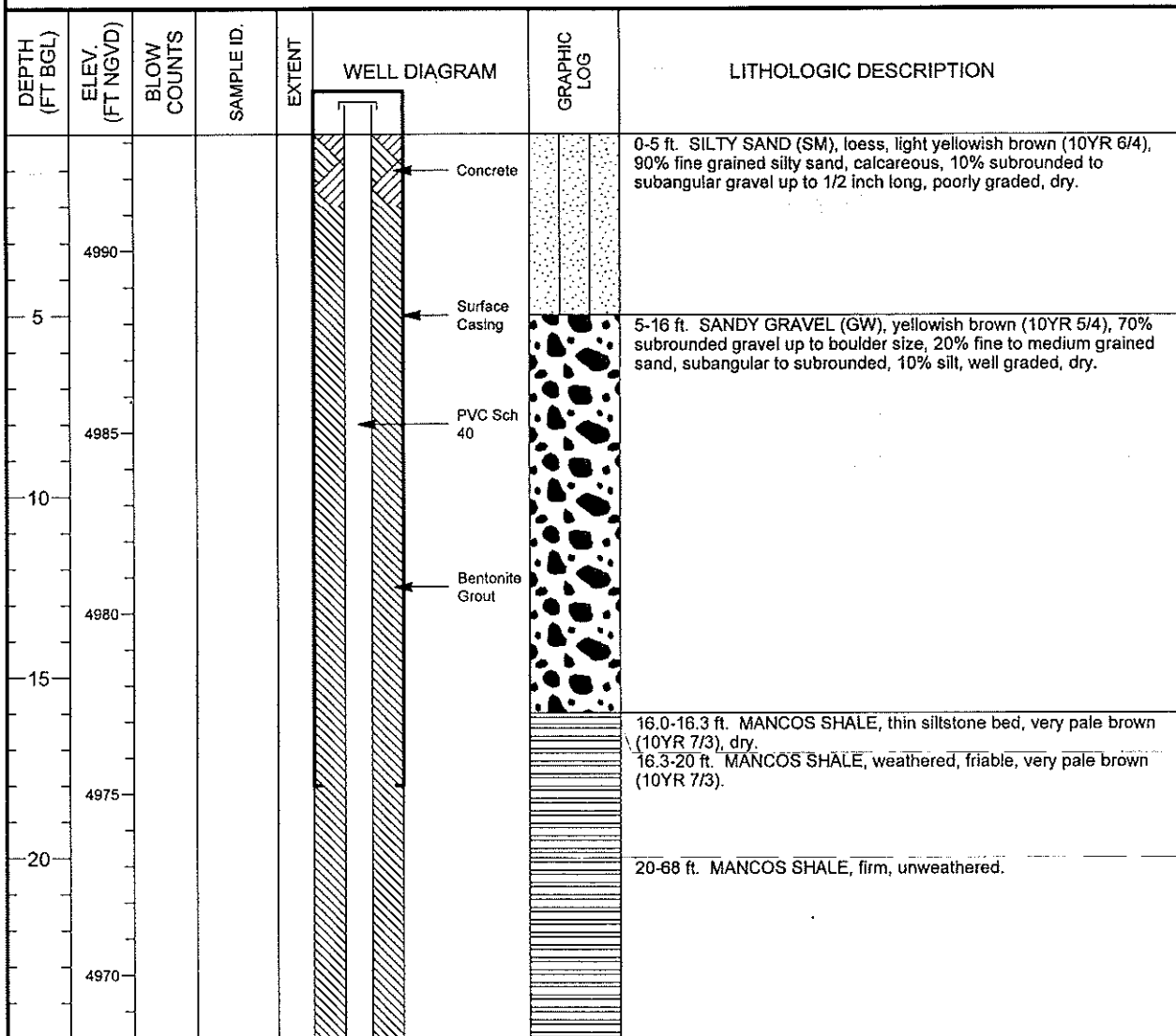
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
60	4935		20-65 ft.	20-65 ft.	 <p style="margin-left: 100px;">0.010" Slotted PVC</p> <p style="margin-left: 100px;">20-40 Silica Sand</p>		seams are rare and are less than 0.1 ft thick at 55.2, 55.7, 59.2, 59.9, 61.2, and 64.8 ft.
65	4930						Total Depth 65.0 ft.
70	4925						
75	4920						
80	4915						
85	4910						
90	4905						



MONITORING WELL COMPLETION LOG SHP02-0801

PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2096236.35	DATE DRILLED	11/17/1998 to 11/19/1998
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	260359.85	SURFACE ELEV. (FT NGVD)	4993.22
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	68.00	TOP OF CASING (FT)	4995.29
WELL NUMBER	0801	WELL DEPTH (FT)	65.00	MEAS. PT. ELEV. (FT)	4995.29
				SLOT SIZE (IN)	0.010
				BIT SIZE(S) (IN)	8.25
	WELL INSTALLATION	INTERVAL (FT)			
SURFACE CASING:	8.625 in. Steel	-2.1 to 18.0		DRILLING METHOD	DRILL-THRU CASING DRIVER
BLANK CASING:	2 in. PVC Sch 40	-2.07 to 54.8		SAMPLING METHOD	
WELL SCREEN:	2 in. Machine Slotted PVC	54.8 to 64.8		DATE DEVELOPED	
SUMP/END CAP:	2 in. PVC Sch 40	64.8 to 65.0		WATER LEVEL (FT BTOC)	Dry 12/06/1998
SURFACE SEAL:	Concrete	-0.5 to 2.0		LOGGED BY	C. Goodknight
GROUT:	Bentonite Grout	2.0 to 43.0		REMARKS	43.0 ft. to 45.9 ft. - 100 mesh silica sand
SEAL:	Bentonite Pellets	45.9 to 49.6			
UPPER PACK:	100 mesh Silica Sand	49.6 to 52.5			
LOWER PACK:	20-40 Silica Sand	52.5 to 68.0			



MONITORING WELL COMPLETION LOG SHP02-0801

PROJECT UMTRA GROUND WATER **WELL NUMBER** 0801
SITE SHIPROCK (TAILINGS AREA) **DATES DRILLED** 11/17/1998 to 11/19/1998

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
30	4965						
35	4960						
40	4955						
45	4950						
50	4945						
55	4940						



MONITORING WELL COMPLETION LOG SHP02-0801

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0801
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	11/17/1998 to 11/19/1998

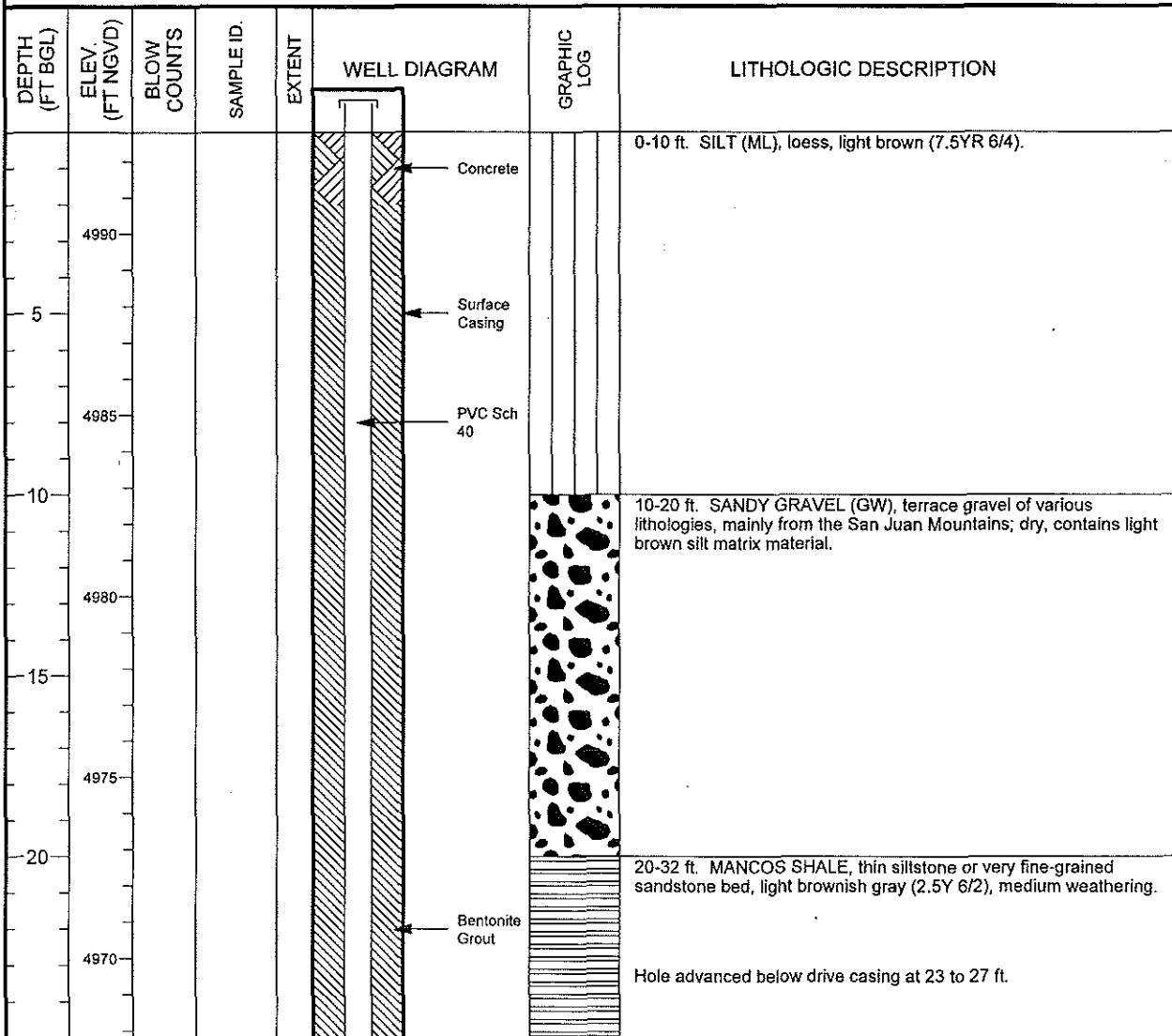
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">60</div> <div style="margin-bottom: 10px;">65</div> <div style="margin-bottom: 10px;">70</div> <div style="margin-bottom: 10px;">75</div> <div style="margin-bottom: 10px;">80</div> <div style="margin-bottom: 10px;">85</div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">4935</div> <div style="margin-bottom: 10px;">4930</div> <div style="margin-bottom: 10px;">4925</div> <div style="margin-bottom: 10px;">4920</div> <div style="margin-bottom: 10px;">4915</div> <div style="margin-bottom: 10px;">4910</div> <div style="margin-bottom: 10px;">4905</div> </div>				<p style="margin-left: 40px;">0.010" Slotted PVC</p> <p style="margin-left: 40px;">20-40 Silica Sand</p>		<p style="text-align: center;">Total Depth 68.0 ft</p>



MONITORING WELL COMPLETION LOG SHP02-0802

PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2096472.78	DATE DRILLED	09/23/1998 to 09/28/1998
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	259469.34	SURFACE ELEV. (FT NGVD)	4992.80
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	65.00	TOP OF CASING (FT)	4996.01
WELL NUMBER	0802	WELL DEPTH (FT)	61.56	MEAS. PT. ELEV. (FT)	4996.01
				SLOT SIZE (IN)	0.010
				BIT SIZE(S) (IN)	8.75
	WELL INSTALLATION	INTERVAL (FT)			
SURFACE CASING:	6.75 in. Steel	-2.3 to 27.0		DRILLING METHOD	CORE/ROTARY/D-THRU DRV
BLANK CASING:	2 in. PVC Sch 40	-3.21 to 51.4		SAMPLING METHOD	CONTINUOUS CORE (NX)
WELL SCREEN:	2 in. Machine Slotted PVC	51.4 to 61.4		DATE DEVELOPED	12/03/1998
SUMP/END CAP:	2 in. PVC Sch 40	61.4 to 61.56		WATER LEVEL (FT BTOC)	Dry 11/18/1998
SURFACE SEAL:	Concrete	-0.5 to 2.0		LOGGED BY	C. Goodknight
GROUT:	Bentonite Grout	2.0 to 42.0		REMARKS	
SEAL:	Bentonite Chips	42.0 to 45.5			
UPPER PACK:	100 mesh Silica Sand	45.5 to 46.5			
LOWER PACK:	20-40 Silica Sand	46.5 to 61.56			



MONITORING WELL COMPLETION LOG SHP02-0802

PROJECT UMTRA GROUND WATER WELL NUMBER 0802
 SITE SHIPROCK (TAILINGS AREA) DATES DRILLED 09/23/1998 to 09/28/1998

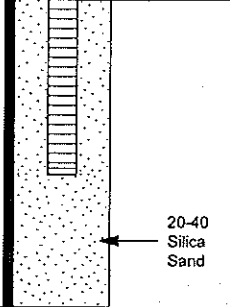
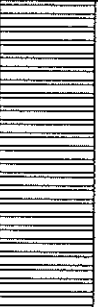
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
30	4965						Rotary drill and split spoon sampling (only 3 in. recovery) at 27-32 ft.
35	4960						32-35 ft. MANCOS SHALE; medium light gray (N6) to dark gray (N3), calcareous, calc. siltstone beds are med light gray and claystone beds are dark gray; trace thin aragonite seams in typical medium gray (N5) shale.
40	4955						35-45 ft. As above. Bedding plane fracturing numerous at 35.0-35.5, 36.5-37.5, and 44.5-45.0 (>5/ft.) Bedding is bioturbated commonly. Thin dark gray claystone seams that swell are at 35.7, 36.5, 36.8, 37.8, 38.1, 38.5, 38.9, 39.1, 39.5, 41.2, 41.7, 42.9, 43.2, 44.2, and 44.7 ft. Core in this interval most competent from 41-44 ft. Trace aragonite seams; one at ~41.0 ft. PNNL sample from 42.3-44 ft. 100% recovery.
45	4950			32-65 ft.			45-55 ft. As above. Bedding plane fractures noticeably greater from 45-47 ft (~5/ft.) Bedding commonly interrupted by bioturbation. Claystone seams (thin) at 46.3, 46.7, 47.0, 50.7, 50.9, 51.2, 53.1, 53.3, and 54.1 ft. Core fairly competent 47-50 ft. Low angle inclined fracture (~15 degrees) at ~53.3 ft. Calcareous throughout. Scattered fossils; trace aragonite seams. Recovered ~9.6 feet.
50	4945						
55	4940						55-65 ft. As above. Bedding plane fractures numerous from 55-56.3 ft. (10-15/ft.) Bedding plane fractures least numerous from 60-65 ft. (~3/ft.) Bedding is about 50% planar and about 50%

MONITORING WELL COMPLETION LOG SHP02-0802

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0802
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	09/23/1998 to 09/28/1998

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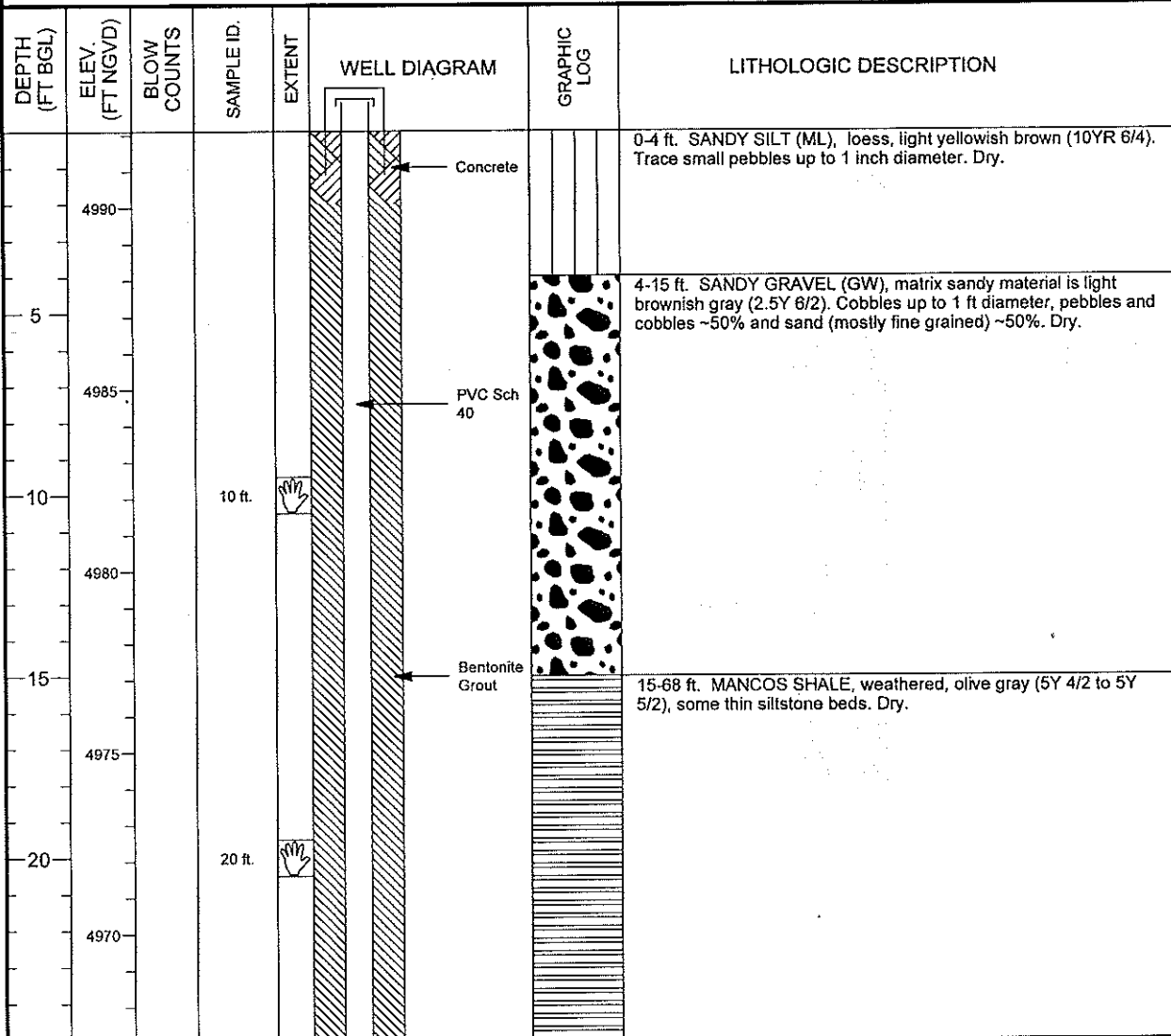
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
60	4935			32-65 ft.			<p>bioturbated. Trace of fossils, and at 61.5 ft. is ~1/4 inch thick aragonite replacement of a fossil at an angle of about 20 degrees. Claystone (gray-black) seams at 57.8, 59.4, and 61.7 ft. Claystone seams are less numerous. At 64.7-64.8 ft. is a large fossil replaced by aragonite (?) that appears as a burrow across the entire core and produced a void space. Calcareous throughout. 100% recovery.</p>
65	4930						Total Depth 65.0 ft.
70	4925						
75	4920						
80	4915						
85	4910						
4905							



MONITORING WELL COMPLETION LOG SHP02-0803

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2097915.13</u>	DATE DRILLED <u>11/18/1998 to 11/19/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>261956.47</u>	SURFACE ELEV. (FT NGVD) <u>4992.10</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>68.00</u>	TOP OF CASING (FT) <u>4994.40</u>
WELL NUMBER <u>0803</u>	WELL DEPTH (FT) <u>65.00</u>	MEAS. PT. ELEV. (FT) <u>4994.40</u>

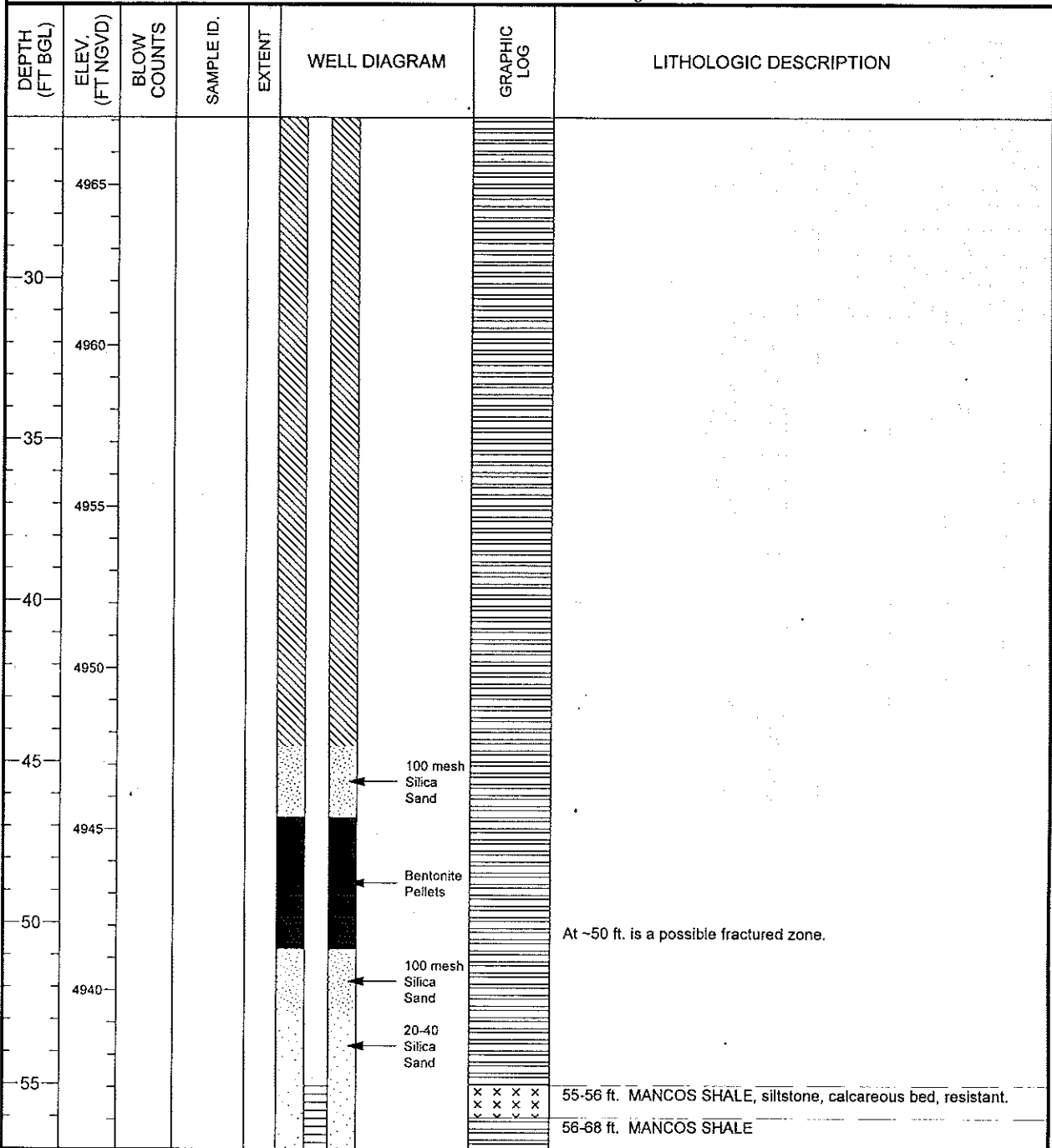
	WELL INSTALLATION	INTERVAL (FT)	SLOT SIZE (IN) <u>0.010</u>
			BIT SIZE(S) (IN) <u>8.25</u>
SURFACE CASING:			DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
BLANK CASING:	2 in. PVC Sch 40	-2.3 to 55.0	SAMPLING METHOD <u>GRAB</u>
WELL SCREEN:	2 in. Machine Slotted PVC	55.0 to 64.8	DATE DEVELOPED _____
SUMP/END CAP:	2 in. PVC Sch 40	64.8 to 65.0	WATER LEVEL (FT BTOC) <u>Dry</u> <u>12/06/1998</u>
SURFACE SEAL:	Concrete	-0.5 to 2.0	LOGGED BY <u>C. Goodknight</u>
GROUT:	Bentonite Grout	2.0 to 44.5	REMARKS <u>44.5 ft. to 46.7 ft. -100 mesh silica sand.</u>
SEAL:	Bentonite Pellets	46.7 to 50.8	
UPPER PACK:	100 mesh Silica Sand	50.8 to 52.8	
LOWER PACK:	20-40 Silica Sand	52.8 to 65.0	



MONITORING WELL COMPLETION LOG SHP02-0803

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0803
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	11/18/1998 to 11/19/1998

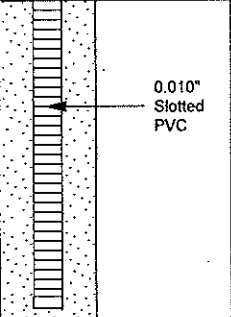

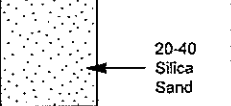

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MONITORING WELL COMPLETION LOG SHP02-0803

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0803
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	11/18/1998 to 11/19/1998

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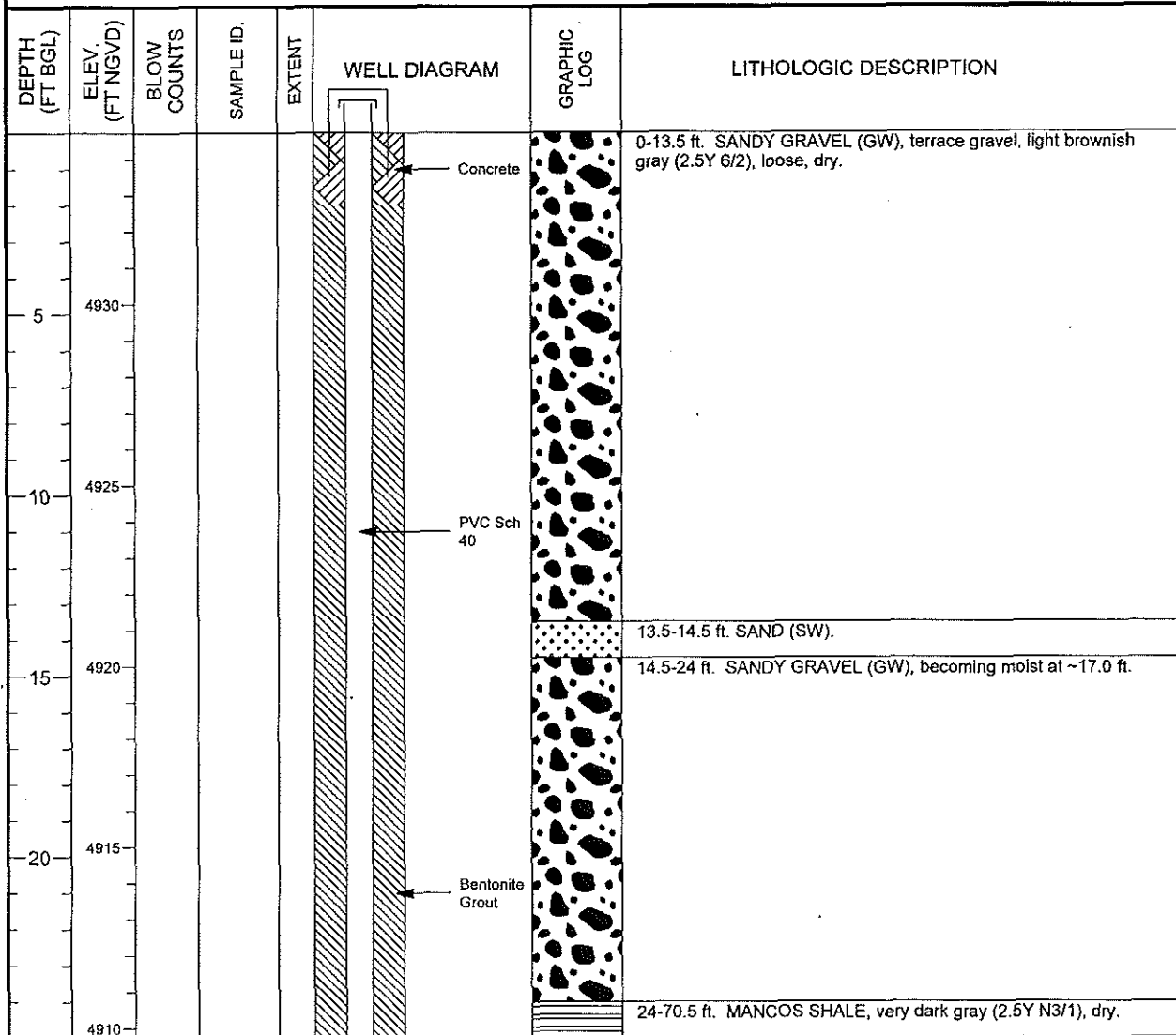
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
60	4930				 <p style="margin-left: 100px;">0.010" Slotted PVC</p>		
65	4925				 <p style="margin-left: 100px;">20-40 Silica Sand</p>		
70	4920						Total Depth 68.0 ft.
75	4915						
80	4910						
85	4905						



MONITORING WELL COMPLETION LOG SHP02-0804

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2098659.62</u>	DATE DRILLED <u>10/21/1998 to 10/22/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>252260.86</u>	SURFACE ELEV. (FT NGVD) <u>4934.73</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>70.50</u>	TOP OF CASING (FT) <u>4936.93</u>
WELL NUMBER <u>0804</u>	WELL DEPTH (FT) <u>70.00</u>	MEAS. PT. ELEV. (FT) <u>4936.93</u>

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			SLOT SIZE (IN) <u>0.010</u>
BLANK CASING:	2 in. PVC Sch 40	-2.2 to 59.8	BIT SIZE(S) (IN) <u>5.88</u>
WELL SCREEN:	2 in. Machine Slotted PVC	59.8 to 69.8	DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
SUMP/END CAP:	2 in. PVC Sch 40	69.8 to 70.0	SAMPLING METHOD <u>GRAB</u>
SURFACE SEAL:	Concrete	-0.5 to 2.0	DATE DEVELOPED
GROUT:	Bentonite Grout	2.0 to 40.0	WATER LEVEL (FT BTOC) <u>Dry 11/18/1998</u>
SEAL:	Bentonite Pellets	43.0 to 46.3	LOGGED BY: <u>M. Kautsky, C. Goodknight</u>
UPPER PACK:	100 mesh Silica Sand	46.3 to 49.3	REMARKS <u>40 ft. to 43 ft. - 100 mesh silica sand.</u>
LOWER PACK:	20-40 Silica Sand	49.3 to 70.5	



MONITORING WELL COMPLETION LOG SHP02-0804

PROJECT UMTRA GROUND WATER WELL NUMBER 0804
 SITE SHIPROCK (TAILINGS AREA) DATES DRILLED 10/21/1998 to 10/22/1998

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
30	4905				<p style="margin-left: 20px;">PVC Sch 40</p> <p style="margin-left: 20px;">100 mesh Silica Sand</p> <p style="margin-left: 20px;">Bentonite Pellets</p> <p style="margin-left: 20px;">100 mesh Silica Sand</p> <p style="margin-left: 20px;">20-40 Silica Sand</p>		
35	4900						
40	4895						
45	4890						
50	4885						
55	4880						



MONITORING WELL COMPLETION LOG SHP02-0804

PROJECT UMTRA GROUND WATER **WELL NUMBER** 0804
SITE SHIPROCK (TAILINGS AREA) **DATES DRILLED** 10/21/1998 to 10/22/1998

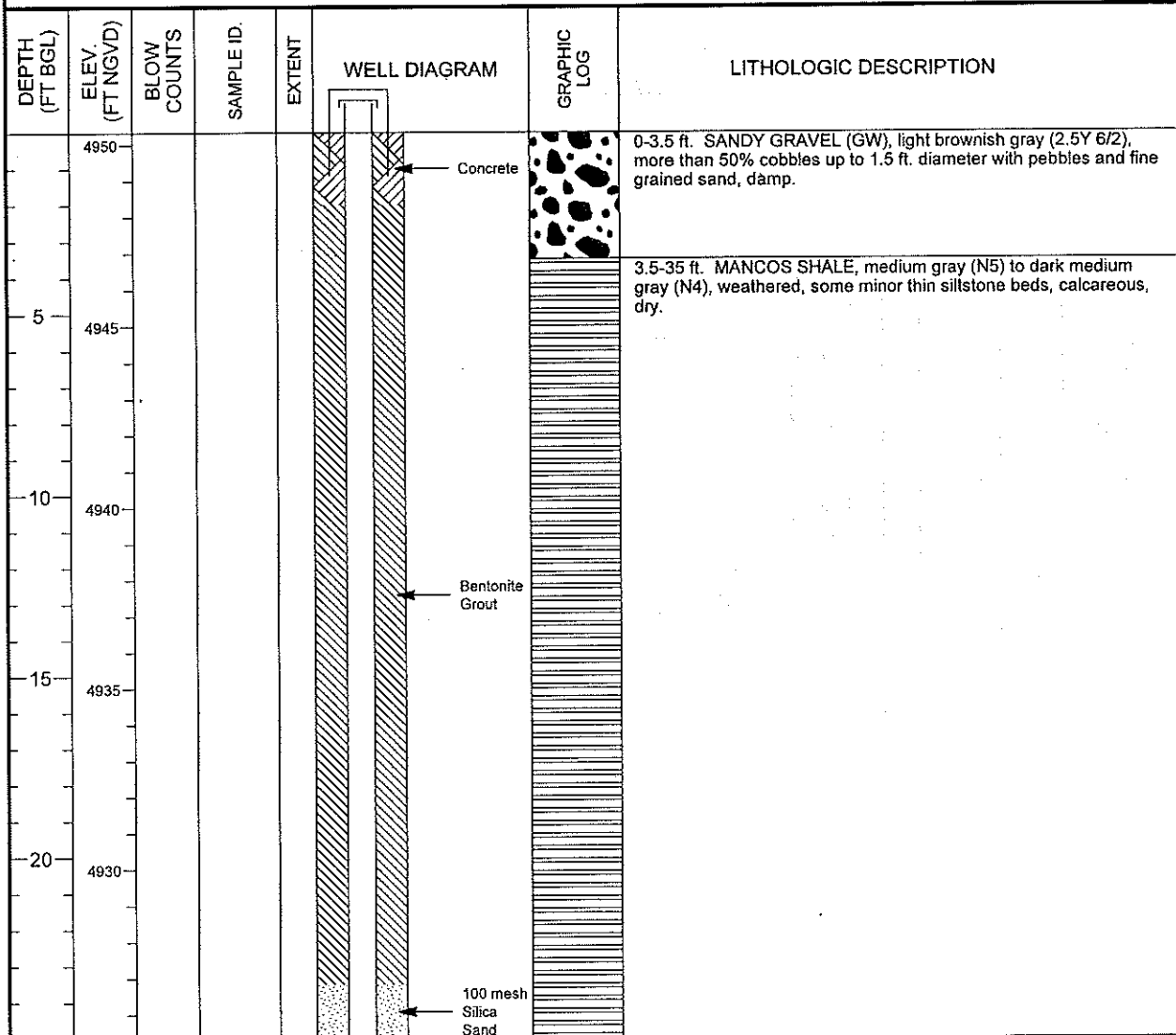
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
60	4875				<p style="margin-left: 100px;">20-40 Silica Sand</p> <p style="margin-left: 100px;">0.010" Slotted PVC</p>		
65	4870						
70	4865						
75	4860						
80	4855						
85	4850						Total Depth 70.5 ft.



MONITORING WELL COMPLETION LOG SHP02-0805

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2097803.99</u>	DATE DRILLED <u>10/23/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>252157.62</u>	SURFACE ELEV. (FT NGVD) <u>4950.34</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>50.90</u>	TOP OF CASING (FT) <u>4953.14</u>
WELL NUMBER <u>0805</u>	WELL DEPTH (FT) <u>49.90</u>	MEAS. PT. ELEV. (FT) <u>4953.14</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>5.88</u>
SURFACE CASING:	WELL INSTALLATION	INTERVAL (FT)
BLANK CASING:	2 in. PVC Sch 40	-2.8 to 39.7
WELL SCREEN:	2 in. Machine Slotted PVC	39.7 to 49.7
SUMP/END CAP:	2 in. PVC Sch 40	49.7 to 49.9
SURFACE SEAL:	Concrete	-0.5 to 2.0
GROUT:	Bentonite Grout	2.0 to 23.5
SEAL:	Bentonite Pellets	25.0 to 28.5
UPPER PACK:	100 mesh Silica Sand	28.5 to 30.0
LOWER PACK:	20-40 Silica Sand	30.0 to 50.9
		DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
		SAMPLING METHOD _____
		DATE DEVELOPED _____
		WATER LEVEL (FT BTOC) <u>Dry</u> <u>11/18/1998</u>
		LOGGED BY <u>C. Goodknight</u>
		REMARKS <u>23.5 ft. to 25.0 ft. - 100 mesh silica sand.</u>



MONITORING WELL COMPLETION LOG SHP02-0805

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0805
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	10/23/1998

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
30	4925 4920						<p>35-36 ft. MANCOS SHALE, siltstone, calcareous bed, resistant.</p> <p>36-50.9 ft. MANCOS SHALE.</p>
40	4910						<p>Total Depth 50.9 ft.</p>
55	4895						



BOREHOLE LOG SHP02-0806

PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>5011.98</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>5.88</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
WELL NUMBER <u>0806</u>	SAMPLING METHOD <u>GRAB</u>
NORTH COORD. (FT) <u>2097451.54</u>	WATER LEVEL (FT BGS) <u>Dry 09/29/1998</u>
EAST COORD. (FT) <u>251225.21</u>	LOGGED BY <u>M. Kautsky</u>
HOLE DEPTH (FT) <u>100.00</u>	REMARKS <u>Dry boring, abandoned</u>
DATE DRILLED <u>09/27/1998</u>	


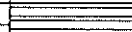

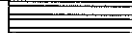



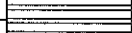



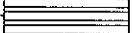
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	5010					0-30 ft. MANCOS SHALE, with some siltstone, light brownish gray (2.5Y 6/2), deeply weathered, soft and friable.
10			10 ft.			
	5000					
20			20 ft.			
	4990					
30			30 ft.			
	4980					30-100 ft. MANCOS SHALE, grading to gray (5Y 6/1), less weathered.
40			40			
	4970					



BOREHOLE LOG SHP02-0806

PROJECT <u>UMTRA GROUND WATER</u>	BOREHOLE NUMBER <u>0806</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DATES DRILLED <u>09/27/1998</u>





Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4960		50 ft.			
60	4950		60 ft.			
70	4940		70 ft.			
80	4930		80 ft.			
90	4920		90 ft.			
100	4910		100 ft.			
Total Depth 100.0 ft.						



BOREHOLE LOG SHP02-0807

PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4977.97</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>5.88</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
WELL NUMBER <u>0807</u>	SAMPLING METHOD <u>GRAB</u>
NORTH COORD. (FT) <u>2098195.35</u>	WATER LEVEL (FT BGS) <u>31.0 on 10/24/1998</u>
EAST COORD. (FT) <u>250582.57</u>	LOGGED BY <u>C. Goodknight</u>
HOLE DEPTH (FT) <u>36.50</u>	REMARKS <u>Boring abandoned after collection of ground water sample; natural backfill 29.5 ft. to 36.5 ft.</u>
DATE DRILLED <u>10/24/1998</u>	






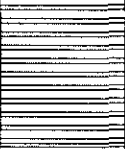
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
5	4975			5 ft.		0-7 ft. SILT (ML), loess, yellowish brown (10YR 6/4), slightly damp.
10	4970			10 ft.		7-13 ft. SAND (SP), pale brown (10YR 6/3), mostly fine grained, less than 5% medium grained, loose, dry.
15	4965			20 ft.		13-20 ft. SANDY GRAVEL (GW), pale brown (10YR 6/3), gravel and cobbles, dry.
20	4960			25 ft.		20-31 ft. SANDY GRAVEL (GW), yellowish brown (10YR 5/4), as above with more sand (approximately 50%), dry.



BOREHOLE LOG SHP02-0807

PROJECT	UMTRA GROUND WATER	BOREHOLE NUMBER	0807
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	10/24/1998

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
30	4950					
			31 ft.			31-32 ft. SAND (SP), dark brown (7.5YR 3/2), medium to coarse grained, moist.
	4945		33 ft.			32-33 ft. SANDY GRAVEL (GW), yellowish brown (10YR 5/4), as above with more sand (approximately 50%), dry.
35						33-36.5 ft. MANCOS SHALE, gray (5Y 5/1), weathered, damp.
						Total Depth 36.5 ft.
40	4940					
45	4935					
50	4930					

BOREHOLE LOG SHP02-0808

PROJECT UMTRA GROUND WATER
 LOCATION SHIPROCK, NM
 SITE SHIPROCK (TAILINGS AREA)
 WELL NUMBER 0808
 NORTH COORD. (FT) 2097464.68
 EAST COORD. (FT) 249551.35
 HOLE DEPTH (FT) 100.00
 DATE DRILLED 09/27/1998

SURFACE ELEV. (FT NGVD) 5024.41
 BIT SIZE(S) (IN) 5.88
 DRILLING METHOD DRILL-THRU CASING DRIVER
 SAMPLING METHOD GRAB
 WATER LEVEL (FT BGS) Dry 09/28/1998
 LOGGED BY M. Kautsky
 REMARKS Dry boring, abandoned

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	5020					0-15 ft. SILT (ML), loess, light brownish gray (10YR 6/2), damp.
10			10 ft.			
	5010					15-25 ft. MANCOS SHALE, light brownish gray (10YR 6/2), deeply weathered, damp.
20			20 ft.			
	5000					25-100 ft. MANCOS SHALE, gray (10YR 5/1), dry.
30			30 ft.			
	4990					
40			40 ft.			
	4980					



BOREHOLE LOG SHP02-0808

PROJECT <u>UMTRA GROUND WATER</u>	BOREHOLE NUMBER <u>0808</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DATES DRILLED <u>09/27/1998</u>






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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
			50 ft.	☞		
	4970					
60			60 ft.	☞		
	4960					
70			70 ft.	☞		
	4950					
80			80 ft.	☞		
	4940					
90			90 ft.	☞		
	4930					
100			100 ft.	☞		
	4920					
Total Depth 100.0 ft.						



BOREHOLE LOG SHP02-0809







PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>5059.67</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>5.88</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
WELL NUMBER <u>0809</u>	SAMPLING METHOD <u>GRAB</u>
NORTH COORD. (FT) <u>2096749.60</u>	WATER LEVEL (FT BGS) <u>Dry 09/29/1998</u>
EAST COORD. (FT) <u>248808.61</u>	LOGGED BY <u>M. Kautsky</u>
HOLE DEPTH (FT) <u>100.00</u>	REMARKS <u>Dry boring, abandoned</u>
DATE DRILLED <u>09/28/1998</u>	

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
10	5050		10 ft.			0-20 ft. MANCOS SHALE, with some siltstone, light brownish gray (2.5Y 6/2), deeply weathered, soft, friable, dry.
20	5040		20 ft.			
30	5030		30 ft.			
40	5020		40 ft.			
	5010					20-100 ft. MANCOS SHALE, grading to gray (5Y 6/1), less weathered, dry.

BOREHOLE LOG SHP02-0809

PROJECT UMTRA GROUND WATER BOREHOLE NUMBER 0809
 SITE SHIPROCK (TAILINGS AREA) DATES DRILLED 09/28/1998

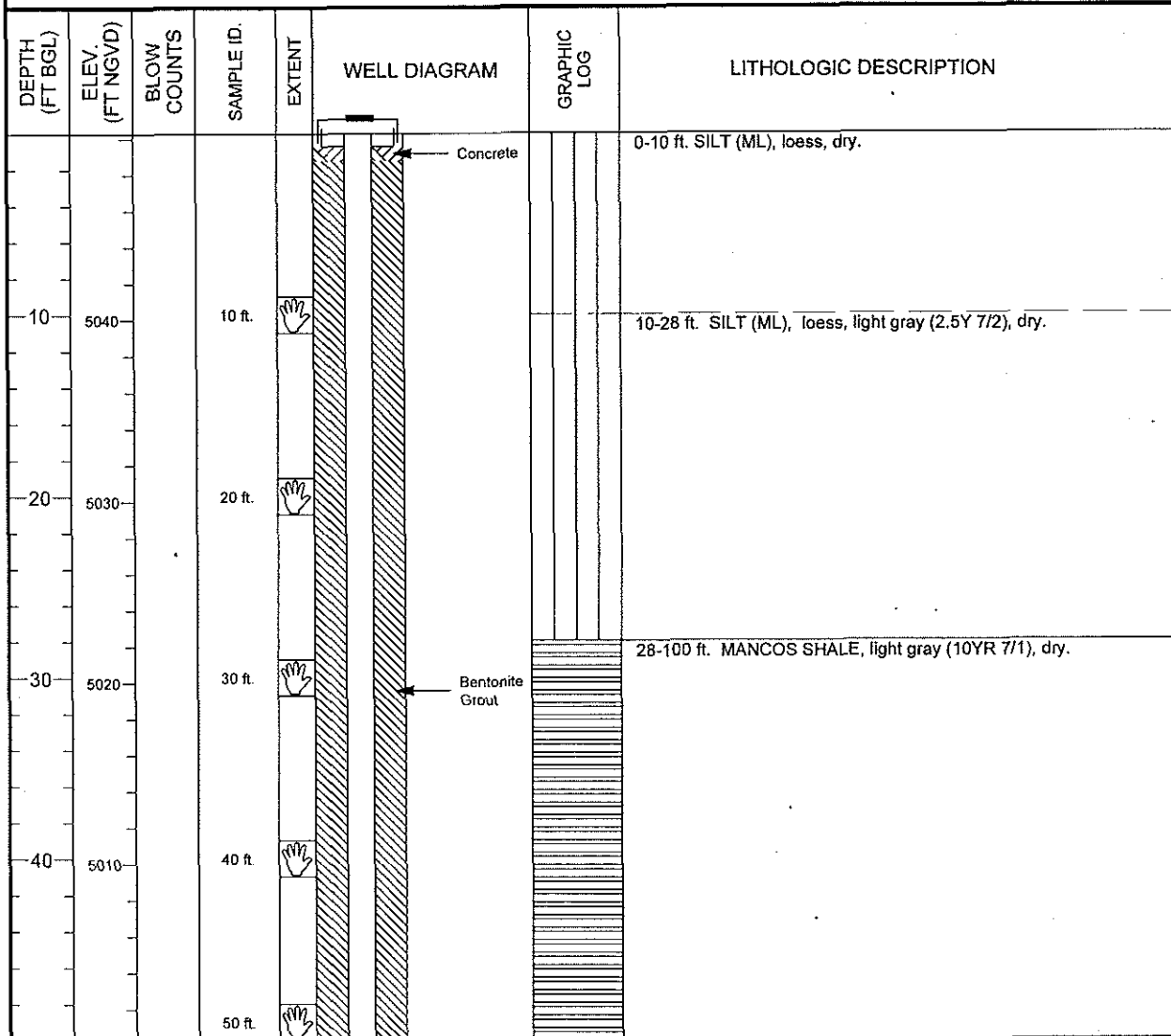
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
			50 ft.		[Hatched Pattern]	
60	5000		60 ft.			
70	4990		70 ft.			
80	4980		80 ft.			
90	4970		90 ft.			
100	4960		100 ft.			
Total Depth 100.0 ft.						



MONITORING WELL COMPLETION LOG SHP02-0810

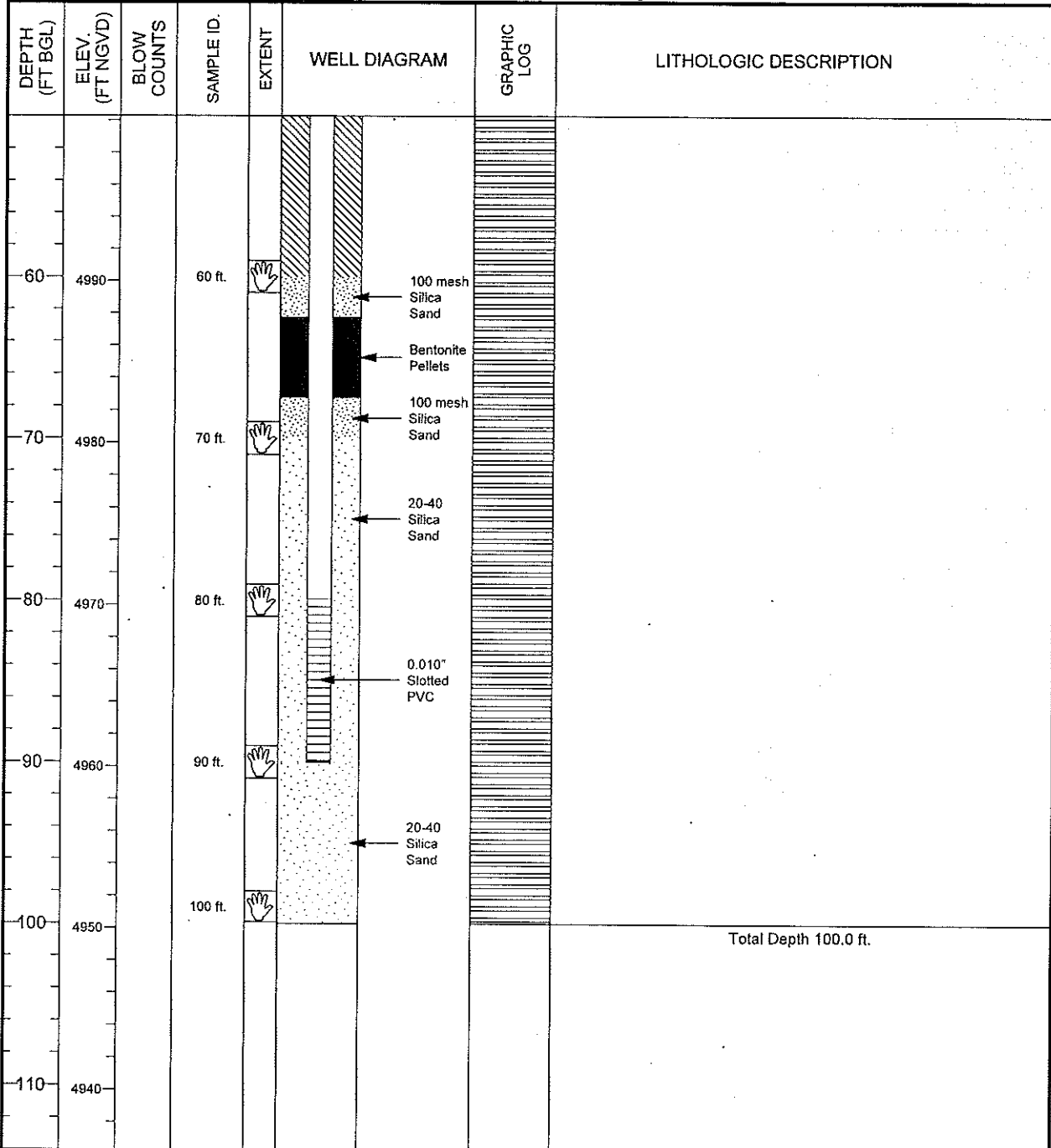
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2095925.14</u>	DATE DRILLED <u>09/27/1998</u>	
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>247626.49</u>	SURFACE ELEV. (FT NGVD) <u>5050.27</u>	
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>100.00</u>	TOP OF CASING (FT) <u>5049.58</u>	
WELL NUMBER <u>0810</u>	WELL DEPTH (FT) <u>90.00</u>	MEAS. PT. ELEV. (FT) <u>5049.58</u>	
		SLOT SIZE (IN) <u>0.010</u>	
		BIT SIZE(S) (IN) <u>5.88</u>	
WELL INSTALLATION		INTERVAL (FT)	
SURFACE CASING:	2 in. PVC Sch 40	0.69	to 79.9
BLANK CASING:	2 in. Machine Slotted PVC	79.9	to 89.9
WELL SCREEN:	2 in. PVC Sch 40	89.9	to 90.0
SUMP/END CAP:	Concrete	0.7	to 1.5
SURFACE SEAL:	Bentonite Grout	1.5	to 60.0
GROUT:	Bentonite Pellets	62.5	to 67.5
SEAL:	100 mesh Silica Sand	67.5	to 70.0
UPPER PACK:	20-40 Silica Sand	70.0	to 100.0
LOWER PACK:			
DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>		SAMPLING METHOD <u>GRAB</u>	
DATE DEVELOPED		WATER LEVEL (FT BGS) <u>Dry 09/28/1998</u>	
LOGGED BY <u>M. Kautsky</u>		REMARKS <u>60.0 ft. to 62.5 ft. - 100 mesh silica sand.</u>	



MONITORING WELL COMPLETION LOG SHP02-0810

PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>0810</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DATES DRILLED <u>09/27/1998</u>

Continued from Previous Page



BOREHOLE LOG SHP02-0811

PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>5056.18</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>5.88</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
WELL NUMBER <u>0811</u>	SAMPLING METHOD <u>GRAB</u>
NORTH COORD. (FT) <u>2096356.54</u>	WATER LEVEL (FT BGS) <u>Dry 09/28/1998</u>
EAST COORD. (FT) <u>247418.86</u>	LOGGED BY <u>M. Kautsky</u>
HOLE DEPTH (FT) <u>100.00</u>	REMARKS <u>Dry boring, abandoned</u>
DATE DRILLED <u>09/28/1998</u>	

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	5050				[Hatched pattern]	0-30 ft. MANCOS SHALE, with some siltstone, light gray (2.5Y N7/0), medium weathered, dry.
10			10 ft.	[Hand icon]	[Hatched pattern]	
	5040				[Hatched pattern]	
20			20 ft.	[Hand icon]	[Hatched pattern]	
	5030				[Hatched pattern]	30-100 ft. MANCOS SHALE, as above, grading to light gray (5Y N7/1).
30			30 ft.	[Hand icon]	[Hatched pattern]	
	5020				[Hatched pattern]	
40			40 ft.	[Hand icon]	[Hatched pattern]	
	5010				[Hatched pattern]	



BOREHOLE LOG SHP02-0811

PROJECT	UMTRA GROUND WATER	BOREHOLE NUMBER	0811
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	09/28/1998

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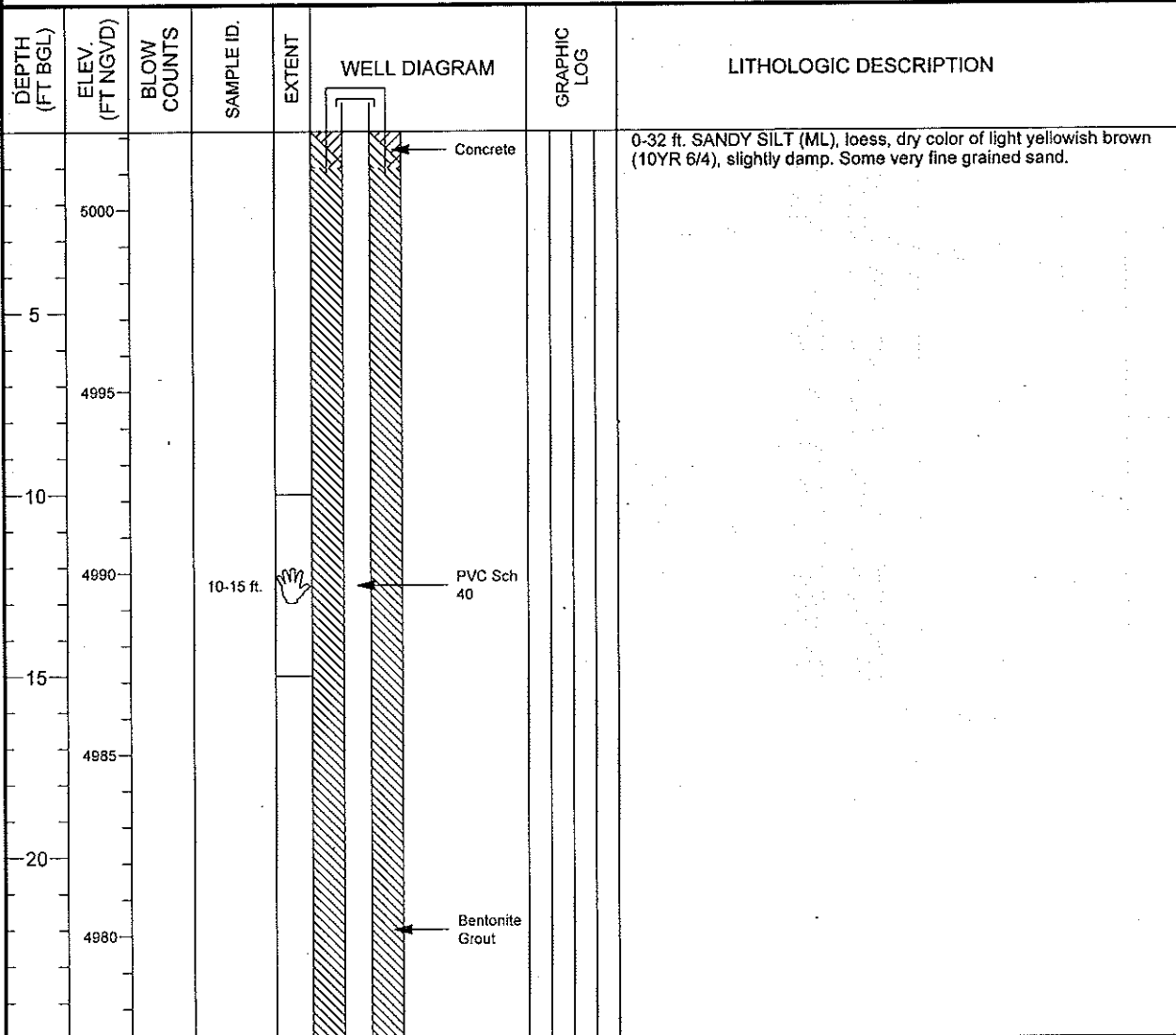
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
			50 ft.	↓		
5000						
60			60 ft.	↓		
4990						
70			70 ft.	↓		
4980						
80			80 ft.	↓		
4970						
90			90 ft.	↓		
4960						
100			100 ft.	↓		
						----- Total Depth 100.0 ft.



MONITORING WELL COMPLETION LOG SHP02-0812

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2098339.51</u>	DATE DRILLED <u>10/27/1998 to 10/28/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>248308.83</u>	SURFACE ELEV. (FT NGVD) <u>5002.16</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>61.50</u>	TOP OF CASING (FT) <u>5004.98</u>
WELL NUMBER <u>0812</u>	WELL DEPTH (FT) <u>61.50</u>	MEAS. PT. ELEV. (FT) <u>5004.98</u>

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
BLANK CASING:	2 in. PVC Sch 40	-2.82 to 51.3	SAMPLING METHOD <u>GRAB</u>
WELL SCREEN:	2 in. Machine Slotted PVC	51.3 to 61.3	DATE DEVELOPED <u>11/11/1998</u>
SUMP/END CAP:	2 in. PVC Sch 40	61.3 to 61.5	WATER LEVEL (FT BGS) <u>60.3 on 10/30/1998</u>
SURFACE SEAL:	Concrete	-0.5 to 1.0	LOGGED BY <u>C. Goodknight</u>
GROUT:	Bentonite Grout	1.0 to 43.0	REMARKS <u>0-29 ft. on 10/27; 29-61.5 ft. on 10/28;</u>
SEAL:	Bentonite Pellets	44.0 to 47.3	<u>finished installation on 10/29. 43.0 ft. to 44.0 ft. -</u>
UPPER PACK:	100 mesh Silica Sand	47.3 to 49.2	<u>20-40 silica sand.</u>
LOWER PACK:	20-40 Silica Sand	49.2 to 61.5	



MONITORING WELL COMPLETION LOG SHP02-0812

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0812
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	10/27/1998 to 10/28/1998

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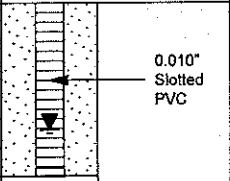

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
4975							
30					PVC Sch 40		
4970							32-34 ft. SANDY SILT (ML), as above, lower part of loess sequence is slightly consolidated and dark grayish brown (10YR 4/2).
35			35-36 ft.	Hand	Bentonite Grout		34-38.5 ft. SAND (SP), mainly fine to medium grained, pale brown (10YR 6/3), with trace small pebbles, dry.
4965							
40							38.5-40 ft. SANDY GRAVEL (GP), about 50% gravel and 50% sand. 40-43 ft. As above, with increase in pebbles.
4960					20-40 Silica Sand		43-48 ft. As above with 50% gravel and cobbles, and 50% medium to coarse grained sand, dry.
45					Bentonite Pellets		
4955			48-48.5 ft.	S	100 mesh Silica Sand		48-55 ft. GRAVELLY SAND (SP), damp color of dark yellowish brown (10YR 4/4), mostly medium-grained sand and ~30% pebbles, dry.
50					20-40 Silica Sand		
4950					0.010" Slotted PVC		
55							55-61.5 ft. MANCOS SHALE, weathered. Dark gray for unweathered parts of the shale, and olive brown for weathered parts. Dry during drilling.



MONITORING WELL COMPLETION LOG SHP02-0812

PROJECT UMTRA GROUND WATER **WELL NUMBER** 0812
SITE SHIPROCK (TAILINGS AREA) **DATES DRILLED** 10/27/1998 to 10/28/1998

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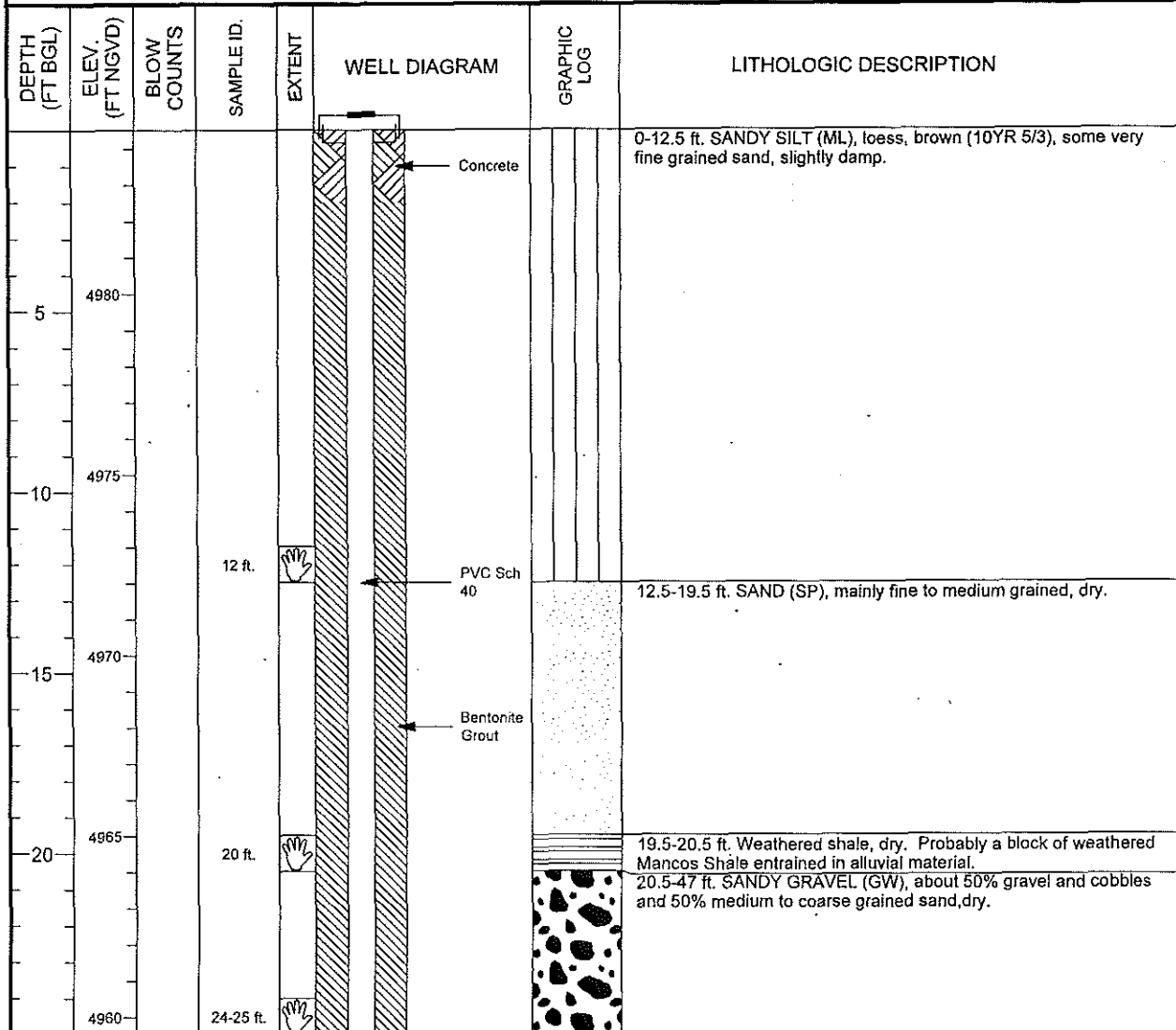
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
60	4945			60-61.5 ft	 <p style="font-size: small;">0.010" Slotted PVC</p>		61.5 ft. MANCOS SHALE, weathered, dark gray (5Y 4/1). Total Depth 61.5 ft.
65	4940						
70	4935						
75	4930						
80	4925						
85	4920						
85	4915						



MONITORING WELL COMPLETION LOG SHP02-0813

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2099346.57</u>	DATE DRILLED <u>10/25/1998 to 10/26/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>248023.06</u>	SURFACE ELEV. (FT NGVD) <u>4984.52</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>51.00</u>	TOP OF CASING (FT) <u>4984.37</u>
WELL NUMBER <u>0813</u>	WELL DEPTH (FT) <u>51.00</u>	MEAS. PT. ELEV. (FT) <u>4984.37</u>

	WELL INSTALLATION	INTERVAL (FT)	SLOT SIZE (IN) <u>0.010</u>
			BIT SIZE(S) (IN) <u>5.88</u>
SURFACE CASING:			DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
BLANK CASING:	2 in. PVC Sch 40	0.15 to 40.8	SAMPLING METHOD <u>GRAB</u>
WELL SCREEN:	2 in. Machine Slotted PVC	40.8 to 50.8	DATE DEVELOPED <u>11/11/1998</u>
SUMP/END CAP:	2 in. PVC Sch 40	50.8 to 51.0	WATER LEVEL (FT BGS) <u>43.3 on 10/27/1998</u>
SURFACE SEAL:	Concrete	-0.5 to 2.0	LOGGED BY <u>C. Goodknight</u>
GROUT:	Bentonite Grout	2.0 to 31.0	REMARKS <u>0-44 ft. on 10/25; 44-51.0 ft. on 10/26.</u>
SEAL:	Bentonite Pellets	32.5 to 36.5	<u>31.0 ft. to 32.5 ft.-100 mesh silica sand.</u>
UPPER PACK:	100 mesh Silica Sand	36.5 to 39.0	
LOWER PACK:	20-40 Silica Sand	39.0 to 51.0	



MONITORING WELL COMPLETION LOG SHP02-0813

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0813
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	10/25/1998 to 10/26/1998

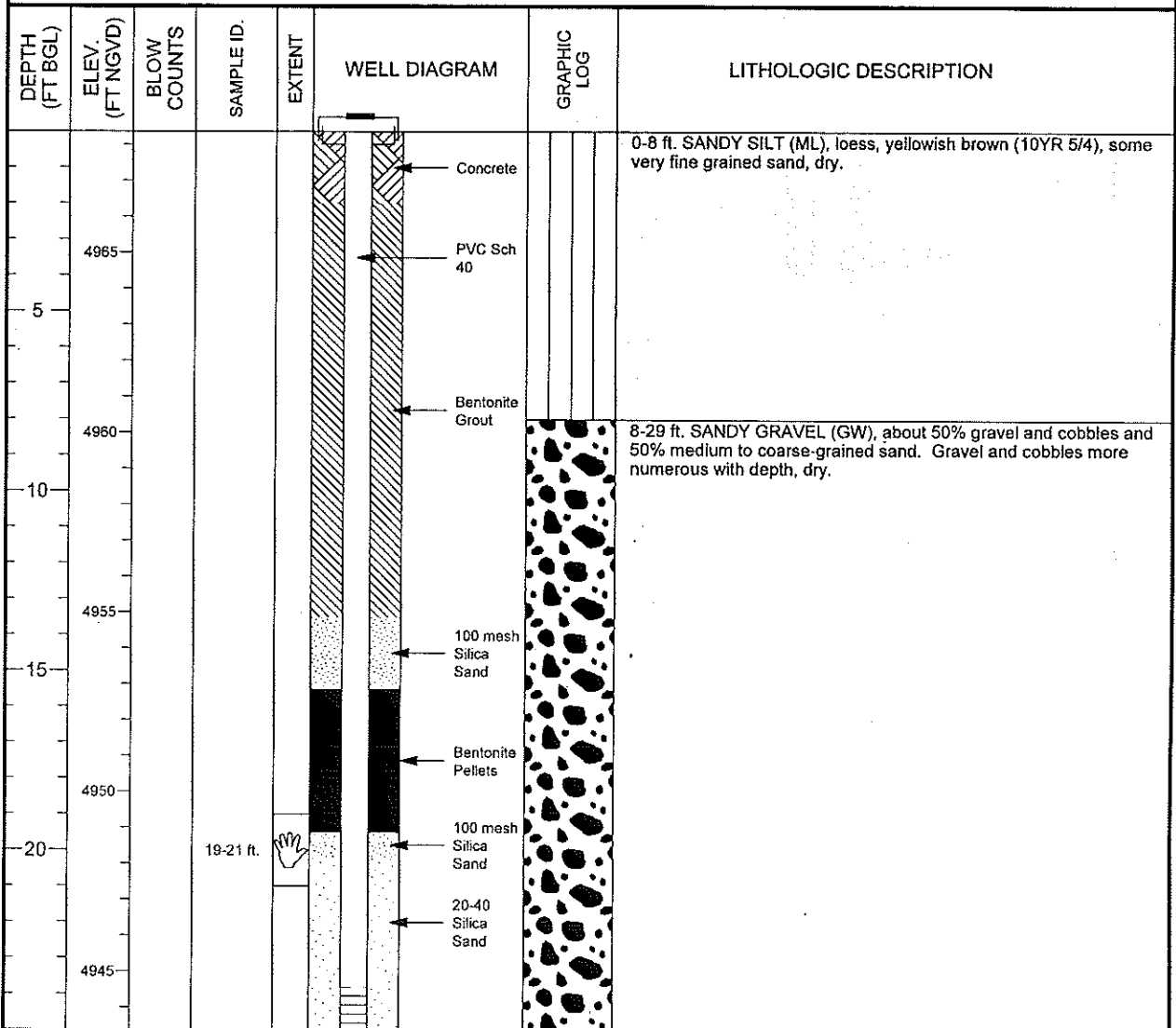
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
-30	4955				PVC Sch 40		
-35	4950			100 mesh Silica Sand	Bentonite Pellets		
-40	4945			100 mesh Silica Sand	20-40 Silica Sand		
-45	4940			0.010" Slotted PVC			Driller thought water found at ~45-47 ft.
-50	4935						47-51 ft. MANCOS SHALE, weathered, olive brown (2.5Y 4/3), soft shale, some limonitic stain associated with the weathered zone.
-55	4930					Total Depth 51.0 ft.	



MONITORING WELL COMPLETION LOG SHP02-0814

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2100474.01</u>	DATE DRILLED <u>11/04/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>247414.84</u>	SURFACE ELEV. (FT NGVD) <u>4968.37</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>36.50</u>	TOP OF CASING (FT) <u>4968.12</u>
WELL NUMBER <u>0814</u>	WELL DEPTH (FT) <u>34.00</u>	MEAS. PT. ELEV. (FT) <u>4968.12</u>
WELL INSTALLATION		SLOT SIZE (IN) <u>0.010</u>
INTERVAL (FT)		BIT SIZE(S) (IN) <u>5.88</u>
SURFACE CASING:		DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
BLANK CASING: 2 in. PVC Sch 40	0.25 to 23.8	SAMPLING METHOD <u>GRAB</u>
WELL SCREEN: 2 in. Machine Slotted PVC	23.8 to 33.8	DATE DEVELOPED <u>11/12/1998</u>
SUMP/END CAP: 2 in. PVC Sch 40	33.8 to 34.0	WATER LEVEL (FT BGS) <u>31.05 on 11/07/1998</u>
SURFACE SEAL: Concrete	0.3 to 2.0	LOGGED BY <u>C. Goodknight</u>
GROUT: Bentonite Grout	2.0 to 13.5	REMARKS <u>13.5 ft. to 15.5 ft. - 100 mesh silica sand.</u>
SEAL: Bentonite Pellets	15.5 to 19.5	
UPPER PACK: 100 mesh Silica Sand	19.5 to 20.2	
LOWER PACK: 20-40 Silica Sand	20.2 to 36.5	



MONITORING WELL COMPLETION LOG SHP02-0814

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0814
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	11/04/1998

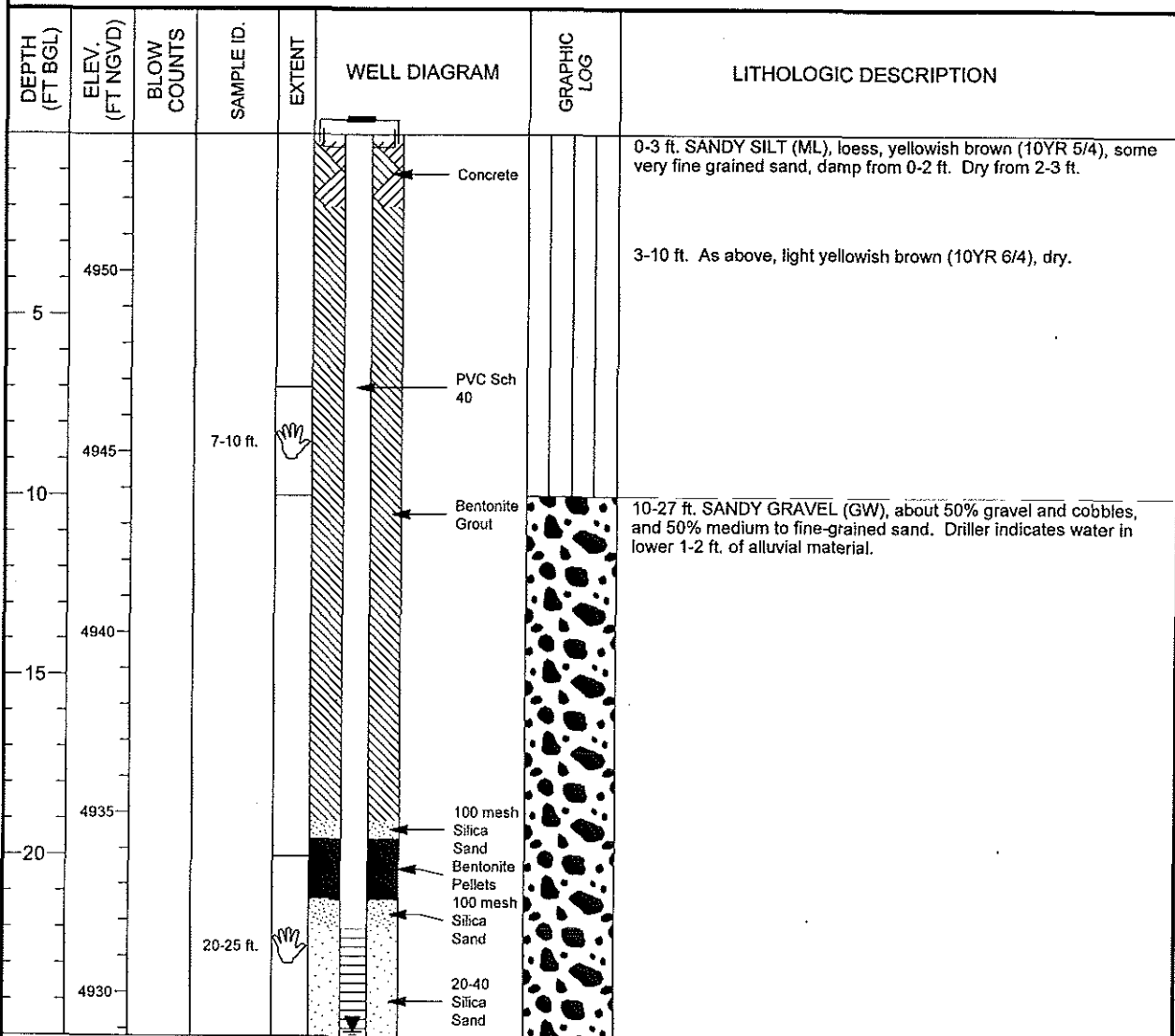
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">30</div> <div style="margin-bottom: 10px;">35</div> <div style="margin-bottom: 10px;">40</div> <div style="margin-bottom: 10px;">45</div> <div style="margin-bottom: 10px;">50</div> <div style="margin-bottom: 10px;">55</div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">4940</div> <div style="margin-bottom: 10px;">4935</div> <div style="margin-bottom: 10px;">4930</div> <div style="margin-bottom: 10px;">4925</div> <div style="margin-bottom: 10px;">4920</div> <div style="margin-bottom: 10px;">4915</div> </div>		30 ft.		<p style="font-size: small;">0.010" Slotted PVC</p> <p style="font-size: small;">20-40 Silica Sand</p>		<p>29-36.5 ft. MANCOS SHALE, weathered, light olive brown (2.5Y 5/3). Soft from 29-30 ft., then harder drilling.</p> <p style="text-align: center; margin-top: 20px;">Total Depth 36.5 ft.</p>



MONITORING WELL COMPLETION LOG SHP02-0815

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101610.39</u>	DATE DRILLED <u>11/05/1998 to 11/06/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>247426.75</u>	SURFACE ELEV. (FT NGVD) <u>4953.79</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>36.00</u>	TOP OF CASING (FT) <u>4953.67</u>
WELL NUMBER <u>0815</u>	WELL DEPTH (FT) <u>32.50</u>	MEAS. PT. ELEV. (FT) <u>4953.67</u>
WELL INSTALLATION INTERVAL (FT)		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>5.88</u>
SURFACE CASING:		DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
BLANK CASING:	2 in. PVC Sch 40 0.12 to 22.3	SAMPLING METHOD <u>GRAB</u>
WELL SCREEN:	2 in. Machine Slotted PVC 22.3 to 32.3	DATE DEVELOPED <u>11/11/1998</u>
SUMP/END CAP:	2 in. PVC Sch 40 32.3 to 32.5	WATER LEVEL (FT BGS) <u>24.84 on 11/07/1998</u>
SURFACE SEAL:	Concrete 0.2 to 2.0	LOGGED BY <u>C. Goodknight</u>
GROUT:	Bentonite Grout 2.0 to 19.0	REMARKS <u>19.0 ft. to 19.5 ft. - 100 mesh silica sand</u>
SEAL:	Bentonite Pellets 19.5 to 21.2	
UPPER PACK:	100 mesh Silica Sand 21.2 to 22.0	
LOWER PACK:	20-40 Silica Sand 22.0 to 36.0	



MONITORING WELL COMPLETION LOG SHP02-0815

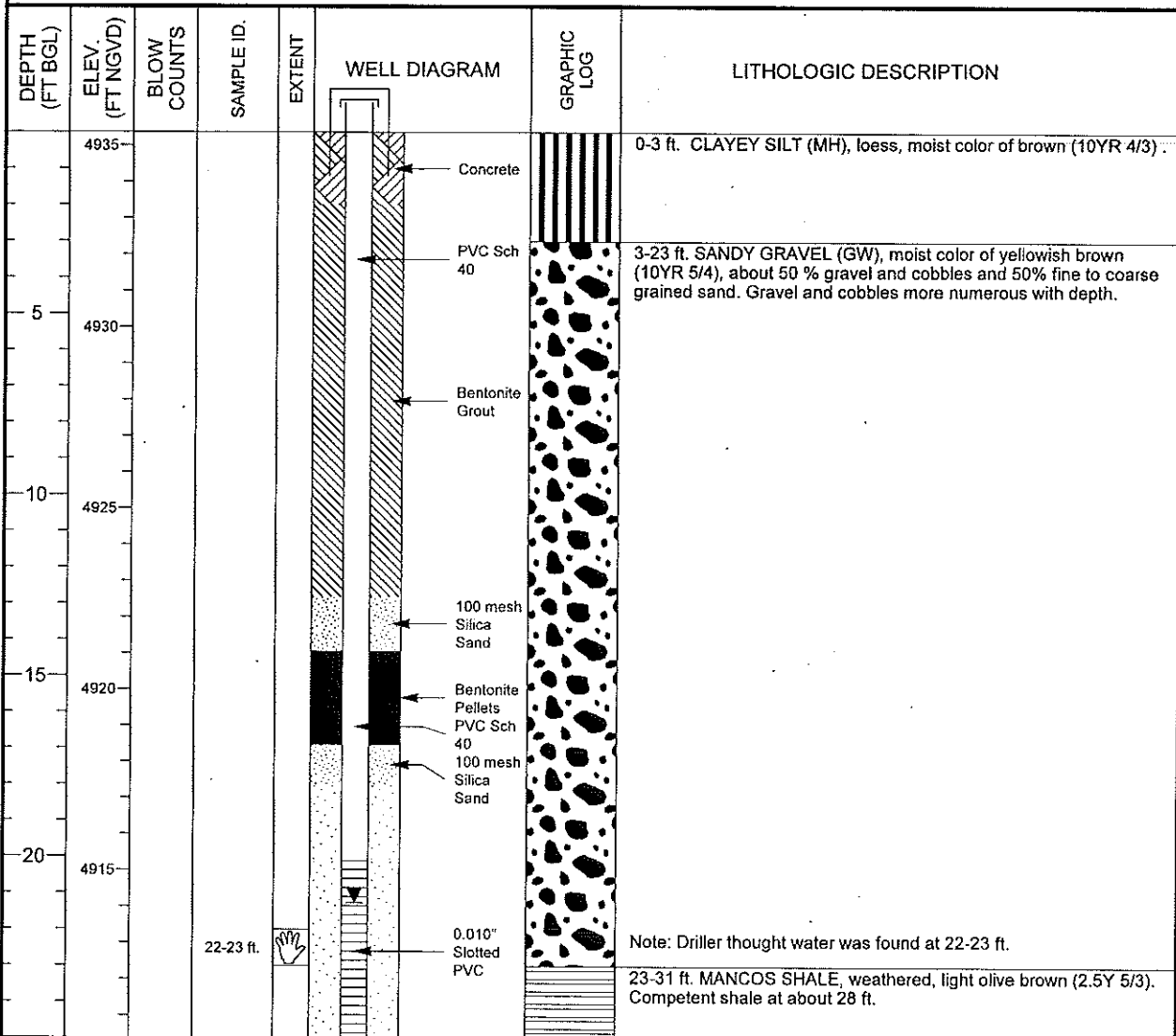
PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>0815</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DATES DRILLED <u>11/05/1998 to 11/06/1998</u>

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">30</div> <div style="margin-bottom: 10px;">35</div> <div style="margin-bottom: 10px;">40</div> <div style="margin-bottom: 10px;">45</div> <div style="margin-bottom: 10px;">50</div> <div style="margin-bottom: 10px;">55</div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">4925</div> <div style="margin-bottom: 10px;">4920</div> <div style="margin-bottom: 10px;">4915</div> <div style="margin-bottom: 10px;">4910</div> <div style="margin-bottom: 10px;">4905</div> <div style="margin-bottom: 10px;">4900</div> </div>				<p style="margin-left: 20px;">0.010" Slotted PVC</p> <p style="margin-left: 20px;">20-40 Silica Sand</p>		<p>27-36 ft. MANCOS SHALE, weathered. Competent shale at ~30 ft.</p> <p style="text-align: center;">Total Depth 36.0 ft.</p>

MONITORING WELL COMPLETION LOG SHP02-0816

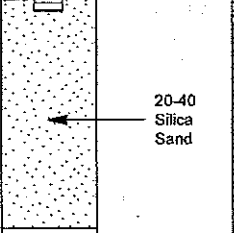
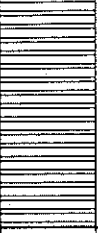
PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2103511.60	DATE DRILLED	11/05/1998
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	247952.70	SURFACE ELEV. (FT NGVD)	4935.37
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	31.00	TOP OF CASING (FT)	4937.92
WELL NUMBER	0816	WELL DEPTH (FT)	25.30	MEAS. PT. ELEV. (FT)	4937.92
				SLOT SIZE (IN)	0.010
				BIT SIZE(S) (IN)	5.88
WELL INSTALLATION		INTERVAL (FT)		DRILLING METHOD DRILL-THRU CASING DRIVER	
SURFACE CASING:				SAMPLING METHOD GRAB	
BLANK CASING:	2 in. PVC Sch 40	-2.55	to 20.1	DATE DEVELOPED 11/12/1998	
WELL SCREEN:	2 in. Machine Slotted PVC	20.1	to 25.1	WATER LEVEL (FT BGS) 21.26 on 11/06/1998	
SUMP/END CAP:	2 in. PVC Sch 40	25.1	to 25.3	LOGGED BY C. Goodknight	
SURFACE SEAL:	Concrete	-0.5	to 2.0	REMARKS 12.8 ft. to 14.3 ft. - 100 mesh silica sand	
GROUT:	Bentonite Grout	2.0	to 12.8		
SEAL:	Bentonite Pellets	14.3	to 16.9		
UPPER PACK:	100 mesh Silica Sand	16.9	to 18.0		
LOWER PACK:	20-40 Silica Sand	18.0	to 31.0		



MONITORING WELL COMPLETION LOG SHP02-0816

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0816
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	11/05/1998

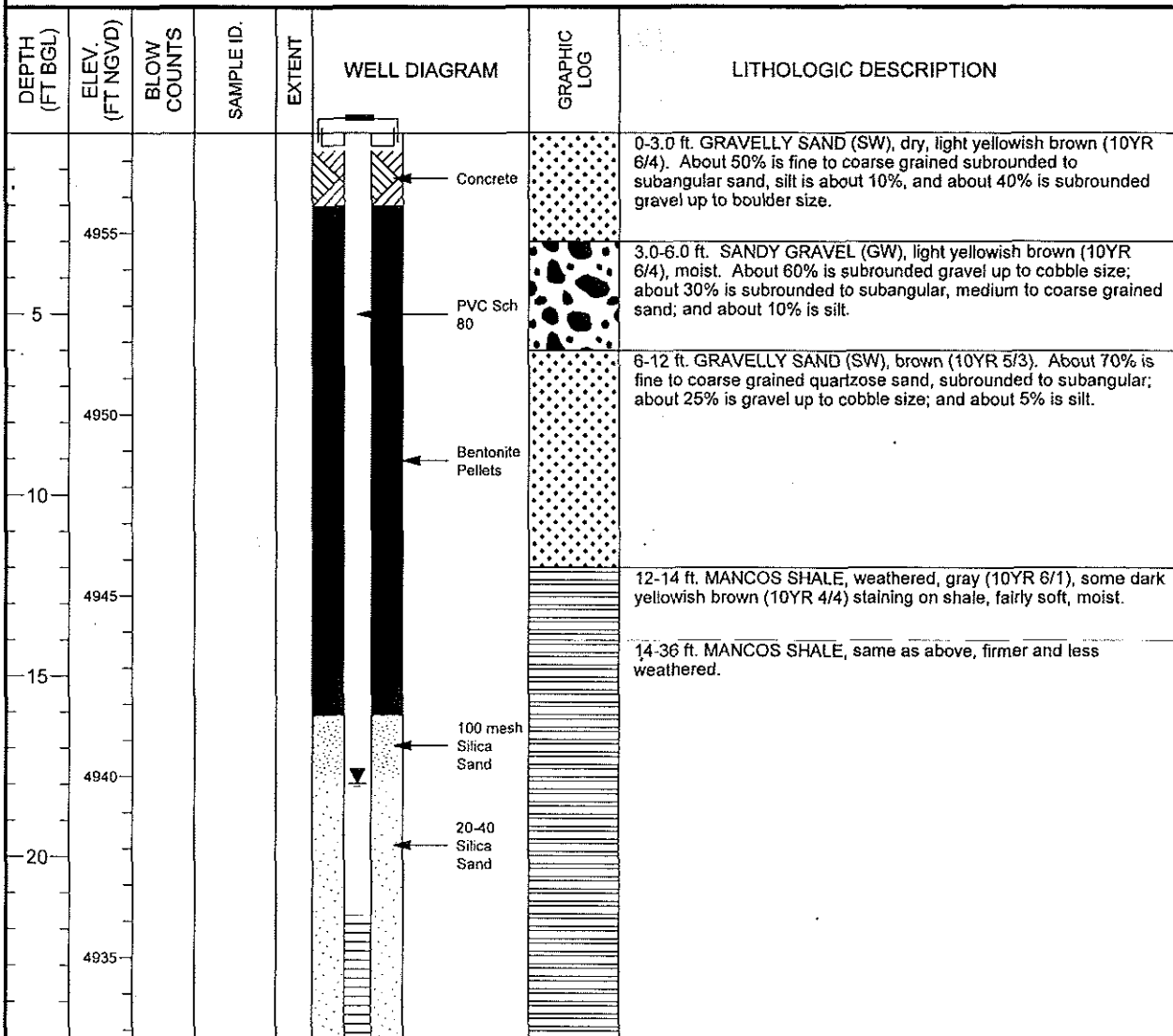
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4910				 <p style="margin-left: 100px;">20-40 Silica Sand</p>		
-30	4905						
-35	4900						Total Depth 31.0 ft.
-40	4895						
-45	4890						
-50	4885						
-55	4880						



MONITORING WELL COMPLETION LOG SHP02-0817

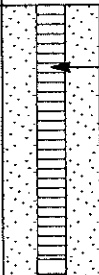

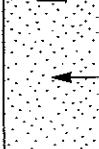
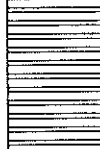
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2100885.97</u>	DATE DRILLED <u>10/12/1998</u>	
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249770.34</u>	SURFACE ELEV. (FT NGVD) <u>4957.77</u>	
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>36.00</u>	TOP OF CASING (FT) <u>4957.34</u>	
WELL NUMBER <u>0817</u>	WELL DEPTH (FT) <u>32.00</u>	MEAS. PT. ELEV. (FT) <u>4957.34</u>	
		SLOT SIZE (IN) <u>0.010</u>	
		BIT SIZE(S) (IN) <u>8.88</u>	
WELL INSTALLATION		INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
BLANK CASING: 5 in. PVC Sch 80	0.43 to 21.6		SAMPLING METHOD <u>GRAB</u>
WELL SCREEN: 5 in. Vee Wire Wrapped	21.6 to 31.62		DATE DEVELOPED <u>11/08/1998</u>
SUMP/END CAP: 5 in. PVC Sch 80	31.62 to 32.0		WATER LEVEL (FT BGS) <u>17.97 on 10/14/1998</u>
SURFACE SEAL: Concrete	0.5 to 2.0		LOGGED BY <u>L. Spencer</u>
GROUT:			REMARKS <u>5 inch diameter production well.</u>
SEAL: Bentonite Pellets	2.0 to 16.08		
UPPER PACK: 100 mesh Silica Sand	16.08 to 17.75		
LOWER PACK: 20-40 Silica Sand	17.75 to 36.0		



MONITORING WELL COMPLETION LOG SHP02-0817

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0817
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	10/12/1998

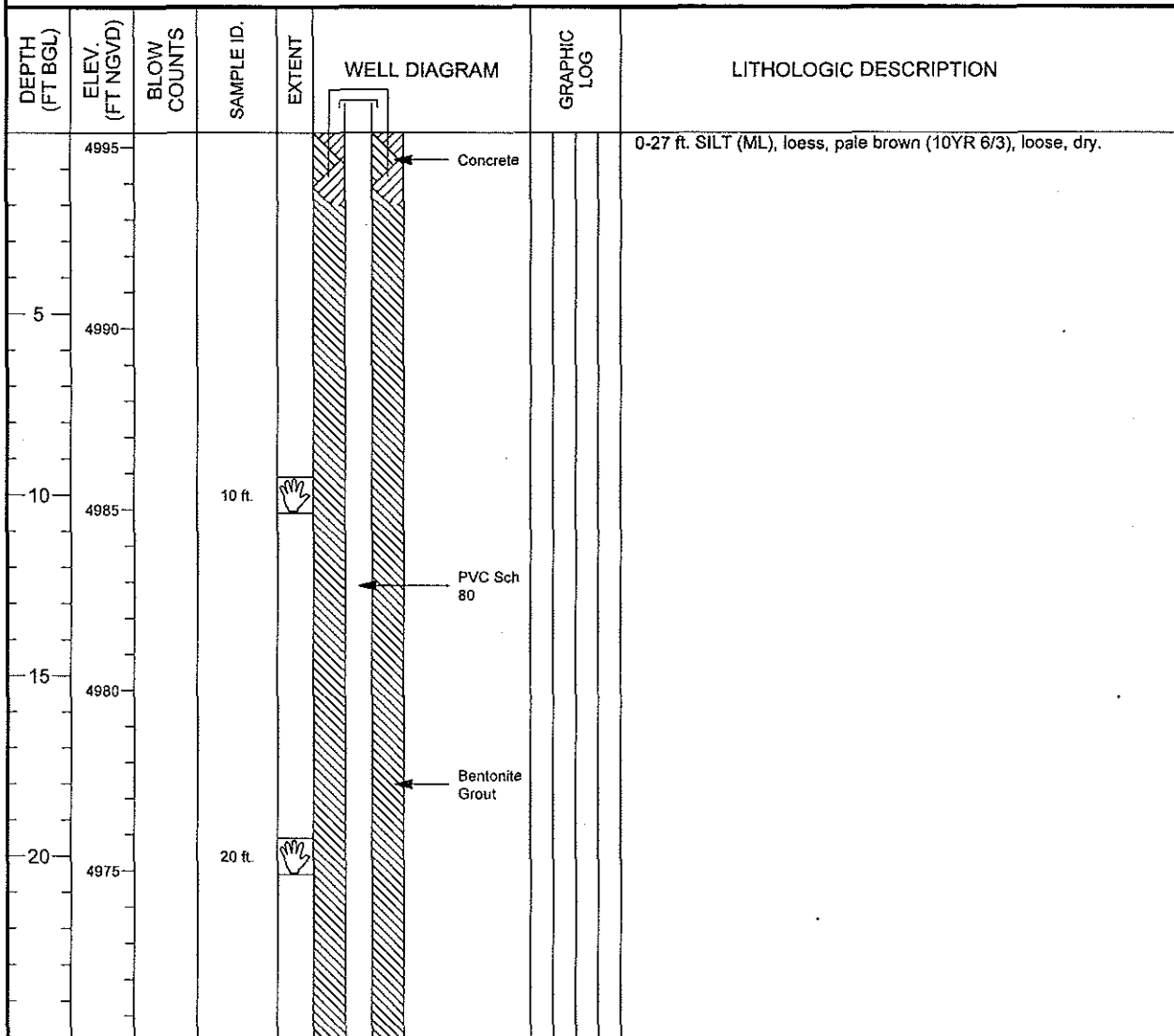
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
30	4930				 <p style="margin-left: 20px;">0.010" Vee Wire Wrapped</p>		
35	4925				 <p style="margin-left: 20px;">20-40 Silica Sand</p>		
40	4920						Total Depth 36.0 ft.
45	4915						
50	4910						
55	4905						



MONITORING WELL COMPLETION LOG SHP02-0818

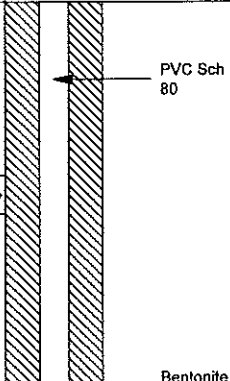



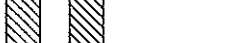

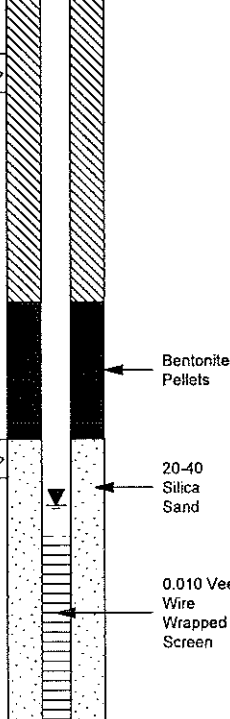
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2098534.26</u>	DATE DRILLED <u>10/08/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249199.65</u>	SURFACE ELEV. (FT NGVD) <u>4995.40</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>64.50</u>	TOP OF CASING (FT) <u>4998.25</u>
WELL NUMBER <u>0818</u>	WELL DEPTH (FT) <u>62.00</u>	MEAS. PT. ELEV. (FT) <u>4998.25</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>8.88</u>
SURFACE CASING:	WELL INSTALLATION	INTERVAL (FT)
BLANK CASING:	5 in. PVC Sch 80	-2.85 to 52.0
WELL SCREEN:	5 in. Vee Wire Wrapped	52.0 to 61.5
SUMP/END CAP:	5 in. PVC Sch 80	61.5 to 62.0
SURFACE SEAL:	Concrete	-0.5 to 2.0
GROUT:	Bentonite Grout	2.0 to 45.9
SEAL:	Bentonite Pellets	45.9 to 49.5
UPPER PACK:		
LOWER PACK:	20-40 Silica Sand	49.5 to 62.0
		DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
		SAMPLING METHOD <u>GRAB</u>
		DATE DEVELOPED <u>11/16/1998</u>
		WATER LEVEL (FT BTOC) <u>54.06 on 12/10/1998</u>
		LOGGED BY <u>M. Kautsky</u>
		REMARKS <u>5-inch diameter production well.</u>



MONITORING WELL COMPLETION LOG SHP02-0818

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0818
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	10/08/1998

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
30	4970 4965			30 ft.	 <p>PVC Sch 80</p>		27-35 ft. SANDY GRAVEL (GW), terrace material, dry, light brown (10YR 6/2).
35	4960				 <p>Bentonite Grout</p>		35-62 ft. SANDY GRAVEL (SP), amount of gravel increases and sand decreases.
40	4955			40 ft.	 <p>Bentonite Pellets</p>		
45	4950				 <p>Bentonite Pellets</p>		
50	4945			50 ft.	 <p>20-40 Silica Sand</p> <p>0.010 Vee Wire Wrapped Screen</p>		
55	4940						



MONITORING WELL COMPLETION LOG SHP02-0818

PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>0818</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DATES DRILLED <u>10/08/1998</u>

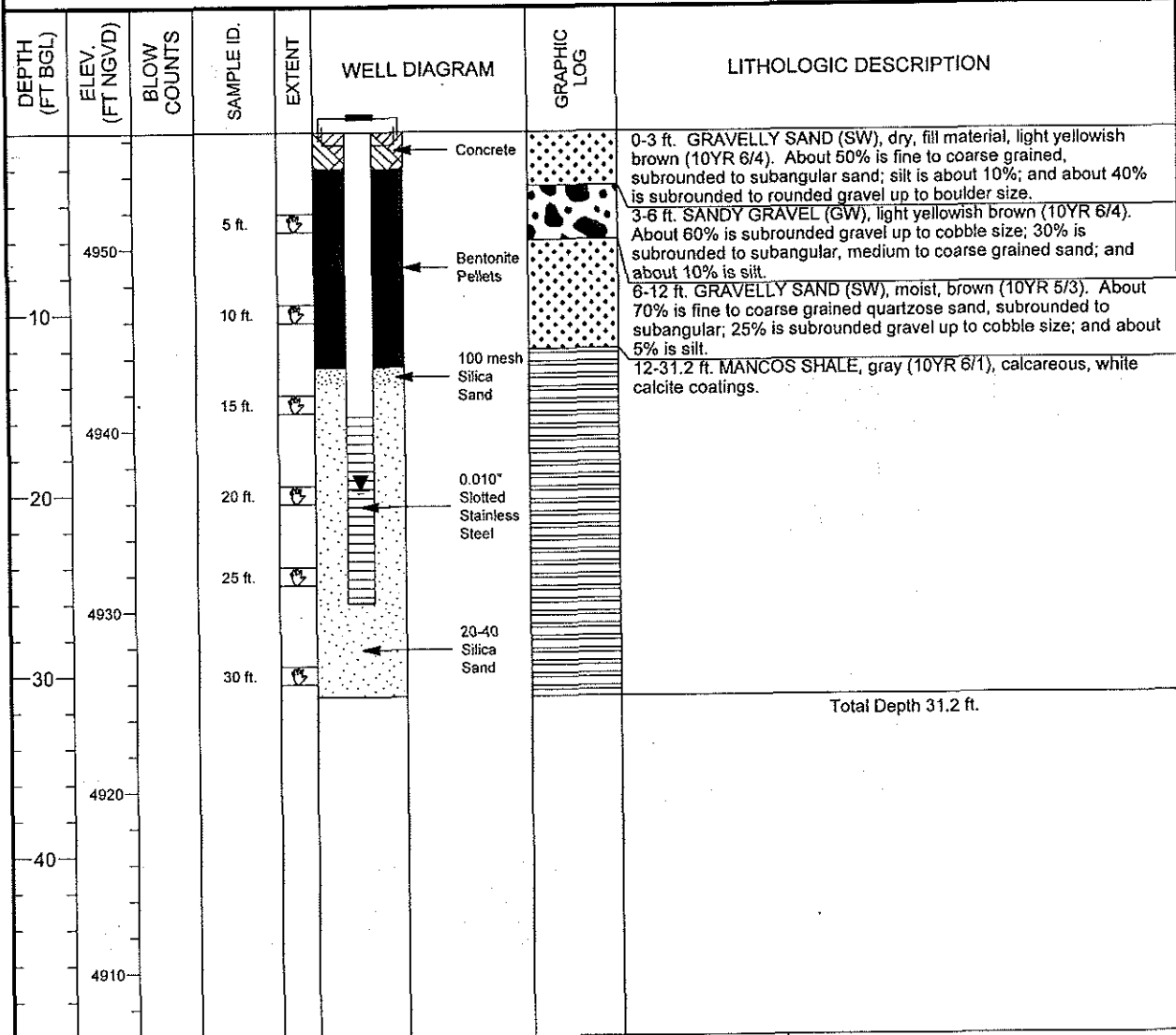
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
60	4935		60 ft.	[Hand icon]	0.010 Vee Wire Wrapped Screen	[Graphic Log Pattern]	
			62-63 ft.	[Hand icon]	20-40 Silica Sand	[Graphic Log Pattern]	62-64.5 ft. MANCOS SHALE, gray (2.5Y N6/1), hard, some weathering.
65	4930						Total Depth 64.5 ft.
70	4925						
75	4920						
80	4915						
85	4910						



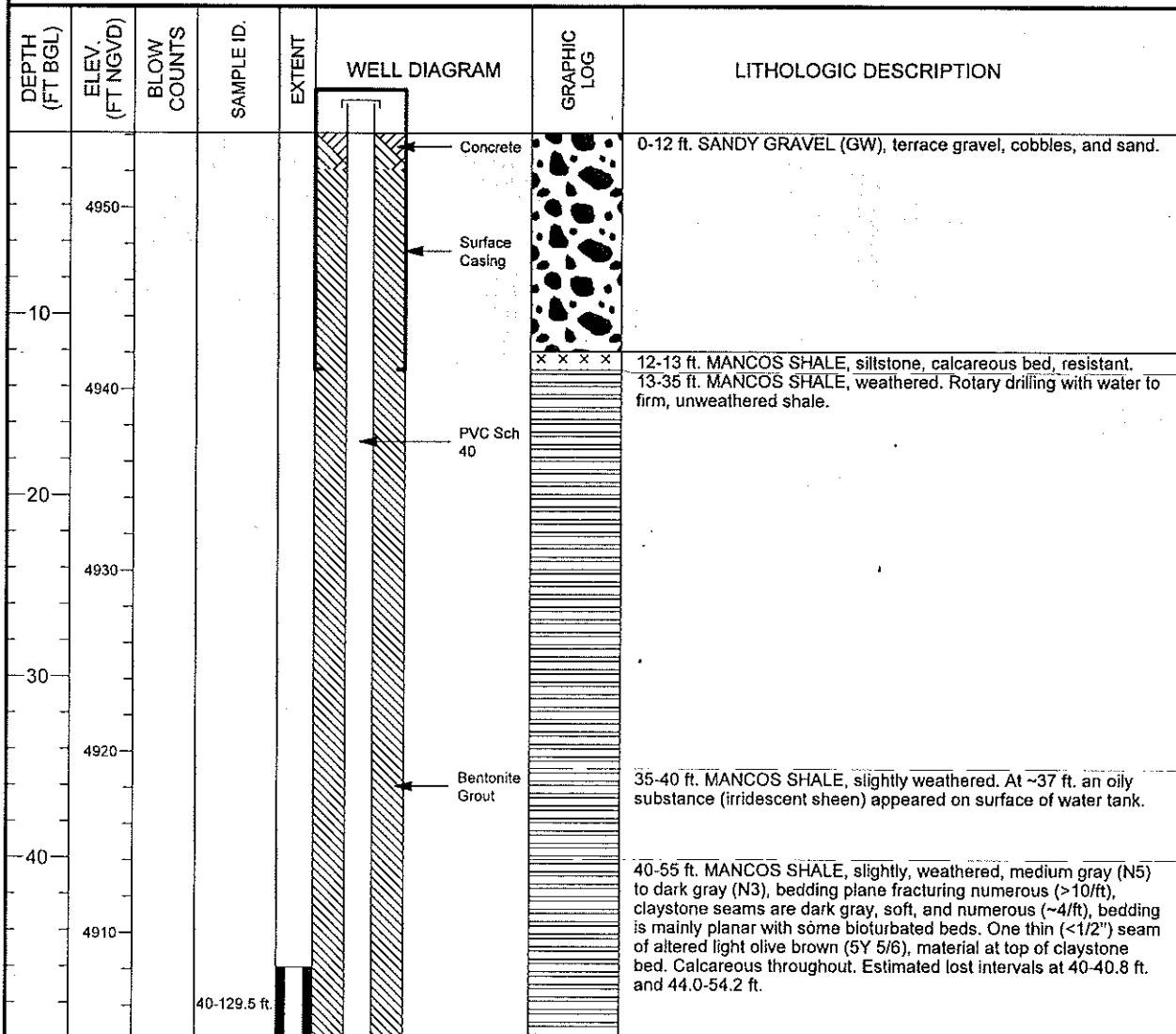
MONITORING WELL COMPLETION LOG SHP02-0819

PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2101176.66	DATE DRILLED	10/14/1998
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	249753.77	SURFACE ELEV. (FT NGVD)	4956.42
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	31.20	TOP OF CASING (FT)	4955.76
WELL NUMBER	0819	WELL DEPTH (FT)	26.00	MEAS. PT. ELEV. (FT)	4955.76
				SLOT SIZE (IN)	0.010
				BIT SIZE(S) (IN)	5.88
WELL INSTALLATION			INTERVAL (FT)	DRILLING METHOD DRILL-THRU CASING DRIVER	
SURFACE CASING:				SAMPLING METHOD GRAB	
BLANK CASING:	2 in. PVC Sch 40	0.66	to 15.67	DATE DEVELOPED 11/09/1998	
WELL SCREEN:	2 in. Stainless Steel	15.67	to 25.67	WATER LEVEL (FT BTOC) 19.09 on 01/06/1999	
SUMP/END CAP:	2 in. Stainless Steel	25.67	to 26.0	LOGGED BY L. Spencer	
SURFACE SEAL:	Concrete	1.0	to 2.0	REMARKS Top of PVC casing is about 0.6 ft. BGS	
GROUT:					
SEAL:	Bentonite Pellets	2.0	to 13.0		
UPPER PACK:	100 mesh Silica Sand	13.0	to 14.0		
LOWER PACK:	20-40 Silica Sand	14.0	to 31.2		



MONITORING WELL COMPLETION LOG SHP02-0820

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102191.62</u>	DATE DRILLED <u>09/16/1998 to 11/21/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250374.05</u>	SURFACE ELEV. (FT NGVD) <u>4954.14</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>153.00</u>	TOP OF CASING (FT) <u>4954.95</u>
WELL NUMBER <u>0820</u>	WELL DEPTH (FT) <u>151.89</u>	MEAS. PT. ELEV. (FT) <u>4954.95</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>8.75 / 5.88</u>
WELL INSTALLATION INTERVAL (FT)		
SURFACE CASING:	10 in. Steel	-1.0 to 13.0
BLANK CASING:	2 in. PVC Sch 40	-0.81 to 149.0
WELL SCREEN:	2 in. Machine Slotted PVC	149.0 to 151.5
SUMPIEND CAP:	2 in. PVC Sch 40	151.5 to 151.89
SURFACE SEAL:	Concrete	-0.5 to 2.0
GROUT:	Bentonite Grout	2.0 to 141.0
SEAL:	Bentonite Pellets	141.0 to 145.5
UPPER PACK:	100 mesh Silica Sand	145.5 to 146.0
LOWER PACK:	20-40 Silica Sand	146.0 to 151.89
DRILLING METHOD <u>CORE/ROTARY/D-THRU DRV</u>		
SAMPLING METHOD <u>CONTINUOUS CORE (NX)</u>		
DATE DEVELOPED _____		
WATER LEVEL (FT BTOC) <u>137.8 on 12/02/1998</u>		
LOGGED BY <u>C. Goodknight, M. Kautsky</u>		
REMARKS <u>0-13 ft. on 9/16; 13-40 ft. on 10/13;</u> <u>40-79.5 ft. on 10/14; 79.5-129.5 ft. on 10/15;</u> <u>129.5-153 ft. on 11/21.</u>		



MONITORING WELL COMPLETION LOG SHP02-0820

PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>0820</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DATES DRILLED <u>09/16/1998 to 11/21/1998</u>

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
4900 60 4890 70 4880 80 4870 90 4860 100 4850 110			40-129.5 ft.		<p style="text-align: center;">PVC Sch 40</p> <p style="text-align: center;">Bentonite Grout</p>		<p>55-59.5 ft. As above. Core is much more competent (few bedding plane fractures), particularly from 55.5-58.5'. From 54.2-55.5' approx. 8 fractures; only ~5 fractures from 55.5-58.5'. Few to no claystone beds. Mostly planar bedding, minor bioturbated or wavy bedding. Calcareous throughout. Aragonite indicating fossil shell at ~55.9'.</p> <p>59.5-69.5 ft. As above. Bedding plane fractures numerous from 59-61' (~8/ft). From 61-62' about 6 fractures. Core more competent from 62-69' with only ~2-3/ft. Thin claystone seams are 4-5/ft from 59-61', then less frequent below. Claystone at 62.6, 62.9, 63.1, 63.3, 63.7, 64.8, 65.8, and 67.1'. Mixture of planar bedding and wavy/bioturbated bedding (about equal amounts). Core very competent at 66-68'. Scattered thin aragonite seams indicating fossils; major one at ~62.5'.</p> <p>69.5-79.5 ft. As above. Bedding plane fractures few from 69.5-71.5' where core is very competent. Few fractures from 72.5-75.2'. From 71.5-72.5' are ~7 fractures. At 72.3-72.6' is a thick light gray siltstone layer. Bedding is about 70% bioturbated and ~30% planar. Core competent with few fractures from 76.0-77.2'. Fracture frequency increases with increase in claystone seams from 75.2-76.0' and 77.2-79.5'. Bioturbation particularly common from 75.2-79.5'. Thick (1/2") seam of aragonite at 75.2'. Calcareous throughout. Fracture frequency from 75-79.5' is ~3-8/ft.</p> <p>79.5-89.5 ft. As above. Bedding plane fractures 2-5/ft from 79.5-85'. More fracturing 85-87' with 5-8/ft. Competent core (few fractures) from 87-89'. Inclined fracture (~80°) at 89-89.5'. Core competent from 81-85'. Thin mudstone seams at 79.8, 81.3, 85.2, 85.6, 85.7, 86.2, 86.8, 87.1, and 88.7'. Scattered aragonite layers indicating fossils, particularly at 85.8'. Bioturbated bedding most common. From 83.6-83.8' is light gray silty layer. Calcareous throughout.</p> <p>89.5-99.5 ft. As above. Bedding plane fractures average 3-5/ft throughout core run (89.7-99.3'). Clay seams occur from 89.7-96 and are at 89.8, 90.8, 91.5, 92.2, 92.6, 94.0, 95.8, and 96.0 ft. Inclined fractures at 95.7' (~30°) and 97.3' (~10°). Several areas of thin aragonite layers indicating flattened pelecypods (?) at 90.8, 97.2, and 94.4'. Calcareous throughout. Bioturbated bedding about as common as planar bedding.</p> <p>99.5-109 ft. As above. Bedding plane fracturing is 2-5/ft est. through core interval 99.3-109.3'. Several high angle fractures at 99.3-99.6, 105.6-105.8', and 106.7-107'. Bioturbated bedding common and predominant in this interval. Claystone seams are rare - one at 105.6'. Thin layers of aragonite indicate flattened pelecypods at 107.0, and 106.7'. One large (1" long) aragonite fossil (vertical) on outside of core at 103.1'. Calcareous throughout. Core quite competent at 102.0-103.2, 104.0-105.3, and 106.0-109'.</p> <p>109-118 ft. As above. Bedding plane fracturing averages 3-6/ft from 109.3-114'. More competent core from 114-116' with only 3 or 4 fractures. Fractures more numerous from 116 to 118.8' with ~5/ft. High angle fracture at 117-117.4'. Thin mudstone layers at 110.8,</p>



MONITORING WELL COMPLETION LOG SHP02-0820

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0820
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	09/16/1998 to 11/21/1998

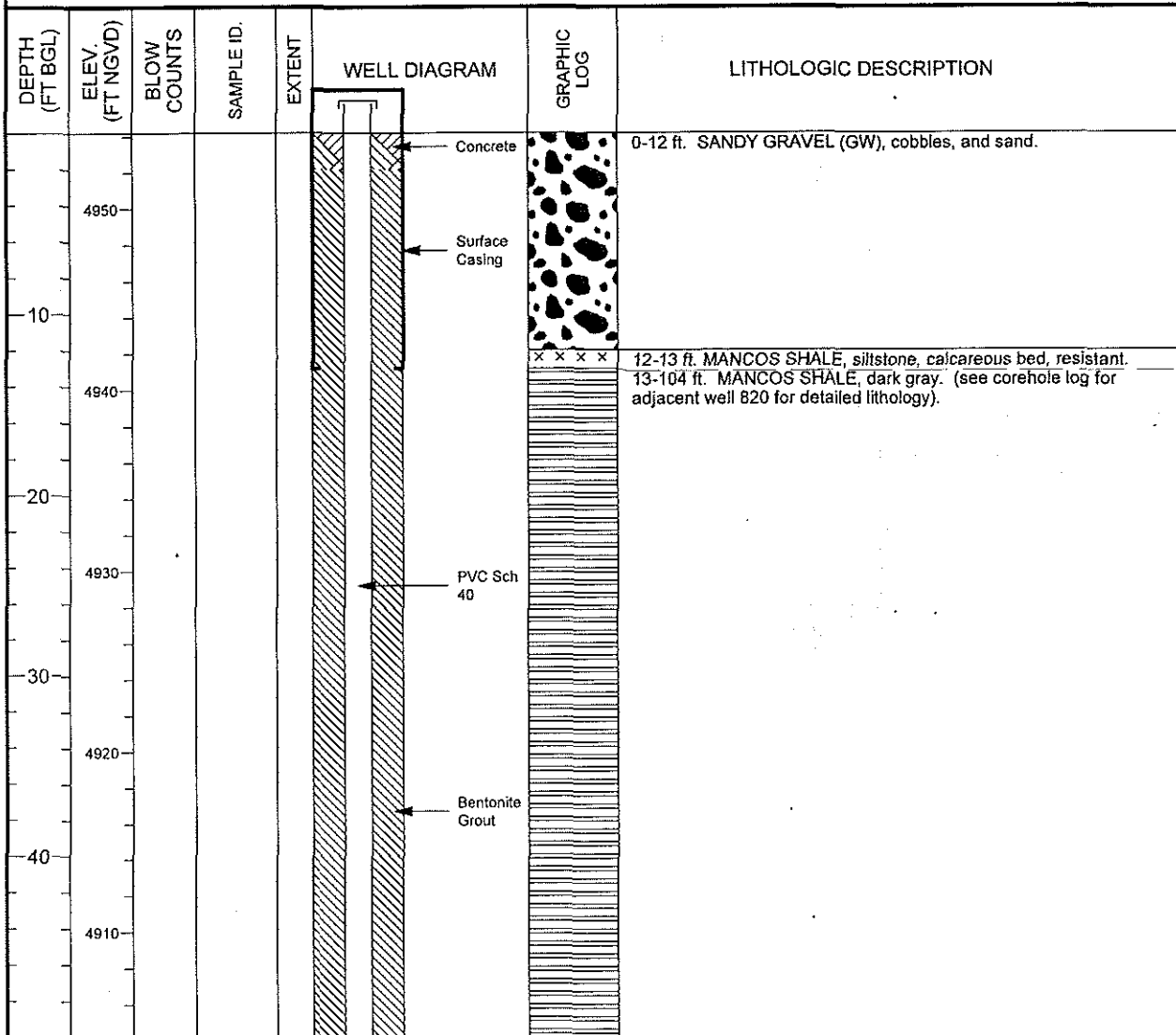
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	
120	4830			40-129.5 ft.			116.1, 116.4, and 117.0'. Bioturbated bedding predominates over planar bedding. Aragonite layers at 110.9, and 113.5' indicating flattened pelecypods (?). Core competent from 114-116' and more broken at 116-118 ft. Calcareous throughout. 118-129.5 ft. As above. Bedding plane fractures ~3-5'/ft from 118.8-120.7'. Fracture zone at 120.7-121.0'. Competent core from 122-123.0'. Fractured zone at 123.7-124.2' and about 5 fractures from 123-123.7'. Competent core 120-121.7'. Bedding plane fractures from 124.2-125.0 are numerous and claystone beds (at least 3) occur in this interval. Fracturing from 125-129.5' is infrequent and ~3-4'/ft. Core is fairly competent. Mostly planar bedding, bioturbation is rare. Minor broken zone at 127.5'. Calcareous throughout.	
130	4820							129.5-153 ft. MANCOS SHALE, dark gray.
140	4810							
150	4800						Total Depth 153.0 ft.	
160	4790							
170	4780							

MONITORING WELL COMPLETION LOG SHP02-0821

PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2102200.62	DATE DRILLED	09/17/1998 to 11/21/1998
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	250370.62	SURFACE ELEV. (FT NGVD)	4954.21
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	104.00	TOP OF CASING (FT)	4955.46
WELL NUMBER	0821	WELL DEPTH (FT)	101.89	MEAS. PT. ELEV. (FT)	4955.46

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:	6 in. Steel	-1.3 to 13.0	DRILLING METHOD DRILL-THRU CASING DRIVER
BLANK CASING:	2 in. PVC Sch 40	-1.25 to 99.0	SAMPLING METHOD
WELL SCREEN:	2 in. Machine Slotted PVC	99.0 to 101.5	DATE DEVELOPED
SUMP/END CAP:	2 in. PVC Sch 40	101.5 to 101.89	WATER LEVEL (FT BTOC) Dry 12/02/1998
SURFACE SEAL:	Concrete	-0.5 to 2.0	LOGGED BY M. Kautsky
GROUT:	Bentonite Grout	2.0 to 89.33	REMARKS
SEAL:	Bentonite Pellets	89.33 to 93.0	
UPPER PACK:	100 mesh Silica Sand	93.0 to 94.7	
LOWER PACK:	20-40 Silica Sand	94.7 to 101.69	



MONITORING WELL COMPLETION LOG SHP02-0821

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0821
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	09/17/1998 to 11/21/1998

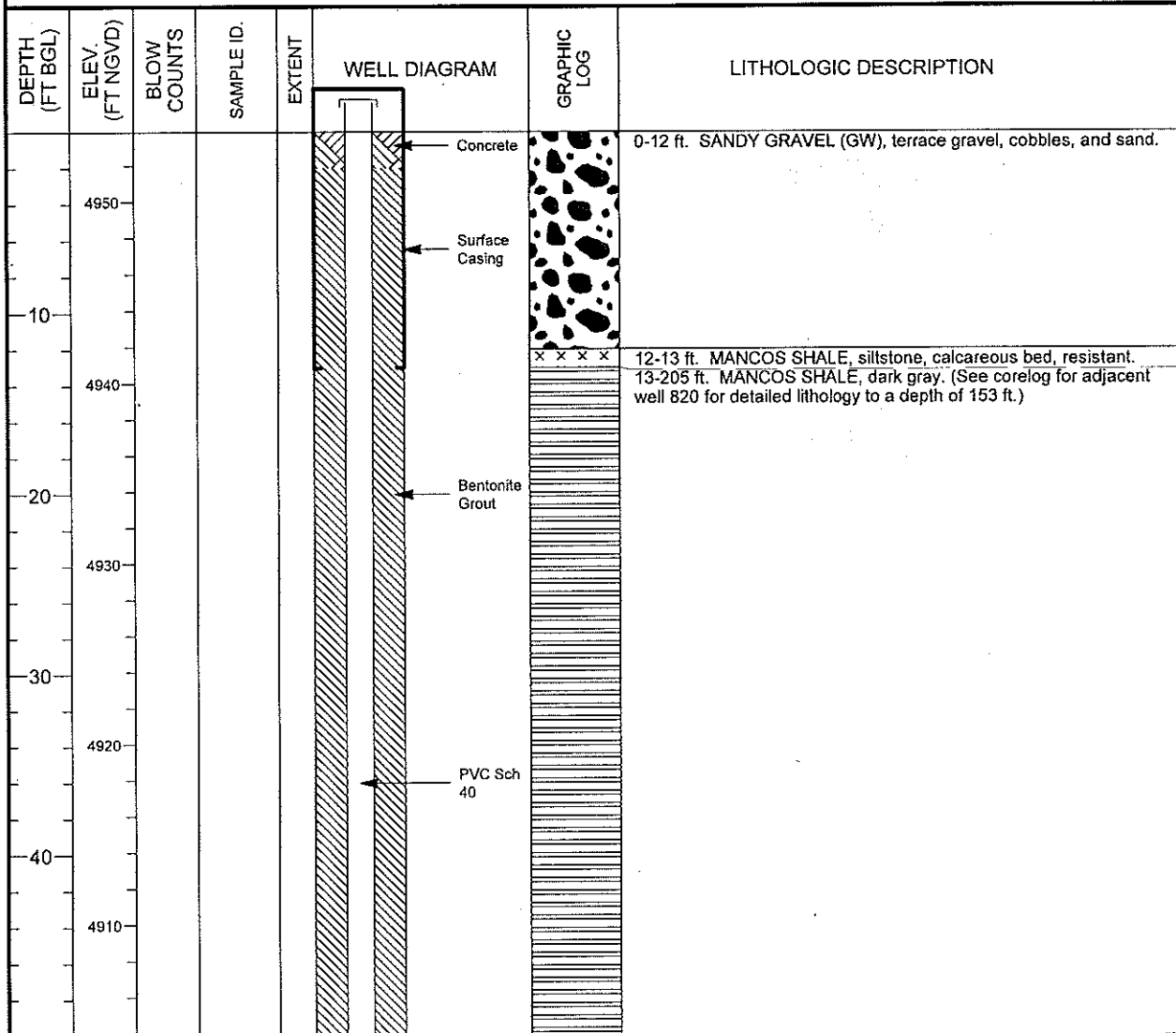
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
4900 60 4890 70 4880 80 4870 90 4860 100 4850 110					<p style="margin-left: 20px;">PVC Sch 40</p> <p style="margin-left: 20px;">Bentonite Grout</p> <p style="margin-left: 20px;">Bentonite Pellets</p> <p style="margin-left: 20px;">100 mesh Silica Sand</p> <p style="margin-left: 20px;">20-40 Silica Sand</p> <p style="margin-left: 20px;">0.010" Slotted PVC</p>		Total Depth 104.0 ft.



MONITORING WELL COMPLETION LOG SHP02-0822

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102192.54</u>	DATE DRILLED <u>09/17/1998 to 11/21/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250363.65</u>	SURFACE ELEV. (FT NGVD) <u>4953.85</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>205.00</u>	TOP OF CASING (FT) <u>4954.42</u>
WELL NUMBER <u>0822</u>	WELL DEPTH (FT) <u>201.66</u>	MEAS. PT. ELEV. (FT) <u>4954.42</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>8.75 / 5.88</u>
WELL INSTALLATION INTERVAL (FT)		
SURFACE CASING: 6 in. Steel	-0.7 to 13.0	DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
BLANK CASING: 2 in. PVC Sch 40	-0.57 to 199.0	
WELL SCREEN: 2 in. Machine Slotted PVC	199.0 to 201.5	SAMPLING METHOD _____
SUMP/END CAP: 2 in. PVC Sch 40	201.5 to 201.66	DATE DEVELOPED _____
SURFACE SEAL: Concrete	-0.5 to 2.0	WATER LEVEL (FT BTOC) <u>Dry 12/02/1998</u>
GROUT: Bentonite Grout	2.0 to 192.0	LOGGED BY <u>M. Kautsky</u>
SEAL: Bentonite Pellets	192.0 to 196.1	REMARKS _____
UPPER PACK: 100 mesh Silica Sand	196.1 to 197.8	
LOWER PACK: 20-40 Silica Sand	197.8 to 201.66	



MONITORING WELL COMPLETION LOG SHP02-0822

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0822
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	09/17/1998 to 11/21/1998

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
4900 60 4890 70 4880 80 4870 90 4860 100 4850 110					<p style="margin-left: 100px;">PVC Sch 40</p> <p style="margin-left: 100px;">Bentonite Grout</p>		



MONITORING WELL COMPLETION LOG SHP02-0822

PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>0822</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DATES DRILLED <u>09/17/1998 to 11/21/1998</u>

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	
-120	4830				<p style="margin-left: 100px;">PVC Sch 40</p> <p style="margin-left: 100px;">Bentonite Grout</p>			
-130	4820							
-140	4810							
-150	4800							
-160	4790							
-170	4780							



MONITORING WELL COMPLETION LOG SHP02-0822

PROJECT UMTRA GROUND WATER **WELL NUMBER** 0822
SITE SHIPROCK (TAILINGS AREA) **DATES DRILLED** 09/17/1998 to 11/21/1998

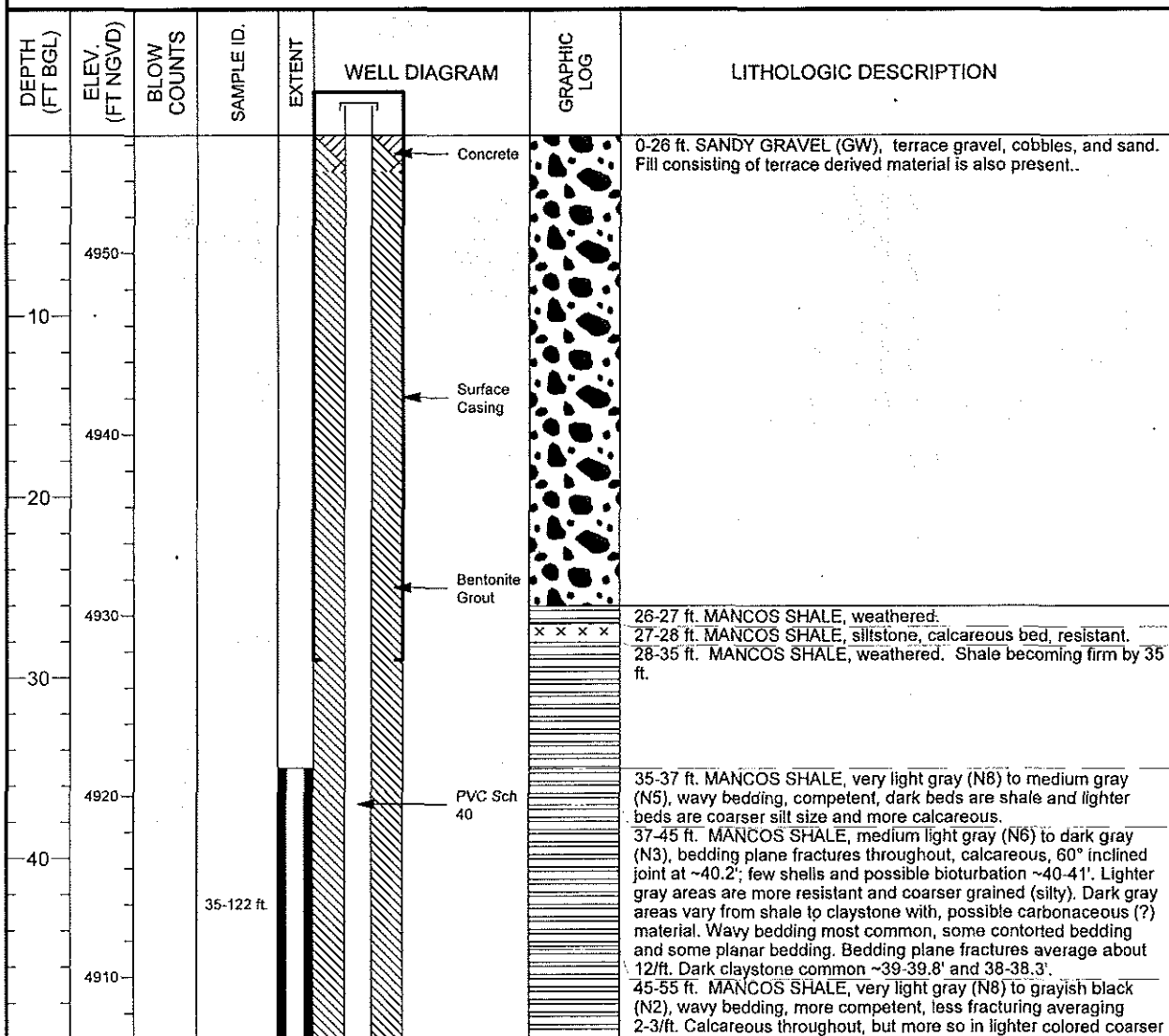
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
-180	4770				<p style="font-size: small;"> Bentonite Grout PVC Sch 40 Bentonite Pellets 100 mesh Silica Sand 0.010" Slotted PVC 20-40 Silica Sand </p>		
-190	4760						
-200	4750						Total Depth 205 ft.
-210	4740						
-220	4730						
-230	4720						
-240							



MONITORING WELL COMPLETION LOG SHP02-0823

PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2101289.48	DATE DRILLED	09/13/1998 to 09/25/1998
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	251528.73	SURFACE ELEV. (FT NGVD)	4956.53
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	122.00	TOP OF CASING (FT)	4957.65
WELL NUMBER	0823	WELL DEPTH (FT)	100.34	MEAS. PT. ELEV. (FT)	4957.65
				SLOT SIZE (IN)	0.010
				BIT SIZE(S) (IN)	8.75 / 5.88
	WELL INSTALLATION	INTERVAL (FT)		DRILLING METHOD	CORE/ROTARY/D-THRU DRV
SURFACE CASING:	10 in. Steel	-1.15 to 29.0		SAMPLING METHOD	CONTINUOUS CORE (NX)
BLANK CASING:	2 in. PVC Sch 40	-1.12 to 97.45		DATE DEVELOPED	
WELL SCREEN:	2 in. Machine Slotted PVC	97.45 to 99.95		WATER LEVEL (FT BTOC)	99.96 on 12/02/1998
SUMP/END CAP:	2 in. PVC Sch 40	99.95 to 100.34		LOGGED BY	C. Goodknight
SURFACE SEAL:	Concrete	-0.5 to 2.0		REMARKS	0-29' on 9/13; 29-55' on 9/24; 55-122' on 9/25.
GROUT:	Bentonite Grout	2.0 to 89.0			
SEAL:	Bentonite Pellets	89.0 to 93.5			
UPPER PACK:					
LOWER PACK:	20-40 Silica Sand	93.5 to 100.34			



MONITORING WELL COMPLETION LOG SHP02-0823

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0823
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	09/13/1998 to 09/25/1998

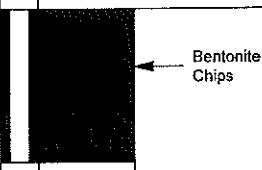
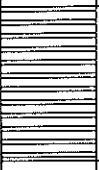
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
					Bentonite Grout	[Hatched Pattern]	grained (silt) layers. Mostly bedding plane fractures. Dark gray areas at ~45.3-45.7' and 54.6-54.8', which are claystone beds. Trace fossil shells (pelecypods?).
60	4900						55-67 ft. As above. Core recovery down to about 66.5 ft. Bedding plane fracturing averaging 3-4/ft. Well fractured 55-56' and ~60.5'. Claystone seams of dark grayish black (N2) at ~58, 59.5, 60.5-61, 61.9-62', and about 3 thin layers (~1") from 63-65'. Calcareous throughout, but coarser, lighter colored silty beds slightly more calc. than the gray to gray-black shaley and claystone beds. Trace fossil shells (pelecypods?).
70	4890						67-77 ft. As above. Core recovery down to about 76.8 ft. Bedding plane fracturing averaging ~12/ft from 65-69 ft; about 6/ft from 69-73 ft; about 3/ft from 73-75 ft. Claystone seams up to 0.5" thick at ~68.3, 68.7, and 69.7 ft. Thin aragonite(?) seams ~0.25" thick at 70.8, 71.7'. Thin claystone seams expand somewhat as they are brought to surface. Core from 73-75' is highly competent. No fossils noted, no pyrite.
80	4880			35-122 ft.	PVC Sch 40	[Hatched Pattern]	77-87 ft. As above. Core recovery down to about 87.3'; low angle joint (~20°) at ~80.7'. Bedding plane fracturing less than in previous core recovery. Average is 2-3/ft. Thin claystone seam at 77'; no pyrite. Calcareous throughout. Bioturbation scattered throughout, some tidal channel (?) crossbedding. No aragonite seams. Fossil Inoceramus (?) shell (flat ridges) at 84.7'. Trace pyrite noted along bedding plane in sampled interval by PNNL; also trace of carbonaceous plant material.
90	4870				Bentonite Pellets	[Dotted Pattern]	87-97 ft. As above. Core recovery down to about 97.5'. Bedding plane fracturing average is about 3-4/ft. Trace amount of fossil pelecypods. Bioturbation layers fairly frequent in 89-91' interval. Thin claystone seams at about 92.5, 94.0, 94.8, 95.2, and 96.2'. Calcareous throughout. Core most competent in 91-92.5' interval.
100	4860				20-40 Silica Sand	[Dotted Pattern]	Irregular, inclined fracture (low angle ~20°) filled with aragonite at ~97.2'.
100	4860				0.010" Slotted PVC	[Hatched Pattern]	97-107 ft. As above. Core recovery of ~8.2' initially down to about 105.7'. Core barrel retrieved ~.8' to about 106.5'. Bedding plane fracturing average is ~3/ft. Trace amount of fossil cephalopods; one at 98.5'. Thin aragonite seams at 97.2' (uneven and inclined about 20°), 100.2 and 102.2'. Bioturbation more frequent in 95-97.5' interval. Thin claystone seams at ~99.5, and 102.7'. Calcareous throughout, except for a light brown nodule about 3/4" long at 103.5' (fossil?) that has trace dissem. pyrite.
110	4850				Bentonite Chips	[Hatched Pattern]	107-112 ft. As above. Recovered ~6.3' of core - 5 ft plus ~1.3' previously cored. Est. depth here at 112.7'. Bedding plane fracturing average is about 3/ft. Calcareous throughout. Thin claystone at 97.8 and 112.0'. Sporadic zones of bioturbated bedding. Competent rock generally from 108-112'. 112-122 ft. As above. Recovered 10.0' of core. Estimated depth of

MONITORING WELL COMPLETION LOG SHP02-0823

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0823
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	09/13/1998 to 09/25/1998

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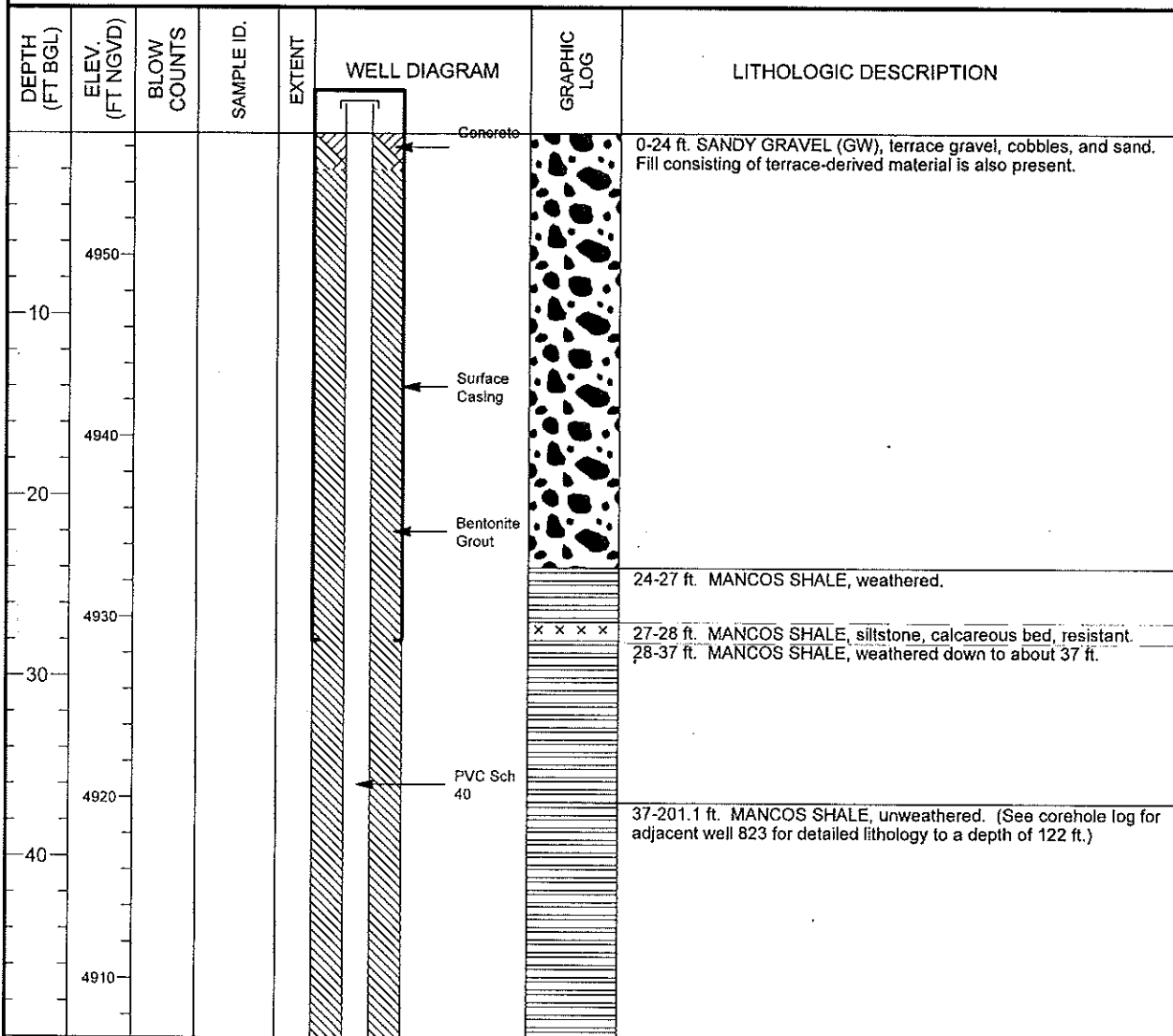
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
-120	4840		35-122 ft.				core is about 122'. Bedding plane fracturing average is 2-3/ft. Core below 116' appeared competent (few fractures). Increasing occurrence of wavy, almost contorted bedding. At ~118.2' is a particularly contorted, almost brecciated bedding. Thin aragonite seams at 115.7 and 122.0'. Thin claystone at ~112.8'. Calcareous throughout.
-130	4830						Total Depth 122 ft.
-140	4820						
-150	4810						
-160	4800						
-170	4790						
-170	4780						



U.S. DEPARTMENT OF ENERGY
 GRAND JUNCTION OFFICE, COLORADO

MONITORING WELL COMPLETION LOG SHP02-0824

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101288.61</u>	DATE DRILLED <u>09/12/1998 to 10/07/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251538.80</u>	SURFACE ELEV. (FT NGVD) <u>4956.75</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>201.10</u>	TOP OF CASING (FT) <u>4958.21</u>
WELL NUMBER <u>0824</u>	WELL DEPTH (FT) <u>201.10</u>	MEAS. PT. ELEV. (FT) <u>4958.21</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>8.75 / 5.88</u>
SURFACE CASING: 10 in. Steel	WELL INSTALLATION INTERVAL (FT) -2.0 to 28.0	DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
BLANK CASING: 2 in. PVC Sch 40	-1.46 to 198.5	SAMPLING METHOD _____
WELL SCREEN: 2 in. Machine Slotted PVC	198.5 to 201.0	DATE DEVELOPED _____
SUMP/END CAP: 2 in. PVC Sch 40	201.0 to 201.1	WATER LEVEL (FT BTOC) <u>105.56 on 11/20/1998</u>
SURFACE SEAL: Concrete	-0.5 to 2.0	LOGGED BY <u>M. Kautsky</u>
GROUT: Bentonite Grout	2.0 to 190.0	REMARKS _____
SEAL: Bentonite Pellets	190.0 to 194.0	
UPPER PACK: 100 mesh Silica Sand	194.0 to 195.0	
LOWER PACK: 20-40 Silica Sand	195.0 to 201.1	



MONITORING WELL COMPLETION LOG SHP02-0824

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0824
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	09/12/1998 to 10/07/1998

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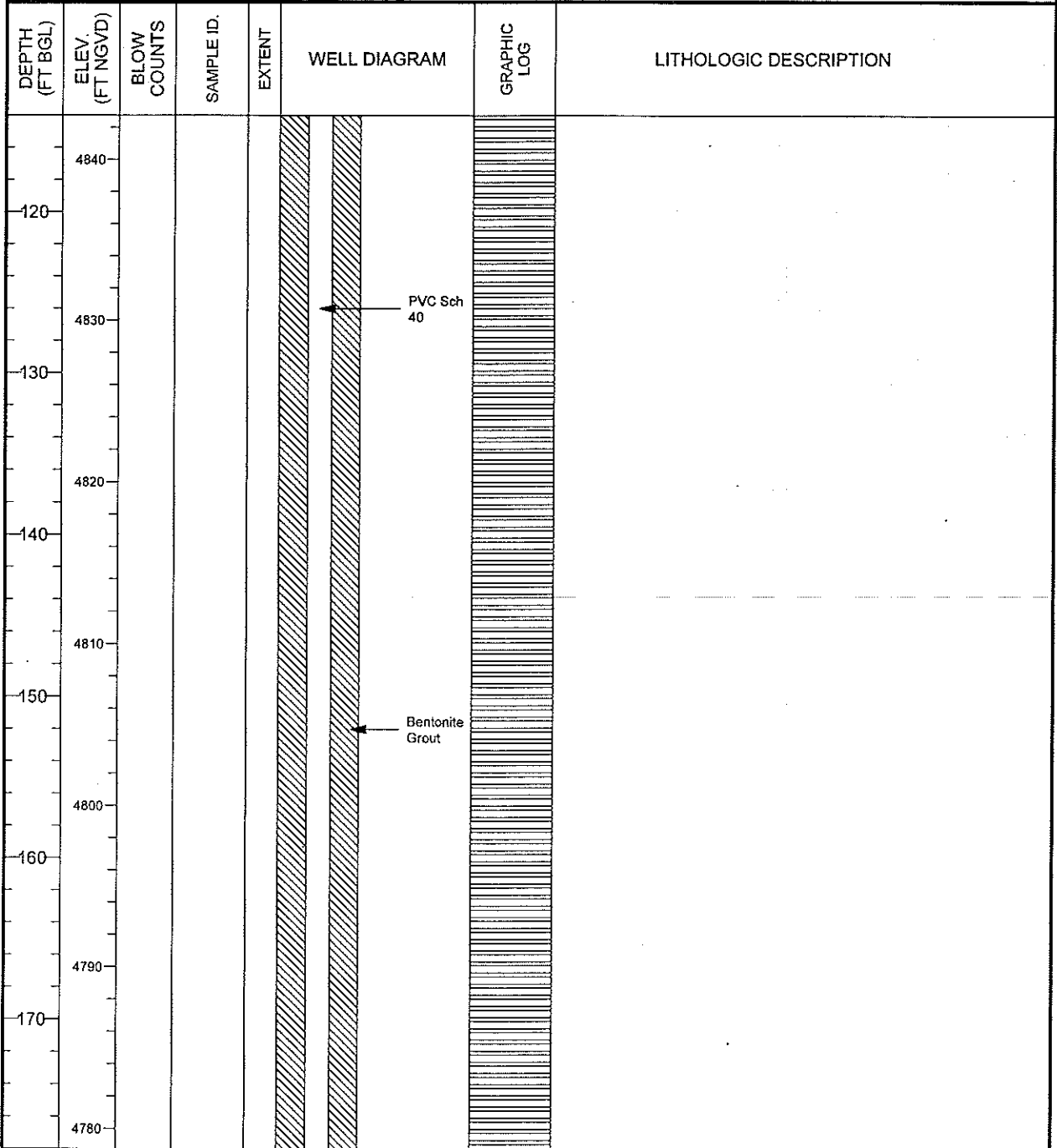
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
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MONITORING WELL COMPLETION LOG SHP02-0824

PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>0824</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DATES DRILLED <u>09/12/1998 to 10/07/1998</u>

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MONITORING WELL COMPLETION LOG SHP02-0824

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0824
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	09/12/1998 to 10/07/1998

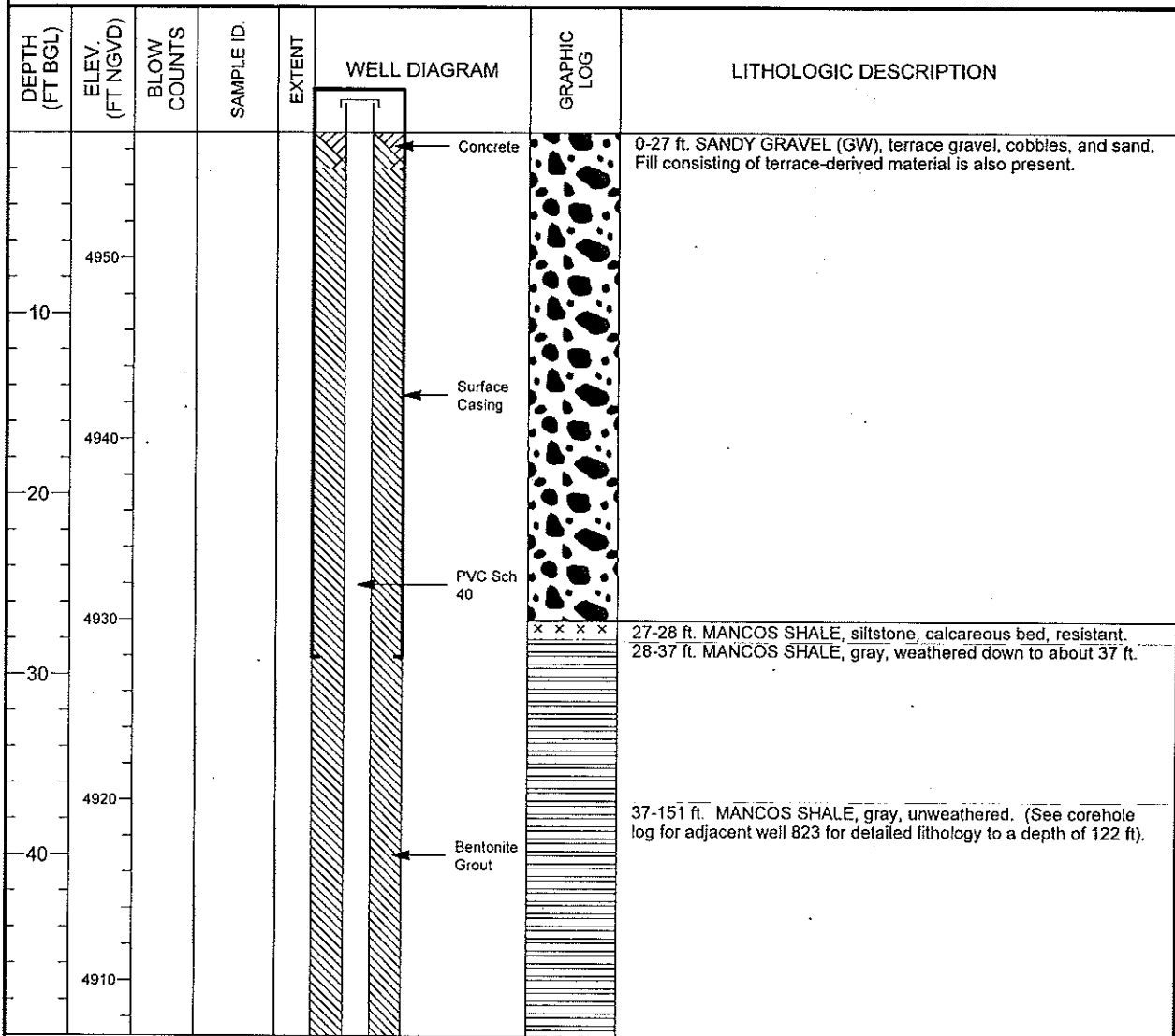
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
180					<p>PVC Sch 40</p>		
	4770				<p>Bentonite Grout</p>		
190					<p>Bentonite Pellets 100 mesh</p>		
	4760				<p>Silica Sand 20-40</p> <p>Silica Sand 0.010" Slotted PVC</p>		
200							Total Depth 201.1 ft.
	4750						
210							
	4740						
220							
	4730						
230							
	4720						
240							



MONITORING WELL COMPLETION LOG SHP02-0825

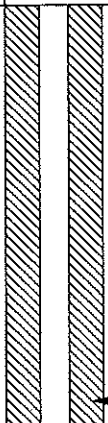
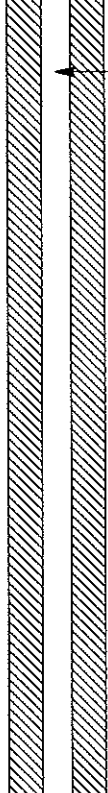

PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2101298.38	DATE DRILLED	09/13/1998 to 10/07/1998
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	251534.90	SURFACE ELEV. (FT NGVD)	4956.94
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	151.00	TOP OF CASING (FT)	4958.68
WELL NUMBER	0825	WELL DEPTH (FT)	150.45	MEAS. PT. ELEV. (FT)	4958.68
				SLOT SIZE (IN)	0.010
				BIT SIZE(S) (IN)	8.75 / 5.88
WELL INSTALLATION		INTERVAL (FT)		DRILLING METHOD	
SURFACE CASING:	10 in. Steel	-1.8	to 29.0	DRILL-THRU CASING DRIVER	
BLANK CASING:	2 in. PVC Sch 40	-1.74	to 147.79	SAMPLING METHOD	
WELL SCREEN:	2 in. Machine Slotted PVC	147.79	to 150.23	DATE DEVELOPED	
SUMP/END CAP:	2 in. PVC Sch 40	150.23	to 150.45	WATER LEVEL (FT BTOC) Dry 12/02/1998	
SURFACE SEAL:	Concrete	-0.5	to 2.0	LOGGED BY M. Kautsky	
GROUT:	Bentonite Grout	2.0	to 139.33	REMARKS Hole clogged at 34'; cleaned out to 151' on 11/20/98.	
SEAL:	Bentonite Pellets	139.33	to 144.0		
UPPER PACK:	100 mesh Silica Sand	144.0	to 145.5		
LOWER PACK:	20-40 Silica Sand	145.5	to 150.45		



MONITORING WELL COMPLETION LOG SHP02-0825

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0825
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	09/13/1998 to 10/07/1998

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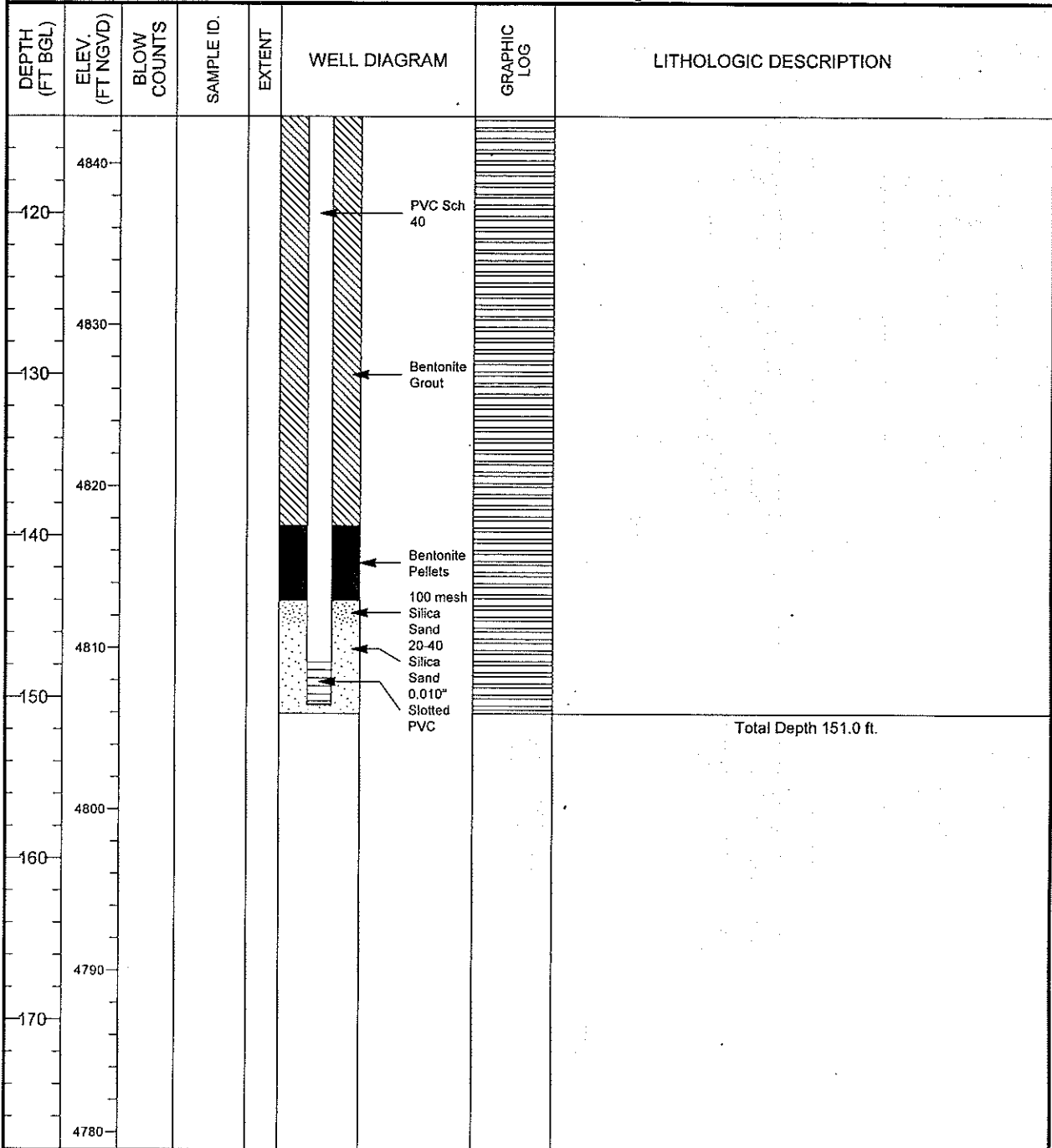
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
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MONITORING WELL COMPLETION LOG SHP02-0825

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0825
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	09/13/1998 to 10/07/1998

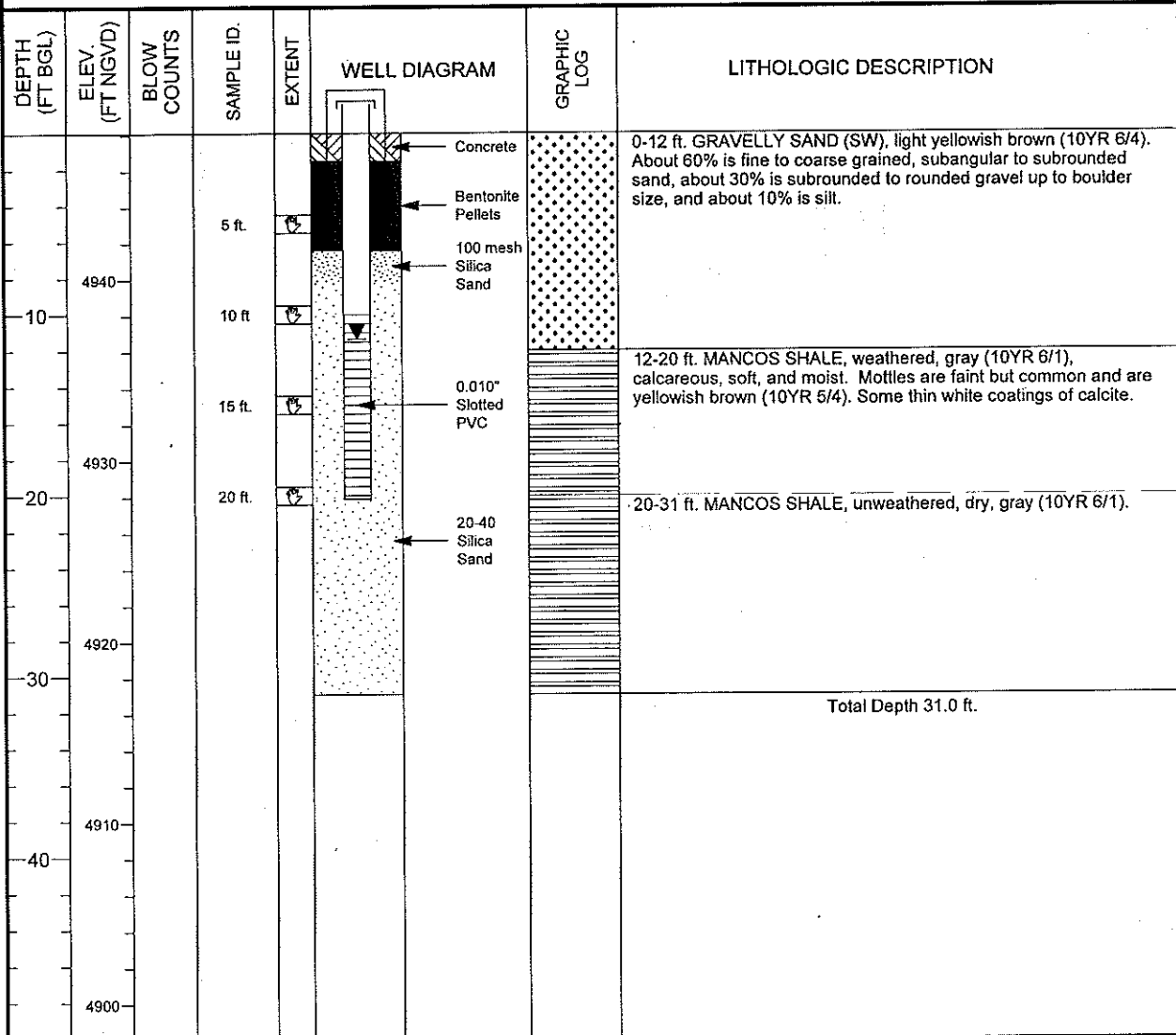
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MONITORING WELL COMPLETION LOG SHP02-0826

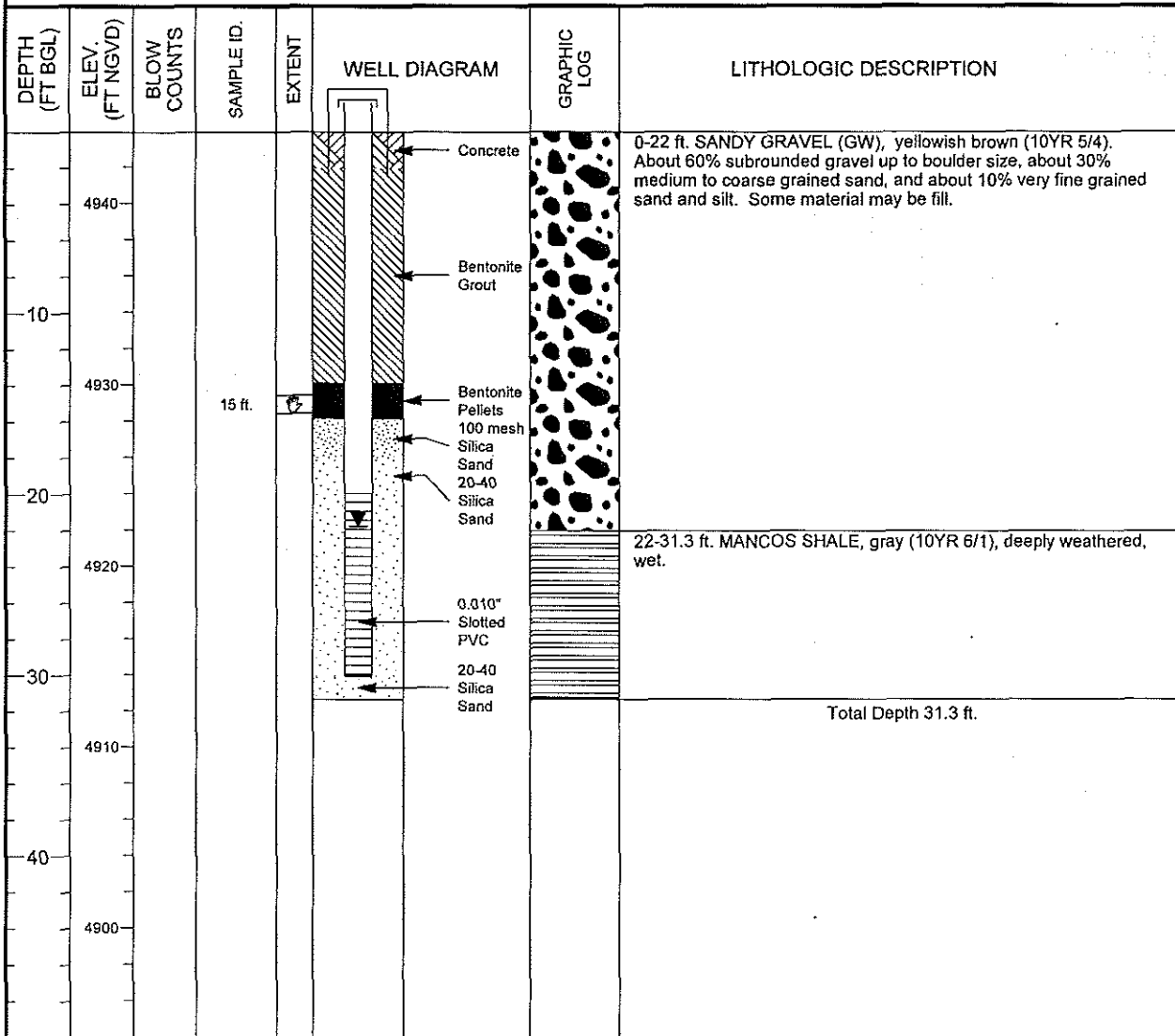
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101938.33</u>	DATE DRILLED <u>10/14/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249596.17</u>	SURFACE ELEV. (FT NGVD) <u>4948.09</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>31.00</u>	TOP OF CASING (FT) <u>4950.73</u>
WELL NUMBER <u>0826</u>	WELL DEPTH (FT) <u>20.17</u>	MEAS. PT. ELEV. (FT) <u>4950.73</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>5.88</u>

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			
BLANK CASING:	2 in. PVC Sch 40	-2.64 to 10.0	DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
WELL SCREEN:	2 in. Machine Slotted PVC	10.0 to 20.0	SAMPLING METHOD <u>GRAB</u>
SUMP/END CAP:	2 in. PVC Sch 40	20.0 to 20.17	DATE DEVELOPED <u>11/26/1998</u>
SURFACE SEAL:	Concrete	-0.5 to 1.5	WATER LEVEL (FT BTOC) <u>14.0 on 10/21/1998</u>
GROUT:			LOGGED BY <u>L. Spencer</u>
SEAL:	Bentonite Pellets	1.5 to 6.5	REMARKS
UPPER PACK:	100 mesh Silica Sand	6.5 to 8.2	
LOWER PACK:	20-40 Silica Sand	8.2 to 31.0	



MONITORING WELL COMPLETION LOG SHP02-0827

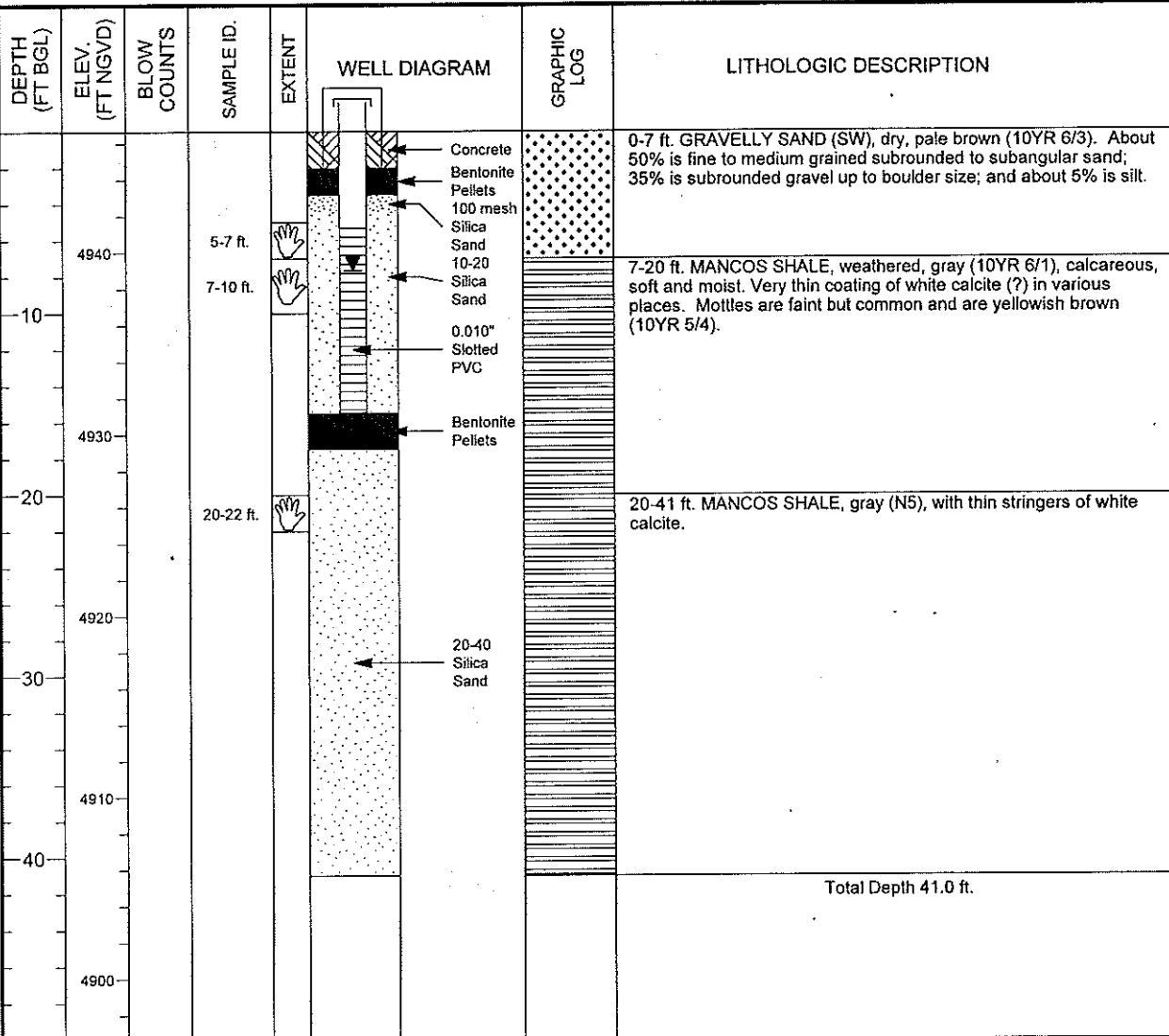
PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2102444.90	DATE DRILLED	11/13/1998
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	249873.25	SURFACE ELEV. (FT NGVD)	4943.91
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	31.30	TOP OF CASING (FT)	4946.92
WELL NUMBER	0827	WELL DEPTH (FT)	30.03	MEAS. PT. ELEV. (FT)	4946.92
				SLOT SIZE (IN)	0.010
				BIT SIZE(S) (IN)	5.88
WELL INSTALLATION			INTERVAL (FT)		
SURFACE CASING:					
BLANK CASING:	2 in. PVC Sch 40	-3.01	to	19.9	DRILLING METHOD DRILL-THRU CASING DRIVER
WELL SCREEN:	2 in. Machine Slotted PVC	19.9	to	29.9	SAMPLING METHOD GRAB
SUMPIEND CAP:	2 in. PVC Sch 40	29.9	to	30.0	DATE DEVELOPED 11/16/1998
SURFACE SEAL:	Concrete	-0.5	to	2.0	WATER LEVEL (FT BTOC) 24.73 on 12/11/1998
GROUT:	Bentonite Grout	2.0	to	13.8	LOGGED BY M. Kautsky
SEAL:	Bentonite Pellets	13.8	to	15.8	REMARKS Redrill; approximately 7 ft. NE of
UPPER PACK:	100 mesh Silica Sand	15.8	to	18.0	original hole. Original borehole penetrated weathered
LOWER PACK:	20-40 Silica Sand	18.0	to	31.3	bedrock at 15 ft.



MONITORING WELL COMPLETION LOG SHP02-0828

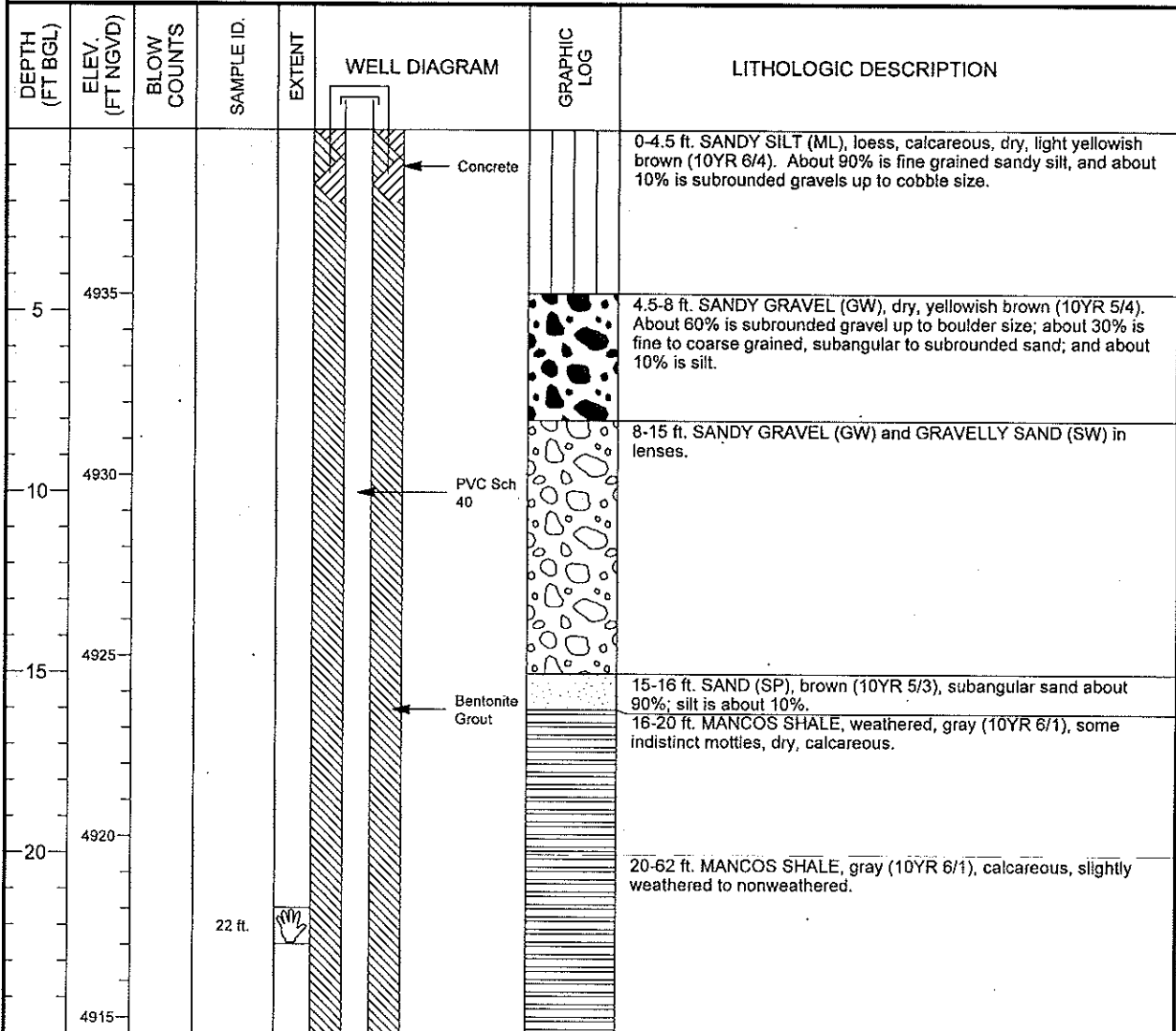
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101524.12</u>	DATE DRILLED <u>10/13/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249145.90</u>	SURFACE ELEV. (FT NGVD) <u>4946.67</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>41.00</u>	TOP OF CASING (FT) <u>4949.34</u>
WELL NUMBER <u>0828</u>	WELL DEPTH (FT) <u>15.47</u>	MEAS. PT. ELEV. (FT) <u>4949.34</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>5.88</u>

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
BLANK CASING:	2 in. PVC Sch 40	-2.67 to 5.3	SAMPLING METHOD <u>GRAB</u>
WELL SCREEN:	2 in. Machine Slotted PVC	5.3 to 15.3	DATE DEVELOPED <u>11/09/1998</u>
SUMP/END CAP:	2 in. PVC Sch 40	15.3 to 15.47	WATER LEVEL (FT BGS) <u>7.65 on 10/14/1998</u>
SURFACE SEAL:	Concrete	-0.5 to 2.0	LOGGED BY <u>L. Spencer</u>
GROUT:			REMARKS <u>Overdrilled well; filled with 20-40 silica sand from 41.0 ft to 17.5 ft.; filled with bentonite pellets from 17.5 ft. to 15.47 ft.</u>
SEAL:	Bentonite Pellets	2.0 to 3.5	
UPPER PACK:	100 mesh Silica Sand	3.5 to 4.5	
LOWER PACK:	10-20 Silica Sand	4.5 to 15.47	



MONITORING WELL COMPLETION LOG SHP02-0829

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102758.77</u>	DATE DRILLED <u>10/15/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249544.67</u>	SURFACE ELEV. (FT NGVD) <u>4939.54</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>62.00</u>	TOP OF CASING (FT) <u>4941.94</u>
WELL NUMBER <u>0829</u>	WELL DEPTH (FT) <u>50.20</u>	MEAS. PT. ELEV. (FT) <u>4941.94</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>5.88</u>
SURFACE CASING:	WELL INSTALLATION	INTERVAL (FT)
BLANK CASING: 2 in. PVC Sch 40		-2.4 to 40.0
WELL SCREEN: 2 in. Machine Slotted PVC		40.0 to 50.0
SUMP/END CAP: 2 in. PVC Sch 40		50.0 to 50.2
SURFACE SEAL: Concrete		-0.5 to 2.0
GROUT: Bentonite Grout		2.0 to 30.0
SEAL: Bentonite Pellets		33.5 to 37.0
UPPER PACK: 100 mesh Silica Sand		37.0 to 38.0
LOWER PACK: 20-40 Silica Sand		38.0 to 51.0
	DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>	
	SAMPLING METHOD <u>GRAB</u>	
	DATE DEVELOPED <u>11/08/1998</u>	
	WATER LEVEL (FT BTOC) <u>38.6 on 11/08/1998</u>	
	LOGGED BY <u>L. Spencer and M. Kautsky</u>	
	REMARKS <u>Overdrilled well: filled w/ 20-40 silica sand from 62.0 to 52.5 ft, bentonite pellets from 52.5 to 51.0 ft, 100 mesh silica sand from 30.0 to 33.5 ft.</u>	



MONITORING WELL COMPLETION LOG SHP02-0829

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0829
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	10/15/1998

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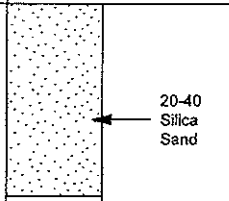

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
30	4910				100 mesh Silica Sand	[Pattern]	
35	4905			▼	Bentonite Pellets	[Pattern]	
					100 mesh Silica Sand	[Pattern]	
40	4900				20-40 Silica Sand	[Pattern]	
45	4895				0.010" Slotted PVC	[Pattern]	
50	4890				Bentonite Pellets	[Pattern]	
55	4885				20-40 Silica Sand	[Pattern]	



MONITORING WELL COMPLETION LOG SHP02-0829

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0829
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	10/15/1998

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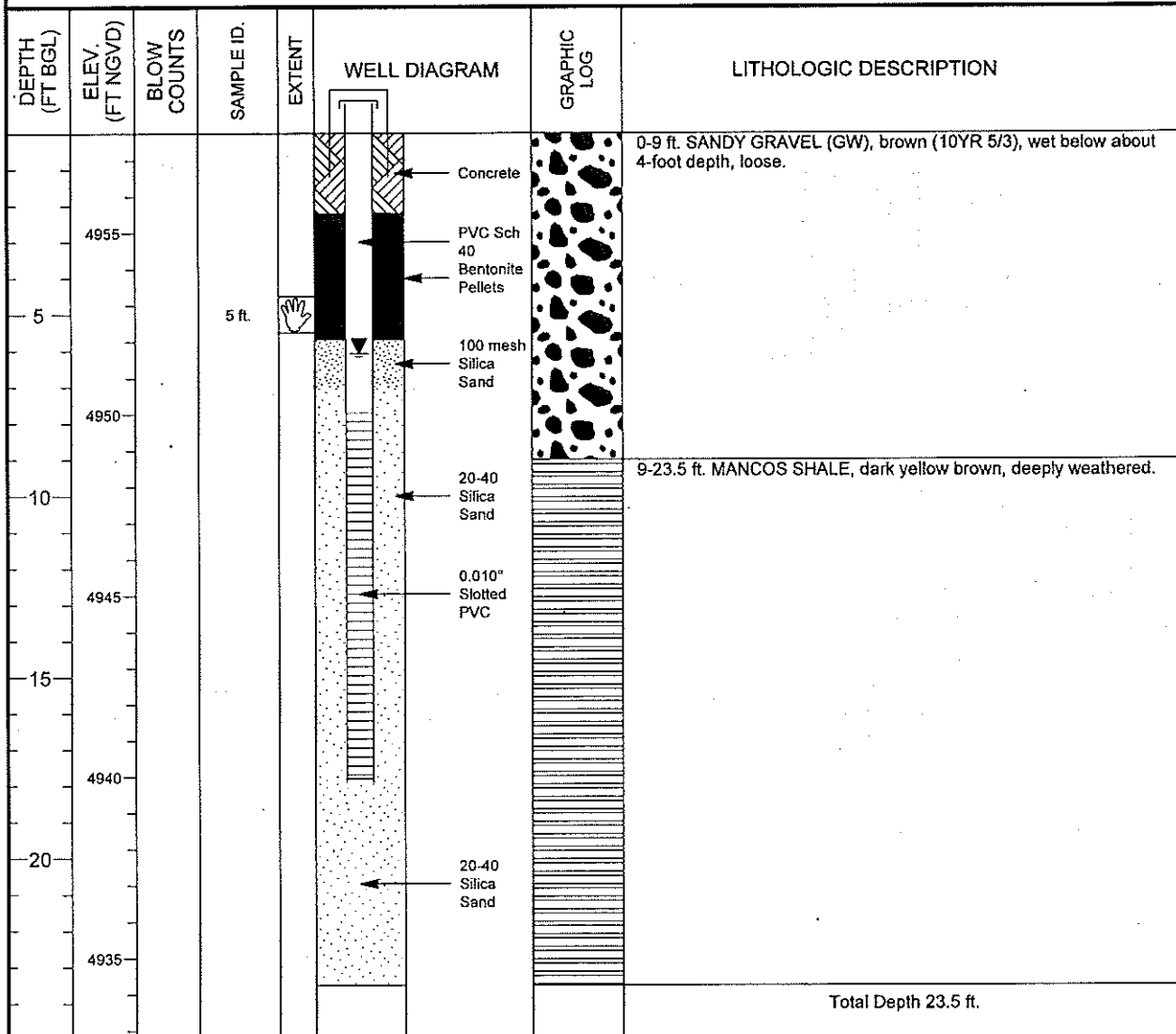
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
60	4880				 <p style="margin-left: 100px;">20-40 Silica Sand</p>		
65	4875						
70	4870						
75	4865						
80	4860						
85	4855						
Total Depth 62.0 ft.							



U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION OFFICE, COLORADO

MONITORING WELL COMPLETION LOG SHP02-0830

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2099901.80</u>	DATE DRILLED <u>11/12/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251233.69</u>	SURFACE ELEV. (FT NGVD) <u>4957.75</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>23.50</u>	TOP OF CASING (FT) <u>4960.77</u>
WELL NUMBER <u>0830</u>	WELL DEPTH (FT) <u>17.80</u>	MEAS. PT. ELEV. (FT) <u>4960.77</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>5.88</u>
WELL INSTALLATION INTERVAL (FT)		
SURFACE CASING:		DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
BLANK CASING: 2 in. PVC Sch 40	-3.02 to 7.7	SAMPLING METHOD <u>GRAB</u>
WELL SCREEN: 2 in. Machine Slotted PVC	7.7 to 17.7	DATE DEVELOPED <u>11/16/1998</u>
SUMPIEND CAP: 2 in. PVC Sch 40	17.7 to 17.8	WATER LEVEL (FT BTOC) <u>9.1 on 01/06/1999</u>
SURFACE SEAL: Concrete	-0.5 to 2.2	LOGGED BY <u>M. Kautsky</u>
GROUT:		REMARKS
SEAL: Bentonite Pellets	2.2 to 5.7	
UPPER PACK: 100 mesh Silica Sand	5.7 to 7.0	
LOWER PACK: 20-40 Silica Sand	7.0 to 23.5	



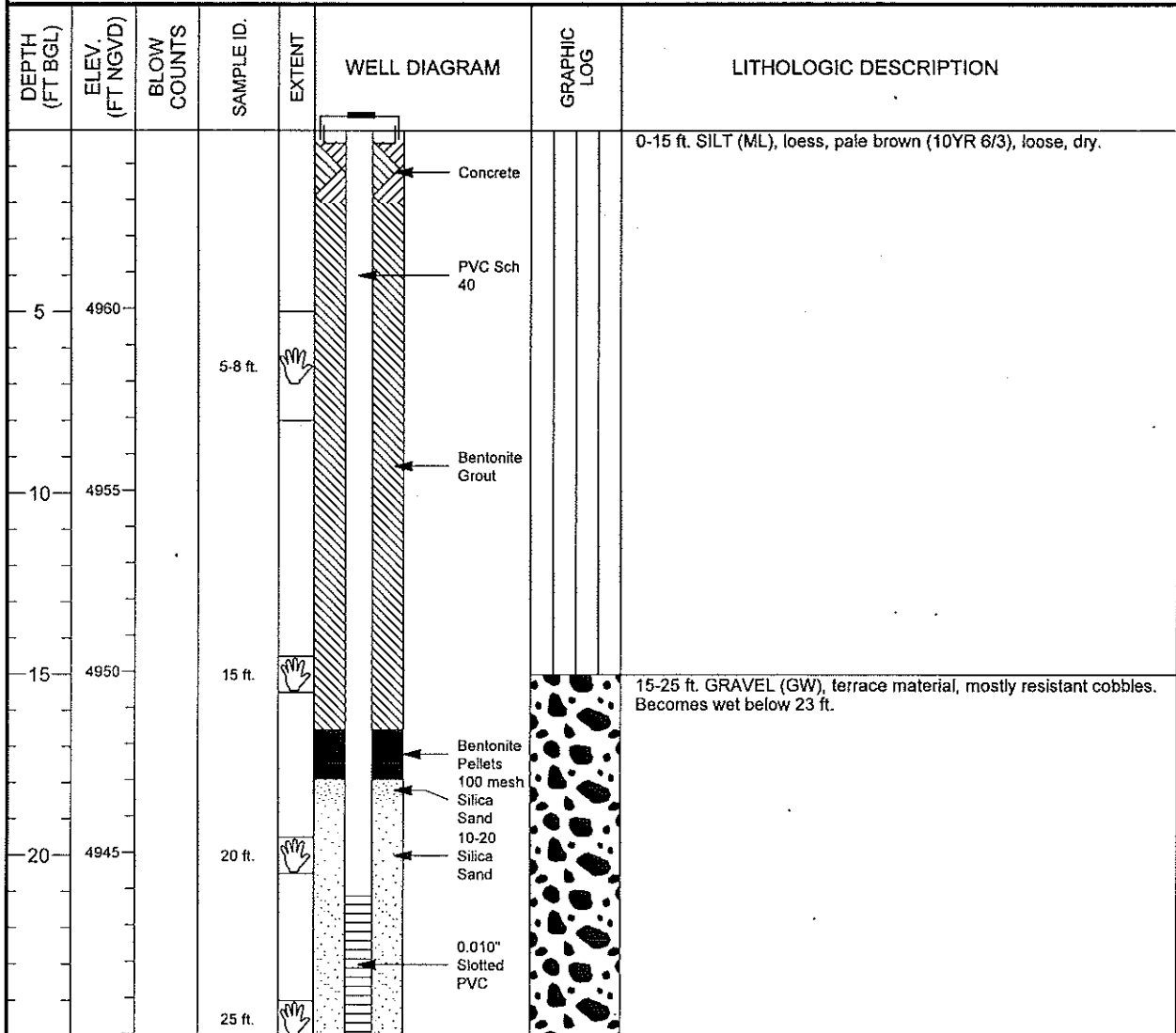
BOREHOLE LOG SHP02-0831

PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4938.53</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>5.88</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
WELL NUMBER <u>0831</u>	SAMPLING METHOD <u>GRAB</u>
NORTH COORD. (FT) <u>2101963.47</u>	WATER LEVEL (FT BGS) <u>34.5 on 12/09/1998</u>
EAST COORD. (FT) <u>244369.05</u>	LOGGED BY <u>C. Goodknight</u>
HOLE DEPTH (FT) <u>44.50</u>	REMARKS <u>Borehole to determine bedrock depth and obtain water sample; abandoned on 12/9/98.</u>
DATE DRILLED <u>12/08/1998</u>	

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
						0-7 ft. SILT (ML), loess, dry, light yellowish brown (10YR 6/4), with trace white calcareous layers and mottles.
	4930		5 ft.			
10			10 ft.			7-13 ft. SILT (ML), loess, dark yellowish brown (10YR 4/4), slight to no plasticity, slightly damp.
			15 ft.			13-18 ft. CLAYEY SILT (MH), loess, brown (10YR 4/3), moderate plasticity, damp.
	4920		20 ft.			18-22 ft. SILT (ML), loess, brown (10YR 4/3), damp, slight plasticity.
20			25 ft.			22-33 ft. SAND (SP), mainly medium-coarse grained, dark yellowish brown (10YR 4/4), damp.
	4910		30 ft.			
30			35 ft.			33-38 ft. SANDY GRAVEL (GW), pebbles and small cobbles up to several inches in diameter, brown (10YR 4/3). Wet at about 33 ft. and heavy flow of water at ~36ft.
	4900		38-39 ft.			38-39 ft. GRAVEL (GP), coarse cobble gravel, wet.
40			40-41 ft.			39-44.5 ft. MANCOS SHALE, weathered, olive gray (5Y 5/2), with trace of white gypsiferous or calcareous material along bedding planes/fractures.
						Total Depth 44.5 ft.
	4890					

MONITORING WELL COMPLETION LOG SHP02-0832



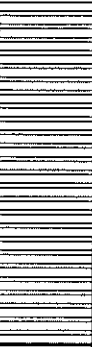
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2100815.04</u>	DATE DRILLED <u>11/10/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>245788.84</u>	SURFACE ELEV. (FT NGVD) <u>4964.91</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>37.00</u>	TOP OF CASING (FT) <u>4964.65</u>
WELL NUMBER <u>0832</u>	WELL DEPTH (FT) <u>31.30</u>	MEAS. PT. ELEV. (FT) <u>4964.65</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>5.88</u>
SURFACE CASING:	WELL INSTALLATION	INTERVAL (FT)
BLANK CASING: 2 in. PVC Sch 40	0.26 to 21.1	DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
WELL SCREEN: Machine Slotted PVC	21.1 to 31.1	SAMPLING METHOD <u>GRAB</u>
SUMP/END CAP: 2 in. PVC Sch 40	31.1 to 31.3	DATE DEVELOPED <u>11/16/1998</u>
SURFACE SEAL: Concrete	0.3 to 2.0	WATER LEVEL (FT BTOC) <u>26.35 on 01/06/1999</u>
GROUT: Bentonite Grout	2.0 to 16.5	LOGGED BY <u>M. Kautsky</u>
SEAL: Bentonite Pellets	16.5 to 17.9	REMARKS _____
UPPER PACK: 100 mesh Silica Sand	17.9 to 18.5	
LOWER PACK: 10-20 Silica Sand	18.5 to 31.3	



MONITORING WELL COMPLETION LOG SHP02-0832

PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>0832</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DATES DRILLED <u>11/10/1998</u>

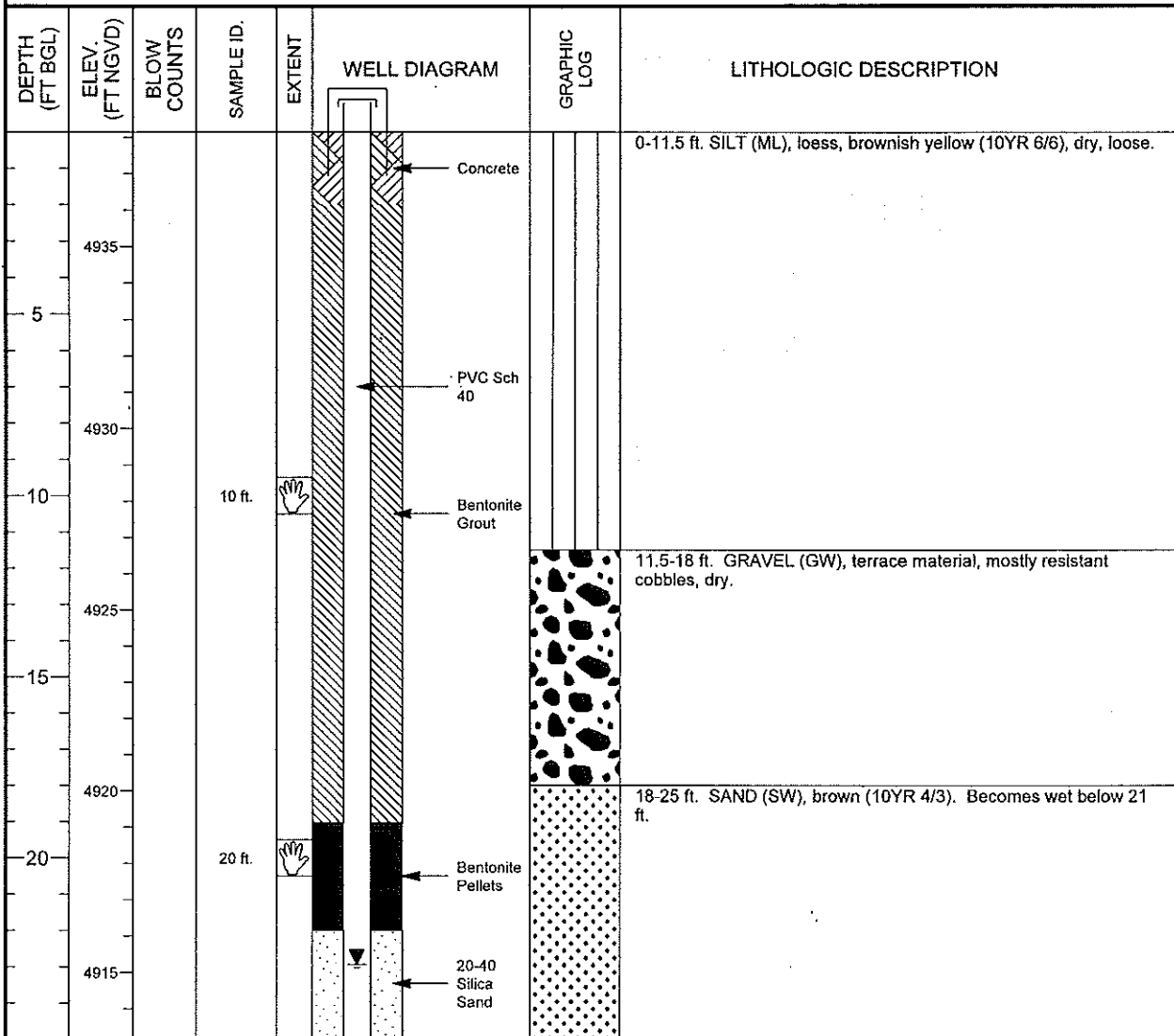
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
					0.010" Slotted PVC		25-28 ft. SANDY GRAVEL (GW), as above. Becomes more sandy below 25 ft.
30	4935		30 ft.		10-20 Silica Sand		28-37 ft. MANCOS SHALE, brown (10YR 5/3), deeply weathered, moist. Drive casing not seated in competent Mancos; water and muck ran into bottom of hole.
35	4930						
40	4925						
45	4920						
50	4915						
55	4910						
Total Depth 37.0 ft.							



MONITORING WELL COMPLETION LOG SHP02-0833

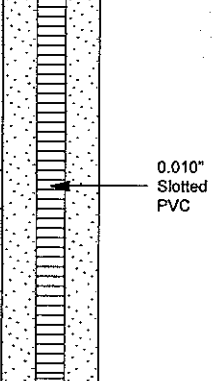
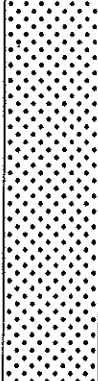

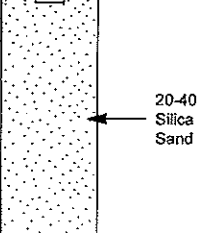
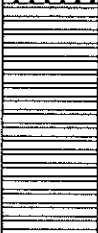

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102760.52</u>	DATE DRILLED <u>12/03/1998</u>	
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>245623.02</u>	SURFACE ELEV. (FT NGVD) <u>4938.15</u>	
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>41.00</u>	TOP OF CASING (FT) <u>4940.52</u>	
WELL NUMBER <u>0833</u>	WELL DEPTH (FT) <u>35.00</u>	MEAS. PT. ELEV. (FT) <u>4940.52</u>	
		SLOT SIZE (IN) <u>0.010</u>	
		BIT SIZE(S) (IN) <u>5.88</u>	
SURFACE CASING:	WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
BLANK CASING: 2 in. PVC Sch 40	-2.37 to 24.9		SAMPLING METHOD <u>GRAB</u>
WELL SCREEN: 2 in. Machine Slotted PVC	24.9 to 34.9		DATE DEVELOPED <u>12/06/1998</u>
SUMP/END CAP: 2 in. PVC Sch 40	34.9 to 35.0		WATER LEVEL (FT BTOC) <u>25.3 on 12/04/1998</u>
SURFACE SEAL: Concrete	-0.5 to 2.0		LOGGED BY <u>M. Kautsky</u>
GROUT: Bentonite Grout	2.0 to 19.0		REMARKS
SEAL: Bentonite Pellets	19.0 to 22.0		
UPPER PACK:			
LOWER PACK: 20-40 Silica Sand	22.0 to 41.0		



MONITORING WELL COMPLETION LOG SHP02-0833

PROJECT UMTRA GROUND WATER WELL NUMBER 0833
 SITE SHIPROCK (TAILINGS AREA) DATES DRILLED 12/03/1998





Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
4910					 <p>0.010" Slotted PVC</p>		25-35 ft. GRAVELLY SAND (SW), as above. Contains more gravel and coarser grained sand below 25 ft.
30			30 ft.				
4905					 <p>20-40 Silica Sand</p>		35-41 ft. MANCOS SHALE, dark gray (10YR 4/1), moist, medium weathered.
35			36-37 ft.				
4900							
40							Total Depth 41.0 ft.
4895							
45							
4890							
50							
4885							
55							



BOREHOLE LOG SHP02-0834





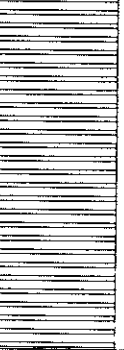
PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4966.86</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>5.88</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
WELL NUMBER <u>0834</u>	SAMPLING METHOD <u>GRAB</u>
NORTH COORD. (FT) <u>2100739.57</u>	WATER LEVEL (FT BGS) <u>45.0 on 12/09/1998</u>
EAST COORD. (FT) <u>244745.63</u>	LOGGED BY <u>C. Goodknight</u>
HOLE DEPTH (FT) <u>46.00</u>	REMARKS <u>Borehole to determine bedrock depth and obtain water sample; abandoned on 12/9/98.</u>
DATE DRILLED <u>12/09/1998</u>	

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
5	4965			5 ft		0-16 ft. SILT (ML), loess, dry, light yellowish brown (10YR 6/4). Small amount (0-5%) of siltstone pebbles and pieces.
10	4960			10 ft		
15	4955					16-24 ft. GRAVELLY SAND (SW), damp, moist, yellowish brown (10YR 5/4). About 60 % is mainly medium to coarse grained sand, and about 40 % is pebble gravel up to 1" diameter.
20	4950			20 ft		
	4945			25 ft		24-35 ft. SANDY GRAVEL (GW), brown (10YR 4/3), composed of coarse cobble gravel

BOREHOLE LOG SHP02-0834

PROJECT <u>UMTRA GROUND WATER</u>	BOREHOLE NUMBER <u>0834</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DATES DRILLED <u>12/09/1998</u>

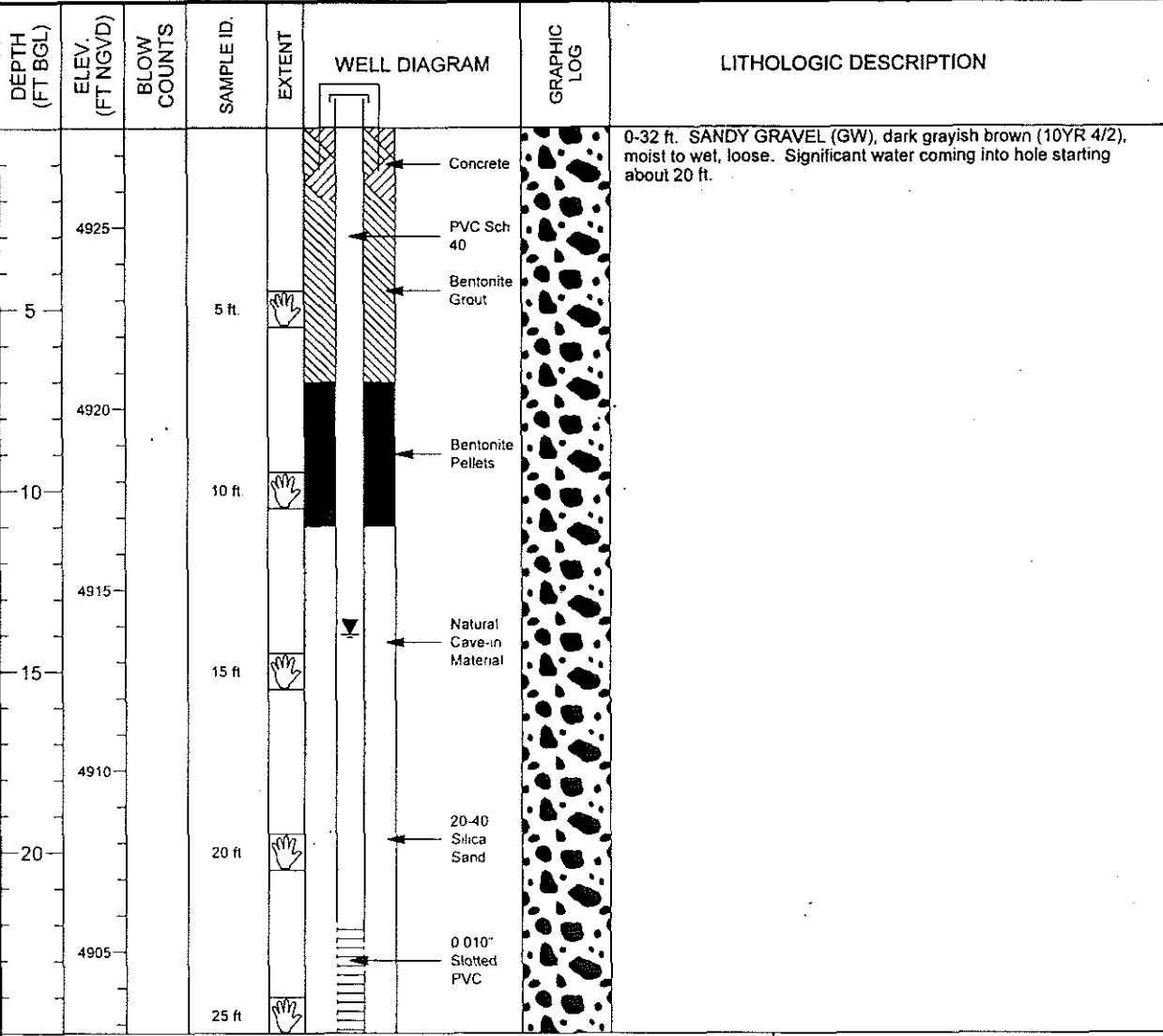
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
4940 30 4935 35 4930 40 4925 45 4920 50 4915						(~70%), and medium to coarse grained sand (~30%). Becomes wet at 28 ft.
			30-31 ft.			
			35 ft.			35-38 ft. GRAVELLY SAND and SANDY GRAVEL (SW-GW), wet, moist, dark yellowish brown (10YR 4/4). Composed of 60% sand and 40% gravel.
			38-39 ft.			38-46 ft. MANCOS SHALE, weathered, gray (10YR 5/1), trace white caliche or gypsum on fracture surfaces.
						Total Depth 46.0 ft.

MONITORING WELL COMPLETION LOG SHP02-0835

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2104159.66</u>	DATE DRILLED <u>12/06/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>246020.38</u>	SURFACE ELEV. (FT NGVD) <u>4927.75</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>35.50</u>	TOP OF CASING (FT) <u>4930.48</u>
WELL NUMBER <u>0835</u>	WELL DEPTH (FT) <u>32.00</u>	MEAS. PT. ELEV. (FT) <u>4930.48</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>5.88</u>

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
BLANK CASING:	2 in. PVC Sch 40	-2.73 to 21.9	SAMPLING METHOD <u>GRAB</u>
WELL SCREEN:	2 in. Machine Slotted PVC	21.9 to 31.9	DATE DEVELOPED <u>12/07/1998</u>
SUMP/END CAP:	2 in. PVC Sch 40	31.9 to 32.0	WATER LEVEL (FT BTOC) <u>16.72 on 01/06/1999</u>
SURFACE SEAL:	Concrete	-0.5 to 2.0	LOGGED BY <u>M. Kautsky</u>
GROUT:	Bentonite Grout	2.0 to 7.0	REMARKS _____
SEAL:	Bentonite Pellets	7.0 to 11.0	
UPPER PACK:	Natural Cave-in Material	11.0 to 17.4	
LOWER PACK:	20-40 Silica Sand	17.4 to 35.5	



MONITORING WELL COMPLETION LOG SHP02-0835

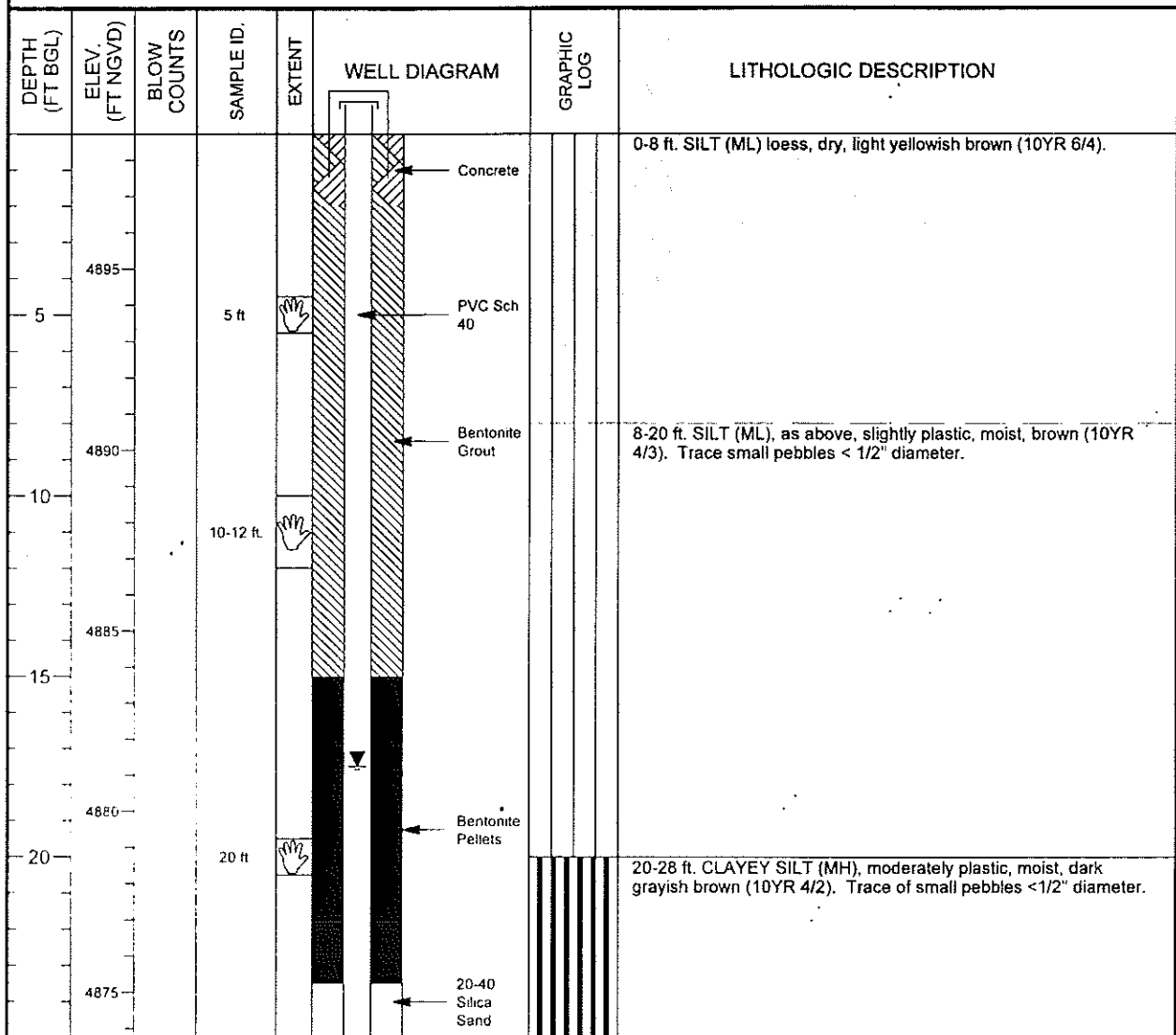
PROJECT UMTRA GROUND WATER **WELL NUMBER** 0835
SITE SHIPROCK (TAILINGS AREA) **DATES DRILLED** 12/06/1998

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
30	4900			Hand icon	0.010" Slotted PVC		
35	4895			Hand icon	20-40 Silica Sand		32-35.5 ft. MANCOS SHALE, weathered, gray (5Y 5/1). Drove casing into firm shale at about 33 ft.
Total Depth 35.5 ft.							
40	4890						
45	4885						
50	4880						
55	4875						

MONITORING WELL COMPLETION LOG SHP02-0836

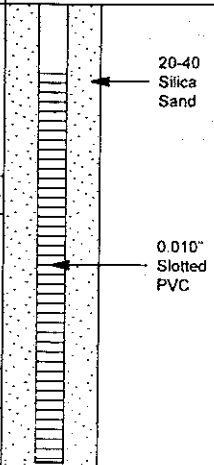

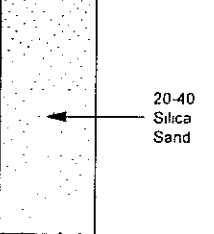
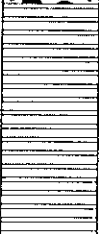
PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2103969.34	DATE DRILLED	12/07/1998
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	241957.93	SURFACE ELEV. (FT NGVD)	4898.74
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	43.00	TOP OF CASING (FT)	4901.74
WELL NUMBER	0836	WELL DEPTH (FT)	36.90	MEAS. PT. ELEV. (FT)	4901.74
				SLOT SIZE (IN)	0.010
				BIT SIZE(S) (IN)	5.88
WELL INSTALLATION INTERVAL (FT)					
SURFACE CASING:					
BLANK CASING:	2 in. PVC Sch 40	-3.0	to	26.8	DRILLING METHOD DRILL-THRU CASING DRIVER
WELL SCREEN:	2 in. Machine Slotted PVC	26.8	to	36.8	SAMPLING METHOD GRAB
SUMP/END CAP:	2 in. PVC Sch 40	36.8	to	36.9	DATE DEVELOPED 12/08/1998
SURFACE SEAL:	Concrete	-0.5	to	2.0	WATER LEVEL (FT BGS) 17.5 on 12/08/1998
GROUT:	Bentonite Grout	2.0	to	15.0	LOGGED BY C. Goodknight
SEAL:	Bentonite Pellets	15.0	to	23.5	REMARKS
UPPER PACK:					
LOWER PACK:	20-40 Silica Sand	23.5	to	43.0	



MONITORING WELL COMPLETION LOG SHP02-0836

PROJECT UMTRA GROUND WATER WELL NUMBER 0836
 SITE SHIPROCK (TAILINGS AREA) DATES DRILLED 12/07/1998

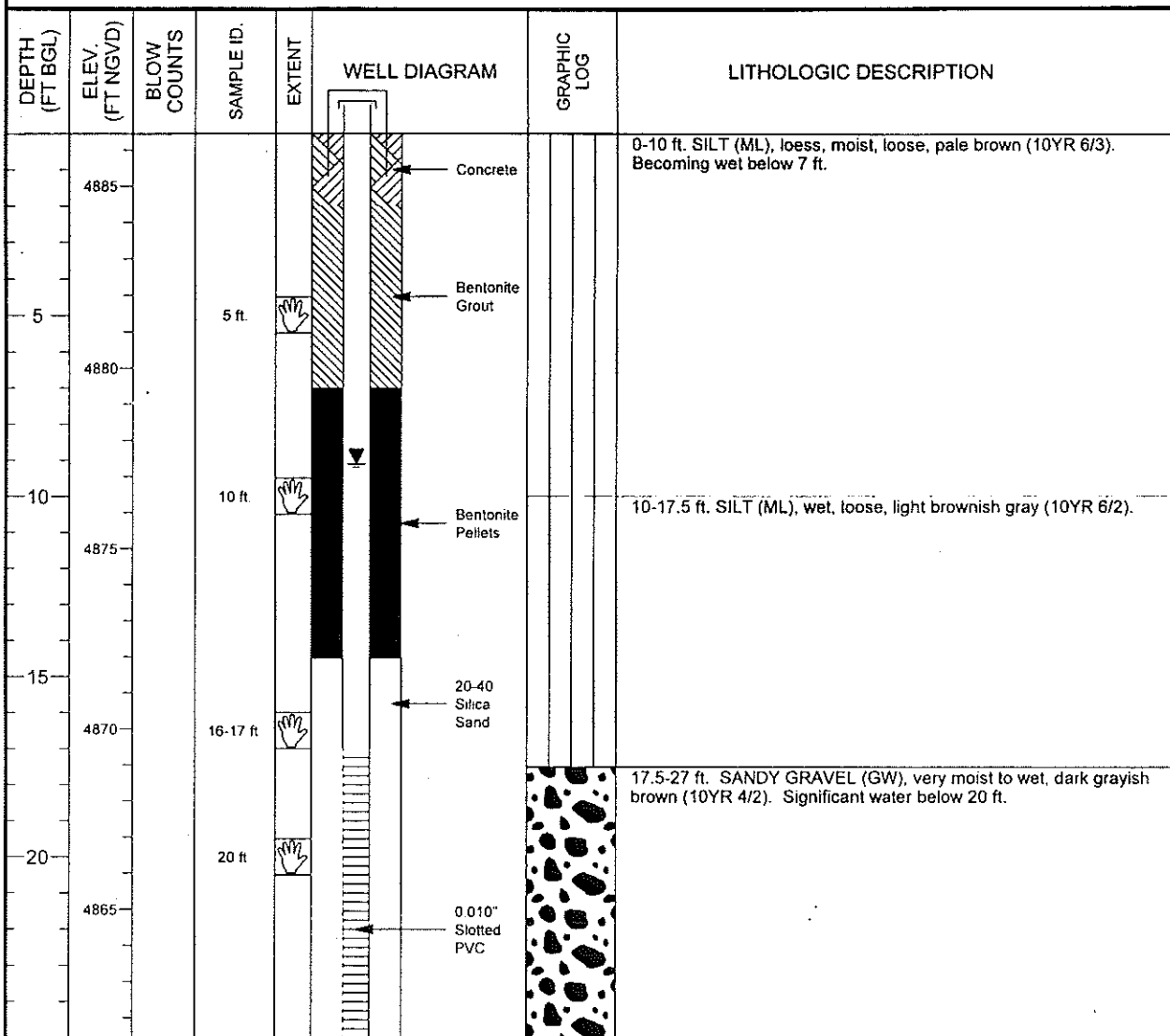
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
30	4870			30 ft.	 <p style="font-size: small;">20-40 Silica Sand</p> <p style="font-size: small;">0.010" Slotted PVC</p>		<p>28-37 ft. SANDY GRAVEL (GW), wet, brown (10YR 4/3), composed of gravel and cobbles ~50%; medium to coarse grained sand ~40-45%; and finer grained material ~5%.</p>
35	4865			35 ft.	 <p style="font-size: small;">20-40 Silica Sand</p>		<p>37-43 ft. MANCOS SHALE, weathered, soft, gray. Firm shale reached at 43 ft.</p>
Total Depth 43.0 ft.							



MONITORING WELL COMPLETION LOG SHP02-0837


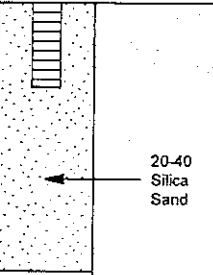
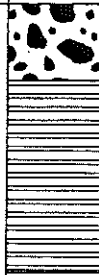
PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2105185.63	DATE DRILLED	12/05/1998 to 12/06/1998
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	243678.55	SURFACE ELEV. (FT NGVD)	4886.45
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	32.00	TOP OF CASING (FT)	4889.54
WELL NUMBER	0837	WELL DEPTH (FT)	27.20	MEAS. PT. ELEV. (FT)	4889.54
				SLOT SIZE (IN)	0.010
				BIT SIZE(S) (IN)	5.88
WELL INSTALLATION		INTERVAL (FT)		DRILLING METHOD DRILL-THRU CASING DRIVER	
SURFACE CASING:				SAMPLING METHOD GRAB	
BLANK CASING:	2 in. PVC Sch 40	-3.09	to 17.0	DATE DEVELOPED 12/06/1998	
WELL SCREEN:	2 in. Machine Slotted PVC	17.0	to 27.1	WATER LEVEL (FT BTOC) 12.2 on 12/06/1998	
SUMP/END CAP:	2 in. PVC Sch 40	27.1	to 27.2	LOGGED BY M. Kautsky	
SURFACE SEAL:	Concrete	-0.5	to 2.0	REMARKS Dust blowing out the borehole at ~27 ft. indicates weathered Mancos Shale is dry.	
GROUT:	Bentonite Grout	2.0	to 7.0		
SEAL:	Bentonite Pellets	7.0	to 14.5		
UPPER PACK:					
LOWER PACK:	20-40 Silica Sand	14.5	to 32.0		



MONITORING WELL COMPLETION LOG SHP02-0837

PROJECT UMTRA GROUND WATER WELL NUMBER 0837
 SITE SHIPROCK (TAILINGS AREA) DATES DRILLED 12/05/1998 to 12/06/1998

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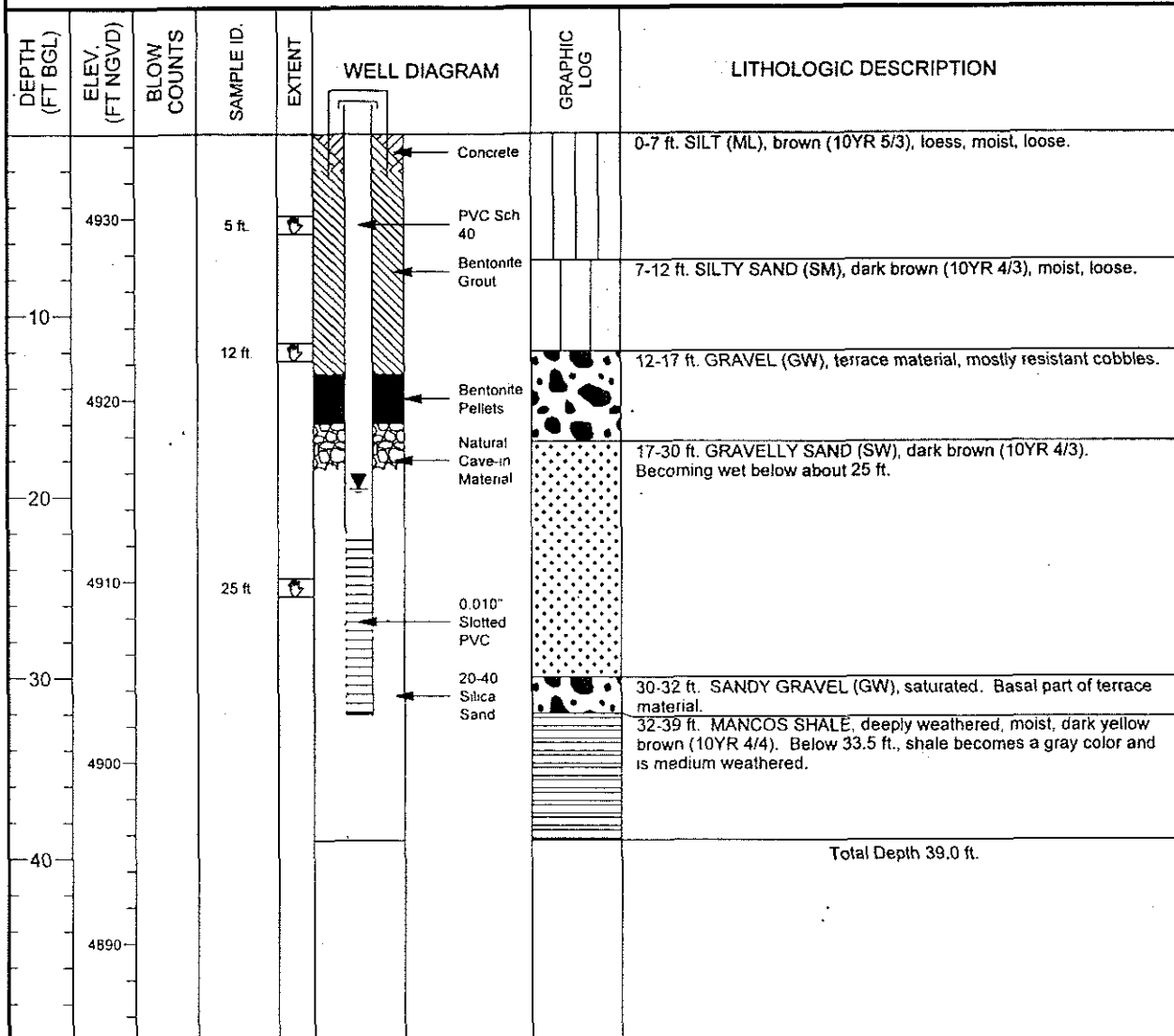
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
30	4860		30-31 ft.		 <p style="text-align: center;">20-40 Silica Sand</p>		27-32 ft. MANCOS SHALE, gray (10YR 6/1), medium weathered, firm.
Total Depth 32.0 ft.							



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MONITORING WELL COMPLETION LOG SHP02-0838

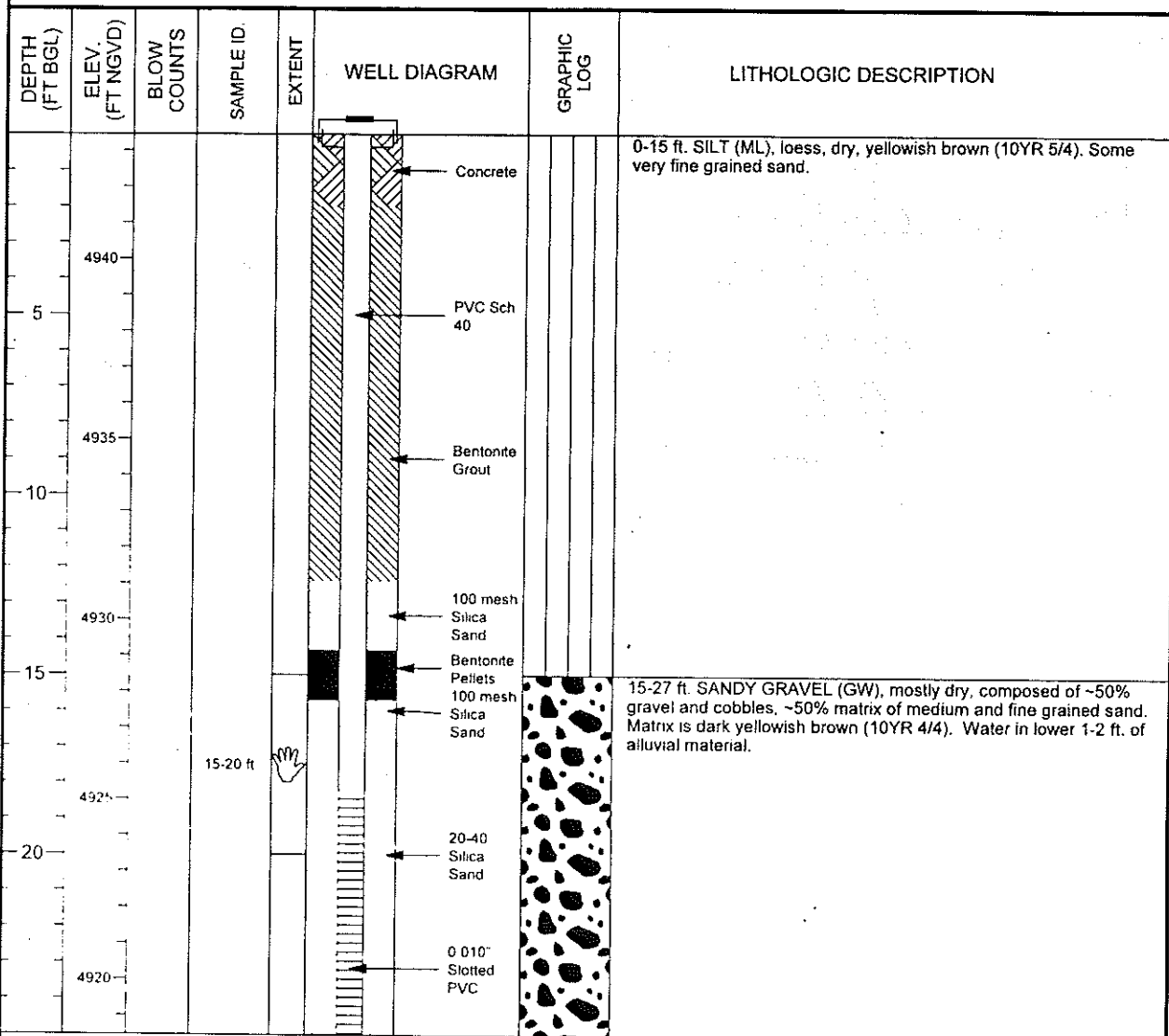
PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2102498.85	DATE DRILLED	12/03/1998 to 12/04/1998
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	244738.77	SURFACE ELEV. (FT NGVD)	4934.66
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	39.00	TOP OF CASING (FT)	4937.70
WELL NUMBER	0838	WELL DEPTH (FT)	32.00	MEAS. PT. ELEV. (FT)	4937.70
				SLOT SIZE (IN)	0.010
				BIT SIZE(S) (IN)	5.88
WELL INSTALLATION			INTERVAL (FT)	DRILLING METHOD	DRILL-THRU CASING DRIVER
SURFACE CASING:				SAMPLING METHOD	GRAB
BLANK CASING:	2 in. PVC Sch 40	-3.04	to 21.9	DATE DEVELOPED	12/06/1998
WELL SCREEN:	2 in. Machine Slotted PVC	21.9	to 31.9	WATER LEVEL (FT BTOC)	22.62 on 12/11/1998
SUMP/END CAP:	2 in. PVC Sch 40	31.9	to 32.0	LOGGED BY	M. Kautsky
SURFACE SEAL:	Concrete	-0.5	to 2.0	REMARKS	
GROUT:	Bentonite Grout	2.0	to 13.2		
SEAL:	Bentonite Pellets	13.2	to 16.0		
UPPER PACK:	Natural Cave-in Material	16.0	to 18.5		
LOWER PACK:	20-40 Silica Sand	18.5	to 39.0		



MONITORING WELL COMPLETION LOG SHP02-0839

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102521.32</u>	DATE DRILLED <u>11/06/1998 to 11/07/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>247357.45</u>	SURFACE ELEV. (FT NGVD) <u>4943.46</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>31.00</u>	TOP OF CASING (FT) <u>4943.21</u>
WELL NUMBER <u>0839</u>	WELL DEPTH (FT) <u>28.30</u>	MEAS. PT. ELEV. (FT) <u>4943.21</u>


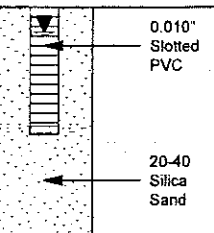
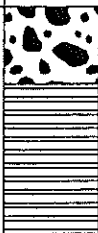
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			SLOT SIZE (IN) <u>0.010</u>
BLANK CASING:	2 in. PVC Sch 40	0.25 to 18.1	BIT SIZE(S) (IN) <u>5.88</u>
WELL SCREEN:	2 in. Machine Slotted PVC	18.1 to 28.1	DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
SUMP/END CAP:	2 in. PVC Sch 40	28.1 to 28.3	SAMPLING METHOD <u>GRAB</u>
SURFACE SEAL:	Concrete	0.3 to 2.0	DATE DEVELOPED <u>11/11/1998</u>
GROUT:	Bentonite Grout	2.0 to 12.4	WATER LEVEL (FT BGS) <u>25.65 on 11/07/1998</u>
SEAL:	Bentonite Pellets	14.3 to 15.7	LOGGED BY <u>C. Goodknight</u>
UPPER PACK:	100 mesh Silica Sand	15.7 to 16.3	REMARKS <u>12.4 to 14.3 ft. - 100 mesh silica sand.</u>
LOWER PACK:	20-40 Silica Sand	16.3 to 31.0	



MONITORING WELL COMPLETION LOG SHP02-0839

PROJECT UMTRA GROUND WATER **WELL NUMBER** 0839
SITE SHIPROCK (TAILINGS AREA) **DATES DRILLED** 11/06/1998 to 11/07/1998

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
4915 -30 4910 -35 4905 -40 4900 -45 4895 -50 4890 -55			28-31 ft.		 <p>0.010" Slotted PVC</p> <p>20-40 Silica Sand</p>		27-31 ft. MANCOS SHALE, weathered, damp, olive gray (5Y 5/2). Some limonitic coloration.
Total Depth 31.0 ft.							



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BOREHOLE LOG SHP02-0840

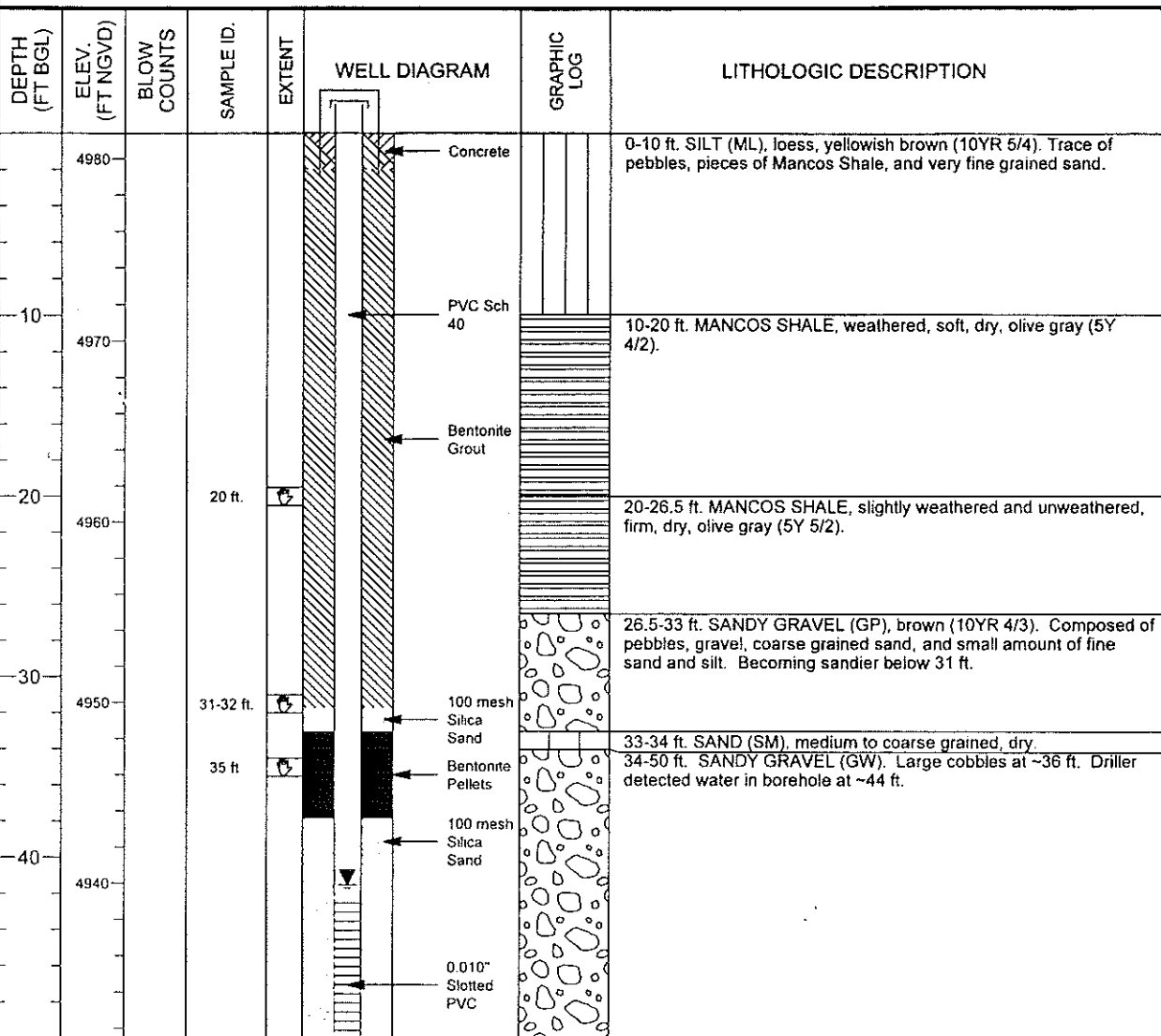
PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>5003.76</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>5.88</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
WELL NUMBER <u>0840</u>	SAMPLING METHOD <u>GRAB</u>
NORTH COORD. (FT) <u>2098570.12</u>	WATER LEVEL (FT BGS) _____
EAST COORD. (FT) <u>246811.67</u>	LOGGED BY <u>C. Goodknight</u>
HOLE DEPTH (FT) <u>11.00</u>	REMARKS <u>Mancos Shale found at ~5 ft; abandoned and filled with grout.</u>
DATE DRILLED <u>11/07/1998</u>	

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	5000					0-5 ft. SILT (ML), loess, dry, yellowish brown (10YR 5/4).
5					[Hatched Pattern]	5-11 ft. MANCOS SHALE, weathered, olive gray (5Y 5/2). Becomes firm and unweathered at from 10 to 11 ft.
	4995				[Hatched Pattern]	
10			10 ft	[Hand Icon]	[Hatched Pattern]	
	4990					Total depth 11.0 ft.

MONITORING WELL COMPLETION LOG SHP02-0841

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2099895.06</u>	DATE DRILLED <u>11/07/1998 to 11/08/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>246000.03</u>	SURFACE ELEV. (FT NGVD) <u>4981.43</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>57.00</u>	TOP OF CASING (FT) <u>4984.05</u>
WELL NUMBER <u>0841</u>	WELL DEPTH (FT) <u>52.20</u>	MEAS. PT. ELEV. (FT) <u>4984.05</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>5.88</u>

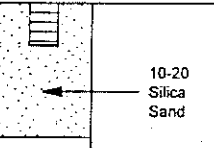
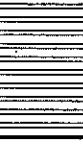
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			
BLANK CASING:	2 in. PVC Sch 40	-2.62 to 42.0	DRILLING METHOD <u>DRILL-THRU CASING DRIVER</u>
WELL SCREEN:	2 in. Machine Slotted PVC	42.0 to 52.0	SAMPLING METHOD <u>GRAB</u>
SUMP/END CAP:	2 in. PVC Sch 40	52.0 to 52.2	DATE DEVELOPED <u>11/12/1998</u>
SURFACE SEAL:	Concrete	-0.5 to 2.0	WATER LEVEL (FT BGS) <u>41.5 on 11/09/1998</u>
GROUT:	Bentonite Grout	2.0 to 31.7	LOGGED BY <u>C. Goodknight</u>
SEAL:	Bentonite Pellets	33.0 to 37.8	REMARKS <u>Drove casing to refusal at 21-22'; rotary drilled to 31.5 ft. on 11/7; rotary drill and casing drive to TD on 11/8. 31.7 to 33 ft. - 100 mesh silica sand.</u>
UPPER PACK:	100 mesh Silica Sand	37.8 to 40.0	
LOWER PACK:	10-20 Silica Sand	40.4 to 57.0	



MONITORING WELL COMPLETION LOG SHP02-0841

PROJECT UMTRA GROUND WATER WELL NUMBER 0841
 SITE SHIPROCK (TAILINGS AREA) DATES DRILLED 11/07/1998 to 11/08/1998

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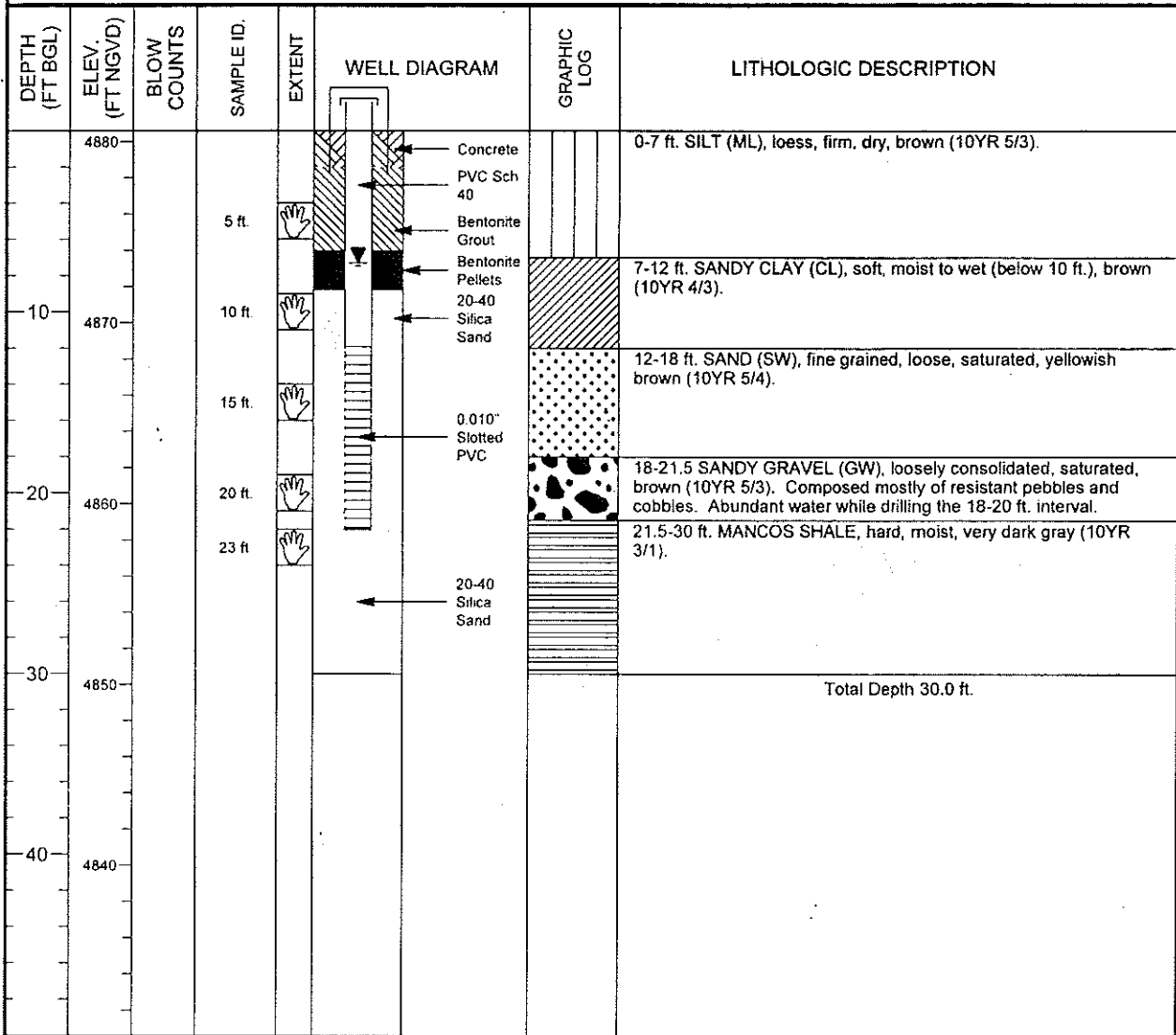
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4930		50-51 ft.	↕	 10-20 Silica Sand		50-57 ft. MANCOS SHALE, weathered.
-60	4920						Total Depth 57.0 ft.
-70	4910						
-80	4900						
-90	4890						
-100	4880						
-110	4870						



MONITORING WELL COMPLETION LOG SHP02-0843

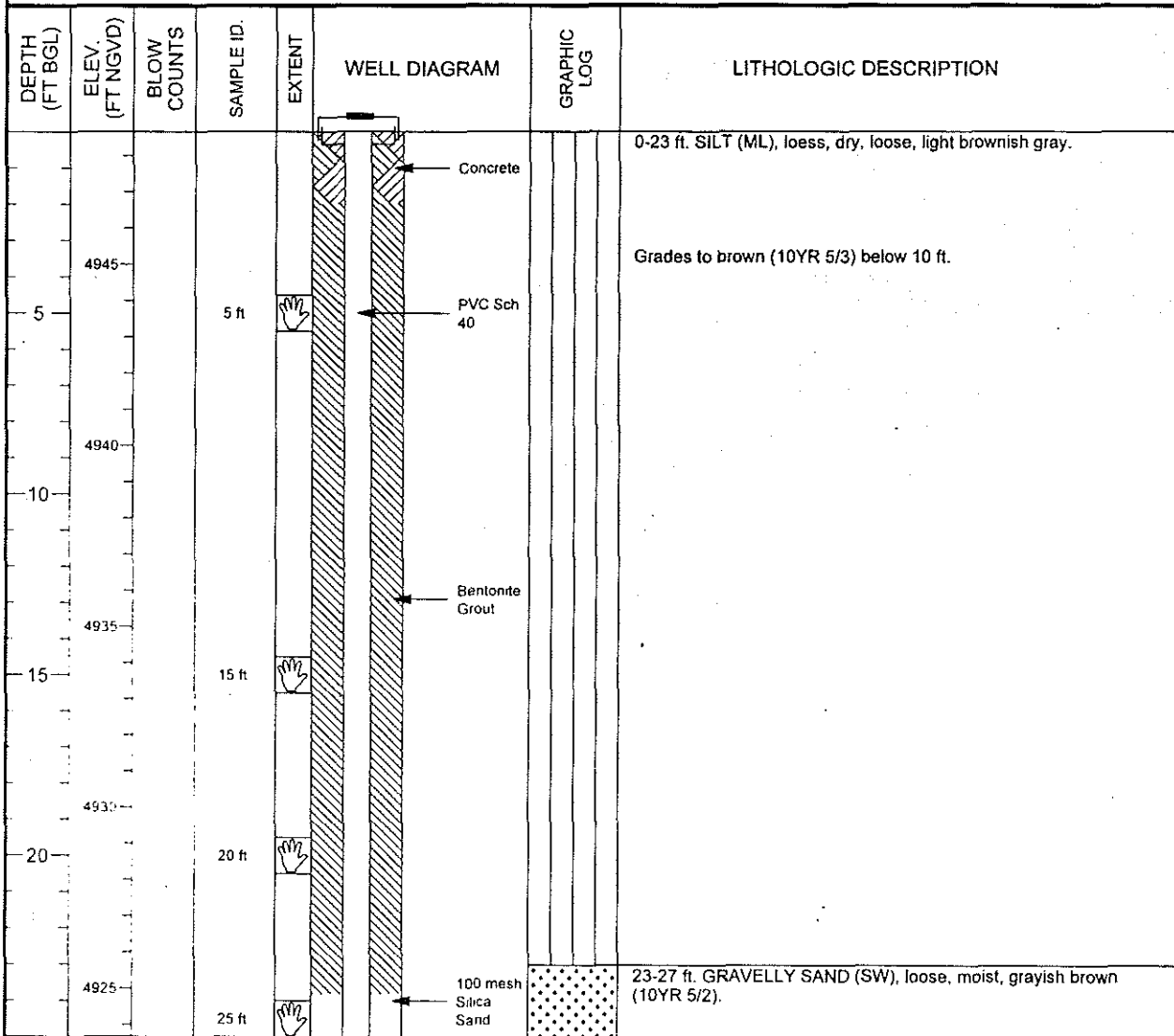
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2105743.99</u>	DATE DRILLED <u>12/05/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>244999.74</u>	SURFACE ELEV. (FT NGVD) <u>4880.60</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>30.00</u>	TOP OF CASING (FT) <u>4883.56</u>
WELL NUMBER <u>0843</u>	WELL DEPTH (FT) <u>22.00</u>	MEAS. PT. ELEV. (FT) <u>4883.56</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>5.88</u>

SURFACE CASING:	WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD
BLANK CASING:	2 in. PVC Sch 40	-2.96 to 11.9	DRILL-THRU CASING DRIVER
WELL SCREEN:	2 in. Machine-Slotted PVC	11.9 to 21.9	SAMPLING METHOD <u>GRAB</u>
SUMP/END CAP:	2 in. PVC Sch 40	21.9 to 22.0	DATE DEVELOPED <u>12/06/1998</u>
SURFACE SEAL:	Concrete	-0.5 to 2.0	WATER LEVEL (FT BTOC) <u>10.27</u> on <u>01/06/1999</u>
GROUT:	Bentonite Grout	2.0 to 6.6	LOGGED BY <u>M. Kautsky</u>
SEAL:	Bentonite Pellets	6.6 to 8.8	REMARKS _____
UPPER PACK:			
LOWER PACK:	20-40 Silica Sand	8.8 to 30.0	



MONITORING WELL COMPLETION LOG SHP02-0844

PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2102036.39	DATE DRILLED	11/11/1998
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	246001.56	SURFACE ELEV. (FT NGVD)	4948.66
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	43.00	TOP OF CASING (FT)	4948.46
WELL NUMBER	0844	WELL DEPTH (FT)	40.20	MEAS. PT. ELEV. (FT)	4948.46
				SLOT SIZE (IN)	0.010
				BIT SIZE(S) (IN)	5.88
WELL INSTALLATION INTERVAL (FT)					
SURFACE CASING:					
BLANK CASING:	2 in. PVC Sch 40	0.2	to	30.0	DRILLING METHOD DRILL-THRU CASING DRIVER
WELL SCREEN:	2 in. Machine Slotted PVC	30.0	to	40.0	SAMPLING METHOD GRAB
SUMP/END CAP:	2 in. PVC Sch 40	40.0	to	40.2	DATE DEVELOPED 11/16/1998
SURFACE SEAL:	Concrete	0.5	to	2.0	WATER LEVEL (FT BTOC) 29.75 on 01/06/1999
GROUT:	Bentonite Grout	2.0	to	23.8	LOGGED BY M. Kautsky
SEAL:	Bentonite Pellets	25.1	to	26.9	REMARKS 23.8 to 25.1 ft. - 100 mesh silica sand.
UPPER PACK:	100 mesh Silica Sand	26.9	to	28.0	
LOWER PACK:	10-20 Silica Sand	28.0	to	43.0	



MONITORING WELL COMPLETION LOG SHP02-0844

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0844
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	11/11/1998

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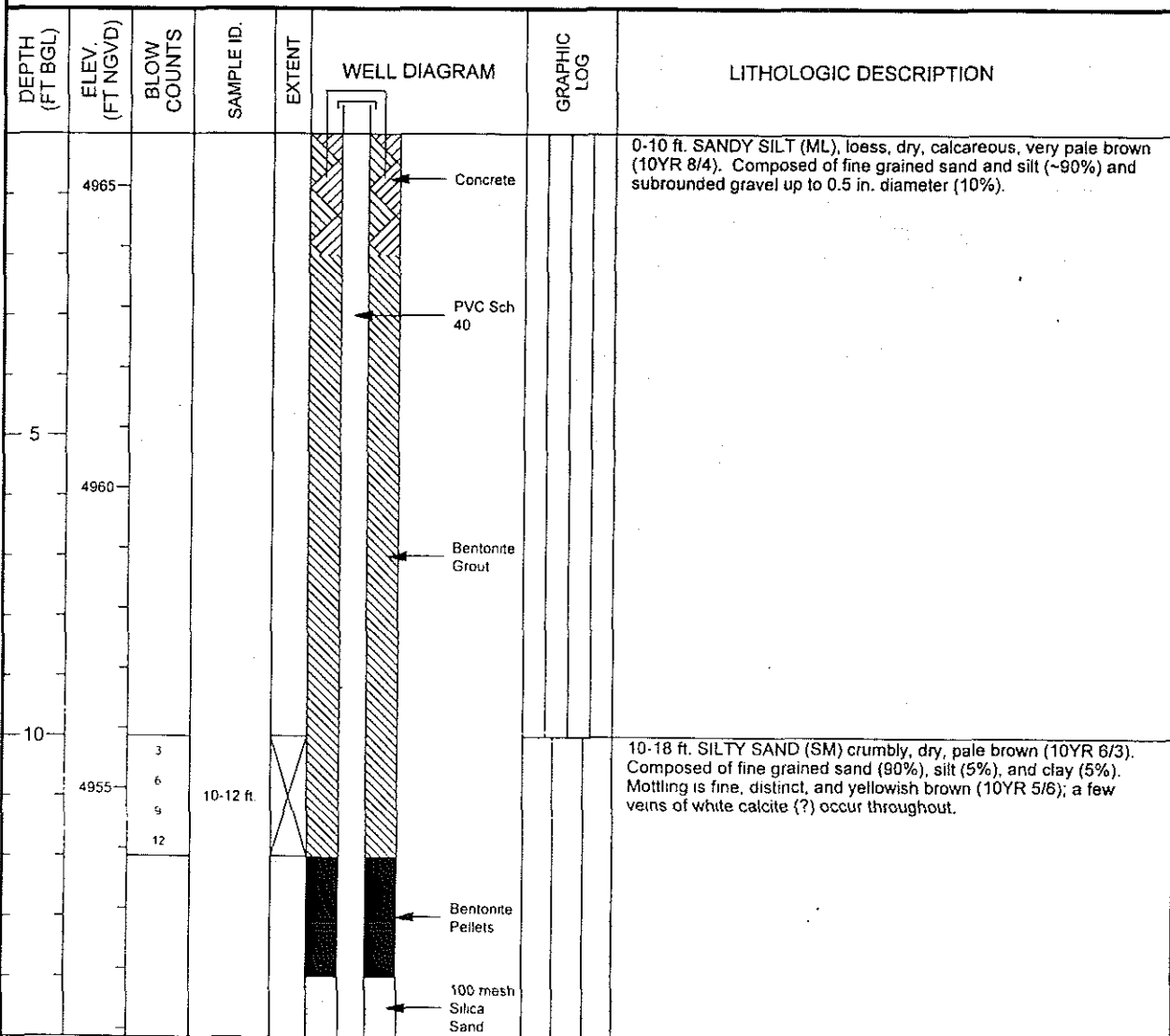
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">30</div> <div style="margin-bottom: 10px;">35</div> <div style="margin-bottom: 10px;">40</div> <div style="margin-bottom: 10px;">45</div> <div style="margin-bottom: 10px;">50</div> <div style="margin-bottom: 10px;">55</div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">4920</div> <div style="margin-bottom: 10px;">4915</div> <div style="margin-bottom: 10px;">4910</div> <div style="margin-bottom: 10px;">4905</div> <div style="margin-bottom: 10px;">4900</div> <div style="margin-bottom: 10px;">4895</div> </div>			<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">30 ft.</div> <div style="margin-bottom: 10px;">35 ft.</div> </div>	<p style="font-size: small;"> Bentonite Pellets 100 mesh Silica Sand 10-20 Silica Sand 0.010" Slotted PVC 10-20 Silica Sand </p>		<p>27-34 ft. GRAVEL (GW), wet below ~30 ft. Contains resistant pebbles and cobbles.</p> <p>34-43 ft. MANCOS SHALE, medium weathered, grayish brown. Water increases at 34.5 ft., but is gone by 37 ft.</p> <p style="text-align: center;">Total Depth 43.0 ft.</p>

MONITORING WELL COMPLETION LOG SHP02-0845

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2100877.91</u>	DATE DRILLED <u>11/19/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>245146.72</u>	SURFACE ELEV. (FT NGVD) <u>4965.87</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>28.50</u>	TOP OF CASING (FT) <u>4969.20</u>
WELL NUMBER <u>0845</u>	WELL DEPTH (FT) <u>28.33</u>	MEAS. PT. ELEV. (FT) <u>4969.20</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>8.0</u>

	WELL INSTALLATION	INTERVAL (FT)
SURFACE CASING:		
BLANK CASING:	2 in. PVC Sch 40	-3.33 to 18.17
WELL SCREEN:	2 in. Machine Slotted PVC	18.17 to 28.17
SUMP/END CAP:	2 in. PVC Sch 40	28.17 to 28.33
SURFACE SEAL:	Concrete	0.5 to 2.0
GROUT:	Bentonite Grout	2.0 to 12.0
SEAL:	Bentonite Pellets	12.0 to 14.0
UPPER PACK:	100 mesh Silica Sand	14.0 to 15.0
LOWER PACK:	20-40 Silica Sand	15.0 to 28.5


DRILLING METHOD <u>H.S.A./CORE/ROTARY</u>
SAMPLING METHOD <u>SPLIT SPOON</u>
DATE DEVELOPED _____
WATER LEVEL (FT BTOC) <u>27.7 on 11/20/1998</u>
LOGGED BY <u>L. Spencer</u>
REMARKS <u>Bedrock was not reached.</u>



MONITORING WELL COMPLETION LOG SHP02-0845

PROJECT UMTRA GROUND WATER **WELL NUMBER** 0845
SITE SHIPROCK (TAILINGS AREA) **DATES DRILLED** 11/19/1998

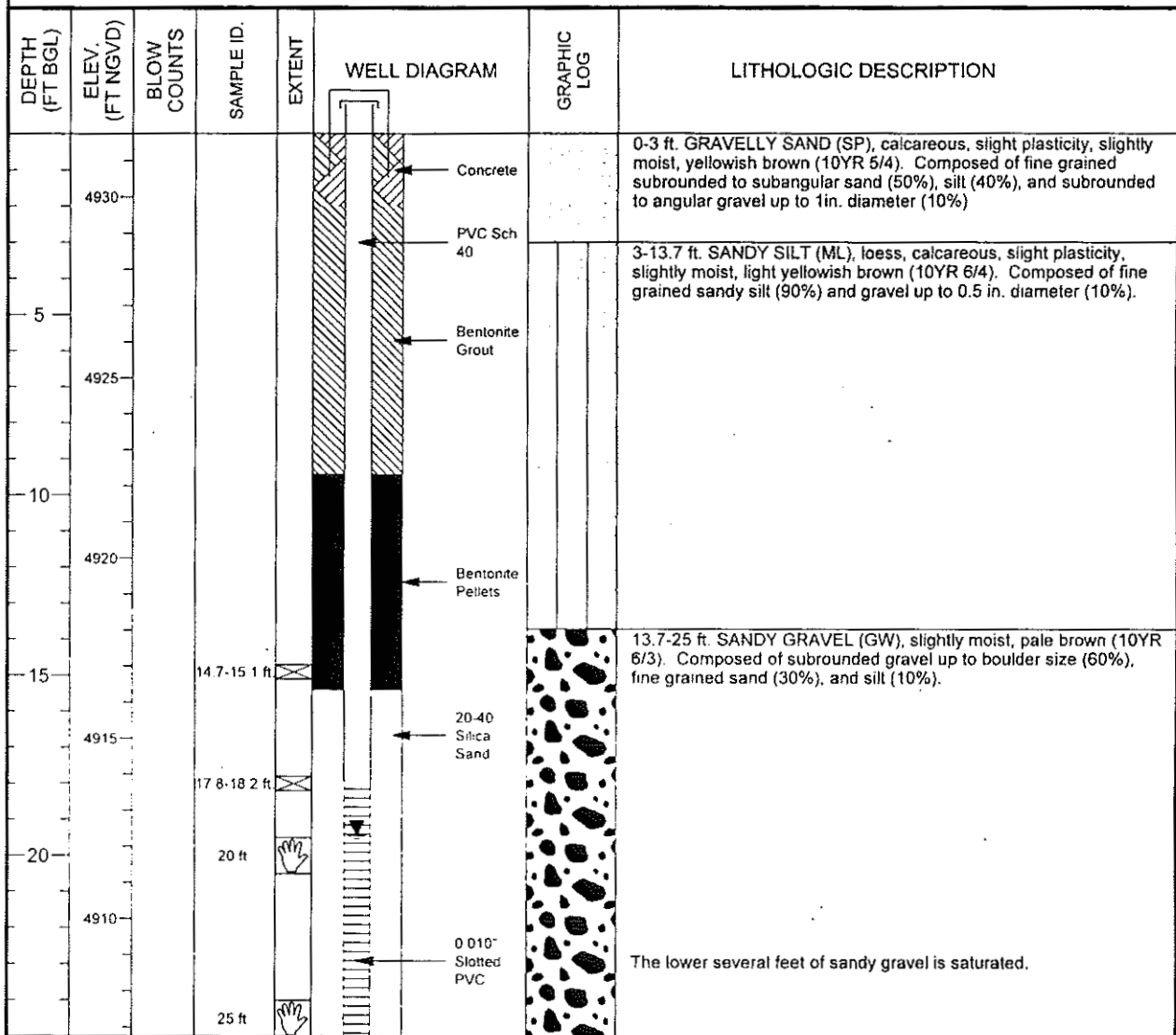
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
4950					20-40 Silica Sand		
20	4945	30 50/2'	20-20.7 ft.	X			18-28.5 ft. SANDY GRAVEL (GW), moist, dark brown (7.5YR 4/4). Composed of subrounded gravel up to cobble size (60%), fine to medium grained subrounded to subangular sand (30%), and silt (10%).
		50	23-23.3 ft.	X	0.010" Slotted PVC		
25	4940		28-28.3 ft.	X			
30	4935						Total Depth 28.5 ft.



MONITORING WELL COMPLETION LOG SHP02-0846

PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2102475.12	DATE DRILLED	12/02/1998 to 12/07/1998
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	242268.43	SURFACE ELEV. (FT NGVD)	4931.75
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	32.00	TOP OF CASING (FT)	4934.57
WELL NUMBER	0846	WELL DEPTH (FT)	28.00	MEAS. PT. ELEV. (FT)	4934.57
				SLOT SIZE (IN)	0.010
				BIT SIZE(S) (IN)	5.88
WELL INSTALLATION			INTERVAL (FT)		
SURFACE CASING:					
BLANK CASING:	2 in. PVC Sch 40	-2.82	to	17.9	DRILLING METHOD HSA & D-THRU DRIVER
WELL SCREEN:	2 in. Machine Slotted PVC	17.9	to	27.9	SAMPLING METHOD GRAB, SPLIT SPOON
SUMP/END CAP:	2 in. PVC Sch 40	27.9	to	28.0	DATE DEVELOPED 12/07/1998
SURFACE SEAL:	Concrete	-0.5	to	2.0	WATER LEVEL (FT BTOC) 22.26 on 01/06/1999
GROUT:	Bentonite Grout	2.0	to	9.4	LOGGED BY C. Goodknight and L. Spencer
SEAL:	Bentonite Pellets	9.4	to	15.4	REMARKS Borehole started on 12/2/98, and was
UPPER PACK:					deepened and completed as a well on 12/7/98.
LOWER PACK:	20-40 Silica Sand	15.4	to	32.0	



MONITORING WELL COMPLETION LOG SHP02-0846

PROJECT	UMTRA GROUND WATER	WELL NUMBER	0846
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	12/02/1998 to 12/07/1998

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
30	4905			30 ft.	<p style="font-size: small;">0.010" Slotted PVC</p> <p style="font-size: small;">20-40 Silica Sand</p>		25-32 ft. MANCOS SHALE, weathered, mainly dark yellowish brown (10YR 4/2); some limonitic (orange) stain, soft (becomes firmer below 31 ft.).
							Total Depth 32.0 ft.
35	4895						
40	4890						
45	4885						
50	4880						
55	4875						



MONITORING WELL COMPLETION LOG SHP02-0847

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102987.81</u>	DATE DRILLED <u>1/1/1995</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>243884.59</u>	SURFACE ELEV. (FT NGVD) <u>4924.17</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) _____	TOP OF CASING (FT) <u>4924.35</u>
WELL NUMBER <u>0847</u>	WELL DEPTH (FT) _____	MEAS. PT. ELEV. (FT) <u>4924.35</u>
WELL INSTALLATION INTERVAL (FT)		SLOT SIZE (IN) _____
SURFACE CASING: _____		BIT SIZE(S) (IN) _____
BLANK CASING: _____		DRILLING METHOD _____
WELL SCREEN: _____		SAMPLING METHOD _____
SUMP/END CAP: _____		DATE DEVELOPED _____
SURFACE SEAL: _____		WATER LEVEL (FT BTOC) <u>13.94 on 6/2/1999</u>
GROUT: _____		LOGGED BY _____
SEAL: _____		REMARKS <u>Well located north of H.S. (irrigation). Depth ~92.5 ft. Lithology and well construction details unknown. Drilled between 1990-1995.</u>
UPPER PACK: _____		
LOWER PACK: _____		

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
4920							
10							
4910							
20							
4900							
30							
4890							
40							
4880							



MONITORING WELL COMPLETION LOG SHP02-0848

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101767.85</u>	DATE DRILLED <u>1/1/1995</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>243482.71</u>	SURFACE ELEV. (FT NGVD) <u>4949.89</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>142.58</u>	TOP OF CASING (FT) <u>4949.91</u>
WELL NUMBER <u>0848</u>	WELL DEPTH (FT) <u>142.58</u>	MEAS. PT. ELEV. (FT) <u>4949.91</u>

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD _____
BLANK CASING: 4.5 in. Stainless Steel?	-0.02 to	45.0	SAMPLING METHOD _____
WELL SCREEN: 4.5 in. Stainless Steel?	45.0 to	142.58	DATE DEVELOPED _____
SUMP/END CAP:			WATER LEVEL (FT BTOC) <u>37.81 on 6/2/1999</u>
SURFACE SEAL:			LOGGED BY _____
GROUT:			REMARKS <u>Well located south of H.S. and is not</u>
SEAL:			<u>used for irrigation. Lithology and well construction</u>
UPPER PACK:			<u>details unknown. Drilled between 1990-1995.</u>
LOWER PACK:			

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">10</div> <div style="margin-bottom: 10px;">20</div> <div style="margin-bottom: 10px;">30</div> <div style="margin-bottom: 10px;">40</div> <div style="margin-bottom: 10px;">50</div> <div style="margin-bottom: 10px;">60</div> <div style="margin-bottom: 10px;">70</div> <div style="margin-bottom: 10px;">80</div> <div style="margin-bottom: 10px;">90</div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">4940</div> <div style="margin-bottom: 10px;">4930</div> <div style="margin-bottom: 10px;">4920</div> <div style="margin-bottom: 10px;">4910</div> <div style="margin-bottom: 10px;">4900</div> <div style="margin-bottom: 10px;">4890</div> <div style="margin-bottom: 10px;">4880</div> <div style="margin-bottom: 10px;">4870</div> <div style="margin-bottom: 10px;">4860</div> </div>				<p style="font-size: small; margin-top: 10px;">Stainless Steel?</p> <p style="font-size: small; margin-top: 10px;">Native soil/fill?</p> <p style="font-size: small; margin-top: 10px;">Screen</p>		

MONITORING WELL COMPLETION LOG SHP02-0848

PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>0848</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DATES DRILLED <u>1/1/1995</u>

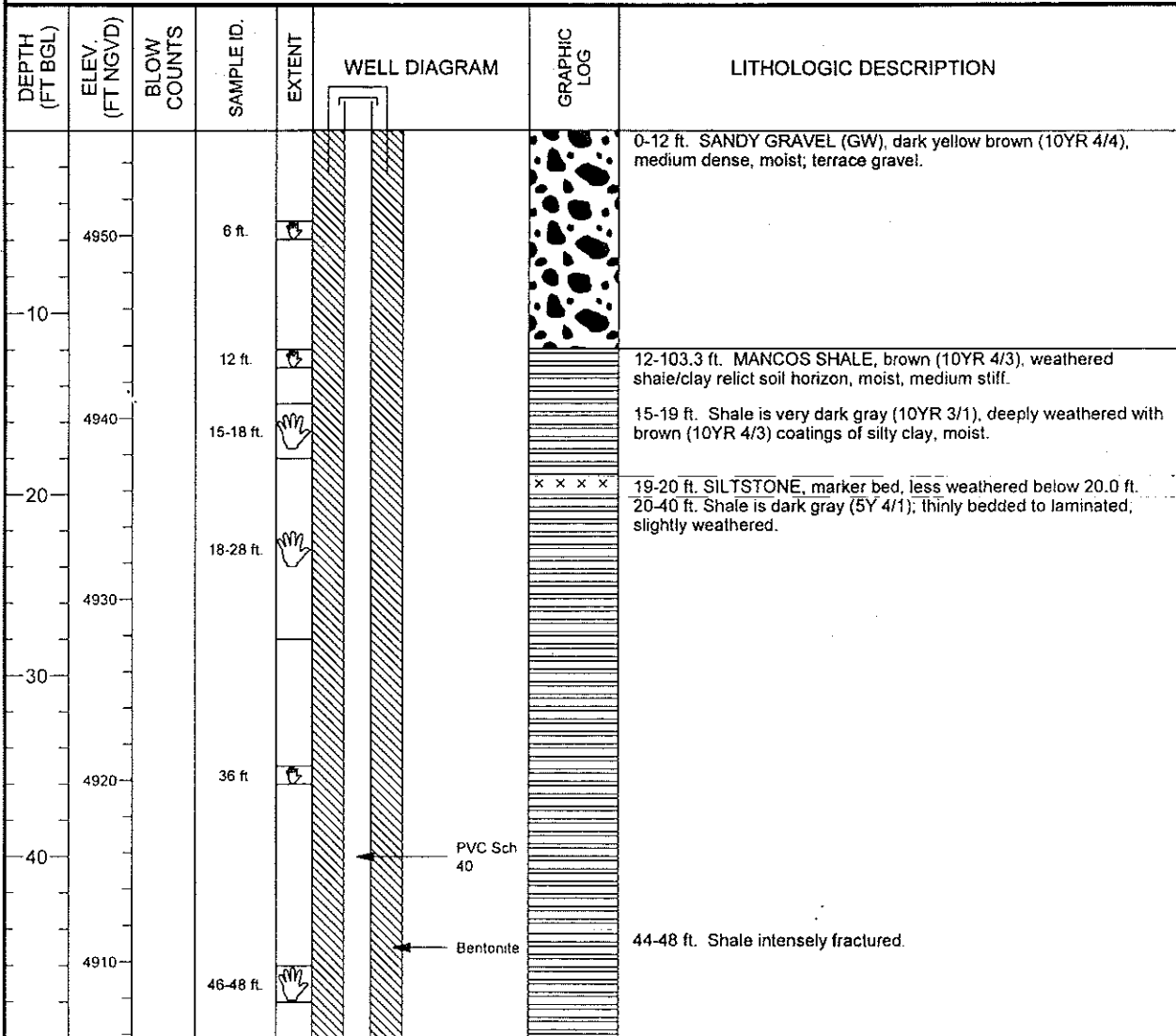
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
-110	4840						
-120	4830						
-130	4820						
-140	4810						
-150	4800						
-160	4790						
-170	4780						
-180	4770						
-190	4760						
-200	4750						
-210	4740						
-220	4730						



MONITORING WELL COMPLETION LOG SHP02-1002

PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2101812.07	DATE DRILLED	03/28/2000
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	250892.78	SURFACE ELEV. (FT NGVD)	4955.78
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	103.30	TOP OF CASING (FT)	4957.63
WELL NUMBER	1002	WELL DEPTH (FT)	103.30	MEAS. PT. ELEV. (FT)	4957.63
		WELL INSTALLATION INTERVAL (FT)		SLOT SIZE (IN)	
SURFACE CASING:				DRILLING METHOD	
BLANK CASING:	2 in. PVC Sch 40	-1.85	to 98.2	ROTASONIC	
WELL SCREEN:	2 in. Slotted PVC	98.2	to 103.0	SAMPLING METHOD	
SUMP/END CAP:	2 in. PVC Sch 40	103.0	to 103.3	GRAB	
SURFACE SEAL:				DATE DEVELOPED	
GROUT:	Bentonite	0.0	to 90.0	04/05/2000	
SEAL:	Bentonite Chips	90.0	to 95.4	WATER LEVEL (FT BGS)	
UPPER PACK:	100 mesh Silica Sand	95.4	to 96.0	LOGGED BY	
LOWER PACK:	20-40 Silica Sand	96.0	to 103.3	M. Kautsky	
				REMARKS	
				First well in nest to be drilled.	
				Centralizer placed in hole.	



MONITORING WELL COMPLETION LOG SHP02-1002

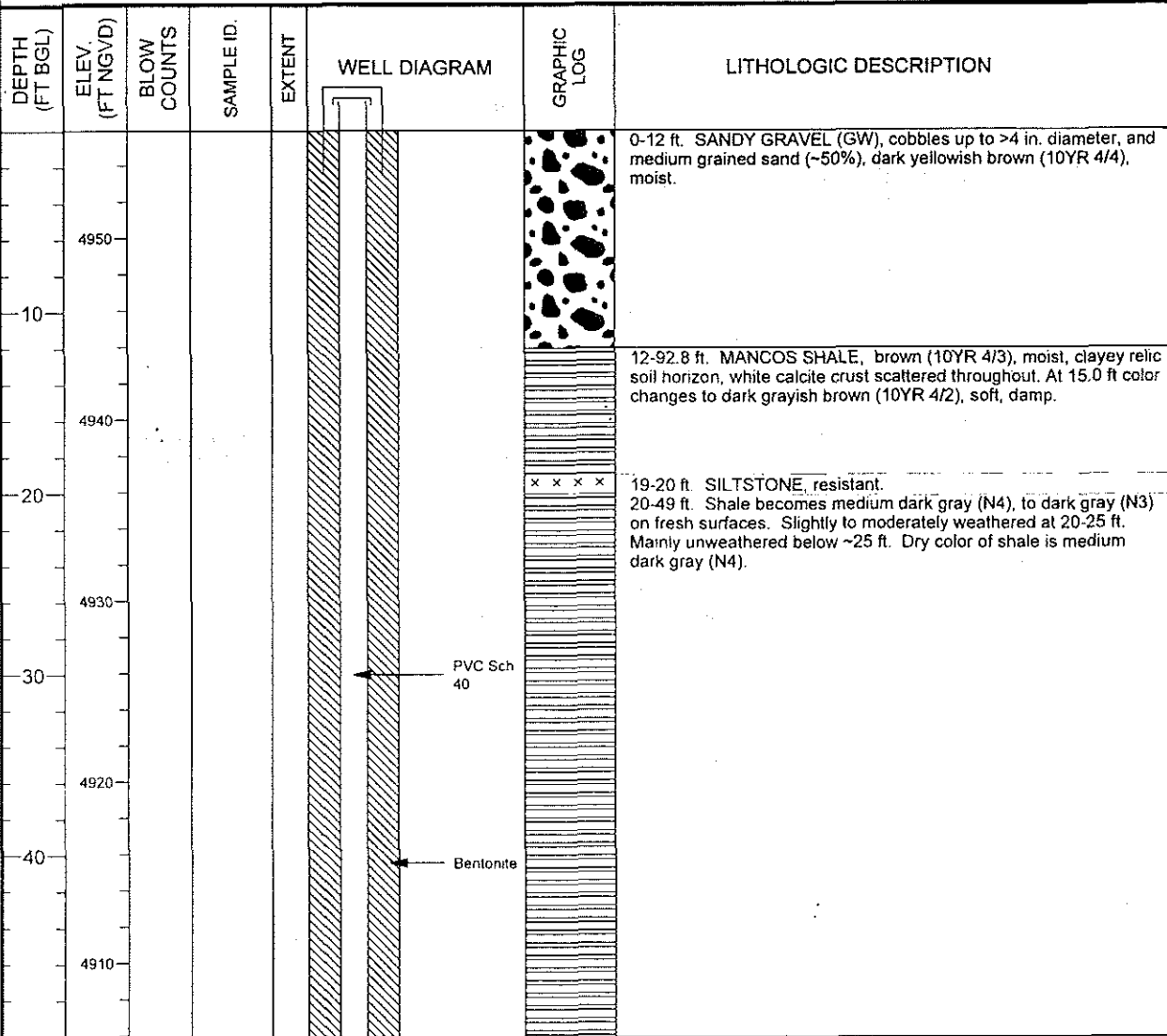
PROJECT	UMTRA GROUND WATER	WELL NUMBER	1002
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	03/28/2000

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION																					
4900			55-58 ft.	[Hand icon]			60	4890	64-66 ft.	[Hand icon]	70	4880	74-76 ft.	[Hand icon]	80	4870	80 ft.	[Hand icon]	89-90 ft.	90-91 ft.	[Hand icon]	4860	96-97 ft.	100-101 ft.	[Hand icon]	100	4850	110
							60-80 ft. Shale grades to very dark gray (5YR 3/1).																					
							80-88 ft. Shale contains calcite-filled veins about 0.05-inch thick; these veins are flattened cephalopods replaced by aragonite.																					
							89-90 ft. Shale is intensely fractured.																					
							96-97 ft. Shale is intensely fractured.																					
							Total Depth 103.3 ft.																					

MONITORING WELL COMPLETION LOG SHP02-1003

PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2101818.32	DATE DRILLED	03/29/2000
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	250884.95	SURFACE ELEV. (FT NGVD)	4955.93
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	92.80	TOP OF CASING (FT)	4957.84
WELL NUMBER	1003	WELL DEPTH (FT)	92.30	MEAS. PT. ELEV. (FT)	4957.84
				SLOT SIZE (IN)	0.010
				BIT SIZE(S) (IN)	6.0
WELL INSTALLATION			INTERVAL (FT)		
SURFACE CASING:					
BLANK CASING:	2 in. PVC Sch 40	-1.91	to	87.2	DRILLING METHOD ROTASONIC
WELL SCREEN:	2 in. Slotted PVC	87.2	to	92.0	SAMPLING METHOD
SUMP/END CAP:	2 in. PVC Sch 40	92.0	to	92.3	DATE DEVELOPED 04/05/2000
SURFACE SEAL:					
GROUT:	Bentonite	0.0	to	80.8	WATER LEVEL (FT BGS)
SEAL:	Bentonite Chips	80.8	to	84.0	LOGGED BY C. Goodknight
UPPER PACK:	100 mesh Silica Sand	84.0	to	85.0	REMARKS Well ~10 ft. NW of 1002. No sample taken- same as adjacent well (1002); detailed log from well 1002. Centralizer in hole.
LOWER PACK:	20-40 Silica Sand	85.0	to	92.8	



MONITORING WELL COMPLETION LOG SHP02-1003

PROJECT	UMTRA GROUND WATER	WELL NUMBER	1003
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	03/29/2000

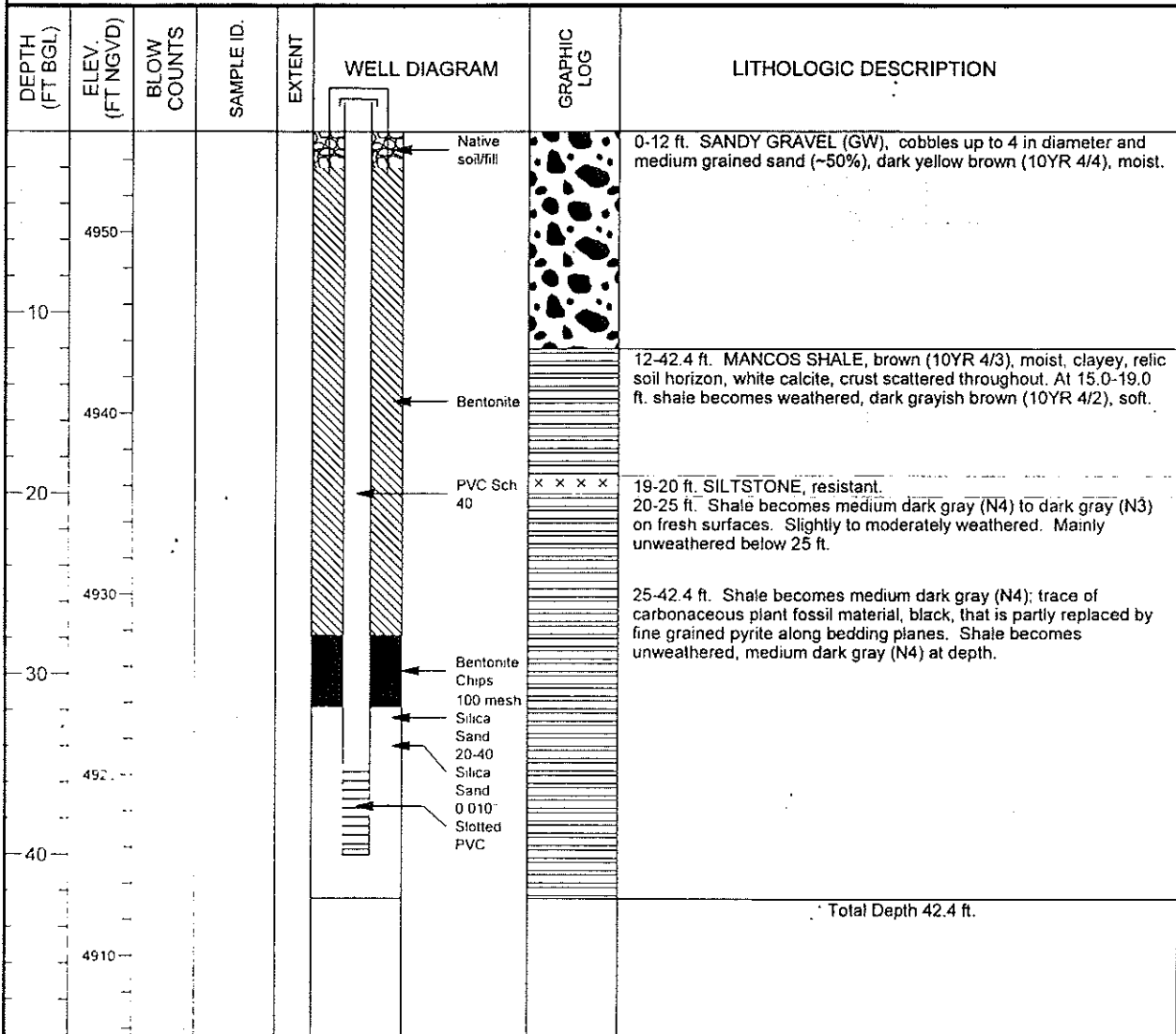
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DEPTH (FT BGL)	ELEV (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4900						49-61 ft. Shale is intensely fractured along bedding planes at 49.0 ft.
60	4890						61-67 ft. Shale is well fractured from 61.0 to 63.0 ft and from 65.0 to 67.0 ft.
70	4880						80-88 ft. Shale has aragonite replacements (fibrous) of cephalopods in thin layers (~0.05 in thick) scattered in shale layers.
80	4870						90-92.8 ft. Shale is well fractured (horizontally).
							Total Depth 92.8 ft.
90	4860						
100	4850						
110							

MONITORING WELL COMPLETION LOG SHP02-1004



PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101807.54</u>	DATE DRILLED <u>03/30/2000 to 04/05/2000</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250884.49</u>	SURFACE ELEV. (FT NGVD) <u>4955.58</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>42.40</u>	TOP OF CASING (FT) <u>4957.61</u>
WELL NUMBER <u>1004</u>	WELL DEPTH (FT) <u>40.00</u>	MEAS. PT. ELEV. (FT) <u>4957.61</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>6.0</u>

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			
BLANK CASING:	2 in. PVC Sch 40	-2.03 to 34.9	DRILLING METHOD <u>ROTASONIC</u>
WELL SCREEN:	2 in. Slotted PVC	34.9 to 39.7	SAMPLING METHOD _____
SUMP/END CAP:	2 in. PVC Sch 40	39.7 to 40.0	DATE DEVELOPED <u>04/12/2000</u>
SURFACE SEAL:	Native soil/fill	0.0 to 2.0	WATER LEVEL (FT BGS) _____
GROUT:	Bentonite Chips	2.0 to 27.8	LOGGED BY <u>C. Goodknight</u>
SEAL:	Bentonite Pellets	27.8 to 31.8	REMARKS <u>Well ~10 ft. south of both wells 1002 and 1003. Rig down on 3/30/00. Drilling resumed on 4/5/00. No samples taken.</u>
UPPER PACK:	100 mesh Silica Sand	31.8 to 33.0	
LOWER PACK:	20-40 Silica Sand	33.0 to 42.4	



BOREHOLE LOG SHP02-1005

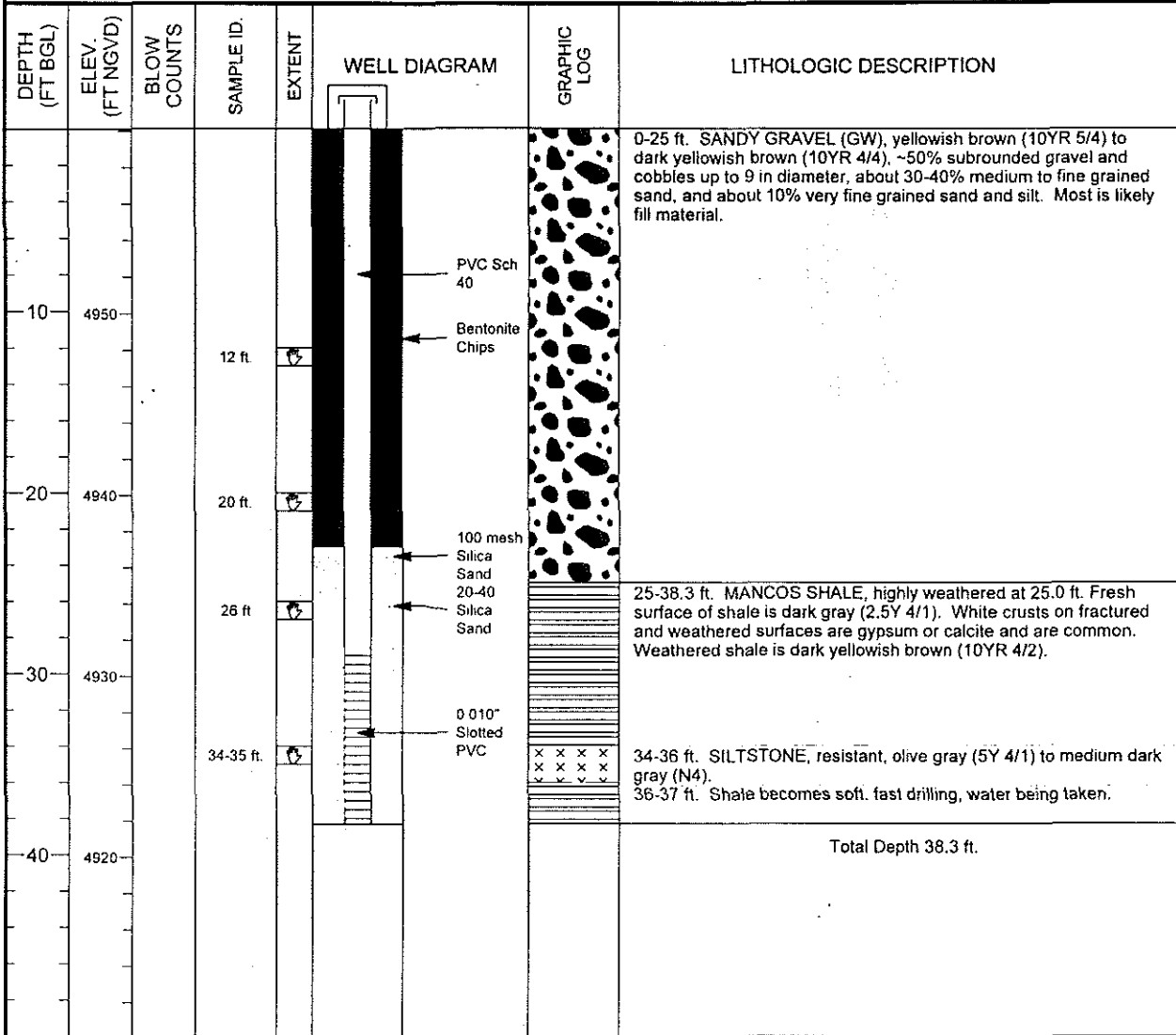
PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4945.98</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>6.0</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>ROTASONIC</u>
WELL NUMBER <u>1005</u>	SAMPLING METHOD <u>GRAB</u>
NORTH COORD. (FT) <u>2102607.00</u>	WATER LEVEL (FT BGS) _____
EAST COORD. (FT) <u>249948.00</u>	LOGGED BY <u>C. Goodknight</u>
HOLE DEPTH (FT) <u>15.00</u>	REMARKS <u>Hole abandoned and filled with Benseal (a</u>
DATE DRILLED <u>04/15/2000</u>	<u>bentonite grout). No anomalous radium-226 content.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
5	4945			5 ft.		0-13 ft. SANDY GRAVEL (GW), yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/4), ~50% subrounded gravel up to boulder size and ~30-40% medium to fine grained sand, and about 10% very fine grained sand and silt. Most is likely fill material.
15	4935			14 ft.		13-15 ft. MANCOS SHALE, weathered at 13.0 ft., olive gray (5Y 4/2) and mottled with some brown/orange limonite staining.
						Total Depth 15.0 ft.
20	4930					
	4925					

MONITORING WELL COMPLETION LOG SHP02-1006

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2100599.95</u>	DATE DRILLED <u>04/15/2000 to 04/16/2000</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251758.62</u>	SURFACE ELEV. (FT NGVD) <u>4960.13</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>38.30</u>	TOP OF CASING (FT) <u>4962.16</u>
WELL NUMBER <u>1006</u>	WELL DEPTH (FT) <u>38.30</u>	MEAS. PT. ELEV. (FT) <u>4962.16</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>6.0</u>

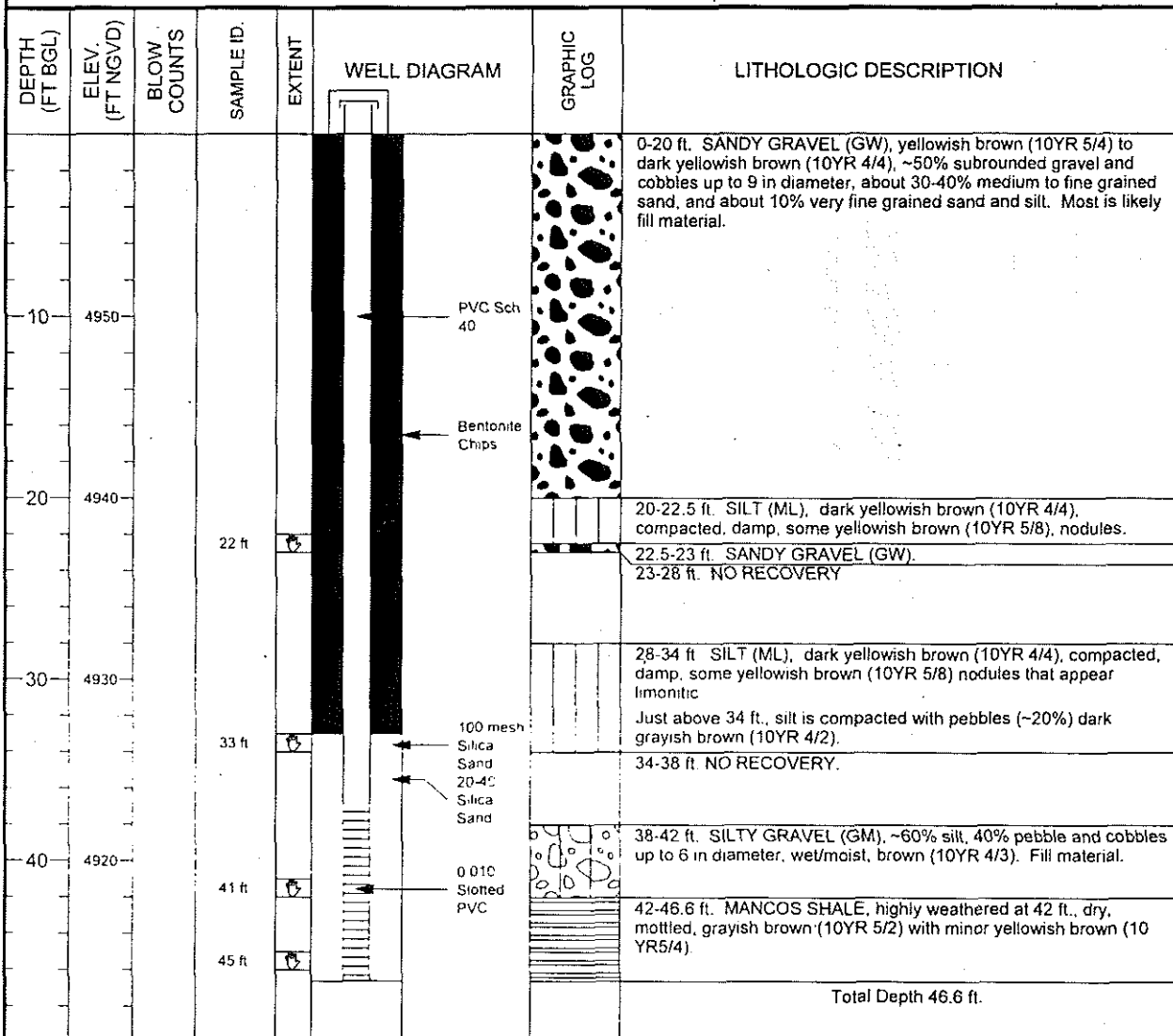
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ROTASONIC</u>
BLANK CASING:	2 in. PVC Sch 40	-2.03 to 28.5	SAMPLING METHOD <u>GRAB</u>
WELL SCREEN:	2 in. Slotted PVC	28.5 to 38.0	DATE DEVELOPED <u>04/17/2000</u>
SUMP/END CAP:	2 in. PVC Sch 40	38.0 to 38.3	WATER LEVEL (FT BGS)
SURFACE SEAL:			LOGGED BY <u>C. Goodknight</u>
GROUT:			REMARKS <u>Well is about 90.0 ft. North of site</u>
SEAL:	Bentonite Chips	0.0 to 23.0	<u>security fence. Well is in old filled drainage along</u>
UPPER PACK:	100 mesh Silica Sand	23.0 to 24.0	<u>escarpment edge.</u>
LOWER PACK:	20-40 Silica Sand	24.0 to 38.3	



MONITORING WELL COMPLETION LOG SHP02-1007

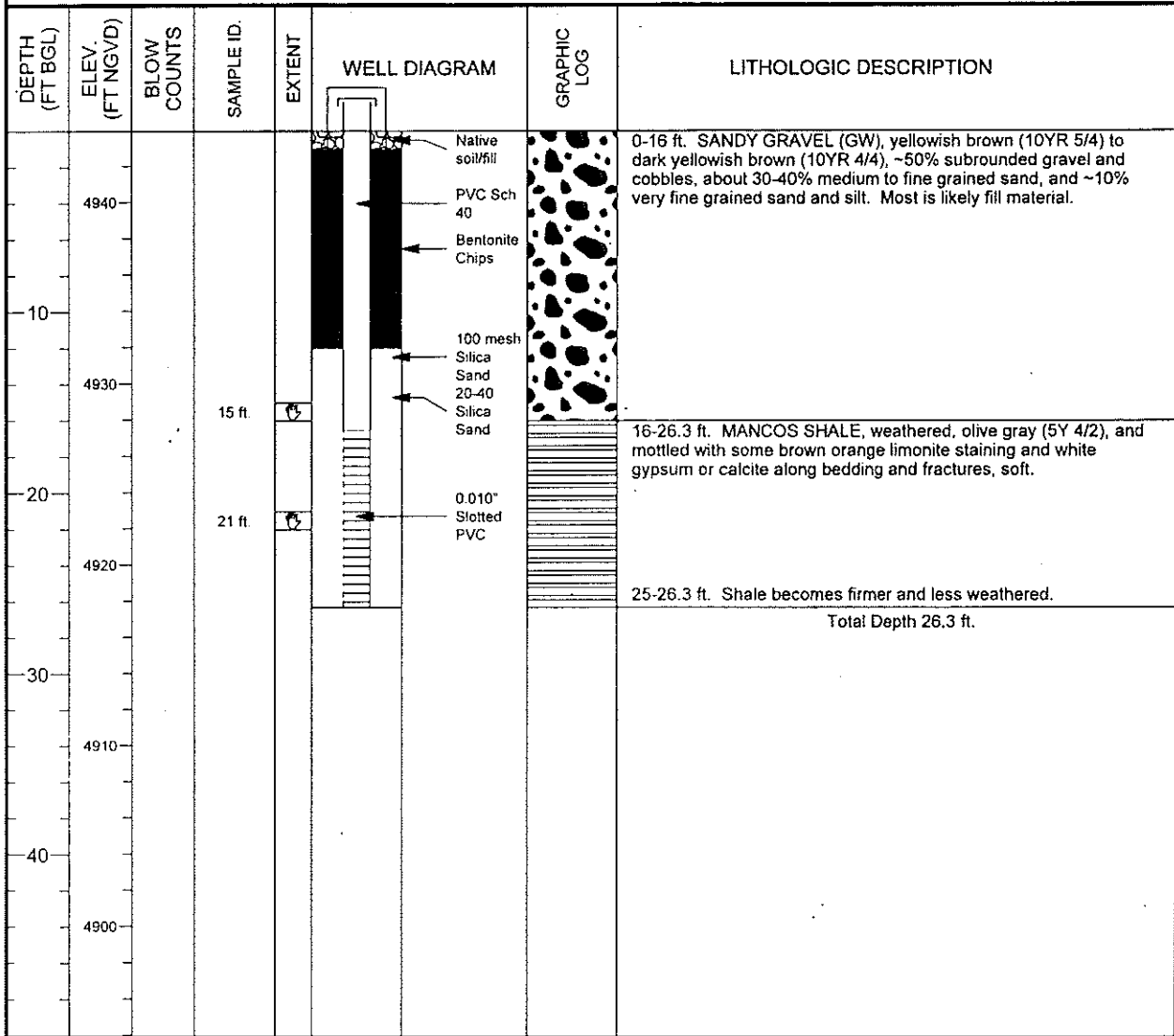
PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2100457.81	DATE DRILLED	04/16/2000
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	251791.21	SURFACE ELEV. (FT NGVD)	4960.03
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	46.60	TOP OF CASING (FT)	4962.01
WELL NUMBER	1007	WELL DEPTH (FT)	46.60	MEAS. PT. ELEV. (FT)	4962.01
				SLOT SIZE (IN)	0.010
				BIT SIZE(S) (IN)	6.0

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD ROTASONIC
BLANK CASING:	2 in. PVC Sch 40	-1.98 to 36.8	SAMPLING METHOD GRAB
WELL SCREEN:	2 in. Slotted PVC	36.8 to 46.3	DATE DEVELOPED 04/17/2000
SUMP/END CAP:	2 in. PVC Sch 40	46.3 to 46.6	WATER LEVEL (FT BGS)
SURFACE SEAL:			LOGGED BY C. Goodknight
GROUT:			REMARKS Well is about 50 ft. south of site security fence. Well is in large filled drainage just south of disposal cell.
SEAL:	Bentonite Chips	0.0 to 33.0	
UPPER PACK:	100 mesh Silica Sand	33.0 to 34.2	
LOWER PACK:	20-40 Silica Sand	34.2 to 46.6	



MONITORING WELL COMPLETION LOG SHP02-1011

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102537.67</u>	DATE DRILLED <u>04/15/2000</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249922.02</u>	SURFACE ELEV. (FT NGVD) <u>4943.93</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>26.30</u>	TOP OF CASING (FT) <u>4945.96</u>
WELL NUMBER <u>1011</u>	WELL DEPTH (FT) <u>26.30</u>	MEAS. PT. ELEV. (FT) <u>4945.95</u>
WELL INSTALLATION		SLOT SIZE (IN) <u>0.010</u>
INTERVAL (FT)		BIT SIZE(S) (IN) <u>6.0</u>
SURFACE CASING:		
BLANK CASING:	2 in. PVC Sch 40	-2.03 to 16.5
WELL SCREEN:	2 in. Slotted PVC	16.5 to 26.0
SUMP/END CAP:	2 in. PVC Sch 40	26.0 to 26.3
SURFACE SEAL:	Native soil/fill	0.0 to 1.0
GROUT:		
SEAL:	Bentonite Chips	1.0 to 12.0
UPPER PACK:	100 mesh Silica Sand	12.0 to 12.9
LOWER PACK:	20-40 Silica Sand	12.9 to 26.3
DRILLING METHOD <u>ROTASONIC</u>		SAMPLING METHOD <u>GRAB</u>
DATE DEVELOPED <u>04/16/2000</u>		WATER LEVEL (FT BGS) _____
LOGGED BY <u>C. Goodknight</u>		REMARKS <u>Well is about 90.0 ft. north-northeast from well 827. No anomalous radium-226 content.</u>



BOREHOLE LOG SHP02-1039


PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4981.16</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>2.2</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>GEOPROBE</u>
WELL NUMBER <u>1039</u>	SAMPLING METHOD <u>CONTINUOUS CORE</u>
NORTH COORD. (FT) <u>2094599.77</u>	WATER LEVEL (FT BGS) <u>Dry</u>
EAST COORD. (FT) <u>251516.87</u>	LOGGED BY <u>C. Goodknight</u>
HOLE DEPTH (FT) <u>33.00</u>	REMARKS <u>The length of drill rods used was 3 ft. 1 3/4" dia. plastic tubes were used for continuous sampling.</u>
DATE DRILLED <u>12/13/1999</u>	

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4980					0-23 ft. SILT (ML), light yellowish brown, some mottling of white, calcareous material, dry.
10	4970					
20	4960					23-32 ft. SILT (ML), light olive brown (2.5Y 5/4), a few small pebbles and sand (~10%), becomes increasingly damp to moist and nearly saturated at about 30.0 to 31.0 ft.
30	4950					32-33 ft. MANCOS SHALE, weathered, dry.
						Total Depth 33.0 ft.
40	4940					



BOREHOLE LOG SHP02-1040

PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4980.63</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>2.2</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>GEOPROBE</u>
WELL NUMBER <u>1040</u>	SAMPLING METHOD <u>CONTINUOUS CORE</u>
NORTH COORD. (FT) <u>2094662.81</u>	WATER LEVEL (FT BGS) <u>Dry</u>
EAST COORD. (FT) <u>251422.15</u>	LOGGED BY <u>C. Goodknight</u>
HOLE DEPTH (FT) <u>32.00</u>	REMARKS <u>The length of drill rods used was 3 ft. 1 3/4" dia. plastic tubes were used for continuous sampling.</u>
DATE DRILLED <u>12/13/1999</u>	

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4980					0-20 ft. SILT (ML), light yellowish brown (2.5Y 6/3), some mottling.
10	4970					
20	4960					20-32 ft. Same as above. A few pebbles and some sand. Becomes slightly damp at 27.0 to 28.0 ft., but is dry below that.
30	4950					30-32 ft. MANCOS SHALE, weathered, dry.
						Total Depth 32.0 ft.
40	4940					



BOREHOLE LOG SHP02-1041

PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4983.67</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>2.2</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>GEOPROBE</u>
WELL NUMBER <u>1041</u>	SAMPLING METHOD <u>CONTINUOUS CORE</u>
NORTH COORD. (FT) <u>2094366.74</u>	WATER LEVEL (FT BGS) <u>Dry</u>
EAST COORD. (FT) <u>251463.54</u>	LOGGED BY <u>C. Goodknight</u>
HOLE DEPTH (FT) <u>36.00</u>	REMARKS <u>The length of drill rods used was 3 ft. 1 3/4" dia. plastic tubes were used for continuous sampling.</u>
DATE DRILLED <u>12/13/1999</u>	

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
10	4980					0-24 ft. SILT (ML), light yellowish brown (2.5Y 6/3), some mottling.
20	4970					
30	4960					24-35 ft Same as above. A few pebbles and some sand. Becomes damp and moist, particularly at 27.0 to 30.0 ft.
40	4950					35-36 ft MANCOS SHALE, weathered, dry.
						Total Depth 36.0 ft.
	4940					

BOREHOLE LOG SHP02-1042

PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4991.49</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>2.2</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>GEOPROBE</u>
WELL NUMBER <u>1042</u>	SAMPLING METHOD <u>CONTINUOUS CORE</u>
NORTH COORD. (FT) <u>2093699.47</u>	WATER LEVEL (FT BGS) <u>Dry</u>
EAST COORD. (FT) <u>251214.44</u>	LOGGED BY <u>C. Goodknight</u>
HOLE DEPTH (FT) <u>30.00</u>	REMARKS <u>The length of drill rods used was 3 ft. 1 3/4" dia. plastic tubes were used for continuous sampling.</u>
DATE DRILLED <u>12/13/1999</u>	

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
10	4990					0-21 ft. SILT (ML), light yellowish brown (2.5Y 6/3), some mottling, few pebbles and shale chips. Note: Silt becomes slightly damp at 21 ft.
20	4970					21-29.5 ft. Same as above. Slightly damp, some pebbles and shale chips below 24.0 ft.
30	4960					29.5-30 ft. MANCOS SHALE, weathered, dry. Total Depth 30.0 ft.
40	4950					



BOREHOLE LOG SHP02-1043

PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4957.45</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>2.2</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>GEOPROBE</u>
WELL NUMBER <u>1043</u>	SAMPLING METHOD <u>CONTINUOUS CORE</u>
NORTH COORD. (FT) <u>2096384.23</u>	WATER LEVEL (FT BGS) <u>Dry</u>
EAST COORD. (FT) <u>252612.14</u>	LOGGED BY <u>C. Goodknight</u>
HOLE DEPTH (FT) <u>18.00</u>	REMARKS <u>The length of drill rods used was 3 ft. 1 3/4" dia.</u>
DATE DRILLED <u>12/14/1999</u>	<u>plastic tubes were used for continuous sampling.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
5	4955					0-17.5 ft. SILT (ML), light yellowish brown (2.5Y 6/3), some mottling, few pebbles and shale chips, dry.
10	4950					
15	4945					
20	4940					17.5-18 ft. MANCOS SHALE, weathered, dry.
						Total Depth 18.0 ft.
	4935					

BOREHOLE LOG SHP02-1044

PROJECT UMTRA GROUND WATER
 LOCATION SHIPROCK, NM
 SITE SHIPROCK (TAILINGS AREA)
 WELL NUMBER 1044
 NORTH COORD. (FT) 2096317.85
 EAST COORD. (FT) 252426.01
 HOLE DEPTH (FT) 32.00
 DATE DRILLED 12/14/1999

SURFACE ELEV. (FT NGVD) 4958.59
 BIT SIZE(S) (IN) 2.2
 DRILLING METHOD GEOPROBE
 SAMPLING METHOD CONTINUOUS CORE
 WATER LEVEL (FT BGS) Dry
 LOGGED BY C. Goodknight
 REMARKS The length of drill rods used was 3 ft. 1 3/4" dia. plastic tubes were used for continuous sampling.

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
10	4950					0-24 ft. SILT (ML), light yellowish brown (2.5Y 6/3), some mottling.
20	4940					24-27 ft. Same as above. Slightly damp. some shale chips (~10%).
30	4930					27-31 ft SILT (ML), light olive gray brown (2.5 Y 5/4), damp to moist at about 30.0 ft., some shale chips (~20%)
						31-32 ft MANCOS SHALE, weathered, dry. Total Depth 32.0 ft.
40	4920					
4910	4910					



BOREHOLE LOG SHP02-1045

PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4953.82</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>2.2</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>GEOPROBE</u>
WELL NUMBER <u>1045</u>	SAMPLING METHOD <u>CONTINUOUS CORE</u>
NORTH COORD. (FT) <u>2096773.74</u>	WATER LEVEL (FT BGS) <u>Dry</u>
EAST COORD. (FT) <u>252355.55</u>	LOGGED BY <u>C. Goodknight</u>
HOLE DEPTH (FT) <u>22.50</u>	REMARKS <u>The length of drill rods used was 3 ft. 1 3/4" dia.</u>
DATE DRILLED <u>12/14/1999</u>	<u>plastic tubes were used for continuous sampling.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
						0-15 ft. SILT (ML), dry.
5	4950					
10	4945					
15	4940					15-22 ft. Same as above. Some shale chips and small pebbles (~10%).
20	4935					
						22-22.5 ft. MANCOS SHALE, weathered, dry.
						Total Depth 22.5 ft.
	4930					



BOREHOLE LOG SHP02-1046

PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4921.99</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>2.2</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>GEOPROBE</u>
WELL NUMBER <u>1046</u>	SAMPLING METHOD <u>CONTINUOUS CORE</u>
NORTH COORD. (FT) <u>2097470.79</u>	WATER LEVEL (FT BGS) <u>Dry</u>
EAST COORD. (FT) <u>252792.01</u>	LOGGED BY <u>C. Goodknight</u>
HOLE DEPTH (FT) <u>6.50</u>	REMARKS <u>The length of drill rods used was 3 ft. 1 3/4" dia.</u>
DATE DRILLED <u>12/14/1999</u>	<u>plastic tubes were used for continuous sampling.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4920					0-5 ft. SILT (ML), dry.
5						5-5.5 ft. MANCOS SHALE, weathered, dry.
					x x	5.5-6.5 ft. SILTSTONE, Dry. Note: Bit stuck in hole below siltstone bed and hole has to be terminated.
	4915					Total Depth 6.5 ft.
10						
	4910					

BOREHOLE LOG SHP02-1047

PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4921.27</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>2.2</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>GEOPROBE</u>
WELL NUMBER <u>1047</u>	SAMPLING METHOD <u>CONTINUOUS CORE</u>
NORTH COORD. (FT) <u>2097627.30</u>	WATER LEVEL (FT BGS) <u>Dry</u>
EAST COORD. (FT) <u>252869.62</u>	LOGGED BY <u>C. Goodknight</u>
HOLE DEPTH (FT) <u>7.00</u>	REMARKS <u>The length of drill rods used was 3 ft. 1 3/4" dia.</u>
DATE DRILLED <u>12/14/1999</u>	<u>plastic tubes were used for continuous sampling.</u>

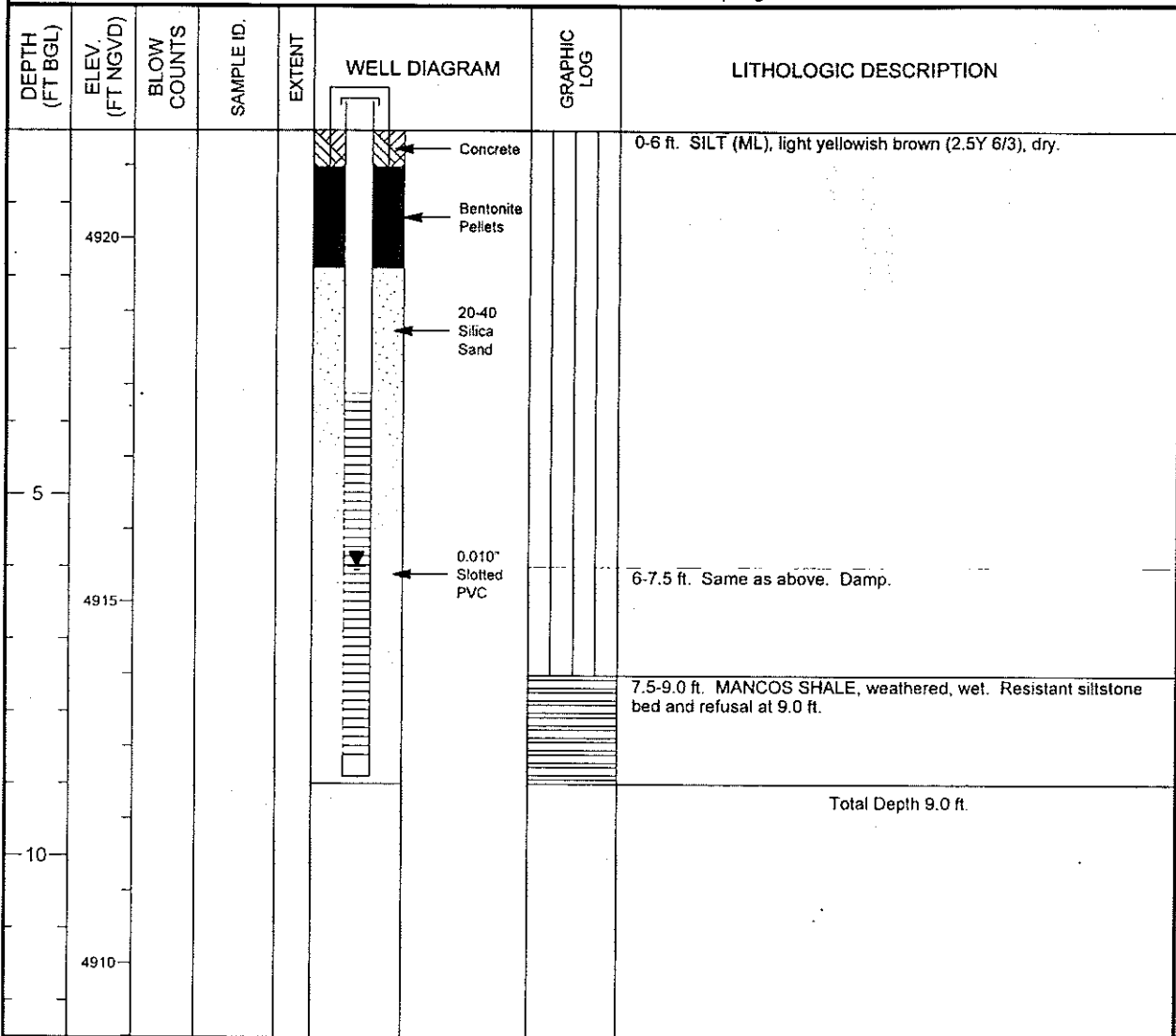
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4920					0-5 ft. SILT (ML), dry.
5						5-7 ft. MANCOS SHALE, weathered, dry, some vertical fracturing in shale. Resistant siltstone bed and refusal at 7.0 ft.
	4915					
						Total Depth 7.0 ft.
10						
	4910					



MONITORING WELL COMPLETION LOG SHP02-1048

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2097481.46</u>	DATE DRILLED <u>12/14/1999</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>252735.06</u>	SURFACE ELEV. (FT NGVD) <u>4921.48</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>9.00</u>	TOP OF CASING (FT) <u>4921.35</u>
WELL NUMBER <u>1048</u>	WELL DEPTH (FT) <u>8.90</u>	MEAS. PT. ELEV. (FT) <u>4921.35</u>

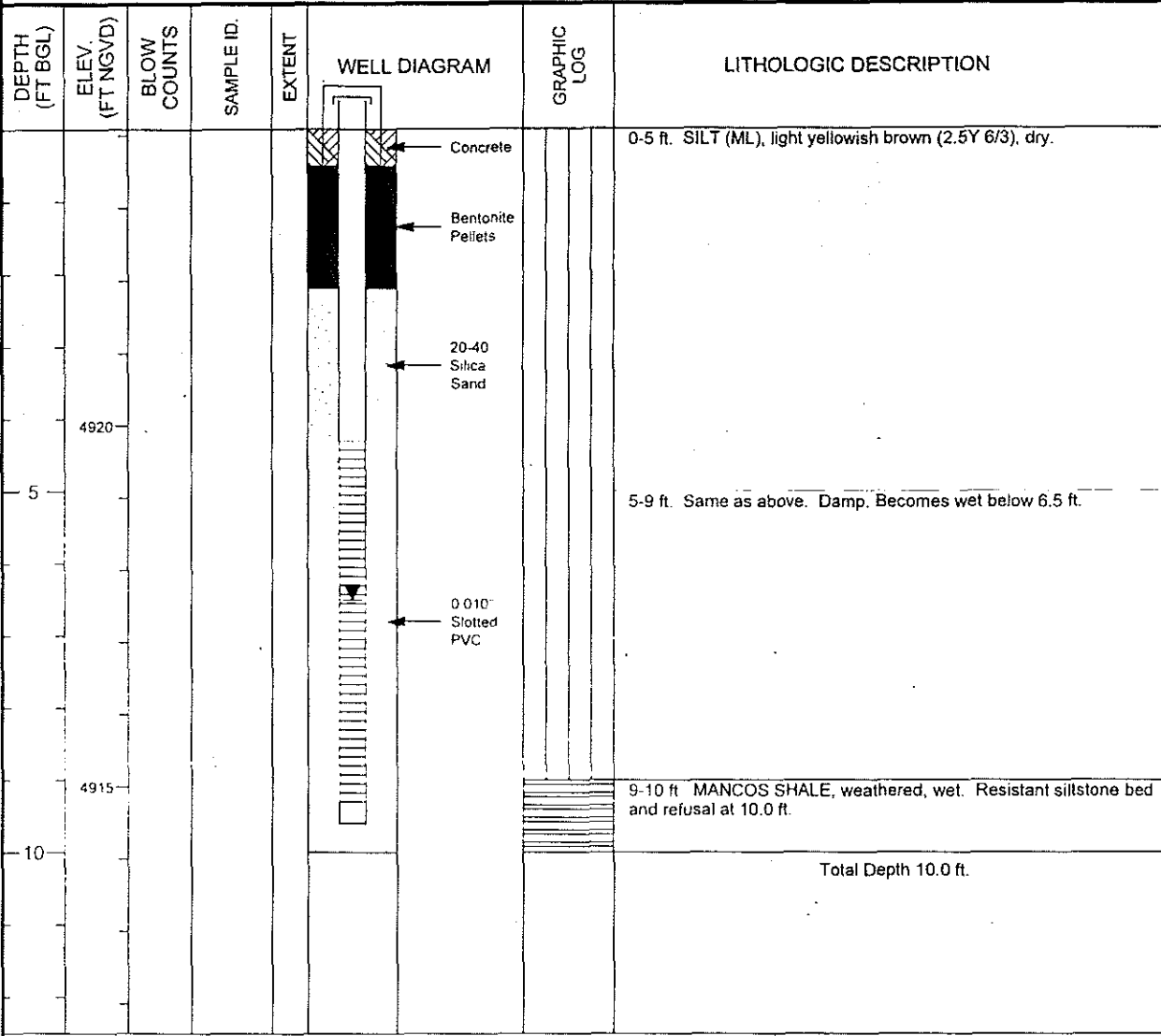
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>GEOPROBE</u>
BLANK CASING: 1 in. PVC Sch 40	0.13	to 3.6	SAMPLING METHOD <u>CONTINUOUS CORE</u>
WELL SCREEN: 1 in. Slotted PVC	3.6	to 8.6	DATE DEVELOPED
SUMP/END CAP: 1 in. PVC Sch 40	8.6	to 8.9	WATER LEVEL (FT BGS) <u>6.0 on 12/15/1999</u>
SURFACE SEAL: Concrete	0.0	to 0.5	LOGGED BY <u>C. Goodknight</u>
GROUT:			REMARKS <u>The length of drill rods used was 3 ft. 1</u>
SEAL: Bentonite Pellets	0.5	to 1.9	<u>3/4" dia. plastic tubes were used for continuous</u>
UPPER PACK:			<u>sampling.</u>
LOWER PACK: 20-40 Silica Sand	1.9	to 9.0	



MONITORING WELL COMPLETION LOG SHP02-1049

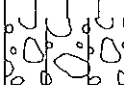

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2097350.35</u>	DATE DRILLED <u>12/15/1999</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>252721.23</u>	SURFACE ELEV. (FT NGVD) <u>4924.09</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>10.00</u>	TOP OF CASING (FT) <u>4923.89</u>
WELL NUMBER <u>1049</u>	WELL DEPTH (FT) <u>9.60</u>	MEAS. PT. ELEV. (FT) <u>4923.89</u>

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>GEOPROBE</u>
BLANK CASING:	1 in. PVC Sch 40	0.2 to 4.3	SAMPLING METHOD <u>CONTINUOUS CORE</u>
WELL SCREEN:	1 in. Slotted PVC	4.3 to 9.3	DATE DEVELOPED
SUMP/END CAP:	1 in. PVC Sch 40	9.3 to 9.6	WATER LEVEL (FT BGS) <u>6.5 on 12/15/1999</u>
SURFACE SEAL:	Concrete	0.0 to 0.5	LOGGED BY <u>C. Goodknight</u>
GROUT:			REMARKS <u>The length of drill rods used was 3 ft. 1</u>
SEAL:	Bentonite Pellets	0.5 to 2.2	<u>3/4" dia. plastic tubes were used for continuous</u>
UPPER PACK:			<u>sampling.</u>
LOWER PACK:	20-40 Silica Sand	2.2 to 10.0	



BOREHOLE LOG SHP02-1050

PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4942.29</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>2.2</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>GEOPROBE</u>
WELL NUMBER <u>1050</u>	SAMPLING METHOD <u>CONTINUOUS CORE</u>
NORTH COORD. (FT) <u>2097654.05</u>	WATER LEVEL (FT BGS) <u>Dry</u>
EAST COORD. (FT) <u>253279.96</u>	LOGGED BY <u>C. Goodknight</u>
HOLE DEPTH (FT) <u>33.00</u>	REMARKS <u>The length of drill rods used was 3 ft. 1 3/4" dia.</u>
DATE DRILLED <u>12/15/1999</u>	<u>plastic tubes were used for continuous sampling.</u>

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4940					0-21 ft. SILT (ML), light yellowish brown (2.5Y 6/3), dry.
10	4930					
20	4920					21-28 ft. Same as above. Some shale fragments, pebbles and gravel (~20%), dry.
30						28-32 ft. SILTY GRAVEL (GM), dry. Gravel, pebbles, and shale fragments (~50%); silt (~50%)
	4910					32-33 ft. MANCOS SHALE, weathered, dry. Resistant bed (probably siltstone) and refusal at 33.0 ft
						Total Depth 33.0 ft.
40						
	4900					



BOREHOLE LOG SHP02-1051

PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4944.43</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>2.2</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>GEOPROBE</u>
WELL NUMBER <u>1051</u>	SAMPLING METHOD <u>CONTINUOUS CORE</u>
NORTH COORD. (FT) <u>2097491.94</u>	WATER LEVEL (FT BGS) <u>Dry</u>
EAST COORD. (FT) <u>253062.56</u>	LOGGED BY <u>C. Goodknight</u>
HOLE DEPTH (FT) <u>27.00</u>	REMARKS <u>The length of drill rods used was 3 ft. 1 3/4" dia. plastic tubes were used for continuous sampling.</u>
DATE DRILLED <u>12/15/1999</u>	

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
10	4940					0-23 ft. SILT (ML), light yellowish brown (2.5Y 6/3), dry.
20	4930					23-27 ft. Same as above. Few small pebbles and some sand, dry. Note: Refusal on cobble, hole terminated at 27.0 ft.
30	4920					Total Depth 27.0 ft.
40	4910					
4900	4900					



BOREHOLE LOG SHP02-1052

PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4944.11</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>2.2</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>GEOPROBE</u>
WELL NUMBER <u>1052</u>	SAMPLING METHOD <u>CONTINUOUS CORE</u>
NORTH COORD. (FT) <u>2097435.70</u>	WATER LEVEL (FT BGS) <u>Dry</u>
EAST COORD. (FT) <u>253266.67</u>	LOGGED BY <u>C. Goodknight</u>
HOLE DEPTH (FT) <u>33.00</u>	REMARKS <u>The length of drill rods used was 3 ft. 1 3/4" dia. plastic tubes were used for continuous sampling.</u>
DATE DRILLED <u>12/15/1999</u>	

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
						0-21 ft. SILT (ML), light yellowish brown (2.5Y 6/3), dry.
10	4940					
	4930					
20						21-27 ft. Same as above. Becomes slightly moist.
	4920					
30						27-32.5 ft. Same as above. Few pebbles (~10%) and some weathered shale fragments, damp.
	4910					32.5-33.0 ft. MANCOS SHALE, weathered, dry. Resistant bed (probably siltstone) at 33.0 ft.
						Total Depth 33.0 ft.
40						
	4900					



BOREHOLE LOG SHP02-1053

PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4946.79</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>2.2</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>GEOPROBE</u>
WELL NUMBER <u>1053</u>	SAMPLING METHOD <u>CONTINUOUS CORE</u>
NORTH COORD. (FT) <u>2097291.45</u>	WATER LEVEL (FT BGS) <u>Dry</u>
EAST COORD. (FT) <u>252939.64</u>	LOGGED BY <u>C. Goodknight</u>
HOLE DEPTH (FT) <u>30.00</u>	REMARKS <u>The length of drill rods used was 3 ft. 1 3/4" dia. plastic tubes were used for continuous sampling.</u>
DATE DRILLED <u>12/15/1999</u>	

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
						0-27 ft. SILT (ML), light yellowish brown (2.5Y 6/3), dry.
10	4940					
20	4930					
30	4920					27-30 ft. Same as above. Some pebbles and cobbles (~20%), dry. Note: Bit stuck on cobbles. hole terminated.
						Total Depth 30.0 ft.
40	4910					
4800	4900					

BOREHOLE LOG SHP02-1054

PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4949.79</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>2.2</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>GEOPROBE</u>
WELL NUMBER <u>1054</u>	SAMPLING METHOD <u>CONTINUOUS CORE</u>
NORTH COORD. (FT) <u>2097074.99</u>	WATER LEVEL (FT BGS) <u>Dry</u>
EAST COORD. (FT) <u>252941.83</u>	LOGGED BY <u>C. Goodknight</u>
HOLE DEPTH (FT) <u>27.00</u>	REMARKS <u>The length of drill rods used was 3 ft. 1 3/4" dia. plastic tubes were used for continuous sampling.</u>
DATE DRILLED <u>12/16/1999</u>	

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
10	4940					0-24 ft. SILT (ML), light yellowish brown (2.5Y 6/3), dry.
20	4930					24-26 ft. Same as above. Some shale chips and small pebbles, dry.
30	4920					26-27 ft. MANCOS SHALE, weathered, dry. Total Depth 27.0 ft.
40	4910					

BOREHOLE LOG SHP02-1055

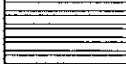
PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4951.92</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>2.2</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>GEOPROBE</u>
WELL NUMBER <u>1055</u>	SAMPLING METHOD <u>CONTINUOUS CORE</u>
NORTH COORD. (FT) <u>2096901.12</u>	WATER LEVEL (FT BGS) <u>Dry</u>
EAST COORD. (FT) <u>252692.52</u>	LOGGED BY <u>C. Goodknight</u>
HOLE DEPTH (FT) <u>33.00</u>	REMARKS <u>The length of drill rods used was 3 ft. 1 3/4" dia. plastic tubes were used for continuous sampling.</u>
DATE DRILLED <u>12/16/1999</u>	

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4950					0-26 ft.. SILT (ML), light yellowish brown (2.5Y 6/3), dry.
10	4940					
20	4930					
30						26-28 ft Same as above Damp. 28-29 ft Same as above Contains some pebbles and sand in fluvial layer, damp. 29-31.5 ft Same as above. Few pebbles and damp.
	4920					31.5-33 ft MANCOS SHALE, weathered, dry. Refusal at 33.0 ft.
						Total Depth 33.0 ft.
40	4910					



BOREHOLE LOG SHP02-1056

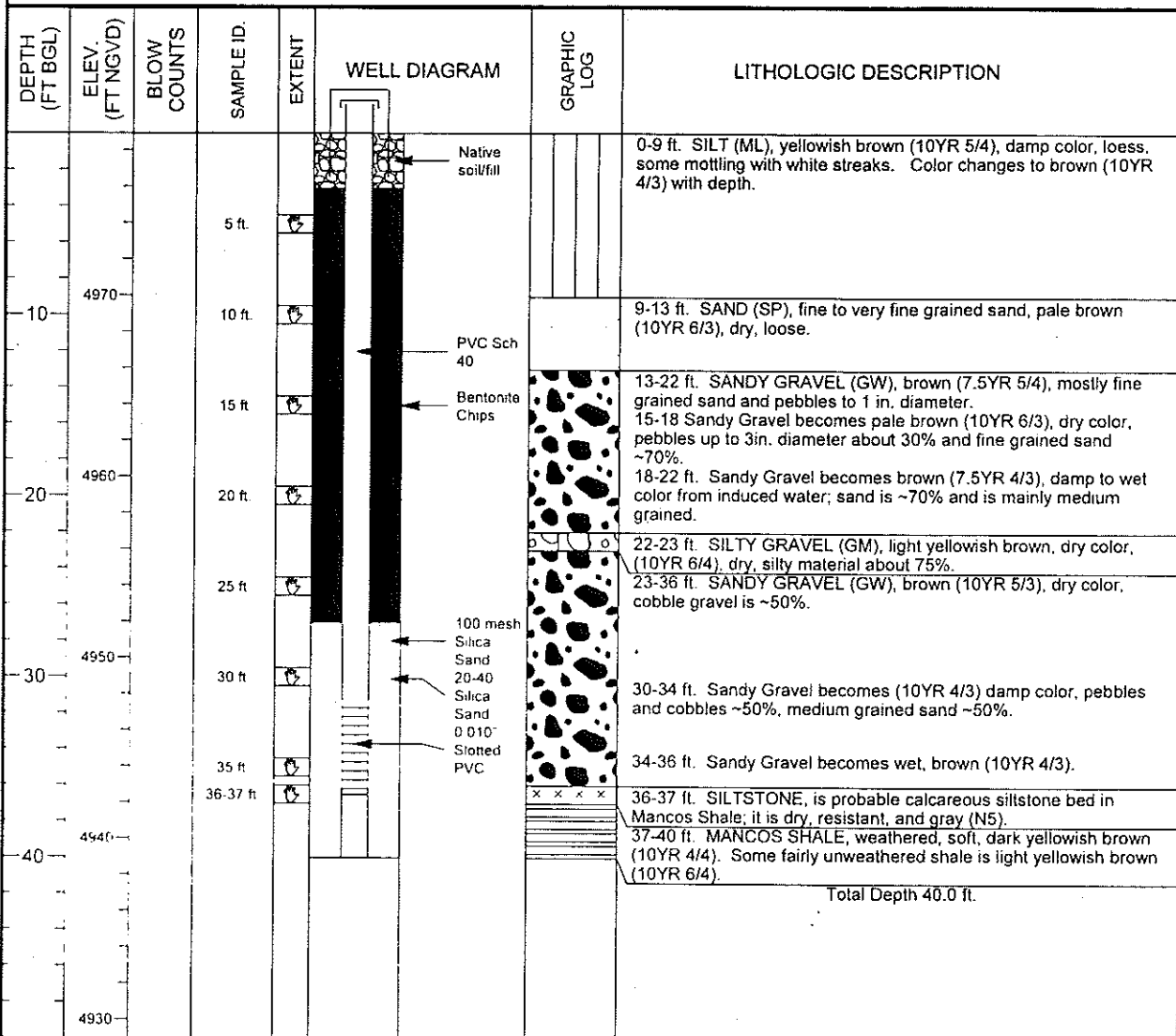
PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4953.45</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>2.2</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>GEOPROBE</u>
WELL NUMBER <u>1056</u>	SAMPLING METHOD <u>CONTINUOUS CORE</u>
NORTH COORD. (FT) <u>2096813.40</u>	WATER LEVEL (FT BGS) <u>Dry</u>
EAST COORD. (FT) <u>252850.59</u>	LOGGED BY <u>C. Goodknight</u>
HOLE DEPTH (FT) <u>32.00</u>	REMARKS <u>The length of drill rods used was 3 ft. 1 3/4" dia. plastic tubes were used for continuous sampling.</u>
DATE DRILLED <u>12/16/1999</u>	

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4950					0-25 ft. SILT (ML), light yellowish brown (2.5Y 6/3), dry.
-10						
	4940					
-20						
	4930					25-27 ft. Same as above. Some small pebbles, sand, and shale fragments, dry.
-30						27-29 ft. Same as above. Slightly damp.
	4920					29-32 ft. MANCOS SHALE, firm, weathered, dry.
-40						Total Depth 32.0 ft.
	4910					



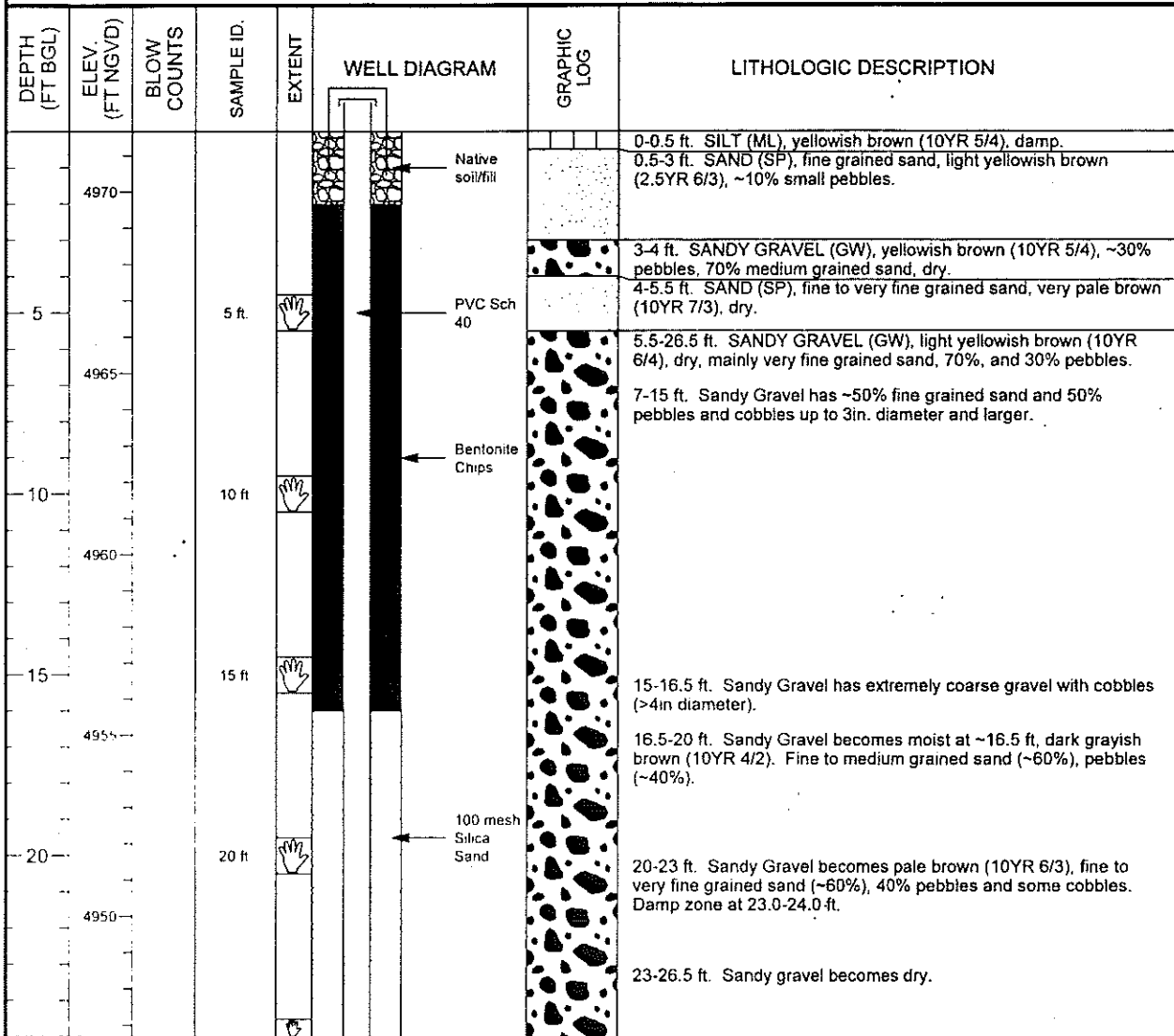
MONITORING WELL COMPLETION LOG SHP02-1057

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2098222.99</u>	DATE DRILLED <u>03/26/2000 to 03/27/2000</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250667.36</u>	SURFACE ELEV. (FT NGVD) <u>4978.94</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>40.00</u>	TOP OF CASING (FT) <u>4980.89</u>
WELL NUMBER <u>1057</u>	WELL DEPTH (FT) <u>36.50</u>	MEAS. PT. ELEV. (FT) <u>4980.89</u>
WELL INSTALLATION		SLOT SIZE (IN) <u>0.010</u>
INTERVAL (FT)		BIT SIZE(S) (IN) <u>6.0</u>
SURFACE CASING:		DRILLING METHOD <u>ROTASONIC</u>
BLANK CASING: 2 in. PVC Sch 40	-1.95 to 31.2	SAMPLING METHOD <u>GRAB</u>
WELL SCREEN: 2 in. Slotted PVC	31.2 to 36.2	DATE DEVELOPED <u>03/29/2000</u>
SUMP/END CAP: 2 in. PVC Sch 40	36.2 to 36.5	WATER LEVEL (FT BGS) _____
SURFACE SEAL: Native soil/fill	0.0 to 3.0	LOGGED BY <u>C. Goodknight</u>
GROUT:		REMARKS <u>Well is just east of borehole 807.</u>
SEAL: Bentonite Chips	3.0 to 27.0	
UPPER PACK: 100 mesh Silica Sand	27.0 to 29.0	
LOWER PACK: 20-40 Silica Sand	29.0 to 40.0	



MONITORING WELL COMPLETION LOG SHP02-1058


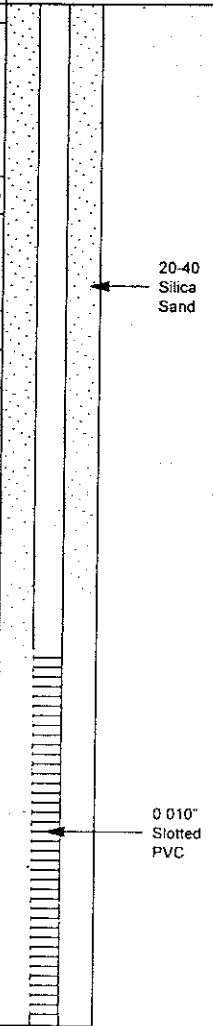
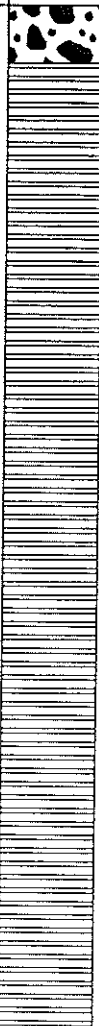





PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2098084.43</u>	DATE DRILLED <u>03/27/2000</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251464.48</u>	SURFACE ELEV. (FT NGVD) <u>4971.67</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>51.50</u>	TOP OF CASING (FT) <u>4973.58</u>
WELL NUMBER <u>1058</u>	WELL DEPTH (FT) <u>51.50</u>	MEAS. PT. ELEV. (FT) <u>4973.58</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>6.0</u>
WELL INSTALLATION INTERVAL (FT)		
SURFACE CASING:		
BLANK CASING:	2 in. PVC Sch 40	-1.91 to 41.7
WELL SCREEN:	2 in. Slotted PVC	41.7 to 51.2
SUMP/END CAP:	2 in. PVC Sch 40	51.2 to 51.5
SURFACE SEAL:	Native soil/fill	0.0 to 2.0
GROUT:		
SEAL:	Bentonite Chips	2.0 to 16.0
UPPER PACK:	100 mesh Silica Sand	16.0 to 23.0
LOWER PACK:	20-40 Silica Sand	23.0 to 51.5
		DRILLING METHOD <u>ROTASONIC</u>
		SAMPLING METHOD <u>GRAB</u>
		DATE DEVELOPED <u>03/29/2000</u>
		WATER LEVEL (FT BGS) _____
		LOGGED BY <u>C. Goodknight</u>
		REMARKS <u>Borehole is just south of fence enclosing Mesa Verde cactus preserve area.</u>



MONITORING WELL COMPLETION LOG SHP02-1058

PROJECT UMTRA GROUND WATER **WELL NUMBER** 1058
SITE SHIPROCK (TAILINGS AREA) **DATES DRILLED** 03/27/2000

Continued from Previous Page

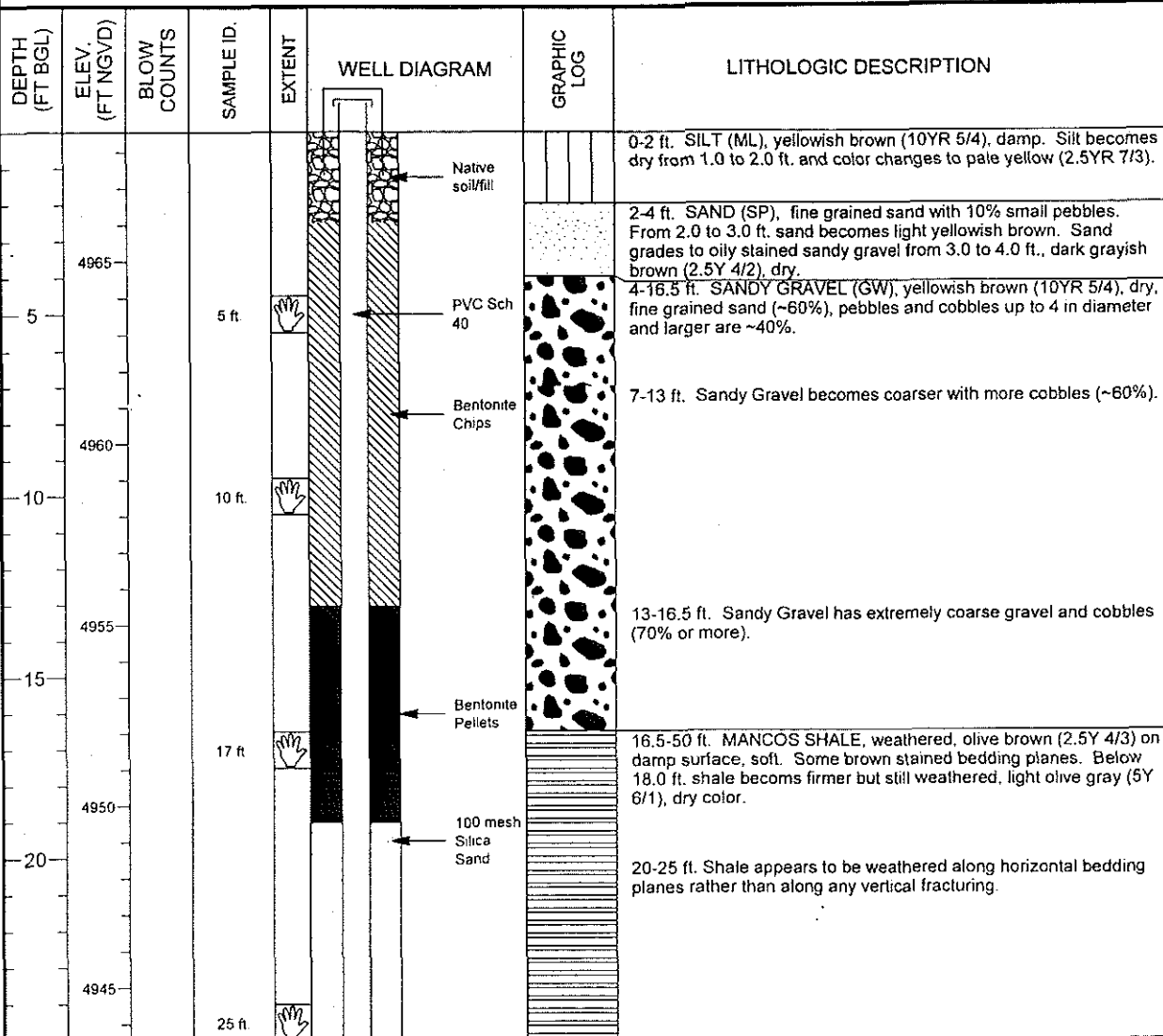
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4945		25 ft		 <p style="text-align: center;">20-40 Silica Sand</p> <p style="text-align: center;">0 010" Slotted PVC</p>		26.5-51.5 ft. MANCOS SHALE, dark grayish brown (10YR 4/2) to light olive brown (2.5Y 5/3), with some white gypsum crystals along bedding, damp to dry. Color changes to medium gray (N5) with depth.
30			30 ft				
35	4940		33-35 ft				
40	4935		40 ft				
45	4930		45 ft				
50	4925		50 ft				
55	4920						Total Depth 51.5 ft.
	4915						



MONITORING WELL COMPLETION LOG SHP02-1059

PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2097603.88	DATE DRILLED	04/16/2000
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	252100.93	SURFACE ELEV. (FT NGVD)	4968.55
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	50.00	TOP OF CASING (FT)	4970.52
WELL NUMBER	1059	WELL DEPTH (FT)	49.30	MEAS. PT. ELEV. (FT)	4970.52

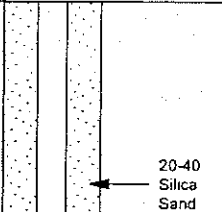
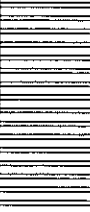

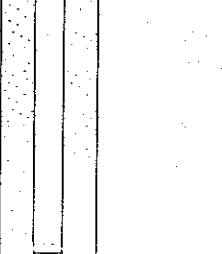
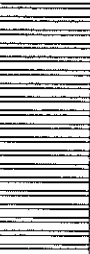


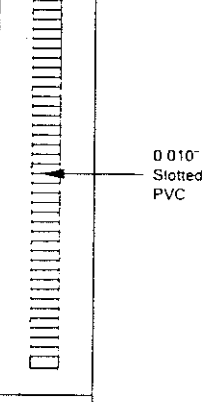
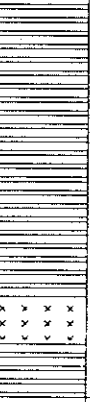
	WELL INSTALLATION	INTERVAL (FT)			
SURFACE CASING:				DRILLING METHOD	ROTASONIC
BLANK CASING:	2 in. PVC Sch 40	-1.97 to 39.5		SAMPLING METHOD	GRAB
WELL SCREEN:	2 in. Slotted PVC	39.5 to 49.0		DATE DEVELOPED	04/12/2000
SUMP/END CAP:	2 in. PVC Sch 40	49.0 to 49.3		WATER LEVEL (FT BGS)	
SURFACE SEAL:	Native soil/fill	0.0 to 2.5		LOGGED BY	C. Goodknight
GROUT:	Bentonite Chips	2.5 to 13.0		REMARKS	Borehole is along old haul road inside area south of gravel pit now known as Mesa Verde cactus preserve.
SEAL:	Bentonite Pellets	13.0 to 19.0			
UPPER PACK:	100 mesh Silica Sand	19.0 to 20.0			
LOWER PACK:	20-40 Silica Sand	20.0 to 50.0			



MONITORING WELL COMPLETION LOG SHP02-1059

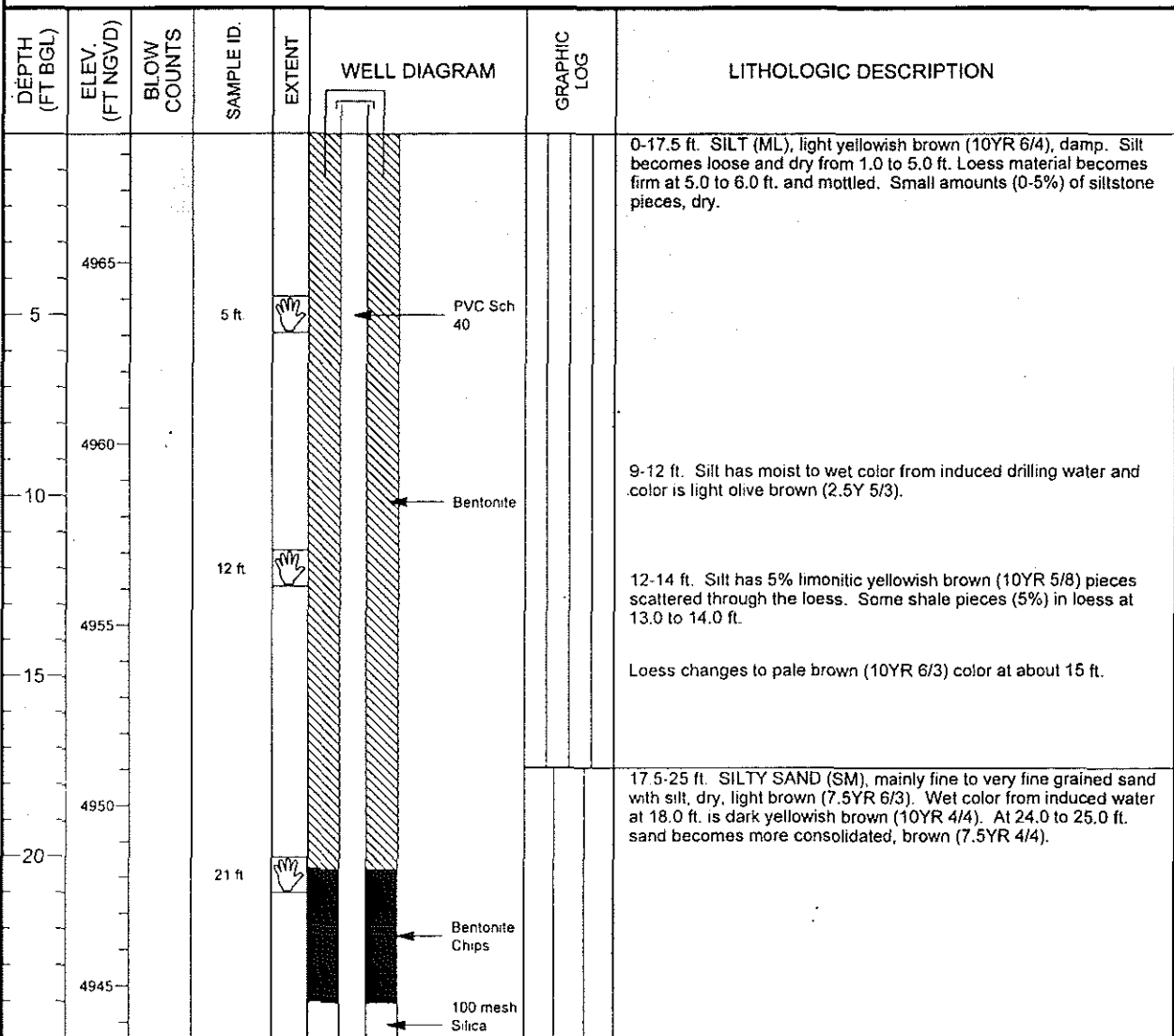
PROJECT UMTRA GROUND WATER **WELL NUMBER** 1059
SITE SHIPROCK (TAILINGS AREA) **DATES DRILLED** 04/16/2000

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
30	4940				 <p style="margin-left: 20px;">20-40 Silica Sand</p>		25-50 ft. Shale becomes unweathered, medium gray (N5), dry color. Moderately horizontally fractured.
35	4935		35 ft.				
40	4930				 <p style="margin-left: 20px;">0 010" Slotted PVC</p>		
45	4925		42 ft.				
50	4920		48-48.3 ft.				47.5-48.5 ft. SILTSTONE, resistant, calcareous-cemented. 48.5-50 ft. Shale.
Total Depth 50.0 ft.							
55	4915						

MONITORING WELL COMPLETION LOG SHP02-1060

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2100719.07</u>	DATE DRILLED <u>04/14/2000</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>244446.80</u>	SURFACE ELEV. (FT NGVD) <u>4968.57</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>38.00</u>	TOP OF CASING (FT) <u>4970.62</u>
WELL NUMBER <u>1060</u>	WELL DEPTH (FT) <u>37.00</u>	MEAS. PT. ELEV. (FT) <u>4970.65</u>
		SLOT SIZE (IN) <u>0.010</u>
		BIT SIZE(S) (IN) <u>6.0</u>
SURFACE CASING:	WELL INSTALLATION	INTERVAL (FT)
BLANK CASING:	2 in. PVC Sch 40	-2.05 to 27.2
WELL SCREEN:	2 in. Slotted PVC	27.2 to 36.7
SUMP/END CAP:	2 in. PVC Sch 40	36.7 to 37.0
SURFACE SEAL:		
GROUT:	Bentonite	0.0 to 20.3
SEAL:	Bentonite Chips	20.3 to 24.0
UPPER PACK:	100 mesh Silica Sand	24.0 to 25.2
LOWER PACK:	20-40 Silica Sand	25.2 to 38.0
		DRILLING METHOD <u>ROTASONIC</u>
		SAMPLING METHOD <u>GRAB</u>
		DATE DEVELOPED <u>04/15/2000</u>
		WATER LEVEL (FT BGS) _____
		LOGGED BY <u>C. Goodknight</u>
		REMARKS <u>Well 1060 is approximately 300 ft. west of borehole 835.</u>



MONITORING WELL COMPLETION LOG SHP02-1060

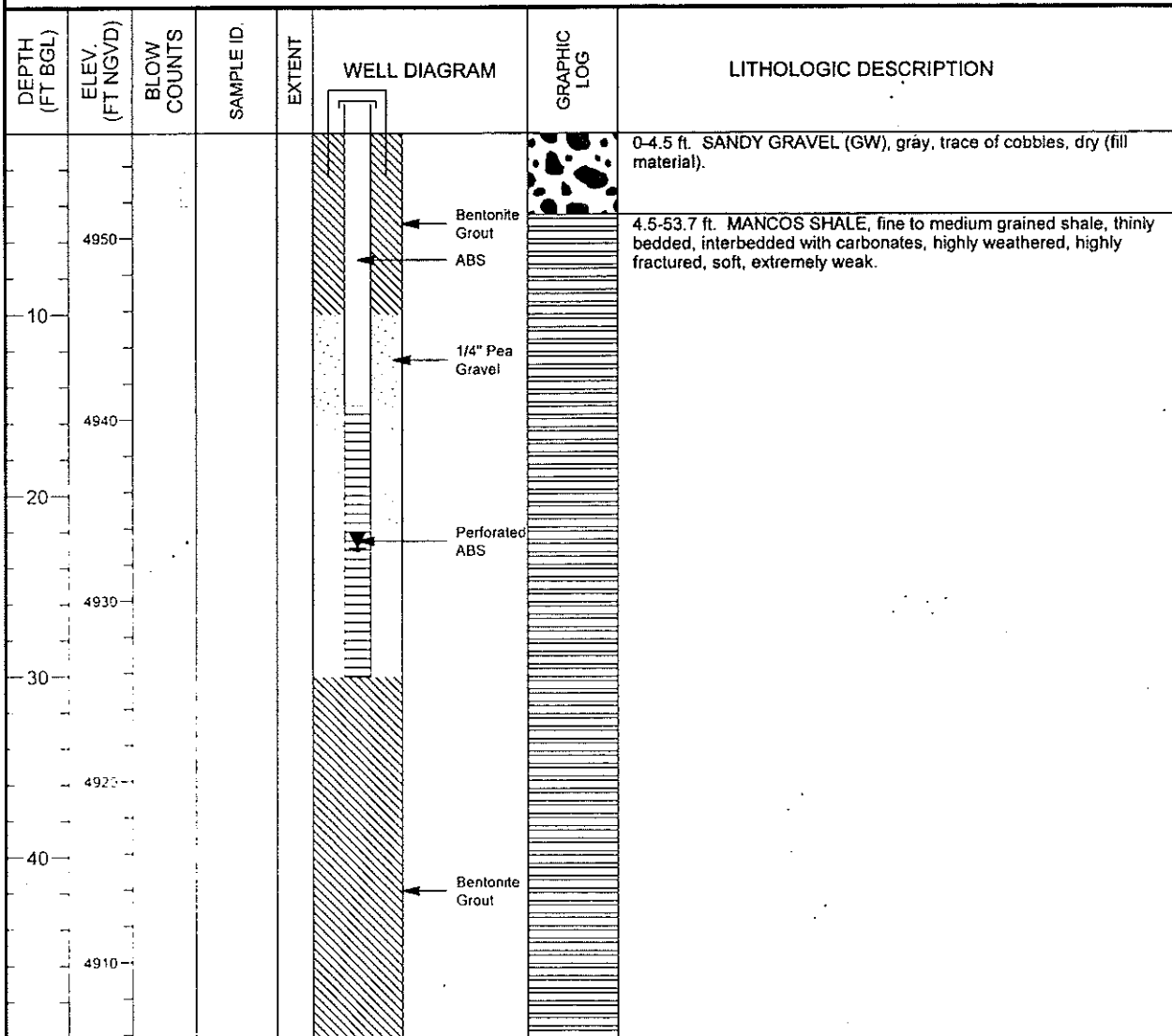
PROJECT UMTRA GROUND WATER WELL NUMBER 1060
 SITE SHIPROCK (TAILINGS AREA) DATES DRILLED 04/14/2000

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
30 4940							25-31 ft. SILTY GRAVEL (GM), brown (7.5YR 4/4- wet color), ~40% pebbles and cobbles and ~60% very fine grained sand and silt.
				32 ft.			31-33 ft. SAND (SP), light yellowish brown (10YR 6/4), mainly fine grained sand, damp, loose.
				34 ft.			33-34 ft. SILTY GRAVEL (GM), brown (7.5YR 4/4- wet color), ~40% pebbles and cobbles and ~60% very fine grained sand and silt.
35 4935							34-35.5 ft. SANDY GRAVEL (GW), dark yellowish brown (10YR 4/6), fine grained sand and cobbles up to 4 in. diameter.
				37 ft.			35.5-38 ft. MANCOS SHALE, weathered, light olive brown (2.5Y 5/4), soft, dry, some white calcite or gypsum along bedding planes and fractures.
40 4930							Total Depth 38.0 ft.
45 4925							
50 4920							
55 4915							

MONITORING WELL COMPLETION LOG SHP02-9003



PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2100683.39	DATE DRILLED	01/16/1982
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	251603.22	SURFACE ELEV. (FT NGVD)	4955.80
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	53.70	TOP OF CASING (FT)	
WELL NUMBER	9003	WELL DEPTH (FT)	30.00	MEAS. PT. ELEV. (FT)	
				SLOT SIZE (IN)	
				BIT SIZE(S) (IN)	6.75
WELL INSTALLATION		INTERVAL (FT)		DRILLING METHOD	AUGER/CABLE TOOL
SURFACE CASING:				SAMPLING METHOD	
BLANK CASING:		-1.0 to 15.0		DATE DEVELOPED	
WELL SCREEN:		15.0 to 30.0		WATER LEVEL (FT BTOC)	23.9 on 03/16/1982
SUMP/END CAP:				LOGGED BY	
SURFACE SEAL:				REMARKS	Hole also known as DM-2. Piezometer removed.
GROUT:					
SEAL:		0.0 to 10.0			
UPPER PACK:					
LOWER PACK:		10.0 to 30.0			



MONITORING WELL COMPLETION LOG SHP02-9003

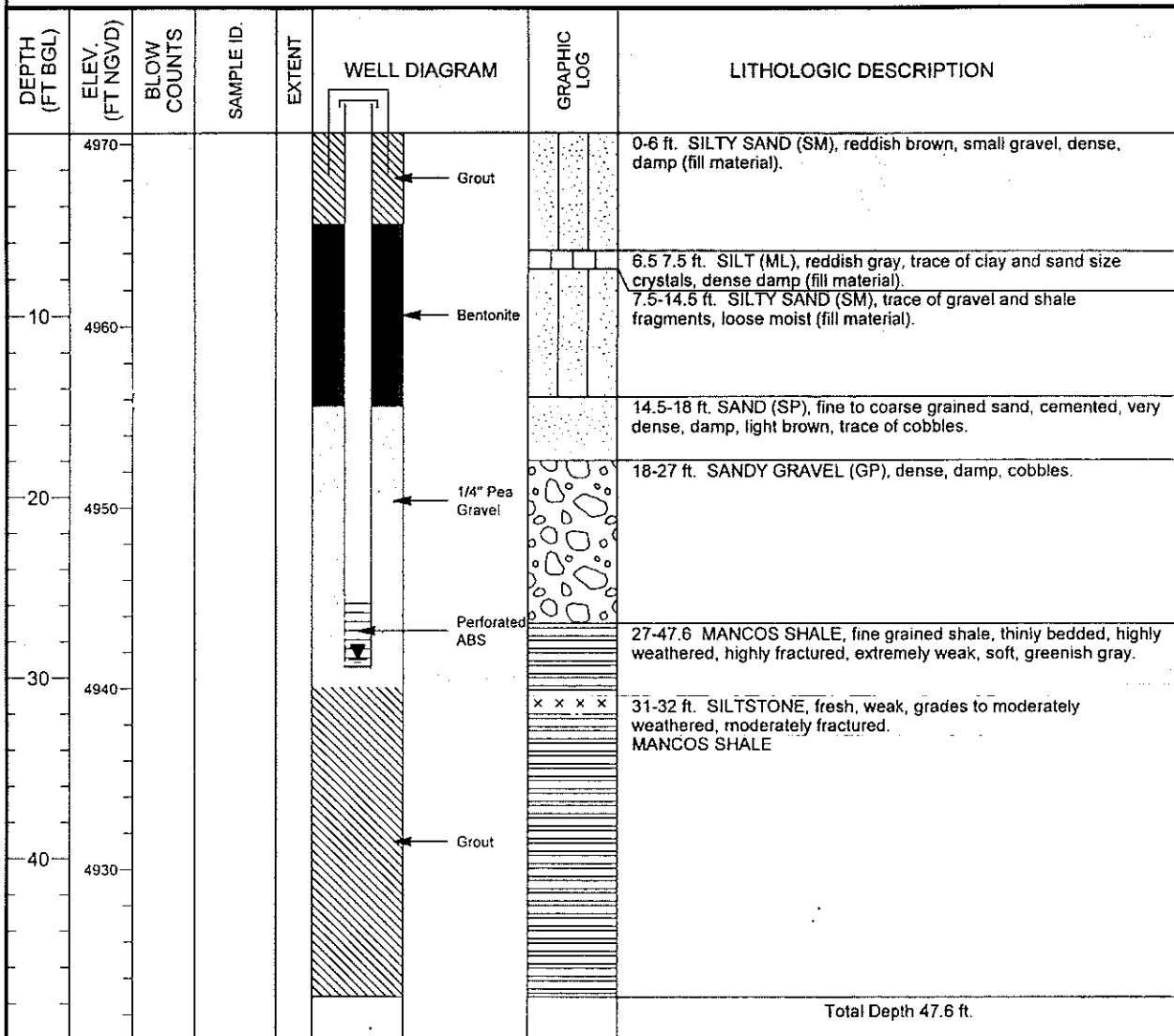
PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>9003</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DATES DRILLED <u>01/16/1982</u>

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
							
60	4900						Total Depth 53.7 ft.
	4890						
70							
	4880						
80							
	4870						
90							
	4860						
100							
	4850						
110							

MONITORING WELL COMPLETION LOG SHP02-9004

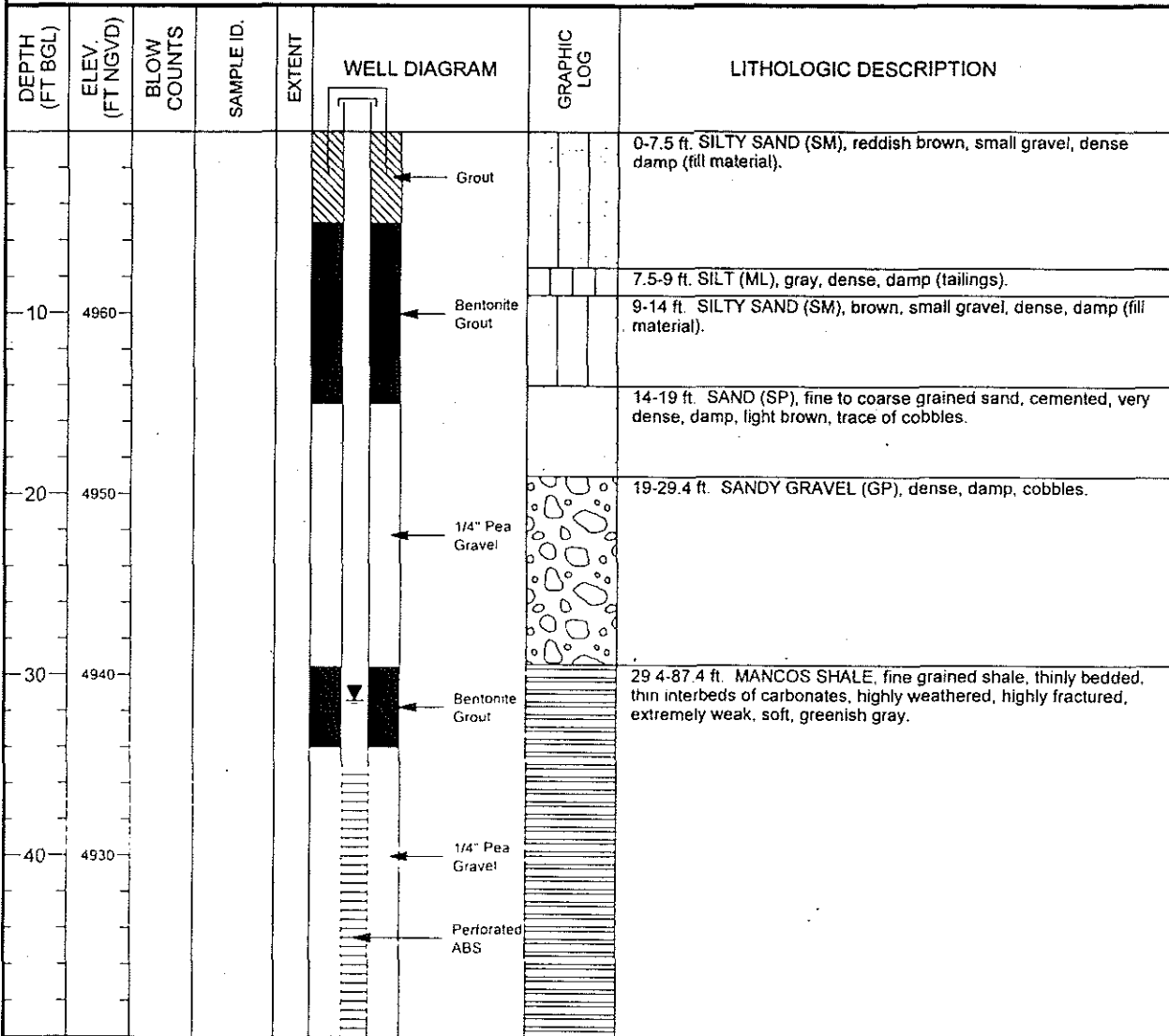
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2100403.17</u>	DATE DRILLED <u>01/30/1981</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250914.08</u>	SURFACE ELEV. (FT NGVD) <u>4970.60</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>47.60</u>	TOP OF CASING (FT) _____
WELL NUMBER <u>9004</u>	WELL DEPTH (FT) <u>29.40</u>	MEAS. PT. ELEV. (FT) _____
		SLOT SIZE (IN) _____
		BIT SIZE(S) (IN) <u>6.75</u>
WELL INSTALLATION INTERVAL (FT)		
SURFACE CASING:		
BLANK CASING:	4 in. ABS	-1.0 to 25.4
WELL SCREEN:	4 in. Perforated ABS	25.4 to 29.4
SUMP/END CAP:		
SURFACE SEAL:	Grout	0.0 to 5.0
GROUT:		
SEAL:	Bentonite	5.0 to 15.0
UPPER PACK:		
LOWER PACK:	1/4" Pea Gravel	15.0 to 30.5
		DRILLING METHOD <u>AUGER/ROTARY</u>
		SAMPLING METHOD _____
		DATE DEVELOPED _____
		WATER LEVEL (FT BTOC) <u>30.0 on 02/18/1982</u>
		LOGGED BY _____
		REMARKS <u>Hole also known as DM-3. Piezometer removed.</u>



U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION OFFICE, COLORADO

MONITORING WELL COMPLETION LOG SHP02-9005

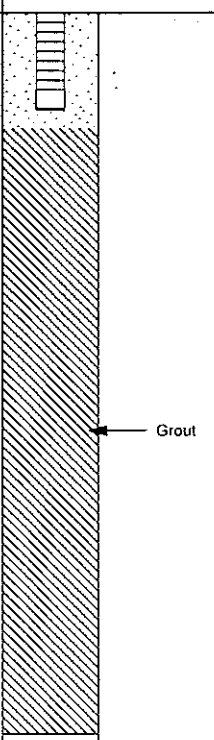
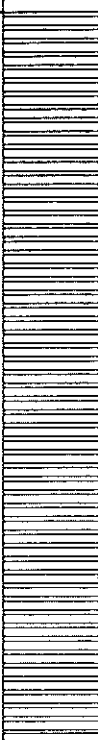
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2100373.08</u>	DATE DRILLED <u>02/11/1982</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250936.96</u>	SURFACE ELEV. (FT NGVD) <u>4970.00</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>87.40</u>	TOP OF CASING (FT) _____
WELL NUMBER <u>9005</u>	WELL DEPTH (FT) <u>56.00</u>	MEAS. PT. ELEV. (FT) _____
WELL INSTALLATION		SLOT SIZE (IN) _____
INTERVAL (FT)		BIT SIZE(S) (IN) <u>6.75</u>
SURFACE CASING:		
BLANK CASING:	4 in. ABS	-1.0 to 35.0
WELL SCREEN:	4 in. Perforated ABS	35.0 to 54.0
SUMP/END CAP:	4 in. ABS	54.0 to 55.0
SURFACE SEAL:	Grout	0.0 to 5.0
GROUT:	Bentonite Grout	5.0 to 15.0
SEAL:	Bentonite Grout	29.5 to 34.0
UPPER PACK:	1/4" Pea Gravel	15.0 to 29.5
LOWER PACK:	1/4" Pea Gravel	34.0 to 56.0
		DRILLING METHOD <u>CORE/ROTARY</u>
		SAMPLING METHOD _____
		DATE DEVELOPED _____
		WATER LEVEL (FT BTOC) <u>32.4 on 03/23/1982</u>
		LOGGED BY _____
		REMARKS <u>Hole also known as DM-3A.</u>
		Piezometer removed.



MONITORING WELL COMPLETION LOG SHP02-9005

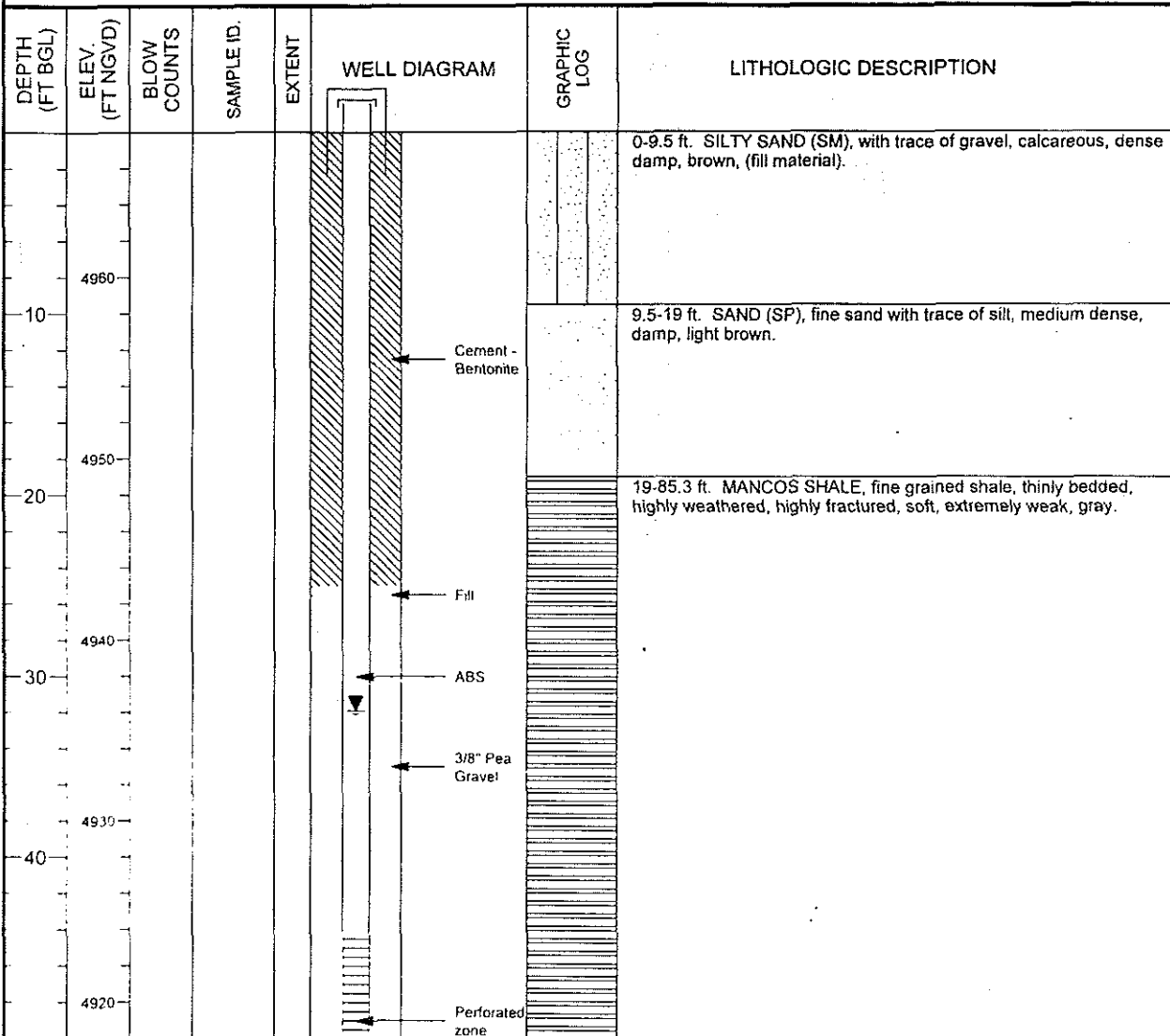
PROJECT	UMTRA GROUND WATER	WELL NUMBER	9005
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	02/11/1982

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 20px;">60</div> <div style="margin-bottom: 20px;">70</div> <div style="margin-bottom: 20px;">80</div> <div style="margin-bottom: 20px;">90</div> <div style="margin-bottom: 20px;">100</div> <div style="margin-bottom: 20px;">110</div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 20px;">4910</div> <div style="margin-bottom: 20px;">4900</div> <div style="margin-bottom: 20px;">4890</div> <div style="margin-bottom: 20px;">4880</div> <div style="margin-bottom: 20px;">4870</div> <div style="margin-bottom: 20px;">4860</div> </div>						<p>Total Depth 87.4 ft.</p>

MONITORING WELL COMPLETION LOG SHP02-9006

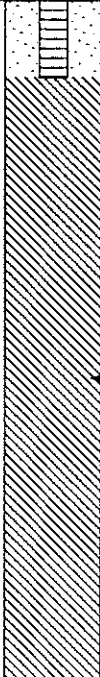

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101071.21</u>	DATE DRILLED <u>12/10/1981</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250410.78</u>	SURFACE ELEV. (FT NGVD) <u>4968.00</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>85.30</u>	TOP OF CASING (FT) _____
WELL NUMBER <u>9006</u>	WELL DEPTH (FT) <u>54.00</u>	MEAS. PT. ELEV. (FT) _____
WELL INSTALLATION		SLOT SIZE (IN) _____
INTERVAL (FT)		BIT SIZE(S) (IN) <u>6.75</u>
SURFACE CASING:		DRILLING METHOD <u>AUGER/ROTARY/CORE</u>
BLANK CASING:	4 in. ABS -1.0 to 44.0	SAMPLING METHOD _____
WELL SCREEN:	4 in. Perforated ABS 44.0 to 54.0	DATE DEVELOPED _____
SUMP/END CAP:		WATER LEVEL (FT BTOC) <u>32.9</u> on <u>03/16/1982</u>
SURFACE SEAL:		LOGGED BY _____
GROUT:	Cement - Bentonite 0.0 to 25.0	REMARKS <u>Hole also known as DM-4. Piezometer removed.</u>
SEAL:	Fill 25.0 to 26.0	
UPPER PACK:		
LOWER PACK:	3/8" Pea Gravel 26.0 to 54.0	



MONITORING WELL COMPLETION LOG SHP02-9006

PROJECT	UMTRA GROUND WATER	WELL NUMBER	9006
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	12/10/1981

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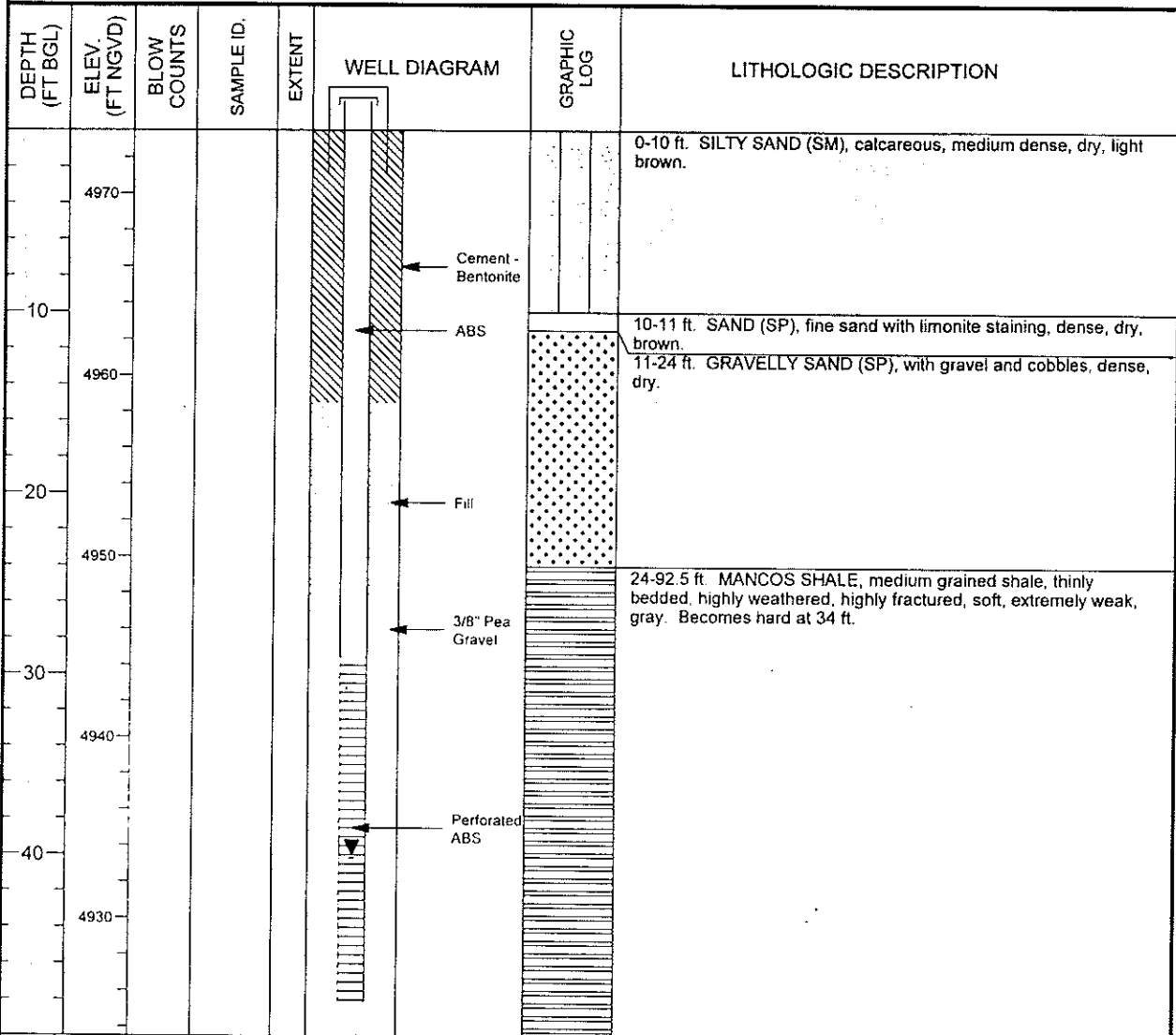
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">60</div> <div style="margin-bottom: 10px;">70</div> <div style="margin-bottom: 10px;">80</div> <div style="margin-bottom: 10px;">90</div> <div style="margin-bottom: 10px;">100</div> <div style="margin-bottom: 10px;">110</div> </div>	<div style="margin-bottom: 10px;">4910</div> <div style="margin-bottom: 10px;">4900</div> <div style="margin-bottom: 10px;">4890</div> <div style="margin-bottom: 10px;">4880</div> <div style="margin-bottom: 10px;">4870</div> <div style="margin-bottom: 10px;">4860</div>				 <p style="margin-left: 20px;">Cement - Bentonite</p>		<p>Total Depth 85.3 ft.</p>



MONITORING WELL COMPLETION LOG SHP02-9007

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2099416.57</u>	DATE DRILLED <u>12/16/1981</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250814.10</u>	SURFACE ELEV. (FT NGVD) <u>4973.50</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>92.50</u>	TOP OF CASING (FT) _____
WELL NUMBER <u>9007</u>	WELL DEPTH (FT) <u>48.00</u>	MEAS. PT. ELEV. (FT) _____

	WELL INSTALLATION	INTERVAL (FT)			
SURFACE CASING:				SLOT SIZE (IN)	<u>6.75</u>
BLANK CASING:	4 in. ABS	-1.0 to 29.0		BIT SIZE(S) (IN)	
WELL SCREEN:	4 in. Perforated ABS	29.0 to 48.0		DRILLING METHOD	<u>AUGER/ROTARY/CORE</u>
SUMP/END CAP:				SAMPLING METHOD	<u>SPLIT SPOON</u>
SURFACE SEAL:				DATE DEVELOPED	_____
GROUT:	Cement - Bentonite	0.0 to 15.0		WATER LEVEL (FT BTOC)	<u>41.0 on 03/23/1982</u>
SEAL:	Fill	15.0 to 26.0		LOGGED BY	_____
UPPER PACK:				REMARKS	<u>Hole also known as DM-6. Piezometer removed.</u>
LOWER PACK:	3/8" Pea Gravel	26.0 to 50.0			



MONITORING WELL COMPLETION LOG SHP02-9007

PROJECT	UMTRA GROUND WATER	WELL NUMBER	9007
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	12/16/1981

Continued from Previous Page

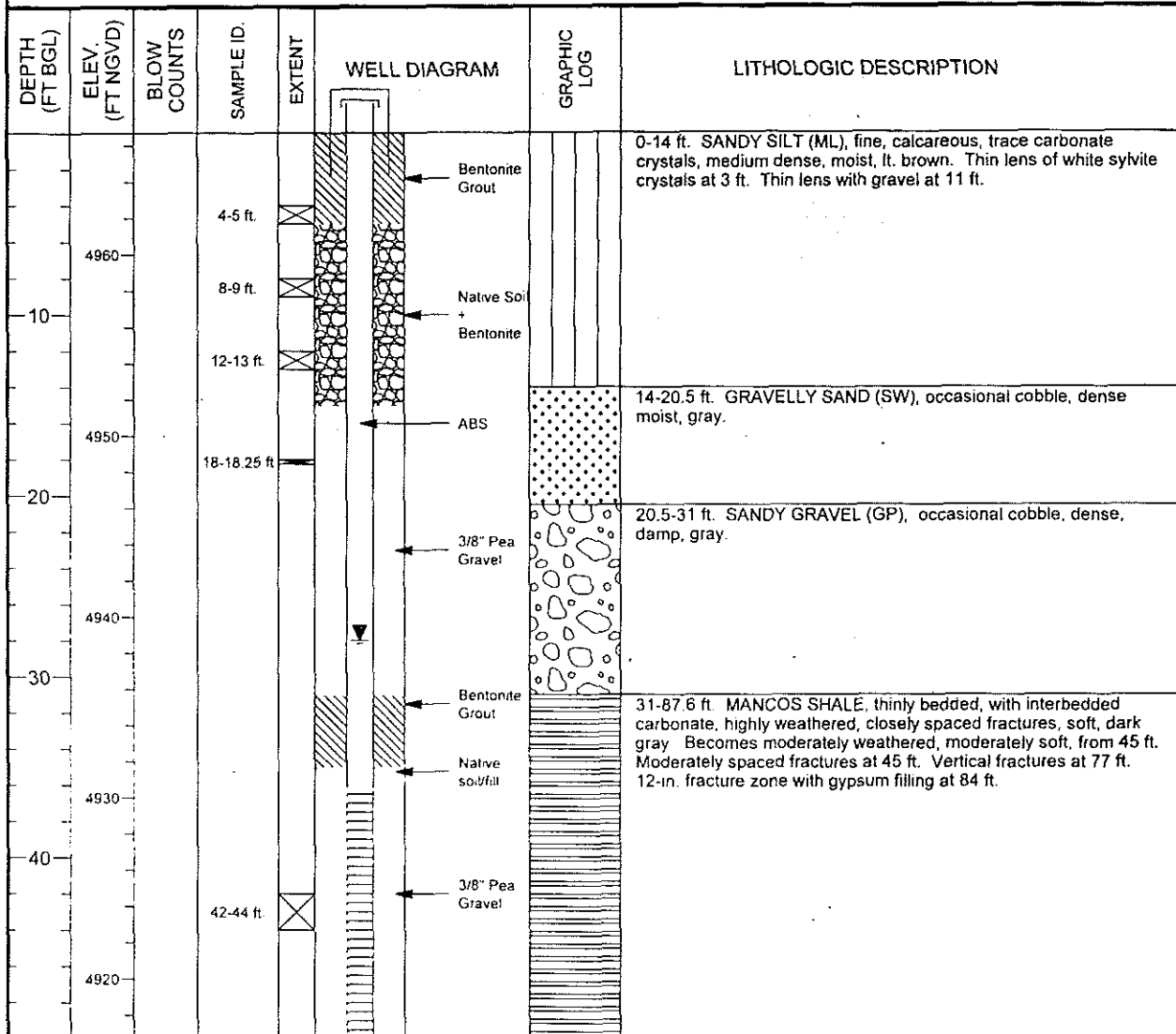
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
60 70 80 90 100 110	4920 4910 4900 4890 4880 4870 4860		62-63 ft. 72-73 ft. 78-79 ft. 89-90 ft.				Total Depth 92.5 ft.



MONITORING WELL COMPLETION LOG SHP02-9008

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2100285.75</u>	DATE DRILLED <u>02/19/1982</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249283.60</u>	SURFACE ELEV. (FT NGVD) <u>4966.70</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>87.60</u>	TOP OF CASING (FT) _____
WELL NUMBER <u>9008</u>	WELL DEPTH (FT) <u>64.00</u>	MEAS. PT. ELEV. (FT) _____

WELL INSTALLATION		INTERVAL (FT)		SLOT SIZE (IN)		BIT SIZE(S) (IN)	
SURFACE CASING:							
BLANK CASING:	4 in. ABS	-1.0	to 36.0	DRILLING METHOD <u>AUGER/ROTARY/CORE</u>			
WELL SCREEN:	4 in. Perforated ABS	36.0	to 63.0	SAMPLING METHOD <u>SPLIT SPOON</u>			
SUMP/END CAP:	4 in. ABS	63.0	to 64.0	DATE DEVELOPED _____			
SURFACE SEAL:	Bentonite Grout	0.0	to 5.0	WATER LEVEL (FT BTOC) <u>29.0 on 03/16/1982</u>			
GROUT:	Native Soil + Bentonite	5.0	to 15.0	LOGGED BY _____			
SEAL:	Bentonite Grout	31.0	to 35.0	REMARKS <u>Hole also known as DM-8. 15.0 ft to</u>			
UPPER PACK:	Native Soil/Fill	35.0	to 35.5	<u>31.0 ft., 3/8" Pea Gravel installed. Piezometer</u>			
LOWER PACK:	3/8" Pea Gravel	35.5	to 64.0	<u>removed.</u>			



MONITORING WELL COMPLETION LOG SHP02-9008

PROJECT	UMTRA GROUND WATER	WELL NUMBER	9008
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	02/19/1982

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
60 70 80 90 100 110	4910 4900 4890 4880 4870 4860		52-54 ft. 63-65 ft. 73-75 ft. 83-85 ft.		<p style="margin-left: 20px;">Perforated ABS</p> <p style="margin-left: 20px;">Cement - Bentonite</p>		<p style="text-align: right; margin-right: 50px;">Total Depth 87.6 ft.</p>

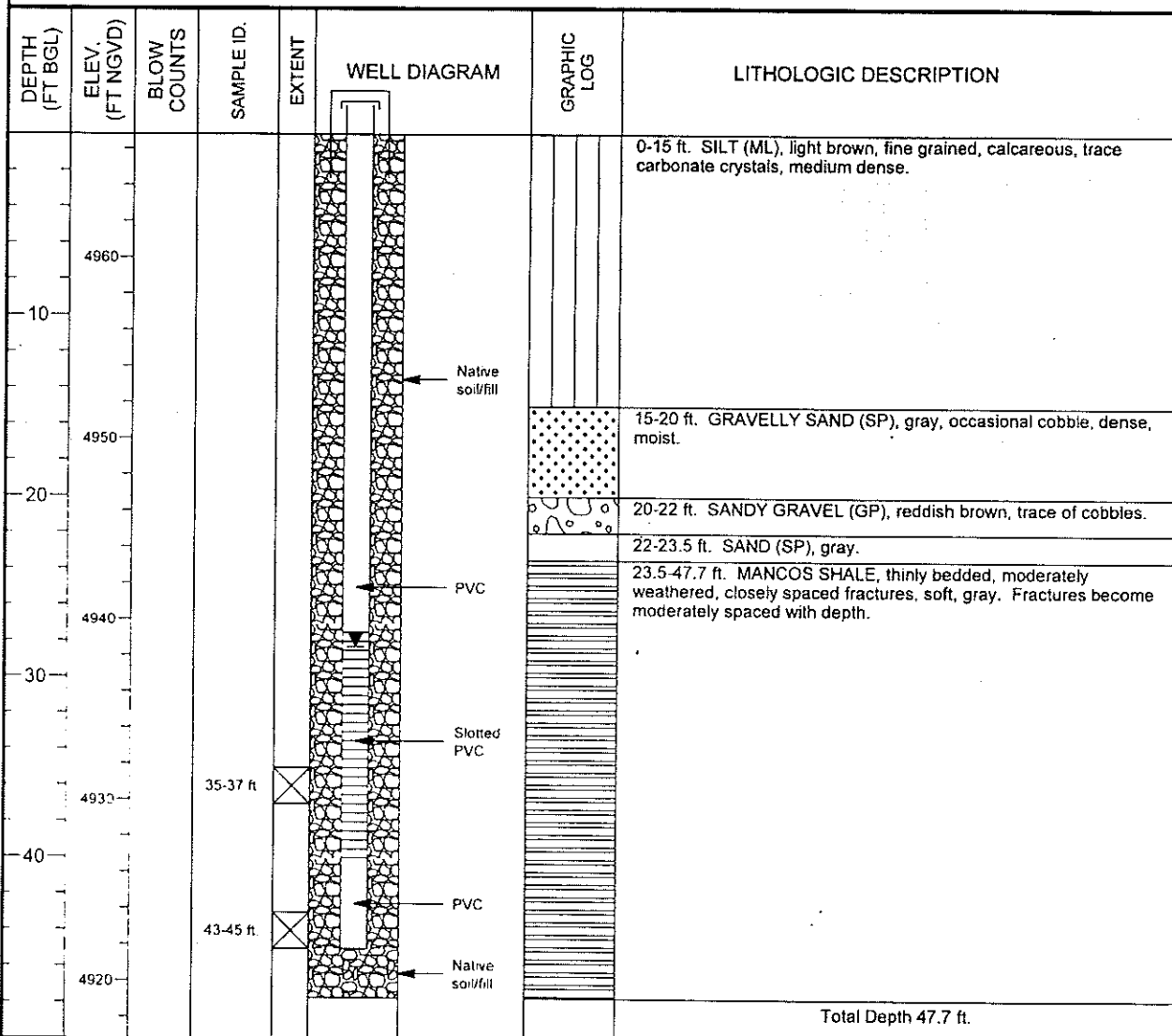


MONITORING WELL COMPLETION LOG SHP02-9009

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2100217.58</u>	DATE DRILLED <u>12/19/1982</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>249326.32</u>	SURFACE ELEV. (FT NGVD) <u>4966.80</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>47.70</u>	TOP OF CASING (FT) _____
WELL NUMBER <u>9009</u>	WELL DEPTH (FT) <u>45.00</u>	MEAS. PT. ELEV. (FT) _____

	WELL INSTALLATION	INTERVAL (FT)
SURFACE CASING:		
BLANK CASING:	2 in. PVC	-1.0 to 27.0
WELL SCREEN:	2 in. Slotted PVC	27.0 to 40.0
SUMP/END CAP:	2 in. PVC	40.0 to 45.0
SURFACE SEAL:		
GROUT:		
SEAL:		
UPPER PACK:		
LOWER PACK:		

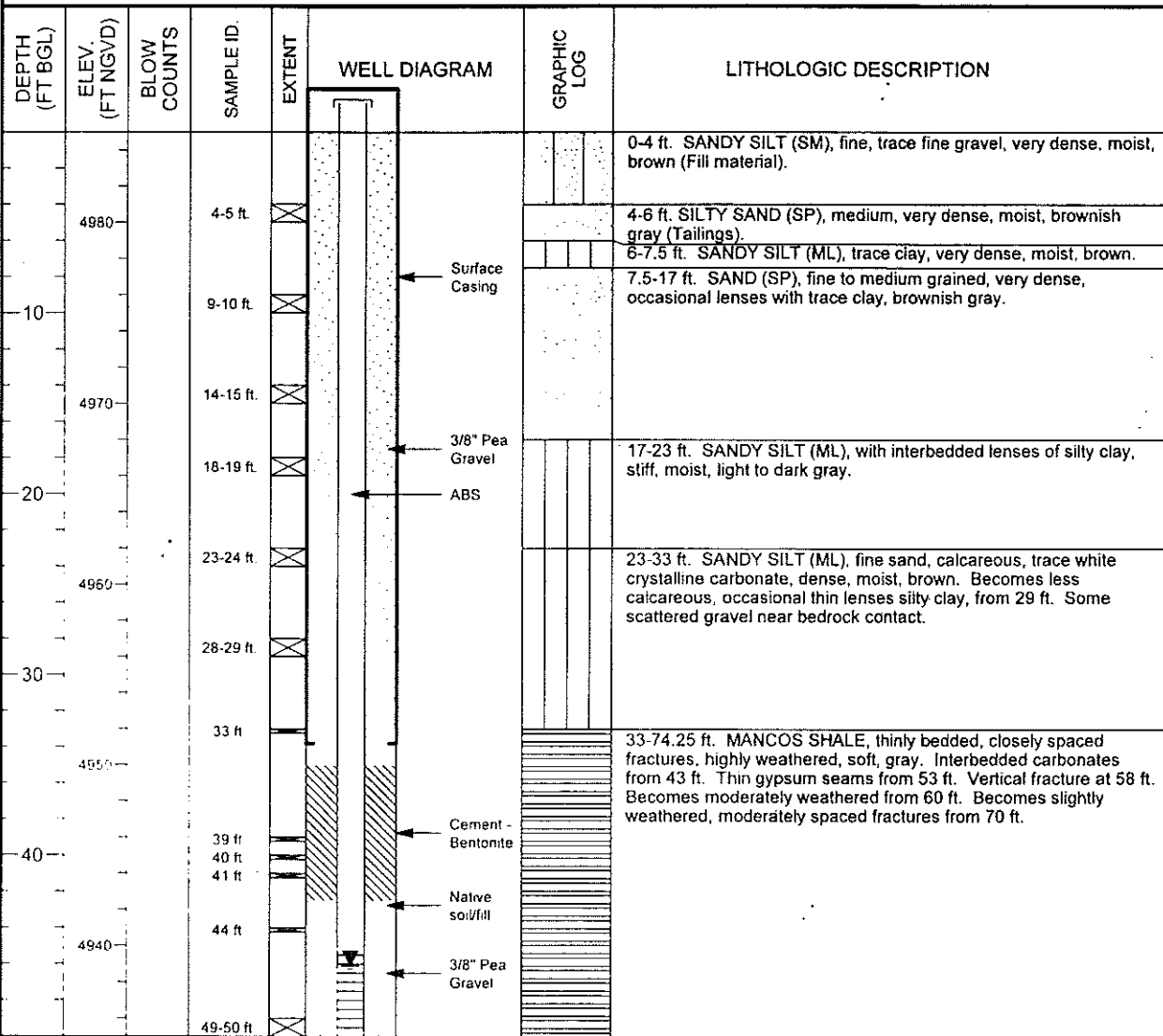
	DRILLING METHOD <u>CORE/ROTARY</u>
	SAMPLING METHOD <u>SPLIT SPOON</u>
	DATE DEVELOPED _____
	WATER LEVEL (FT BTOC) <u>29.3 on 03/16/1982</u>
	LOGGED BY _____
	REMARKS <u>Hole also known as DM-9. Piezometer removed.</u>



MONITORING WELL COMPLETION LOG SHP02-9010

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2100428.55</u>	DATE DRILLED <u>01/20/1982</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250324.17</u>	SURFACE ELEV. (FT NGVD) <u>4985.00</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>74.25</u>	TOP OF CASING (FT) _____
WELL NUMBER <u>9010</u>	WELL DEPTH (FT) <u>65.00</u>	MEAS. PT. ELEV. (FT) _____

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:	6.75 in. Steel	-1.0 to 33.8	SLOT SIZE (IN) _____
BLANK CASING:	4 in. ABS	-1.0 to 45.0	BIT SIZE(S) (IN) <u>6.75</u>
WELL SCREEN:	4 in. Perforated ABS	45.0 to 65.0	DRILLING METHOD <u>AUGER/ROTARY/CORE</u>
SUMP/END CAP:			SAMPLING METHOD <u>SPLIT SPOON</u>
SURFACE SEAL:			DATE DEVELOPED _____
GROUT:	3/8" Pea Gravel	0.0 to 35.0	WATER LEVEL (FT BTOC) <u>47.1 on 03/16/1982</u>
SEAL:	Bentonite Grout	35.0 to 42.5	LOGGED BY _____
UPPER PACK:	Native Soil/Fill	42.5 to 43.0	REMARKS <u>Hole also known as DM-10.</u>
LOWER PACK:	3/8" Pea Gravel	43.0 to 65.0	<u>Piezometer removed.</u>



MONITORING WELL COMPLETION LOG SHP02-9010

PROJECT UMTRA GROUND WATER WELL NUMBER 9010
 SITE SHIPROCK (TAILINGS AREA) DATES DRILLED 01/20/1982

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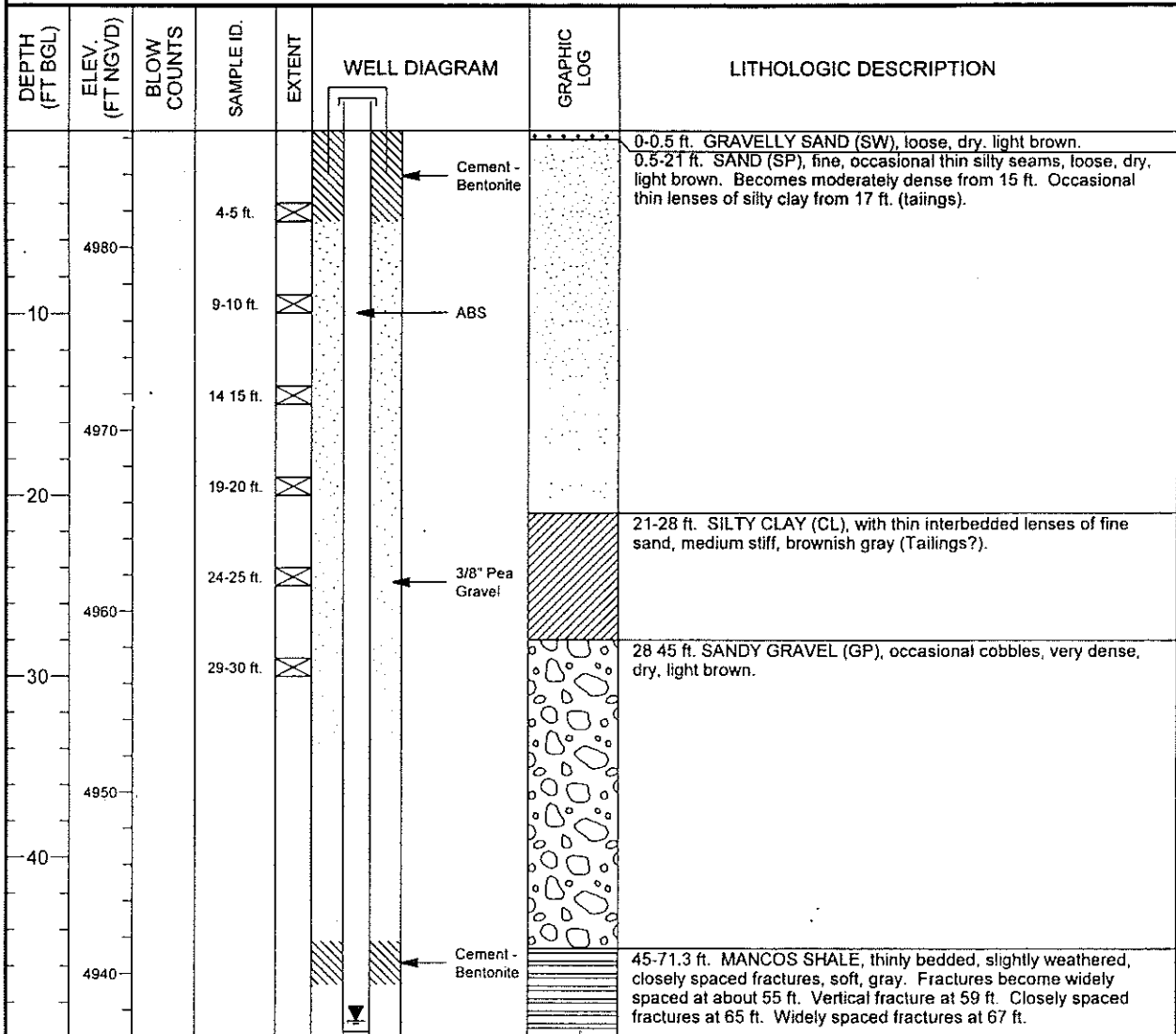
DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
4930 60 4920 70 4910 80 4900 90 4890 100 4880 110				59-61 ft. 69-71 ft.	<p style="font-size: small;">Perforated ABS</p> <p style="font-size: small;">Bentonite Grout</p> <p style="font-size: small;">Cave-in</p>		<p style="text-align: center;">Total Depth 74.25 ft.</p>



MONITORING WELL COMPLETION LOG SHP02-9011

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101128.78</u>	DATE DRILLED <u>01/28/1982</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251012.01</u>	SURFACE ELEV. (FT NGVD) <u>4986.40</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>71.30</u>	TOP OF CASING (FT) _____
WELL NUMBER <u>9011</u>	WELL DEPTH (FT) <u>70.58</u>	MEAS. PT. ELEV. (FT) _____

	WELL INSTALLATION	INTERVAL (FT)	SLOT SIZE (IN) _____
			BIT SIZE(S) (IN) <u>6.75</u>
SURFACE CASING:			DRILLING METHOD <u>AUGER/ROTARY/CORE</u>
BLANK CASING: 4 in. ABS	-1.0 to 49.08		SAMPLING METHOD <u>SPLIT SPOON</u>
WELL SCREEN: 4 in. Perforated ABS	49.08 to 69.58		DATE DEVELOPED _____
SUMP/END CAP: 4 in. ABS	69.58 to 70.58		WATER LEVEL (FT BTOC) <u>50.0 on 03/26/1982</u>
SURFACE SEAL: Cement - Bentonite	0.0 to 5.0		LOGGED BY _____
GROUT: 3/8" Pea Gravel	5.0 to 44.58		REMARKS <u>Hole also known as DM-11.</u>
SEAL: Cement - Bentonite	44.58 to 47.0		<u>Piezometer removed.</u>
UPPER PACK: Native Soil/Fill	47.0 to 47.42		
LOWER PACK: 3/8" Pea Gravel	47.42 to 71.3		



U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION OFFICE, COLORADO

MONITORING WELL COMPLETION LOG SHP02-9011

PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>9011</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DATES DRILLED <u>01/28/1982</u>

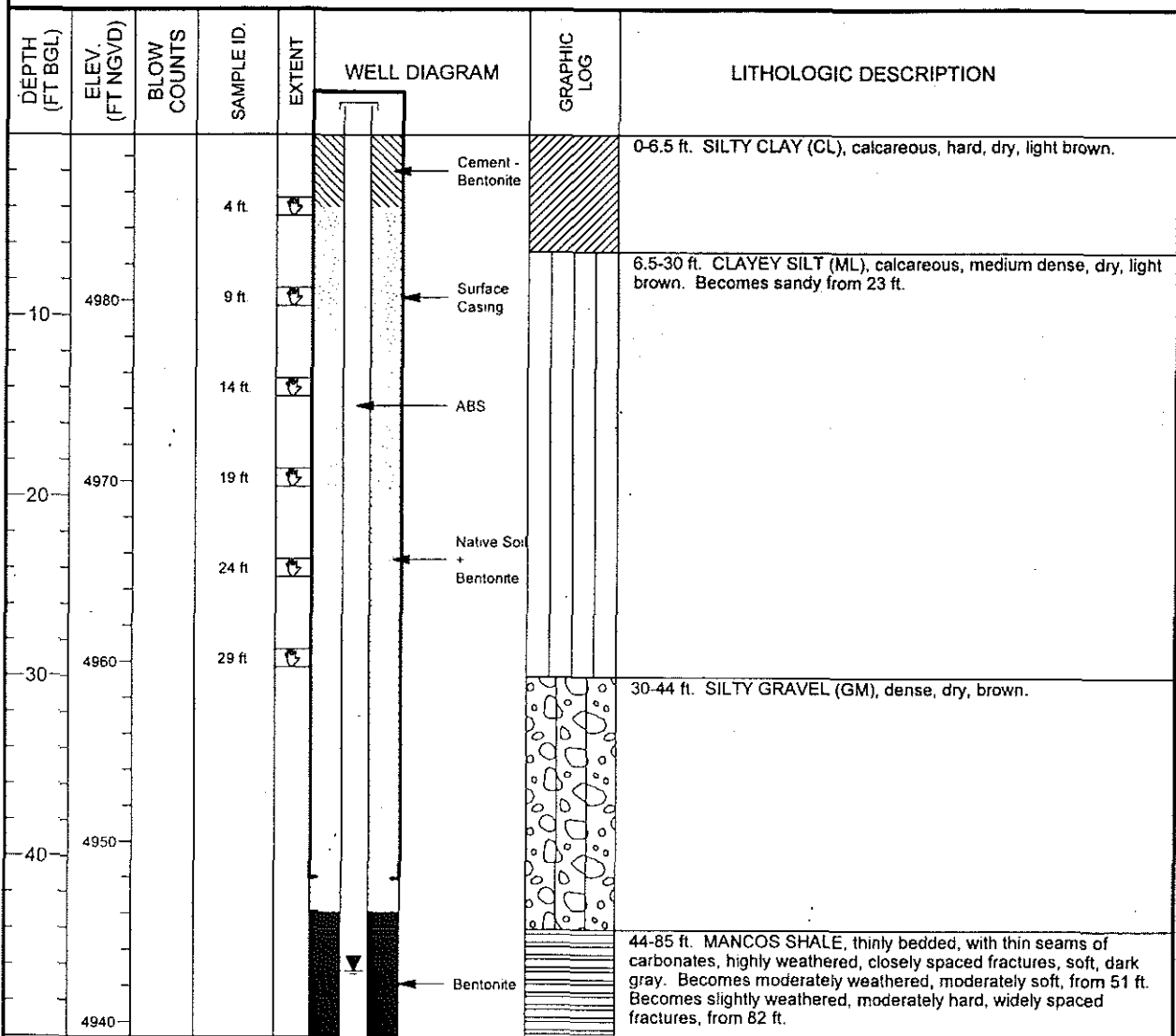
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
			50-52 ft.	X			
			53-55 ft.	X			
60	4930		57-59 ft.	X			
			62-64 ft.	X			
	4920		65-67 ft.	X			
70			69-71 ft.	X			
			Total Depth 71.3 ft.				
	4910						
80							
	4900						
90							
	4890						
100							
	4880						
110							



MONITORING WELL COMPLETION LOG SHP02-9012

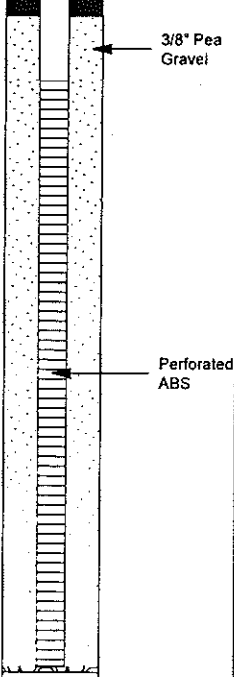

PROJECT <u>UMTRA GROUND WATER</u>		NORTH COORD. (FT) <u>2098851.33</u>	DATE DRILLED <u>03/13/1982</u>
LOCATION <u>SHIPROCK, NM</u>		EAST COORD. (FT) <u>249632.81</u>	SURFACE ELEV. (FT NGVD) <u>4989.20</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>		HOLE DEPTH (FT) <u>85.00</u>	TOP OF CASING (FT) _____
WELL NUMBER <u>9012</u>		WELL DEPTH (FT) <u>84.67</u>	MEAS. PT. ELEV. (FT) _____
			SLOT SIZE (IN) _____
			BIT SIZE(S) (IN) <u>6.75</u>
SURFACE CASING:	WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD <u>AUGER/ROTARY/CORE</u>
BLANK CASING:	6.75 in. Stainless Steel	-1.0 to 41.17	SAMPLING METHOD <u>GRAB</u>
WELL SCREEN:	4 in. ABS	-1.0 to 54.33	DATE DEVELOPED _____
SUMP/END CAP:	4 in. Perforated ABS	54.33 to 84.67	WATER LEVEL (FT BTOC) <u>47.3 on 03/26/1982</u>
SURFACE SEAL:	Cement - Bentonite	0.0 to 4.0	LOGGED BY _____
GROUT:	Native Soil + Bentonite	4.0 to 43.0	REMARKS <u>Hole also known as DM-12A.</u>
SEAL:	Bentonite	43.0 to 51.0	Piezometer removed.
UPPER PACK:			
LOWER PACK:	3/8" Pea Gravel	51.0 to 84.67	



MONITORING WELL COMPLETION LOG SHP02-9012

PROJECT	UMTRA GROUND WATER	WELL NUMBER	9012
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	03/13/1982

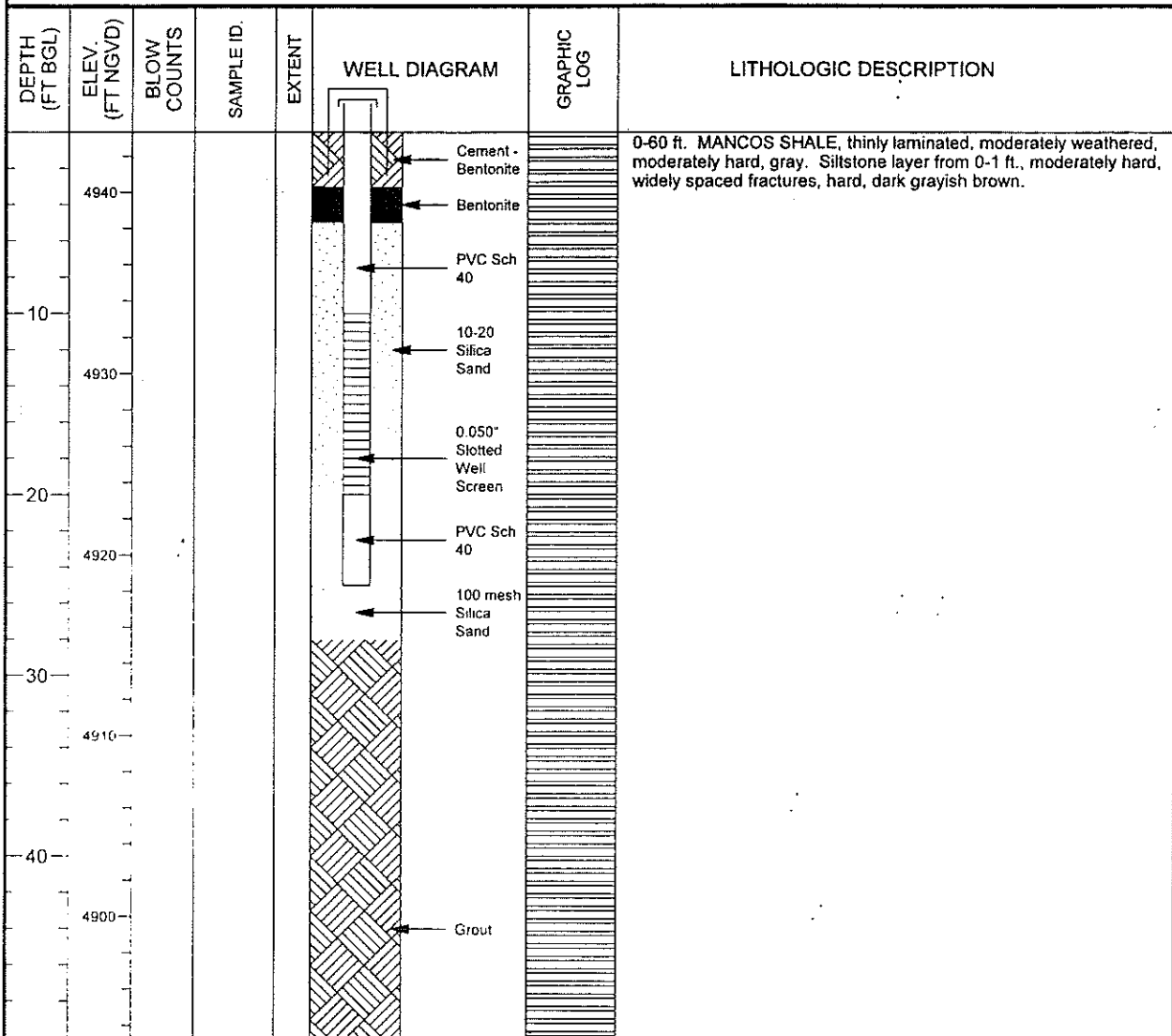
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 20px;">60</div> <div style="margin-bottom: 20px;">70</div> <div style="margin-bottom: 20px;">80</div> <div style="margin-bottom: 20px;">90</div> <div style="margin-bottom: 20px;">100</div> <div style="margin-bottom: 20px;">110</div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 20px;">4930</div> <div style="margin-bottom: 20px;">4920</div> <div style="margin-bottom: 20px;">4910</div> <div style="margin-bottom: 20px;">4900</div> <div style="margin-bottom: 20px;">4890</div> <div style="margin-bottom: 20px;">4880</div> </div>				 <p style="font-size: small;">3/8" Pea Gravel</p> <p style="font-size: small;">Perforated ABS</p>		<p style="text-align: center;">Total Depth 85.0 ft.</p>



MONITORING WELL COMPLETION LOG SHP02-9013

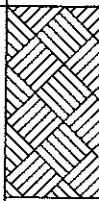

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2102145.70</u>	DATE DRILLED <u>05/17/1983</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250174.21</u>	SURFACE ELEV. (FT NGVD) <u>4943.33</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>60.00</u>	TOP OF CASING (FT) _____
WELL NUMBER <u>9013</u>	WELL DEPTH (FT) <u>25.00</u>	MEAS. PT. ELEV. (FT) _____
WELL INSTALLATION		SLOT SIZE (IN) <u>0.050</u>
INTERVAL (FT)		BIT SIZE(S) (IN) <u>6.0</u>
SURFACE CASING:		
BLANK CASING:	2 in. PVC Sch 40	-0.96 to 10.0
WELL SCREEN:	2 in. Machine Slotted PVC	10.0 to 20.0
SUMP/END CAP:	2 in. PVC Sch 40	20.0 to 25.0
SURFACE SEAL:		
GROUT:	Cement - Bentonite	0.0 to 3.0
SEAL:	Bentonite	3.0 to 5.0
UPPER PACK:		
LOWER PACK:	10-20 Silica Sand	5.0 to 25.0
		DRILLING METHOD <u>ROTARY MUD</u>
		SAMPLING METHOD _____
		DATE DEVELOPED _____
		WATER LEVEL (FT BTOC) <u>Dry</u> <u>06/20/1983</u>
		LOGGED BY _____
		REMARKS <u>Hole also known as 1H. Monitor well removed.</u>



MONITORING WELL COMPLETION LOG SHP02-9013

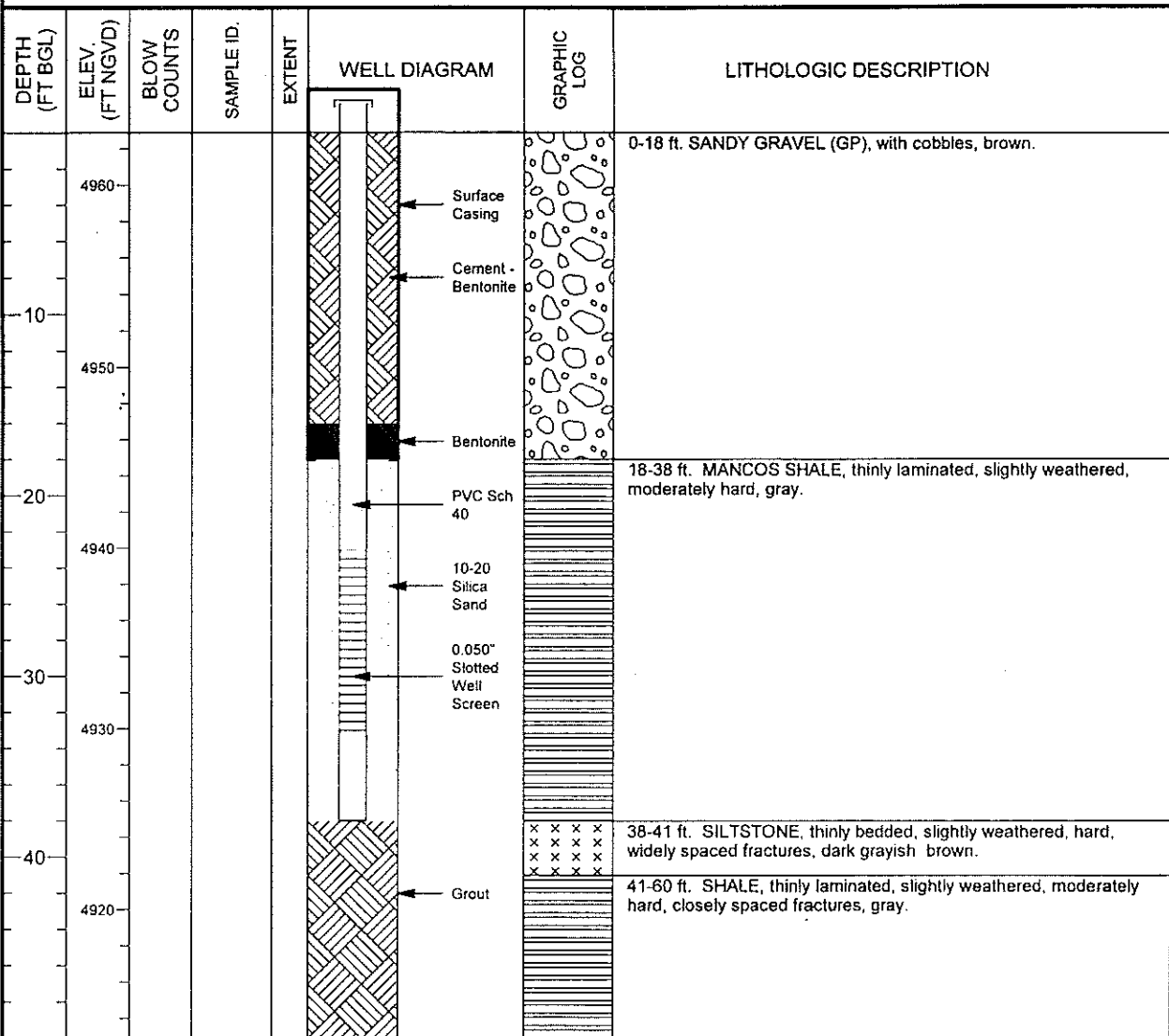
PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>9013</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DATES DRILLED <u>05/17/1983</u>

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
4890 60 4880 70 4870 80 4860 90 4850 100 4840 110 4830							Total Depth 60.0 ft.

MONITORING WELL COMPLETION LOG SHP02-9014

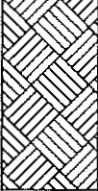
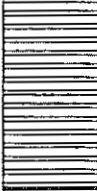
PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2100104.96	DATE DRILLED	05/23/1983
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	251861.59	SURFACE ELEV. (FT NGVD)	4962.90
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	60.00	TOP OF CASING (FT)	
WELL NUMBER	9014	WELL DEPTH (FT)	38.00	MEAS. PT. ELEV. (FT)	
				SLOT SIZE (IN)	0.050
				BIT SIZE(S) (IN)	6.0
	WELL INSTALLATION	INTERVAL (FT)		DRILLING METHOD	ROTARY MUD
SURFACE CASING:	6 in. Steel	-1.0 to 18.0		SAMPLING METHOD	
BLANK CASING:	2 in. PVC Sch 40	-1.0 to 23.0		DATE DEVELOPED	
WELL SCREEN:	2 in. Machine Slotted PVC	23.0 to 33.0		WATER LEVEL (FT BTOC)	Dry 06/20/1983
SUMP/END CAP:	2 in. PVC Sch 40	33.0 to 38.0		LOGGED BY	
SURFACE SEAL:				REMARKS	Hole also known as 2H. Monitor well removed.
GROUT:	Cement - Bentonite	0.0 to 16.0			
SEAL:	Bentonite	16.0 to 18.0			
UPPER PACK:					
LOWER PACK:	10-20 Silica Sand	18.0 to 38.0			



MONITORING WELL COMPLETION LOG SHP02-9014

PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>9014</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DATES DRILLED <u>05/23/1983</u>

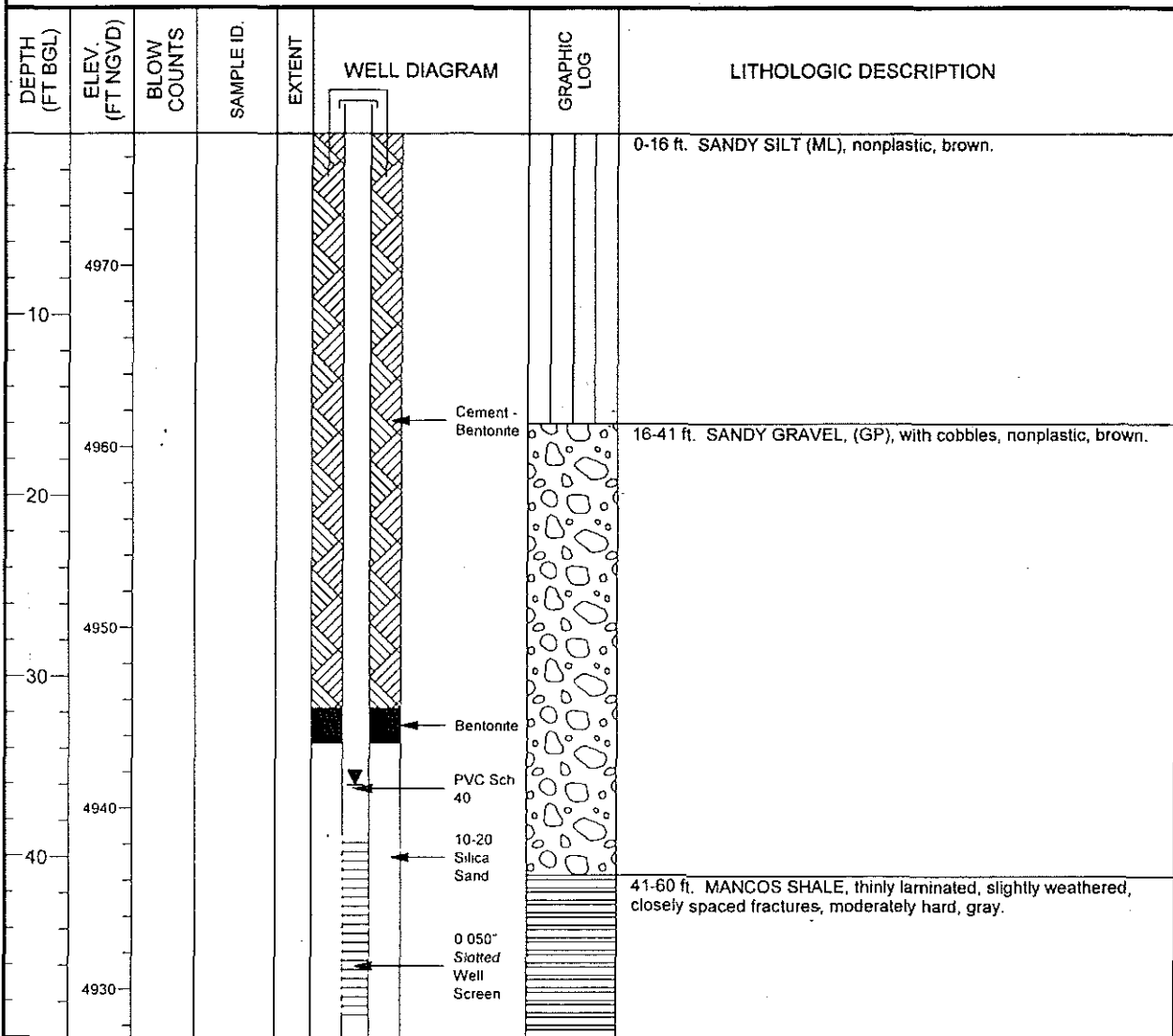
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
60	4910						
70	4890						Total Depth 60.0 ft.
80	4880						
90	4870						
100	4860						
110	4850						



MONITORING WELL COMPLETION LOG SHP02-9015

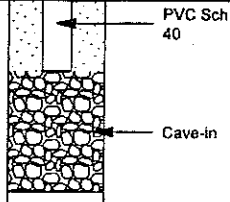
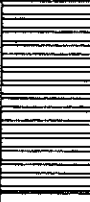
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2099606.10</u>	DATE DRILLED <u>05/31/1983</u>	
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>248675.35</u>	SURFACE ELEV. (FT NGVD) <u>4977.31</u>	
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>60.00</u>	TOP OF CASING (FT) _____	
WELL NUMBER <u>9015</u>	WELL DEPTH (FT) <u>53.70</u>	MEAS. PT. ELEV. (FT) _____	
		SLOT SIZE (IN) <u>0.050</u>	
		BIT SIZE(S) (IN) <u>6.0</u>	
WELL INSTALLATION		INTERVAL (FT)	
SURFACE CASING:	2 in. PVC Sch 40	-1.0 to 38.7	DRILLING METHOD <u>ROTARY MUD</u>
BLANK CASING:	2 in. Machine Slotted PVC	38.7 to 48.7	SAMPLING METHOD _____
WELL SCREEN:	2 in. Machine Slotted PVC	48.7 to 53.7	DATE DEVELOPED _____
SUMP/END CAP:	2 in. PVC Sch 40	48.7 to 53.7	WATER LEVEL (FT BTOC) <u>37.0 on 05/31/1983</u>
SURFACE SEAL:			LOGGED BY _____
GROUT:	Cement - Bentonite	0.0 to 31.7	REMARKS <u>Hole also known as 3H. Monitor well removed.</u>
SEAL:	Bentonite	31.7 to 33.7	
UPPER PACK:			
LOWER PACK:	10-20 Silica Sand	33.7 to 53.7	



MONITORING WELL COMPLETION LOG SHP02-9015

PROJECT	UMTRA GROUND WATER	WELL NUMBER	9015
SITE	SHIPROCK (TAILINGS AREA)	DATES DRILLED	05/31/1983

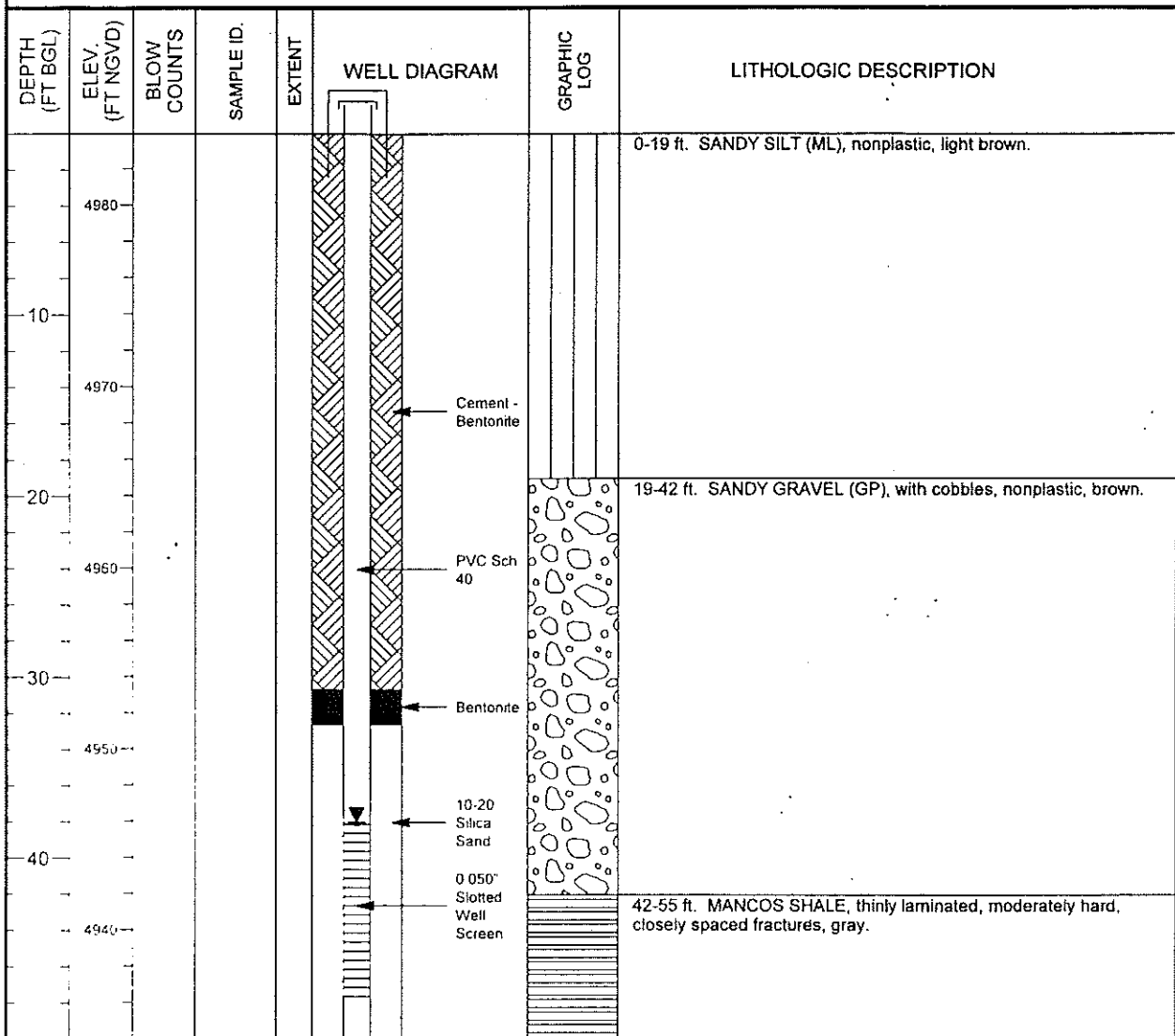
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">60</div> <div style="margin-bottom: 10px;">70</div> <div style="margin-bottom: 10px;">80</div> <div style="margin-bottom: 10px;">90</div> <div style="margin-bottom: 10px;">100</div> <div style="margin-bottom: 10px;">110</div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">4920</div> <div style="margin-bottom: 10px;">4910</div> <div style="margin-bottom: 10px;">4900</div> <div style="margin-bottom: 10px;">4890</div> <div style="margin-bottom: 10px;">4880</div> <div style="margin-bottom: 10px;">4870</div> </div>				 <p style="font-size: small;">PVC Sch 40</p> <p style="font-size: small;">Cave-in</p>		<p style="text-align: center;">Total Depth 60.0 ft</p>



MONITORING WELL COMPLETION LOG SHP02-9016



PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2098615.77</u>	DATE DRILLED <u>06/01/1983</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250779.82</u>	SURFACE ELEV. (FT NGVD) <u>4983.93</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>55.00</u>	TOP OF CASING (FT) _____
WELL NUMBER <u>9016</u>	WELL DEPTH (FT) <u>52.60</u>	MEAS. PT. ELEV. (FT) _____
		SLOT SIZE (IN) <u>0.050</u>
		BIT SIZE(S) (IN) <u>6.0</u>
WELL INSTALLATION INTERVAL (FT)		
SURFACE CASING:		DRILLING METHOD <u>ROTARY MUD</u>
BLANK CASING: 2 in. PVC Sch 40	-1.0 to 37.6	SAMPLING METHOD _____
WELL SCREEN: 2 in. Machine Slotted PVC	37.6 to 47.6	DATE DEVELOPED _____
SUMP/END CAP: 2 in. PVC Sch 40	47.6 to 52.6	WATER LEVEL (FT BTOC) <u>39.0 on 06/20/1983</u>
SURFACE SEAL:		LOGGED BY _____
GROUT: Cement - Bentonite	0.0 to 30.6	REMARKS <u>Hole also known as 5AGT. Monitor well removed.</u>
SEAL: Bentonite	30.6 to 32.6	
UPPER PACK:		
LOWER PACK: 10-20 Silica Sand	32.6 to 52.6	



MONITORING WELL COMPLETION LOG SHP02-9016

PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>9016</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DATES DRILLED <u>06/01/1983</u>

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	4930						
60	4920						Total Depth 55.0 ft.
70	4910						
80	4900						
90	4890						
100	4880						
110							



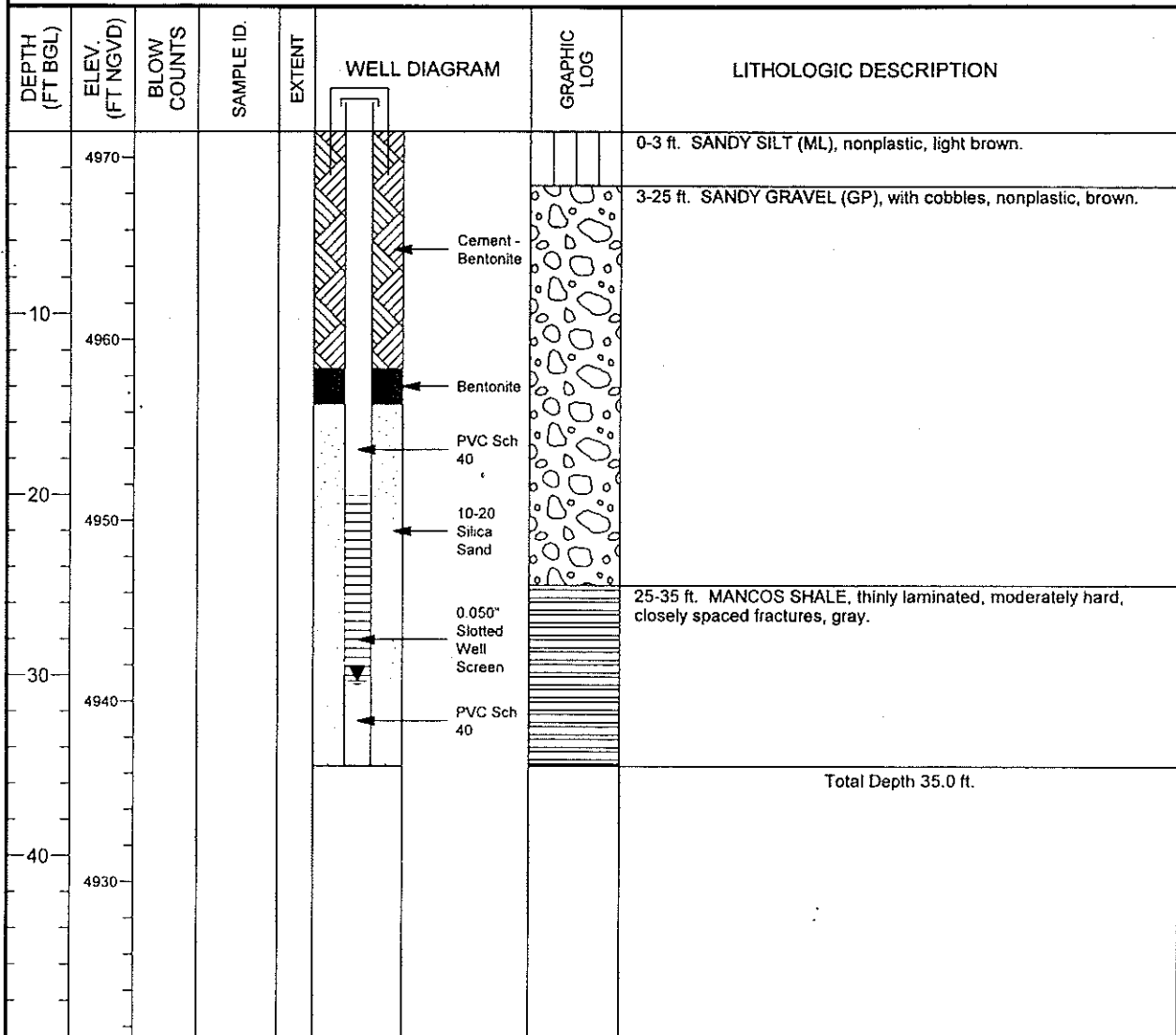
U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION OFFICE, COLORADO

MONITORING WELL COMPLETION LOG SHP02-9017

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2099368.86</u>	DATE DRILLED <u>06/05/1983</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251287.21</u>	SURFACE ELEV. (FT NGVD) <u>4971.43</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>35.00</u>	TOP OF CASING (FT) _____
WELL NUMBER <u>9017</u>	WELL DEPTH (FT) <u>35.00</u>	MEAS. PT. ELEV. (FT) _____
		SLOT SIZE (IN) <u>0.050</u>
		BIT SIZE(S) (IN) <u>6.0</u>

	WELL INSTALLATION	INTERVAL (FT)
SURFACE CASING:		
BLANK CASING:	2 in. PVC Sch 40	-1.0 to 20.0
WELL SCREEN:	2 in. Machine Slotted PVC	20.0 to 30.0
SUMPIEND CAP:	2 in. PVC Sch 40	30.0 to 35.0
SURFACE SEAL:		
GROUT:	Cement - Bentonite	0.0 to 13.0
SEAL:	Bentonite	13.0 to 15.0
UPPER PACK:		
LOWER PACK:	10-20 Silica Sand	15.0 to 35.0

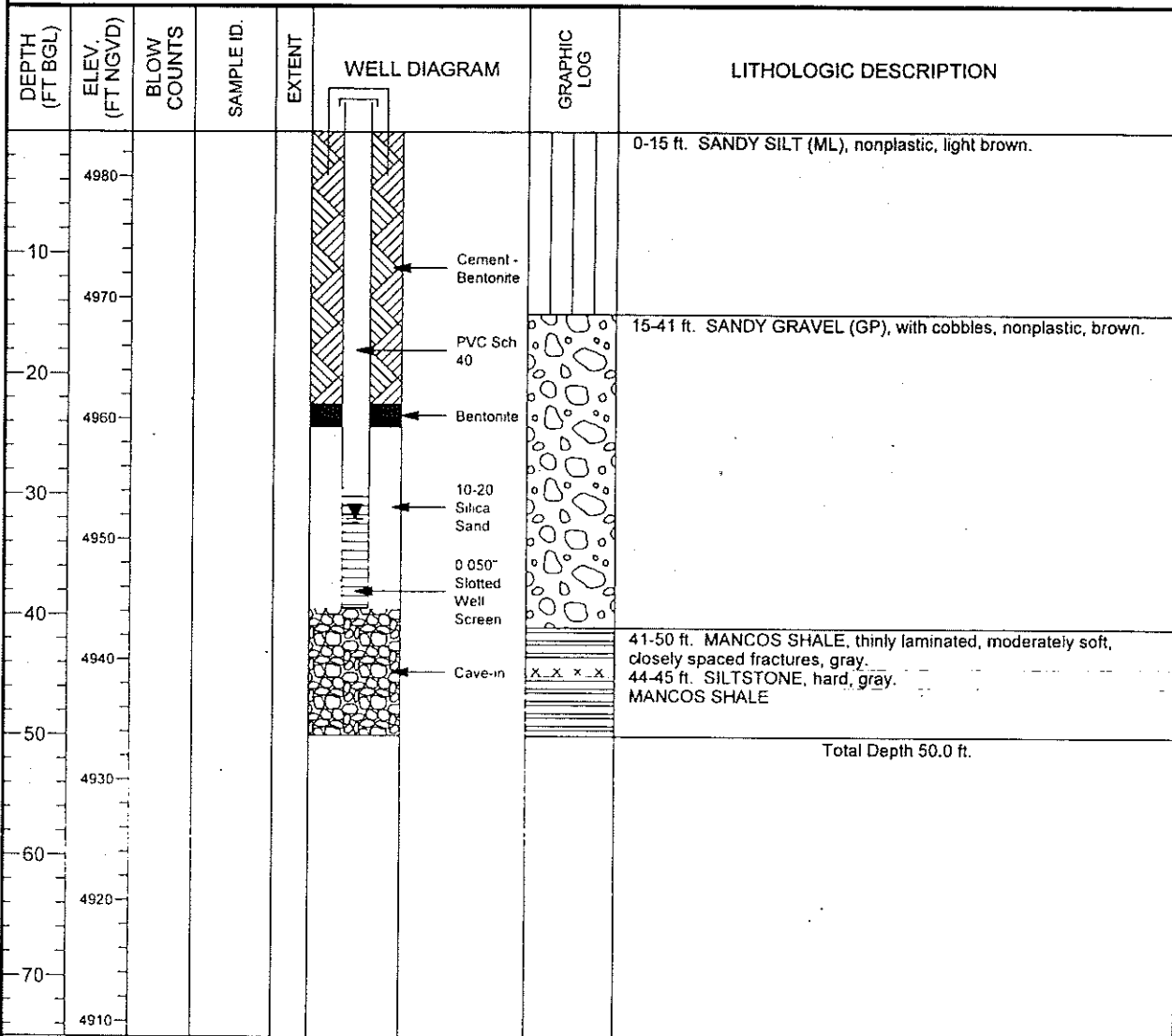
DRILLING METHOD <u>ROTARY MUD</u>
SAMPLING METHOD _____
DATE DEVELOPED _____
WATER LEVEL (FT BTOC) <u>31.3 on 06/20/1983</u>
LOGGED BY _____
REMARKS <u>Hole also known as 7GT. Monitor well removed.</u>



MONITORING WELL COMPLETION LOG SHP02-9018

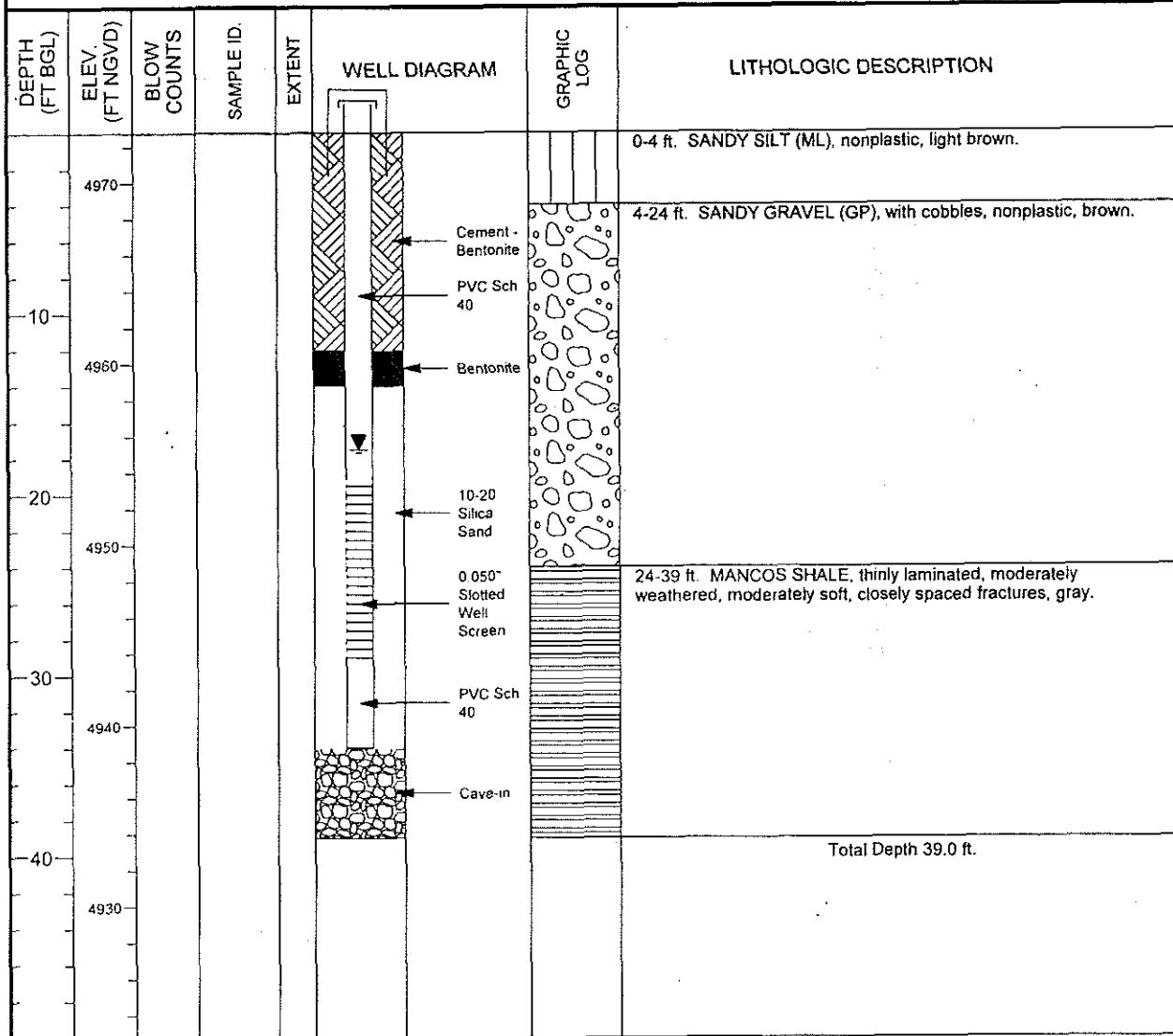
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2098296.75</u>	DATE DRILLED <u>06/02/1998</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250955.20</u>	SURFACE ELEV. (FT NGVD) <u>4983.71</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>50.00</u>	TOP OF CASING (FT) _____
WELL NUMBER <u>9018</u>	WELL DEPTH (FT) <u>39.40</u>	MEAS. PT. ELEV. (FT) _____

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ROTARY MUD</u>
BLANK CASING:	2 in. PVC Sch 40	-1.0 to 29.4	SAMPLING METHOD _____
WELL SCREEN:	2 in. Machine Slotted PVC	29.4 to 39.4	DATE DEVELOPED _____
SUMP/END CAP:			WATER LEVEL (FT BTOC) <u>33.0 on 06/05/1983</u>
SURFACE SEAL:			LOGGED BY _____
GROUT:	Cement - Bentonite	0.0 to 22.4	REMARKS <u>Hole also known as 8GT. Monitor well removed.</u>
SEAL:	Bentonite	22.4 to 24.4	
UPPER PACK:			
LOWER PACK:	10-20 Silica Sand	24.4 to 39.4	



MONITORING WELL COMPLETION LOG SHP02-9019

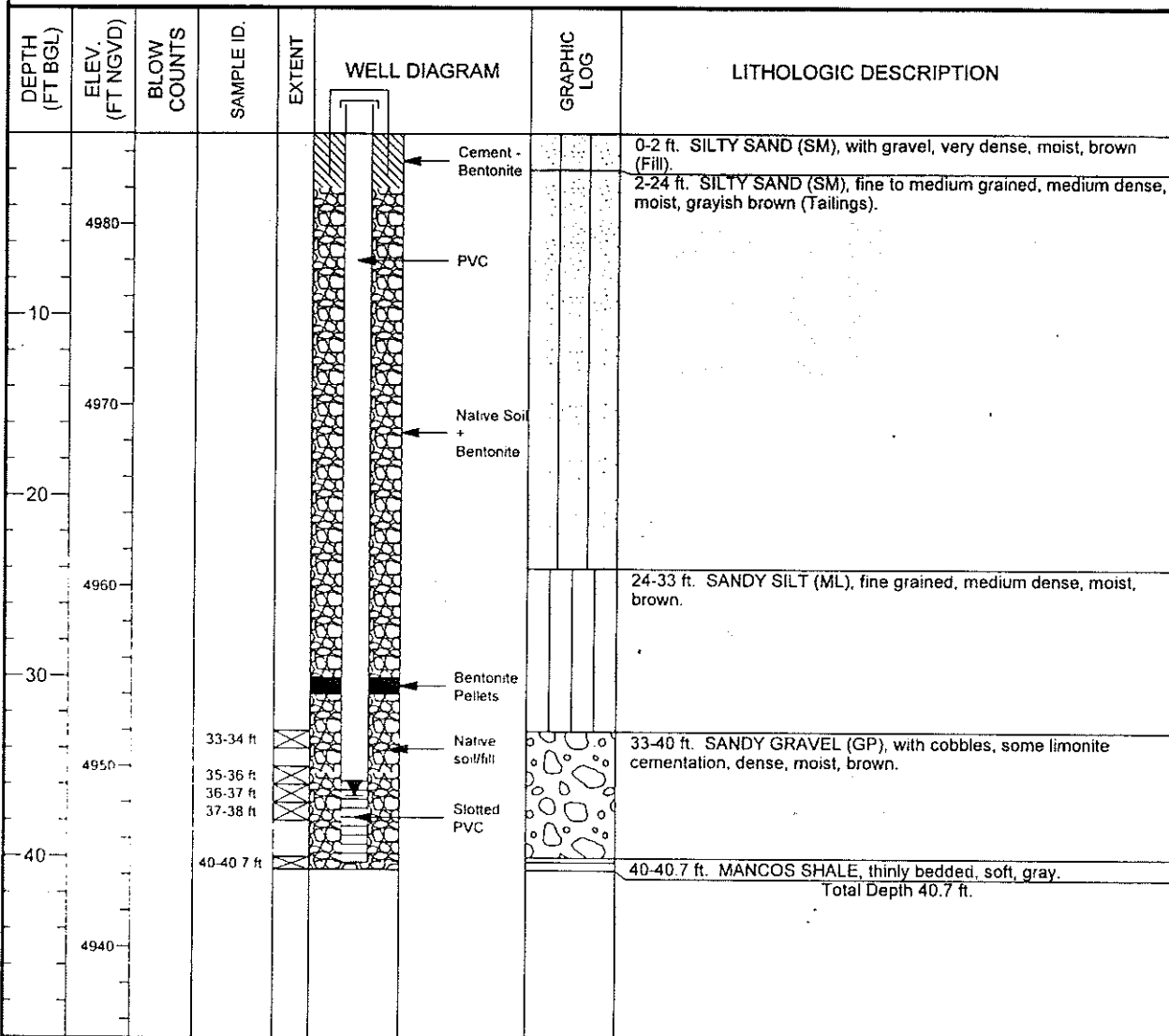
PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2099053.00</u>	DATE DRILLED <u>06/03/1983</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251494.48</u>	SURFACE ELEV. (FT NGVD) <u>4972.78</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>39.00</u>	TOP OF CASING (FT) _____
WELL NUMBER <u>9019</u>	WELL DEPTH (FT) <u>34.00</u>	MEAS. PT. ELEV. (FT) _____
		SLOT SIZE (IN) <u>0.050</u>
		BIT SIZE(S) (IN) <u>8.0</u>
WELL INSTALLATION		INTERVAL (FT)
SURFACE CASING:	2 in. PVC Sch 40	-1.0 to 19.0
BLANK CASING:	2 in. Machine Slotted PVC	19.0 to 29.0
WELL SCREEN:	2 in. Machine Slotted PVC	19.0 to 29.0
SUMP/END CAP:	2 in. PVC Sch 40	29.0 to 34.0
SURFACE SEAL:		
GROUT:	Cement - Bentonite	0.0 to 12.0
SEAL:	Bentonite	12.0 to 14.0
UPPER PACK:		
LOWER PACK:	10-20 Silica Sand	14.0 to 34.0
DRILLING METHOD <u>ROTARY MUD</u>		
SAMPLING METHOD _____		
DATE DEVELOPED _____		
WATER LEVEL (FT BTOC) <u>18.5 on 06/20/1983</u>		
LOGGED BY _____		
REMARKS <u>Hole also known as 10GT. Monitor well removed.</u>		



MONITORING WELL COMPLETION LOG SHP02-9020

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2100438.78</u>	DATE DRILLED <u>01/25/1982</u>
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>250269.22</u>	SURFACE ELEV. (FT NGVD) <u>4985.00</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) <u>40.70</u>	TOP OF CASING (FT) _____
WELL NUMBER <u>9020</u>	WELL DEPTH (FT) <u>40.70</u>	MEAS. PT. ELEV. (FT) _____
		SLOT SIZE (IN) _____
		BIT SIZE(S) (IN) <u>6.75</u>

	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>AUGER/ROTARY</u>
BLANK CASING:	2 in. PVC	-1.0 to 35.3	SAMPLING METHOD <u>SPLIT SPOON</u>
WELL SCREEN:	2 in. Slotted PVC	35.3 to 40.3	DATE DEVELOPED _____
SUMP/END CAP:			WATER LEVEL (FT BTOC) <u>37.6 on 03/26/1982</u>
SURFACE SEAL:	Cement - Bentonite	0.0 to 3.0	LOGGED BY _____
GROUT:	Native Soil + Bentonite	3.0 to 30.0	REMARKS <u>Hole also known as DM-10A.</u>
SEAL:	Bentonite Pellets	30.0 to 31.0	<u>Piezometer removed.</u>
UPPER PACK:			
LOWER PACK:	Native soil/fill	31.0 to 40.7	



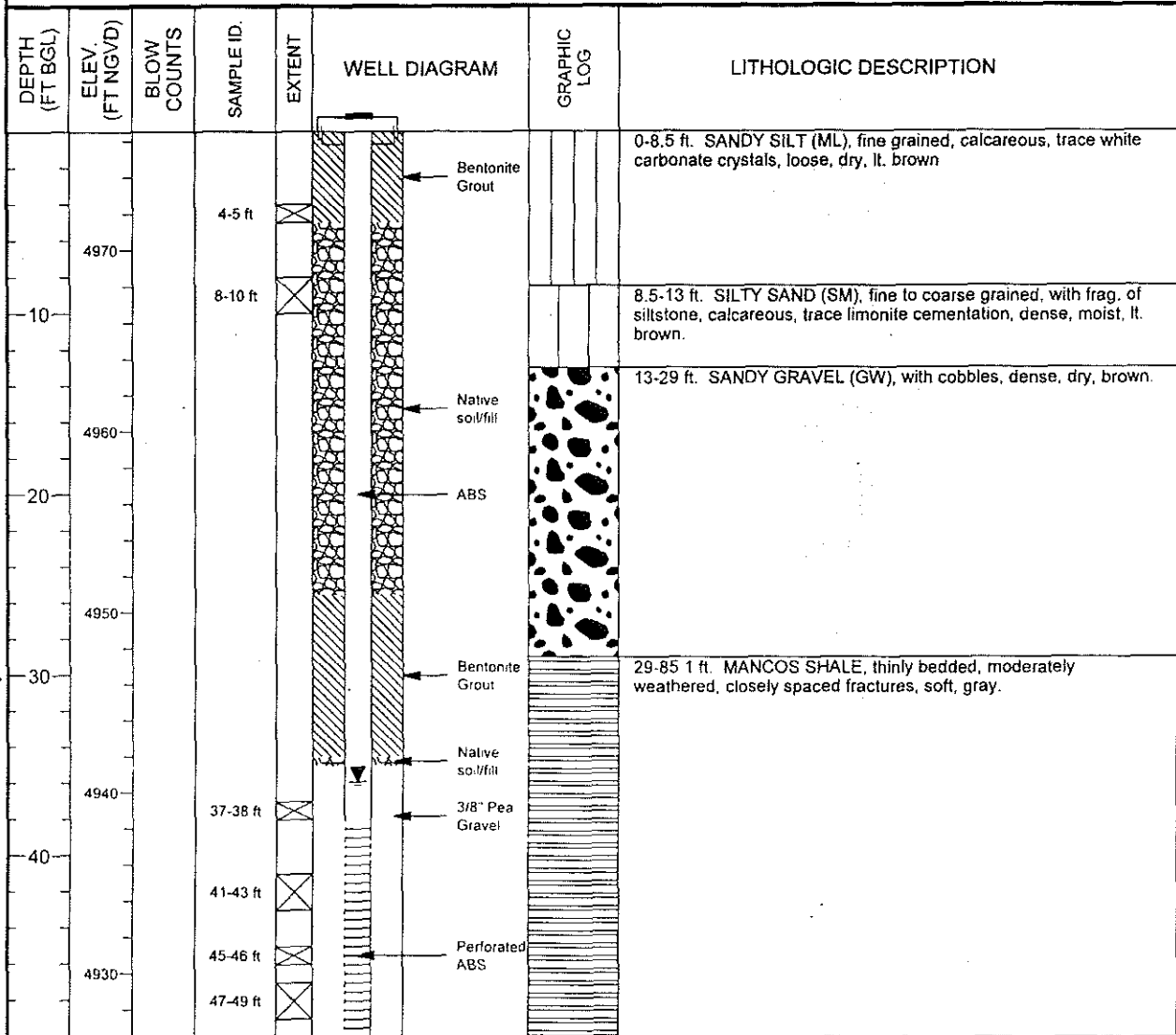
BOREHOLE LOG SHP02-9021

PROJECT <u>UMTRA GROUND WATER</u>	SURFACE ELEV. (FT NGVD) <u>4998.00</u>
LOCATION <u>SHIPROCK, NM</u>	BIT SIZE(S) (IN) <u>6.75</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DRILLING METHOD <u>HOLLOW STEM AUGER</u>
WELL NUMBER <u>9021</u>	SAMPLING METHOD <u>GRAB, SPLIT SPOON</u>
NORTH COORD. (FT) <u>2098467.71</u>	WATER LEVEL (FT BGS) <u>Dry</u>
EAST COORD. (FT) <u>249538.26</u>	LOGGED BY _____
HOLE DEPTH (FT) <u>46.00</u>	REMARKS <u>Hole also known as DM-12.</u>
DATE DRILLED <u>02/23/1982</u>	

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
						0-36 ft. CLAYEY SILT (MH), calcareous, medium dense, dry, light brown.
	4990		4-5 ft.	☞		
10			9-10 ft.	☞		
	4980		14-15 ft.	☞		
20			19-20 ft.	☞		
	4970		24-25 ft.	☞		
30			29-30 ft.	☞		
	4960		34-35 ft.	☞		
40			42-43 ft.	☞		36-42.5 ft. SILTY SAND (SM), with gravel, medium dense, dry, brown.
	4950			☞		42.5-46 ft. SILTY GRAVEL (GM), with sand, increasing cobbles, dense, dry, brown.
						Total Depth 46.0 ft.

MONITORING WELL COMPLETION LOG SHP02-DM7

PROJECT	UMTRA GROUND WATER	NORTH COORD. (FT)	2099645.67	DATE DRILLED	01/25/1982
LOCATION	SHIPROCK, NM	EAST COORD. (FT)	249944.02	SURFACE ELEV. (FT NGVD)	4976.50
SITE	SHIPROCK (TAILINGS AREA)	HOLE DEPTH (FT)	85.10	TOP OF CASING (FT)	4974.50
WELL NUMBER	DM7	WELL DEPTH (FT)	54.00	MEAS. PT. ELEV. (FT)	4974.50
				SLOT SIZE (IN)	
				BIT SIZE(S) (IN)	5.6
WELL INSTALLATION			INTERVAL (FT)		
SURFACE CASING:					
BLANK CASING:	4 in. ABS	2.0	to	38.0	DRILLING METHOD AUGER/ROTARY/CORE
WELL SCREEN:	4 in. Perforated ABS	38.0	to	53.0	SAMPLING METHOD SPLIT SPOON
SUMP/END CAP:	4 in. ABS	53.0	to	54.0	DATE DEVELOPED
SURFACE SEAL:	Bentonite Grout	0.0	to	5.0	WATER LEVEL (FT BTOC) 33.9 on 03/07/1982
GROUT:	Native soil/fill	5.0	to	25.5	LOGGED BY
SEAL:	Bentonite Grout	25.5	to	34.5	REMARKS
UPPER PACK:	Native Soil/Fill	34.5	to	35.0	
LOWER PACK:	3/8" Pea Gravel	35.0	to	54.0	



MONITORING WELL COMPLETION LOG SHP02-DM7

PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>DM7</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	DATES DRILLED <u>01/25/1982</u>

Continued from Previous Page

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
			52-54 ft	X			<p>Note: Fractures become widely spaced, with interbedded carbonates from 50 feet.</p>
60	4920		57-59 ft	X	<p style="text-align: center;">Bentonite Grout</p>		
			63-65 ft	X			
70	4910		69-71 ft	X			
			78-80 ft	X			
80	4900						
	4890						Total Depth 85.1 ft.
90							
	4880						
100							
	4870						
110							

MONITORING WELL COMPLETION LOG SHP02-MW1

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>2101488.51</u>	DATE DRILLED _____
LOCATION <u>SHIPROCK, NM</u>	EAST COORD. (FT) <u>251338.36</u>	SURFACE ELEV. (FT NGVD) <u>4956.91</u>
SITE <u>SHIPROCK (TAILINGS AREA)</u>	HOLE DEPTH (FT) _____	TOP OF CASING (FT) <u>4955.64</u>
WELL NUMBER <u>MW1</u>	WELL DEPTH (FT) _____	MEAS. PT. ELEV. (FT) <u>4955.64</u>

SURFACE CASING:	WELL INSTALLATION	INTERVAL (FT)	DRILLING METHOD _____
BLANK CASING:			SAMPLING METHOD _____
WELL SCREEN:			DATE DEVELOPED _____
SUMP/END CAP:			WATER LEVEL (FT BTOC) <u>52.94 on 06/02/1999</u>
SURFACE SEAL:			LOGGED BY _____
GROUT:			REMARKS <u>Well drilled in the early 1980s.</u>
SEAL:			<u>Unknown depth and well construction.</u>
UPPER PACK:			
LOWER PACK:			

DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">10</div> <div style="margin-bottom: 10px;">20</div> <div style="margin-bottom: 10px;">30</div> <div style="margin-bottom: 10px;">40</div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">4950</div> <div style="margin-bottom: 10px;">4940</div> <div style="margin-bottom: 10px;">4930</div> <div style="margin-bottom: 10px;">4920</div> <div style="margin-bottom: 10px;">4910</div> </div>						Well completion assumed in Mancos Shale.

Appendix B

Summary of Surface Water and Ground Water Analytical Results, 1997 through April 2000 Sampling

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Site Code	Location Code	Date Sampled	Alk mg/L	EC umhos/cm	ORP mV	TDS mg/L	Temp C	Turbidity NTU	pH s.u.	As mg/L	Ca mg/L	CaCO3 mg/L	Cd mg/L
SHP01	0546	01/25/1997	142	794	257	498	2	---	7.25	0.0025	87.4	---	<0.0011
		01/25/1997	---	---	---	490	---	---	---	0.0023	84.6	---	<0.0011
		02/03/1998	114	517	172	297	5.8	---	8.93	<0.001	50.6	---	<0.001
		12/12/1998	123	674	170	458	2.4	72.8	8.38	0.0004	70.8	---	<0.001
		03/07/1999	105	531	190	360	9.9	18.7	8.18	<0.001	57.4	---	<0.001
		06/02/1999	75	3100	96	140	11.6	131	8.00	<0.001	30.1	---	<0.0003
		02/05/2000	125	667	184	~485	5.5	---	8.59	<0.0004	~68.6	---	<0.0003
SHP01	0548	01/25/1997	150	792	---	505	2.3	---	8.30	0.004	93	---	<0.0011
		02/05/1998	119	532	140	297	7.7	---	8.76	<0.001	52.7	---	<0.001
		12/12/1998	129	665	124	460	1.1	58.7	8.26	0.0005	66.9	---	<0.001
		03/07/1999	105	545	226	383	9.3	20	8.36	<0.001	58.8	---	<0.001
		06/07/1999	78	272	54	220	10.9	52.5	7.15	<0.001	30.6	---	<0.0003
		02/05/2000	122	680	136	~495	6.2	23	9.11	<0.0004	~69.1	---	<0.0003
SHP01	0549	01/26/1997	142	831	163	543	3.9	---	8.12	0.001	85.1	---	<0.0011
		02/03/1998	107	512	137	293	5.7	---	8.91	<0.001	50.8	---	<0.001
		12/15/1998	127	749	138	513	1.7	66.5	8.29	0.0003	70.7	---	<0.001
SHP01	0551	01/26/1997	---	1050	212	678	3	---	8.45	0.0009	95.6	---	<0.0011
		02/03/1998	112	557	218	308	4	---	8.54	<0.001	54.5	---	<0.001
		12/15/1998	139	901	135	582	1.8	76.7	8.21	0.0003	75	---	<0.001
SHP01	0553	01/26/1997	153	803	237	520	4	---	8.13	0.001	84.1	---	<0.0011
		02/03/1998	108	529	183	302	5.3	---	8.75	<0.001	51.4	---	<0.001
		02/03/1998	---	---	---	313	---	---	---	<0.001	50.4	---	<0.001
		12/15/1998	141	6970	162	450	1.8	112	8.28	0.0004	68.5	---	<0.001
		12/15/1998	---	---	---	463	---	---	---	0.0004	69	---	<0.001
		03/07/1999	112	555	197	385	7.1	21.5	8.42	<0.001	58.9	---	<0.001
		06/05/1999	84	261	-76	187	9.7	75.8	8.15	<0.001	28.7	---	<0.0003
		02/03/2000	130	674	168	478	6.4	23.8	8.64	0.0005	67.6	---	<0.0003

Site	Location	Date	Aik	EC	ORP	TDS	Temp	Turbidity	pH	As	Ca	CaCO3	Cd
Code	Code	Sampled	mg/L	umhos/cm	mV	mg/L	C	NTU	s.u.	mg/L	mg/L	mg/L	mg/L
SHP01	0555	01/27/1997	101	1012	238	675	4.8	---	7.60	0.0041	222	---	<0.001
		02/03/1998	103	536	111	305	3.9	---	8.38	<0.001	50.9	---	<0.001
		12/14/1998	122	715	193	487	1.9	59.5	8.32	0.0002	73.8	---	<0.001
		03/06/1999	103	535	253	395	10.2	---	8.61	<0.001	57.4	---	<0.001
		06/04/1999	64	265	97	172	11.9	96.7	8.08	<0.001	29.1	---	<0.0003
		02/02/2000	119	644	197	443	4.7	23.7	8.41	<0.0004	68.8	---	<0.0003
SHP01	0556	01/26/1997	143	---	145	537	3.8	---	8.10	0.0002	84.1	---	<0.001
		02/03/1998	103	531	135	308	5.6	---	9.00	<0.001	50.5	---	<0.001
		12/15/1998	142	706	138	468	1.7	76.6	8.37	0.0004	72.2	---	<0.001
SHP01	0655	01/26/1997	217	5770	165	4600	1.2	---	7.76	0.0004	278	---	<0.0011
		02/03/1998	193	5520	216	4130	2.7	---	8.27	<0.001	198	---	<0.001
		12/15/1998	234	5950	141	4740	-2	23.7	7.54	0.0001	229	---	<0.001
		03/02/1999	182	5200	190	4320	8.9	72.5	8.54	<0.001	196	---	<0.001
		06/06/1999	134	4550	136	1940	14.1	30.6	7.58	<0.001	103	---	<0.0003
		02/03/2000	339	7820	190	6730	-2	0.46	7.86	<0.0004	401	---	<0.0003
SHP01	0656	02/05/1998	623	11250	185	8940	2.2	---	7.43	0.0019	312	---	<0.001
SHP01	0657	01/24/1997	107	390	255	3010	-1	74.9	7.69	0.0003	125	---	<0.001
		02/05/1998	52	1460	210	687	2.1	---	9.67	<0.001	31.3	---	<0.001
		12/14/1998	1426	24600	94	29500	0.1	694	7.61	0.0023	420	---	<0.001
		06/06/1999	597	16770	87	17100	16.1	12.34	8.65	<0.001	385	---	<0.0003
		02/02/2000	148	5440	206	4250	0.4	33	7.01	<0.0004	259	---	<0.0003
SHP01	0658	01/24/1997	98	410	297	3220	0.5	67.1	8.30	0.0009	133	---	<0.0011
		02/05/1998	99	4450	136	3130	7.8	---	8.25	<0.001	116	---	<0.001
		12/14/1998	92	4580	26	3200	-2	35	7.27	0.0004	116	---	<0.001
		12/14/1998	---	---	---	3130	---	---	---	0.0005	113	---	<0.001
		03/09/1999	79	4210	67	3250	4.9	---	7.23	<0.001	124	---	<0.001
		06/06/1999	100	4300	-230	3360	27.6	16.3	6.44	<0.001	127	---	<0.0003
		02/02/2000	238	5160	200	4870	2.2	13.9	8.26	0.0007	308	---	<0.0003

Site	Location	Date	Alk	EC	ORP	TDS	Temp	Turbidity	pH	As	Ca	CaCO3	Cd
Code	Code	Sampled	mg/L	umhos/cm	mV	mg/L	C	NTU	s.u.	mg/L	mg/L	mg/L	mg/L
SHP01	0887	12/12/1998	310	4420	212	4440	3.6	89.2	7.16	<0.0001	495	—	<0.001
		03/04/1999	296	4510	210	4460	7	8	7.57	<0.001	491	—	<0.001
		06/03/1999	73	249	68	135	11.6	96.6	7.97	<0.001	28.7	—	<0.0003
		02/05/2000	314	4640	155	~4560	9	0.76	7.55	<0.0004	~489	—	<0.0003
SHP01	0888	12/11/1998	120	1314	214	915	4.7	109	8.33	0.0007	92.1	—	<0.001
		03/06/1999	116	1050	206	730	7.7	45.2	8.41	<0.001	85.1	—	<0.001
		06/06/1999	84	260	83	162	8.9	52.8	7.27	<0.001	30	—	<0.0003
		02/04/2000	—	960	206	660	6	147	8.65	0.0005	~80.3	—	<0.0003
SHP01	0893	12/14/1998	148	772	109	502	3	71.9	8.08	0.0002	71.7	—	<0.001
		03/09/1999	106	575	169	383	5.9	19.3	8.12	<0.001	58.4	—	<0.001
		06/05/1999	61	263	92	148	9.9	56.4	6.74	<0.001	30.1	—	<0.0003
		02/04/2000	112	755	137	530	5.8	—	8.42	<0.0004	~68.5	—	<0.0003
SHP01	0894	03/02/1999	106	597	198	395	10.4	18.4	8.75	<0.001	57.4	—	<0.001
		06/06/1999	132	3160	123	1870	12.6	44.9	7.62	<0.001	97.1	—	<0.0003
		02/03/2000	350	7380	208	6730	0.1	10.8	7.77	<0.0004	398	—	<0.0003
SHP01	0895	03/08/1999	107	563	214	392	7.8	17.9	8.51	<0.001	58.6	—	<0.001
		06/05/1999	71	2640	64	172	9.1	52.4	8.12	<0.001	29.8	—	<0.0003
		02/03/2000	127	676	145	487	3.7	27.8	8.13	<0.0004	68.8	—	<0.0003
SHP01	0896	12/15/1998	121	708	137	493	1.8	60.9	7.88	0.0005	71.7	—	<0.001
		03/08/1999	105	551	203	358	9.7	29	8.49	<0.001	58.1	—	<0.001
		06/05/1999	71	3960	98	343	9.4	—	8.18	<0.001	29	—	<0.0003
		02/03/2000	132	696	147	492	5.6	28.4	8.23	<0.0004	69.3	—	<0.0003
SHP01	0897	12/13/1998	152	725	190	502	4	44.1	7.96	<0.0001	72.8	—	<0.001
		12/13/1998	—	—	—	475	—	—	—	<0.0003	74.1	—	<0.001
		03/08/1999	106	534	218	365	9.9	19	8.48	<0.001	57	—	<0.001
		06/07/1999	63	445	99	230	11.8	48.8	8.25	<0.001	31.3	—	<0.0003
		02/05/2000	144	728	205	~493	6.2	28.4	8.79	0.0005	69	—	<0.0003

Site Code	Location Code	Date Sampled	Alk mg/L	EC umhos/cm	ORP mV	TDS mg/L	Temp C	Turbidity NTU	pH s.u.	As mg/L	Ca mg/L	CaCO3 mg/L	Cd mg/L
SHP01	0898	12/09/1998	123	767	146	475	1.9	50.2	8.34	0.0003	74.2	---	<0.001
		03/02/1999	82	583	205	378	10	---	8.42	<0.001	57.7	---	<0.001
		06/06/1999	71	267	-5	162	11.1	---	7.69	<0.001	29.2	---	<0.0003
		02/02/2000	131	736	169	467	4.9	39.5	8.21	<0.0004	67.6	---	<0.0003
SHP01	0939	06/04/1999	73	259	79	150	12.1	66.3	6.90	<0.001	30.4	---	<0.0003
		06/04/1999	---	---	---	150	---	---	---	<0.001	31.3	---	<0.0003
		02/06/2000	307	3980	208	3700	1.9	6.27	9.29	<0.0004	~458	---	<0.0003
SHP01	0940	06/06/1999	74	280	64	158	12.4	40	7.06	<0.001	29.4	---	<0.0003
		02/03/2000	124	774	142	1020	7.9	23.3	8.34	<0.0004	78.6	---	<0.0003
SHP01	0941	06/06/1999	69	271	97	158	12.7	45.8	7.14	<0.001	23.9	---	<0.0003
		02/03/2000	129	793	174	530	3.2	31.1	8.34	<0.0004	72.1	---	<0.0003
SHP01	0960	03/07/1999	104	555	184	387	7.1	---	8.38	<0.001	58.8	---	<0.001
SHP01	0961	03/09/1999	109	575	164	390	6.3	27.5	8.15	<0.001	58.2	---	<0.001
SHP01	0962	03/08/1999	104	567	200	380	7.7	30	8.55	<0.001	58.1	---	<0.001
SHP01	0963	03/08/1999	105	547	184	640	9.3	21.2	8.75	<0.001	58	---	<0.001
SHP01	0964	03/09/1999	---	---	---	370	---	---	---	<0.001	57	---	<0.001
SHP01	1200	03/14/2000	127	640	98	---	7.8	41.6	8.45	---	---	---	---
SHP01	1201	03/14/2000	119	640	154	---	7.7	71.4	8.67	---	---	---	---
SHP01	1202	03/14/2000	134	628	89	---	8.9	26.1	8.47	---	---	---	---
SHP01	1203	03/14/2000	128	604	53	---	13.7	26.2	8.59	---	---	---	---
SHP01	1204	03/14/2000	126	625	60	---	10	23.5	8.82	---	---	---	---

Site	Location	Date	Alk	EC	ORP	TDS	Temp	Turbidity	pH	As	Ca	CaCO3	Cd
Code	Code	Sampled	mg/L	umhos/cm	mV	mg/L	C	NTU	s.u.	mg/L	mg/L	mg/L	mg/L
SHP01	1205	03/14/2000	124	626	90	---	10.7	23.5	8.55	---	---	---	---
SHP01	1206	03/14/2000	128	731	69	---	12.8	36	8.55	---	---	---	---
SHP01	1207	03/14/2000	407	4190	113	---	8	3.63	8.03	---	---	---	---
		03/14/2000	---	---	---	---	---	---	---	---	---	---	---
SHP01	1208	03/14/2000	137	5200	97	---	20.9	17.6	8.47	---	---	---	---
SHP01	1209	03/14/2000	98	5260	93	---	23.1	15.2	8.77	---	---	---	---
SHP01	1210	03/14/2000	117	680	99	---	12	38.4	8.49	---	---	---	---
SHP01	1211	03/14/2000	463	5590	107	---	9	10.4	7.49	---	---	---	---
SHP01	1212	03/14/2000	471	6520	107	---	7.3	5.18	7.79	---	---	---	---
SHP01	1213	03/14/2000	148	5160	96	---	5.9	538	7.44	---	---	---	---
SHP01	1236	09/03/1998	---	---	---	---	---	---	---	<0.0022	---	1020	---
SHP01	1237	09/03/1998	---	---	---	---	---	---	---	<0.0022	---	1170	---
SHP01	1238	09/02/1998	---	---	---	---	---	---	---	<0.0097	---	311	---
SHP01	1239	09/02/1998	---	---	---	---	---	---	---	<0.0076	---	279	---
SHP01	1240	09/02/1998	---	---	---	---	---	---	---	<0.0068	---	296	---
SHP01	1241	09/02/1998	---	---	---	---	---	---	---	<0.0094	---	344	---
SHP01	1242	09/02/1998	---	---	---	---	---	---	---	<0.0123	---	289	---
SHP01	1243	09/03/1998	---	---	---	---	---	---	---	<0.0053	---	269	---
		09/03/1998	---	---	---	---	---	---	---	<0.0056	---	265	---

Site	Location	Date	Alk	EC	ORP	TDS	Temp	Turbidity	pH	As	Ca	CaCO3	Cd
Code	Code	Sampled	mg/L	umhos/cm	mV	mg/L	C	NTU	s.u.	mg/L	mg/L	mg/L	mg/L
SHP02	0425	12/14/1998	497	6920	226	7520	13.4	134	6.97	<0.0001	463	—	<0.001
		03/04/1999	547	6840	160	7440	13.4	—	6.94	<0.001	471	—	<0.001
		06/06/1999	472	6890	170	7160	16.1	3.47	6.80	<0.001	444	—	<0.0003
		02/02/2000	448	5960	211	5680	14.4	7.63	7.06	<0.0004	478	—	<0.0003
		02/02/2000	—	—	—	6050	—	—	—	<0.0004	477	—	<0.0003
SHP02	0426	01/24/1997	402	698	170	7170	11.9	1.19	7.07	<0.0002	429	—	<0.001
		02/05/1998	511	8650	183	8330	11.7	—	7.06	<0.001	389	—	<0.001
		12/14/1998	406	6710	147	7280	12	48	7.21	<0.0001	438	—	<0.001
		03/04/1999	332	6840	159	6710	12.4	—	7.26	<0.001	434	—	<0.001
		06/06/1999	354	7160	31	6590	15.4	0.99	7.26	<0.001	414	—	0.0016
		02/01/2000	349	7180	154	6740	13.1	0.67	6.91	<0.0004	427	—	<0.0003
SHP02	0662	01/26/1997	66	2290	218	1640	3	—	7.16	0.0009	136	—	<0.0011
		02/05/1998	72	4080	37	3100	18.6	—	8.30	<0.001	105	—	<0.001
		12/13/1998	62	3840	176	3170	14.6	13.1	8.27	0.0002	114	—	<0.001
		03/07/1999	98	3950	189	3140	19.9	—	8.38	<0.001	116	—	<0.001
		03/07/1999	—	—	—	3170	—	—	—	<0.001	116	—	<0.001
		06/06/1999	53	4080	165	3110	25.7	8.31	7.75	<0.001	109	—	<0.0003
		06/06/1999	—	—	—	3130	—	—	—	<0.001	115	—	<0.0003
		02/02/2000	119	4860	178	3940	6.9	20.8	7.85	<0.0004	253	—	<0.0003
SHP02	0786	02/04/2000	354	6660	223	6840	7.4	—	7.84	<0.0004	~450	—	<0.0003
SHP02	0849	11/07/1998	—	—	—	—	—	—	—	0.0133	—	—	<0.0011
SHP02	0884	12/12/1998	301	4000	196	3570	0	35	7.76	<0.0001	517	—	<0.001
		03/04/1999	252	3760	186	3650	4.7	6.1	7.85	<0.001	543	—	<0.001
		06/03/1999	229	3860	87	3900	18.7	8.31	7.32	<0.001	521	—	<0.0003
		02/05/2000	264	3540	143	~3380	2	8.06	7.89	0.0004	~497	—	<0.0003
		02/05/2000	—	—	—	~3390	—	—	—	<0.0004	~492	—	<0.0003
SHP02	0885	12/13/1998	425	9080	217	9180	1.7	602	7.56	0.0007	619	—	<0.001
		06/07/1999	643	8150	192	8850	22.6	>1000	7.76	<0.001	464	—	<0.0003
		02/02/2000	550	8310	205	8570	5.4	23.6	7.76	<0.0004	423	—	<0.0003

Site	Location	Date	Alk	EC	ORP	TDS	Temp	Turbidity	pH	As	Ca	CaCO3	Cd
Code	Code	Sampled	mg/L	umhos/cm	mV	mg/L	C	NTU	s.u.	mg/L	mg/L	mg/L	mg/L
SHP02	0886	12/11/1998	560	29200	184	37900	4	12.1	8.26	<0.0001	414	—	<0.001
		03/07/1999	555	32700	208	21300	10	—	8.62	<0.001	413	—	<0.001
		06/07/1999	530	56700	50	124000	27.4	18.4	9.39	<0.001	473	—	<0.0003
		02/04/2000	593	25000	204	31300	2.5	23.1	8.34	<0.0004	~361	—	<0.0003
SHP02	0889	12/11/1998	720	35800	243	51800	0	376	7.97	0.0002	474	—	<0.001
		03/07/1999	561	30500	222	19500	11.7	—	8.31	<0.001	365	—	<0.001
		06/07/1999	521	32800	65	92300	28	3.76	9.00	<0.001	408	—	<0.0003
		02/04/2000	552	30100	231	38200	5.6	2.89	8.15	0.0006	~358	—	<0.0003
SHP02	0933	06/05/1999	653	8860	150	8990	9.4	12.8	7.06	<0.001	520	—	<0.0003
		02/04/2000	358	6900	180	6600	2.7	47.4	7.73	<0.0004	~449	—	<0.0003
SHP02	0934	06/05/1999	299	2520	122	2570	15.3	3.92	6.80	<0.001	404	—	<0.0003
		02/05/2000	284	3150	176	~3020	10.5	18.4	7.29	<0.0004	~461	—	<0.0003
SHP02	0935	06/05/1999	395	6430	139	6530	10.9	385	6.75	<0.001	463	—	<0.0003
		02/04/2000	428	5580	157	10200	6.9	—	7.36	<0.0004	586	—	<0.0003
SHP02	0936	06/05/1999	—	—	—	4140	—	—	—	<0.001	510	—	<0.0003
		02/05/2000	300	4070	151	~4560	7	1.3	7.74	<0.0004	~470	—	<0.0003
SHP02	0942	06/04/1999	268	3730	113	3610	15.6	—	6.92	<0.001	497	—	<0.0003
		02/05/2000	272	3510	156	~3540	13.6	1.16	7.06	<0.0004	533	—	<0.0003
SHP02	1244	09/03/1998	—	—	—	—	—	—	—	<0.0072	—	265	—
SHP02	1245	09/04/1998	—	—	—	—	—	—	—	<0.0057	—	278	—
SHP02	1246	09/04/1998	—	—	—	—	—	—	—	<0.0064	—	256	—
SHP02	1247	09/04/1998	—	—	—	—	—	—	—	<0.0049	—	250	—
SHP02	1263	02/01/2000	58	4080	80	3070	24.9	9.17	8.08	0.0006	109	—	<0.0003

Site	Location	Date	Alk	EC	ORP	TDS	Temp	Turbidity	pH	As	Ca	CaCO3	Cd
Code	Code	Sampled	mg/L	umhos/cm	mV	mg/L	C	NTU	s.u.	mg/L	mg/L	mg/L	mg/L
SHP02	1264	02/01/2000	53	4140	75	3120	21.7	11.1	8.01	<0.0008	108	---	<0.0003
SHP02	1265	02/01/2000	55	4100	104	3130	20.2	41.8	7.55	<0.001	111	---	<0.0003
		Note:											
		1. When both filtered and unfiltered measurements are available, the unfiltered result is reported.											
		2. Environmental Sciences Laboratory results are not reported in this table.											

Site	Location	Cl	Cr	Fe	Fluoride	GrossAlpha	GrossBeta	Hardness	K	Mg	Mn	Mo
Code	Code	mg/L	mg/L	mg/L	mg/L	pCl/L	pCl/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP01	0546	31.1	---	13.4	---	<9.9	10.95	---	6.26	20.7	0.262	---
		31.5	---	10.4	---	<10.56	<9.23	---	4.89	19.7	0.212	---
		9.94	---	<0.005	---	<2.1	2.76	---	2.07	9.98	0.0077	---
		14.2	---	<0.0132	---	<4.43	<3.8	---	2.33	14.3	0.0114	---
		12.5	---	<0.0053	---	<2.77	<2.96	---	2.29	10.3	0.009	---
		3.41	---	<0.0357	---	<1.11	<1.81	---	~1.51	4.98	0.0164	0.001
		16.2	---	<0.0144	0.308	<3.77	<4.05	---	2.23	13.9	0.0095	0.0015
SHP01	0548	29.7	---	21.6	---	<9.35	<9.16	---	8.78	23.5	0.406	---
		11.5	---	<0.005	---	<2.13	2.91	---	2.25	11.5	0.0068	---
		14.7	---	<0.0127	---	<4.39	<3.79	---	2.19	14.5	0.0125	---
		13	---	<0.0078	---	<3.37	<3.32	---	2.31	10.9	0.012	---
		3.6	---	0.0226	---	<2.36	<2.45	---	1.49	5.27	0.0068	<0.0009
		16.4	---	<0.0144	0.297	<3.96	<4.33	---	2.27	14.1	0.0081	0.0014
SHP01	0549	20.4	---	3.09	---	<9.84	<10.01	---	3.57	20.9	0.107	---
		10.7	---	<0.005	---	2.17	3.46	---	2.05	10.2	0.0076	---
		17	---	<0.0048	---	<4.72	<4.45	---	2.37	16.8	0.0111	---
SHP01	0551	22.1	---	2.92	---	<11.89	<12.16	---	3.91	25.6	0.125	---
		11.7	---	<0.005	---	<2.61	<3.03	---	2.11	11.8	0.0116	---
		19	---	<0.0049	---	<43.22	<38.64	---	2.57	19.1	0.0909	---
SHP01	0553	19.6	---	2.94	---	<9.58	<9.72	---	3.5	19.4	0.0953	---
		11.1	---	<0.005	---	<2.07	<2.44	---	2.04	10.3	0.0045	---
		11.1	---	<0.005	---	<2.07	<2.43	---	2.1	10.1	0.0049	---
		16	---	<0.0086	---	<4.24	<3.85	---	2.31	15.1	0.0071	---
		15.8	---	<0.0065	---	<4.32	<3.87	---	2.3	15.3	0.0067	---
		13.8	---	<0.005	---	<3.39	3.76	---	2.31	10.8	0.0065	---
		3.25	---	<0.048	---	<2.24	<2.43	---	1.52	5.01	0.008	<0.0013
		18.2	---	<0.0144	0.318	<3.86	<4.06	---	2.29	14	0.0064	<0.0025

Site	Location	Cl	Cr	Fe	Fluoride	GrossAlpha	GrossBeta	Hardness	K	Mg	Mn	Mo
Code	Code	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP01	0555	21.1	—	34.9	—	18.77	19.66	—	12.3	46.4	3.08	—
		11.2	—	<0.005	—	<2.56	<3.03	—	2.11	11.2	0.0071	—
		16.4	—	<0.0096	—	<4.35	<4.05	—	2.41	15.4	0.0091	—
		13.6	—	<0.0216	—	<2.2	<2.59	—	2.35	10.7	0.0157	—
		3.29	—	<0.0396	—	<2.26	<2.43	—	1.64	5.09	0.0115	<0.0016
		16.5	—	<0.0144	0.316	<3.74	4.76	—	2.38	14.2	<0.0115	<0.0024
SHP01	0556	20.2	—	<0.006	—	<9.51	<9.71	—	2.69	19.2	0.0327	—
		10.9	—	<0.005	—	<2.06	<2.42	—	2.08	10.2	<0.0061	—
		16.5	—	<0.013	—	<4.44	<3.87	—	2.35	15.6	0.0093	—
SHP01	0655	91.2	—	0.736	—	<78.73	<86.52	—	11.4	123	0.625	—
		75.7	—	<0.005	—	30.4	<30.69	—	9.63	72.1	0.599	—
		91.3	—	<0.0458	—	<23.28	<37.48	—	10.7	94.4	0.741	—
		79.5	—	<0.006	—	<26.62	33.6	—	10	75.2	0.287	—
		35.8	—	<0.0224	—	<10.93	<13.24	—	5.4	35.8	0.347	0.0027
		124	—	<0.0144	1.8	66.37	<60.56	—	13.9	199	0.691	0.0097
SHP01	0656	170	—	<0.0064	—	202.4	67.88	—	14.8	143	5.08	—
SHP01	0657	56	—	<0.0201	—	<55.51	<60.56	—	8.8	19.8	0.0312	—
		21.6	—	0.402	—	4.29	5.08	—	7.35	4.64	0.109	—
		547	—	0.279	—	415.4	<290.1	—	44	757	16.4	—
		300	—	<0.0417	—	<90.79	<115.77	—	33.7	352	1.47	0.0095
		85.3	—	<0.0144	2.02	39.27	46.06	—	11.9	71.9	0.0421	0.0093
SHP01	0658	<0.006	—	1.86	—	<57.5	<60.93	—	9.96	22.5	0.042	—
		58.2	—	<0.0404	—	<19.68	<24.15	—	9.34	19.7	0.0565	—
		53.4	—	<0.0138	—	<29.85	<28.79	—	8.01	15.3	0.0039	—
		53.2	—	<0.0121	—	<30.01	<28.77	—	7.82	15.1	0.0036	—
		58.8	—	0.11	—	<16.55	<18.66	—	7.64	15.6	0.0244	—
		55.9	—	<0.084	—	<18.48	<23.05	—	7.41	18.1	0.0227	0.0017
		112	—	0.0818	1.97	<38.12	<40.59	—	14.4	78.8	0.191	0.0058

Site	Location	Cl	Cr	Fe	Fluoride	GrossAlpha	GrossBeta	Hardness	K	Mg	Mn	Mo
Code	Code	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP01	0887	62.4	---	<0.003	---	<38.24	<37.79	---	~10.3	264	0.485	---
		71	---	<0.005	---	78.57	53.93	---	8.48	265	0.36	---
		2.83	---	<0.0246	---	<1.21	<1.82	---	~1.36	4.83	0.0065	0.0011
		83.8	---	<0.0144	0.467	45.31	<40.28	---	10.1	270	0.168	0.0055
SHP01	0888	43	---	<0.0129	---	<8.4	<7.24	---	6.5	42.4	0.0051	---
		31.8	---	<0.005	---	<4.11	<4.69	---	4.2	32.3	0.0169	---
		3.04	---	<0.0398	---	<2.25	<2.43	---	1.43	5.14	0.0051	0.001
		26	---	<0.0144	0.571	<5.48	<6.05	---	3.71	25.9	0.326	0.0075
SHP01	0893	15.4	---	<0.0065	---	<4.66	<4.08	---	2.42	16.5	0.0106	---
		14.3	---	<0.0053	---	<3.43	<3.32	---	2.27	11.4	0.0103	---
		2.92	---	<0.0435	---	<2.21	<2.42	---	1.41	5.09	0.0051	0.001
		17.7	---	<0.0144	0.332	<4.3	5.67	---	2.53	15.5	0.0122	0.0018
SHP01	0894	14.4	---	<0.005	---	<2.35	3.26	---	2.38	12.2	0.0108	---
		33.3	---	<0.0328	---	<9.32	11.7	---	4.94	33	0.526	0.0027
		125	---	<0.0144	1.84	<53.85	78.54	---	13.7	201	0.592	0.0099
SHP01	0895	13.5	---	<0.005	---	<3.4	<3.32	---	2.33	11.3	0.0149	---
		3.1	---	0.0865	---	<2.22	<2.43	---	1.58	5.12	0.0091	0.0011
		17.5	---	<0.0144	0.308	<3.85	<4.05	---	2.42	14.8	0.0114	<0.0023
SHP01	0896	16.1	---	<0.0076	---	<4.51	<4.11	---	2.41	15.9	0.0086	---
		13.7	---	<0.0083	---	<3.2	<3	---	2.3	11.2	0.0085	---
		4.46	---	<0.0449	---	<1.65	3.47	---	1.64	5.3	0.0076	0.0011
		17.9	---	<0.0144	0.317	<4	<4.33	---	2.38	14.7	<0.0082	<0.0024
SHP01	0897	14.5	---	<0.0049	---	<4.36	<4.04	---	~2.44	15.4	0.0084	---
		15.1	---	<0.0047	---	<4.15	<3.78	---	~2.43	15.2	0.0084	---
		12.4	---	<0.0081	---	<3.18	3.61	---	2.28	10.6	0.008	---
		3.97	---	0.0327	---	2.32	4.55	---	1.52	5.52	0.0072	0.0009
		18.1	---	<0.0144	0.303	<3.88	<4.07	---	2.5	14.7	<0.0046	0.0017

Site Code	Location Code	Cl mg/L	Cr mg/L	Fe mg/L	Fluoride mg/L	GrossAlpha pCl/L	GrossBeta pCl/L	Hardness mg/L	K mg/L	Mg mg/L	Mn mg/L	Mo mg/L
SHP01	0898	15.3	--	<0.0093	--	<4.34	3.97	--	2.26	15	0.0145	--
		15.1	--	<0.0139	--	~3.21	3.6	--	2.43	12.2	0.0077	--
		3.22	--	<0.0404	--	<2.24	<2.43	--	1.42	5.03	0.0066	0.0011
		17.3	--	<0.0144	0.381	<3.92	5.28	--	2.49	14.7	0.009	<0.0031
SHP01	0939	3.08	--	<0.0213	--	<2.25	<2.44	--	~1.51	5.06	0.007	0.0011
		3.21	--	<0.0578	--	<2.26	<2.43	--	~1.5	5.31	0.0068	0.0016
		55.2	--	<0.0144	0.567	32.77	<30.35	--	8.46	198	0.697	0.0061
SHP01	0940	3.37	--	<0.0423	--	<2.29	<2.44	--	1.48	5.16	0.0074	0.001
		33.9	--	<0.0144	0.289	30.67	22.6	--	3.39	52.3	0.044	<0.0024
SHP01	0941	3.45	--	<0.0237	--	<2.27	<2.44	--	1.19	4.16	0.006	0.001
		18.9	--	<0.0144	0.291	4.66	<4.7	--	2.62	19.7	0.0496	<0.0025
SHP01	0960	13.3	--	<0.005	--	<3.16	<3.29	--	2.55	10.9	0.0061	--
SHP01	0961	14.9	--	<0.005	--	<3.4	<3.31	--	2.29	11.4	0.0104	--
SHP01	0962	13.4	--	<0.0203	--	<3.4	3.67	--	2.29	11.6	0.013	--
SHP01	0963	13.1	--	<0.005	--	<4.64	<5.8	--	2.32	11.2	0.0075	--
SHP01	0964	13	--	<0.015	--	<3.23	<3.15	--	2.27	10.7	0.0085	--
SHP01	1200	--	--	--	--	<7.59	<11.6	--	--	--	0.0526	0.0019
SHP01	1201	--	--	--	--	<7.43	<11.62	--	--	--	0.0745	0.0014
SHP01	1202	--	--	--	--	<7.77	<11.64	--	--	--	0.0539	0.0015
SHP01	1203	--	--	--	--	<5.38	10.11	--	--	--	0.031	0.0025
SHP01	1204	--	--	--	--	9.42	<9.01	--	--	--	0.0413	0.0019

Site	Location	Cl	Cr	Fe	Fluoride	GrossAlpha	GrossBeta	Hardness	K	Mg	Mn	Mo
Code	Code	mg/L	mg/L	mg/L	mg/L	pCl/L	pCl/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP01	1205	---	---	---	---	6.84	<8.99	---	---	---	0.0508	0.0018
SHP01	1206	---	---	---	---	6.27	9.97	---	---	---	0.112	0.0016
SHP01	1207	---	---	---	---	164.96	149.29	---	---	---	0.0086	0.0062
		---	---	---	---	241.43	117.01	---	---	---	0.0068	0.0057
SHP01	1208	---	---	---	---	<27.04	33.38	---	---	---	0.108	0.014
SHP01	1209	---	---	---	---	<27.36	33.81	---	---	---	0.0312	0.01
SHP01	1210	---	---	---	---	<5.69	<9	---	---	---	0.0637	0.0015
SHP01	1211	---	---	---	---	45.22	<38.03	---	---	---	0.0244	0.0062
SHP01	1212	---	---	---	---	193.1	122	---	---	---	0.0036	0.0059
SHP01	1213	---	---	---	---	41.81	51.17	---	---	---	0.0357	0.008
SHP01	1236	---	---	---	---	---	---	2110	---	303	0.0072	---
SHP01	1237	---	---	---	---	---	---	3570	---	624	0.27	---
SHP01	1238	---	---	---	---	---	---	381	---	18.6	0.0808	---
SHP01	1239	---	---	---	---	---	---	337	---	18.1	0.025	---
SHP01	1240	---	---	---	---	---	---	359	---	20.1	0.0343	---
SHP01	1241	---	---	---	---	---	---	415	---	18.1	0.0308	---
SHP01	1242	---	---	---	---	---	---	349	---	16.5	0.0611	---
SHP01	1243	---	---	---	---	---	---	323	---	14.5	<0.0022	---
		---	---	---	---	---	---	316	---	14.7	<0.0022	---

Site	Location	Cl	Cr	Fe	Fluoride	GrossAlpha	GrossBeta	Hardness	K	Mg	Mn	Mo
Code	Code	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP02	0425	205	---	<0.0056	---	237.7	121.7	---	28.2	480	0.106	---
		204	---	<0.0218	---	304.1	160	---	26.4	496	0.145	---
		204	---	<0.0239	---	~236	140.9	---	26.1	419	0.114	0.0052
		137	---	<0.0144	0.669	231.5	156.04	---	20.2	335	0.0298	0.0061
		138	---	<0.0144	0.635	206.66	110.14	---	21.5	332	0.0305	0.006
SHP02	0426	157	---	<0.006	---	270.28	140.07	---	19.5	280	<0.0075	---
		196	---	<0.005	---	283.4	103.4	---	23.3	379	<0.001	---
		195	---	0.182	---	244.1	146.6	---	19.1	272	0.022	---
		160	---	0.071	---	168.8	113.1	---	15.3	236	0.0125	---
		173	---	<0.0081	---	~201.8	136.2	---	17	219	0.0296	0.0108
		135	---	<0.0144	1.53	200.17	122.08	---	17.3	249	<0.0072	0.0124
SHP02	0662	85.8	---	0.897	---	<29.01	<30.53	---	5.97	43.8	0.0223	---
		52.5	---	<0.005	---	<19.53	<24.13	---	8.08	14.2	<0.0054	---
		52.8	---	<0.0227	---	<25.46	<22.68	---	8.11	14.6	0.0021	---
		56.4	---	<0.0167	---	<16.32	<18.74	---	7.99	14.5	0.0027	---
		55.3	---	<0.0193	---	<16.92	<18.73	---	7.93	14.5	0.0028	---
		56.2	---	<0.0151	---	<17.31	<22.98	---	7.75	14	0.0028	0.0018
		60	---	<0.0138	---	<17.01	<22.97	---	8.17	14.6	0.0014	0.0017
		69.8	---	<0.0191	2.01	45.78	43.26	---	11.8	63.2	<0.0108	0.0085
SHP02	0786	164	---	<0.0144	0.5	<52.12	<60.2	---	17.6	407	0.0015	0.005
SHP02	0849	---	<0.0045	---	---	---	---	---	26.8	0.638	---	
SHP02	0884	35.4	---	<0.009	---	<28.89	<28.39	---	~6.51	173	0.0021	---
		43.9	---	<0.005	---	45.07	39.8	---	6.08	183	0.0017	---
		41.1	---	<0.009	---	~36.64	25.53	---	~3.39	189	0.0076	0.0073
		33.2	---	<0.0144	0.479	40.18	<30.2	---	7.9	159	0.0022	0.0073
		34.8	---	<0.0144	0.527	32.48	<30.19	---	7.82	158	0.0033	0.0074
SHP02	0885	332	---	<0.0591	---	661.8	357.2	---	~26.1	506	0.0387	---
		215	---	<0.0059	---	1147	441.2	---	22.5	495	0.0264	0.0099
		225	---	<0.0144	0.754	957.83	591.07	---	20	504	0.0568	0.0205

Site Code	Location Code	Cl mg/L	Cr mg/L	Fe mg/L	Fluoride mg/L	GrossAlpha pCi/L	GrossBeta pCi/L	Hardness mg/L	K mg/L	Mg mg/L	Mn mg/L	Mo mg/L
SHP02	0886	1150	---	<0.003	---	<346.09	<290.67	---	58.1	1230	0.009	---
		1410	---	<0.005	---	<241.5	<309.3	---	43.6	1440	0.0052	---
		2690	---	0.0086	---	<1154.12	<1222.15	---	190	3610	0.129	0.135
		1010	---	<0.0144	<0.9	<259.68	<300.96	---	41.2	1000	0.0022	0.0195
SHP02	0889	1950	---	<0.0102	---	<555.5	<574.5	---	~72.2	1830	0.0166	---
		1360	---	<0.005	---	<206.95	<233.6	---	42.7	1310	0.0091	---
		1510	---	<0.0059	---	<497.47	<598.03	---	76.4	1390	0.0052	0.0453
		1270	---	<0.0144	<0.9	<281.25	<303.01	---	45	1300	0.005	0.0341
SHP02	0933	240	---	0.197	---	91.56	<78.16	---	23	682	1.9	0.0178
		165	---	<0.0144	0.714	<51.56	<60.02	---	12.9	452	0.01	0.0051
SHP02	0934	27.6	---	<0.0194	---	<22.18	<20.81	---	4.68	117	0.011	0.0031
		36	---	0.015	0.471	32.84	<24.32	---	5.23	132	0.0256	0.0023
SHP02	0935	68.7	---	<0.0254	---	<61.1	<61.81	---	15.3	460	0.008	0.0117
		252	---	<0.0144	0.933	92.85	<84.89	---	23	787	0.065	0.0197
SHP02	0936	55.6	---	<0.0059	---	<39.8	<41.05	---	9.38	240	0.0016	0.0077
		76.6	---	<0.0144	0.439	63.16	<40.38	---	10.1	237	<0.0006	0.0062
SHP02	0942	52.3	---	<0.0059	---	~25.43	<23.16	---	~5.69	186	0.0109	0.0057
		41.1	---	<0.0144	0.506	27.8	<30.21	---	5.25	170	0.0018	0.0049
SHP02	1244	---	---	---	---	---	---	318	---	16.2	0.0079	---
SHP02	1245	---	---	---	---	---	---	335	---	13.1	<0.0022	---
SHP02	1246	---	---	---	---	---	---	306	---	13.8	0.0061	---
SHP02	1247	---	---	---	---	---	---	297	---	13.7	0.0717	---
SHP02	1263	57.7	---	0.14	2.18	<22.94	<24.32	---	8.25	14.1	<0.0275	<0.0019

Site	Location	Cl	Cr	Fe	Fluoride	GrossAlpha	GrossBeta	Hardness	K	Mg	Mn	Mo
Code	Code	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP02	1264	57.3	---	0.275	2.13	<23.07	<24.35	---	8.7	14.5	<0.0188	<0.002
SHP02	1265	1.08	---	0.296	0.0979	<23.08	<24.34	---	8.51	14.6	<0.0125	<0.0021

Site Code	Location Code	NH4 mg/L	NO3 mg/L	Na mg/L	Pb mg/L	Po-210 pCi/L	Ra-226 pCi/L	Ra-228 pCi/L	SO4 mg/L	Sb mg/L	Se mg/L	Sr mg/L	U mg/L
SHP01	0546	—	2.21	58.6	—	0.57	1.71	<0.8	193	<0.0016	0.0011	1.05	0.0025
		—	2.21	58	—	0.81	0.47	0.5	193	<0.0013	0.0011	1.02	0.0025
		0.0076	1.07	28.8	—	<0.25	<0.32	<0.6	121	<0.001	<0.001	0.599	0.0015
		0.0313	2.05	45.1	—	<0.06	<0.11	<0.67	162	<0.001	0.0008	0.928	0.0024
		0.132	0.481	37.3	—	<0.27	<0.12	<0.73	134	<0.001	<0.001	0.72	0.0014
		0.0254	0.605	11.6	—	<0.34	<0.14	<0.85	40.2	<0.0005	<0.001	0.294	0.0003
		~0.022	1.77	45.6	—	<0.15	<0.12	<0.8	182	<0.0004	0.0006	0.859	0.002
SHP01	0548	—	2.27	59.4	—	0.94	<0.68	0.6	197	<0.0014	0.0011	1.09	0.003
		0.01	1.16	30.8	—	<0.37	0.18	<0.5	130	<0.001	<0.001	0.628	0.0016
		0.0232	1.92	44.9	—	<0.06	<0.11	<0.67	167	<0.001	0.0005	0.91	0.0022
		<0.0169	0.591	38.4	—	<0.08	<0.11	<0.63	139	<0.001	<0.001	0.734	0.0018
		<0.0145	0.42	12.2	—	<0.17	<0.12	<0.68	43	<0.0004	<0.001	0.299	0.0004
		~0.0245	2.29	47.3	—	<0.14	<0.12	<0.79	188	<0.0004	0.0006	0.873	0.0021
SHP01	0549	—	3.19	62.6	—	<0.13	<0.22	<0.7	233	<0.0013	0.0014	1.06	0.0036
		0.0148	1.24	29.7	—	<0.39	0.1	<0.6	125	<0.001	<0.001	0.603	0.0016
		0.0257	2.74	53.4	—	<0.07	<0.11	<0.64	200	<0.001	0.0009	0.979	0.0034
SHP01	0551	—	4.68	91.6	—	<0.17	<0.22	<0.8	305	<0.0012	0.003	1.37	0.0056
		0.0148	1.53	37.5	—	<0.23	0.19	<0.8	144	<0.001	<0.001	0.688	0.0019
		0.0119	3.21	85.7	—	<0.09	0.17	<0.63	293	<0.001	0.0014	1.29	0.0042
SHP01	0553	—	2.74	58.8	—	<0.09	<0.41	<0.7	221	<0.0015	0.0014	1.05	0.0022
		0.0124	1.27	30.3	—	<0.52	0.11	<1	126	<0.001	<0.001	0.611	0.0015
		0.01	1.27	30	—	<0.43	0.68	<0.7	126	<0.001	<0.001	0.607	0.0015
		0.0643	1.86	45.8	—	<0.07	<0.11	<0.68	181	<0.001	0.0006	0.934	0.0025
		0.0671	1.86	46.1	—	<0.08	<0.11	<0.69	180	<0.001	0.0007	0.943	0.0024
		<0.0188	0.834	38.5	—	<0.15	<0.11	<0.68	141	<0.001	<0.001	0.747	0.0017
		0.0282	0.539	11.1	—	<0.29	<0.14	<0.8	42.1	<0.0011	<0.001	0.274	0.0007
0.0568	2.13	47.7	—	<0.15	<0.15	<0.91	183	<0.0006	0.001	0.868	0.0022		

Site Code	Location Code	NH4 mg/L	NO3 mg/L	Na mg/L	Pb mg/L	Po-210 pCi/L	Ra-226 pCi/L	Ra-228 pCi/L	SO4 mg/L	Sb mg/L	Se mg/L	Sr mg/L	U mg/L
SHP01	0555	—	7.12	180	—	0.57	2.26	<1.2	298	<0.0012	0.0026	3.76	0.0128
		0.0171	1.45	32.2	—	<0.39	<0.2	<1	127	<0.001	<0.001	0.61	0.0015
		0.0186	2.39	48.2	—	<0.05	<0.11	<0.66	192	<0.001	0.0006	0.966	0.0025
		<0.0188	0.746	38.2	—	<0.07	<0.11	<0.63	139	<0.001	<0.001	0.73	0.0014
		0.0335	0.803	11.6	—	<0.2	<0.15	<0.81	43.2	<0.0022	<0.001	0.282	0.0023
		0.0284	2.68	50	—	<0.1	<0.13	<0.73	191	<0.0006	0.001	0.877	0.0027
SHP01	0556	—	3.29	60.8	—	<0.12	0.09	<1	230	<0.0011	0.0016	1.07	0.0031
		0.0124	1.24	29.6	—	<0.32	0.11	<0.4	126	<0.001	<0.001	0.603	0.0016
		0.0615	2.65	50.7	—	<0.06	<0.11	<0.66	193	<0.001	0.0008	0.951	0.003
SHP01	0655	—	66.4	973	—	<0.12	1.64	<0.6	2740	<0.0014	0.0531	10.3	0.0697
		0.01	25.8	964	—	<0.23	<0.26	<0.9	2540	<0.001	0.0184	11.5	0.0532
		0.0395	34	1100	—	<0.04	<0.11	<0.67	2840	<0.001	0.0174	11.4	0.0486
		0.0191	33.3	1030	—	<0.1	0.17	<0.76	2540	<0.001	0.0192	11.3	0.0368
		0.093	3.07	430	—	<0.19	<0.14	<0.78	1150	<0.0013	0.0042	4.33	0.0142
		0.0491	103	1330	—	<0.14	<0.15	<0.89	4200	<0.0009	0.0836	14.8	0.111
SHP01	0656	0.0908	0.172	2340	—	<0.43	<0.75	<0.4	5410	<0.001	<0.001	7.88	0.327
SHP01	0657	—	3.53	782	—	<0.06	0.52	<0.9	1870	<0.0012	0.0029	10.2	0.01
		0.0338	0.246	142	—	<0.53	0.22	<0.9	386	<0.001	<0.001	1.85	0.0047
		0.0367	0.471	7320	—	<0.09	<0.11	<0.65	17100	0.0022	0.0005	19.8	0.682
		0.093	<0.104	4350	—	<0.33	<0.15	<0.91	11300	<0.0082	<0.001	16.2	0.129
		0.23	21.5	930	—	<0.16	0.59	<0.95	2750	<0.0014	0.018	10.7	0.0913
SHP01	0658	—	3.58	831	—	4.21	3.24	3.7	1990	<0.0014	0.0024	11.1	0.0102
		0.048	2.43	815	—	<0.46	<1.98	<0.7	2010	<0.001	0.0013	11.8	0.0065
		0.0229	0.792	859	—	<0.08	0.36	<0.67	1970	<0.001	<0.0001	12	0.0017
		0.0119	0.823	853	—	<0.08	0.38	<0.7	1960	<0.001	<0.0001	12	0.0013
		0.0224	0.461	870	—	<0.27	0.54	<0.8	2050	<0.001	<0.001	11.6	0.0024
		0.0352	<0.0331	891	—	<0.4	0.31	0.85	2190	<0.0012	<0.001	12.5	0.0019
		1.02	5.63	1170	—	<0.27	0.34	<0.72	3300	<0.0008	0.0119	14.1	0.0632

Site	Location	NH4	NO3	Na	Pb	Po-210	Ra-226	Ra-228	SO4	Sb	Se	Sr	U
Code	Code	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP01	0887	0.0771	128	337	--	<0.06	0.17	<0.63	2260	<0.001	0.107	5.88	0.0473
		0.0241	165	346	--	<0.15	<0.1	<0.58	2510	<0.001	0.158	5.8	0.0506
		0.0181	0.57	10.8	--	<0.24	<0.14	<0.85	37.6	<0.0003	<0.001	0.271	0.0004
		~0.0322	203	373	--	<0.09	0.13	<0.65	2650	<0.0004	0.152	5.93	0.0496
SHP01	0888	0.0134	3.34	129	--	<0.06	<0.14	<0.83	491	<0.001	0.0011	1.55	0.0038
		0.0444	3.63	99.5	--	<0.09	<0.14	<0.81	369	<0.001	0.0018	1.29	0.0036
		0.02	0.462	11.4	--	<0.25	<0.14	<0.82	40.5	<0.0003	<0.001	0.275	0.0004
		~0.0271	2.29	84.1	--	<0.16	<0.13	<0.82	304	0.0005	0.0011	1.13	0.0029
SHP01	0893	0.0465	3	52.8	--	<0.05	<0.11	<0.64	185	<0.001	0.0009	0.998	0.0031
		0.0124	1.04	42.4	--	<0.19	<0.11	<0.71	152	<0.001	<0.001	0.746	0.002
		0.0181	0.49	11.2	--	<0.27	<0.13	<0.79	39	<0.0005	<0.001	0.273	0.0004
		~0.0245	2.71	54.5	--	<0.12	<0.12	<0.8	219	<0.0004	0.0012	0.897	0.003
SHP01	0894	0.0085	0.973	46	--	<0.21	<0.13	<0.74	175	<0.001	0.001	0.806	0.0023
		0.109	2.88	401	--	<0.11	<0.13	<0.76	1060	<0.0013	0.0041	4.05	0.0136
		0.0568	104	1330	--	<0.17	<0.13	<0.76	4190	<0.0014	0.0787	14.6	0.112
SHP01	0895	0.0143	0.869	39.5	--	<0.21	<0.12	<0.72	143	<0.001	<0.001	0.739	0.0022
		<0.0228	0.483	11.5	--	<0.34	<0.15	<0.83	42.2	<0.0011	<0.001	0.277	0.0004
		0.0465	1.88	48	--	<0.17	<0.14	<0.82	187	<0.0006	0.0008	0.874	0.0025
SHP01	0896	0.0671	2.42	48	--	<0.04	<0.11	<0.68	189	<0.001	0.0007	0.946	0.003
		0.02	0.881	39.3	--	<0.3	<0.11	<0.68	142	<0.001	<0.001	0.727	0.0018
		0.0282	0.975	12.5	--	<0.25	<0.14	<0.76	44.2	<0.0011	<0.001	0.279	0.0029
		0.0387	2.63	49.2	--	<0.15	<0.15	<0.86	189	<0.0006	0.001	0.875	0.0026
SHP01	0897	0.0214	2.51	47.9	--	<0.03	<0.11	<0.65	167	<0.001	0.0008	0.928	0.0025
		0.0214	2.5	47.2	--	<0.07	<0.11	<0.64	175	<0.001	0.0009	0.929	0.0024
		0.0143	1.11	37.9	--	<0.19	<0.12	<0.71	141	<0.001	<0.001	0.711	0.0013
		0.0305	0.463	12.4	--	<0.22	<0.14	<0.8	45.2	<0.0006	<0.001	0.316	0.0004
		0.0663	2.63	49.5	--	<0.14	<0.13	<0.81	203	<0.0004	0.0011	0.868	0.0024

Site Code	Location Code	NH4 mg/L	NO3 mg/L	Na mg/L	Pb mg/L	Po-210 pCi/L	Ra-226 pCi/L	Ra-228 pCi/L	SO4 mg/L	Sb mg/L	Se mg/L	Sr mg/L	U mg/L
SHP01	0898	0.015	1.51	45.1	---	<0.07	<0.11	<0.65	182	<0.001	0.0003	0.902	0.0022
		0.0102	0.891	42.3	---	<0.19	<0.14	<0.8	165	<0.001	<0.001	0.786	0.0015
		0.0162	0.451	11	---	<0.26	<0.14	<0.81	40.7	<0.0003	<0.001	0.27	0.0003
		0.0347	2.6	51.6	---	<0.12	<0.14	<0.84	201	<0.0007	0.0012	0.888	0.0023
SHP01	0939	0.0219	0.536	11.4	---	<0.23	<0.11	<0.61	40.2	<0.0004	<0.001	0.284	0.0004
		0.0238	0.533	12.4	---	<0.16	<0.1	<0.6	41.5	<0.0003	<0.001	0.285	0.0004
		~0.0681	98.2	267	---	<0.1	<0.13	<0.76	2160	<0.0004	0.114	5.18	0.0393
SHP01	0940	<0.0175	0.513	11.2	---	<0.21	<0.15	<0.82	41	<0.0004	<0.001	0.283	0.0003
		0.173	22.5	111	---	<0.17	<0.16	<0.96	504	<0.0006	0.001	1.09	0.0469
SHP01	0941	<0.0175	0.516	8.68	---	<0.17	<0.15	<0.8	41.1	<0.0003	<0.001	0.225	0.0003
		0.0543	1.74	68.1	---	<0.12	<0.13	<0.77	245	<0.0007	0.0008	0.925	0.0057
SHP01	0960	<0.0151	0.79	38.7	---	<0.19	<0.1	<0.58	139	<0.001	<0.001	0.742	0.0014
SHP01	0961	0.0124	1.02	41.3	---	<0.18	<0.11	<0.68	156	<0.001	<0.001	0.744	0.0019
SHP01	0962	0.0124	0.844	40.5	---	<0.3	<0.12	<0.71	146	<0.001	<0.001	0.732	0.002
SHP01	0963	0.164	0.818	38.9	---	<0.21	<0.12	<0.72	143	<0.001	<0.001	0.729	0.0017
SHP01	0964	0.0105	0.747	37.7	---	<0.2	<0.1	<0.64	143	<0.001	<0.001	0.712	0.0013
SHP01	1200	0.065	1.82	---	---	---	---	---	167	---	0.0001	---	0.0022
SHP01	1201	0.0309	0.959	---	---	---	---	---	161	---	0.0001	---	0.002
SHP01	1202	0.0369	0.924	---	---	---	---	---	164	---	0.0001	---	0.0021
SHP01	1203	0.0318	0.548	---	---	---	---	---	165	---	0.0001	---	0.0027
SHP01	1204	0.0318	0.743	---	---	---	---	---	163	---	0.0001	---	0.0026

Site Code	Location Code	NH4 mg/L	NO3 mg/L	Na mg/L	Pb mg/L	Po-210 pCi/L	Ra-226 pCi/L	Ra-228 pCi/L	SO4 mg/L	Sb mg/L	Se mg/L	Sr mg/L	U mg/L
SHP01	1205	0.0262	0.782	---	---	---	---	---	165	---	<0.0001	---	0.0023
SHP01	1206	0.126	2.11	---	---	---	---	---	201	---	0.0001	---	0.0057
SHP01	1207	0.0734	147	---	---	---	---	---	3260	---	0.0032	---	0.371
		0.0623	148	---	---	---	---	---	3180	---	0.0033	---	0.36
SHP01	1208	0.0456	0.893	---	---	---	---	---	3340	---	0.0014	---	0.0166
SHP01	1209	0.0401	3.01	---	---	---	---	---	3420	---	0.0023	---	0.0355
SHP01	1210	0.0373	1.48	---	---	---	---	---	191	---	<0.0001	---	0.0031
SHP01	1211	0.0428	429	---	---	---	---	---	3370	---	---	---	0.0662
SHP01	1212	0.102	159	---	---	---	---	---	3580	---	0.0041	---	0.384
SHP01	1213	0.115	7.88	---	---	---	---	---	2590	---	0.001	---	0.0624
SHP01	1236	---	---	1380	---	---	<0.51	---	4160	<0.0011	0.0625	8.81	0.396
SHP01	1237	---	---	1070	---	---	10.22	---	4710	<0.0011	0.0329	8.14	0.472
SHP01	1238	---	---	967	---	---	0.95	---	2130	0.0056	<0.0022	13.6	0.0014
SHP01	1239	---	---	872	---	---	0.82	---	2060	<0.0011	<0.0022	12.3	<0.0011
SHP01	1240	---	---	880	---	---	0.99	---	2060	<0.0011	<0.0022	12.4	0.0012
SHP01	1241	---	---	899	---	---	<0.56	---	2120	<0.0011	<0.0022	12.6	<0.0011
SHP01	1242	---	---	871	---	---	1.58	---	2050	0.0012	<0.0022	12.2	<0.0011
SHP01	1243	---	---	839	---	---	0.81	---	1980	<0.0011	<0.0022	11.8	<0.0011
		---	---	833	---	---	0.86	---	1950	<0.0011	<0.0022	11.7	<0.0011

Site	Location	NH4	NO3	Na	Pb	Po-210	Ra-226	Ra-228	SO4	Sb	Se	Sr	U
Code	Code	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP02	0425	0.158	290	904	—	<0.07	0.5	1.13	3880	<0.001	0.0546	7.15	0.358
		0.299	280	925	—	<0.18	0.61	1.01	3900	<0.001	0.0489	7.52	0.361
		~0.376	265	818	—	<0.19	0.47	0.99	3970	<0.0024	0.0586	6.85	0.411
		0.0258	180	695	—	<0.18	0.49	<0.64	3380	<0.0007	0.0446	6.45	0.345
		0.0284	185	687	—	<0.11	0.58	<0.6	3370	<0.0006	0.0464	6.46	0.349
SHP02	0426	—	163	1250	—	<0.1	0.41	<1	4180	<0.0012	0.11	9.09	0.407
		0.0361	240	1610	—	<0.24	0.41	0.6	4770	<0.001	0.137	8.17	0.435
		0.0201	228	1330	—	0.08	0.46	0.8	4130	<0.001	0.116	10.4	0.386
		<0.0272	178	1230	—	<0.16	0.45	0.77	3790	<0.001	0.08	10.1	0.317
		0.0282	196	1180	—	<0.19	0.36	<0.73	4100	<0.0011	0.0704	10	0.383
		0.0213	129	1230	—	<0.16	0.45	<0.72	4160	<0.0006	0.11	10.3	0.33
SHP02	0662	—	85.6	305	—	<0.36	<0.52	<1.1	872	<0.0012	0.0198	3.1	0.0283
		0.0124	1.27	822	—	<0.29	0.68	0.9	1940	<0.001	<0.001	12	<0.001
		<0.001	2.09	842	—	<0.06	0.74	<0.66	1940	<0.001	<0.0001	12.5	<0.001
		0.0143	1.36	861	—	<0.07	0.58	<1.15	2110	<0.001	<0.001	11.7	<0.001
		0.0143	1.39	872	—	<0.16	0.68	<1.15	2000	<0.001	<0.001	11.8	<0.001
		<0.0124	0.578	829	—	<0.26	0.66	1.17	2050	<0.0011	<0.001	11.7	<0.0002
		<0.0107	0.543	829	—	<0.25	0.78	1.1	2050	<0.001	<0.001	11.7	<0.0002
		0.0672	18.2	869	—	<0.16	0.36	<0.73	2570	<0.0008	0.0138	9.77	0.077
SHP02	0786	~0.0681	281	773	—	<0.18	0.68	<0.75	3740	<0.0004	0.16	6.95	0.0433
SHP02	0849	—	~0.481	106	0.0012	—	—	—	106	0.0054	<0.0026	1.29	0.003
SHP02	0884	0.0716	85.2	208	—	<0.05	0.17	<0.63	~1970	<0.001	0.15	5.45	0.0349
		0.0223	90.7	215	—	<0.24	0.2	<0.66	2060	<0.001	0.198	5.28	0.0368
		0.103	28	247	—	<0.36	0.25	<0.83	2340	<0.0007	0.131	5.51	0.0382
		~0.0758	64	182	—	<0.15	0.25	<0.92	1950	<0.0004	0.146	5.24	0.0364
		~0.0732	64.9	181	—	<0.09	0.23	<0.97	2010	<0.0004	0.147	5.18	0.0369
SHP02	0885	0.378	284	1190	—	<0.08	1.88	<0.78	4930	<0.001	0.119	9.98	1.23
		~0.211	157	1160	—	<0.2	0.2	<0.92	4860	<0.0007	0.0135	11.7	1.85
		0.0596	134	1290	—	<0.18	0.67	<0.87	4990	<0.001	0.0293	8.13	1.71

Site	Location	NH4	NO3	Na	Pb	Po-210	Ra-226	Ra-228	SO4	Sb	Se	Sr	U
Code	Code	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP02	0886	0.108	3450	9350	---	<0.06	0.15	0.7	19500	<0.001	1.87	9.56	0.169
		0.137	3800	10500	---	<0.19	0.2	<0.71	23400	<0.001	2.78	10.6	0.193
		2.05	8060	28300	---	<0.41	0.91	~1.72	72800	<0.0024	7.01	16.1	0.63
		~0.0655	2930	7410	---	<0.17	0.15	<0.78	16500	<0.0004	1.89	8.56	0.144
SHP02	0889	0.045	4660	12900	---	<0.03	0.24	1.2	27400	0.0012	2.87	12.5	0.24
		0.0788	3570	9580	---	<0.11	0.16	<1.21	21400	0.001	2.44	9.74	0.178
		~0.145	4020	10500	---	<0.21	0.38	~1.86	25400	<0.0021	1.74	9.44	0.19
		~0.117	3520	9140	---	<0.15	0.25	1.07	20100	0.0011	2.32	9.17	0.171
SHP02	0933	0.802	227	949	---	<0.16	0.2	<0.84	5380	<0.0024	0.203	7.39	0.0965
		~0.0963	376	656	---	<0.14	0.16	<0.83	3420	<0.0004	0.226	6.44	0.0706
SHP02	0934	0.0463	56.4	151	---	<0.25	<0.14	<0.79	1320	<0.0004	0.067	3.41	0.0317
		~0.0425	74.5	161	---	<0.11	<0.12	<0.78	1670	<0.0004	0.101	4.18	0.0329
SHP02	0935	0.0162	368	654	---	<0.24	0.68	<0.71	1850	<0.0017	0.23	6.43	0.0595
		~0.847	515	1030	---	<0.13	0.83	<0.82	5670	0.0006	0.428	9.78	0.102
SHP02	0936	0.0407	145	300	---	<0.4	0.57	<0.83	2350	<0.0006	0.167	5.94	0.0486
		~0.045	218	321	---	<0.06	0.56	<0.79	2640	<0.0004	0.172	5.7	0.0486
SHP02	0942	0.0313	122	233	---	<0.25	<0.14	<0.83	2120	<0.0003	0.235	4.92	0.0365
		~0.0117	105	188	---	<0.15	<0.12	<0.77	1990	<0.0004	0.19	5.19	0.0339
SHP02	1244	---	---	768	---	---	1.23	---	1970	<0.0011	<0.0022	10.8	<0.0011
SHP02	1245	---	---	810	---	---	0.81	---	1970	<0.0011	<0.0022	11	<0.0011
SHP02	1246	---	---	823	---	---	0.9	---	1960	<0.0011	<0.0022	11.6	<0.0011
SHP02	1247	---	---	807	---	---	1.44	---	1960	<0.0011	<0.0022	11.4	<0.0011
SHP02	1263	0.225	1.07	854	---	<0.1	0.72	<0.74	2080	<0.0005	<0.0001	12.1	<0.0001

Site	Location	NH4	NO3	Na	Pb	Po-210	Ra-226	Ra-228	SO4	Sb	Se	Sr	U
Code	Code	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP02	1264	0.126	1.34	847	—	<0.1	0.65	<0.78	2040	<0.0006	<0.0001	12.1	<0.0001
SHP02	1265	0.0498	0.0183	860	—	<0.12	0.51	<0.7	36.1	<0.0015	<0.0001	12.2	<0.0001

Site Code	Location Code	V mg/L	Zn mg/L
SHP01	0546	---	---
		---	---
		---	---
		---	---
		0.0017	---
		---	---
SHP01	0548	---	---
		---	---
		---	---
		<0.0006	---
		---	---
SHP01	0549	---	---
		---	---
		---	---
SHP01	0551	---	---
		---	---
		---	---
SHP01	0553	---	---
		---	---
		---	---
		---	---
		---	---
		0.0013	---
		---	---

Site Code	Location Code	V mg/L	Zn mg/L
SHP01	0555	---	---
		---	---
		---	---
		0.001	---
		---	---
SHP01	0556	---	---
		---	---
		---	---
SHP01	0655	---	---
		---	---
		---	---
		<0.0006	---
		---	---
SHP01	0656	---	---
SHP01	0657	---	---
		---	---
		---	---
		<0.0006	---
		---	---
SHP01	0658	---	---
		---	---
		---	---
		---	---
		0.0019	---
		---	---

Site Code	Location Code	V mg/L	Zn mg/L
SHP01	0887	---	---
		---	---
		0.0009	---
		---	---
SHP01	0888	---	---
		---	---
		<0.0006	---
		---	---
SHP01	0893	---	---
		---	---
		0.0012	---
		---	---
SHP01	0894	---	---
		<0.0006	---
		---	---
SHP01	0895	---	---
		<0.0006	---
		---	---
SHP01	0896	---	---
		---	---
		0.0011	---
		---	---
SHP01	0897	---	---
		---	---
		---	---
		<0.0006	---
		---	---

Site	Location	V	Zn
Code	Code	mg/L	mg/L
SHP01	0898	---	---
		---	---
		0.0012	---
		---	---
SHP01	0939	0.0012	---
		<0.0006	---
		---	---
SHP01	0940	0.0009	---
		---	---
SHP01	0941	0.001	---
		---	---
SHP01	0960	---	---
SHP01	0961	---	---
SHP01	0962	---	---
SHP01	0963	---	---
SHP01	0964	---	---
SHP01	1200	0.0022	0.0178
SHP01	1201	0.0034	0.0128
SHP01	1202	0.0034	<0.0084
SHP01	1203	0.0015	<0.0084
SHP01	1204	0.0015	0.0163

Site	Location	V	Zn
Code	Code	mg/L	mg/L
SHP01	1205	0.0029	0.0272
SHP01	1206	0.002	0.013
SHP01	1207	0.0007	<0.0084
		<0.0004	<0.0084
SHP01	1208	0.0044	<0.0084
SHP01	1209	0.0046	<0.0084
SHP01	1210	0.006	<0.0084
SHP01	1211	<0.0004	<0.0084
SHP01	1212	<0.0004	<0.0084
SHP01	1213	0.0054	<0.0084
SHP01	1236	---	---
SHP01	1237	---	---
SHP01	1238	---	---
SHP01	1239	---	---
SHP01	1240	---	---
SHP01	1241	---	---
SHP01	1242	---	---
SHP01	1243	---	---
		---	---

Site Code	Location Code	V mg/L	Zn mg/L
SHP02	0425	---	---
		---	---
		<0.0006	---
		---	---
		---	---
SHP02	0426	---	---
		---	---
		---	---
		0.0012	---
		---	---
SHP02	0662	---	---
		---	---
		---	---
		---	---
		0.0009	---
		<0.0006	---
SHP02	0786	---	---
		---	---
SHP02	0849	<0.0111	---
SHP02	0884	---	---
		---	---
		<0.0006	---
		---	---
SHP02	0885	---	---
		0.0052	---
		---	---

Site Code	Location Code	V mg/L	Zn mg/L
SHP02	0886	---	---
		---	---
		<0.0006	---
		---	---
SHP02	0889	---	---
		---	---
		<0.0006	---
		---	---
SHP02	0933	0.0025	---
		---	---
SHP02	0934	0.0008	---
		---	---
SHP02	0935	<0.0006	---
		---	---
SHP02	0936	<0.0006	---
		---	---
SHP02	0942	<0.0006	---
		---	---
SHP02	1244	---	---
SHP02	1245	---	---
SHP02	1246	---	---
SHP02	1247	---	---
SHP02	1263	---	---

Site	Location	V	Zn
Code	Code	mg/L	mg/L
SHP02	1264	---	---
SHP02	1265	---	---

Site Code	Location Code
SHP01	0546
SHP01	0548
SHP01	0549
SHP01	0551
SHP01	0553

Site Code	Location Code
SHP01	0555
SHP01	0556
SHP01	0655
SHP01	0656
SHP01	0657
SHP01	0658

Site Code	Location Code
SHP01	0887
SHP01	0888
SHP01	0893
SHP01	0894
SHP01	0895
SHP01	0896
SHP01	0897

Site Code	Location Code
SHP01	0898
SHP01	0939
SHP01	0940
SHP01	0941
SHP01	0960
SHP01	0961
SHP01	0962
SHP01	0963
SHP01	0964
SHP01	1200
SHP01	1201
SHP01	1202
SHP01	1203
SHP01	1204

Site Code	Location Code
SHP01	1205
SHP01	1206
SHP01	1207
SHP01	1208
SHP01	1209
SHP01	1210
SHP01	1211
SHP01	1212
SHP01	1213
SHP01	1236
SHP01	1237
SHP01	1238
SHP01	1239
SHP01	1240
SHP01	1241
SHP01	1242
SHP01	1243

Site	Location
Code	Code
SHP02	0425
SHP02	0426
SHP02	0662
SHP02	0786
SHP02	0849
SHP02	0884
SHP02	0885

Site Code	Location Code
SHP02	0886
SHP02	0889
SHP02	0933
SHP02	0934
SHP02	0935
SHP02	0936
SHP02	0942
SHP02	1244
SHP02	1245
SHP02	1246
SHP02	1247
SHP02	1263

Site Code	Location Code
SHP02	1264
SHP02	1265

Site	Location	Date	Alk	EC	ORP	TDS	Temp	Turbidity	pH	As	Ca	Cd	Cl
Code	Code	Sampled	mg/L	umhos/cm	mV	mg/L	C	NTU	s.u.	mg/L	mg/L	mg/L	mg/L
SHP01	0608	01/27/1997	1090	16876	219	19100	6.8	4.96	6.86	0.0003	463	<0.001	337
		02/03/1998	1070	17030	247	18200	7.2	8.75	6.74	<0.001	415	0.001	325
		12/10/1998	1030	16130	213	19600	11.3	8.36	6.58	<0.0001	482	0.0011	340
		03/03/1999	1051	17890	199	19100	8.4	9.93	6.75	<0.001	462	<0.001	350
		06/03/1999	919	17730	173	18300	16.6	9.67	7.03	<0.001	435	0.0007	317
		02/03/2000	1130	17560	184	17300	7.4	9.41	6.73	0.0005	436	0.0007	318
SHP01	0610	01/28/1997	652	10720	202	18700	8.9	78.4	7.17	<0.0002	527	<0.001	356
		02/03/1998	468	13130	226	18300	8.5	55.6	7.03	<0.001	461	<0.001	335
		12/10/1998	560	9370	230	16800	12.8	3.26	6.94	<0.0001	491	<0.001	262
		03/03/1999	437	10890	207	17600	9.6	5.29	7.06	<0.001	495	<0.001	321
		06/04/1999	650	26700	162	18700	17.6	43.8	6.99	<0.001	463	<0.0003	385
		02/03/2000	454	15580	192	18200	9.2	29.4	7.13	<0.0004	460	0.0005	315
SHP01	0612	12/11/1998	541	6570	-91	6900	11	3.89	7.45	0.001	432	<0.001	150
		03/06/1999	276	2370	-267	3180	9.9	1.16	7.35	0.0031	140	<0.001	39.9
		06/04/1999	421	2080	-185	1610	18.1	4.35	7.32	<0.001	137	<0.0003	37.6
		02/03/2000	258	1321	-194	888	9.9	4.15	7.58	0.0006	67.6	<0.0003	22.7
SHP01	0614	01/28/1997	553	16790	246	21200	10.5	4.64	7.12	0.0002	498	<0.001	413
		02/03/1998	717	18510	248	23600	10.3	1.67	6.87	<0.001	451	<0.001	466
		12/11/1998	668	18540	8	23700	14.3	3.14	6.91	0.0002	511	<0.001	439
		03/03/1999	668	18450	55	23200	10	8.35	6.97	<0.001	519	<0.001	458
		12/15/1999	---	17290	202	21320	13.3	---	---	---	---	---	---
		12/15/1999	---	19400	208	24740	13.2	---	---	---	---	---	---
		02/03/2000	730	20300	173	23100	10.7	1.91	7.09	<0.0004	456	0.0004	485
SHP01	0615	01/28/1997	671	15224	246	20800	9.2	9.36	7.14	<0.0002	460	<0.001	418
		02/03/1998	629	14590	232	19200	9	61.1	7.07	<0.001	406	<0.001	381
		12/11/1998	676	17788	208	22800	14.9	487	6.85	<0.0001	466	<0.001	430
		03/03/1999	680	18290	65	24800	10.9	81.5	6.84	<0.001	458	<0.001	520
		12/15/1999	---	---	---	14480	---	---	---	---	---	---	---
		12/15/1999	860	18550	217	21600	14	---	7.15	---	---	---	---
		02/05/2000	645	17490	229	~23100	11.3	84.8	7.00	0.0006	428	0.0006	498

Site	Location	Date	Alk	EC	ORP	TDS	Temp	Turbidity	pH	As	Ca	Cd	Cl
Code	Code	Sampled	mg/L	umhos/cm	mV	mg/L	C	NTU	s.u.	mg/L	mg/L	mg/L	mg/L
SHP01	0616	01/25/1997	294	4960	204	4620	12.1	4.11	7.20	0.0002	466	<0.001	62.3
		01/25/1997	---	---	---	4630	---	---	---	<0.0002	469	<0.001	61.2
		02/03/1998	283	5800	120	5320	10.7	2.51	7.31	<0.001	413	<0.001	67.8
		12/09/1998	275	3330	157	4280	14.8	1.78	7.04	0.0001	469	<0.001	55.9
		03/07/1999	285	4270	194	4180	11.2	2.25	7.13	<0.001	484	<0.001	56.9
		06/05/1999	247	4170	64	3990	15.6	7.89	7.09	<0.001	422	<0.0003	59.7
		02/03/2000	332	4910	164	4880	12.2	6.69	7.18	0.0005	533	<0.0003	76.2
SHP01	0617	01/25/1997	355	8630	209	8570	12.3	40.6	7.13	<0.0002	470	<0.001	164
		02/03/1998	349	8150	137	7640	11.9	9.4	7.13	<0.001	405	<0.001	137
		12/09/1998	344	6070	218	7400	15	7.75	6.95	<0.0001	491	<0.001	119
		03/03/1999	347	7210	215	7360	11.5	9.62	7.00	<0.001	466	<0.001	131
		06/05/1999	362	8230	94	8170	16.5	8.72	6.91	<0.001	468	<0.0003	154
		02/03/2000	380	8290	204	8550	13.2	8.27	7.01	<0.0004	486	<0.0003	168
SHP01	0619	01/27/1997	878	13800	215	16600	14.3	32.9	7.13	0.0003	443	<0.001	364
		02/03/1998	1036	18160	167	20400	14	25.4	7.21	<0.001	435	<0.001	637
		12/09/1998	1020	17030	222	21100	16.2	9.89	7.01	0.0003	462	<0.001	609
		12/09/1998	---	---	---	21500	---	---	---	0.0003	471	<0.001	610
		03/03/1999	1064	16360	196	20900	12.9	8.31	7.04	<0.001	419	<0.001	609
		12/15/1999	970	15670	191	19500	12.2	---	6.90	---	---	---	---
		12/15/1999	942	15930	197	19180	13.2	---	6.75	---	---	---	---
		02/05/2000	982	14680	237	~18600	13.9	4.21	7.11	0.0006	429	<0.0003	571
		02/05/2000	---	---	---	~18900	---	---	---	0.0005	411	<0.0003	563
SHP01	0620	01/28/1997	1071	13020	213	15000	12	4.08	7.06	0.0002	451	<0.001	452
		02/03/1998	1045	16780	109	19100	11.6	6.61	7.06	<0.001	434	<0.001	572
		12/11/1998	1155	13550	177	16700	14.9	4.53	6.84	<0.0001	422	<0.001	451
		03/07/1999	1217	13800	185	16500	10.9	4.02	6.87	<0.001	418	<0.001	455
		06/06/1999	998	12460	154	14000	12.6	3.83	6.85	<0.001	342	<0.0003	403
		02/03/2000	944	10930	227	13500	11.8	3.47	7.02	<0.0004	360	<0.0003	383

Site	Location	Date	Alk	EC	ORP	TDS	Temp	Turbidity	pH	As	Ca	Cd	Cl
Code	Code	Sampled	mg/L	umhos/cm	mV	mg/L	C	NTU	s.u.	mg/L	mg/L	mg/L	mg/L
SHP01	0624	01/27/1997	749	11150	205	12700	14.9	201	7.22	<0.0002	428	<0.001	363
		02/03/1998	935	16330	142	17800	14.7	9.86	7.14	<0.001	459	<0.001	568
		12/08/1998	428	12240	194	16800	16.4	9.8	6.94	0.0003	458	<0.001	489
		03/03/1999	880	12120	211	14800	14	9.4	7.04	<0.001	399	<0.001	378
		12/15/1999	996	12960	219	15430	12.4	---	7.71	---	---	---	---
		12/15/1999	990	14040	217	16420	12.4	---	7.36	---	---	---	---
		02/03/2000	770	11780	154	13600	14.8	8.3	7.18	0.0006	410	<0.0003	332
SHP01	0626	01/25/1997	472	6180	204	5180	10.7	2.64	7.50	<0.0002	241	<0.001	85.6
		02/04/1998	457	6310	86	5170	10.4	2.01	6.87	<0.001	257	<0.001	98
		02/04/1998	---	---	---	5140	---	---	---	<0.001	259	<0.001	100
		12/07/1998	425	5320	0	4380	13	5.85	7.24	0.0002	231	<0.001	74.9
		03/03/1999	422	5320	200	4510	9.4	8	7.31	<0.001	225	<0.001	74.8
		03/03/1999	---	---	---	4500	---	---	---	<0.001	223	<0.001	76.4
		06/05/1999	417	5700	112	4610	12.7	6.31	7.24	<0.001	257	<0.0003	88.6
		02/02/2000	466	6050	161	5000	10.2	7.13	7.36	<0.0004	266	<0.0003	94.3
		02/02/2000	---	---	---	4980	---	---	---	<0.0004	271	<0.0003	93.9
SHP01	0628	01/27/1997	199	5030	-69	3930	7.1	1.13	7.46	0.0004	226	<0.001	69.9
		02/03/1998	172	4774	30	3600	6.2	7.6	7.66	<0.001	169	<0.001	64.8
		12/07/1998	239	5780	38	4890	11.4	1.3	7.38	0.0001	295	<0.001	91.9
		03/04/1999	136	4380	157	3560	7.1	3.2	7.56	<0.001	211	<0.001	66.1
		06/05/1999	126	4730	-40	3710	11.9	4.93	7.57	<0.001	220	<0.0003	67.4
		02/02/2000	240	4970	96	3880	7.6	0.71	7.72	<0.0004	210	<0.0003	69.4
SHP01	0630	01/27/1997	341	6210	200	5630	10.1	2.05	7.35	0.0005	362	<0.001	110
		02/04/1998	479	739	208	6900	9.7	2.09	7.17	<0.001	437	<0.001	183
		12/10/1998	273	5510	209	4770	14.1	1.93	7.39	0.0004	262	<0.001	82.1
		03/02/1999	287	5600	194	4870	10.2	8.22	7.48	<0.001	259	<0.001	82.9
		06/06/1999	174	5010	137	4190	13.7	2.78	8.21	<0.001	194	<0.0003	81.7
		02/02/2000	220	6670	187	~7870	10.4	0.93	7.32	0.0007	408	<0.0003	89.7
SHP01	0631	12/12/1998	480	5340	147	5060	16.7	4.72	7.28	0.0004	371	<0.001	168
		03/04/1999	460	5090	54	4850	13.6	1.69	6.88	<0.001	352	<0.001	164
		02/07/2000	471	4050	44	4600	14.6	9.39	6.93	<0.0004	351	<0.0003	145

Site Code	Location Code	Date Sampled	Alk mg/L	EC umhos/cm	ORP mV	TDS mg/L	Temp C	Turbidity NTU	pH s.u.	As mg/L	Ca mg/L	Cd mg/L	Cl mg/L
SHP01	0632	12/12/1998	480	4990	110	4850	16.1	9.87	7.11	0.0003	358	<0.001	158
		03/05/1999	464	5070	71	4820	13.2	8.52	7.11	<0.001	350	<0.001	152
		03/05/1999	—	—	—	6150	—	—	—	<0.001	348	<0.001	160
		02/07/2000	455	3910	34	4650	13.9	3.58	6.96	<0.0004	351	<0.0003	150
SHP01	0732	01/25/1997	199	1312	-111	907	12.7	2.13	7.63	0.0002	83	<0.001	37.2
		01/25/1997	—	—	—	908	—	—	—	<0.0002	83.6	<0.001	36.7
		02/03/1998	201	1630	21	1110	12.1	0.52	7.64	<0.001	109	<0.001	40.8
		12/12/1998	329	1753	115	1340	14.7	3.98	7.49	0.0003	108	<0.001	35.9
		03/05/1999	218	1467	172	1230	11.2	0.45	7.32	<0.001	109	<0.001	40.9
		06/02/1999	191	1277	164	818	12.7	4.2	7.57	<0.001	57	<0.0003	21.3
		02/05/2000	223	1551	76	~1190	12	0.68	7.50	<0.0004	94.9	<0.0003	34.2
SHP01	0733	01/25/1997	420	4224	-56	3850	13.3	4.91	7.40	0.0036	335	<0.001	216
		02/04/1998	449	4650	-87	4270	12.7	18.6	7.23	0.0027	339	<0.001	123
		12/12/1998	420	4470	-79	4360	17	12.3	7.12	0.0047	366	<0.001	109
		12/12/1998	—	—	—	4360	—	—	—	0.0048	374	<0.001	110
		03/05/1999	406	4300	-189	4180	12.8	2.12	7.00	0.0035	363	<0.001	107
		06/07/1999	448	4570	-33	4630	15.5	9.28	6.94	~0.004	351	<0.0003	119
		02/07/2000	458	4010	-78	4290	13.7	11.9	6.97	0.0036	358	<0.0003	109
SHP01	0734	01/28/1997	531	8600	131	8750	7.7	0.33	7.22	<0.0002	443	<0.001	216
		02/03/1998	827	9563	183	11000	7.3	14	7.81	<0.001	427	<0.001	279
		12/10/1998	276	1950	215	13700	10.3	4.27	7.18	0.0001	502	<0.001	326
		03/02/1999	608	10550	217	11300	7.5	0.67	7.12	<0.001	417	<0.001	283
		06/06/1999	652	10840	162	11500	13.2	5.05	7.08	<0.001	391	0.0003	274
		02/02/2000	716	12630	261	11900	6.6	84.4	7.47	0.0005	420	0.0003	306
SHP01	0735	02/03/1998	540	10590	221	11000	7.3	5.8	7.23	<0.001	365	<0.001	314
		12/10/1998	492	7550	242	9090	10.6	9.8	7.06	0.0002	264	<0.001	239
		03/06/1999	623	13040	203	14200	8	3.85	7.03	<0.001	428	<0.001	383
		06/03/1999	451	9840	144	9510	10.8	30.4	6.98	<0.001	289	<0.0003	257
		02/03/2000	628	13210	175	12600	8.1	2.27	7.29	0.0005	375	<0.0003	367

Site	Location	Date	Alk	EC	ORP	TDS	Temp	Turbidity	pH	As	Ca	Cd	Cl
Code	Code	Sampled	mg/L	umhos/cm	mV	mg/L	C	NTU	s.u.	mg/L	mg/L	mg/L	mg/L
SHP01	0736	01/28/1997	623	12740	87	13900	9	0.78	7.46	0.0004	422	<0.001	253
		02/03/1998	844	19050	37	21300	9.3	2.8	7.75	0.0086	450	<0.001	453
		12/10/1998	693	9730	41	16300	12.1	3.48	7.35	0.0007	468	<0.001	279
		03/02/1999	575	12140	14	12400	10.9	1.28	7.52	<0.001	390	<0.001	227
		06/05/1999	596	13020	121	14000	16.2	1.22	7.48	<0.001	448	<0.0003	242
		02/02/2000	732	15040	126	15400	9.9	1.5	7.56	<0.0004	352	<0.0003	279
SHP01	0766	02/02/2000	1354	29500	192	~41200	10.6	1.74	7.48	0.0016	422	0.0005	1310
SHP01	0768	02/05/2000	1271	15480	208	~20100	10.5	242	7.45	0.0009	370	<0.0003	548
SHP01	0773	02/05/2000	308	8660	28	~9840	10.1	9.89	7.11	<0.0004	417	<0.0003	184
SHP01	0775	02/02/2000	888	18690	228	22400	10.7	9.91	7.67	0.0007	401	<0.0003	614
SHP01	0779	02/03/2000	604	10200	129	10900	10.8	3.4	7.30	<0.0004	473	0.0005	298
SHP01	0782	02/01/2000	142	688	234	485	8.5	4.1	7.39	0.0005	69.5	<0.0003	14.8
SHP01	0783	02/01/2000	145	582	178	380	9.3	6.94	7.73	<0.0004	41.1	<0.0003	7.39
SHP01	0784	02/01/2000	415	1181	-45	752	9.5	4.91	7.41	0.0039	108	<0.0003	22.1
SHP01	0850	12/09/1998	364	2890	-24	2960	15	>1000	7.44	0.0008	232	<0.001	93.2
		03/02/1999	325	3560	-20	2670	11.9	623	7.47	<0.001	182	<0.001	70.4
		06/06/1999	321	3000	-15	2210	16.6	7.86	7.21	<0.001	137	<0.0003	54.8
		02/02/2000	366	4040	46	3270	13.2	381	7.28	0.001	213	<0.0003	102
SHP01	0851	12/09/1998	300	2630	-56	2170	14.6	43.2	7.58	0.001	181	<0.001	54.3
		03/02/1999	284	3190	-54	2530	12	8.4	7.48	0.0011	214	<0.001	69.7
		06/06/1999	319	3130	-54	2380	15.8	9.39	7.24	0.0012	180	<0.0003	59.8
SHP01	0852	12/09/1998	306	3350	86	2930	13.1	50.2	7.61	0.0003	269	<0.001	69.5
		03/02/1999	270	3520	-29	2790	12.5	9.16	7.46	<0.001	221	<0.001	75.1
		06/06/1999	305	3350	-32	2550	17.7	36.4	7.30	<0.001	167	<0.0003	63

Site	Location	Date	Alk	EC	ORP	TDS	Temp	Turbidity	pH	As	Ca	Cd	Cl
Code	Code	Sampled	mg/L	umhos/cm	mV	mg/L	C	NTU	s.u.	mg/L	mg/L	mg/L	mg/L
SHP01	0853	12/11/1998	270	3280	39	3250	16	345	6.92	0.0004	466	<0.001	42.7
		03/03/1999	270	3480	-3	3210	12.5	167	7.12	<0.001	397	<0.001	49.4
		06/04/1999	278	3500	-40	3120	16.7	>1000	7.14	<0.001	420	<0.0003	43.2
		02/05/2000	254	2960	-23	~2690	12	178	7.16	<0.0004	354	<0.0003	43
SHP01	0854	12/10/1998	1112	29400	182	43700	12.8	>1000	7.38	0.0002	488	<0.001	1310
		03/02/1999	1149	26500	207	42100	10.8	>1000	7.19	<0.001	434	<0.001	1230
		06/05/1999	1086	25100	165	40900	16	>1000	6.98	<0.001	417	<0.0003	1240
		02/05/2000	1220	24500	214	41500	9.9	>1000	7.32	0.0007	428	0.0003	1320
SHP01	0855	12/10/1998	298	5200	222	5370	10.6	508	7.26	0.0001	346	<0.001	97.4
		03/08/1999	347	7120	152	6230	6.7	2.47	7.27	<0.001	365	<0.001	119
		06/06/1999	340	6800	148	5940	10.6	8.48	7.35	<0.001	317	<0.0003	119
		02/02/2000	276	6180	147	5190	7	0.97	7.53	<0.0004	292	<0.0003	102
SHP01	0856	12/10/1998	358	5490	30	5120	13.5	3.37	7.40	0.0001	301	<0.001	85.6
		03/02/1999	268	6110	101	5510	12	9.14	7.41	<0.001	309	<0.001	92.7
		06/06/1999	344	6200	94	5410	11.4	5.29	7.38	<0.001	294	<0.0003	97
		06/06/1999	---	---	---	5360	---	---	---	<0.001	305	<0.0003	98.3
		02/02/2000	286	6090	164	5160	12.5	0.86	7.51	<0.0004	271	<0.0003	92.6
		02/02/2000	---	---	---	5160	---	---	---	<0.0004	276	<0.0003	92.6
SHP01	0857	12/09/1998	327	4390	-55	4210	16	246	7.04	0.0005	402	<0.001	86.3
		03/03/1999	378	4640	-34	5580	13.3	7.02	7.08	<0.001	499	<0.001	105
		06/05/1999	366	4670	-53	5320	13.5	43.8	7.09	<0.001	446	<0.0003	105
		02/03/2000	300	3900	-21	3460	13.6	1.5	7.31	0.0008	307	<0.0003	64.1
SHP01	0860	12/14/1998	---	2870	154	1960	15.1	>1000	8.45	0.0018	15.1	<0.001	713
		03/08/1999	---	5350	100	---	14.6	>1000	8.23	0.0011	23.8	<0.001	1430
		02/04/2000	---	11540	111	8000	13.7	982	6.93	<0.0004	54.5	0.0005	3110
SHP01	0862	12/11/1998	---	2860	111	1720	13.5	>1000	8.45	0.0019	10.7	<0.001	615
		03/08/1999	---	6780	115	---	13.1	>1000	7.62	---	---	---	1470
		02/04/2000	---	11480	131	---	11	>1000	7.02	---	---	---	---

Site	Location	Date	Alk	EC	ORP	TDS	Temp	Turbidity	pH	As	Ca	Cd	Cl
Code	Code	Sampled	mg/L	umhos/cm	mV	mg/L	C	NTU	s.u.	mg/L	mg/L	mg/L	mg/L
SHP01	0863	01/13/1999	—	21100	135	16800	10	>1000	8.37	0.0039	289	0.0011	5240
		03/08/1999	170	8250	87	435	13.7	174	8.26	<0.001	39.8	<0.001	80.3
		06/04/1999	—	3000	83	4020	18.3	135	7.59	0.0036	39.5	<0.0003	1620
		02/04/2000	857	11530	153	8210	12.9	604	6.97	0.0015	66.1	0.0012	3020
SHP01	0923	04/12/1999	748	21000	163	—	—	—	7.90	—	—	—	—
SHP01	0924	04/12/1999	1240	32600	145	—	—	—	7.90	—	—	—	—
SHP01	0925	04/12/1999	1020	29400	177	—	—	—	7.70	—	—	—	—
SHP01	0926	04/12/1999	660	14200	160	—	—	—	7.60	—	—	—	—
SHP01	0927	04/12/1999	1024	28200	166	—	—	—	7.80	—	—	—	—
SHP01	0928	04/12/1999	1308	28800	166	—	—	—	7.60	—	—	—	—
SHP01	0929	04/12/1999	1100	23200	165	—	—	—	7.80	—	—	—	—
SHP01	1000	04/17/2000	—	—	—	—	—	—	—	—	—	—	—
SHP01	1001	04/17/2000	—	—	—	—	—	—	—	—	—	—	—
SHP01	1008	04/17/2000	—	—	—	—	—	—	—	—	—	—	—
SHP01	1009	04/17/2000	—	—	—	—	—	—	—	—	—	—	—
SHP01	1010	04/17/2000	—	—	—	—	—	—	—	—	—	—	—
SHP01	1013	04/17/2000	—	—	—	—	—	—	—	—	—	—	—
SHP01	1062	04/17/2000	—	—	—	—	—	—	—	—	—	—	—

Site	Location	Date	Alk	EC	ORP	TDS	Temp	Turbidity	pH	As	Ca	Cd	Cl
Code	Code	Sampled	mg/L	umhos/cm	mV	mg/L	C	NTU	s.u.	mg/L	mg/L	mg/L	mg/L
SHP02	0600	01/24/1997	1501	15673	148	15900	15.7	5.12	6.78	<0.0002	366	<0.001	522
		02/05/1998	1435	16230	169	15200	15.9	9.48	6.50	<0.001	405	<0.001	434
		12/14/1998	1365	15020	207	15100	16.2	3.85	6.44	0.0001	375	<0.001	349
		03/08/1999	1394	14330	213	15600	16.1	2.13	6.52	<0.001	385	<0.001	332
		06/04/1999	1328	14620	149	14100	16.4	9.27	6.60	<0.001	422	<0.0003	302
		02/04/2000	1336	13830	179	14600	15.5	4.74	6.32	<0.0004	401	0.0005	254
SHP02	0602	01/23/1997	2113	21634	187	25500	16.4	17.2	6.41	<0.0002	424	<0.001	675
		02/04/1998	2010	23100	146	27600	16.5	9.31	6.86	<0.001	404	<0.001	685
		06/04/1998	2193	17440	206	---	16.5	5.61	6.13	---	---	---	---
		12/07/1998	2249	19810	157	28600	15.8	4.34	6.50	<0.0001	470	<0.001	702
		03/04/1999	2145	20800	193	27500	17.8	9.67	6.59	<0.001	427	<0.001	699
		06/08/1999	2033	21900	189	29000	18	8.78	6.47	<0.001	418	0.0005	724
		02/01/2000	2108	18990	207	27500	16.5	7.9	6.58	0.0004	415	0.0004	676
SHP02	0603	01/23/1997	281	1886	217	16000	16.2	0.8	6.44	<0.0002	447	0.0233	380
		02/04/1998	273	20800	199	15300	16.4	1.12	6.52	<0.001	411	0.0221	394
		06/04/1998	276	1729	232	---	16.2	0.91	6.04	---	---	---	---
		12/07/1998	291	20800	233	15000	15.5	1.1	6.32	<0.0001	479	0.0193	401
		03/04/1999	300	19800	200	14600	17	6.46	6.33	<0.001	481	0.0193	399
		06/07/1999	269	19830	242	14300	17	5.64	6.28	<0.001	483	0.0185	412
		02/04/2000	260	17490	202	13200	16.1	1.29	6.39	<0.0004	480	0.0154	383
SHP02	0604	02/05/1998	837	19860	110	15400	12	>1000	7.08	<0.001	638	<0.001	3400
		06/04/1998	730	1866	172	---	16.7	>1000	6.70	---	---	---	---
		12/07/1998	659	1985	178	25100	9.2	336	6.89	0.0002	539	0.001	3090
		03/06/1999	625	19020	175	18700	17.4	509	6.80	<0.001	414	<0.001	2380
		06/02/1999	761	24700	143	25200	17.7	578	6.65	<0.001	549	0.0019	3220
		02/01/2000	835	15550	192	25800	15.8	>1000	7.00	<0.0004	568	0.001	3230
SHP02	0648	06/03/1998	52	3940	-138	3100	30.4	---	7.80	<0.001	110	<0.001	52.2
		06/03/1998	---	---	---	3120	---	---	---	<0.001	110	<0.001	53.7

Site	Location	Date	Alk	EC	ORP	TDS	Temp	Turbidity	pH	As	Ca	Cd	Cl
Code	Code	Sampled	mg/L	umhos/cm	mV	mg/L	C	NTU	s.u.	mg/L	mg/L	mg/L	mg/L
SHP02	0725	01/24/1997	287	6130	225	5290	10.1	4.52	7.26	<0.0002	330	<0.001	119
		02/04/1998	354	667	194	5810	9.4	1.73	7.20	<0.001	302	<0.001	146
		06/03/1998	288	5180	188	---	14.7	5.16	6.86	---	---	---	---
		12/11/1998	306	6640	208	6390	13.7	6.45	7.04	<0.0001	359	<0.001	173
		03/07/1999	285	6160	196	5650	11.3	8.43	7.28	<0.001	308	<0.001	145
		06/07/1999	307	5830	141	5960	14.6	3.91	6.98	<0.001	312	<0.0003	138
		02/05/2000	200	5720	122	~5540	11.8	9.4	7.34	<0.0004	391	<0.0003	83
		02/05/2000	---	---	---	~5530	---	---	---	<0.0004	388	<0.0003	81.7
SHP02	0726	01/24/1997	681	14550	203	13300	15.6	73.3	7.05	<0.0002	412	<0.001	343
		02/04/1998	443	10380	89	9990	15.9	21	6.96	<0.001	382	<0.001	144
		06/03/1998	502	10190	188	---	16.6	7.48	6.66	---	---	---	---
		12/10/1998	420	7720	202	9370	15.9	104	6.97	0.0002	474	<0.001	~255
		03/07/1999	337	8950	199	9260	15.9	8.62	6.96	<0.001	428	<0.001	145
		06/07/1999	455	8990	192	9390	15.6	7.08	6.74	<0.001	414	<0.0003	148
		02/06/2000	358	7140	120	7600	15.8	1.92	6.94	<0.0004	414	<0.0003	128
SHP02	0727	01/24/1997	1561	18602	231	22500	14.3	557	6.48	<0.0002	446	<0.001	456
		02/04/1998	1584	14260	223	21400	12	259	6.64	<0.001	408	<0.001	444
		06/03/1998	1523	14180	217	---	15.2	169	6.15	---	---	---	---
		12/11/1998	1438	17540	191	22700	16.4	778	6.50	0.0001	455	<0.001	413
		03/09/1999	1557	16750	213	22100	12.4	55	6.61	<0.001	442	<0.001	438
		06/07/1999	1462	16860	181	23000	16.2	91.4	7.31	<0.001	434	0.0005	481
		02/06/2000	1520	16140	136	21600	13.1	324	6.45	<0.0004	414	0.0005	393
SHP02	0728	01/24/1997	960	13440	233	17400	15.3	56.5	6.84	<0.0002	528	<0.001	225
		02/04/1998	1175	17870	198	21100	14.8	15.4	6.60	<0.001	452	0.001	306
		06/03/1998	655	8790	155	---	15.7	5.17	6.31	---	---	---	---
		12/08/1998	683	12400	256	13100	15.3	6.37	6.60	<0.0001	509	<0.001	151
		03/04/1999	307	5040	201	5780	15.4	8.03	6.94	<0.001	420	<0.001	53.2
		06/08/1999	177	3410	99	4700	15.3	1.2	7.01	<0.001	498	<0.0003	43.4
		02/04/2000	275	5500	235	6490	15	2.7	7.04	<0.0004	477	<0.0003	115
		02/04/2000	---	---	---	6620	---	---	---	<0.0004	485	<0.0003	113

Site	Location	Date	Alk	EC	ORP	TDS	Temp	Turbidity	pH	As	Ca	Cd	Cl
Code	Code	Sampled	mg/L	umhos/cm	mV	mg/L	C	NTU	s.u.	mg/L	mg/L	mg/L	mg/L
SHP02	0730	02/04/1998	19	4710	146	3480	12.1	135	5.75	<0.001	480	0.0466	16.9
		06/03/1998	13	3840	221	—	19.4	11.6	5.58	—	—	—	—
		12/13/1998	9	4440	265	3620	12.6	13.4	5.28	<0.0001	524	0.0506	16.9
		03/06/1999	13	4470	186	3530	13.6	—	4.97	<0.001	510	0.0479	17.9
		06/08/1999	15	4770	133	3800	15.3	5.33	5.26	<0.001	477	0.0488	20.9
		02/06/2000	17	4460	187	3720	14.6	23.7	5.13	<0.0004	537	0.0471	20.8
SHP02	0731	02/05/1998	423	10100	123	9590	15.2	110	7.01	<0.001	442	<0.001	503
		06/04/1998	485	7880	167	—	14.5	51.1	6.60	—	—	—	—
		12/08/1998	264	12760	243	12600	15.1	12.4	6.99	<0.0001	687	<0.001	627
		03/05/1999	345	10520	171	10100	14.9	52	6.89	<0.001	552	<0.001	476
		06/07/1999	393	10630	162	11300	14.7	42.9	6.43	<0.001	490	<0.0003	532
		02/03/2000	480	9780	177	10500	15.8	72.2	6.69	<0.0004	438	<0.0003	433
SHP02	0812	12/08/1998	—	22900	187	35100	14.1	820	6.98	0.0001	495	<0.001	2160
		03/08/1999	731	28700	186	35700	14.5	>1000	6.78	<0.001	473	<0.001	2310
		06/08/1999	—	26900	157	35000	15.9	90.1	7.46	<0.001	447	0.0003	2270
		02/07/2000	661	24800	211	34900	13.6	79.1	6.95	<0.0004	446	0.0005	2250
SHP02	0813	10/27/1998	—	—	—	—	—	—	—	—	—	—	—
		10/30/1998	—	—	—	—	—	—	—	—	—	—	—
		12/07/1998	1026	14630	170	27900	14.7	29	6.50	<0.0001	595	<0.001	629
		03/04/1999	1094	21700	182	28400	15.2	9.2	6.63	<0.001	604	<0.001	661
		06/07/1999	1009	21700	149	28200	16.3	4.83	7.06	<0.001	586	<0.0003	636
		02/06/2000	950	19680	222	29600	15.4	7.68	6.53	0.0004	595	<0.0003	671
SHP02	0814	12/09/1998	969	20600	244	26000	13.1	>1000	7.02	0.0001	467	<0.001	950
		03/04/1999	990	21300	194	25900	11.8	—	6.89	<0.001	453	<0.001	1030
		06/08/1999	1000	21300	138	26800	16.6	446	7.07	<0.001	451	<0.0003	1070
		02/06/2000	1001	33500	241	27100	15	84.8	6.78	<0.0004	443	0.0004	1080
SHP02	0815	12/12/1998	1480	19000	225	28000	16.2	32.5	6.40	<0.0001	466	<0.001	745
		03/06/1999	1409	20300	212	29300	16.6	7.5	6.65	<0.001	433	<0.001	844
		06/08/1999	1493	19390	121	26700	16.7	4.09	6.72	<0.001	431	<0.0003	831
		02/07/2000	1358	18740	196	27900	16.4	4.54	6.63	<0.0004	430	<0.0003	866

Site	Location	Date	Alk	EC	ORP	TDS	Temp	Turbidity	pH	As	Ca	Cd	Cl
Code	Code	Sampled	mg/L	umhos/cm	mV	mg/L	C	NTU	s.u.	mg/L	mg/L	mg/L	mg/L
SHP02	0816	12/12/1998	487	6860	153	7230	16.5	11.7	7.16	<0.0001	420	<0.001	148
		03/09/1999	563	7030	218	7860	15.7	4.98	6.81	<0.001	443	<0.001	201
		06/08/1999	490	7660	67	8410	15.7	43.2	7.11	<0.001	459	<0.0003	209
		02/07/2000	454	7810	180	8900	15.3	7.47	7.24	<0.0004	546	<0.0003	240
SHP02	0819	12/09/1998	2510	17604	272	22100	15.4	93.2	6.68	0.0002	475	<0.001	751
		03/06/1999	—	18700	228	23300	17	70.1	6.75	<0.001	421	<0.001	830
		06/08/1999	—	19480	220	22900	16.7	11.2	6.76	<0.001	430	<0.0003	767
		02/07/2000	—	17680	210	22200	16.3	31.7	6.76	<0.0004	433	<0.0003	825
SHP02	0820	12/13/1998	477	14980	94	15000	14.2	>1000	7.74	<0.0005	200	<0.001	1620
		03/06/1999	—	17670	157	15800	15.3	>1000	7.71	<0.001	137	<0.001	2690
		06/04/1999	—	19350	133	15700	17.1	>1000	7.62	<0.001	150	0.0005	3220
		02/07/2000	—	20600	177	4100	14	>1000	7.03	—	—	—	4450
SHP02	0823	12/09/1998	—	7040	198	5840	12.5	—	7.84	—	—	—	757
		02/03/2000	—	14650	171	—	12	>1000	7.69	—	—	—	3700
SHP02	0824	01/13/1999	115	15570	198	10300	16.6	53.3	7.83	0.0013	279	0.0025	3230
		03/06/1999	96	22600	123	12800	18.3	>1000	7.49	<0.001	252	0.0021	3960
		06/08/1999	98	25500	153	22700	20.3	27.5	7.54	<0.001	359	0.0008	6270
		02/03/2000	—	19740	216	19100	14.3	133	6.67	0.0016	278	0.0007	5640
SHP02	0826	12/13/1998	1697	16820	210	22000	16.6	82.4	6.42	0.0002	430	<0.001	790
		03/04/1999	1783	15940	173	21600	15.5	38	6.53	<0.001	427	<0.001	764
		06/08/1999	1675	17510	242	23100	16.6	12.4	6.54	<0.001	438	0.0003	792
		02/04/2000	1660	15220	243	22100	14.8	37.1	6.61	<0.0004	430	<0.0003	719
SHP02	0827	12/14/1998	888	8690	216	9030	17.6	70.9	6.49	0.0001	487	<0.001	312
		03/06/1999	880	8290	199	9150	17.1	81	6.61	<0.001	510	<0.001	325
		06/08/1999	—	8580	176	9080	16.6	15.6	6.44	<0.001	475	<0.0003	313
		02/03/2000	765	8060	196	9040	15.7	13.6	6.20	<0.0004	465	0.0003	284

Site	Location	Date	Aik	EC	ORP	TDS	Temp	Turbidity	pH	As	Ca	Cd	Cl
Code	Code	Sampled	mg/L	umhos/cm	mV	mg/L	C	NTU	s.u.	mg/L	mg/L	mg/L	mg/L
SHP02	0828	12/14/1998	526	4120	204	4820	14.7	23.7	6.81	0.0002	448	<0.001	132
		03/04/1999	564	4210	195	5740	13	9.85	6.89	<0.001	396	<0.001	155
		06/08/1999	—	3890	-14	4080	18.1	3.82	7.00	<0.001	295	<0.0003	143
		02/03/2000	605	3960	199	4040	9.3	4.63	6.74	<0.0004	301	<0.0003	79.5
SHP02	0829	12/14/1998	—	18460	234	19600	13.2	>1000	7.16	0.0007	274	<0.001	1220
SHP02	0830	12/08/1998	24	2670	233	2680	12.9	321	5.00	<0.0001	550	0.0077	43
		03/04/1999	8	2980	258	2760	11.5	981	5.21	<0.001	543	0.0088	52.3
		06/08/1999	15	3000	247	2900	18.1	240	4.88	<0.001	516	0.01	46.9
		02/03/2000	13	2680	252	2660	11.6	>1000	5.18	<0.0004	536	0.0086	43.7
SHP02	0832	12/12/1998	230	5160	197	5280	15.1	10	7.25	0.0002	360	<0.001	114
		03/04/1999	255	9060	185	9530	15.6	24.1	7.08	<0.001	422	<0.001	357
		06/05/1999	335	12100	153	12500	15.4	>1000	6.99	<0.001	414	<0.0003	525
		02/07/2000	297	12420	175	12900	15.7	62.8	7.18	<0.0004	444	<0.0003	564
SHP02	0833	12/13/1998	358	6060	160	6560	14.7	9.25	6.56	<0.0001	533	<0.001	107
		03/03/1999	396	8230	205	8870	15.1	9.79	6.71	<0.001	698	<0.001	214
		06/04/1999	469	9790	127	10600	15	8.28	6.70	<0.001	597	<0.0003	278
		02/06/2000	402	10130	194	10400	15.2	8.18	6.98	<0.0004	735	<0.0003	318
SHP02	0835	12/14/1998	299	18420	172	2280	17.3	12.8	6.94	<0.0001	360	<0.001	18.4
		03/03/1999	325	2050	167	2200	15.6	8.67	6.91	<0.001	366	<0.001	13.4
		06/04/1999	327	2530	101	2290	15.1	8.16	6.74	<0.001	394	<0.0003	20.4
		06/04/1999	—	—	—	2260	—	—	—	<0.001	393	<0.0003	20.4
		02/06/2000	283	2690	175	2490	16.1	4.67	7.11	<0.0004	419	<0.0003	24.5
SHP02	0836	12/12/1998	425	4640	60	4860	14.2	27	6.66	<0.0001	532	<0.001	35.6
		03/03/1999	404	4650	96	4920	14.7	36.5	6.67	<0.001	574	<0.001	37.9
		06/03/1999	420	4210	72	5230	14.9	13.6	6.77	<0.001	541	<0.0003	41.6
		01/31/2000	413	4950	267	5060	14.5	17.7	7.12	<0.0004	565	<0.0003	37.7
		02/06/2000	354	4860	165	5040	14.6	13.6	6.96	<0.0004	574	<0.0003	41.4

Site	Location	Date	Alk	EC	ORP	TDS	Temp	Turbidity	pH	As	Ca	Cd	Cl
Code	Code	Sampled	mg/L	umhos/cm	mV	mg/L	C	NTU	s.u.	mg/L	mg/L	mg/L	mg/L
SHP02	0837	12/12/1998	461	3140	231	3000	14.1	13	6.39	0.0002	458	<0.001	21.2
		03/04/1999	444	3150	194	4100	13.6	9.5	6.74	<0.001	436	<0.001	18.2
		03/04/1999	---	---	---	3000	---	---	---	<0.001	442	<0.001	18.9
		06/03/1999	454	3240	104	3050	13.4	39.8	6.77	<0.001	470	<0.0003	20.1
		02/01/2000	520	3460	216	3350	14	7.27	7.04	<0.0004	484	<0.0003	17.2
		02/06/2000	502	3420	174	3240	14.1	17.3	7.44	0.0005	493	<0.0003	17.5
SHP02	0838	12/13/1998	371	2560	192	2380	16.5	8.7	6.79	<0.0001	466	<0.001	14.8
		03/03/1999	321	2550	206	2970	15.8	3.79	6.69	<0.001	552	<0.001	15.5
		06/04/1999	343	2910	104	3080	15.4	7.3	6.77	<0.001	526	<0.0003	15.1
		02/06/2000	302	2450	128	2240	16.5	112	6.96	<0.0004	399	<0.0003	12.8
SHP02	0839	12/12/1998	910	14280	272	19800	16.8	>1000	6.65	<0.0001	490	<0.001	430
		03/06/1999	878	15590	220	20200	16.7	79.2	6.74	<0.001	439	<0.001	448
		06/08/1999	820	15990	133	18800	19.4	84.7	6.88	<0.001	446	<0.0003	449
		02/07/2000	905	15480	76	20900	15.9	42.4	6.73	<0.0004	433	<0.0003	467
SHP02	0841	12/08/1998	831	16510	148	25700	15.2	125	7.25	0.0002	436	<0.001	673
		03/04/1999	845	21800	180	25000	15.7	337	7.15	<0.001	406	<0.001	686
		06/04/1999	795	20800	150	22100	16.6	27.8	7.11	<0.001	433	<0.0003	557
		02/07/2000	736	21500	183	25000	15.7	8.64	7.24	<0.0004	378	<0.0003	663
SHP02	0843	12/12/1998	363	3120	231	3020	14.7	9.58	6.71	0.0002	440	<0.001	24.7
		03/04/1999	406	3190	200	3090	13	7.53	6.94	<0.001	441	<0.001	24.8
		06/03/1999	375	3370	102	3200	13	8.1	6.77	<0.001	475	<0.0003	25.9
		01/31/2000	381	3720	236	3650	13.9	3.08	7.10	<0.0004	556	<0.0003	24.7
		02/06/2000	347	3650	145	3650	14	7.45	6.98	<0.0004	557	<0.0003	25.2
SHP02	0844	12/12/1998	312	4680	211	5180	14.6	22.1	7.04	<0.0001	489	<0.001	54.6
		12/12/1998	---	---	---	5250	---	---	---	<0.0001	490	<0.001	56.2
		03/03/1999	322	4130	208	5050	15.1	222	6.76	<0.001	451	<0.001	55.1
		03/03/1999	---	---	---	5040	---	---	---	<0.001	449	<0.001	54.5
		06/05/1999	329	4620	119	5460	15.2	9.16	6.84	<0.001	492	<0.0003	71.7
		02/06/2000	306	4640	175	5360	15.1	7.18	7.04	<0.0004	448	<0.0003	66.2

Site	Location	Date	Alk	EC	ORP	TDS	Temp	Turbidity	pH	As	Ca	Cd	Cl
Code	Code	Sampled	mg/L	umhos/cm	mV	mg/L	C	NTU	s.u.	mg/L	mg/L	mg/L	mg/L
SHP02	0846	12/13/1998	290	4070	203	4650	15.2	9.85	6.59	<0.0001	553	<0.001	109
		03/03/1999	247	5040	134	4990	15.5	8.71	6.89	<0.001	598	<0.001	118
		06/04/1999	260	4890	93	5070	14.9	5.96	6.90	<0.001	571	<0.0003	118
		02/06/2000	267	5640	169	5430	15.7	6.25	7.00	<0.0004	611	<0.0003	135
SHP02	0847	12/14/1998	313	2890	114	2850	16.9	1.3	6.85	<0.0001	529	<0.001	11.8
		03/08/1999	242	2890	139	2870	16	1.83	6.98	<0.001	554	<0.001	14.4
		06/03/1999	296	3030	120	2810	16	0.95	7.09	<0.001	505	<0.0003	15
		06/03/1999	---	---	---	2840	---	---	---	<0.001	511	<0.0003	14.7
		02/01/2000	283	2320	135	2400	16.1	0.79	7.07	<0.0004	449	<0.0003	11.4
		02/01/2000	---	---	---	2390	---	---	---	<0.0004	451	<0.0003	11.3
SHP02	0848	12/14/1998	470	8890	68	9070	15.8	1.29	6.39	<0.0001	465	<0.001	218
		03/08/1999	564	10970	55	12500	16.2	3.88	6.86	<0.001	497	<0.001	369
		06/03/1999	439	10230	92	10600	17.1	2.22	6.89	<0.001	548	<0.0003	306
		02/02/2000	597	9160	161	10100	15.5	2.07	6.86	<0.0004	449	0.0005	303
SHP02	0918	03/17/1999	258	---	---	---	---	---	7.90	---	---	---	---
SHP02	0930	04/12/1999	200	2100	131	---	---	---	8.00	---	---	---	---
SHP02	1002	04/17/2000	---	---	---	---	---	---	---	---	---	---	---
SHP02	1003	04/17/2000	---	---	---	---	---	---	---	---	---	---	---
SHP02	1004	04/17/2000	---	---	---	---	---	---	---	---	---	---	---
SHP02	1007	04/17/2000	---	---	---	---	---	---	---	---	---	---	---
SHP02	1011	04/17/2000	---	---	---	---	---	---	---	---	---	---	---
SHP02	1048	02/06/2000	540	24300	9	32000	13.1	>1000	7.66	<0.0004	377	<0.0003	1130
SHP02	1049	02/06/2000	568	24500	220	32000	12.5	100	7.55	<0.0004	379	<0.0003	1130

Site	Location	Date	Alk	EC	ORP	TDS	Temp	Turbidity	pH	As	Ca	Cd	Cl
Code	Code	Sampled	mg/L	umhos/cm	mV	mg/L	C	NTU	s.u.	mg/L	mg/L	mg/L	mg/L
SHP02	1057	04/17/2000	---	---	---	---	---	---	---	---	---	---	---
SHP02	1058	04/17/2000	---	---	---	---	---	---	---	---	---	---	---
SHP02	1059	04/17/2000	---	---	---	---	---	---	---	---	---	---	---
SHP02	1060	04/17/2000	---	---	---	---	---	---	---	---	---	---	---
SHP02	MW1	02/04/1998	1030	13160	113	8610	14.8	24.7	7.08	<0.001	53.9	<0.001	3060
		Note:											
		1. When both filtered and unfiltered measurements are available, the unfiltered result is reported.											
		2. Environmental Sciences Laboratory results are not reported in this table, except for all the results from the 0900-series locations.											
		3. Groundwater from wells, test pits, trenches, and boreholes are reported in this table.											

Site	Location	Fe	Fluoride	GrossAlpha	GrossBeta	K	Mg	Mn	Mo	NH ₄	NO ₃	Na
Code	Code	mg/L	mg/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP01	0608	<0.006	---	1824.69	596.27	162	1950	8.53	---	---	2560	1960
		<0.005	---	1340	466.6	153	1750	7.59	---	498	2350	1770
		<0.003	---	~1794	734.2	175	1920	9.44	---	306	2530	1940
		<0.005	---	1480	603.4	148	2000	9.3	---	602	2560	2020
		<0.0059	---	1754	575.43	187	1790	8.42	<0.0074	~557	2500	1870
		<0.0144	0.674	1650.63	725.22	167	1800	8.14	0.0051	526	2320	1900
SHP01	0610	<0.006	---	1406.17	597.41	126	1730	3.04	---	---	2950	2100
		<0.005	---	1051	450.2	107	1720	3.11	---	78.5	2880	2040
		<0.003	---	1023	442.3	118	1480	2.93	---	94.1	2220	1810
		<0.005	---	1001	503.4	106	1610	3.04	---	113	2660	1900
		<0.0059	---	1236	562.28	133	1670	3.5	0.0098	97.6	3100	2150
		<0.0144	1.28	1094.33	657.27	122	1820	3.16	0.0083	63.8	2910	2180
SHP01	0612	0.379	---	701.6	398.5	25.2	407	0.618	---	0.0242	0.122	908
		0.607	---	~145	66.52	11.9	106	0.944	---	3.62	<0.0523	293
		0.0936	---	58.27	35.83	10.2	82.1	0.405	0.01	<0.0246	<0.0119	245
		0.491	0.876	32.75	22.48	7.1	46.7	1.28	0.007	2.48	0.135	143
SHP01	0614	<0.006	---	1475.06	543.82	105	1990	6.29	---	---	3130	2170
		<0.005	---	1807	509.5	121	2410	5.63	---	46.8	3750	2620
		<0.0051	---	1635	862.6	137	2340	6.1	---	22.5	3290	2460
		<0.005	---	1588	898.5	110	2440	6.38	---	56.5	3480	2620
		---	---	---	---	---	---	---	---	---	---	---
		---	---	---	---	---	---	---	---	---	---	---
		<0.0144	1.42	1707.91	860.96	134	2410	5.67	0.0106	50.5	3480	2670
SHP01	0615	<0.006	---	1389.97	440.61	112	1700	6.29	---	---	2430	2560
		<0.005	---	1463	525.5	109	1660	5.37	---	43.7	2250	2540
		<0.0185	---	1196	794	129	1870	5.29	---	68.1	2430	2750
		<0.005	---	~1709	947.5	109	2160	6.84	---	96.8	2950	3040
		---	---	---	---	---	---	---	---	---	---	---
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		<0.0144	0.775	~1934.55	1111.8	125	2100	7.68	0.0063	~70.375	2960	3140

Site	Location	Fe	Fluoride	GrossAlpha	GrossBeta	K	Mg	Mn	Mo	NH ₄	NO ₃	Na
Code	Code	mg/L	mg/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP01	0616	<0.006	—	285.2	132.05	34.4	299	2.84	—	—	77.6	447
		<0.006	—	271.46	136.85	35.9	302	2.72	—	—	76.4	445
		<0.005	—	241	105.1	38.3	300	0.832	—	4.77	13.3	616
		<0.0099	—	245.5	116.5	37.1	220	1.48	—	9.8	42.2	356
		<0.005	—	~255.7	123.7	31.5	228	1.65	—	12	72.7	336
		<0.0059	—	217.82	116.41	34.5	219	0.84	<0.0033	~0.686	46.9	336
		<0.0144	0.552	316.28	169.76	37.9	268	1.15	<0.0037	12.9	73.4	444
SHP01	0617	<0.006	—	439.55	<169.31	54.8	708	6.42	—	—	724	955
		<0.005	—	401.6	131.7	51.4	601	5.39	—	58.7	595	814
		<0.003	—	308.5	231	57.9	538	5.63	—	42	477	698
		<0.005	—	~453.9	231.9	47.1	540	5.57	—	58.2	582	711
		<0.0059	—	359.56	169.96	58.2	593	6.32	<0.0032	56	738	831
		<0.0144	0.268	359.97	206.26	58	643	6.81	<0.0035	61.6	796	921
SHP01	0619	<0.006	—	793.03	375.99	76.3	1130	4.92	—	—	228	2790
		<0.005	—	1215	389.1	80.4	1530	5.82	—	10.4	389	3300
		<0.0115	—	1142	553.7	89.6	1390	6.3	—	7.85	328	3120
		<0.003	—	1215	589.2	92.5	1410	6.42	—	7.55	328	3210
		<0.005	—	~1405	753.5	68.8	1420	6.36	—	8.95	207	3300
		—	—	—	—	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—	—	—	—
		<0.0144	0.649	898.87	568.05	77.1	1210	5.45	0.0134	~7.68	126	3160
		<0.0144	0.725	~680.59	566.04	72	1220	5.29	0.0136	~7.6	130	3170
SHP01	0620	<0.006	—	684.26	<244.16	49.8	1150	2.43	—	—	176	2070
		<0.005	—	917.2	422.8	55.9	1510	3.09	—	0.0836	155	2790
		<0.0193	—	790.2	468	55.2	1210	2.19	—	0.0178	143	2220
		<0.005	—	~742.5	385	46.6	1300	2.45	—	0.0334	161	2290
		<0.0059	—	~566.4	246.6	49.4	1000	1.97	0.0088	0.0195	160	2030
		<0.0144	0.57	587.86	257.34	45	981	1.88	0.0088	0.057	155	1940

Site	Location	Fe	Fluoride	GrossAlpha	GrossBeta	K	Mg	Mn	Mo	NH ₄	NO ₃	Na	
Code	Code	mg/L	mg/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
SHP01	0624	<0.006	---	697.93	295.39	52.1	880	4.5	---	---	210	2180	
		<0.005	---	1074	403.8	64.5	1290	5.77	---	6.04	368	2770	
		<0.003	---	~992.2	456.2	69.1	1130	5.67	---	8.28	267	2570	
		<0.005	---	<52.47	<91.17	50.6	966	4.62	---	6.22	175	2280	
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SHP01	0626	<0.006	---	<93.59	<98.35	17.8	97.3	0.924	---	---	0.628	1250	
		<0.005	---	90.42	<41.48	16.8	112	1.39	---	0.0361	10.2	1150	
		<0.005	---	80.78	46.53	16.6	116	1.41	---	0.0361	9.86	1150	
		<0.0036	---	~55.94	42.3	16.4	72.7	1.15	---	0.0187	2	1040	
		<0.005	---	47.24	40.19	14	73.7	1.14	---	0.0686	1.4	1090	
		<0.005	---	32.06	40.79	13.9	72.9	1.12	---	0.0686	1.37	1080	
		<0.0081	---	53.77	<41.62	16.4	75.8	1.66	0.0072	0.0547	1.46	1100	
		<0.0144	1.21	~86.79	57.01	15.9	83.5	1.46	~0.0077	0.0309	10.5	1160	
		<0.0144	1.18	~72.55	<40.85	14.9	83.8	1.45	~0.0076	0.0315	11.3	1170	
SHP01	0628	0.104	---	<69.6	<73.36	8.39	41.4	2.72	---	---	0.319	939	
		0.0699	---	<25.46	<30.34	7.62	40.2	1.41	---	0.0219	0.786	789	
		0.239	---	<44.85	<38.79	13.2	45.7	2.36	---	0.0327	0.716	1160	
		<0.0249	---	<21.51	34.24	9.15	33.7	1.38	---	0.039	0.917	851	
		0.146	---	<31.88	<30.84	13.5	39.4	2	0.0111	0.0282	<0.01	933	
		<0.11	1.65	<29.09	<30.53	10.5	35.9	1.86	~0.0073	0.074	0.228	936	
SHP01	0630	<0.006	---	148.07	<106.64	12	163	0.486	---	---	50.6	1150	
		<0.005	---	238	76.55	13.2	205	0.905	---	0.0124	126	1290	
		<0.003	---	54.36	44.39	11.6	96	0.416	---	<0.001	10.9	1040	
		<0.005	---	70.46	48.25	10	94.5	0.296	---	<0.0174	20.8	1100	
		<0.0059	---	~57.99	25.19	10	92.1	0.553	0.01	<0.0124	18.7	940	
		<0.0144	1.53	~118.87	<50.82	11.3	128	0.622	~0.0076	0.0094	77.3	1150	
SHP01	0631	0.199	---	<45.3	<37.99	9.22	251	6.62	---	0.0259	0.106	743	
		0.308	---	<39.76	<39.88	7.77	204	5.3	---	0.093	<0.011	589	
		0.301	0.477	<35.79	<40.14	9.17	236	4.41	0.0068	~0.0925	0.0822	618	

Site	Location	Fe	Fluoride	GrossAlpha	GrossBeta	K	Mg	Mn	Mo	NH ₄	NO ₃	Na
Code	Code	mg/L	mg/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP01	0632	0.0855	—	<43.06	<37.87	9.39	241	5.81	—	0.0098	1.45	655
		0.178	—	<40.24	<39.95	7.89	254	6.96	—	~0.179	1.31	685
		0.173	—	<49.31	<58.54	7.79	254	6.9	—	0.0647	1.29	680
		0.0512	0.392	<28.56	<31.44	9.54	244	4.34	0.0039	~0.0376	0.154	632
SHP01	0732	<0.006	—	<16.09	<16.77	3.44	40.8	0.0411	—	—	26.1	146
		<0.006	—	<16.39	<16.68	3.38	40.7	0.0409	—	—	25.7	146
		<0.005	—	<7.46	<8.7	3.71	45.6	0.162	—	0.169	28.5	163
		<0.003	—	<12.46	<11.34	4.68	69.6	0.0019	—	0.401	91.6	196
		<0.005	—	<10.32	<10.01	3.67	52.1	0.0151	—	0.339	30.6	170
		<0.0059	—	~5.16	<5.79	~3.39	40.7	0.0011	0.0034	0.482	57.9	137
		<0.0144	0.361	<9.32	<10.1	3.73	53.9	0.0014	~0.0032	~0.524	31.3	164
SHP01	0733	3.41	—	<68.48	<72.94	5.24	224	2.92	—	—	<0.008	480
		3.74	—	<31.77	<40.3	5.65	255	3.08	—	0.162	0.11	520
		3.71	—	<39.9	<37.77	6.07	251	3.28	—	0.118	<0.0693	509
		3.81	—	<39.89	<37.78	6.32	248	3.38	—	0.11	0.0812	499
		3.79	—	<37.02	<39.53	5.29	250	3.22	—	0.0502	1.36	447
		4.62	—	<40.22	<40.85	5.66	233	3.38	0.0045	~0.34	<0.0144	499
		3.53	0.508	<63.03	<111.21	5.85	237	3.11	0.0038	~0.213	<0.01	444
SHP01	0734	0.106	—	<95.14	<149.07	15.2	542	1.18	—	—	202	1340
		<0.005	—	160.3	<88.42	17.5	638	2.8	—	0.0361	161	1800
		<0.003	—	167.6	<116.43	25.2	798	1.42	—	<0.001	232	2230
		<0.005	—	<65.87	91.6	18	645	0.385	—	0.0279	261	1900
		<0.01	—	~87.24	<77.43	21.2	572	1.03	0.0072	0.0405	175	1840
		<0.0144	1.08	~170.47	<101.25	19.3	656	1.76	~0.0107	0.0345	211	2070
SHP01	0735	<0.005	—	102.8	<86.82	27.3	744	3.33	—	15.8	1790	1670
		<0.003	—	~141.4	<72.93	23.3	480	2.11	—	16.7	1230	1350
		<0.005	—	~228.1	105	32.5	945	3.9	—	25.3	2400	2180
		<0.0059	—	<88.7	<88.21	29.7	563	2.53	<0.004	15.8	1720	1530
		<0.0144	0.384	189.28	118.8	34.2	814	3.54	0.0054	20	1940	2070

Site	Location	Fe	Fluoride	GrossAlpha	GrossBeta	K	Mg	Mn	Mo	NH ₄	NO ₃	Na
Code	Code	mg/L	mg/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP01	0736	<0.0153	---	455.22	<241.74	39.9	787	4.68	---	---	0.377	2560
		0.1	---	633.5	244.2	42.5	1320	2.25	---	0.0148	5.88	4090
		<0.051	---	433.5	205.2	46.9	773	3.53	---	0.0093	2.91	3090
		0.0864	---	245.3	174	37.2	599	3.58	---	0.0607	1.67	2680
		<0.0059	---	201.71	<124.42	38.5	583	0.892	0.0158	<0.0246	0.58	2700
		<0.0484	0.699	~291.19	123.44	45.1	740	2.72	~0.0117	0.0381	0.14	3220
SHP01	0766	<0.0144	0.945	~2236.94	1159.67	146	3110	3.36	~0.0094	1.09	1180	6400
SHP01	0768	0.0257	1.08	506.08	519.25	77	1180	3.4	0.042	1.69	32.9	3810
SHP01	0773	<0.0144	0.899	~539.28	335.86	60.1	911	0.389	0.0037	12.9	1490	1030
SHP01	0775	<0.0144	1.64	1357.55	551.51	84.3	1580	0.29	~0.029	2.84	1070	3330
SHP01	0779	<0.0144	0.677	657.19	397.72	43.4	764	6.23	0.0115	23.2	157	1380
SHP01	0782	<0.0144	0.317	<4.07	<4.09	2.09	15.2	2.33	0.0045	0.0488	0.113	49
SHP01	0783	<0.0144	0.314	~4.87	<4.05	1.62	17.4	0.101	0.0075	0.0129	0.16	51.5
SHP01	0784	4.86	0.519	<7.21	<6.31	2.74	36.7	6.04	~0.0066	0.415	0.228	90
SHP01	0850	0.404	---	<27.51	<23.3	7.12	42	2.74	---	0.0518	0.465	623
		0.364	---	~21.47	19.95	5.11	34.2	2.29	---	0.111	0.194	596
		0.358	---	<22.27	<20.73	4.59	25.6	1.56	0.0112	0.067	<0.0204	528
		<0.0144	0.977	<27.42	<30.21	5.28	39.5	1.72	0.01	0.0742	0.0321	812
SHP01	0851	0.448	---	<20.91	<19.28	4.76	33.3	1.04	---	0.0518	0.0517	458
		0.594	---	<15.51	18.28	4.62	41.7	1.25	---	0.115	<0.0134	552
		0.583	---	<22.81	<20.76	4.4	33.3	0.982	0.0098	0.131	<0.01	489
SHP01	0852	0.144	---	<26.21	<23.17	6.31	45.2	1.52	---	0.0037	0.476	571
		0.288	---	~29.87	21.59	5.11	38.8	0.996	---	0.0262	0.516	615
		0.131	---	<23.98	<21	4.48	28.7	0.72	0.0065	0.0162	0.434	579

Site	Location	Fe	Fluoride	GrossAlpha	GrossBeta	K	Mg	Mn	Mo	NH ₄	NO ₃	Na
Code	Code	mg/L	mg/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP01	0853	1.58	---	98.45	73.8	32.1	165	2.49	---	16	0.101	246
		0.932	---	~169.9	86.97	22.7	152	2.25	---	0.385	<0.0414	246
		1.65	---	174.45	52.04	27.9	170	2.41	<0.0041	34	<0.0232	250
		0.769	0.326	~148.57	96.37	20.1	129	1.86	0.0039	32.5	0.05	218
SHP01	0854	<0.0296	---	2902	1109	159	3570	9.28	---	8.85	2220	6400
		<0.005	---	2438	1045	90.2	3540	12.8	---	38.4	1970	6040
		<0.0059	---	2223	823.64	120	3150	12.1	0.01	26.4	2030	5700
		<0.0144	<0.9	2468.99	1407.94	118	3440	10.4	0.0076	~28	2050	6230
SHP01	0855	<0.003	---	79.28	61.11	14.1	116	2.27	---	0.0134	27	1130
		<0.0172	---	~145.6	<60.31	12.8	134	2.36	---	0.0295	17.8	1380
		<0.0059	---	~74.49	47.09	13.5	121	2.18	0.0146	<0.0175	10.8	1260
		<0.0144	1.53	~68.02	<40.78	11.9	112	2.22	~0.0155	0.0309	39.6	1130
SHP01	0856	<0.0397	---	86.78	<39.12	18.8	108	1.43	---	0.0093	0.166	1100
		<0.0356	---	75.73	65.72	17.8	119	1.51	---	0.0843	<0.0324	1220
		<0.0449	---	~78.76	68.95	17.9	110	1.38	0.0122	0.0494	<0.0114	1140
		<0.0477	---	~85.08	64.08	18.4	114	1.43	0.0123	0.051	<0.0123	1140
		0.0475	0.578	~71.42	<40.77	17.7	104	1.38	~0.0137	0.0955	<0.0342	1120
		<0.0394	0.579	~94.37	<40.9	17.7	105	1.44	~0.0135	0.0776	0.142	1130
SHP01	0857	1.94	---	139.2	88.07	24.3	211	3.7	---	16.3	0.121	478
		3.53	---	~274.1	166.4	23.6	309	5.06	---	29	0.217	586
		2.37	---	199.37	95.28	24.8	263	4.4	0.0048	24.4	<0.0247	583
		0.713	0.351	124.34	80.75	19.5	183	3.19	0.0065	22.8	0.219	377
SHP01	0860	0.112	---	---	---	16.2	4.16	0.0239	---	2.29	0.47	712
		<0.0468	---	---	---	19.5	7.37	0.0354	---	7.65	0.423	1200
		<0.0144	1.28	---	---	11.1	16.1	0.332	0.121	0.859	32.2	2830
SHP01	0862	0.137	---	---	---	7.48	2.73	0.0586	---	1.68	0.236	610
		---	---	---	---	---	---	---	---	4.07	0.878	---
		---	---	---	---	---	---	---	---	2.78	14.3	---

Site	Location	Fe	Fluoride	GrossAlpha	GrossBeta	K	Mg	Mn	Mo	NH ₄	NO ₃	Na
Code	Code	mg/L	mg/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP01	0863	<0.0355	---	---	---	517	129	0.718	---	152	1.24	4960
		<0.005	---	~5.36	9.87	9.69	7.67	0.0524	---	2.5	3.15	92.1
		<0.0416	---	---	---	52.3	12.6	0.225	0.518	17	0.426	1470
		0.096	1.22	---	---	43.7	24.3	0.574	0.349	7.9	34.4	2750
SHP01	0923	---	---	---	---	---	---	---	---	---	528	---
SHP01	0924	---	---	---	---	---	---	---	---	---	704	---
SHP01	0925	---	---	---	---	---	---	---	---	---	2112	---
SHP01	0926	---	---	---	---	---	---	---	---	---	396	---
SHP01	0927	---	---	---	---	---	---	---	---	---	836	---
SHP01	0928	---	---	---	---	---	---	---	---	---	880	---
SHP01	0929	---	---	---	---	---	---	---	---	---	330	---
SHP01	1000	---	---	---	---	---	---	0.0821	---	2.46	28.2	---
SHP01	1001	---	---	---	---	---	---	0.0179	---	0.641	1.86	---
SHP01	1008	---	---	---	---	---	---	11	---	56.1	1200	---
SHP01	1009	---	---	---	---	---	---	4.07	---	32.7	903	---
SHP01	1010	---	---	---	---	---	---	5	---	48	551	---
SHP01	1013	---	---	---	---	---	---	0.451	---	6.38	2.38	---
SHP01	1062	---	---	---	---	---	---	0.297	---	2.6	0.356	---

Site	Location	Fe	Fluoride	GrossAlpha	GrossBeta	K	Mg	Mn	Mo	NH ₄	NO ₃	Na	
Code	Code	mg/L	mg/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
SHP02	0600	<0.006	---	1038.64	<308.59	62.1	585	0.87	---	---	513	3500	
		<0.005	---	1224.9	313.6	90.8	847	1.41	---	200	493	2570	
		<0.0124	---	1010	462.3	88.7	858	1.38	---	315	477	2580	
		<0.005	---	~633.9	368.8	56	669	1.03	---	170	538	3320	
		<0.0059	---	609.43	423.46	101	778	1.63	<0.0036	~332	516	2450	
		<0.0144	0.441	792.26	441.05	90.3	780	1.4	0.004	320	507	2460	
SHP02	0602	<0.006	---	672.12	<497.25	218	2640	1.97	---	---	57.8	2920	
		<0.0635	---	805	379.1	208	2730	1.95	---	481	56.1	3010	
		---	---	---	---	---	---	---	---	845	82.3	---	
		<0.0078	---	~689.6	494.9	238	2620	2.2	---	630	122	2790	
		<0.005	---	641.3	357.1	190	2860	2.14	---	653	119	3060	
		<0.0059	---	850.35	525.1	220	2480	2.14	0.0041	~566	129	2790	
SHP02	0603	<0.0144	0.679	652.58	418.38	217	2650	2.05	0.0038	551	109	3020	
		<0.0107	---	<314.63	<362.87	229	1250	32.3	---	---	3190	1300	
		<0.005	---	<101.53	163.8	214	1140	34	---	1850	4190	1230	
		---	---	---	---	---	---	---	---	2150	4390	---	
		<0.0095	---	<128.75	152.8	231	1080	32.7	---	1890	~4450	1230	
		<0.005	---	<86.3	206.4	199	1080	34.5	---	2160	4700	1250	
SHP02	0604	<0.0059	---	<113.41	180.7	217	950	30.4	0.0031	~1760	4790	1160	
		<0.0144	<0.36	<99.98	204.87	202	938	31.4	0.0028	~1740	4900	1150	
		<0.005	---	<169.6	<202.67	39.1	1050	0.378	---	0.57	2610	4880	
		---	---	---	---	---	---	---	---	0.0661	4960	---	
		0.0109	---	<216.41	<193.41	44.9	1230	0.483	---	0.105	~4560	4710	
		<0.0066	---	~125	<117.57	27.9	972	0.338	---	0.147	3730	3680	
SHP02	0648	<0.0259	---	~147.21	<155.11	~47.4	1320	0.547	0.0328	0.131	5470	5030	
		<0.0144	0.95	<195.18	<203.62	44.1	1320	0.504	0.034	0.0957	5330	5410	
		0.106	---	<20.21	<21.88	7.82	13.5	0.0886	---	0.569	<0.0285	836	
		0.123	---	<20.19	<21.83	7.82	13.4	0.0887	---	0.601	<0.0245	845	

Site	Location	Fe	Fluoride	GrossAlpha	GrossBeta	K	Mg	Mn	Mo	NH ₄	NO ₃	Na
Code	Code	mg/L	mg/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP02	0725	<0.006	---	124.28	<99.31	11.9	170	0.0071	---	---	138	1040
		<0.005	---	197.8	71.43	12.9	234	<0.0014	---	0.0124	191	1070
		---	---	---	---	---	---	---	---	0.0343	151	---
		<0.0185	---	155.6	83.65	15	240	0.0337	---	0.0071	199	1180
		<0.005	---	~197.4	101.5	11.6	206	0.0048	---	0.0264	182	1110
		<0.0059	---	235.7	67.12	14	191	0.0024	0.012	0.0073	175	1050
		<0.0144	1.61	~51.9	41.91	11.8	133	<0.0021	0.0092	0.069	59.1	1050
		<0.0144	1.42	<39.46	44.42	11.8	133	<0.0006	0.0092	0.032	57.2	1050
SHP02	0726	<0.006	---	<230.53	<244.61	34.2	504	0.468	---	---	363	2850
		<0.005	---	112.5	<87.32	33.1	431	0.467	---	0.0789	76.7	1930
		---	---	---	---	---	---	---	---	<0.01	184	---
		<0.003	---	<87.65	<82.58	33.1	365	0.109	---	0.0163	311	1610
		<0.005	---	<49.07	67.06	30.7	436	0.298	---	0.109	120	1730
		<0.0059	---	<82.13	<86.98	34.3	394	0.315	0.0023	0.0287	136	1520
		<0.0144	0.498	<56.3	<60.58	25.3	335	0.0721	0.0032	0.0927	137	1260
		---	---	---	---	---	---	---	---	---	---	---
SHP02	0727	<0.006	---	<442.3	<492.17	67.7	2160	1.43	---	---	1830	2760
		<0.005	---	330.1	167.7	68.6	2220	1.33	---	15.3	2010	2570
		---	---	---	---	---	---	---	---	16.8	1710	---
		0.161	---	298.4	219.2	85.8	2220	1.58	---	28.2	1930	2500
		<0.005	---	~353.3	209.8	62.8	2170	1.45	---	24.3	1680	2660
		<0.0059	---	285.6	<205.8	69.1	1820	1.36	0.0019	~12.4	1490	2700
		<0.0144	0.4	~433.13	349.01	83.8	2150	1.41	0.0013	46.5	1810	2190
		---	---	---	---	---	---	---	---	---	---	---
SHP02	0728	<0.006	---	<335.22	<370.1	132	1600	2.14	---	---	3010	1750
		<0.005	---	505.4	235.8	142	2030	2.51	---	218	4170	2230
		---	---	---	---	---	---	---	---	203	2840	---
		<0.003	---	~464.2	251.2	116	1300	1.83	---	181	~2600	1360
		<0.005	---	151.3	59.95	50.6	439	0.532	---	63.8	538	397
		<0.0059	---	89.42	76.75	~41.1	290	0.395	<0.0013	~46.6	281	252
		<0.0144	1.89	216.48	144.15	50.1	536	0.537	0.0011	50.2	499	619
		<0.0144	1.82	149.15	148.25	50.9	522	0.529	0.0011	51.8	496	601
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Site	Location	Fe	Fluoride	GrossAlpha	GrossBeta	K	Mg	Mn	Mo	NH ₄	NO ₃	Na
Code	Code	mg/L	mg/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP02	0730	0.311	---	<23.38	32.75	24.2	157	21.2	---	180	407	95.4
		---	---	---	---	---	---	---	---	211	412	---
		<0.0324	---	<31.84	<28.37	27.6	164	21.3	---	91	445	111
		1.12	---	---	---	24.6	169	21.7	---	208	479	116
		0.179	---	<30.19	<30.65	~27.2	172	20.8	<0.0008	~230	517	116
		0.225	1.02	---	---	26	174	22.5	<0.0004	~207	574	126
SHP02	0731	<0.005	---	73.32	<86.56	44.2	655	0.08	---	23.3	791	1320
		---	---	---	---	---	---	---	---	32.7	808	---
		<0.0034	---	<119.24	129.6	78.9	856	0.0479	---	47.8	~4100	1400
		<0.005	---	90.35	<86.15	55.7	707	0.0367	---	51.4	1770	1340
		0.222	---	<92.92	<101.34	54.4	748	0.181	0.0047	~39.6	1910	1360
		<0.0144	0.238	<71.89	<85.5	57.8	613	0.0482	<0.0039	66.6	1260	1170
SHP02	0812	<0.0135	---	---	---	78.2	2100	0.693	---	0.47	~6030	6150
		<0.005	---	---	---	58.5	2240	0.394	---	0.191	5500	6360
		<0.0059	---	---	---	~69.7	2050	0.271	0.0138	0.0234	6340	5910
		0.0741	<0.9	---	---	68.3	2140	0.161	0.0108	~0.249	5820	6140
SHP02	0813	---	---	---	---	---	---	---	---	---	7640	---
		---	---	---	---	---	---	---	---	---	6330	---
		<0.0102	---	<232.1	<194.24	108	3010	0.375	---	67.1	~7820	2540
		<0.005	---	<179.6	<232.61	87.3	3070	0.416	---	72.7	7240	2760
		<0.0059	---	<275	<303.56	109	2840	0.204	<0.0028	~74.9	8440	2360
		<0.0144	2.77	~260.39	<298.45	111	3080	0.29	0.0023	72.5	8790	2690
SHP02	0814	<0.0308	---	<223.11	<193.44	100	2530	1.33	---	18.8	4030	3210
		<0.005	---	<209.2	<200.7	84.6	2500	1.29	---	40.9	3860	3220
		<0.0059	---	<229.02	<208.44	~107	2320	1.25	0.0071	56.5	4270	3250
		0.0345	0.966	---	---	96.7	2460	1.34	0.0066	38.8	4100	3370
SHP02	0815	<0.0057	---	301.7	<282.9	~82.5	2650	1.41	---	0.0364	2510	3570
		<0.005	---	<257.4	<295	67.5	1300	1.37	---	0.0587	2540	1800
		<0.0059	---	297.22	<210.12	~77.1	2330	1.42	0.0083	~0.117	2730	3310
		<0.0144	0.382	~293.95	231.75	73.9	2450	1.32	0.0077	~0.505	2940	3520

Site	Location	Fe	Fluoride	GrossAlpha	GrossBeta	K	Mg	Mn	Mo	NH ₄	NO ₃	Na
Code	Code	mg/L	mg/L	pCl/L	pCl/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP02	0816	<0.0057	---	<63.85	<56.97	17.7	539	0.446	---	0.271	274	807
		<0.005	---	~75.41	<60.24	15.3	599	0.0451	---	0.0447	348	885
		<0.0059	---	<74.71	<76.92	~17.1	565	0.029	0.0056	0.0251	414	854
		<0.0144	1.21	~93.92	<75.77	17.8	702	0.0585	0.0046	~0.0141	558	1010
SHP02	0819	<0.0163	---	813.5	337.9	227	1730	2.2	---	325	125	2550
		<0.0441	---	1068	329.3	119	1770	1.87	---	2.88	151	3500
		0.0285	---	547	3836	179	1570	2.27	0.009	~504	272	2740
		0.0302	1.01	~629.94	437.55	178	1660	2.52	0.0071	536	380	2850
SHP02	0820	<0.0287	---	---	---	~63.2	109	0.34	---	5.8	436	4670
		0.0677	---	~117.4	<117.1	30.5	64.2	0.161	---	11.9	260	5090
		<0.0199	---	---	---	24.1	63.6	0.165	0.907	2.95	176	5220
		---	1.04	---	---	---	---	---	---	2.62	473	---
SHP02	0823	---	---	---	---	---	---	---	---	8.01	197	---
		---	1.15	---	---	---	---	---	---	2.72	483	---
SHP02	0824	0.269	---	105.6	437.4	635	158	0.122	---	222	113	2500
		<0.035	---	<86.12	189.6	198	97.1	0.109	---	0.8	91.3	3610
		<0.0059	---	<216.75	<205.6	221	130	0.106	1.35	~84.5	97.7	6380
		0.372	0.947	320.84	278.31	226	133	0.67	0.856	62.3	636	5930
SHP02	0826	<0.0049	---	1950	962.6	118	2260	2.63	---	43.8	169	2140
		<0.005	---	2241	991	102	2450	2.65	---	108	134	2210
		0.0631	---	1928	1945	121	2190	2.77	0.0046	~127	137	2040
		<0.0144	0.528	2171.68	1134.84	122	2310	2.61	0.004	110	94.7	2150
SHP02	0827	<0.0344	---	477.2	233.8	21.6	531	1.62	---	0.0529	546	1270
		<0.005	---	~425.4	287.3	21.6	552	1.63	---	1.83	568	1320
		0.0362	---	550.6	290.7	21.1	495	1.44	0.0048	~0.913	611	1200
		<0.0144	0.217	568.14	313.09	21.2	533	1.24	<0.0038	1.5	633	1330

Site	Location	Fe	Fluoride	GrossAlpha	GrossBeta	K	Mg	Mn	Mo	NH ₄	NO ₃	Na
Code	Code	mg/L	mg/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP02	0828	<0.003	---	179	116.8	17.1	276	0.143	---	1.8	83.9	508
		<0.005	---	240.9	102.4	19.2	357	0.0692	---	8.25	155	634
		<0.0059	---	130.2	124.7	19	214	0.497	0.0129	-2.73	73.1	491
		<0.0144	0.881	216.11	160.05	13.3	275	0.642	0.0087	3.3	35.4	431
SHP02	0829	<0.0069	---	885	426.9	39	826	1.03	---	7.1	157	4770
SHP02	0830	<0.0031	---	<22.42	<22.97	3.22	33.8	1.55	---	14.1	86.2	128
		<0.005	---	<14.81	<18.52	3.35	40	1.89	---	21.1	94.1	157
		<0.0059	---	<23.12	<24.47	3.64	42.6	2.27	<0.0008	-24.3	81.1	147
		<0.0144	0.595	<18.73	<20.16	2.47	35	1.98	<0.0006	13.4	75.1	132
SHP02	0832	<0.003	---	<48.01	<43.75	~11	285	0.0021	---	0.002	358	756
		<0.005	---	82.54	<85.3	13.4	525	<0.001	---	0.0353	1220	1240
		<0.0059	---	<102.6	<102.34	18.4	769	0.002	0.0066	0.0238	1790	1770
		<0.0144	0.986	<104.33	<120.33	19	889	<0.0009	0.007	0.0612	1560	2040
SHP02	0833	<0.003	---	62.25	<56.75	~12.4	466	0.0253	---	0.0576	377	574
		<0.005	---	~59.13	<58.58	13.5	626	0.0025	---	0.127	758	842
		<0.0059	---	151.42	<89.72	~16.3	743	0.0024	0.0038	0.0144	1100	1100
		<0.0144	0.684	94.75	<86.82	16.7	863	<0.0006	0.003	0.0248	1240	1050
SHP02	0835	0.238	---	<19.55	<19.3	4.99	94.4	0.033	---	<0.001	24.3	120
		<0.007	---	~16.22	<15.6	4.56	92.9	0.0034	---	0.012	23.2	114
		<0.0059	---	<21.32	<20.75	~4.29	96.9	<0.0009	0.0032	0.0068	27.6	118
		<0.0059	---	<21.48	<20.75	~4.47	100	<0.0009	0.0033	<0.0068	27.6	123
		<0.0144	0.577	19.49	<20.27	5.01	99.6	<0.0006	0.0032	0.0092	42.9	124
SHP02	0836	0.0794	---	<40.6	<37.92	~5.79	268	1.24	---	0.122	62.5	418
		0.101	---	89.82	97.35	4.64	269	1.25	---	0.039	61.7	412
		<0.0059	---	~64.12	<31.13	~5.03	262	1.54	0.0202	0.0144	57.9	488
		<0.0144	0.489	~38.24	<40.44	5.38	268	1.72	~0.023	0.0165	60.9	454
		<0.0144	0.447	60.17	<40.56	5.3	260	1.62	0.022	0.0118	61.4	443

Site	Location	Fe	Fluoride	GrossAlpha	GrossBeta	K	Mg	Mn	Mo	NH ₄	NO ₃	Na
Code	Code	mg/L	mg/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP02	0837	<0.003	---	<25.02	<22.79	~6.78	172	1.26	---	<0.001	3.46	173
		<0.005	---	34.29	<39.17	6.14	172	1.09	---	<0.0036	5.07	164
		<0.005	---	34.06	<24.18	6.07	171	1.1	---	<0.0055	5.06	162
		<0.0059	---	~18.13	23.1	~6.13	181	1.81	0.0099	0.0087	5.69	162
		<0.0144	0.347	~46.31	<30.31	6.59	173	2.86	~0.0121	0.0237	4.02	183
		<0.0144	0.356	35.48	<24.58	6.85	173	2.66	~0.0113	0.0248	3.9	183
SHP02	0838	<0.003	---	<19.65	<18.92	~4.23	87.6	0.0142	---	<0.001	11.6	111
		<0.005	---	<16.46	<18.76	4.64	114	0.0012	---	<0.0036	14.8	130
		<0.0059	---	<26.89	<24.99	~5.44	143	<0.0009	0.0027	0.005	15.5	174
		<0.0144	0.838	<18.06	<20.16	4	87.9	<0.0006	0.0025	0.0092	12.9	91.9
SHP02	0839	<0.0077	---	336	204.1	~111	1790	0.942	---	36.8	~2600	2020
		<0.005	---	299.3	307.6	90.2	1920	0.899	---	105	1990	2140
		<0.0059	---	293.09	<157.13	~102	1680	0.746	0.0048	~114	2180	1950
		<0.0144	<0.36	~436.64	420.2	113	2020	0.818	0.0041	~138	2500	2120
SHP02	0841	<0.0171	---	<219.5	<194.12	50.9	967	0.35	---	2.27	~2320	5180
		<0.005	---	<200.1	<200.11	40	931	0.136	---	2.37	2180	5500
		<0.0059	---	<220.07	<207.22	~46.2	699	0.0356	0.015	0.0613	1890	5400
		<0.0144	2.54	<184.47	<201.69	44.1	781	0.0255	0.0166	0.0274	1990	5710
SHP02	0843	<0.003	---	31.77	<22.84	~10.7	161	1.35	---	0.0134	<0.0604	180
		<0.005	---	<24.9	37.22	9.12	165	1.54	---	0.016	<0.0408	174
		<0.0059	---	~40.11	<23.22	~9.85	183	3.03	0.0092	0.0144	<0.018	190
		<0.0144	0.507	<27.64	<30.32	10.2	197	3.39	~0.0091	0.0417	0.62	207
		<0.0144	0.388	<27.68	<30.28	11.1	187	3.3	0.0081	0.0222	<0.01	196
SHP02	0844	<0.003	---	<42.04	<38.03	~10.5	359	0.0326	---	0.0134	137	462
		<0.003	---	55.58	<43.77	~10.3	355	0.0307	---	0.0163	140	449
		<0.005	---	~38	37.35	9.7	373	0.0428	---	0.0421	113	397
		<0.005	---	~52.86	<31.41	9.76	378	0.0391	---	0.0102	113	406
		<0.0059	---	<49.62	<47.81	11.2	377	0.0549	0.005	0.02	192	448
		<0.0144	0.565	41.44	<40.65	10.2	379	0.0358	0.0042	0.0118	164	470

Site	Location	Fe	Fluoride	GrossAlpha	GrossBeta	K	Mg	Mn	Mo	NH ₄	NO ₃	Na
Code	Code	mg/L	mg/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP02	0846	<0.003	---	<38.67	<37.79	~8.71	206	0.0765	---	0.0353	405	459
		<0.005	---	~34.59	<31.33	7.88	225	0.0074	---	0.0178	445	501
		<0.0059	---	~29.4	<30.89	~7.94	213	0.0028	0.0082	0.0162	517	492
		<0.0144	0.731	<39.32	<40.75	9.99	225	<0.0006	0.0087	0.0066	547	604
SHP02	0847	<0.0107	---	29.3	<22.82	4.6	92.3	0.0351	---	0.122	16.7	121
		<0.01	---	~24.82	<18.75	4.33	101	0.033	---	0.193	16.5	127
		<0.0075	---	~18.12	<18.51	~4.29	96.3	0.0282	0.0034	0.161	15	135
		<0.0159	---	~32.08	<18.61	~4.39	101	0.0295	0.0036	0.117	15	144
		<0.0144	0.843	19.97	<20.22	3.79	71.9	0.0182	0.0044	0.164	14.6	99.8
		<0.0144	0.792	<18.3	<20.2	3.73	71.8	0.0154	0.004	0.143	14.6	92.5
SHP02	0848	0.117	---	<79.97	<71.36	17.6	445	0.37	---	0.685	598	1380
		0.304	---	~75.09	<78.12	17.7	555	0.847	---	3.63	771	2230
		<0.0117	---	<99.75	<89.73	~18.6	500	0.43	0.0178	1.5	1070	1690
		0.0212	0.557	<77.72	<86.28	16	457	0.386	0.0208	1.66	737	1830
SHP02	0918	---	---	---	---	---	---	---	---	---	572	---
SHP02	0930	---	---	---	---	---	---	---	---	---	35.6	---
SHP02	1002	---	---	---	---	---	---	0.0198	---	0.0546	0.756	---
SHP02	1003	---	---	---	---	---	---	0.0239	---	0.13	0.676	---
SHP02	1004	---	---	---	---	---	---	29.9	---	~14.5	~8.96	---
SHP02	1007	---	---	---	---	---	---	0.773	---	4.42	127	---
SHP02	1011	---	---	---	---	---	---	0.723	---	1.51	287	---
SHP02	1048	<0.0144	<0.9	<257.59	<300.5	38.5	1090	<0.0154	0.0215	0.137	3160	7790
SHP02	1049	<0.0144	<0.9	<257.63	<300.52	41.9	1050	<0.0056	0.0213	~0.1	3010	7430

Site	Location	Fe	Fluoride	GrossAlpha	GrossBeta	K	Mg	Mn	Mo	NH ₄	NO ₃	Na
Code	Code	mg/L	mg/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP02	1057	---	---	---	---	---	---	8.49	---	1190	7250	---
SHP02	1058	---	---	---	---	---	---	0.0448	---	2.54	8.9	---
SHP02	1059	---	---	---	---	---	---	1.43	---	25	834	---
SHP02	1060	---	---	---	---	---	---	64.6	---	1.97	<0.03	---
SHP02	MW1	<0.0207	---	<58.65	<61.47	10.9	26	0.197	---	1.56	9.33	3110

Site	Location	Po-210	Ra-226	Ra-228	SO ₄	Sb	Se	Sr	U	V
Code	Code	pCi/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP01	0608	<0.06	0.09	<1.6	10800	<0.0014	0.0089	11.9	2.11	---
		<0.23	0.08	<0.8	10700	<0.001	0.0078	11.2	2.02	---
		<0.07	<0.13	<0.77	11300	<0.001	0.0075	11.4	2.01	---
		<0.18	<0.12	1.19	11000	<0.001	0.0076	11.5	2.01	---
		<0.21	<0.16	<1.15	10100	<0.0008	0.0081	10.8	1.97	<0.0006
		<0.12	<0.17	<0.98	11200	<0.0009	0.0077	11	1.95	---
SHP01	0610	<0.11	0.13	<1.4	9690	<0.0013	0.0216	10.8	1.78	---
		<0.47	0.11	<1	9320	<0.001	0.0268	10.9	1.79	---
		<0.04	<0.12	<0.65	8470	<0.001	0.0555	9.6	1.45	---
		<0.08	<0.12	<0.69	8920	<0.001	0.0401	10.4	1.59	---
		<0.2	<0.16	<0.85	13800	<0.0018	0.0296	10.8	1.7	<0.0006
		<0.23	<0.13	<0.74	8860	<0.0008	0.0177	10.7	1.67	---
SHP01	0612	<0.13	<0.11	<0.61	3750	<0.001	0.0278	5.64	0.991	---
		<0.24	<0.11	<0.73	1030	0.0023	<0.001	1.65	0.202	---
		<0.45	<0.14	<0.81	757	<0.0019	0.0116	1.54	0.127	0.0012
		<0.58	<0.13	<0.75	423	<0.0006	<0.0001	0.845	0.0542	---
SHP01	0614	<0.13	0.09	0.8	11000	<0.0017	0.214	10.7	2	---
		<0.41	0.07	<0.9	12200	<0.001	0.0917	12.6	2.46	---
		<0.05	<0.11	<0.62	11800	<0.001	0.115	12.4	2.22	---
		<0.16	<0.13	1.06	11900	<0.001	0.203	12.8	2.26	---
		---	---	---	---	---	---	---	---	---
		---	---	---	---	---	---	---	---	---
SHP01	0615	<0.14	<0.15	<0.78	12900	<0.0013	0.0662	12.5	2.33	---
		<0.1	0.13	<1.3	11100	<0.0013	0.607	9.31	2.24	---
		<0.27	0.11	1.2	10400	<0.001	0.864	9.06	1.91	---
		<0.04	<0.13	0.88	11400	<0.001	0.591	9.26	2.15	---
		<0.1	<0.15	<1.51	13000	<0.001	1.1	11.6	2.24	---
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		<0.07	<0.14	1.1	13400	<0.0004	1.04	11.7	2.27	---

Site	Location	Po-210	Ra-226	Ra-228	SO ₄	Sb	Se	Sr	U	V
Code	Code	pCi/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP01	0616	<0.14	0.22	<0.8	2800	<0.0016	0.0096	4.9	0.422	—
		<0.13	0.14	<1	2790	<0.0016	0.0101	4.92	0.414	—
		<0.37	0.06	<0.4	3310	<0.001	0.0214	4.73	0.422	—
		<0.05	<0.13	2.39	2490	<0.001	0.045	4.42	0.335	—
		<0.13	<0.1	<0.62	2340	<0.001	0.0963	4.57	0.372	—
		<0.26	<0.13	<0.75	2470	<0.0016	0.078	4.18	0.363	<0.0006
		<0.18	<0.13	<0.74	2940	<0.001	0.0612	5.14	0.474	—
SHP01	0617	<0.11	<0.07	<0.5	5000	<0.0013	0.0428	6.54	0.612	—
		<0.55	0.06	0.4	4460	<0.001	0.043	5.38	0.533	—
		<0.05	<0.11	0.62	4210	<0.001	0.0722	5.63	0.456	—
		<0.18	<0.14	<0.97	4140	<0.001	0.0868	5.52	0.482	—
		<0.25	<0.16	<1.01	4660	<0.0013	0.095	5.97	0.539	<0.0006
		<0.16	<0.14	<0.74	5140	<0.0008	0.0706	6.47	0.592	—
SHP01	0619	<0.11	0.08	1	7490	<0.0014	0.202	9.6	1.32	—
		<0.52	0.08	1.4	12200	<0.001	0.345	11.8	1.8	—
		<0.1	<0.12	1.14	11700	<0.001	0.314	10.7	1.64	—
		<0.07	<0.12	1.08	11700	<0.001	0.328	11.1	1.67	—
		<0.15	<0.15	<1	11900	<0.001	0.279	11	1.61	—
		—	—	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—	—
		<0.14	<0.12	<0.78	11600	<0.0004	0.468	11.5	1.38	—
<0.11	<0.14	<0.79	11400	0.0004	0.481	11.1	1.38	—		
SHP01	0620	<0.14	0.07	<1.3	8840	<0.0015	0.12	9.89	1.09	—
		<0.3	0.06	0.5	11200	<0.001	0.327	12.5	1.27	—
		<0.09	<0.12	<0.67	8810	<0.001	0.134	11.2	1.06	—
		<0.1	<0.13	1.15	8770	<0.001	0.272	10.1	1.06	—
		<0.18	<0.14	0.79	8200	<0.0017	0.247	8.76	0.813	<0.0006
		<0.12	<0.14	<0.74	7810	<0.001	0.159	9.2	0.791	—

Site	Location	Po-210	Ra-226	Ra-228	SO ₄	Sb	Se	Sr	U	V
Code	Code	pCi/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP01	0624	<0.15	0.06	0.8	7520	<0.0015	0.107	9.06	1.02	---
		<0.23	<0.05	<0.9	10500	<0.001	0.186	12	1.61	---
		<0.09	<0.14	1.17	9280	<0.001	0.215	10.6	1.45	---
		<0.14	<0.12	1.34	7840	<0.001	0.247	10.2	1.12	---
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		---	---	---	---	---	---	---	---	---
		<0.08	<0.15	0.87	7370	<0.0014	0.181	10.4	0.88	---
SHP01	0626	<0.14	<0.06	<0.9	2990	<0.0015	0.0111	5.76	0.148	---
		<0.42	<0.05	<1	3020	<0.001	0.0296	7.68	0.152	---
		<0.23	0.05	<0.8	3060	<0.001	0.0312	7.81	0.153	---
		<0.11	<0.13	<0.71	2590	<0.001	0.0128	6.67	0.0816	---
		<0.07	<0.11	0.73	2540	<0.001	0.0114	7.46	0.0901	---
		<0.15	<0.11	<0.66	2560	<0.001	0.0116	7.49	0.0881	---
		1.83	<0.15	<1.01	2900	<0.0016	0.0128	8.56	0.0878	0.0006
		<0.14	<0.14	<0.83	2980	<0.001	0.0364	10.4	0.104	---
		<0.12	<0.16	<0.9	2960	<0.001	0.0366	10.2	0.103	---
SHP01	0628	<0.16	<0.06	<0.6	2370	<0.0014	0.0169	10.6	0.0402	---
		<0.3	0.06	<0.6	2260	<0.001	0.0308	6.76	0.0339	---
		<0.16	<0.11	<0.62	3020	<0.001	0.0104	13.3	0.0291	---
		<0.22	<0.12	1.17	2190	<0.001	0.0488	10.5	0.0221	---
		<0.28	<0.15	<0.84	2290	<0.0015	0.005	8.42	0.0181	<0.0006
		<0.1	<0.15	<0.83	2480	<0.0009	0.0092	11.4	0.0279	---
SHP01	0630	<0.09	<0.31	<0.7	3230	<0.002	0.142	14.1	0.255	---
		<0.36	<0.17	<0.9	3970	<0.001	0.164	20.5	0.34	---
		<0.05	<0.1	<0.59	2890	<0.001	0.0936	10.5	0.116	---
		<0.15	<0.12	<0.71	2880	<0.001	0.116	12.1	0.13	---
		<0.25	<0.12	<0.7	2670	<0.0022	0.0802	8.91	0.092	0.007
		<0.21	<0.14	<0.81	3880	<0.0011	0.123	20.1	0.122	---
SHP01	0631	<0.05	<0.1	<0.61	2660	<0.001	<0.0001	5.09	0.0204	---
		<0.2	<0.1	<0.59	2620	<0.001	<0.001	4.05	0.0176	---
		<0.1	<0.12	<0.78	2600	<0.0004	<0.0001	4.53	0.0185	---

Site	Location	Po-210	Ra-226	Ra-228	SO ₄	Sb	Se	Sr	U	V
Code	Code	pCi/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP01	0632	<0.07	<0.11	<0.63	2570	<0.001	<0.0001	4.69	0.0239	---
		<0.12	<0.1	0.61	2460	<0.001	<0.001	4.9	0.023	---
		<0.11	<0.1	0.74	2560	<0.001	<0.001	4.96	0.0242	---
		<0.18	<0.12	<0.77	2670	<0.0004	<0.0001	4.51	0.0213	---
SHP01	0732	<0.14	<0.04	<0.5	399	<0.0012	0.0046	1.11	0.0057	---
		<0.07	0.1	<0.4	398	<0.0012	0.0045	1.11	0.0061	---
		<0.52	<0.04	<0.7	553	<0.001	0.0037	1.37	0.0084	---
		<0.04	<0.11	<0.64	605	<0.001	0.0037	1.58	0.0073	---
		<0.17	<0.11	0.95	560	<0.001	0.0033	1.54	0.0087	---
		<0.14	<0.13	<0.78	380	<0.0017	0.0042	0.797	0.0059	<0.0006
		<0.19	<0.12	<0.79	517	<0.0004	0.0038	1.29	0.009	---
SHP01	0733	<0.23	<0.07	<0.9	1830	<0.001	<0.0002	4.52	0.0196	---
		<0.39	0.11	<1	2500	<0.001	<0.001	4.61	0.0206	---
		<0.05	<0.1	<0.61	2310	<0.001	<0.0001	5.23	0.0209	---
		<0.04	<0.11	<0.64	2310	<0.001	<0.0001	5.24	0.0205	---
		<0.21	<0.1	<0.61	2240	<0.001	<0.001	5.07	0.0226	---
		<0.18	<0.13	~0.7	2350	<0.0003	<0.001	4.75	0.0173	<0.0006
		<0.16	<0.13	<0.79	2310	<0.0004	<0.0001	4.59	0.0197	---
SHP01	0734	<0.04	0.12	<0.6	5020	<0.0013	0.196	8.52	0.0957	---
		<0.21	0.09	<0.9	6590	<0.001	0.15	8.82	0.139	---
		<0.06	<0.11	<0.61	11800	<0.001	0.231	10.9	0.192	---
		<0.16	<0.17	<4.78	6600	<0.001	0.172	9.04	0.0991	---
		<0.19	<0.13	<0.72	6570	<0.0016	0.151	8.7	0.111	<0.0006
		<0.18	<0.15	<0.83	7140	<0.0009	0.114	9.56	0.13	---
SHP01	0735	<0.27	0.13	<0.6	5310	<0.001	0.0954	7.57	0.16	---
		<0.06	<0.13	<0.72	3900	<0.001	0.0673	5.14	0.112	---
		<0.11	<0.11	<1.03	6270	<0.001	0.15	8.9	0.205	---
		<0.13	<0.14	<0.76	4380	<0.0007	0.13	6.23	0.125	<0.0006
		<0.16	<0.14	<0.76	6240	<0.001	0.0812	8.21	0.189	---

Site	Location	Po-210	Ra-226	Ra-228	SO ₄	Sb	Se	Sr	U	V
Code	Code	pCi/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP01	0736	<0.08	<0.03	<1.1	8710	<0.0017	0.0097	8.25	0.531	---
		<0.25	0.09	<0.4	13600	0.0016	0.0033	11.1	0.746	---
		<0.05	<0.12	<0.71	9900	<0.001	0.0062	8.71	0.625	---
		<0.13	<0.11	<0.69	7830	<0.001	0.0012	7.97	0.392	---
		<0.26	<0.13	<0.77	8720	<0.0022	0.002	7.59	0.425	<0.0006
		<0.14	<0.15	<0.88	9950	<0.0015	0.0012	7.64	0.479	---
SHP01	0766	<0.22	0.18	<0.91	24600	<0.0012	0.0035	15.6	3.5	---
SHP01	0768	<0.15	<0.13	<0.81	12500	0.0009	0.134	11	0.948	---
SHP01	0773	<0.13	<0.13	<0.77	5440	<0.0004	0.0122	5.7	0.808	---
SHP01	0775	<0.19	<0.13	<0.73	12800	<0.0011	0.0246	10.4	1.96	---
SHP01	0779	<0.2	<0.13	<0.76	6500	<0.0013	0.001	7.96	0.984	---
SHP01	0782	<0.15	<0.14	<0.79	183	<0.0006	<0.0001	0.879	0.0025	---
SHP01	0783	<0.11	<0.14	<0.83	138	<0.0006	<0.0004	0.505	0.0078	---
SHP01	0784	<0.27	<0.16	<0.86	211	<0.0007	<0.0002	1.35	0.0032	---
SHP01	0850	<0.08	0.24	<0.63	1590	<0.001	<0.0001	2.86	0.0088	---
		<0.12	0.14	<0.76	1480	<0.001	<0.001	2.4	0.0166	---
		<0.18	<0.13	<0.77	1140	<0.0003	<0.001	1.76	0.0129	0.0012
		<0.17	<0.12	<0.73	1920	<0.0006	<0.0004	2.82	0.0274	---
SHP01	0851	<0.15	<0.12	<0.71	1160	<0.001	<0.0001	2.46	0.0111	---
		<0.11	<0.14	<0.84	1460	<0.001	<0.001	3.18	0.0174	---
		<0.35	<0.13	<0.76	1250	<0.0003	<0.001	2.61	0.0155	<0.0006
SHP01	0852	<0.06	<0.11	<0.65	1580	<0.001	0.0012	2.88	0.0165	---
		<0.11	<0.12	<0.7	1640	<0.001	<0.001	2.57	0.0171	---
		<0.23	<0.13	<0.79	1420	<0.0004	<0.001	1.85	0.0148	0.0011

Site Code	Location Code	Po-210 pCi/L	Ra-226 pCi/L	Ra-228 pCi/L	SO ₄ mg/L	Sb mg/L	Se mg/L	Sr mg/L	U mg/L	V mg/L
SHP01	0853	<0.08	<0.1	<0.61	1960	<0.001	<0.0001	4.21	0.166	---
		<0.06	<0.13	<0.8	1930	<0.001	<0.001	4.01	0.224	---
		<0.14	<0.14	<0.8	1980	<0.0012	<0.001	4	0.183	<0.0006
		<0.15	<0.13	<0.77	1600	<0.0004	0.0002	3.52	0.185	---
SHP01	0854	<0.11	<0.11	<0.63	23800	<0.001	0.0031	17.1	3.95	---
		<0.24	<0.12	1.02	22400	<0.001	0.0041	16.2	3.43	---
		<0.26	<0.16	<1.06	22200	<0.0015	0.0046	15.4	3.58	<0.0006
		<0.16	<0.14	<0.78	25300	0.0006	0.0054	16.5	3.77	---
SHP01	0855	<0.07	<0.11	0.59	3240	<0.001	0.0896	9.33	0.143	---
		<0.15	<0.11	<0.63	3710	<0.001	0.106	9.83	0.178	---
		<0.23	<0.13	<0.74	3830	<0.0019	0.122	10.1	0.156	<0.0006
		<0.18	<0.14	<0.81	3210	<0.0011	0.0784	8.83	0.11	---
SHP01	0856	<0.05	<0.11	0.64	3130	<0.001	0.0003	3.95	0.144	---
		<0.12	<0.11	0.98	3330	<0.001	<0.001	4.43	0.16	---
		<0.14	<0.14	<0.76	3440	<0.0013	<0.001	3.92	0.162	<0.0006
		<0.18	<0.13	0.85	3470	<0.0012	<0.001	4.02	0.16	<0.0006
		<0.16	<0.14	0.76	3250	<0.0008	0.0008	3.84	0.13	---
		<0.16	<0.13	<0.76	3250	<0.0008	0.0007	4	0.13	---
SHP01	0857	<0.05	<0.11	<0.62	2440	<0.001	<0.0001	4.16	0.174	---
		<0.1	<0.14	<0.92	3210	<0.001	<0.001	5.75	0.285	---
		<0.37	<0.15	<0.81	3260	<0.0012	<0.001	4.86	0.311	<0.0006
		<0.17	<0.13	<0.76	2110	<0.0015	<0.0003	3.55	0.212	---
SHP01	0860	---	---	---	341	0.0044	0.0015	0.586	0.012	---
		---	---	---	509	0.0047	0.0029	0.922	0.0119	---
		---	---	---	1600	0.0023	0.001	3.25	0.0149	---
SHP01	0862	---	---	---	265	0.0025	0.0007	0.319	0.0162	---
		---	---	---	1060	---	---	---	---	---
		---	---	---	---	---	---	---	---	---

Site	Location	Po-210	Ra-226	Ra-228	SO ₄	Sb	Se	Sr	U	V
Code	Code	pCi/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP01	0863	---	---	---	6170	0.0059	0.0052	16	0.0529	---
		<0.3	0.18	<0.65	134	<0.001	0.0013	0.566	0.0034	---
		---	---	---	1130	<0.0024	<0.001	1.68	0.0285	0.0017
		---	---	---	1960	0.0028	0.0007	4.04	0.0259	---
SHP01	0923	---	---	---	17100	---	---	---	1.926	---
SHP01	0924	---	---	---	28800	---	---	---	4.304	---
SHP01	0925	---	---	---	24700	---	---	---	4.211	---
SHP01	0926	---	---	---	840	---	---	---	1.216	---
SHP01	0927	---	---	---	21900	---	---	---	3.175	---
SHP01	0928	---	---	---	21900	---	---	---	3.361	---
SHP01	0929	---	---	---	13900	---	---	---	2.086	---
SHP01	1000	---	---	---	306	---	~0.006	---	0.0071	---
SHP01	1001	---	---	---	134	---	~0.0009	---	0.0082	---
SHP01	1008	---	---	---	17100	---	~0.0089	---	1.87	---
SHP01	1009	---	---	---	3920	---	~0.0456	---	0.299	---
SHP01	1010	---	---	---	3900	---	~0.0598	---	0.327	---
SHP01	1013	---	---	---	763	---	~0.0034	---	0.0509	---
SHP01	1062	---	---	---	88.3	---	~0.0004	---	<0.0013	---

Site	Location	Po-210	Ra-226	Ra-228	SO ₄	Sb	Se	Sr	U	V
Code	Code	pCi/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP02	0600	<0.07	1.03	4	9030	<0.0015	0.0018	9.08	1.1	—
		<0.28	0.94	4.6	9030	<0.001	0.0021	9.46	1.25	—
		<0.06	1.08	5.08	8710	<0.001	0.0016	9.64	1.29	—
		<0.16	0.83	4.48	8770	<0.001	0.0012	8.49	1.19	—
		<0.17	0.92	4.79	8600	<0.0006	0.0016	9.23	1.2	<0.0006
		<0.24	1.1	—	8750	<0.0004	0.0018	9.42	1.18	—
SHP02	0602	<0.14	4.64	9.4	16400	<0.0014	0.005	12.1	0.741	—
		<0.55	4.21	0.3	17100	<0.001	0.0049	12.8	0.653	—
		—	—	—	17600	—	—	—	0.741	—
		<0.24	4.23	10.53	17600	<0.001	0.0045	11.9	0.805	—
		<0.3	4.38	10.9	16800	<0.001	0.0049	13	0.801	—
		<0.26	4.31	~10.58	17600	<0.0008	0.0045	11.8	0.836	<0.0006
		<0.37	4.34	—	17400	<0.0008	0.0052	12.5	0.726	—
SHP02	0603	<0.15	0.44	1.9	11400	<0.0011	0.455	2.98	0.0145	—
		<0.55	0.46	3	10300	<0.001	0.353	2.82	0.013	—
		—	—	—	10000	—	—	—	0.0131	—
		<0.04	0.21	2.6	9420	<0.001	0.322	3.16	0.0113	—
		<0.26	0.31	2.55	8930	<0.001	0.346	3.16	0.0134	—
		<0.43	0.21	~2.42	8970	<0.0005	0.315	3.21	0.0111	0.115
		<0.16	0.29	2.12	8590	<0.0004	0.304	3.02	0.0121	0.119
SHP02	0604	<0.25	0.78	<0.9	4240	<0.001	0.119	18.3	0.06	—
		—	—	—	8080	—	—	—	0.0692	—
		<0.09	0.65	2.37	7920	0.0014	0.274	16.5	0.0608	—
		<0.16	0.41	<1.87	6390	<0.001	0.24	13.1	0.0483	—
		<0.23	0.56	1.22	9080	<0.0026	0.391	16.9	0.0659	<0.0006
		<0.14	0.54	<0.85	9240	<0.0022	0.321	19.1	0.0807	—
SHP02	0648	<0.07	0.58	0.83	2000	<0.001	<0.001	12.1	<0.001	—
		<0.04	0.57	1.01	1990	<0.001	<0.001	12	<0.001	—

Site	Location	Po-210	Ra-226	Ra-228	SO ₄	Sb	Se	Sr	U	V
Code	Code	pCi/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP02	0725	<0.08	0.14	<0.5	3110	<0.0011	0.0359	10.3	0.237	---
		<0.22	<0.05	<0.6	3490	<0.001	0.0446	9.3	0.325	---
		---	---	---	3190	---	---	---	0.287	---
		<0.13	<0.12	<0.7	3640	<0.001	0.0553	14	0.293	---
		<0.18	<0.11	<0.62	3390	<0.001	0.0518	9.94	0.304	---
		<0.23	<0.12	<0.7	3390	<0.0005	0.0268	10.7	0.321	0.021
		<0.13	<0.13	<0.78	3640	<0.0004	0.0836	9.44	0.0781	---
		<0.09	<0.12	<0.75	3600	<0.0004	0.0826	9.36	0.077	---
SHP02	0726	<0.13	1.08	3.1	7750	<0.0013	0.0044	7.77	0.0485	---
		<0.41	0.97	2.4	6200	<0.001	0.0017	6.42	0.029	---
		---	---	---	7300	---	---	---	0.0369	---
		<0.06	0.92	1.83	~8780	<0.001	0.213	8.85	0.0267	---
		<0.13	0.92	<1.63	5770	<0.001	0.0215	7.49	0.028	---
		<0.26	0.94	~1.98	5330	<0.0006	0.0199	6.89	0.0262	<0.0006
		<0.1	0.62	0.93	4710	<0.0004	0.198	7.72	0.0206	---
SHP02	0727	<0.07	4.16	7.2	11900	<0.0012	0.0013	13.5	0.385	---
		<0.39	3.02	5.2	11800	<0.001	<0.001	13.8	0.402	---
		---	---	---	11800	---	---	---	0.369	---
		<0.08	3.49	6.22	11600	<0.001	0.0006	13.5	0.4	---
		<0.11	2.88	6.09	11900	<0.001	<0.001	13	0.37	---
		<0.28	2.92	~5.79	12100	<0.0007	0.0012	12.9	0.313	<0.0006
		<0.18	2.76	---	12000	<0.0004	0.0007	12.6	0.432	---
SHP02	0728	<0.15	6.03	5.6	8610	<0.0011	0.0362	10.9	0.566	---
		<0.39	6.5	9	10300	<0.001	0.0365	13.4	0.579	---
		---	---	---	7660	---	---	---	0.466	---
		<0.12	4.38	5.34	5580	<0.001	0.027	9.69	0.429	---
		<0.19	1.09	1.73	3200	<0.001	0.0257	5.22	0.214	---
		<0.16	0.84	~1.09	2780	<0.0014	0.0165	4.26	0.174	<0.0006
		<0.14	1.26	1.2	4000	<0.0004	0.0777	5.36	0.252	---
		<0.15	1.29	0.94	3960	<0.0004	0.0785	5.37	0.261	---

Site	Location	Po-210	Ra-226	Ra-228	SO ₄	Sb	Se	Sr	U	V
Code	Code	pCi/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP02	0730	<0.4	0.25	<0.8	2360	<0.001	0.0175	2.5	0.0038	---
		---	---	---	2310	---	---	---	0.0042	---
		0.18	0.19	0.86	~2380	<0.001	0.0161	2.79	0.0024	---
		---	---	---	2380	<0.001	0.0166	2.63	0.0025	---
		<0.19	0.21	<0.87	2440	<0.0004	0.016	2.69	0.003	0.887
		<0.07	---	---	2570	<0.0004	0.0173	2.75	0.0021	0.814
SHP02	0731	<0.23	0.18	1.7	5060	<0.001	0.3	8.91	0.0477	---
		---	---	---	4840	---	---	---	0.0516	---
		<0.06	<0.13	0.82	4250	<0.001	0.53	12.2	0.0359	---
		<0.15	<0.11	0.74	4510	<0.001	0.554	9.75	0.0355	---
		<0.14	<0.15	~0.88	5320	<0.0014	0.303	10.3	0.0568	<0.0006
		<0.14	0.15	0.78	5740	<0.0006	0.17	8.54	0.043	---
SHP02	0812	---	---	---	14100	0.0015	5.78	14.1	0.125	---
		<0.21	---	---	15000	<0.001	6.69	14	0.123	---
		---	---	---	14900	<0.0013	6.41	14.1	0.121	<0.0006
		<0.13	---	---	15600	0.0008	6.52	14	0.119	---
SHP02	0813	---	---	---	---	---	---	---	---	---
		---	---	---	---	---	---	---	---	---
		<0.05	0.49	<0.64	11200	<0.001	0.065	17.3	0.157	---
		<0.19	1.05	2.03	11500	<0.001	0.0812	17.6	0.16	---
		<0.13	0.68	~1.18	11200	<0.0005	0.0533	17.4	0.145	<0.0006
		<0.12	1.34	1.78	12400	<0.0004	0.0372	18.3	0.147	---
SHP02	0814	<0.05	0.99	1.23	12200	<0.001	2.62	12.9	0.146	---
		---	---	---	13000	<0.001	3.3	12.8	0.142	---
		<0.21	0.74	~1.34	13500	<0.0007	2.77	13.2	0.125	<0.0006
		<0.16	---	---	13800	<0.0004	2.96	13.6	0.127	---
SHP02	0815	<0.07	3.34	2.74	13200	<0.001	0.188	13	0.333	---
		<0.09	4.25	3.74	14400	<0.001	0.386	6.65	0.33	---
		<0.22	3.9	~3.57	14200	<0.0005	0.3	12.1	0.332	<0.0006
		<0.13	4	---	15300	<0.0004	0.373	12.8	0.323	---

Site	Location	Po-210	Ra-226	Ra-228	SO ₄	Sb	Se	Sr	U	V
Code	Code	pCi/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP02	0816	<0.06	0.27	<0.65	3580	0.0016	0.185	6.84	0.0601	---
		<0.11	0.16	<0.64	5450	<0.001	0.206	6.96	0.069	---
		<0.18	<0.12	<0.65	4560	<0.0006	0.183	7.44	0.0663	<0.0006
		<0.13	0.21	<0.79	5420	<0.0004	0.242	8.58	0.0749	---
SHP02	0819	<0.12	0.72	1.11	12400	0.0011	0.0132	10.6	2.15	---
		<0.29	---	---	13000	<0.001	0.0059	11.1	1.15	---
		<0.45	0.53	~1.38	12400	<0.001	0.0061	10.1	1.57	<0.0006
		<0.33	0.82	1.27	13400	0.0005	0.0041	10.5	1.39	---
SHP02	0820	---	---	---	6870	0.011	0.0212	11.6	0.349	---
		---	---	---	7450	0.0049	0.0043	12.2	0.203	---
		---	---	---	7190	<0.0067	0.0162	13.7	0.19	<0.0006
		---	---	---	7040	---	---	---	---	---
SHP02	0823	---	---	---	2570	---	---	---	0.297	---
		---	---	---	3170	---	---	---	---	---
SHP02	0824	<0.16	3.53	3.4	3880	0.0045	0.0162	12.3	0.0662	---
		<0.14	1.02	1.18	4700	0.0028	0.0087	14	0.0263	---
		<0.18	0.79	~1.53	7850	<0.0053	0.0095	23.6	0.0414	<0.0006
		<0.09	0.96	1.13	7130	<0.0038	0.0039	20.3	0.172	---
SHP02	0826	<0.09	0.91	1.66	~11500	<0.001	0.0852	12.1	2.86	---
		<0.15	1.39	3.31	12000	<0.001	0.0636	12.2	3.04	---
		<0.28	1.25	~2.65	12800	<0.0006	0.055	11.1	3.4	<0.0006
		<0.12	0.91	1.92	14100	<0.0004	0.0389	12.8	3.08	---
SHP02	0827	<0.08	1.42	1.78	4310	<0.001	0.0024	8.47	0.791	---
		<0.08	2.21	2.14	4550	<0.001	0.0131	8.16	0.814	---
		<0.31	1.84	~2.06	4290	<0.0009	0.0153	7.75	0.873	<0.0006
		<0.13	1.87	2.47	4600	<0.0007	0.0341	7.83	0.781	---

Site	Location	Po-210	Ra-226	Ra-228	SO ₄	Sb	Se	Sr	U	V
Code	Code	pCi/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP02	0828	<0.09	0.51	<0.72	2460	<0.001	0.0242	5.32	0.306	---
		<0.12	<0.12	<0.67	2950	<0.001	0.038	5.18	0.315	---
		<0.29	0.14	~0.73	1640	<0.0007	0.0181	4.04	0.324	<0.0006
		<0.26	0.45	<0.79	2090	<0.0013	0.0034	4.91	0.388	---
SHP02	0829	<0.03	---	---	10800	0.0044	0.0169	15.8	1.13	---
SHP02	0830	<0.07	<0.12	<0.68	1650	<0.001	0.0218	0.281	0.0036	---
		<0.14	0.12	<0.66	1660	<0.001	0.0257	0.166	0.0052	---
		<0.27	<0.12	<0.7	1790	<0.0005	0.0255	0.208	0.0076	0.192
		<0.15	<0.12	<0.77	1760	<0.0005	0.0216	0.169	0.0051	0.157
SHP02	0832	<0.16	0.14	<0.57	3030	<0.001	0.444	3.72	0.0269	---
		<0.13	0.22	<0.57	4340	<0.001	1.6	5.55	0.0471	---
		<0.27	0.17	<0.75	5800	<0.0004	2.29	6.58	0.0644	<0.0006
		<0.14	0.79	<0.79	6980	<0.0004	2.61	7.67	0.075	---
SHP02	0833	<0.07	0.15	<0.61	3100	<0.001	0.18	6.79	0.0743	---
		<0.11	<0.13	<0.74	4940	<0.001	0.366	8.76	0.106	---
		<0.15	<0.11	0.67	5590	<0.0003	0.5	8.7	0.128	<0.0006
		<0.15	<0.14	<0.82	5950	<0.0004	0.592	10	0.123	---
SHP02	0835	<0.07	0.16	<0.65	1170	<0.001	0.037	3.33	0.0271	---
		<0.18	<0.13	<0.73	882	<0.001	0.0373	3.3	0.0282	---
		<0.11	<0.1	<0.6	1260	<0.0004	0.0467	3.15	0.0283	<0.0006
		<0.17	<0.1	<0.57	1260	<0.0003	0.0462	3.13	0.028	<0.0006
		<0.13	<0.13	<0.77	1440	<0.0004	0.0453	3.66	0.0258	---
SHP02	0836	<0.05	0.17	<0.59	2780	<0.001	0.11	6.44	0.0563	---
		<0.06	<0.11	<0.62	2800	<0.001	0.142	6.54	0.056	---
		<0.16	<0.13	<0.78	2910	<0.0003	0.115	6.2	0.0563	<0.0006
		<0.21	<0.13	<0.75	2950	<0.0007	0.111	6.63	0.0537	---
		<0.13	<0.11	<0.63	3200	<0.0004	0.0976	6.49	0.0525	---

Site	Location	Po-210	Ra-226	Ra-228	SO ₄	Sb	Se	Sr	U	V
Code	Code	pCi/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP02	0837	<0.05	0.28	<0.61	1700	<0.001	0.0099	4.73	0.0353	--
		<0.14	<0.11	0.64	1670	<0.001	0.012	4.77	0.0372	--
		<0.08	<0.09	<0.55	1660	<0.001	0.013	4.8	0.0373	--
		<0.18	<0.14	<0.81	1680	<0.0003	0.0156	4.69	0.0353	0.0008
		<0.18	<0.14	<0.76	1860	<0.0007	0.0187	5.19	0.043	--
		<0.16	<0.12	<0.73	1860	<0.0004	0.0162	5.14	0.0421	--
SHP02	0838	<0.06	0.19	<0.6	1180	<0.001	0.0298	3.59	0.0235	--
		<0.1	0.14	<0.75	1740	<0.001	0.0472	4.51	0.0314	--
		<0.17	<0.1	<0.58	1770	<0.0003	0.0538	4.83	0.0335	<0.0006
		<0.13	<0.11	<0.64	1300	<0.0004	0.0272	3.51	0.0252	--
SHP02	0839	<0.07	1.41	1.56	9210	<0.001	0.0108	10.6	0.382	--
		<0.09	2.72	2.87	10100	<0.001	0.0105	11.5	0.388	--
		<0.14	2.01	~2.46	9950	<0.0005	0.0093	10.3	0.378	<0.0006
		<0.15	3.08	3.34	11700	<0.0004	0.002	10.8	0.589	--
SHP02	0841	<0.1	0.48	0.74	13300	<0.001	3.02	8.97	0.114	--
		<0.12	0.69	1.3	13700	<0.001	3.42	9	0.103	--
		<0.14	0.54	1.35	14200	<0.0004	2.71	7.86	0.09	<0.0006
		<0.11	0.69	0.95	14800	<0.0004	2.94	8.58	0.094	--
SHP02	0843	<0.04	0.17	<0.61	1740	<0.001	0.0014	5.1	0.0274	--
		<0.15	0.13	<0.74	1720	<0.001	<0.001	5.48	0.0303	--
		<0.25	0.16	<0.79	1940	<0.0004	<0.001	5.29	0.0314	<0.0006
		<0.1	<0.14	<0.77	2170	<0.0014	0.001	6.26	0.0289	--
		<0.16	<0.11	<0.64	2240	<0.0004	0.0006	6.39	0.0286	--
SHP02	0844	<0.07	0.26	<0.59	2740	<0.001	0.159	6.29	0.0404	--
		<0.07	0.25	<0.58	2670	<0.001	0.168	6.23	0.0406	--
		<0.19	0.24	<0.76	3080	<0.001	0.155	6.33	0.0426	--
		<0.19	0.23	<0.73	3070	<0.001	0.155	6.33	0.0423	--
		<0.17	0.34	<0.77	2920	<0.0003	0.208	6.34	0.0484	<0.0006
		<0.14	0.3	<0.71	3390	<0.0004	0.171	6.76	0.0495	--

Site	Location	Po-210	Ra-226	Ra-228	SO ₄	Sb	Se	Sr	U	V
Code	Code	pCi/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP02	0846	<0.07	0.35	<0.58	2240	<0.001	0.668	6.27	0.0405	---
		<0.19	0.16	<0.62	4550	<0.001	0.89	6.37	0.0421	---
		<0.23	0.18	<0.81	2570	<0.0003	0.931	6.02	0.0435	<0.0006
		<0.06	0.13	<0.68	2890	<0.0004	0.89	6.48	0.0458	---
SHP02	0847	<0.08	0.24	<0.61	1420	<0.001	0.0329	4.6	0.0256	---
		<0.14	0.22	<0.6	1650	<0.001	0.0396	4.53	0.0273	---
		<0.27	0.23	<0.76	1630	<0.0004	0.0406	4.39	0.0274	<0.0006
		<0.34	0.14	<0.8	1630	<0.0004	0.0409	4.36	0.0275	<0.0006
		<0.1	0.18	<0.78	1370	<0.0006	0.0295	3.66	0.021	---
		<0.13	0.16	<0.67	1390	<0.0006	0.0296	3.68	0.0197	---
SHP02	0848	0.28	1.08	<0.65	4310	<0.001	0.9	8.07	0.0398	---
		<0.25	1.32	<1.06	6440	<0.001	0.338	9.88	0.0519	---
		<0.29	0.95	1.17	5330	<0.0006	1.65	8.76	0.0551	<0.0006
		<0.26	1.04	<0.74	5690	<0.0009	0.974	8.33	0.0474	---
SHP02	0918	---	---	---	6011	---	---	---	0.0448	---
SHP02	0930	---	---	---	760	---	---	---	0.159	---
SHP02	1002	---	---	---	99.4	---	~0.0002	---	<0.0015	---
SHP02	1003	---	---	---	102	---	~0.0002	---	<0.0013	---
SHP02	1004	---	---	---	1750	---	~0.0466	---	0.104	---
SHP02	1007	---	---	---	967	---	~0.0208	---	0.0438	---
SHP02	1011	---	---	---	2070	---	~0.34	---	0.0685	---
SHP02	1048	<0.15	0.3	<0.82	17600	<0.0004	2.09	9.14	0.136	---
SHP02	1049	<0.14	0.17	<0.83	17800	<0.0004	2.05	9.21	0.135	---

Site	Location	Po-210	Ra-226	Ra-228	SO ₄	Sb	Se	Sr	U	V
Code	Code	pCi/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SHP02	1057	---	---	---	10500	---	~0.379	---	0.0543	---
SHP02	1058	---	---	---	889	---	~0.001	---	<0.0002	---
SHP02	1059	---	---	---	4780	---	~0.0201	---	0.057	---
SHP02	1060	---	---	---	1140	---	~0.015	---	0.3	---
SHP02	MW1	<0.61	1.04	<0.9	1460	<0.001	<0.001	4.62	0.0031	---

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Appendix C

Surface Water Analytical Results

Included in CD-ROM format

This appendix is not available in electronic format.

Please email lm.records@lm.doe.gov to request the appendix.

Appendix D

Ground Water Analytical Results and Water Level Data

Included in CD-ROM format

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Appendix E

Sediment, Soil, and Salt Crust Sample Analytical Results

Included in CD-ROM format

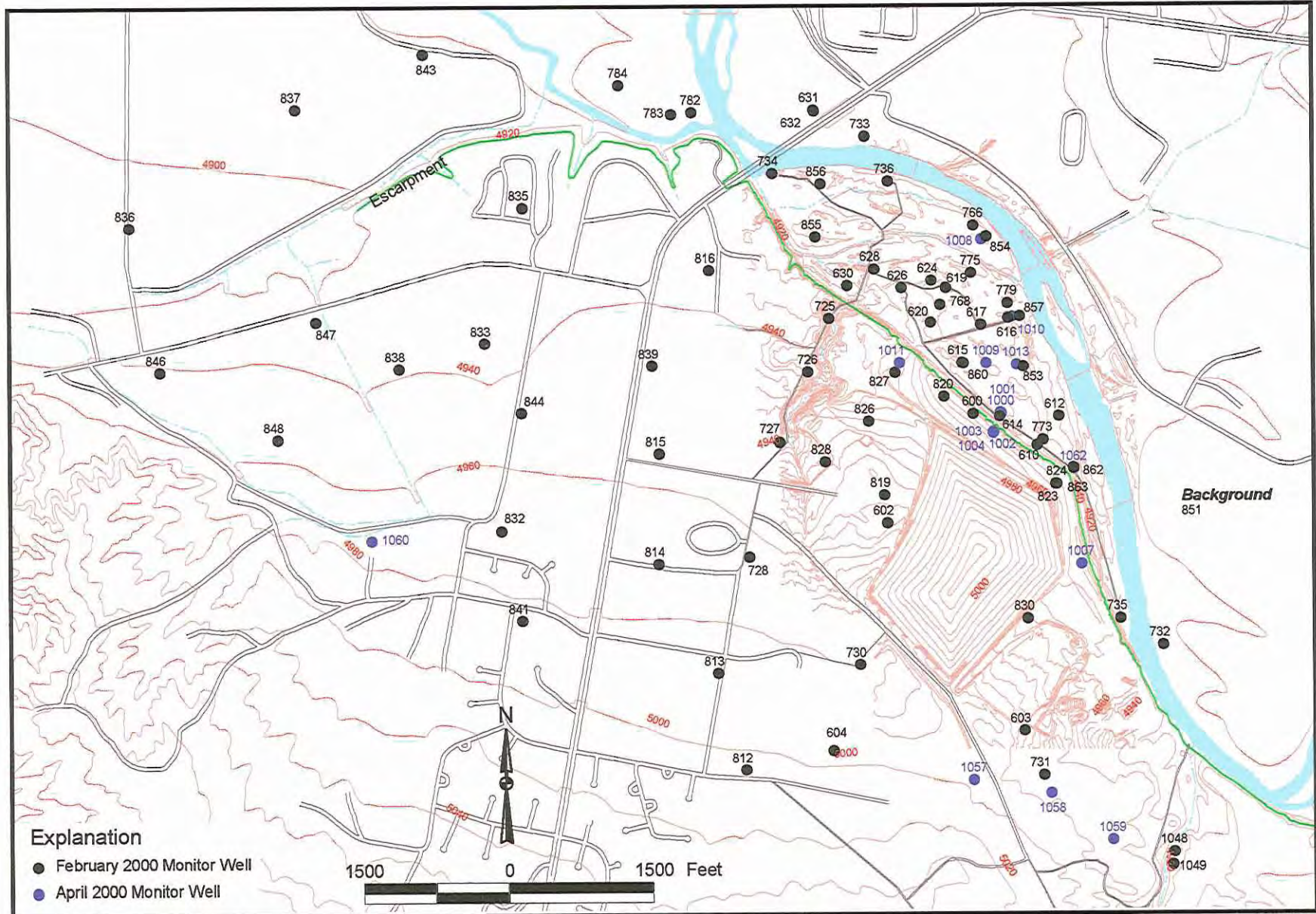
This appendix is not available in electronic format.

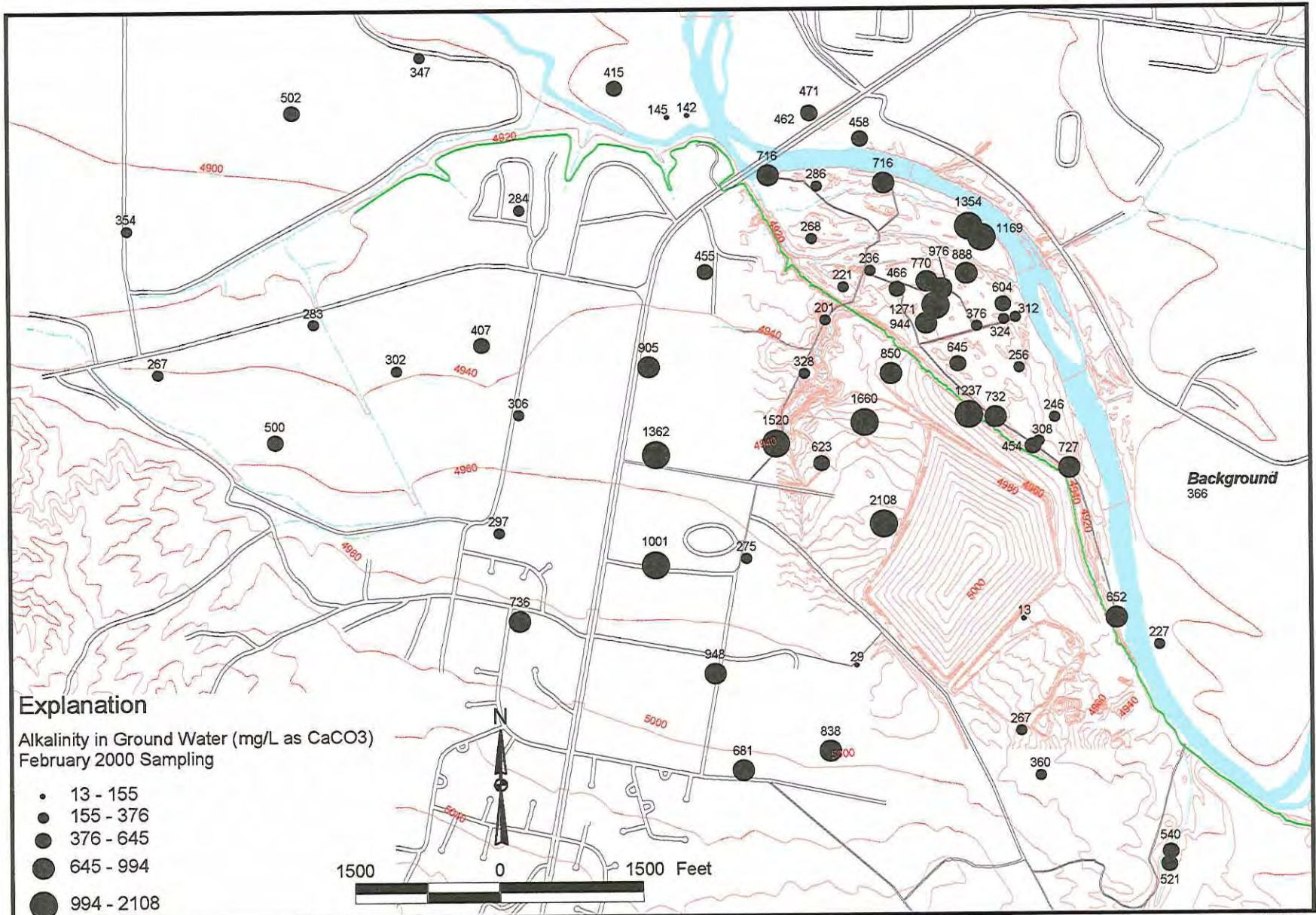
Please email lm.records@lm.doe.gov to request the appendix.

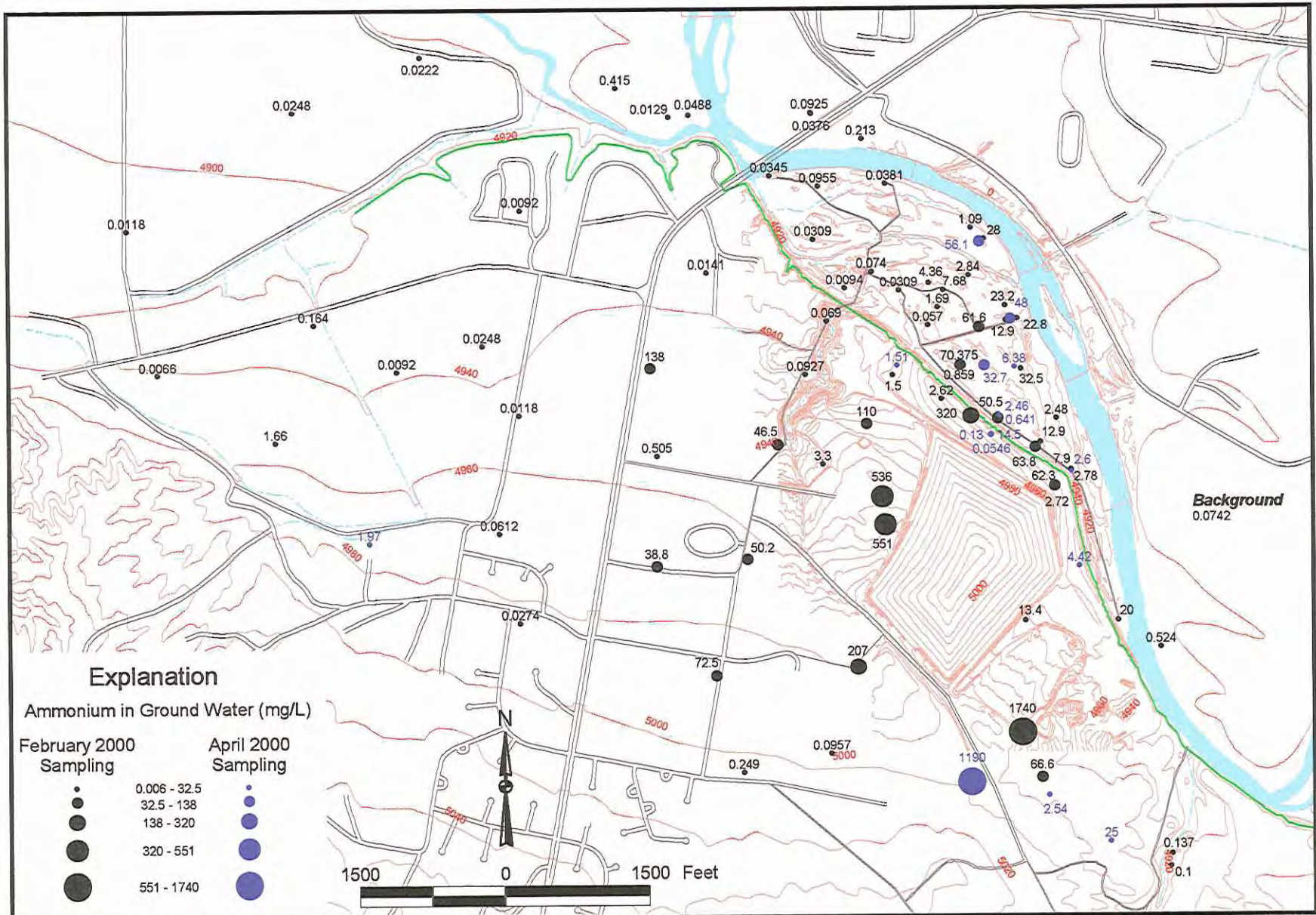
Appendix F

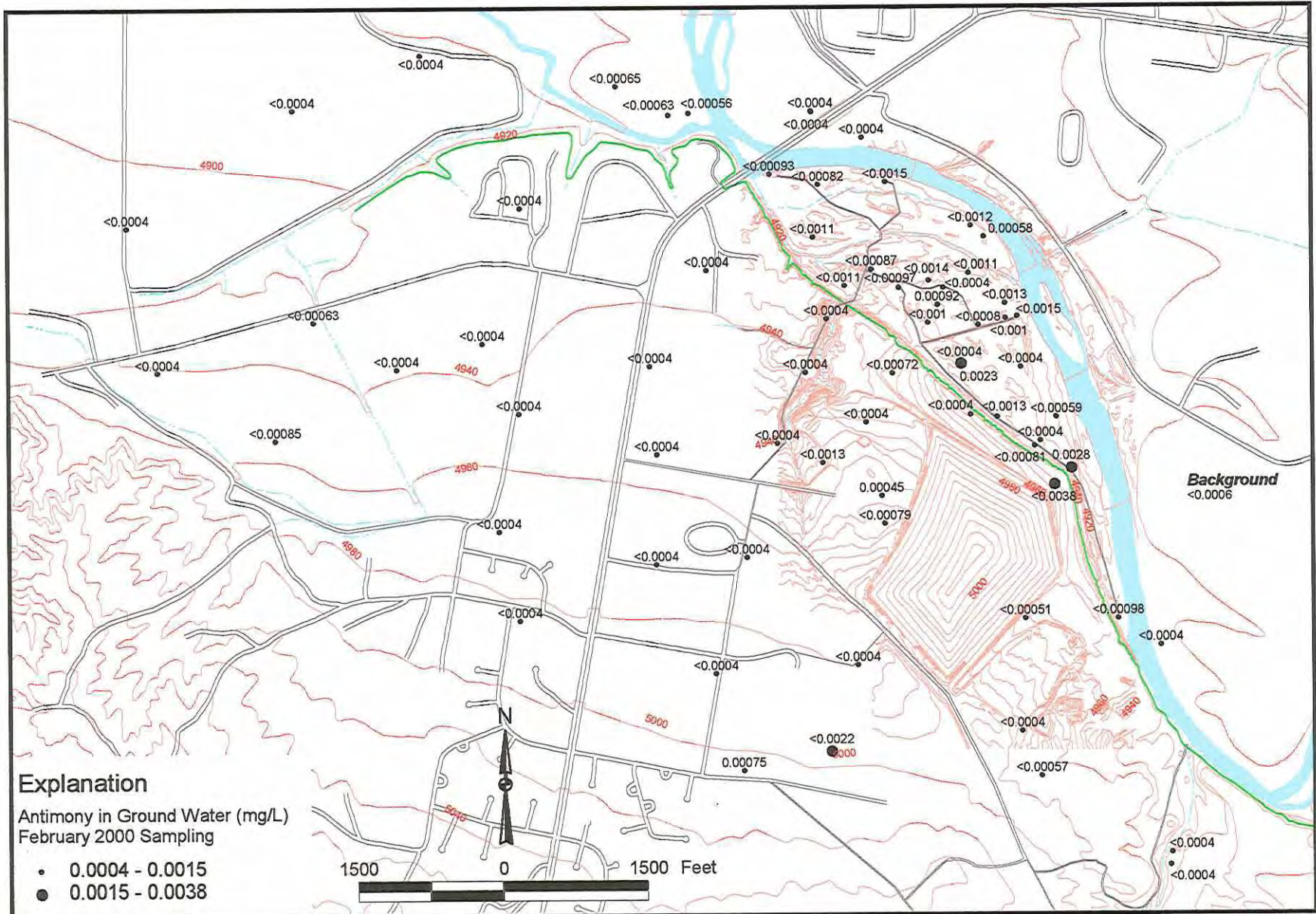
**Graduated-Symbol Plots for Ground Water Analyses,
February 2000 Sampling, or Most Recent Sampling**

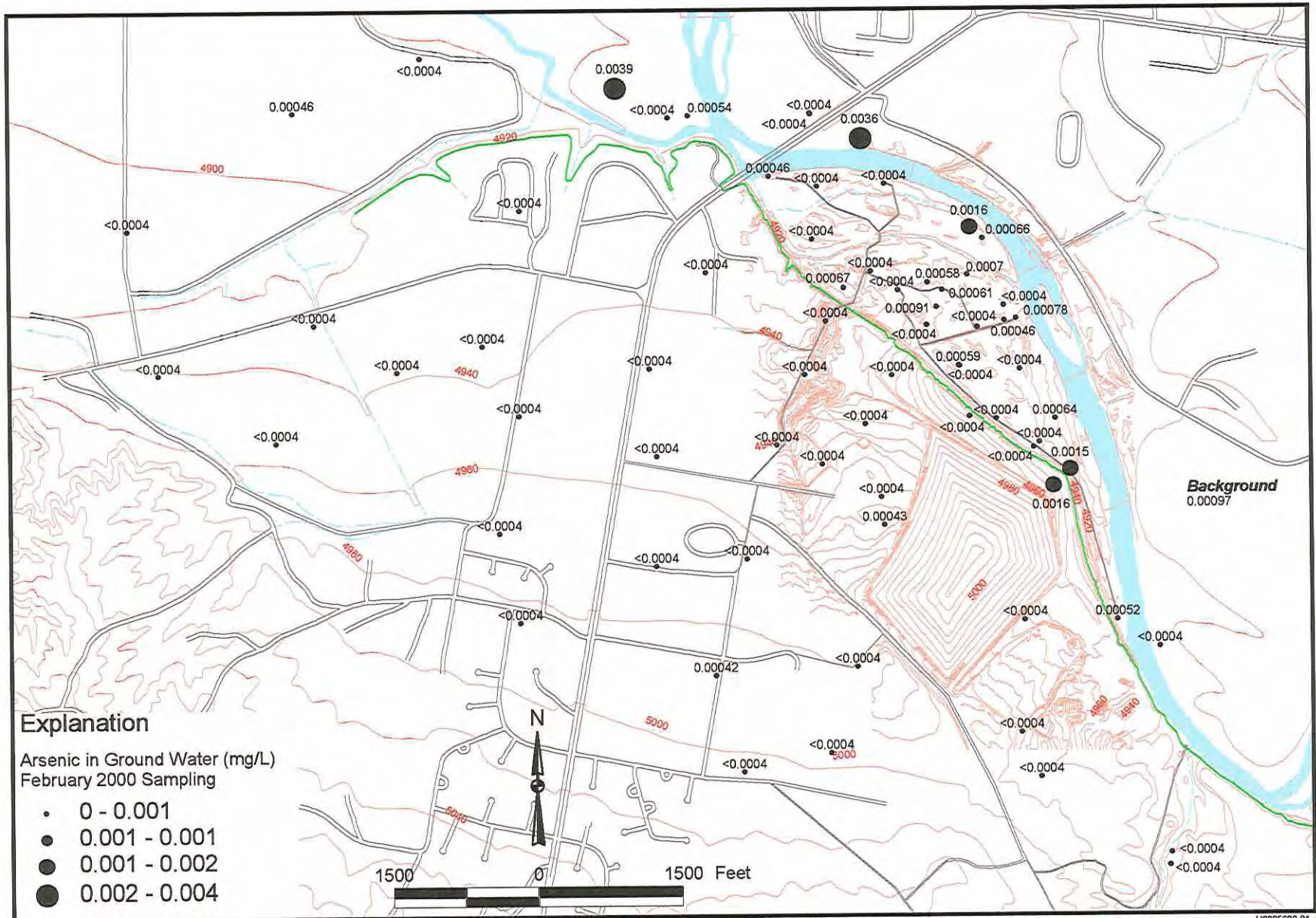
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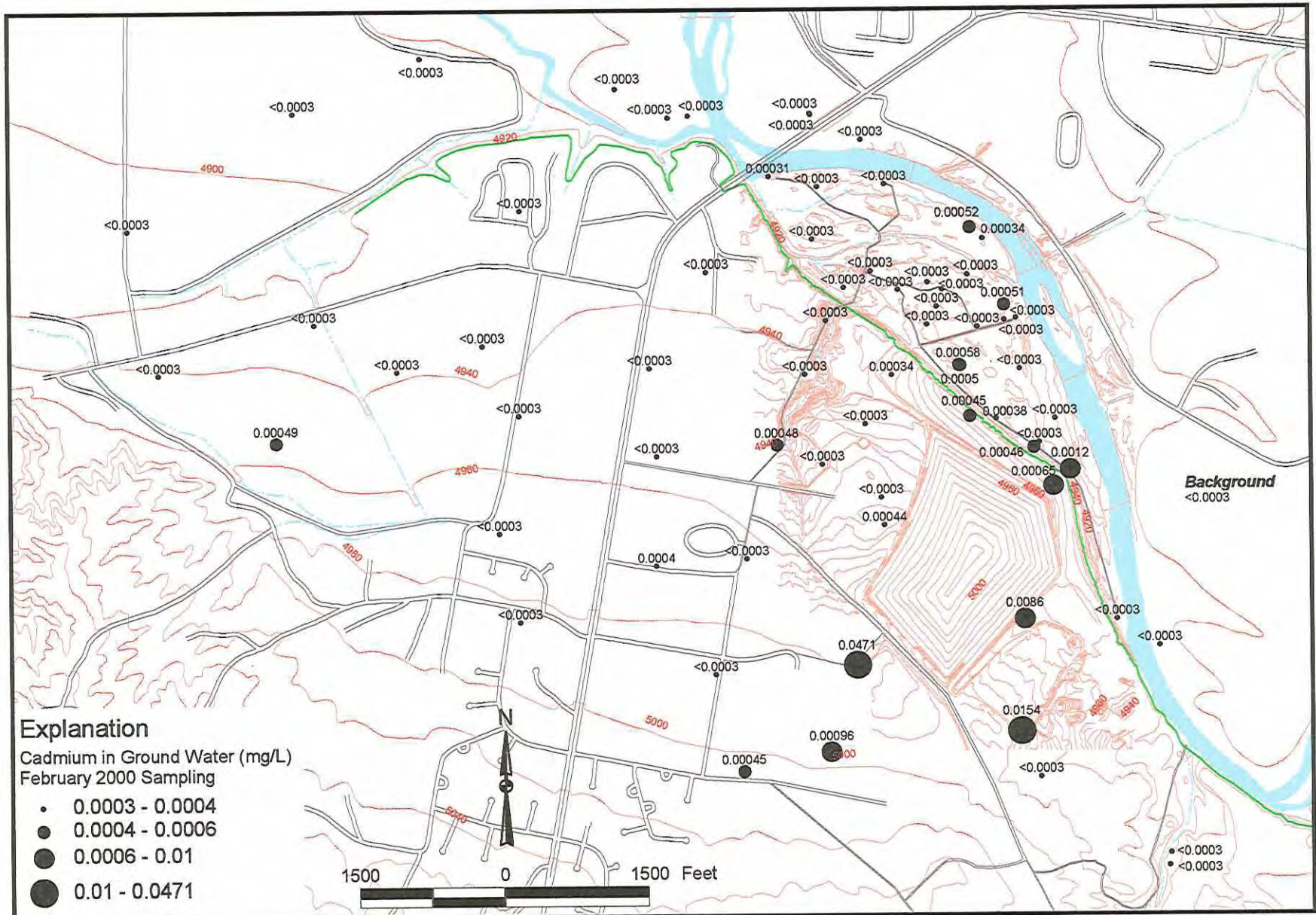












Explanation

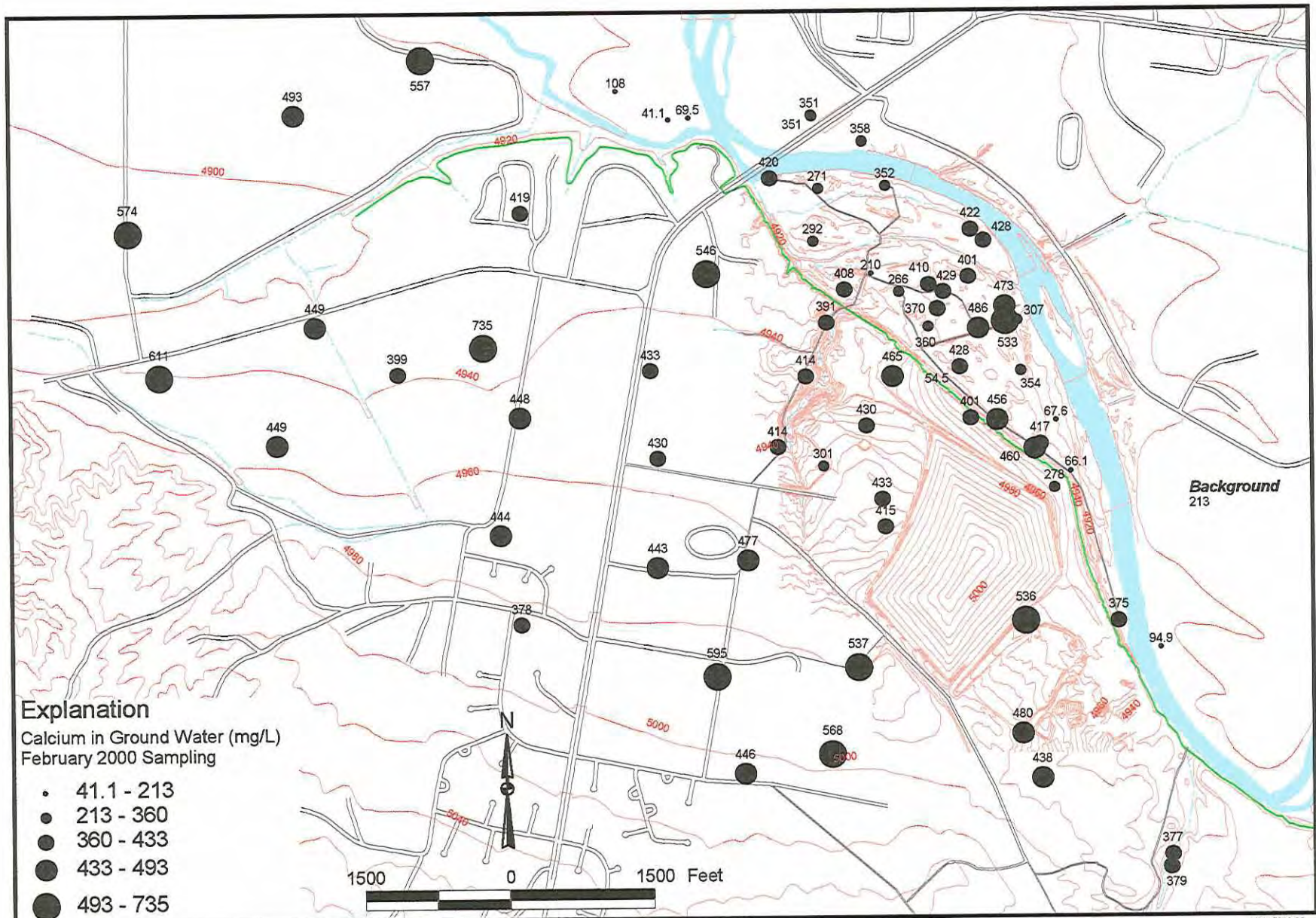
Cadmium in Ground Water (mg/L)
February 2000 Sampling

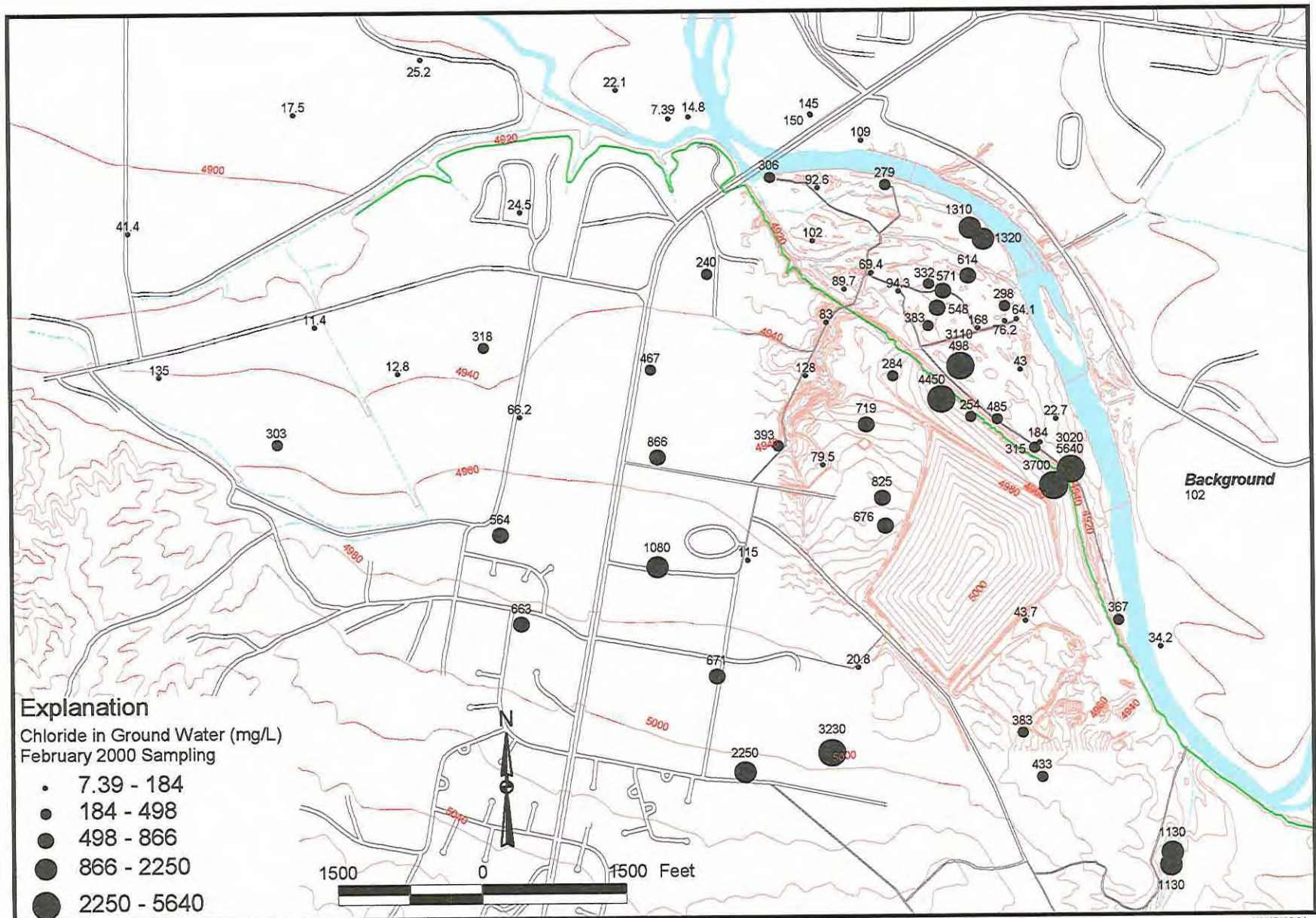
- 0.0003 - 0.0004
- 0.0004 - 0.0006
- 0.0006 - 0.01
- 0.01 - 0.0471

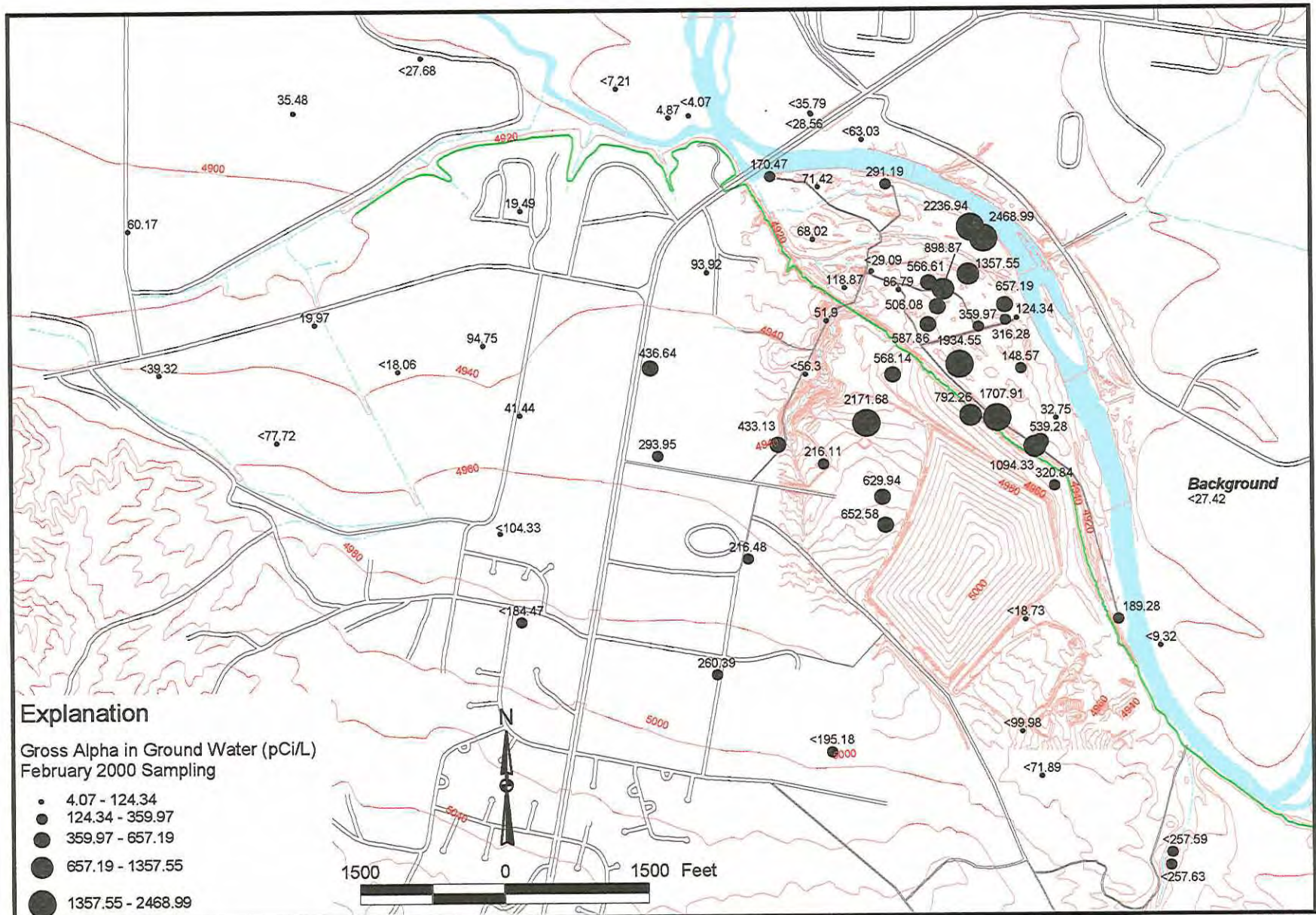
1500 0 1500 Feet

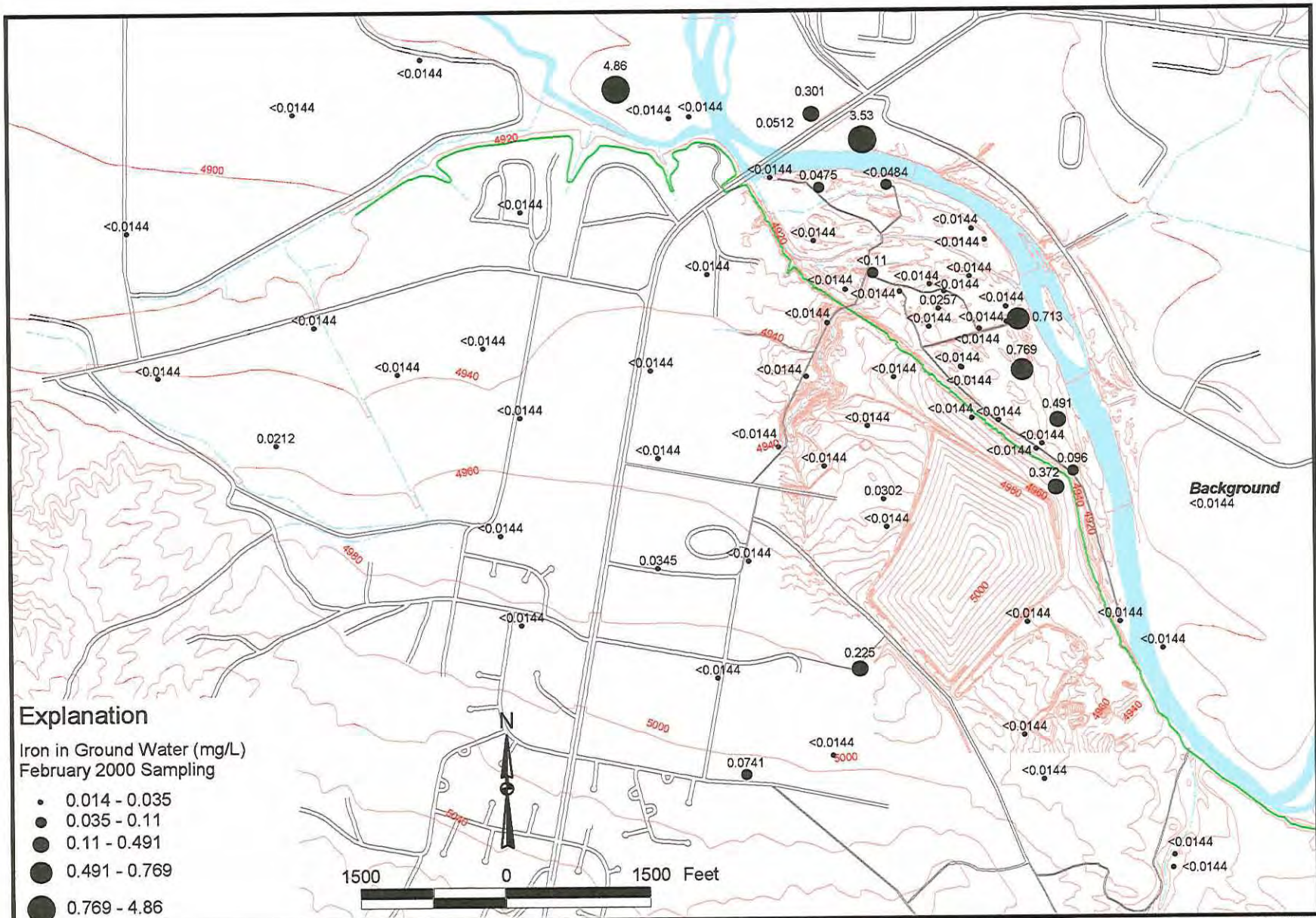
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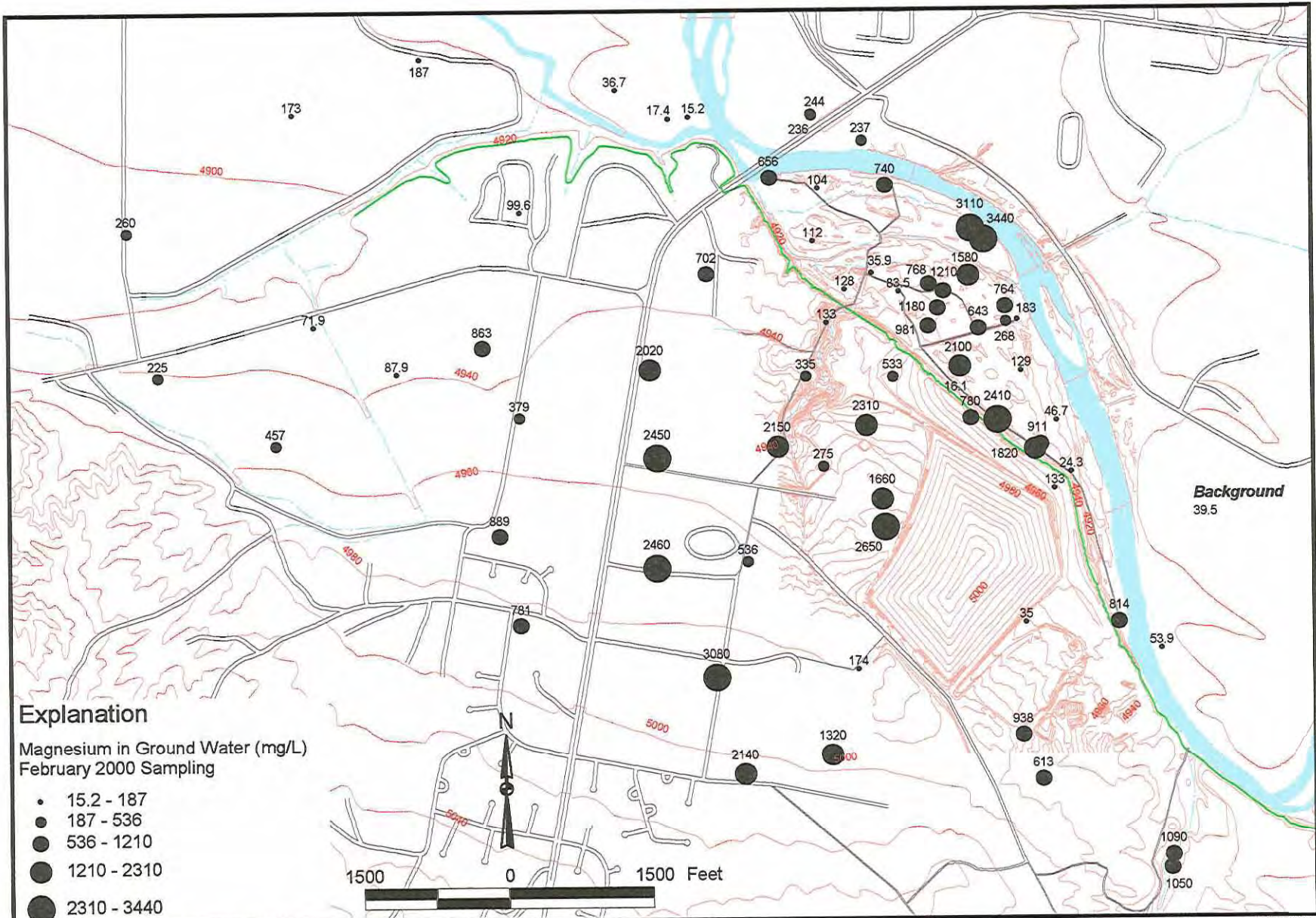
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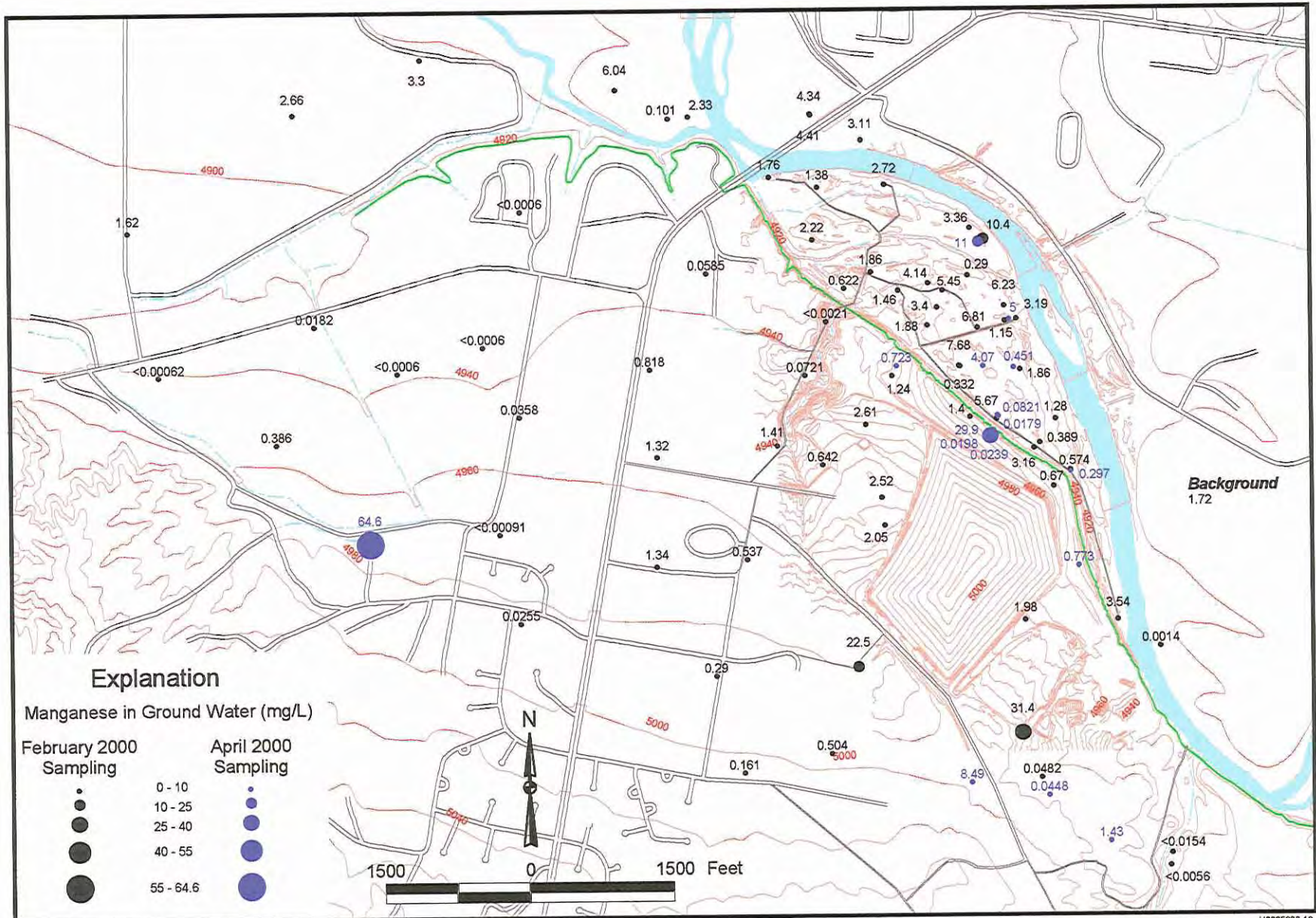


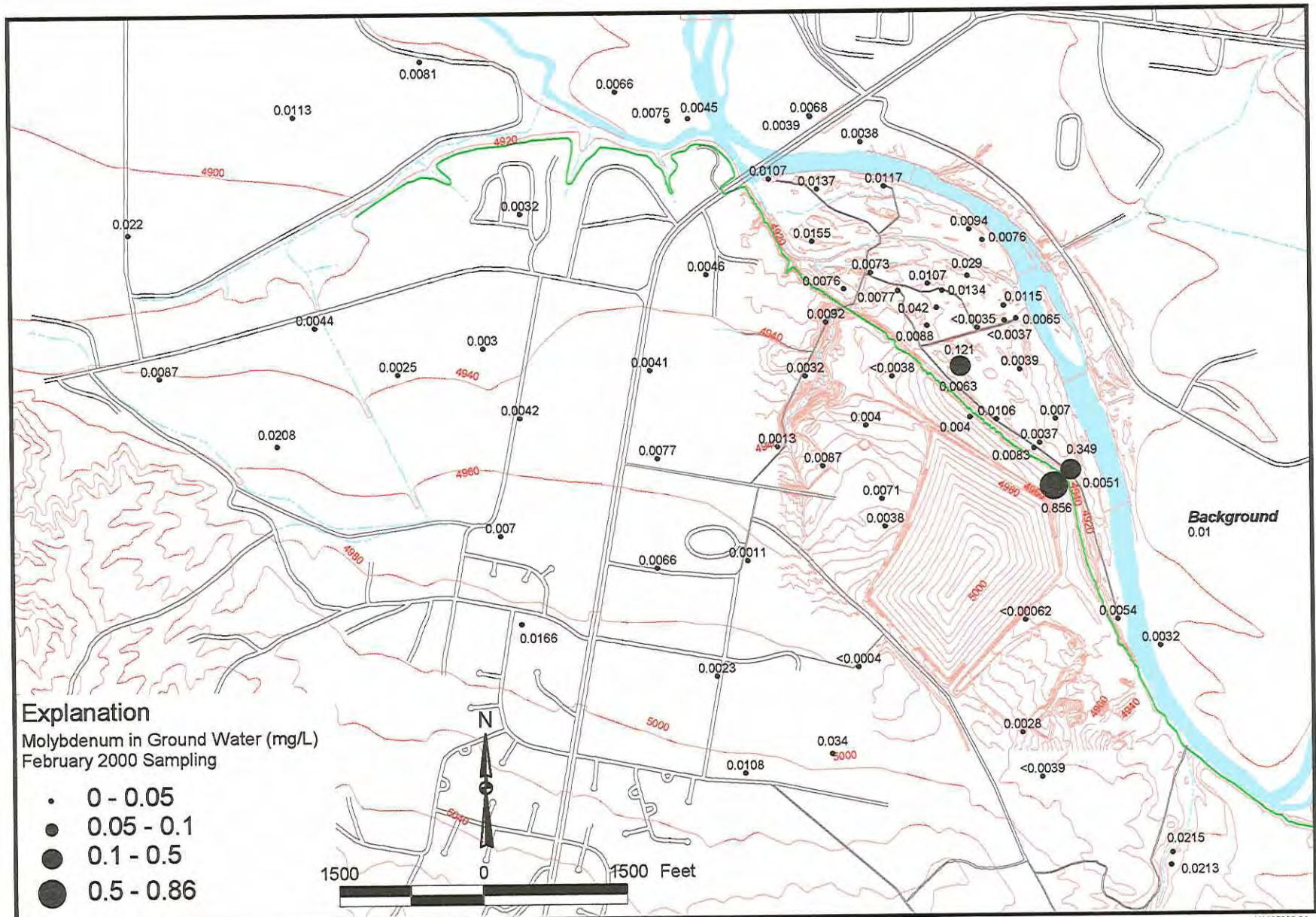


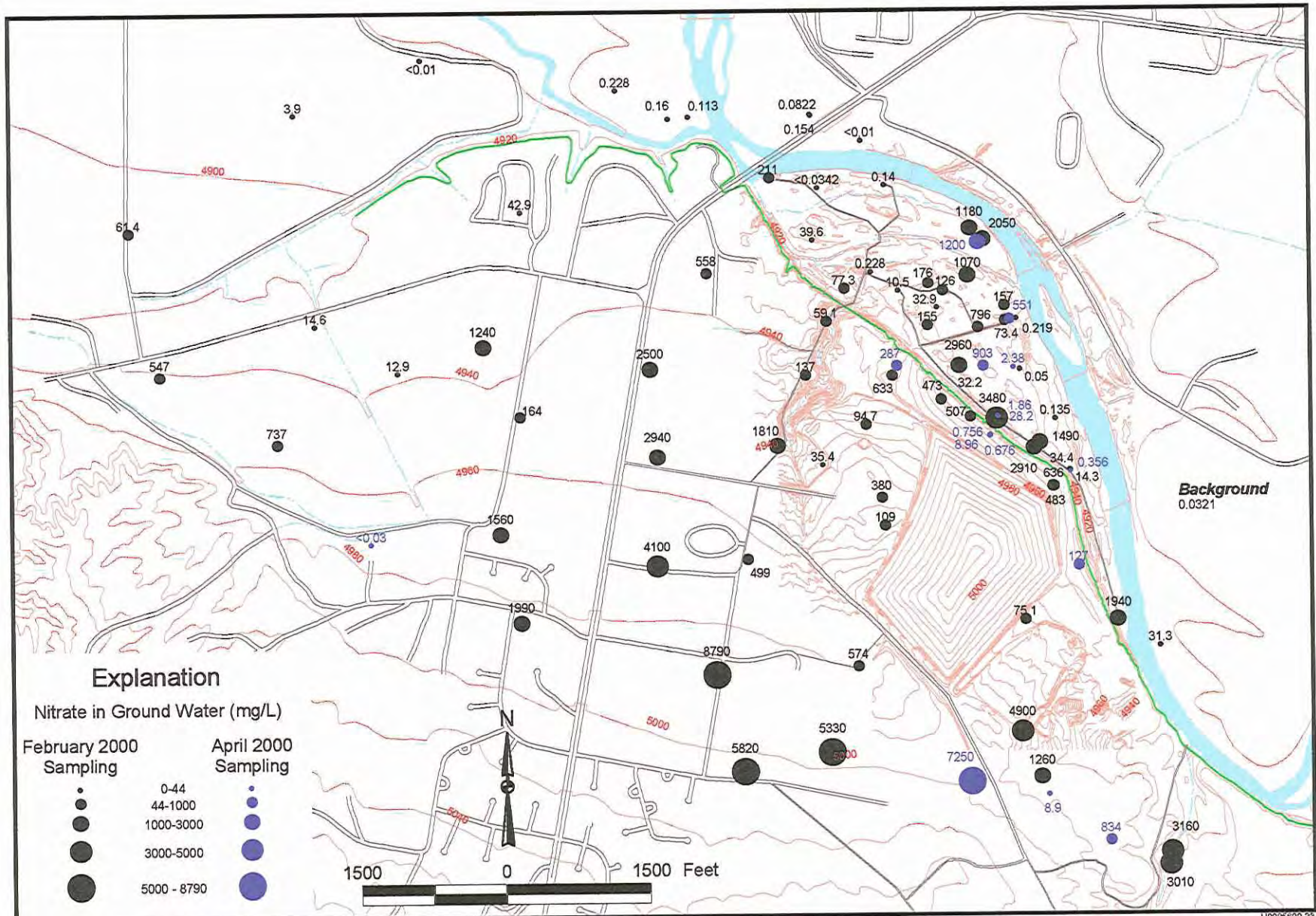


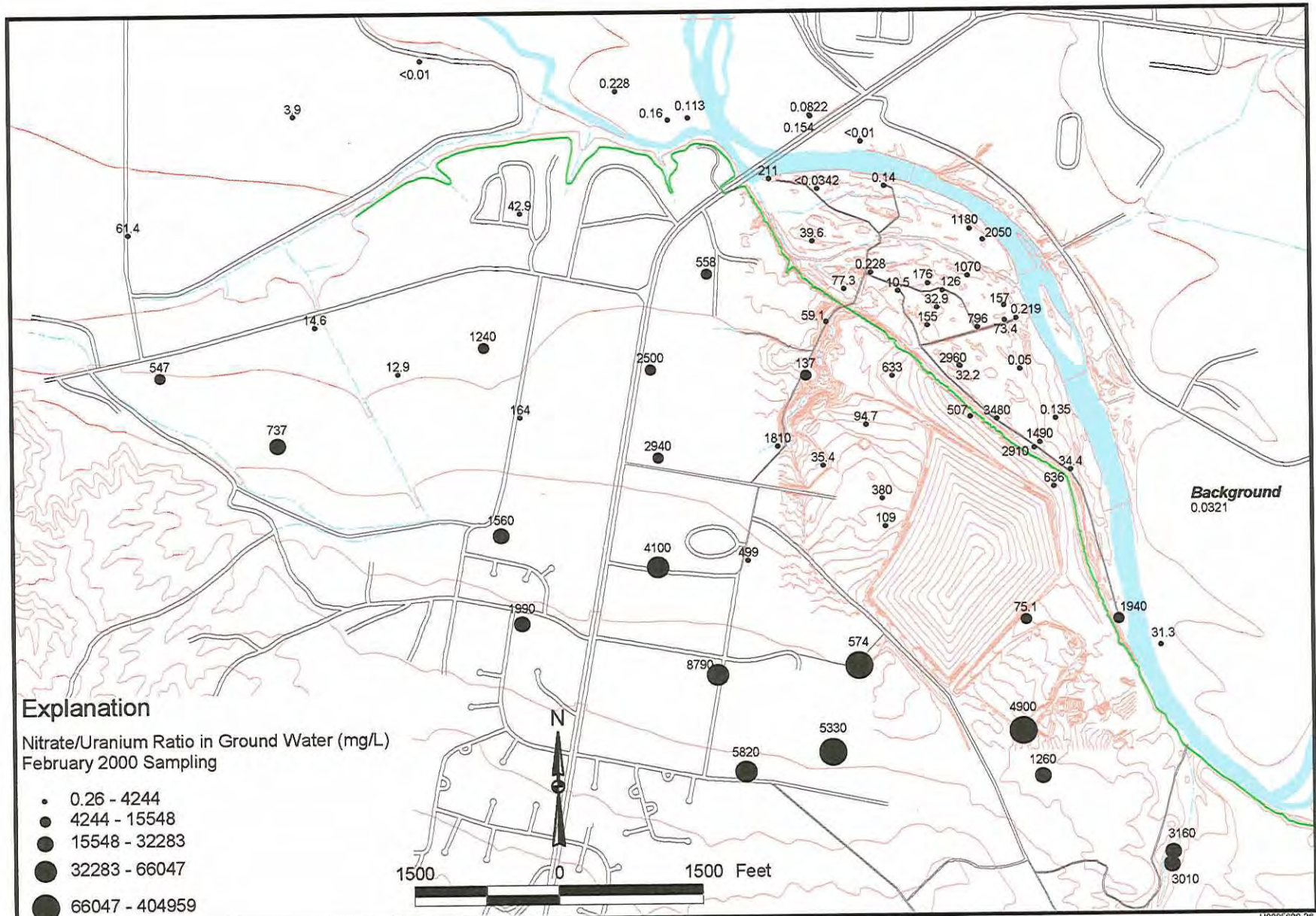


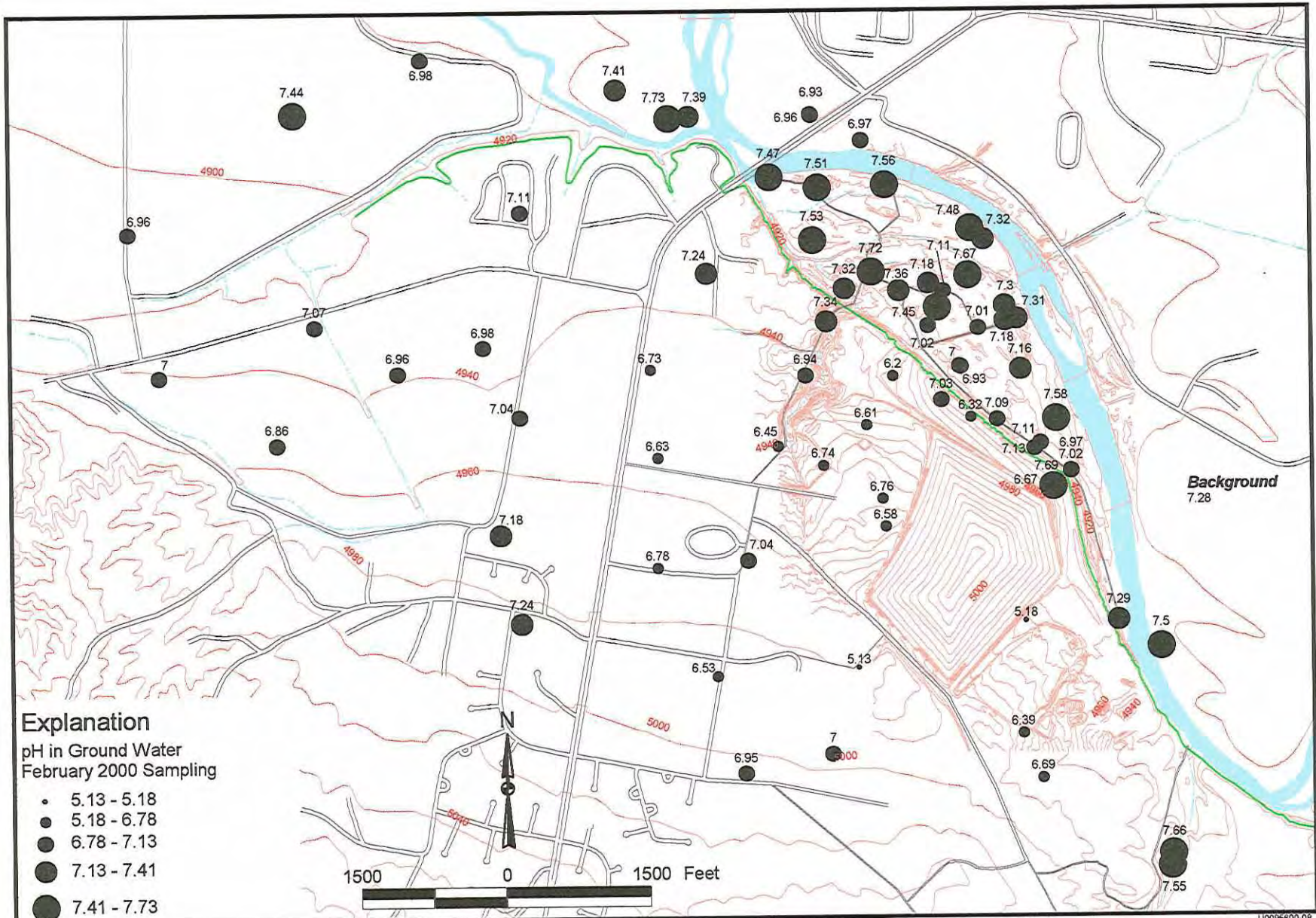


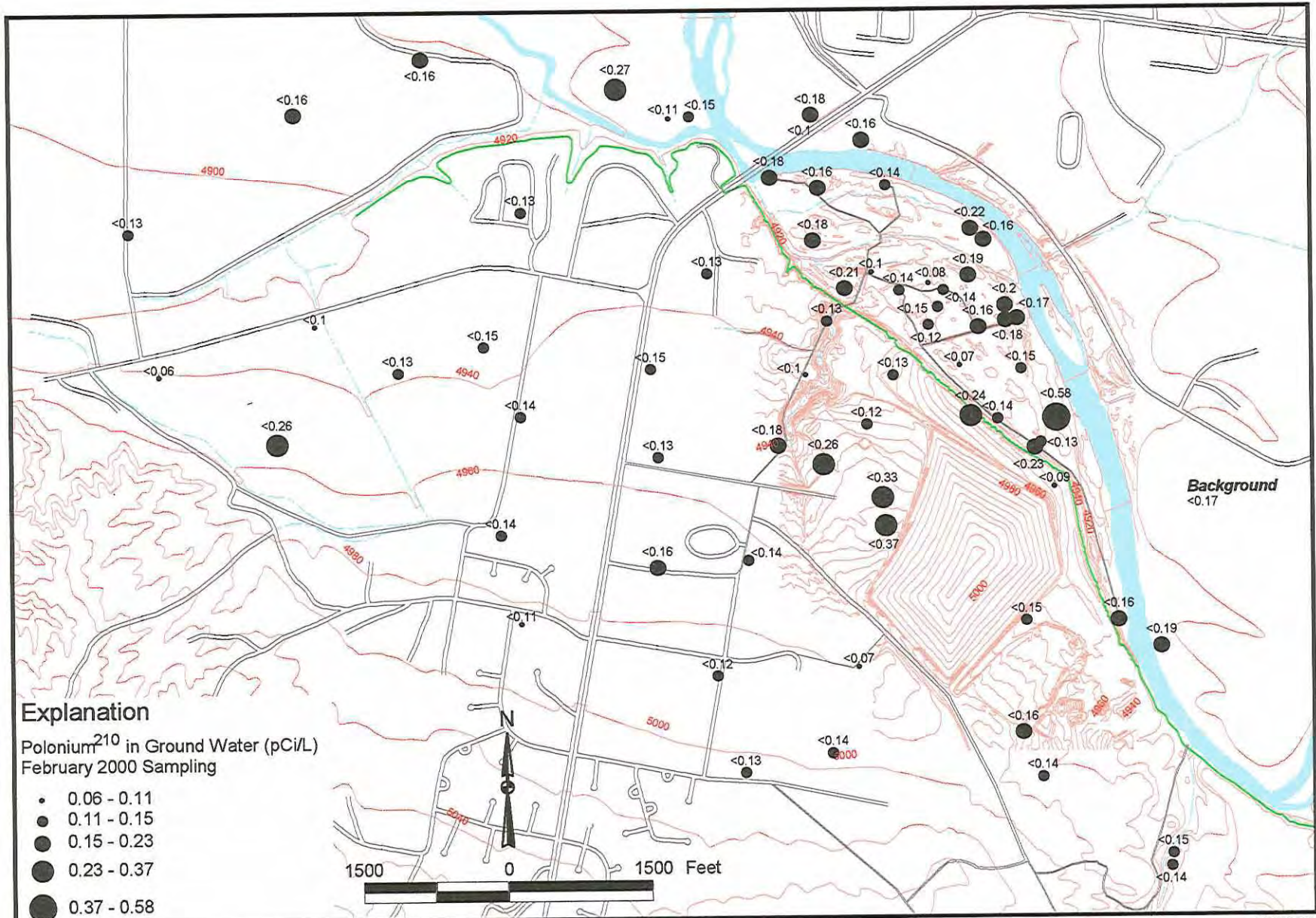


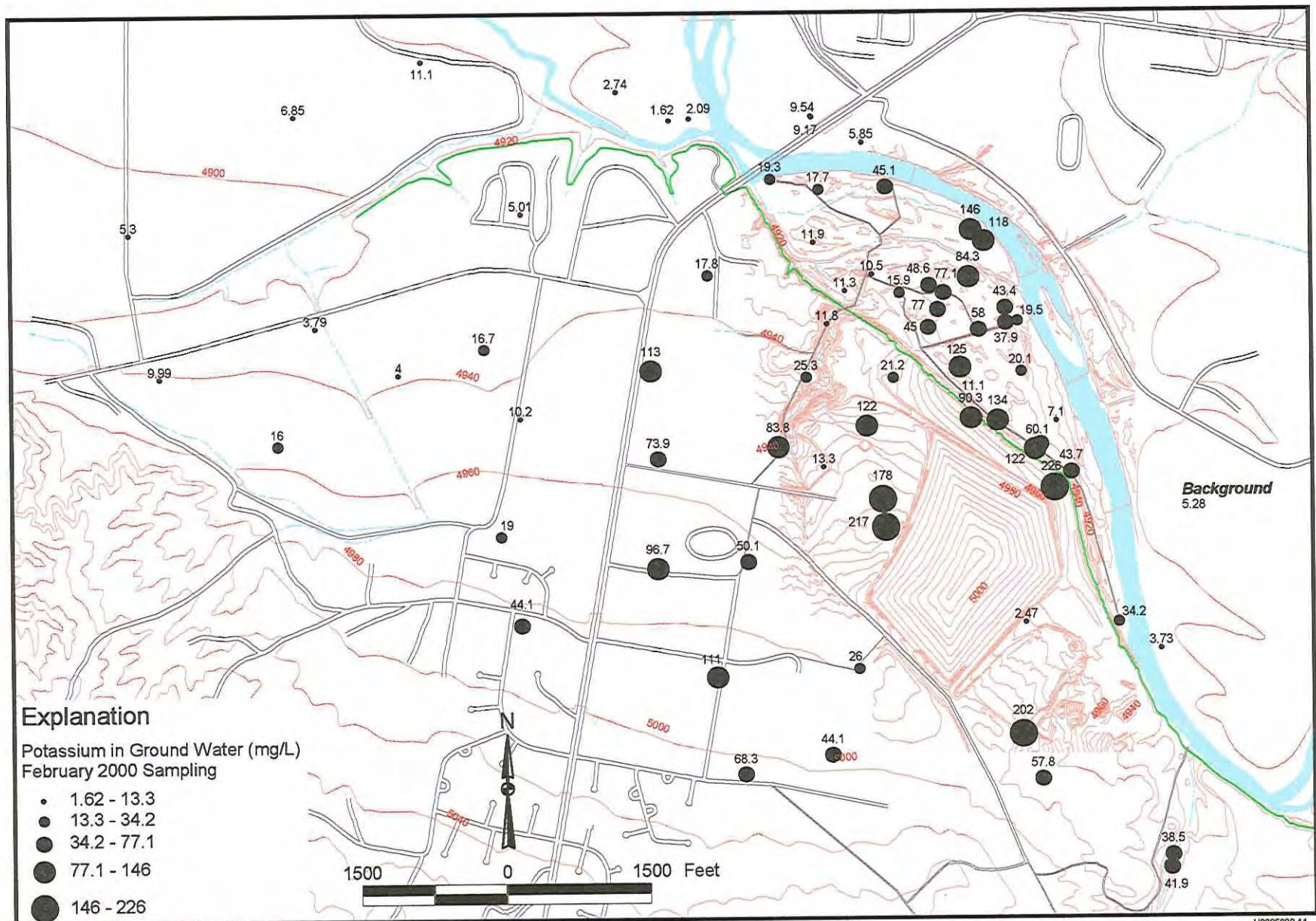


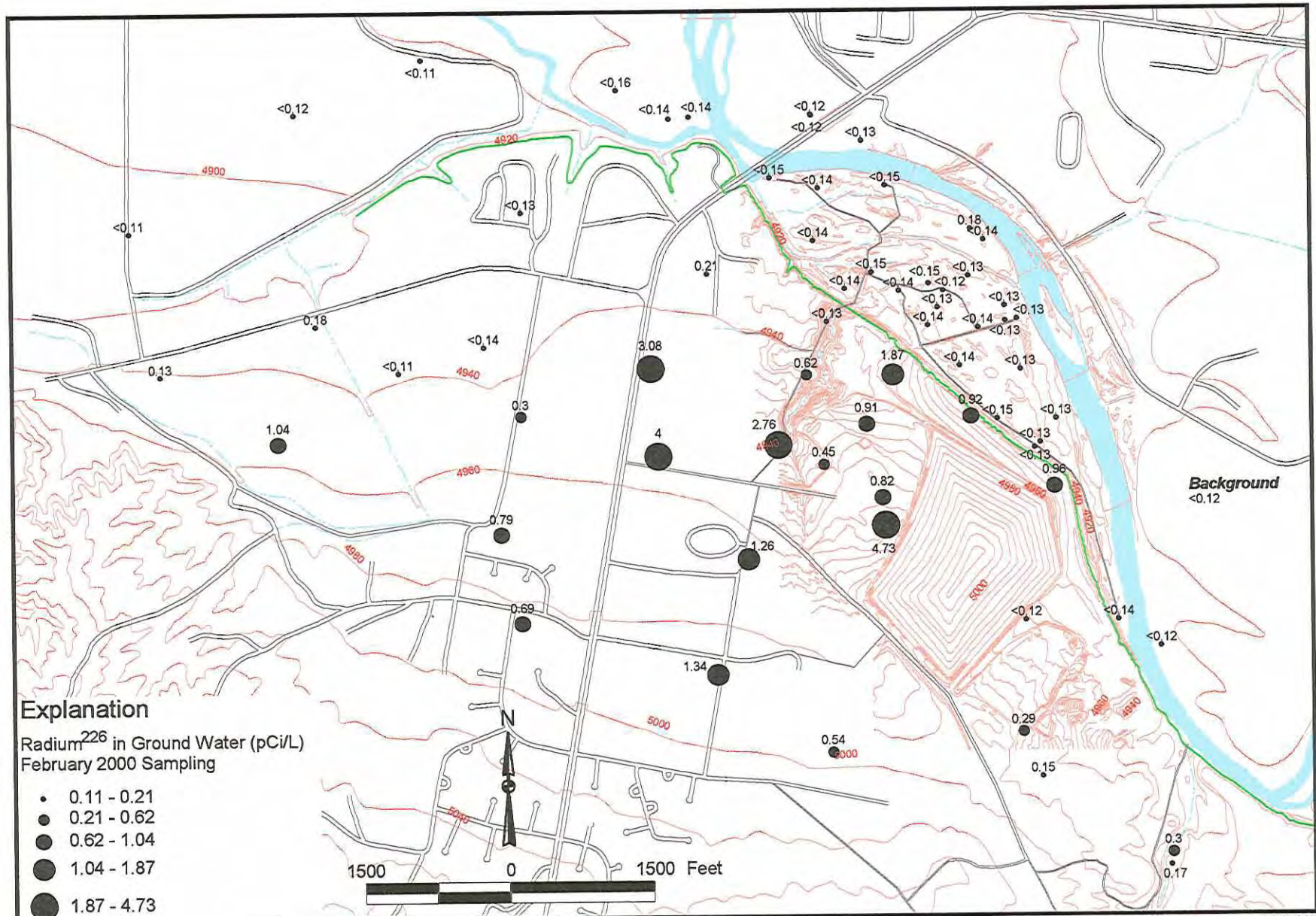


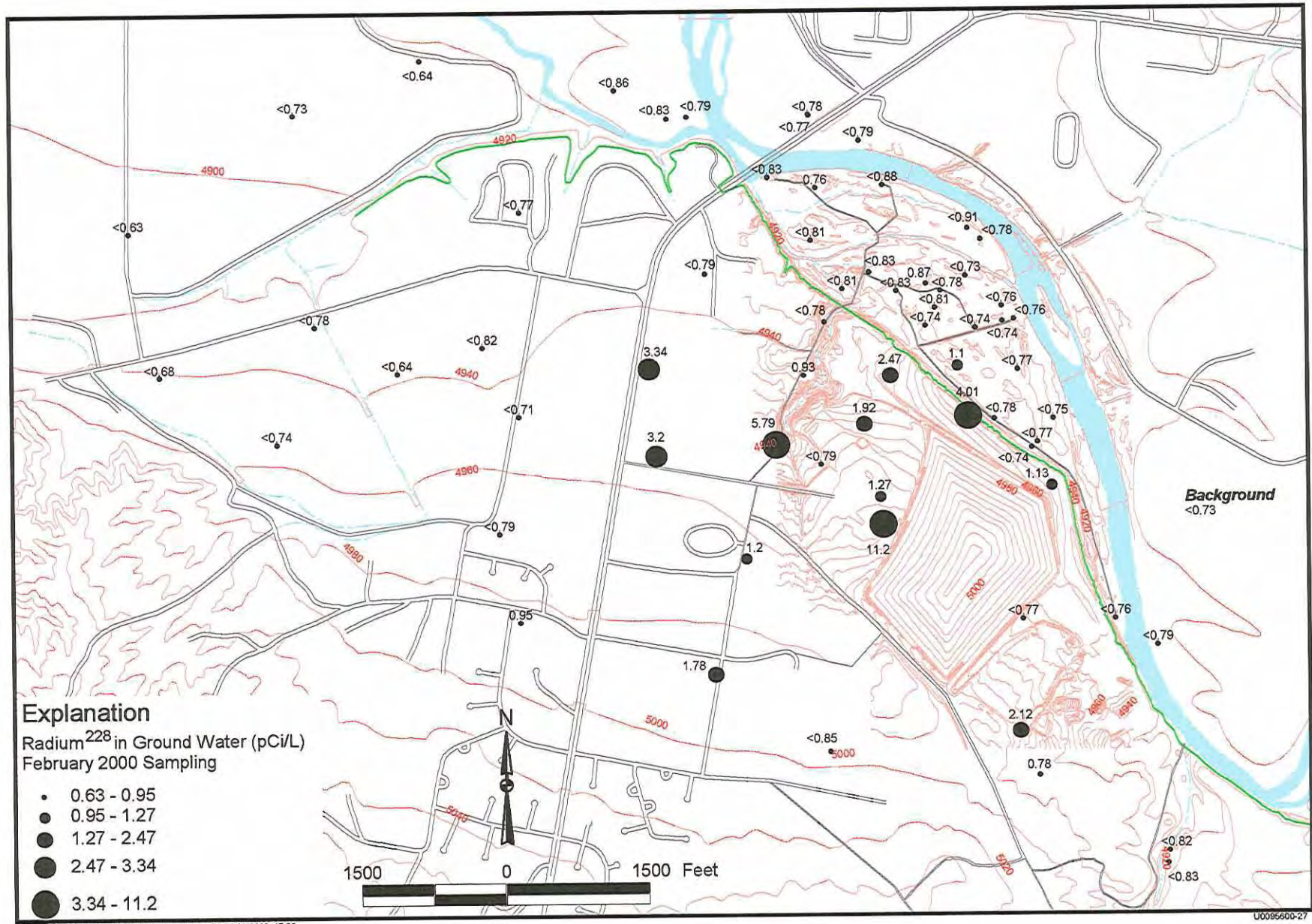


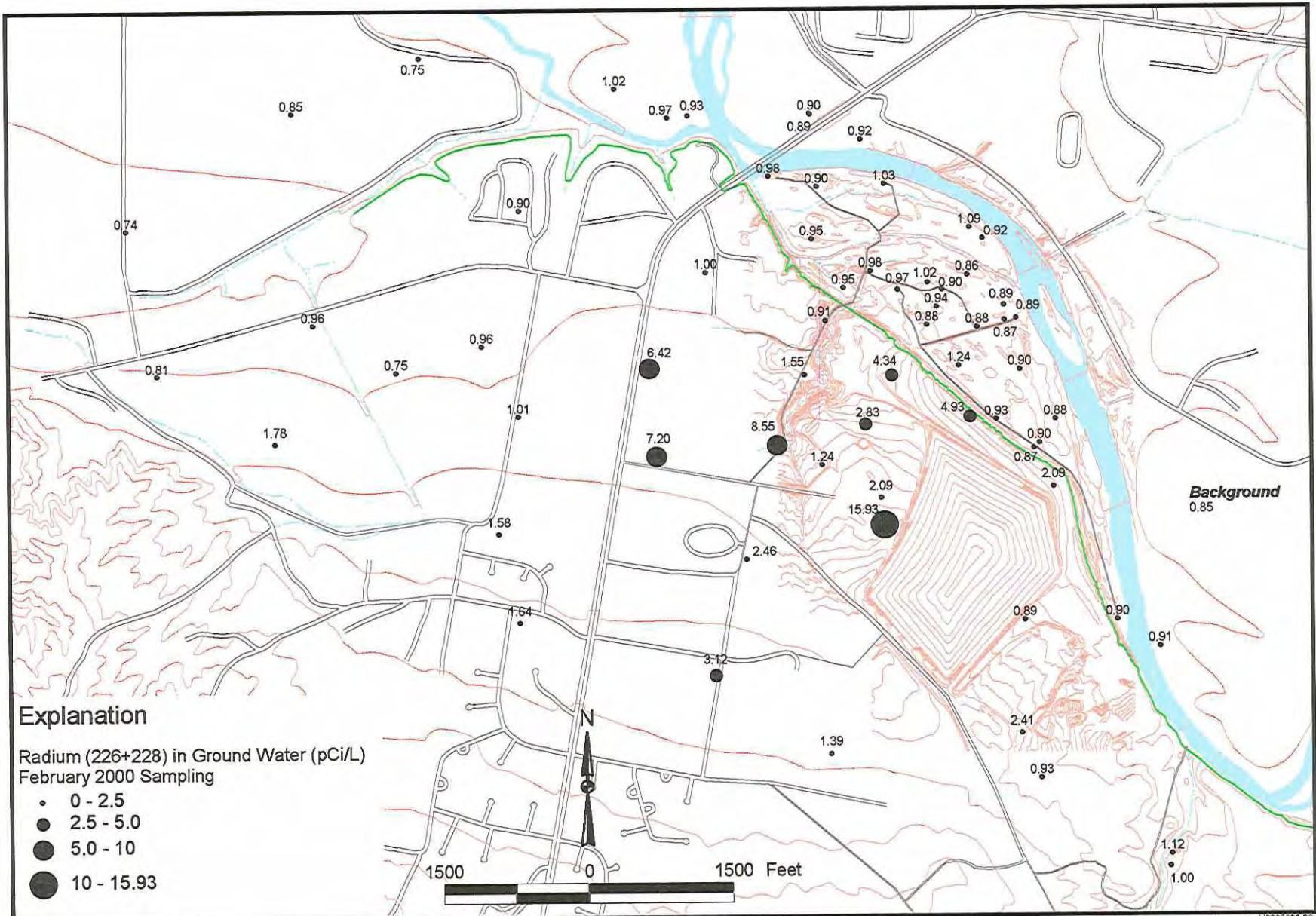


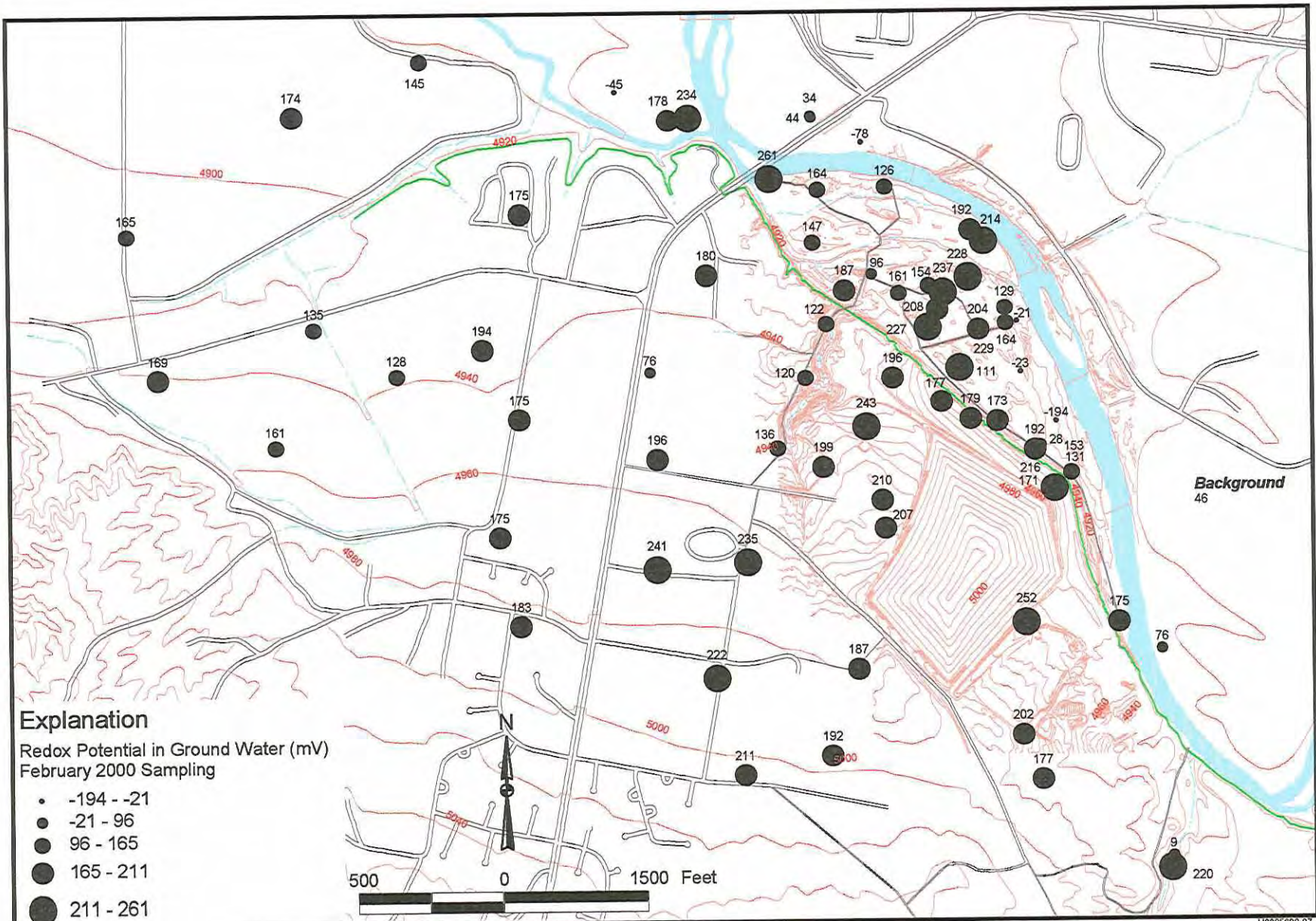


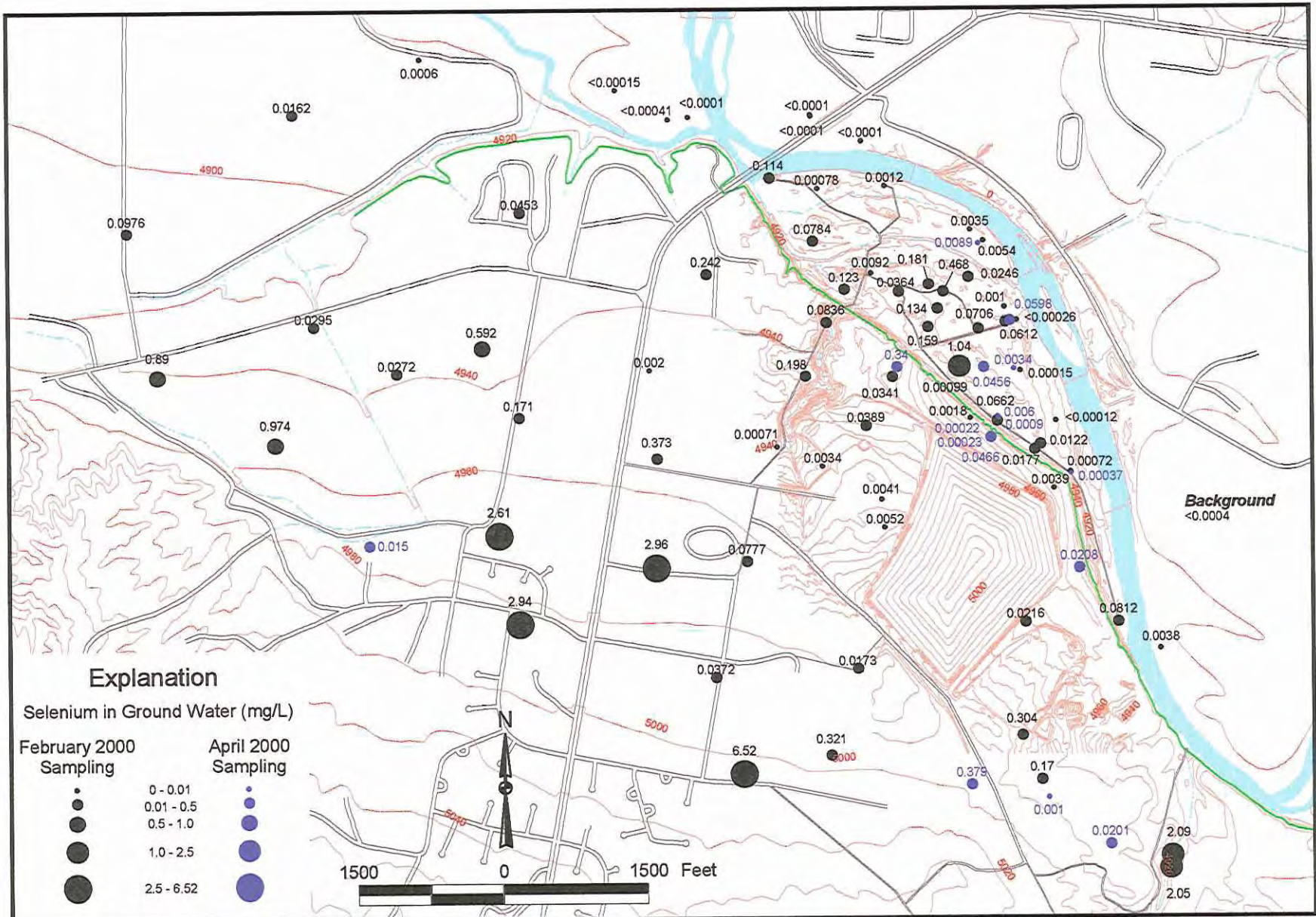


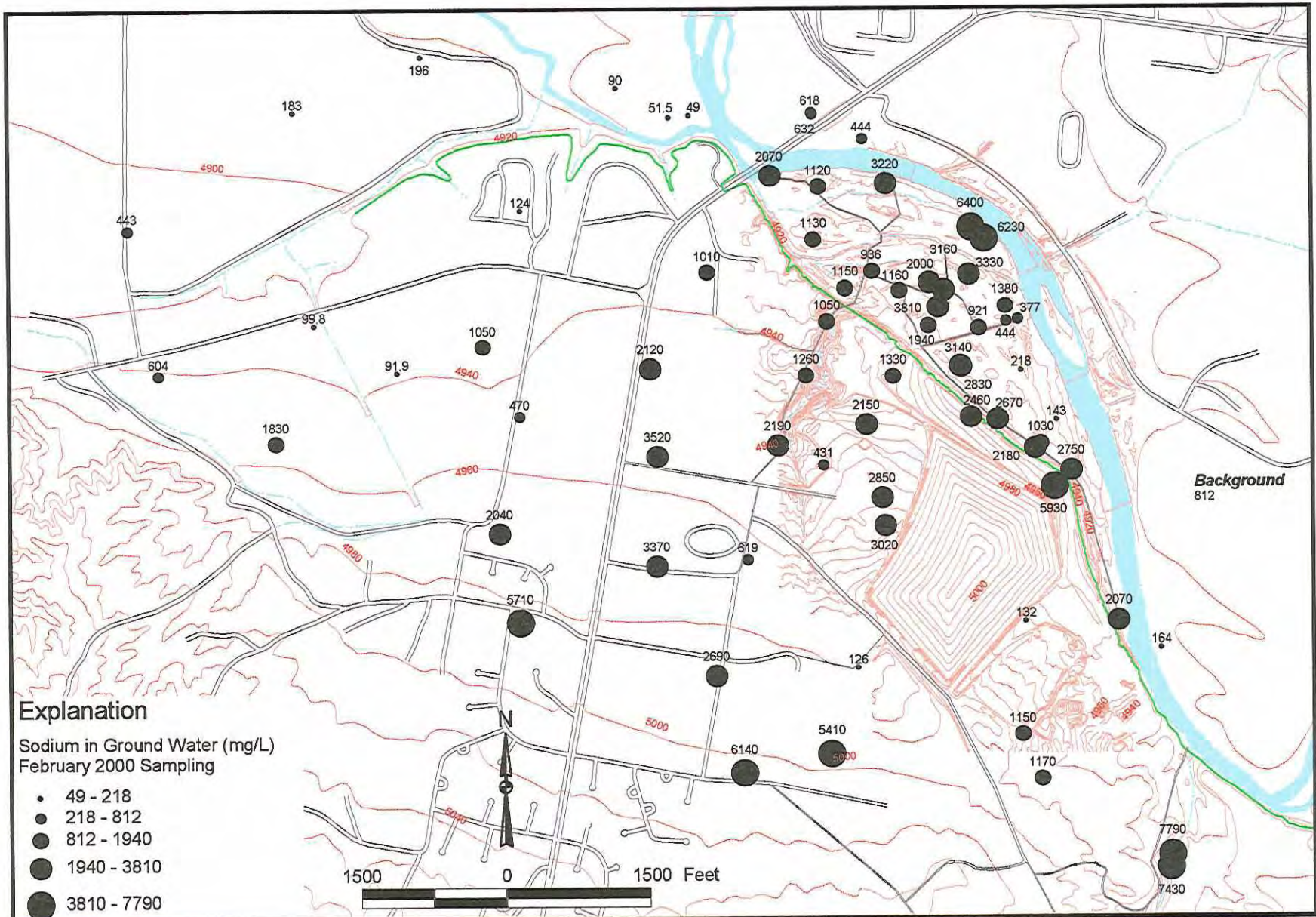


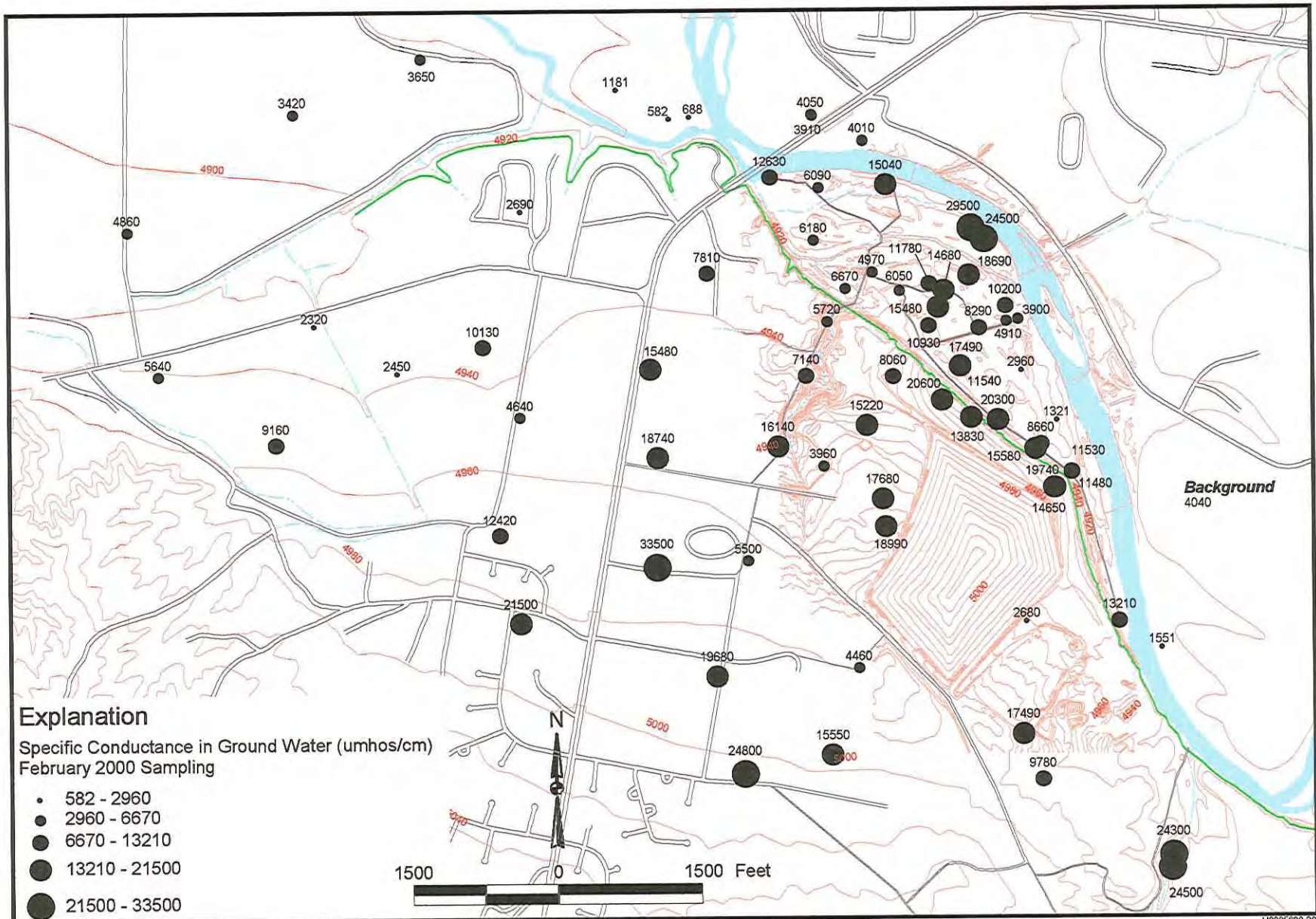


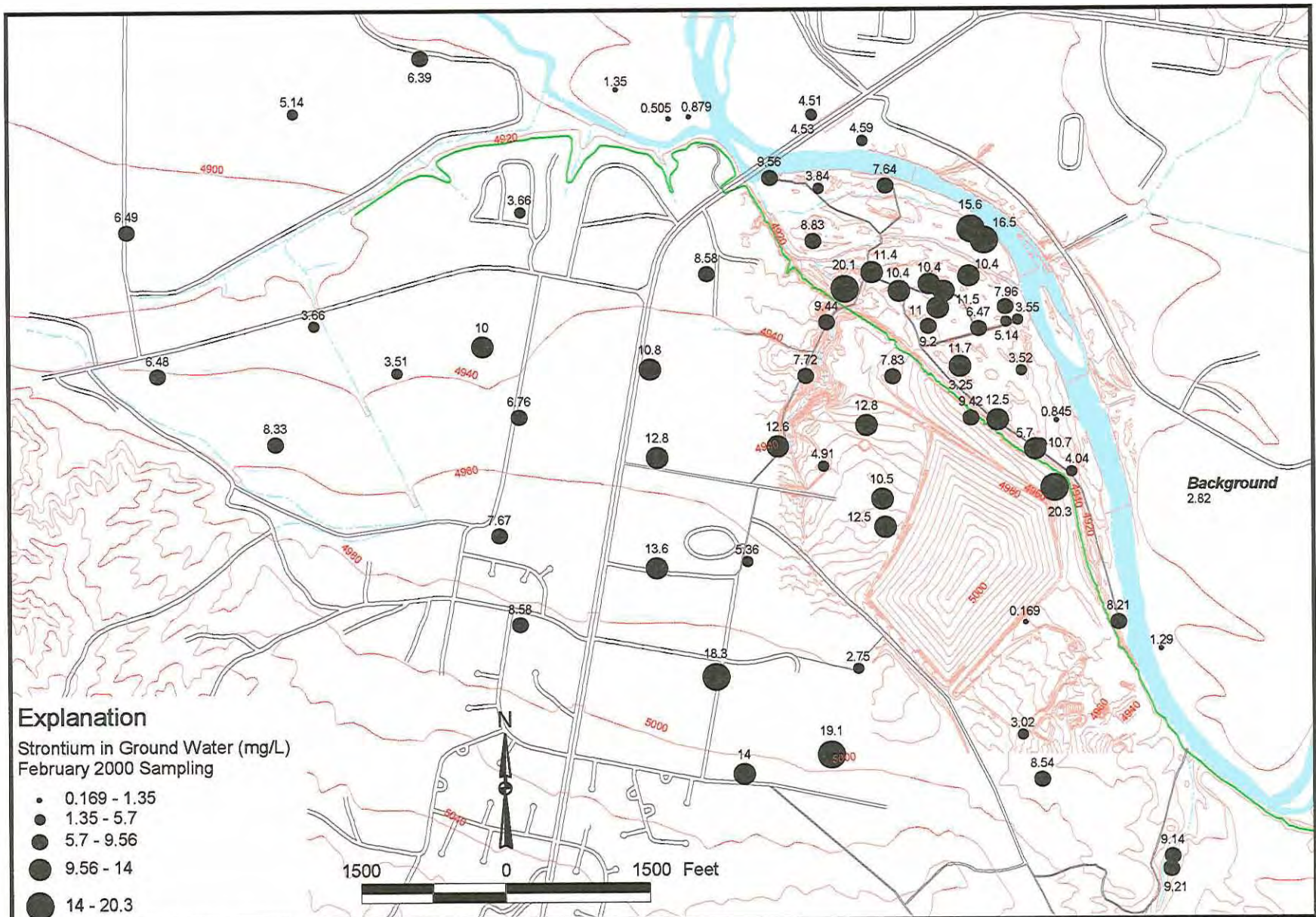


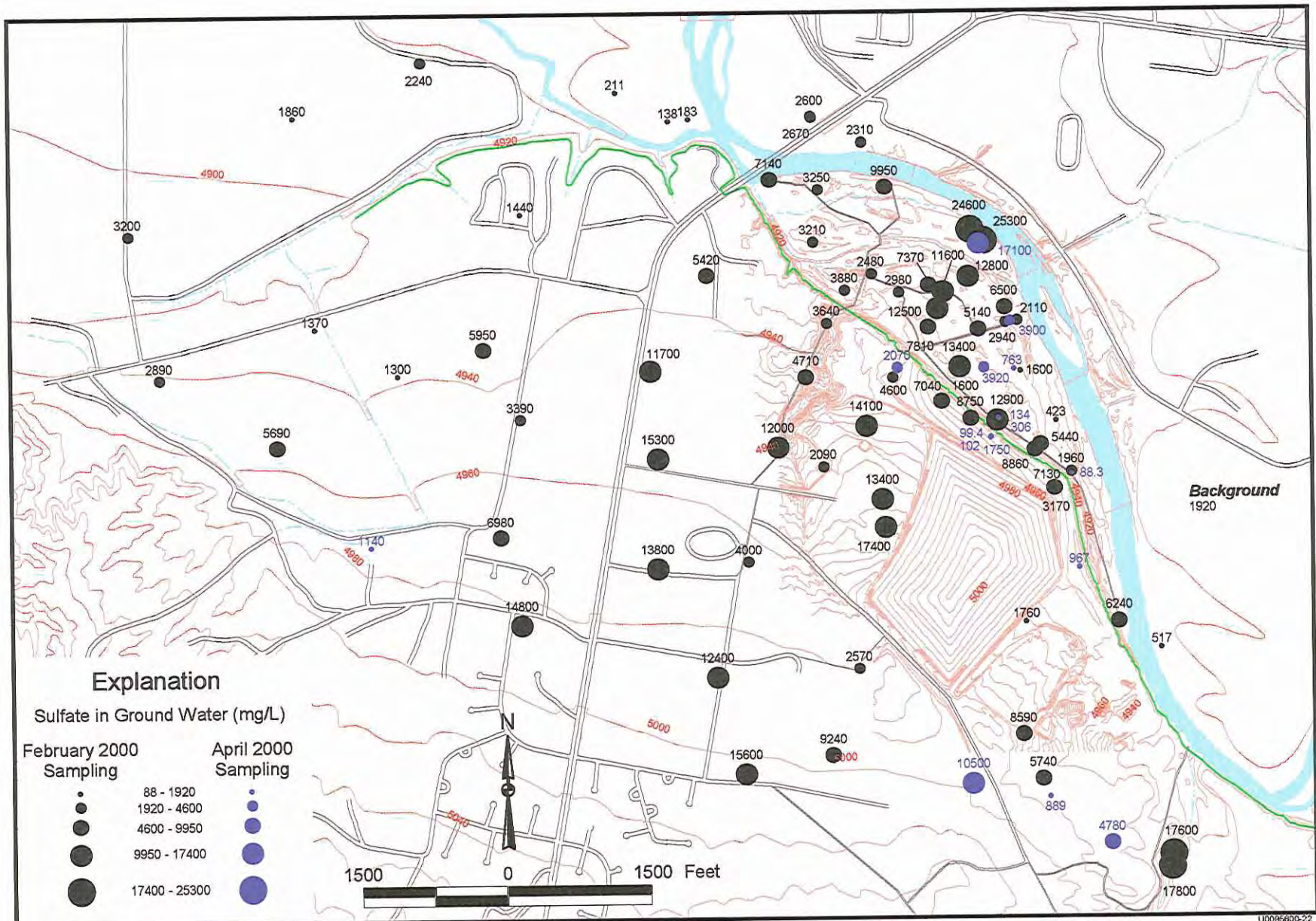


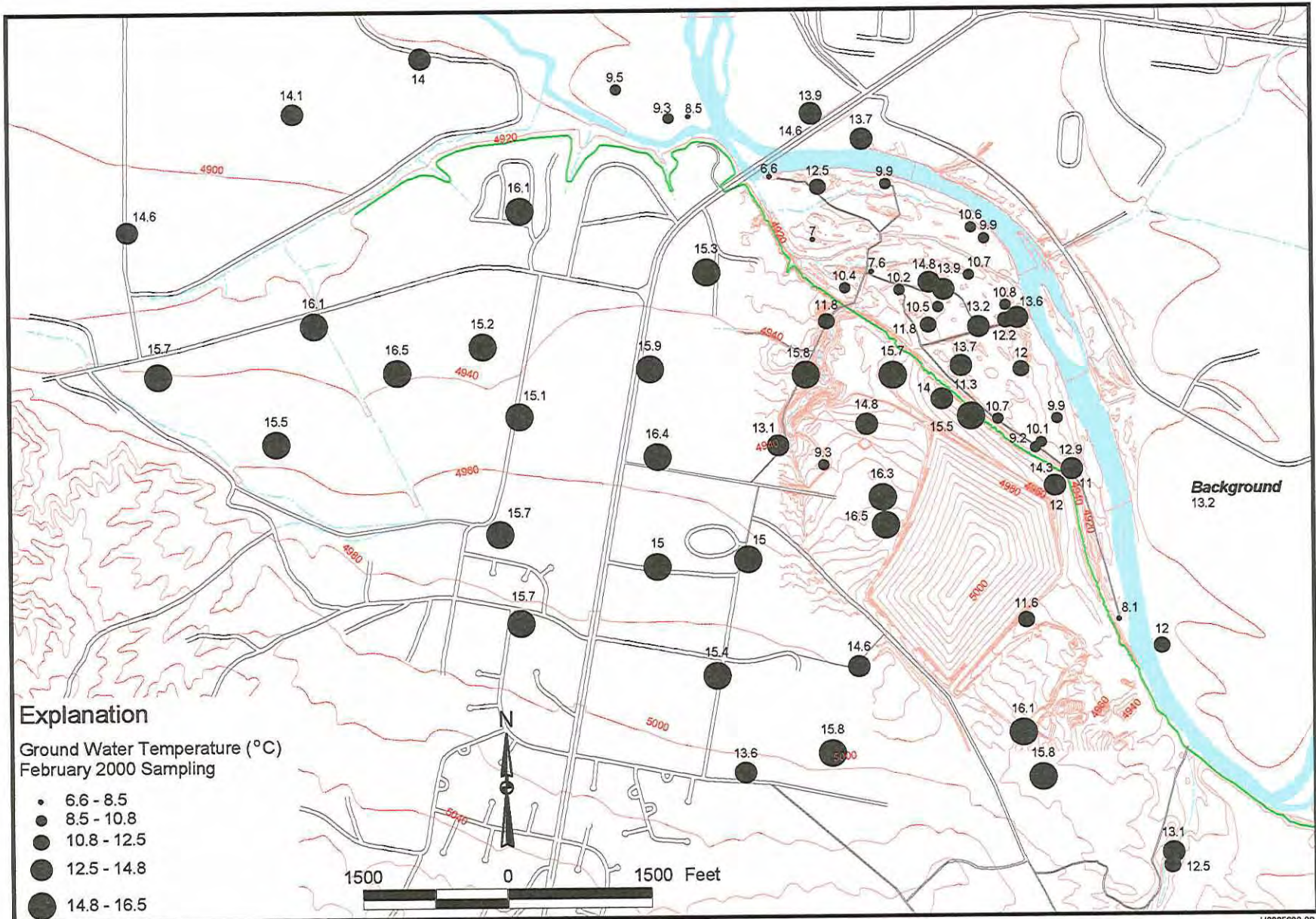


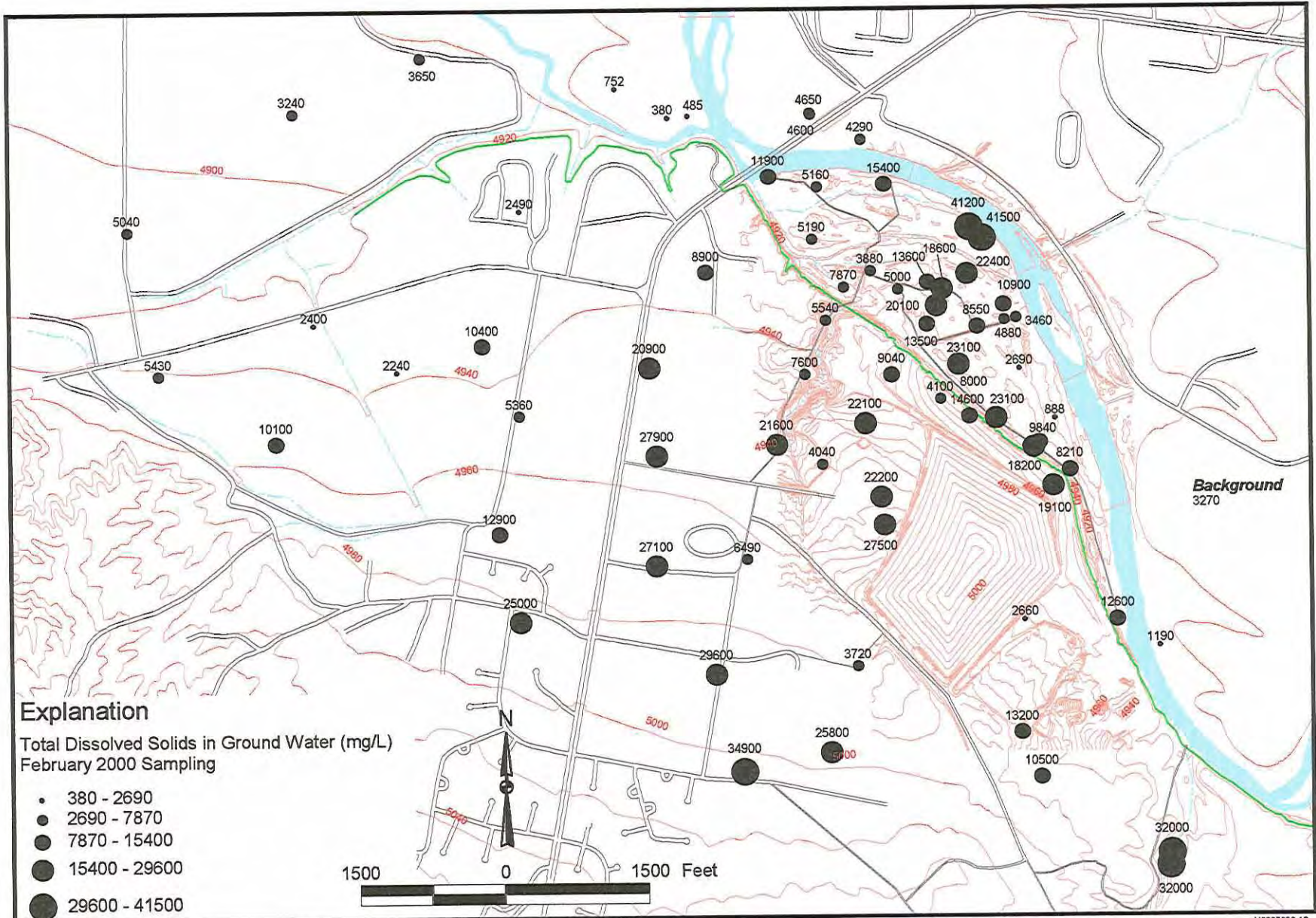


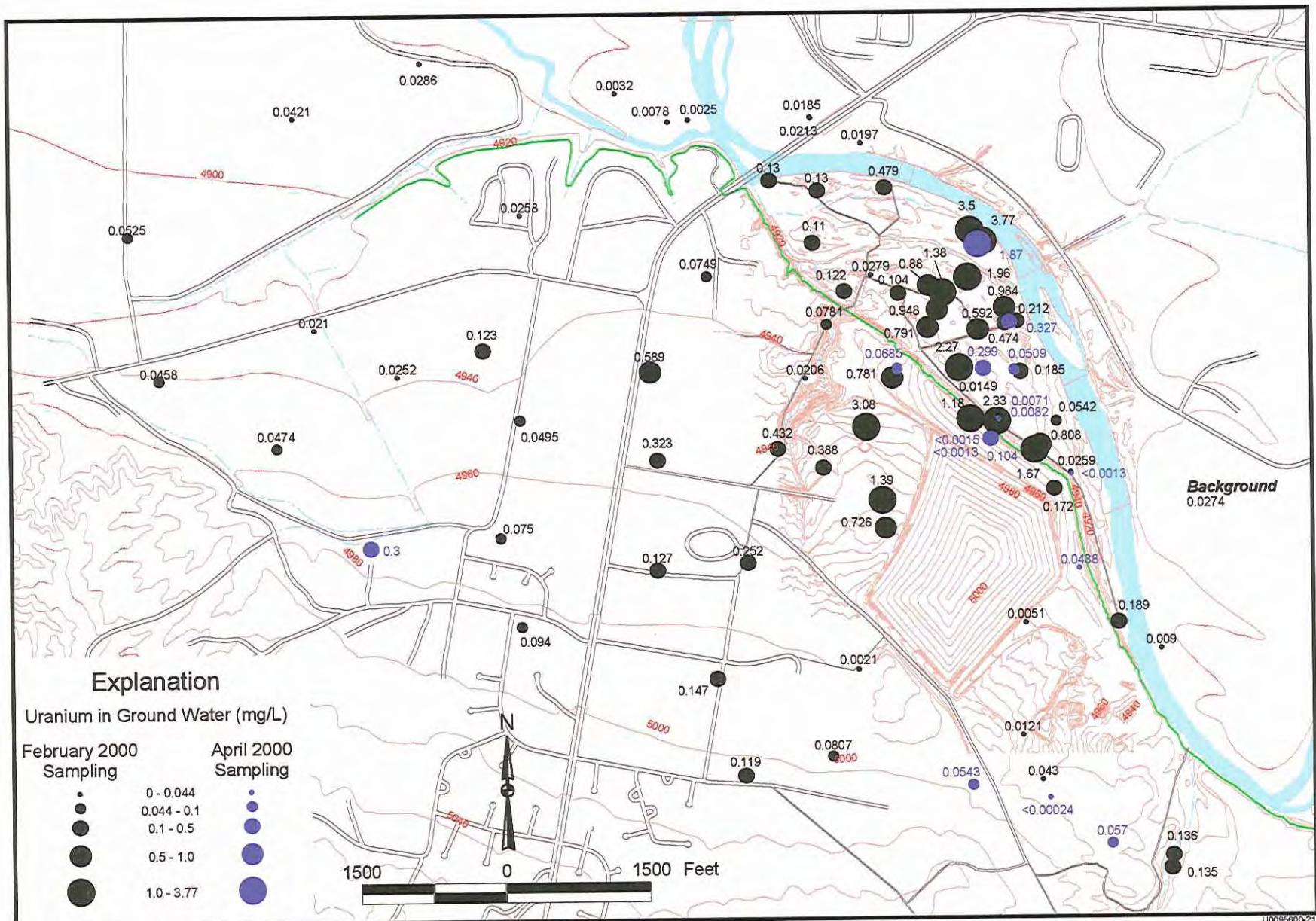


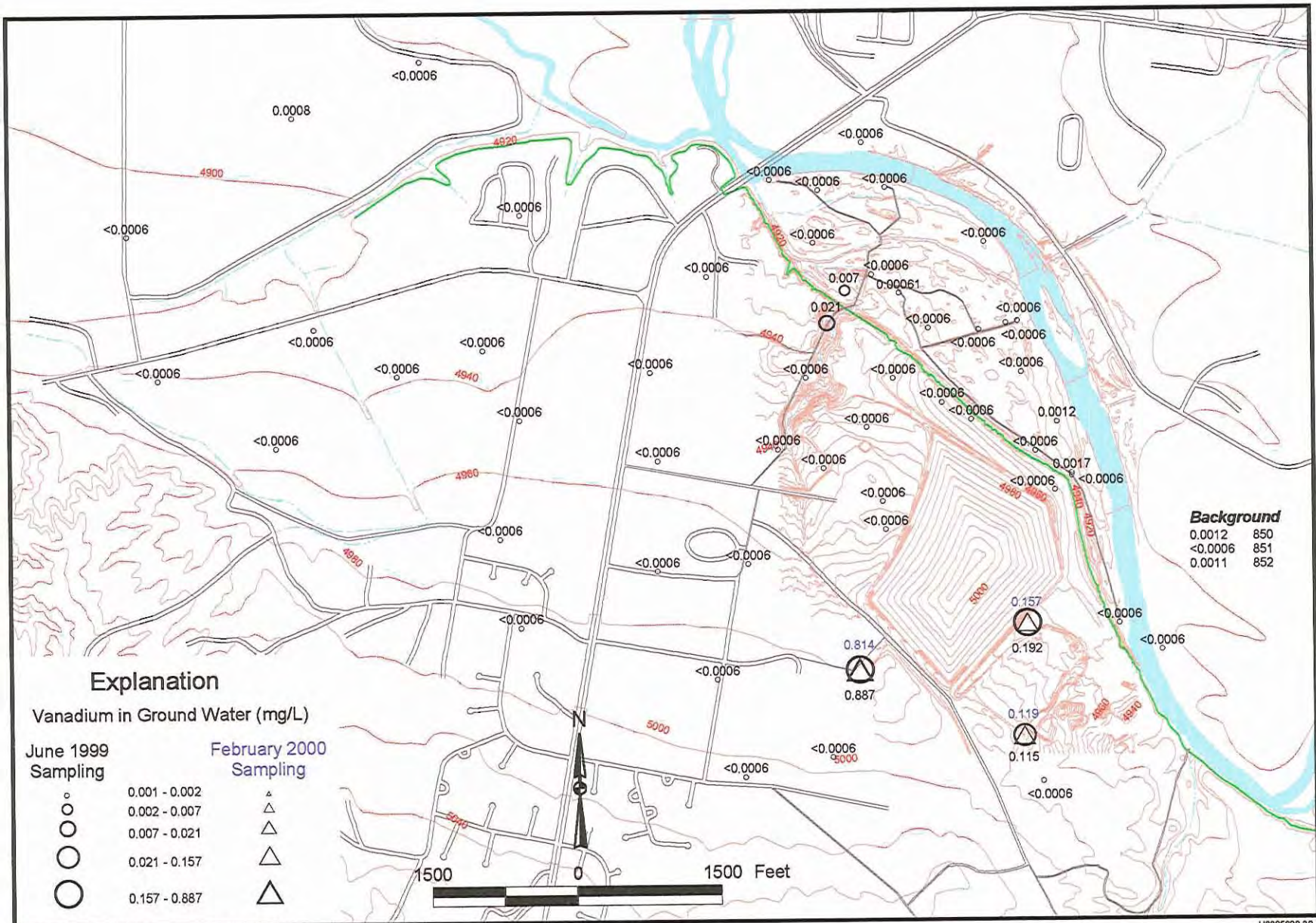












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Appendix G

Vegetation (Ecological) Sample Analytical Results

Included in CD-ROM format

This appendix is not available in electronic format.

Please email lm.records@lm.doe.gov to request the appendix.

Appendix H

Data and Calculations for Ecological Risk Assessment

Summary Statistics for 1998 – 1999 Ecological Data

Table 1. Summary Statistics for the Reference Welland- Inorganics in Sediment - 1998 & 1999 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit	Comment
Antimony	0	6	0	0.070	0.135	0.084	0	NA	0.135	mg/kg	
Arsenic	6	6	100	4.00	7.80	5.30	1.31	6.57	6.57	mg/kg	
Magnesium	6	6	100	8180	17300	11528	3381	14309	14309	mg/kg	
Manganese	6	6	100	172.0	610.0	330.3	153.2	456.4	456.4	mg/kg	
Nitrate	6	6	100	2.90	189.0	37.65	74.22	98.70	98.70	mg/kg	
Percent Solids	6	6	100	61.03	81.19	71.57	6.50	76.91	76.91	percent	
Radium-226	6	6	100	0.64	2.68	1.35	0.71	1.93	1.93	pCi/g	
Selenium	0	6	0	0.13	0.17	0.14	0	NA	0.17	mg/kg	
Sodium	3	3	100	880.0	1880	1293	522.0	2173	1880	mg/kg	1998 data only
Strontium	6	6	100	197.0	312.0	249.8	42.17	284.5	284.5	mg/kg	
Sulfate	6	6	100	568.0	1530	875	365.3	1176	1176	mg/kg	
Thorium-230	4	6	67	0.37	1.80	1.15	0.61	1.65	1.65	pCi/g	
Uranium	6	6	100	2.40	3.80	3.15	0.54	3.60	3.60	mg/kg	
Ammonia as NH ₄	3	3	100	1.00	8.30	3.53	4.13	10.50	8.30	mg/kg	1999 data only

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA- Not applicable.

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g- picocuries per gram.

Table 2. Summary Statistics for the Reference Welland- Inorganics in Sediment - 1999 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	3	0	0.070	0.135	0.095	0	NA	0.135	mg/kg
Arsenic	3	3	100	4.00	7.80	5.57	1.99	8.91	7.80	mg/kg
Magnesium	3	3	100	8180	10200	9023	1050	10794	10200	mg/kg
Manganese	3	3	100	224.0	365.0	294.0	70.51	412.9	365.0	mg/kg
Nitrate	3	3	100	2.90	189.0	65.30	107.1	245.9	189.0	mg/kg
Percent Solids	3	3	100	70.89	81.19	75.26	5.32	84.24	81.19	percent
Radium-226	3	3	100	0.64	1.41	1.00	0.39	1.65	1.41	pCi/g
Selenium	0	3	0	0.13	0.14	0.13	0	NA	0.14	mg/kg
Strontium	3	3	100	197.0	267.0	224.7	37.23	287.4	267.0	mg/kg
Sulfate	3	3	100	568.0	892.0	688.7	177.1	987.3	892.0	mg/kg
Thorium-230	1	3	33	0.37	1.30	0.69	0.53	1.58	1.30	pCi/g
Uranium	3	3	100	2.40	3.80	2.93	0.76	4.21	3.80	mg/kg
Ammonia as NH ₄	3	3	100	1.00	8.30	3.53	4.13	10.50	8.30	mg/kg

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA- Not applicable

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g- picocuries per gram

Table 3. Summary Statistics for the Floodplain Wetland- Inorganics in Sediment - 1998 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	9	0	0.065	0.090	0.074	0	NA	0.090	mg/kg
Arsenic	9	9	100	3.50	7.40	5.12	1.40	5.99	5.99	mg/kg
Magnesium	9	9	100	4890	14300	9096	3915	11523	11523	mg/kg
Manganese	9	9	100	157.0	1190	414.0	340.5	625.1	625.1	mg/kg
Nitrate	9	9	100	3.20	83.50	21.63	25.16	37.23	37.23	mg/kg
Percent Solids	9	9	100	56.16	78.58	68.06	6.76	72.25	72.25	percent
Radium-226	9	9	100	1.08	11.99	3.45	3.42	5.57	5.57	pCi/g
Selenium	9	9	100	0.47	4.10	1.62	1.38	2.47	2.47	mg/kg
Sodium	9	9	100	982.0	2255	1396	413.0	1652	1652	mg/kg
Strontium	9	9	100	133.0	568.0	263.5	128.6	343.2	343.2	mg/kg
Sulfate	9	9	100	1010	12300	4407	4204	7013	7013	mg/kg
Thorium-230	9	9	100	2.20	79.50	16.52	25.30	32.21	32.21	pCi/g
Uranium	9	9	100	2.80	13.90	6.06	3.54	8.25	8.25	mg/kg

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA- Not applicable.

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g- picocuries per gram.

Table 4. Summary Statistics for the West (Power) Wash Wetland- Inorganics in Sediment - 1999 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	5	0	0.070	0.105	0.086	0	NA	0.105	mg/kg
Arsenic	5	5	100	4.60	6.40	5.78	0.76	6.50	6.40	mg/kg
Magnesium	5	5	100	11100	14100	12100	1198	13242	13242	mg/kg
Manganese	5	5	100	201.0	368.0	277.2	68.81	342.8	342.8	mg/kg
Nitrate	5	5	100	7.40	243.0	116.9	107.0	218.9	218.9	mg/kg
Percent Solids	5	5	100	47.43	72.50	64.73	10.24	74.50	72.50	percent
Radium-226	5	5	100	0.79	1.22	1.01	0.19	1.19	1.19	pCi/g
Selenium	5	5	100	0.89	23.10	7.60	9.40	16.56	16.56	mg/kg
Strontium	5	5	100	219.00	407.00	303.60	73.44	373.62	373.62	mg/kg
Sulfate	5	5	100	3.50	27800	17001	10455	26969	26969	mg/kg
Thorium-230	5	5	100	0.92	1.50	1.22	0.27	1.48	1.48	pCi/g
Uranium	5	5	100	3.60	5.40	4.24	0.74	4.95	4.95	mg/kg
Ammonia as NH4	5	5	100	1.30	16.80	6.30	6.06	12.08	12.08	mg/kg

UCL95 - Upper 95% confidence limit

mg/kg - milligrams per kilogram

NA- Not applicable

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram

pCi/g- picocuries per gram

Table 5. Summary Statistics for the Floodplain Wetland- Inorganics in Unfiltered Surface Water (1998)

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	2	9	22	0.0006	0.0056	0.0012	0.0017	0.0022	0.0022	mg/L
Arsenic	0	9	0	0.0011	0.0062	0.0035	0.0017	0.0045	0.0062	mg/L
Magnesium	9	9	100	14.60	624.0	116.6	212.4	248.3	248.3	mg/L
Manganese	8	9	89	0.0011	0.27	0.058	0.084	0.110	0.110	mg/L
Nitrate	9	9	100	0.066	301.0	48.33	104.4	113.1	113.1	mg/L
Radium-226	7	9	78	0.26	10.22	1.91	3.15	3.86	3.86	pCi/L
Selenium	2	9	22	0.0011	0.063	0.011	0.022	0.025	0.025	mg/L
Sodium	9	9	100	768.0	1380	949.2	182.2	1062	1062	mg/L
Strontium	9	9	100	8.14	13.60	11.40	1.82	12.53	12.53	mg/L
Sulfate	9	9	100	1965	4710	2581	1062	3239	3239	mg/L
Thorium-230	0	9	0	0.60	2.60	1.17	0.68	1.59	2.60	pCi/L
Uranium	4	9	44	0.00	0.47	0.10	0.19	0.22	0.22	mg/L
Calcium Carbonate	9	9	100	265.0	1170	471.2	356.4	692.2	692.2	mg/L
Hardness	9	9	100	318.0	3570	906.5	1156	1623	1623	mg/L

UCL95 - Upper 95% confidence limit.

mg/L - milligrams per liter.

NA- Not applicable.

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g- picocuries per gram.

Table 6. Summary Statistics for the Reference Wetland- Inorganics in Unfiltered Surface Water (1998)

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	3	0	0.0006	0.0006	0.0006	0	NA	0.0006	mg/L
Arsenic	0	3	0	0.0025	0.0032	0.0028	0	NA	0.0032	mg/L
Magnesium	3	3	100	13.10	13.80	13.53	0.38	14.17	13.80	mg/L
Manganese	2	3	67	0.0011	0.072	0.026	0.039	0.093	0.072	mg/L
Nitrate	3	3	100	0.39	1.39	1.02	0.55	1.94	1.39	mg/L
Radium-226	3	3	100	0.81	1.44	1.05	0.34	1.62	1.44	pCi/L
Selenium	0	3	0	0.0011	0.0011	0.0011	0	NA	0.0011	mg/L
Sodium	3	3	100	807.0	823.0	813.3	8.50	827.7	823.0	mg/L
Strontium	3	3	100	11.00	11.60	11.33	0.31	11.85	11.60	mg/L
Sulfate	3	3	100	1960	1970	1963	5.77	1973	1970	mg/L
Thorium-230	0	3	0	1.00	2.55	1.87	0	NA	2.55	pCi/L
Uranium	0	3	0	0.0006	0.0006	0.0006	0	NA	0.0006	mg/L
Calcium Carbonate	3	3	100	250.0	278.0	261.3	14.74	286.2	278.0	mg/L
Hardness	3	3	100	297.0	335.0	312.7	19.86	346.1	335.0	mg/L

UCL95 - Upper 95% confidence limit.

mg/L - milligrams per liter.

NA- Not applicable.

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g- picocuries per gram.

Table 7. Summary Statistics for the Floodplain Wetland- Inorganics in Filtered Surface Water (1998)

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	9	0	0.0005	0.0005	0.0005	0	NA	0.0005	mg/L
Arsenic	9	9	100	0.0021	0.0072	0.0042	0.0017	0.0053	0.0053	mg/L
Magnesium	9	9	100	12.80	681.0	116.4	227.2	257.3	257.3	mg/L
Manganese	8	9	89	0.001	0.24	0.048	0.075	0.095	0.095	mg/L
Nitrate	9	9	100	4.52	552.0	170.4	177.3	280.3	280.3	mg/L
Radium-226	9	9	100	0.43	0.92	0.69	0.14	0.78	0.78	pCi/L
Selenium	2	9	22	0.0010	0.067	0.013	0.025	0.028	0.028	mg/L
Sodium	9	9	100	749.0	1200	901.2	171.1	1007	1007	mg/L
Strontium	9	9	100	7.32	13.90	10.59	2.02	11.84	11.84	mg/L
Sulfate	9	9	100	1350	5650	2829	1328	3653	3653	mg/L
Thorium-230	0	9	0	0.60	0.60	0.60	0	NA	0.60	pCi/L
Uranium	2	9	22	0.0005	0.46	0.10	0.19	0.21	0.21	mg/L
Calcium Carbonate	9	9	100	246.0	1390	485.2	423.4	747.8	747.8	mg/L
Hardness	9	9	100	302.0	4190	965.0	1347	1800	1800	mg/L

UCL95 - Upper 95% confidence limit.

mg/L - milligrams per liter.

NA - Not applicable.

EPC - Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g - picocuries per gram.

Table 8. Summary Statistics for the Reference Wetland- Inorganics in Filtered Surface Water (1998)

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	3	0	0.0005	0.0005	0.0005	0	NA	0.0005	mg/L
Arsenic	3	3	100	0.0053	0.0080	0.0069	0.0014	0.0094	0.0080	mg/L
Magnesium	3	3	100	12.20	12.50	12.33	0.15	12.59	12.50	mg/L
Manganese	2	3	67	0.001	0.067	0.025	0.036	0.086	0.067	mg/L
Nitrate	3	3	100	1.30	23.90	8.86	13.02	30.82	23.90	mg/L
Radium-226	3	3	100	0.78	0.85	0.82	0.036	0.88	0.85	pCi/L
Selenium	0	3	0	0.001	0.001	0.001	0	NA	0.001	mg/L
Sodium	3	3	100	742.0	782.0	767.7	22.3	805.2	782.0	mg/L
Strontium	3	3	100	10.50	11.10	10.90	0.35	11.48	11.10	mg/L
Sulfate	3	3	100	1670	1900	1820	130.0	2039	1900	mg/L
Thorium-230	0	3	0	1.75	2.20	2.05	0	NA	2.20	pCi/L
Uranium	0	3	0	0.0005	0.0005	0.0005	0	NA	0.0005	mg/L
Calcium Carbonate	3	3	100	245.0	250.0	247.7	2.5	251.9	250.0	mg/L
Hardness	3	3	100	295.0	301.0	298.3	3.06	303.5	301.0	mg/L

UCL95 - Upper 95% confidence limit.

mg/L - milligrams per liter.

NA - Not applicable.

EPC - Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g - picocuries per gram.

Table 9. Summary Statistics for the Floodplain Wetland- Inorganics in Bulrush Roots - 1998 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	1	2	50	0.050	0.17	0.11	0.08	0.49	0.17	mg/kg
Arsenic	2	2	100	0.24	0.70	0.47	0.33	1.92	0.70	mg/kg
Magnesium	2	2	100	1850	2270	2060	297.0	3386	2270	mg/kg
Manganese	2	2	100	107.0	704.0	405.5	422.1	2290	704.0	mg/kg
Radium-226	1	2	50	0.11	0.61	0.36	0.36	1.95	0.61	pCi/g
Selenium	2	2	100	2.20	6.40	4.30	2.97	17.56	6.40	mg/kg
Sodium	2	2	100	1940	4890	3415	2086	12729	4890	mg/kg
Strontium	2	2	100	56.40	165.0	110.7	76.79	453.6	165.0	mg/kg
Thorium-230	0	2	0	0.40	0.40	0.40	0	NA	0.40	pCi/g
Uranium	2	2	100	15.20	54.90	35.05	28.07	160.4	54.90	mg/kg
Loss on Drying	2	2	100	76.00	80.90	78.45	3.46	93.92	80.90	percent

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA- Not applicable.

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g- picocuries per gram.

Table 10. Summary Statistics for the Reference Wetland- Inorganics in Bulrush Roots - 1998 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	1	3	33	0.05	0.15	0.08	0.06	0.18	0.15	mg/kg
Arsenic	2	3	67	0.16	4.30	2.59	2.16	6.23	4.30	mg/kg
Magnesium	3	3	100	1540	2800	2013	686.0	3170	2800	mg/kg
Manganese	3	3	100	82.40	1880	733.1	996.2	2413	1880	mg/kg
Radium-226	2	3	67	0.043	5.42	1.96	3.00	7.02	5.42	pCi/g
Selenium	1	3	33	0.10	4.30	1.57	2.36	5.56	4.30	mg/kg
Sodium	3	3	100	4160	34200	21653	15619	47985	34200	mg/kg
Strontium	3	3	100	61.30	813.0	344.4	408.7	1033	813.0	mg/kg
Thorium-230	0	3	0	0.40	0.40	0.40	0	NA	0.40	pCi/g
Uranium	3	3	100	0.15	0.86	0.50	0.36	1.10	0.86	mg/kg
Loss on Drying	3	3	100	85.80	93.40	88.50	4.25	95.67	93.40	percent

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA- Not applicable.

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g- picocuries per gram.

Table 11. Summary Statistics for the Floodplain Wetland- Inorganics in Bulrush Stems - 1998 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	2	0	0.050	0.05	0.050	0	NA	0.05	mg/kg
Arsenic	1	2	50	0.10	0.26	0.18	0.11	0.69	0.26	mg/kg
Magnesium	2	2	100	2400	4580	3490	1541	10373	4580	mg/kg
Manganese	2	2	100	158.0	315.0	236.5	111.0	732.2	315.0	mg/kg
Radium-226	1	2	50	0.11	0.30	0.20	0.14	0.82	0.30	pCi/g
Selenium	2	2	100	1.400	1.70	1.55	0.21	2.50	1.70	mg/kg
Sodium	2	2	100	5390	6270	5830	622	8608	6270	mg/kg
Strontium	2	2	100	62.40	93.70	78.05	22.13	176.9	93.70	mg/kg
Thorium-230	0	2	0	0.400	0.40	0.40	0	NA	0.40	pCi/g
Uranium	2	2	100	2.70	4.50	3.60	1.27	9.28	4.50	mg/kg
Loss on Drying	2	2	100	77.00	80.20	78.60	2.26	88.70	80.20	percent

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA- Not applicable.

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g- picocuries per gram.

Table 12. Summary Statistics for the Reference Wetland- Inorganics in Bulrush Stems

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	3	0	0.05	0.05	0.05	0	NA	0.05	mg/kg
Arsenic	0	3	0	0.21	0.25	0.23	0.02	0.27	0.25	mg/kg
Magnesium	3	3	100	1130	1510	1323	190.1	1644	1510	mg/kg
Manganese	3	3	100	94.70	863.0	437.6	390.7	1096	863.0	mg/kg
Radium-226	2	3	67	0.10	0.62	0.34	0.26	0.78	0.62	pCi/g
Selenium	0	3	0	0.26	0.48	0.36	0.11	0.55	0.48	mg/kg
Sodium	3	3	100	9820	21800	17273	6504	28238	21800	mg/kg
Strontium	3	3	100	73.40	1100	544.5	518.5	1419	1100	mg/kg
Thorium-230	0	3	0	0.400	0.40	0.40	0	NA	0.40	pCi/g
Uranium	3	3	100	0.170	0.23	0.21	0.03	0.27	0.23	mg/kg
Loss on Drying	3	3	100	86.50	91.50	88.87	2.51	93.10	91.50	percent

UCL95 - Upper 95% confidence limit

mg/kg - milligrams per kilogram

NA- Not applicable

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram

pCi/g- picocuries per gram

Table 13. Summary Statistics for the Terrestrial Floodplain - Hot Spot West - Inorganics in Russian Olives Stems and Leaves - 1999 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	3	0	0.05	0.05	0.05	0	NA	0.05	mg/kg
Arsenic	3	3	100	0.30	0.64	0.48	0.17	0.77	0.64	mg/kg
Magnesium	3	3	100	1880	3210	2760	762.2	4045	3210	mg/kg
Manganese	3	3	100	28.60	33.10	30.27	2.47	34.42	33.10	mg/kg
Radium-226	0	3	0	0.03	0.04	0.04	0	NA	0.04	pCi/g
Selenium	2	3	67	0.26	3.20	1.85	1.49	4.36	3.20	mg/kg
Sodium	3	3	100	1630	6250	4013	2313	7914	6250	mg/kg
Strontium	3	3	100	66.20	101.00	84.87	17.54	114.43	101.00	mg/kg
Thorium-230	0	3	0	0.30	0.30	0.30	0	NA	0.30	pCi/g
Uranium	2	3	67	0.05	0.16	0.11	0.06	0.20	0.16	mg/kg
Loss on Drying	3	3	100	70.00	84.70	77.20	7.35	89.60	84.70	percent

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA- Not applicable.

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g- picocuries per gram.

Table 14. Summary Statistics for the Reference Floodplain - Inorganics in Russian Olives Stems and Leaves - 1999 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	5	0	0.05	0.06	0.05	0	NA	0.06	mg/kg
Arsenic	5	5	100	0.45	0.69	0.53	0.10	0.62	0.62	mg/kg
Magnesium	5	5	100	1700	2390	2136	262	2386	2386	mg/kg
Manganese	5	5	100	43.40	73.20	57.58	11.81	68.84	68.84	mg/kg
Radium-226	0	5	0	0.03	0.11	0.06	0	NA	0.11	pCi/g
Selenium	0	5	0	0.10	0.39	0.22	0	NA	0.39	mg/kg
Sodium	5	5	100	1310	2500	2004	432	2416	2416	mg/kg
Strontium	5	5	100	65.80	124.0	93.96	20.97	114.0	114.0	mg/kg
Thorium-230	0	5	0	0.30	0.30	0.30	0	NA	0.30	pCi/g
Uranium	5	5	100	0.12	0.42	0.22	0.13	0.34	0.34	mg/kg
Loss on Drying	5	5	100	71.30	77.40	74.88	2.37	77.14	77.14	percent

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA- Not applicable.

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g- picocuries per gram.

Table 15. Summary Statistics for the Terrestrial Terrace - Inorganics in Greasewood Stems and Leaves - 1998 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	4	0	0.05	0.05	0.05	0	NA	0.05	mg/kg
Arsenic	1	4	25	0.10	0.46	0.21	0.17	0.41	0.41	mg/kg
Magnesium	4	4	100	1400	5870	3605	2173	6162	5870	mg/kg
Manganese	4	4	100	41.80	100.0	76.70	25	106.3	100.0	mg/kg
Radium-226	0	4	0	0.08	0.13	0.11	0	NA	0.13	pCi/g
Selenium	2	4	50	0.21	4.80	1.79	2	4.22	4.22	mg/kg
Sodium	4	4	100	712.0	37200	17044	19089	39502	37200	mg/kg
Strontium	4	4	100	54.30	285.0	146.9	109.3	275.5	275.5	mg/kg
Thorium-230	0	4	0	0.40	0.40	0.40	0	NA	0.40	pCi/g
Uranium	4	4	100	0.42	1.70	0.90	0.56	1.56	1.56	mg/kg
Loss on Drying	4	4	100	75.20	78.80	77.35	1.63	79.27	78.80	percent

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA- Not applicable.

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g- picocuries per gram.

Table 16. Summary Statistics for the Reference Terrestrial Terrace - Inorganics in Greasewood Stems and Leaves - 1998 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	3	0	0.05	0.05	0.05	0	NA	0.05	mg/kg
Arsenic	1	3	33	0.15	0.37	0.23	0.12	0.44	0.37	mg/kg
Magnesium	3	3	100	2010	2300	2160	145.3	2405	2300	mg/kg
Manganese	3	3	100	74.10	87.10	79.73	6.67	90.98	87.10	mg/kg
Radium-226	0	3	0	0.09	0.13	0.11	0	NA	0.13	pCi/g
Selenium	3	3	100	4.70	6.60	5.63	0.95	7.24	6.60	mg/kg
Sodium	3	3	100	27400	34100	30033	3573	36056	34100	mg/kg
Strontium	3	3	100	51.90	68.70	59.07	8.67	73.68	68.70	mg/kg
Thorium-230	0	3	0	0.40	0.40	0.40	0	NA	0.40	pCi/g
Uranium	3	3	100	0.16	0.25	0.20	0.05	0.28	0.25	mg/kg
Loss on Drying	3	3	100	73.00	77.10	74.80	2.10	78.33	77.10	percent

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA- Not applicable

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g- picocuries per gram.

Table 17. Summary Statistics for the Terrestrial Terrace - Inorganics in Greasewood Stems and Leaves - 1999 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	3	0	0.05	0.05	0.05	0	NA	0.05	mg/kg
Arsenic	1	3	33	0.22	0.46	0.30	0.14	0.53	0.46	mg/kg
Magnesium	3	3	100	2360	4270	3433	976.7	5080	4270	mg/kg
Manganese	3	3	100	166.0	200.0	182.7	17.01	211.3	200.0	mg/kg
Radium-226	0	3	0	0.04	0.05	0.04	0	NA	0.05	pCi/g
Selenium	3	3	100	2.50	4.50	3.40	1.01	5.11	4.50	mg/kg
Sodium	3	3	100	44100	55200	50533	5757	60239	55200	mg/kg
Strontium	3	3	100	61.20	80.50	70.00	9.76	86.46	80.50	mg/kg
Thorium-230	0	3	0	0.30	0.30	0.30	0	NA	0.30	pCi/g
Uranium	2	3	67	0.05	0.25	0.15	0.10	0.32	0.25	mg/kg
Loss on Drying	3	3	100	78.00	79.80	78.77	0.93	80.33	79.80	percent

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA - Not applicable.

EPC - Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g - picocuries per gram.

Table 18. Summary Statistics for the Floodplain - East Contaminated Area - Inorganics in Greasewood Stems and Leaves - 1999 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	5	0	0.05	0.11	0.06	0	NA	0.11	mg/kg
Arsenic	0	5	0	0.22	0.31	0.25	0	NA	0.31	mg/kg
Magnesium	5	5	100	2280	3980	3442	693	4103	3980	mg/kg
Manganese	5	5	100	63.30	180.0	111.8	47.10	156.7	156.7	mg/kg
Radium-226	0	5	0	0.03	0.07	0.04	0	NA	0.07	pCi/g
Selenium	4	5	80	0.10	0.45	0.32	0.14	0.46	0.45	mg/kg
Sodium	5	5	100	41500	62300	48220	8369	56200	56200	mg/kg
Strontium	5	5	100	44.00	51.40	48.44	2.96	51.26	51.26	mg/kg
Thorium-230	0	5	0	0.30	0.35	0.31	0	NA	0.35	pCi/g
Uranium	5	5	100	0.15	0.48	0.26	0.13	0.39	0.39	mg/kg
Loss on Drying	5	5	100	79.00	82.80	80.42	1.76	82.10	82.10	percent

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA - Not applicable

EPC - Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g - picocuries per gram.

Table 19. Summary Statistics for the Terrestrial Floodplain - Inorganics in Cottonwood Stems and Leaves - 1998 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	3	0	0.05	0.05	0.05	0	NA	0.05	mg/kg
Arsenic	1	3	33	0.19	4.30	1.59	2.35	5.55	4.30	mg/kg
Magnesium	3	3	100	1470	3350	2440	941.4	4027	3350	mg/kg
Manganese	3	3	100	59.80	1800	796.93	900	2314	1800	mg/kg
Radium-226	3	3	100	0.29	6.86	2.75	3.58	8.78	6.86	pCi/g
Selenium	1	3	33	0.28	1.60	0.73	0.75	2.00	1.60	mg/kg
Sodium	3	3	100	5380	24100	16460	9823	33020	24100	mg/kg
Strontium	3	3	100	330.0	464.0	385.7	69.82	503.4	464.0	mg/kg
Thorium-230	0	3	0	0.40	0.40	0.40	0	NA	0.40	pCi/g
Uranium	3	3	100	0.18	0.59	0.33	0.22	0.71	0.59	mg/kg
Loss on Drying	3	3	100	69.80	71.50	70.47	0.91	72.00	71.50	percent

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA - Not applicable.

EPC - Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g - picocuries per gram.

Table 20. Summary Statistics for the Reference Terrestrial Floodplain - Inorganics in Cottonwood Stems and Leaves - 1998 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	3	0	0.05	0.05	0.05	0	NA	0.05	mg/kg
Arsenic	3	3	100	0.35	0.41	0.37	0.03	0.43	0.41	mg/kg
Magnesium	3	3	100	2630	4180	3407	775.0	4713	4180	mg/kg
Manganese	3	3	100	37.70	54.30	43.37	9.47	59.33	54.30	mg/kg
Radium-226	0	3	0	0.08	0.10	0.09	0	NA	0.10	pCi/g
Selenium	0	3	0	0.29	0.60	0.44	0	NA	0.60	mg/kg
Sodium	3	3	100	2620	4550	3343	1052	5117	4550	mg/kg
Strontium	3	3	100	199.0	276.0	248.0	42.58	319.8	276.0	mg/kg
Thorium-230	0	3	0	0.40	0.40	0.40	0	NA	0.40	pCi/g
Uranium	3	3	100	0.22	0.39	0.32	0.09	0.48	0.39	mg/kg
Loss on Drying	3	3	100	70.20	71.80	70.80	0.87	72.27	71.80	percent

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA - Not applicable.

EPC - Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g - picocuries per gram.

Table 21. Summary Statistics for the Floodplain Wetland- Inorganics in Cattail Roots - 1998 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	7	0	0.05	0.05	0.05	0	NA	0.05	mg/kg
Arsenic	7	7	100	1.20	2.30	1.79	0.40	2.08	2.08	mg/kg
Magnesium	7	7	100	1420	1860	1678	148	1787	1787	mg/kg
Manganese	7	7	100	46.50	126.0	93.90	30.33	116.2	116.2	mg/kg
Radium-226	3	7	43	0.11	0.48	0.22	0.16	0.35	0.35	pCi/g
Selenium	5	7	71	0.10	0.76	0.41	0.28	0.61	0.61	mg/kg
Sodium	7	7	100	7445	15900	12142	2979	14330	14330	mg/kg
Strontium	7	7	100	340.5	565.0	448.4	81.9	508.5	508.5	mg/kg
Thorium-230	0	7	0	0.40	0.40	0.40	0	NA	0.40	pCi/g
Uranium	7	7	100	0.75	1.50	0.99	0.30	1.20	1.20	mg/kg
Loss on Drying	7	7	100	83.00	89.40	87.83	2.31	89.53	89.40	percent

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA- Not applicable.

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g- picocuries per gram.

Table 22. Summary Statistics for the Reference Wetland- Inorganics in Cattail Roots - 1998 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	3	0	0.05	0.05	0.05	0	NA	0.05	mg/kg
Arsenic	2	3	67	0.26	2.10	1.12	0.93	2.68	2.10	mg/kg
Magnesium	3	3	100	1510	2540	1930	541	2841	2540	mg/kg
Manganese	3	3	100	172.0	472.0	336.3	152.0	592.7	472.0	mg/kg
Radium-226	3	3	100	0.46	1.59	0.85	0.64	1.93	1.59	pCi/g
Selenium	0	3	0	0.13	0.22	0.17	0	NA	0.22	mg/kg
Sodium	3	3	100	16800	27400	20467	6008	30595	27400	mg/kg
Strontium	3	3	100	402.0	705.0	548.0	151.8	803.9	705.0	mg/kg
Thorium-230	0	3	0	0.40	0.40	0.40	0	NA	0.40	pCi/g
Uranium	3	3	100	0.22	0.78	0.50	0.28	0.97	0.78	mg/kg
Loss on Drying	3	3	100	91.40	93.40	92.73	1.15	94.68	93.40	percent

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA- Not applicable.

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g- picocuries per gram.

Table 23. Summary Statistics for the 1st Wash- Inorganics in Cattail Roots - 1999 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	5	0	0.05	0.12	0.07	0	0.10	0.12	mg/kg
Arsenic	2	5	40	0.25	2.00	0.99	0.88	1.83	1.83	mg/kg
Magnesium	5	5	100	5270	8670	6752	1387	8075	8075	mg/kg
Manganese	5	5	100	63.40	354.0	181.0	113.3	289.0	289.0	mg/kg
Radium-226	3	5	60	0.07	0.55	0.30	0.21	0.50	0.50	pCi/g
Selenium	5	5	100	3.70	24.30	8.60	8.85	17.04	17.04	mg/kg
Sodium	5	5	100	7000	9740	8356	1029	9337	9337	mg/kg
Strontium	5	5	100	104.0	329.0	168.2	91.94	255.9	255.9	mg/kg
Thorium-230	0	5	0	0.30	0.90	0.48	0.25	0.71	0.90	pCi/g
Uranium	5	5	100	0.11	2.70	1.31	0.98	2.25	2.25	mg/kg
Loss on Drying	5	5	100	86.50	89.70	87.90	1.33	89.17	89.17	percent

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA- Not applicable.

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g- picocuries per gram.

Table 24. Summary Statistics for the Reference Wetland- Inorganics in Cattail Roots - 1999 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	3	0	0.05	0.22	0.11	0	NA	0.22	mg/kg
Arsenic	3	3	100	2.50	6.90	4.50	2.23	8.25	6.90	mg/kg
Magnesium	3	3	100	2130	5300	3257	1773	6245	5300	mg/kg
Manganese	3	3	100	179.0	477.0	313.3	151.2	568.2	477.0	mg/kg
Radium-226	3	3	100	0.94	1.59	1.21	0.34	1.78	1.59	pCi/g
Selenium	0	3	0	0.10	0.10	0.10	0	NA	0.10	mg/kg
Sodium	3	3	100	14900	35400	21967	11639	41588	35400	mg/kg
Strontium	3	3	100	419.0	998.0	645.3	309.5	1167.1	998.0	mg/kg
Thorium-230	0	3	0	0.30	0.37	0.32	0	NA	0.37	pCi/g
Uranium	3	3	100	0.57	1.40	1.02	0.42	1.73	1.40	mg/kg
Loss on Drying	3	3	100	90.30	93.80	91.93	1.76	94.90	93.80	percent

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA- Not applicable.

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g- picocuries per gram.

Table 25. Summary Statistics for the Floodplain Wetland- Inorganics in Cattail Stems - 1998 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	7	0	0.05	0.05	0.05	0	NA	0.05	mg/kg
Arsenic	4	7	57	0.41	0.99	0.62	0.22	0.78	0.78	mg/kg
Magnesium	7	7	100	748.0	1240	902.6	176.5	1032	1032	mg/kg
Manganese	7	7	100	105.0	324.00	221.0	74.59	275.8	275.8	mg/kg
Radium-226	3	7	43	0.06	0.29	0.17	0.10	0.24	0.24	pCi/g
Selenium	7	7	100	0.20	1.00	0.46	0	0.68	0.68	mg/kg
Sodium	7	7	100	12900	23400	17786	3991	20717	20717	mg/kg
Strontium	7	7	100	696.0	1940	1115	413.5	1419	1419	mg/kg
Thorium-230	0	7	0	0.40	0.40	0.40	0	NA	0.40	pCi/g
Uranium	7	7	100	0.19	1.60	0.45	0.51	0.82	0.82	mg/kg
Loss on Drying	7	7	100	83.20	91.40	86.41	2.90	88.54	88.54	percent

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA- Not applicable.

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g- picocuries per gram.

Table 26. Summary Statistics for the Reference Wetland- Inorganics in Cattail Stems - 1998 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	3	0	0.05	0.05	0.05	0	NA	0.05	mg/kg
Arsenic	2	3	67	0.22	2.00	0.90	0.97	2.52	2.00	mg/kg
Magnesium	3	3	100	1430	1700	1580	137.5	1812	1700	mg/kg
Manganese	3	3	100	149.0	519.0	296.0	196.4	627.0	519.0	mg/kg
Radium-226	3	3	100	0.23	0.61	0.40	0	0.73	0.61	pCi/g
Selenium	0	3	0	0.10	0.20	0.14	0	NA	0.20	mg/kg
Sodium	3	3	100	8830	21700	17177	7237	29377	21700	mg/kg
Strontium	3	3	100	132.0	1300	802.3	602.8	1819	1300	mg/kg
Thorium-230	1	3	33	0.40	0.98	0.59	0.33	1.16	0.98	pCi/g
Uranium	3	3	100	0.15	1.80	0.82	0.87	2.28	1.80	mg/kg
Loss on Drying	3	3	100	92.20	94.50	93.17	1.19	95.18	94.50	percent

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA- Not applicable.

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g- picocuries per gram.

Table 27. Summary Statistics for the 1st Wash- Inorganics in Cattail Stems - 1999 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	5	0	0.05	0.07	0.05	0	NA	0.07	mg/kg
Arsenic	1	5	20	0.23	1.70	0.57	0.64	1.17	1.17	mg/kg
Magnesium	5	5	100	4110	6920	5348	1008	6309	6309	mg/kg
Manganese	5	5	100	97.60	372.0	190.5	108.9	294.3	294.3	mg/kg
Radium-226	1	5	20	0.05	0.51	0.16	0.20	0.35	0.35	pCi/g
Selenium	4	5	80	0.85	7.50	3.37	2.58	5.83	5.83	mg/kg
Sodium	5	5	100	5590	7150	6456	611	7039	7039	mg/kg
Strontium	5	5	100	100.0	135.0	121.0	13.11	133.5	133.5	mg/kg
Thorium-230	0	5	0	0.30	1.40	0.53	0	NA	1.40	pCi/g
Uranium	5	5	100	0.14	1.70	0.48	0.68	1.13	1.13	mg/kg
Loss on Drying	5	5	100	86.80	89.40	88.36	0.96	89.28	89.28	percent

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA- Not applicable.

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g- picocuries per gram.

Table 28. Summary Statistics for the Reference Wetland- Inorganics in Cattail Stems - 1999 - Dry Weight

Analyte	Number of Detects	Number of Samples	% Detects	Minimum	Maximum	Average	Std. Deviation	UCL95	EPC	Unit
Antimony	0	3	0	0.05	0.09	0.06	0	NA	0.09	mg/kg
Arsenic	0	3	0	0.20	0.43	0.31	0	NA	0.43	mg/kg
Magnesium	3	3	100	1340	1710	1463	213.62	1823	1710	mg/kg
Manganese	3	3	100	323.0	689.0	488.7	185.4	801.3	689.0	mg/kg
Radium-226	2	3	67	0.07	0.29	0.21	0.12	0.42	0.29	pCi/g
Selenium	0	3	0	0.14	0.22	0.18	0	NA	0.22	mg/kg
Sodium	3	3	100	24200	28900	26900	2427	30991	28900	mg/kg
Strontium	3	3	100	937.0	1100	1042	91.36	1196	1100	mg/kg
Thorium-230	0	3	0	0.30	0.30	0.30	0	NA	0.30	pCi/g
Uranium	3	3	100	0.13	0.17	0.15	0.02	0.18	0.17	mg/kg
Loss on Drying	3	3	100	90.70	91.80	91.13	0.59	92.12	91.80	percent

UCL95 - Upper 95% confidence limit.

mg/kg - milligrams per kilogram

NA- Not applicable.

EPC- Exposure point concentration in milligrams per kilogram or picocuries per gram.

pCi/g- picocuries per gram.

Area A

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Area A: Media Concentrations Based on Maximum Measured Values

Chemical Name	Soil Conc. (mg/kg)	Sediment Conc. (mg/kg)	Water Conc. (mg/L)	K _d	Soil-to-Plant Uptake Parameters		Uplnd Plant Conc. (mg/kgdw)	Wild Plant Conc. (mg/kgdw)	Soil-to-Mammal Uptake Parameters		Mammal Conc. (mg/kgdw)	Invert. BCF	Invert. Conc. (mg/kgdw)	Fish BCF	Fish Conc. (mg/kgdw)
					B ₀	B ₁			B ₀	B ₁					
Ammonium		4.91E+01	3.00E+00	3.10E+01	1.00E+00	1.00E+00	0.00E+00	4.91E+01	0.00E+00	1.00E+00	0.00E+00	4.00E+00	1.20E+01	3.00E+00	9.00E+00
Manganese		3.68E+02	1.90E+00	6.50E+01	3.00E+00	1.00E+00	4.46E+01	3.72E+02	2.05E-02	1.00E+00	0.00E+00	6.50E+01	1.24E+02	1.78E+01	1.35E+02
Molybdenum		3.94E-01	1.97E-02	2.00E+01	8.00E-01	1.00E+00	0.00E+00	3.15E-01	1.00E-03	1.00E+00	0.00E+00	1.00E+01	1.97E-01	1.00E+01	7.88E-01
Nitrate		2.43E+02	5.15E+02	1.00E-02	1.00E+00	1.00E+00	0.00E+00	2.43E+02	0.00E+00	1.00E+00	0.00E+00	4.00E+00	2.06E+03	3.00E+00	1.55E+03
Selenium		2.31E+01	4.28E-01	3.00E+02	5.08E-01	1.10E+00	2.80E+00	4.52E+01	6.60E-01	3.76E-01	0.00E+00	2.69E+02	1.15E+02	1.29E+02	2.21E+02
Strontium		4.07E+02	9.78E+00	3.50E+01	2.50E+00	1.00E+00	1.42E+02	3.29E+02	8.00E-03	1.00E+00	4.23E-03	9.50E+00	9.29E+01	9.50E+00	3.72E+02
Sulfate		2.78E+04	5.67E+03	7.50E+00	1.00E+00	1.00E+00	0.00E+00	2.78E+04	0.00E+00	1.00E+00	0.00E+00	4.00E+00	2.27E+04	3.00E+00	1.70E+04
Uranium		5.40E+00	1.02E-01	4.50E+02	2.30E-02	1.00E+00	7.80E-01	5.30E+00	3.30E-02	1.00E+00	0.00E+00	2.71E+01	2.76E+00	2.71E+01	1.11E+01
Vanadium		2.50E+00	2.50E-03	1.00E+03	5.50E-03	1.00E+00	0.00E+00	1.38E-02	1.23E-02	1.00E+00	0.00E+00	3.00E+03	7.50E+00	3.00E+03	3.00E+01

Area A: Media Concentrations Based on 95% UCL Values

Chemical Name	Soil Conc. (mg/kg)	Sediment Conc. (mg/kg)	Water Conc. (mg/L)	K _d	Soil-to-Plant Uptake Parameters		Uplnd Plant Conc. (mg/kgdw)	Wild Plant Conc. (mg/kgdw)	Soil-to-Mammal Uptake Parameters		Mammal Conc. (mg/kgdw)	Invert. BCF	Invert. Conc. (mg/kgdw)	Fish BCF	Fish Conc. (mg/kgdw)
					B ₀	B ₁			B ₀	B ₁					
Ammonium		2.43E+01	4.58E-01	3.10E+01	1.00E+00	1.00E+00	0.00E+00	2.43E+01	0.00E+00	1.00E+00	0.00E+00	4.00E+00	1.83E+00	3.00E+00	1.37E+00
Manganese		3.03E+02	3.15E-01	6.50E+01	3.00E+00	1.00E+00	3.29E+01	1.63E+02	2.05E-02	1.00E+00	0.00E+00	6.50E+01	2.05E+01	1.78E+01	2.24E+01
Molybdenum		1.74E-01	8.70E-03	2.00E+01	8.00E-01	1.00E+00	0.00E+00	1.39E-01	1.00E-03	1.00E+00	0.00E+00	1.00E+01	8.70E-02	1.00E+01	3.48E-01
Nitrate		1.63E+02	1.94E+02	1.00E-02	1.00E+00	1.00E+00	0.00E+00	1.63E+02	0.00E+00	1.00E+00	0.00E+00	4.00E+00	7.76E+02	3.00E+00	5.82E+02
Selenium		1.18E+01	1.85E-01	3.00E+02	5.08E-01	1.10E+00	2.28E+00	1.42E+01	6.60E-01	3.76E-01	0.00E+00	2.69E+02	4.98E+01	1.29E+02	9.55E+01
Strontium		3.39E+02	5.81E+00	3.50E+01	2.50E+00	1.00E+00	1.15E+02	1.38E+02	8.00E-03	1.00E+00	3.43E-03	9.50E+00	5.52E+01	9.50E+00	2.21E+02
Sulfate		2.14E+04	2.73E+03	7.50E+00	1.00E+00	1.00E+00	0.00E+00	2.14E+04	0.00E+00	1.00E+00	0.00E+00	4.00E+00	1.09E+04	3.00E+00	8.19E+03
Uranium		4.64E+00	5.18E-02	4.50E+02	2.30E-02	1.00E+00	4.82E-01	1.50E+00	3.30E-02	1.00E+00	0.00E+00	2.71E+01	1.40E+00	2.71E+01	5.62E+00
Vanadium		1.14E+00	1.14E-03	1.00E+03	5.50E-03	1.00E+00	0.00E+00	6.27E-03	1.23E-02	1.00E+00	0.00E+00	3.00E+03	3.42E+00	3.00E+03	1.37E+01

Toxicity Data and Benchmarks

Chemical Name	Mammals			Birds			Plant Benchmark (mg/kg)	Water Benchmark (mg/L)	Sediment Benchmark (mg/kg)
	NOAEL (mg/kg/d)	Test Species	Body Wt. (kg)	NOAEL (mg/kg/d)	Test Species	Body Wt. (kg)			
Ammonium	88	rat	0.35	977	J. quail	0.072	500	0.18	75
Manganese	0.26	mouse	0.03	3.53	chicken	1.5	2	0.08	630
Molybdenum	507	guinea pig	0.86					0.24	4
Nitrate	0.20	rat	0.35	0.4	mallard	1	1	177	2440
Selenium	263	rat	0.35					0.002	5
Strontium								1.5	49
Sulfate								100	
Uranium	3.07	mouse	0.028	16	black duck	1.25	5	0.0026	
Vanadium	0.21	rat	0.26	11.4	mallard	1.17	2	0.019	50

**Area A: Hazard Quotients Based on Maximum Concentrations
Aquatic and Benthic Organisms and Plants**

Chemical Name	Aquatic Organism HQ	Benthic Organism HQ	Upland Plant HQ	Wetland Plant HQ
Ammonium	1.67E+01	6.55E-01		
Manganese	2.38E+01	5.84E-01		7.36E-01
Molybdenum	8.21E-02	9.85E-02		1.97E-01
Nitrate	2.91E+00	9.96E-02		
Selenium	2.14E+02	4.62E+00		2.31E+01
Strontium	6.52E+00	8.31E+00		
Sulfate	5.67E+01			
Uranium	3.92E+01			1.08E+00
Vanadium	1.32E-01	5.00E-02		1.25E+00

Toxicity Data and Benchmarks

Chemical Name	Mammals			Birds			Plant Benchmark (mg/kg)	Water Benchmark (mg/L)	Sediment Benchmark (mg/kg)
	NOAEL (mg/kg/d)	Test Species	Body Wt. (kg)	NOAEL (mg/kg/d)	Test Species	Body Wt. (kg)			
Ammonium	88	rat	0.35	977	J. quail	0.072	500	0.18	75
Manganese	0.26	mouse	0.03	3.53	chicken	1.5	2	0.08	630
Molybdenum	507	guinea pig	0.86					0.24	4
Nitrate	0.20	rat	0.35	0.4	mallard	1	1	177	2440
Selenium	263	rat	0.35					0.002	5
Strontium								1.5	49
Sulfate								100	
Uranium	3.07	mouse	0.028	16	black duck	1.25	5	0.0026	
Vanadium	0.21	rat	0.26	11.4	mallard	1.17	2	0.019	50

**Area A: Hazard Quotients Based on 95% UCL Concentrations
Aquatic and Benthic Organisms and Plants**

Chemical Name	Aquatic Organism HQ	Benthic Organism HQ	Upland Plant HQ	Wetland Plant HQ
Ammonium	2.54E+00	3.24E-01		
Manganese	3.94E+00	4.81E-01		6.06E-01
Molybdenum	3.63E-02	4.35E-02		8.70E-02
Nitrate	1.10E+00	6.68E-02		
Selenium	9.25E+01	2.36E+00		1.18E+01
Strontium	3.87E+00	6.92E+00		
Sulfate	2.73E+01			
Uranium	1.99E+01			9.28E-01
Vanadium	6.00E-02	2.28E-02		5.70E-01

Sheep (*Ovis aries*)

Exposure parameters

Body Weight (kg)	50
Food intake (kg(dw)/d)	2.00E+00
Water intake (L/d)	5.00E+00
Soil intake (kg/d) -- 6.6% of diet	1.36E-01
Plant intake (kg(dw)/d) - 100% of diet	2.00E+00

Deer Mouse (*Peromyscus maniculatus*)

Exposure parameters

Body Weight (kg)	2.39E-02
Food intake (kg(dw)/d)	3.72E-03
Water intake (L/d)	3.44E-03
Soil intake (kg/d) -- 2% of diet	7.44E-05
Plant intake (kg(dw)/d) - 100% of diet	3.72E-03

Area A: Hazard Quotients Based on Maximum Concentrations

Sheep (*Ovis aries*)

Chemical Name	Sheep NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Sheep Hazard Quotient
Ammonium		0.00E+00	1.50E+01	0.00E+00	3.00E-01	
Manganese	6.53E+01	0.00E+00	9.50E+00	8.92E+01	1.97E+00	3.02E-02
Molybdenum	1.67E-01	0.00E+00	9.85E-02	0.00E+00	1.97E-03	1.18E-02
Nitrate	3.97E+02	0.00E+00	2.58E+03	0.00E+00	5.15E+01	1.30E-01
Selenium	1.49E-01	0.00E+00	2.14E+00	5.60E+00	1.55E-01	1.04E+00
Strontium	1.95E+02	0.00E+00	4.89E+01	2.84E+02	6.66E+00	3.41E-02
Sulfate		0.00E+00	2.84E+04	0.00E+00	5.67E+02	
Uranium	1.96E+00	0.00E+00	5.10E-01	1.56E+00	4.14E-02	2.11E-02
Vanadium	1.53E-01	0.00E+00	1.25E-02	0.00E+00	2.50E-04	1.63E-03

Area A: Hazard Quotients Based on Maximum Concentrations

Deer Mouse (*Peromyscus maniculatus*)

Chemical Name	Deer Mouse NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Deer Mouse HQ
Ammonium		0.00E+00	1.03E-02	0.00E+00	4.31E-01	
Manganese	1.03E+02	0.00E+00	6.53E-03	1.66E-01	7.21E+00	6.98E-02
Molybdenum	2.64E-01	0.00E+00	6.77E-05	0.00E+00	2.83E-03	1.07E-02
Nitrate	6.29E+02	0.00E+00	1.77E+00	0.00E+00	7.41E+01	1.18E-01
Selenium	2.35E-01	0.00E+00	1.47E-03	1.04E-02	4.97E-01	2.12E+00
Strontium	3.09E+02	0.00E+00	3.36E-02	5.28E-01	2.35E+01	7.61E-02
Sulfate		0.00E+00	1.95E+01	0.00E+00	8.15E+02	
Uranium	3.10E+00	0.00E+00	3.51E-04	2.90E-03	1.36E-01	4.39E-02
Vanadium	2.42E-01	0.00E+00	8.59E-06	0.00E+00	3.60E-04	1.48E-03

Area A: Hazard Quotients Based on 95% UCL Concentrations

Sheep (*Ovis aries*)

Chemical Name	Sheep NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Sheep Hazard Quotient
Ammonium		0.00E+00	2.29E+00	0.00E+00	4.58E-02	
Manganese	6.53E+01	0.00E+00	1.58E+00	6.58E+01	1.35E+00	2.06E-02
Molybdenum	1.67E-01	0.00E+00	4.35E-02	0.00E+00	8.70E-04	5.22E-03
Nitrate	3.97E+02	0.00E+00	9.70E+02	0.00E+00	1.94E+01	4.88E-02
Selenium	1.49E-01	0.00E+00	9.25E-01	4.56E+00	1.10E-01	7.39E-01
Strontium	1.95E+02	0.00E+00	2.91E+01	2.30E+02	5.19E+00	2.66E-02
Sulfate		0.00E+00	1.36E+04	0.00E+00	2.73E+02	
Uranium	1.96E+00	0.00E+00	2.59E-01	9.64E-01	2.45E-02	1.25E-02
Vanadium	1.53E-01	0.00E+00	5.70E-03	0.00E+00	1.14E-04	7.44E-04

Area A: Hazard Quotients Based on 95% UCL Concentrations

Deer Mouse (*Peromyscus maniculatus*)

Chemical Name	Deer Mouse NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Deer Mouse HQ
Ammonium		0.00E+00	1.57E-03	0.00E+00	6.59E-02	
Manganese	1.03E+02	0.00E+00	1.08E-03	1.22E-01	5.17E+00	5.00E-02
Molybdenum	2.64E-01	0.00E+00	2.99E-05	0.00E+00	1.25E-03	4.75E-03
Nitrate	6.29E+02	0.00E+00	6.67E-01	0.00E+00	2.79E+01	4.44E-02
Selenium	2.35E-01	0.00E+00	6.36E-04	8.48E-03	3.81E-01	1.62E+00
Strontium	3.09E+02	0.00E+00	2.00E-02	4.29E-01	1.88E+01	6.07E-02
Sulfate		0.00E+00	9.38E+00	0.00E+00	3.92E+02	
Uranium	3.10E+00	0.00E+00	1.78E-04	1.79E-03	8.25E-02	2.66E-02
Vanadium	2.42E-01	0.00E+00	3.92E-06	0.00E+00	1.64E-04	6.77E-04

Burrowing owl (*Speotyto cunicularia*)

Exposure parameters

Body Weight (kg)	0.155
Food intake (kg(dw)/d)	1.73E-02
Water intake (L/d)	2.83E-04
Soil intake (kg/d) – 2% of diet	3.46E-04
(kg(dw)/d) – 100% of diet	1.73E-02

Red Fox (*Vulpes vulpes*)

Exposure parameters

Body Weight (kg)	4.54
Food intake (kg(dw)/d)	2.38E-01
Water intake (L/d)	3.86E-01
Soil intake (kg/d) – 2.8% of diet	6.67E-03
Plant intake (kg(dw)/d) – 20% of diet	4.77E-02
Mouse intake (kg(dw)/d) – 80% of diet	1.91E-01

Area A: Hazard Quotients Based on Maximum Concentrations

Burrowing owl (*Speotyto cunicularia*)

Chemical Name	Burrowing Owl NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Burrowing Owl HQ
Ammonium		0.00E+00	8.49E-04	0.00E+00	5.48E-03	
Manganese	1.14E+03	0.00E+00	5.38E-04	0.00E+00	3.47E-03	3.04E-06
Molybdenum	2.24E+00	0.00E+00	5.57E-06	0.00E+00	3.60E-05	1.60E-05
Nitrate		0.00E+00	1.46E-01	0.00E+00	9.40E-01	
Selenium	2.76E-01	0.00E+00	1.21E-04	0.00E+00	7.81E-04	2.84E-03
Strontium		0.00E+00	2.77E-03	7.30E-05	1.83E-02	
Sulfate		0.00E+00	1.60E+00	0.00E+00	1.03E+01	
Uranium	1.05E+01	0.00E+00	2.89E-05	0.00E+00	1.86E-04	1.77E-05
Vanadium	7.61E+00	0.00E+00	7.07E-07	0.00E+00	4.56E-06	6.00E-07

Area A: Hazard Quotients Based on Maximum Concentrations

Red Fox (*Vulpes vulpes*)

Chemical Name	Red Fox NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Mouse Intake (mg/d)	Total Dose (mg/kg/d)	Red Fox HQ
Ammonium		0.00E+00	1.16E+00	0.00E+00	0.00E+00	2.55E-01	
Manganese	7.55E+01	0.00E+00	7.34E-01	2.13E+00	0.00E+00	6.30E-01	8.35E-03
Molybdenum	1.92E-01	0.00E+00	7.61E-03	0.00E+00	0.00E+00	1.68E-03	8.71E-03
Nitrate	4.59E+02	0.00E+00	1.99E+02	0.00E+00	0.00E+00	4.38E+01	9.55E-02
Selenium	1.71E-01	0.00E+00	1.65E-01	1.33E-01	0.00E+00	6.58E-02	3.84E-01
Strontium	2.26E+02	0.00E+00	3.78E+00	6.77E+00	8.06E-04	2.32E+00	1.03E-02
Sulfate		0.00E+00	2.19E+03	0.00E+00	0.00E+00	4.83E+02	
Uranium	2.26E+00	0.00E+00	3.94E-02	3.72E-02	0.00E+00	1.69E-02	7.46E-03
Vanadium	1.77E-01	0.00E+00	9.66E-04	0.00E+00	0.00E+00	2.13E-04	1.20E-03

Area A: Hazard Quotients Based on 95% UCL Concentrations

Burrowing owl (*Speotyto cunicularia*)

Chemical Name	Burrowing Owl NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Burrowing Owl HQ
Ammonium		0.00E+00	1.30E-04	0.00E+00	8.36E-04	
Manganese	1.14E+03	0.00E+00	8.91E-05	0.00E+00	5.75E-04	5.05E-07
Molybdenum	2.24E+00	0.00E+00	2.46E-06	0.00E+00	1.59E-05	7.08E-06
Nitrate		0.00E+00	5.49E-02	0.00E+00	3.54E-01	
Selenium	2.76E-01	0.00E+00	5.23E-05	0.00E+00	3.38E-04	1.23E-03
Strontium		0.00E+00	1.64E-03	5.92E-05	1.10E-02	
Sulfate		0.00E+00	7.72E-01	0.00E+00	4.98E+00	
Uranium	1.05E+01	0.00E+00	1.47E-05	0.00E+00	9.45E-05	8.97E-06
Vanadium	7.61E+00	0.00E+00	3.23E-07	0.00E+00	2.08E-06	2.73E-07

Area A: Hazard Quotients Based on 95% UCL Concentrations

Red Fox (*Vulpes vulpes*)

Chemical Name	Red Fox NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Mouse Intake (mg/d)	Total Dose (mg/kg/d)	Red Fox HQ
Ammonium		0.00E+00	1.77E-01	0.00E+00	0.00E+00	3.90E-02	
Manganese	7.55E+01	0.00E+00	1.22E-01	1.57E+00	0.00E+00	3.72E-01	4.93E-03
Molybdenum	1.92E-01	0.00E+00	3.36E-03	0.00E+00	0.00E+00	7.40E-04	3.85E-03
Nitrate	4.59E+02	0.00E+00	7.50E+01	0.00E+00	0.00E+00	1.65E+01	3.60E-02
Selenium	1.71E-01	0.00E+00	7.15E-02	1.09E-01	0.00E+00	3.97E-02	2.31E-01
Strontium	2.26E+02	0.00E+00	2.24E+00	5.49E+00	6.54E-04	1.70E+00	7.56E-03
Sulfate		0.00E+00	1.05E+03	0.00E+00	0.00E+00	2.32E+02	
Uranium	2.26E+00	0.00E+00	2.00E-02	2.30E-02	0.00E+00	9.47E-03	4.19E-03
Vanadium	1.77E-01	0.00E+00	4.40E-04	0.00E+00	0.00E+00	9.70E-05	5.48E-04

Muskrat (*Ondatra zibethicus*)

Exposure parameters

Body Weight (kg)	1.135
Food ingestion (kg(dw)/d)	7.72E-02
Water intake (L/day)	1.11E-01
Sediment ingestion (kg/d)	
9.4% of diet	7.25E-03
Plant ingestion (kg(dw)/d)	
100% of diet	7.72E-02

Raccoon (*Procyon lotor*)

Exposure parameters

Body Weight (kg)	5.74
(kg(dw)/d)	2.89E-01
Water intake (L/day)	4.77E-01
Soil intake (kg/d) –	
9.4% of diet	2.72E-02
Fish intake (kg(dw)/d)	
– 10% of diet	2.89E-02
(kg(dw)/d)–50% of	
diet	1.44E-01
Plant intake	
(kg(dw)/d) – 40% of	
diet	1.16E-01

Area A: Hazard Quotients Based on Maximum Concentrations

Muskrat (*Ondatra zibethicus*)

Chemical Name	Muskrat NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Muskrat Hazard Quotient
Ammonium		3.56E-01	3.33E-01	3.79E+00	3.95E+00	
Manganese	8.20E+01	2.67E+00	2.11E-01	2.87E+01	2.78E+01	3.39E-01
Molybdenum	2.09E-01	2.86E-03	2.19E-03	2.43E-02	2.59E-02	1.24E-01
Nitrate	4.99E+02	1.76E+00	5.71E+01	1.88E+01	6.84E+01	1.37E-01
Selenium	1.86E-01	1.68E-01	4.75E-02	3.49E+00	3.26E+00	1.75E+01
Strontium	2.45E+02	2.95E+00	1.09E+00	2.54E+01	2.59E+01	1.06E-01
Sulfate		2.02E+02	6.29E+02	2.15E+03	2.62E+03	
Uranium	2.46E+00	3.92E-02	1.13E-02	4.09E-01	4.05E-01	1.65E-01
Vanadium	1.92E-01	1.81E-02	2.77E-04	1.06E-03	1.72E-02	8.93E-02

Area A: Hazard Quotients Based on Maximum Concentrations

Raccoon (*Procyon lotor*)

Chemical Name	Raccoon NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Invertebrate Intake (mg/d)	Fish Intake (mg/d)	Total Dose (mg/kg/d)	Raccoon Hazard Quotient
Ammonium		1.33E+00	1.43E+00	5.67E+00	1.73E+00	2.60E-01	1.82E+00	
Manganese	7.44E+01	9.99E+00	9.07E-01	4.30E+01	1.78E+01	3.91E+00	1.32E+01	1.77E-01
Molybdenum	1.90E-01	1.07E-02	9.40E-03	3.64E-02	2.85E-02	2.28E-02	1.88E-02	9.90E-02
Nitrate	4.52E+02	6.60E+00	2.46E+02	2.81E+01	2.98E+02	4.46E+01	1.08E+02	2.40E-01
Selenium	1.69E-01	6.27E-01	2.04E-01	5.22E+00	1.66E+01	6.38E+00	5.06E+00	2.99E+01
Strontium	2.22E+02	1.11E+01	4.67E+00	3.80E+01	1.34E+01	1.07E+01	1.36E+01	6.10E-02
Sulfate		7.55E+02	2.71E+03	3.21E+03	3.28E+03	4.91E+02	1.82E+03	
Uranium	2.23E+00	1.47E-01	4.87E-02	6.13E-01	3.99E-01	3.19E-01	2.66E-01	1.19E-01
Vanadium	1.74E-01	6.79E-02	1.19E-03	1.59E-03	1.08E+00	8.67E-01	3.52E-01	2.02E+00

Area A: Hazard Quotients Based on 95% UCL Concentrations

Muskrat (*Ondatra zibethicus*)

Chemical Name	Muskrat NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Muskrat Hazard Quotient
Ammonium		1.76E-01	5.08E-02	1.88E+00	1.85E+00	
Manganese	8.20E+01	2.20E+00	3.49E-02	1.26E+01	1.31E+01	1.59E-01
Molybdenum	2.09E-01	1.26E-03	9.65E-04	1.07E-02	1.14E-02	5.47E-02
Nitrate	4.99E+02	1.18E+00	2.15E+01	1.26E+01	3.11E+01	6.24E-02
Selenium	1.86E-01	8.56E-02	2.05E-02	1.10E+00	1.06E+00	5.68E+00
Strontium	2.45E+02	2.46E+00	6.45E-01	1.07E+01	1.21E+01	4.94E-02
Sulfate		1.55E+02	3.03E+02	1.65E+03	1.86E+03	
Uranium	2.46E+00	3.37E-02	5.75E-03	1.16E-01	1.37E-01	5.56E-02
Vanadium	1.92E-01	8.27E-03	1.26E-04	4.84E-04	7.82E-03	4.07E-02

Area A: Hazard Quotients Based on 95% UCL Concentrations

Raccoon (*Procyon lotor*)

Chemical Name	Raccoon NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Invertebrate Intake (mg/d)	Fish Intake (mg/d)	Total Dose (mg/kg/d)	Raccoon Hazard Quotient
Ammonium		6.60E-01	2.19E-01	2.81E+00	2.65E-01	3.97E-02	6.95E-01	
Manganese	7.44E+01	8.23E+00	1.50E-01	1.88E+01	2.96E+00	6.48E-01	5.37E+00	7.22E-02
Molybdenum	1.90E-01	4.73E-03	4.15E-03	1.61E-02	1.26E-02	1.01E-02	8.29E-03	4.37E-02
Nitrate	4.52E+02	4.43E+00	9.26E+01	1.88E+01	1.12E+02	1.68E+01	4.26E+01	9.42E-02
Selenium	1.69E-01	3.20E-01	8.83E-02	1.64E+00	7.19E+00	2.76E+00	2.09E+00	1.24E+01
Strontium	2.22E+02	9.21E+00	2.77E+00	1.59E+01	7.97E+00	6.38E+00	7.37E+00	3.31E-02
Sulfate		5.81E+02	1.30E+03	2.47E+03	1.58E+03	2.37E+02	1.07E+03	
Uranium	2.23E+00	1.26E-01	2.47E-02	1.73E-01	2.03E-01	1.62E-01	1.20E-01	5.38E-02
Vanadium	1.74E-01	3.10E-02	5.44E-04	7.25E-04	4.94E-01	3.95E-01	1.61E-01	9.20E-01

Mallard (*Anas platyrhynchos*)

Exposure parameters

Body Weight (kg)	1.134
Food intake (kg(dw)/d)	5.92E-02
Water intake (L/day)	6.42E-02
Soil intake (kg/d) – 3.3% of diet	1.95E-03
Plant intake (kg(dw)/d) – 90% of diet	5.33E-02
(kg(dw)/d) – 10% of	5.92E-03

Killdeer (*Charadrius vociferus*)

Exposure parameters

Body Weight (kg)	0.0966
Food intake (kg(dw)/d)	9.32E-03
Water intake (L/day)	1.23E-02
Soil intake (kg/d) – 18% of diet	1.68E-03
(kg(dw)/d) – 100% of	9.32E-03

Area A: Hazard Quotients Based on Maximum Concentrations

Mallard (*Anas platyrhynchos*)

Chemical Name	Mallard NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Invertebrate Intake (mg/d)	Total Dose (mg/kg/d)	Mallard Hazard Quotient
Ammonium		9.60E-02	1.93E-01	2.62E+00	7.11E-02	2.63E+00	
Manganese	1.70E+03	7.19E-01	1.22E-01	1.98E+01	7.32E-01	1.89E+01	1.11E-02
Molybdenum	3.34E+00	7.70E-04	1.26E-03	1.68E-02	1.17E-03	1.76E-02	5.29E-03
Nitrate		4.75E-01	3.31E+01	1.30E+01	1.22E+01	5.18E+01	
Selenium	4.10E-01	4.52E-02	2.75E-02	2.41E+00	6.82E-01	2.79E+00	6.80E+00
Strontium		7.96E-01	6.28E-01	1.75E+01	5.50E-01	1.72E+01	
Sulfate		5.43E+01	3.64E+02	1.48E+03	1.34E+02	1.79E+03	
Uranium	1.57E+01	1.06E-02	6.55E-03	2.83E-01	1.64E-02	2.79E-01	1.78E-02
Vanadium	1.13E+01	4.89E-03	1.60E-04	7.33E-04	4.44E-02	4.43E-02	3.91E-03

Area A: Hazard Quotients Based on Maximum Concentrations

Killdeer (*Charadrius vociferus*)

Chemical Name	Killdeer NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Invertebrate Intake (mg/d)	Total Dose (mg/kg/d)	Killdeer Hazard Quotient
Ammonium		8.23E-02	3.70E-02	1.12E-01	2.39E+00	
Manganese	1.04E+03	6.17E-01	2.34E-02	1.15E+00	1.85E+01	1.79E-02
Molybdenum	2.04E+00	6.61E-04	2.43E-04	1.84E-03	2.84E-02	1.39E-02
Nitrate		4.08E-01	6.35E+00	1.92E+01	2.69E+02	
Selenium	2.51E-01	3.87E-02	5.28E-03	1.07E+00	1.16E+01	4.61E+01
Strontium		6.83E-01	1.21E-01	8.66E-01	1.73E+01	
Sulfate		4.66E+01	6.99E+01	2.11E+02	3.39E+03	
Uranium	9.59E+00	9.06E-03	1.26E-03	2.58E-02	3.73E-01	3.89E-02
Vanadium	6.92E+00	4.19E-03	3.08E-05	6.99E-02	7.67E-01	1.11E-01

Area A: Hazard Quotients Based on 95% UCL Concentrations

Mallard (*Anas platyrhynchos*)

Chemical Name	Mallard NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Invertebrate Intake (mg/d)	Total Dose (mg/kg/d)	Mallard Hazard Quotient
Ammonium		4.75E-02	2.94E-02	1.30E+00	1.09E-02	1.22E+00	
Manganese	1.70E+03	5.92E-01	2.02E-02	8.69E+00	1.21E-01	8.31E+00	4.90E-03
Molybdenum	3.34E+00	3.40E-04	5.58E-04	7.42E-03	5.15E-04	7.79E-03	2.33E-03
Nitrate		3.19E-01	1.25E+01	8.69E+00	4.60E+00	2.30E+01	
Selenium	4.10E-01	2.31E-02	1.19E-02	7.57E-01	2.95E-01	9.58E-01	2.34E+00
Strontium		6.63E-01	3.73E-01	7.36E+00	3.27E-01	7.69E+00	
Sulfate		4.18E+01	1.75E+02	1.14E+03	6.47E+01	1.25E+03	
Uranium	1.57E+01	9.07E-03	3.32E-03	8.00E-02	8.32E-03	8.88E-02	5.66E-03
Vanadium	1.13E+01	2.23E-03	7.32E-05	3.34E-04	2.03E-02	2.02E-02	1.78E-03

Area A: Hazard Quotients Based on 95% UCL Concentrations

Killdeer (*Charadrius vociferus*)

Chemical Name	Killdeer NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Invertebrate Intake (mg/d)	Total Dose (mg/kg/d)	Killdeer Hazard Quotient
Ammonium		4.08E-02	5.64E-03	1.71E-02	6.57E-01	
Manganese	1.04E+03	5.08E-01	3.88E-03	1.91E-01	7.28E+00	7.02E-03
Molybdenum	2.04E+00	2.92E-04	1.07E-04	8.11E-04	1.25E-02	6.14E-03
Nitrate		2.73E-01	2.39E+00	7.23E+00	1.02E+02	
Selenium	2.51E-01	1.98E-02	2.28E-03	4.64E-01	5.03E+00	2.01E+01
Strontium		5.69E-01	7.16E-02	5.14E-01	1.20E+01	
Sulfate		3.59E+01	3.36E+01	1.02E+02	1.77E+03	
Uranium	9.59E+00	7.78E-03	6.38E-04	1.31E-02	2.23E-01	2.32E-02
Vanadium	6.92E+00	1.91E-03	1.41E-05	3.19E-02	3.50E-01	5.05E-02

Great Blue Heron (*Ardea herodias*)

Exposure parameters

Body Weight (kg)	2.229
Food intake (kg(dw)/d)	9.63E-02
Water intake (L/day)	1.01E-01
Soil intake (kg/d) – 2% of diet	1.93E-03
Crayfish intake (kg(dw)/d) – 50% of diet	4.81E-02
Fish intake (kg(dw)/d) –	4.81E-02

Area A: Hazard Quotients Based on Maximum Concentrations

Great Blue Heron (*Ardea herodias*)

Chemical Name	Great Blue Heron NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Invertebrate Intake (mg/d)	Fish Intake (mg/d)	Total Dose (mg/kg/d)	Great Blue Heron HQ
Ammonium		9.46E-02	3.03E-01	5.78E-01	4.33E-01	6.32E-01	
Manganese	1.94E+03	7.09E-01	1.92E-01	5.95E+00	6.51E+00	5.99E+00	3.09E-03
Molybdenum	3.82E+00	7.59E-04	1.99E-03	9.48E-03	3.79E-02	2.25E-02	5.89E-03
Nitrate		4.68E-01	5.20E+01	9.92E+01	7.44E+01	1.01E+02	
Selenium	4.70E-01	4.45E-02	4.32E-02	5.54E+00	1.06E+01	7.30E+00	1.55E+01
Strontium		7.84E-01	9.87E-01	4.47E+00	1.79E+01	1.08E+01	
Sulfate		5.35E+01	5.72E+02	1.09E+03	8.19E+02	1.14E+03	
Uranium	1.80E+01	1.04E-02	1.03E-02	1.33E-01	5.32E-01	3.08E-01	1.71E-02
Vanadium	1.30E+01	4.81E-03	2.52E-04	3.61E-01	1.44E+00	8.12E-01	6.26E-02

Area A: Hazard Quotients Based on 95% UCL Concentrations

Great Blue Heron (*Ardea herodias*)

Chemical Name	Great Blue Heron NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Invertebrate Intake (mg/d)	Fish Intake (mg/d)	Total Dose (mg/kg/d)	Great Blue Heron HQ
Ammonium		4.68E-02	4.62E-02	8.82E-02	6.62E-02	1.11E-01	
Manganese	1.94E+03	5.84E-01	3.18E-02	9.86E-01	1.08E+00	1.20E+00	6.20E-04
Molybdenum	3.82E+00	3.35E-04	8.78E-04	4.19E-03	1.68E-02	9.94E-03	2.60E-03
Nitrate		3.14E-01	1.96E+01	3.74E+01	2.80E+01	3.83E+01	
Selenium	4.70E-01	2.27E-02	1.87E-02	2.40E+00	4.60E+00	3.16E+00	6.72E+00
Strontium		6.53E-01	5.86E-01	2.66E+00	1.06E+01	6.52E+00	
Sulfate		4.12E+01	2.75E+02	5.26E+02	3.94E+02	5.55E+02	
Uranium	1.80E+01	8.94E-03	5.23E-03	6.76E-02	2.70E-01	1.58E-01	8.79E-03
Vanadium	1.30E+01	2.20E-03	1.15E-04	1.65E-01	6.59E-01	3.70E-01	2.86E-02

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Area B

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Area B: Media Concentrations Based on Maximum Measured Values

Chemical Name	Soil Conc. (mg/kg)	Sediment Conc. (mg/kg)	Water Conc. (mg/L)	K _d	Soil-to-Plant Uptake Parameters		Uplnd Plant Conc. (mg/kgdw)	Wtld Plant Conc. (mg/kgdw)	Soil-to-Mammal Uptake Parameters		Mammal Conc. (mg/kgdw)	Invert. BCF	Invert. Conc. (mg/kgdw)	Fish BCF	Fish Conc. (mg/kgdw)
					B ₀	B ₁			B ₀	B ₁					
Ammonium		1.80E+00	1.64E-01	3.10E+01	1.00E+00	1.00E+00	0.00E+00	1.80E+00	0.00E+00	1.00E+00	0.00E+00	4.00E+00	6.56E-01	3.00E+00	4.92E-01
Manganese		2.29E+02	5.92E-01	6.50E+01	3.00E+00	1.00E+00	0.00E+00	6.87E+02	2.05E-02	1.00E+00	0.00E+00	6.50E+01	3.85E+01	1.78E+01	4.22E+01
Molybdenum		1.35E+01	9.90E-03	2.00E+01	8.00E-01	1.00E+00	0.00E+00	1.08E+01	1.00E-03	1.00E+00	0.00E+00	1.00E+01	9.90E-02	1.00E+01	3.96E-01
Nitrate		3.90E+01	1.04E+02	1.00E-02	1.00E+00	1.00E+00	0.00E+00	3.90E+01	0.00E+00	1.00E+00	0.00E+00	4.00E+00	4.16E+02	3.00E+00	3.12E+02
Selenium		1.00E-01	7.87E-02	3.00E+02	5.08E-01	1.10E+00	0.00E+00	4.00E-02	6.60E-01	3.76E-01	0.00E+00	2.69E+02	2.12E+01	1.29E+02	4.06E+01
Strontium		4.50E+01	1.46E+01	3.50E+01	2.50E+00	1.00E+00	0.00E+00	1.13E+02	8.00E-03	1.00E+00	0.00E+00	9.50E+00	1.39E+02	9.50E+00	5.55E+02
Sulfate		2.66E+03	4.19E+03	7.50E+00	1.00E+00	1.00E+00	0.00E+00	2.66E+03	0.00E+00	1.00E+00	0.00E+00	4.00E+00	1.68E+04	3.00E+00	1.26E+04
Uranium		2.50E-01	1.12E-01	4.50E+02	2.30E-02	1.00E+00	0.00E+00	5.75E-03	3.30E-02	1.00E+00	0.00E+00	2.71E+01	3.04E+00	2.71E+01	1.21E+01
Vanadium		1.94E+01	1.70E-03	1.00E+03	5.50E-03	1.00E+00	0.00E+00	1.07E-01	1.23E-02	1.00E+00	0.00E+00	3.00E+03	5.10E+00	3.00E+03	2.04E+01

Area B: Media Concentrations Based on 95% UCL Values

Chemical Name	Soil Conc. (mg/kg)	Sediment Conc. (mg/kg)	Water Conc. (mg/L)	K _d	Soil-to-Plant Uptake Parameters		Uplnd Plant Conc. (mg/kgdw)	Wtld Plant Conc. (mg/kgdw)	Soil-to-Mammal Uptake Parameters		Mammal Conc. (mg/kgdw)	Invert. BCF	Invert. Conc. (mg/kgdw)	Fish BCF	Fish Conc. (mg/kgdw)
					B ₀	B ₁			B ₀	B ₁					
Ammonium		1.52E+00	3.93E-02	3.10E+01	1.00E+00	1.00E+00	0.00E+00	1.52E+00	0.00E+00	1.00E+00	0.00E+00	4.00E+00	1.57E-01	3.00E+00	1.16E-01
Manganese		2.24E+02	5.18E-02	6.50E+01	3.00E+00	1.00E+00	0.00E+00	6.72E+02	2.05E-02	1.00E+00	0.00E+00	6.50E+01	3.37E+00	1.78E+01	3.69E+00
Molybdenum		1.35E+01	2.20E-03	2.00E+01	8.00E-01	1.00E+00	0.00E+00	1.08E+01	1.00E-03	1.00E+00	0.00E+00	1.00E+01	2.20E-02	1.00E+01	8.80E-02
Nitrate		3.02E+01	6.04E+00	1.00E-02	1.00E+00	1.00E+00	0.00E+00	3.02E+01	0.00E+00	1.00E+00	0.00E+00	4.00E+00	2.42E+01	3.00E+00	1.81E+01
Selenium		1.00E-01	4.11E-03	3.00E+02	5.08E-01	1.10E+00	0.00E+00	4.00E-02	6.60E-01	3.76E-01	0.00E+00	2.69E+02	1.11E+00	1.29E+02	2.12E+00
Strontium		4.49E+01	1.52E+00	3.50E+01	2.50E+00	1.00E+00	0.00E+00	1.12E+02	8.00E-03	1.00E+00	0.00E+00	9.50E+00	1.44E+01	9.50E+00	5.78E+01
Sulfate		2.36E+03	3.46E+02	7.50E+00	1.00E+00	1.00E+00	0.00E+00	2.36E+03	0.00E+00	1.00E+00	0.00E+00	4.00E+00	1.38E+03	3.00E+00	1.04E+03
Uranium		2.35E-01	7.13E-03	4.50E+02	2.30E-02	1.00E+00	0.00E+00	5.41E-03	3.30E-02	1.00E+00	0.00E+00	2.71E+01	1.93E-01	2.71E+01	7.73E-01
Vanadium		1.76E+01	9.68E-04	1.00E+03	5.50E-03	1.00E+00	0.00E+00	9.68E-02	1.23E-02	1.00E+00	0.00E+00	3.00E+03	2.90E+00	3.00E+03	1.16E+01

Toxicity Data and Benchmarks

Chemical Name	Mammals			Birds			Plant Benchmark (mg/kg)	Water Benchmark (mg/L)	Sediment Benchmark (mg/kg)
	NOAEL (mg/kg/d)	Test Species	Body Wt. (kg)	NOAEL (mg/kg/d)	Test Species	Body Wt. (kg)			
Ammonium								0.18	75
Manganese	88	rat	0.35	977	J. quail	0.072	500	0.08	630
Molybdenum	0.26	mouse	0.03	3.53	chicken	1.5	2	0.24	4
Nitrate	507	guinea pig	0.86					177	2440
Selenium	0.20	rat	0.35	0.4	mallard	1	1	0.002	5
Strontium Sulfate	263	rat	0.35					1.5	49
Uranium	3.07	mouse	0.028	16	black duck	1.25	5	0.0026	100
Vanadium	0.21	rat	0.26	11.4	mallard	1.17	2	0.019	50

Toxicity Data and Benchmarks

Chemical Name	Mammals			Birds			Plant Benchmark (mg/kg)	Water Benchmark (mg/L)	Sediment Benchmark (mg/kg)
	NOAEL (mg/kg/d)	Test Species	Body Wt. (kg)	NOAEL (mg/kg/d)	Test Species	Body Wt. (kg)			
Ammonium								0.18	75
Manganese	88	rat	0.35	977	J. quail	0.072	500	0.08	630
Molybdenum	0.26	mouse	0.03	3.53	chicken	1.5	2	0.24	4
Nitrate	507	guinea pig	0.86					177	2440
Selenium	0.20	rat	0.35	0.4	mallard	1	1	0.002	5
Strontium Sulfate	263	rat	0.35					1.5	49
Uranium	3.07	mouse	0.028	16	black duck	1.25	5	0.0026	100
Vanadium	0.21	rat	0.26	11.4	mallard	1.17	2	0.019	50

Area B: Hazard Quotients Based on Maximum Concentrations Aquatic and Benthic Organisms and Plants

Chemical Name	Aquatic Organism HQ	Benthic Organism HQ	Upland Plant HQ	Wetland Plant HQ
Ammonium	9.11E-01	2.40E-02		
Manganese	7.40E+00	3.63E-01		4.58E-01
Molybdenum	4.13E-02	3.38E+00		6.75E+00
Nitrate	5.88E-01	1.60E-02		
Selenium	3.94E+01	2.00E-02		1.00E-01
Strontium Sulfate	9.73E+00	9.18E-01		
Uranium	4.31E+01			5.00E-02
Vanadium	8.95E-02	3.88E-01		9.70E+00

Area B: Hazard Quotients Based on 95% UCL Concentrations Aquatic and Benthic Organisms and Plants

Chemical Name	Aquatic Organism HQ	Benthic Organism HQ	Upland Plant HQ	Wetland Plant HQ
Ammonium	2.18E-01	2.03E-02		
Manganese	6.48E-01	3.56E-01		4.48E-01
Molybdenum	9.17E-03	3.38E+00		6.75E+00
Nitrate	3.41E-02	1.24E-02		
Selenium	2.06E+00	2.00E-02		1.00E-01
Strontium Sulfate	1.01E+00	9.18E-01		
Uranium	3.46E+00			4.70E-02
Vanadium	2.74E+00	3.52E-01		8.80E+00

**Area B: Hazard Quotients Based on Maximum Concentrations
Sheep (*Ovis aries*)**

Chemical Name	Sheep NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Sheep Hazard Quotient
Ammonium		0.00E+00	8.20E-01	0.00E+00	1.64E-02	
Manganese	6.53E+01	0.00E+00	2.96E+00	0.00E+00	5.92E-02	9.06E-04
Molybdenum	1.67E-01	0.00E+00	4.95E-02	0.00E+00	9.90E-04	5.94E-03
Nitrate	3.97E+02	0.00E+00	5.20E+02	0.00E+00	1.04E+01	2.62E-02
Selenium	1.49E-01	0.00E+00	3.94E-01	0.00E+00	7.87E-03	5.30E-02
Strontium	1.95E+02	0.00E+00	7.30E+01	0.00E+00	1.46E+00	7.48E-03
Sulfate		0.00E+00	2.10E+04	0.00E+00	4.19E+02	
Uranium	1.96E+00	0.00E+00	5.60E-01	0.00E+00	1.12E-02	5.72E-03
Vanadium	1.53E-01	0.00E+00	8.50E-03	0.00E+00	1.70E-04	1.11E-03

**Area B: Hazard Quotients Based on 95% UCL Concentrations
Sheep (*Ovis aries*)**

Chemical Name	Sheep NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Sheep Hazard Quotient
Ammonium		0.00E+00	1.97E-01	0.00E+00	3.93E-03	
Manganese	6.53E+01	0.00E+00	2.59E-01	0.00E+00	5.18E-03	7.93E-05
Molybdenum	1.67E-01	0.00E+00	1.10E-02	0.00E+00	2.20E-04	1.32E-03
Nitrate	3.97E+02	0.00E+00	3.02E+01	0.00E+00	6.04E-01	1.52E-03
Selenium	1.49E-01	0.00E+00	2.06E-02	0.00E+00	4.11E-04	2.77E-03
Strontium	1.95E+02	0.00E+00	7.60E+00	0.00E+00	1.52E-01	7.78E-04
Sulfate		0.00E+00	1.73E+03	0.00E+00	3.46E+01	
Uranium	1.96E+00	0.00E+00	3.57E-02	0.00E+00	7.13E-04	3.64E-04
Vanadium	1.53E-01	0.00E+00	4.84E-03	0.00E+00	9.68E-05	6.32E-04

**Area B: Hazard Quotients Based on Maximum Concentrations
Deer Mouse (*Peromyscus maniculatus*)**

Chemical Name	Deer Mouse NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Deer Mouse HQ
Ammonium		0.00E+00	5.64E-04	0.00E+00	2.36E-02	
Manganese	1.03E+02	0.00E+00	2.03E-03	0.00E+00	8.51E-02	8.24E-04
Molybdenum	2.64E-01	0.00E+00	3.40E-05	0.00E+00	1.42E-03	5.40E-03
Nitrate	6.29E+02	0.00E+00	3.57E-01	0.00E+00	1.50E+01	2.38E-02
Selenium	2.35E-01	0.00E+00	2.71E-04	0.00E+00	1.13E-02	4.82E-02
Strontium	3.09E+02	0.00E+00	5.02E-02	0.00E+00	2.10E+00	6.80E-03
Sulfate		0.00E+00	1.44E+01	0.00E+00	6.03E+02	
Uranium	3.10E+00	0.00E+00	3.85E-04	0.00E+00	1.61E-02	5.20E-03
Vanadium	2.42E-01	0.00E+00	5.84E-06	0.00E+00	2.44E-04	1.01E-03

**Area B: Hazard Quotients Based on 95% UCL Concentrations
Deer Mouse (*Peromyscus maniculatus*)**

Chemical Name	Deer Mouse NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Deer Mouse HQ
Ammonium		0.00E+00	1.35E-04	0.00E+00	5.65E-03	
Manganese	1.03E+02	0.00E+00	1.78E-04	0.00E+00	7.45E-03	7.21E-05
Molybdenum	2.64E-01	0.00E+00	7.56E-06	0.00E+00	3.16E-04	1.20E-03
Nitrate	6.29E+02	0.00E+00	2.08E-02	0.00E+00	8.69E-01	1.38E-03
Selenium	2.35E-01	0.00E+00	1.41E-05	0.00E+00	5.91E-04	2.52E-03
Strontium	3.09E+02	0.00E+00	5.22E-03	0.00E+00	2.19E-01	7.08E-04
Sulfate		0.00E+00	1.19E+00	0.00E+00	4.98E+01	
Uranium	3.10E+00	0.00E+00	2.45E-05	0.00E+00	1.03E-03	3.31E-04
Vanadium	2.42E-01	0.00E+00	3.33E-06	0.00E+00	1.39E-04	5.74E-04

**Area B: Hazard Quotients Based on Maximum Concentrations
Burrowing owl (*Speotyto cunicularia*)**

Chemical Name	Burrowing Owl NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Burrowing Owl HQ
Ammonium		0.00E+00	4.64E-05	0.00E+00	2.99E-04	
Manganese	1.14E+03	0.00E+00	1.67E-04	0.00E+00	1.08E-03	9.49E-07
Molybdenum	2.24E+00	0.00E+00	2.80E-06	0.00E+00	1.81E-05	8.06E-06
Nitrate		0.00E+00	2.94E-02	0.00E+00	1.90E-01	
Selenium	2.76E-01	0.00E+00	2.23E-05	0.00E+00	1.44E-04	5.21E-04
Strontium		0.00E+00	4.13E-03	0.00E+00	2.66E-02	
Sulfate		0.00E+00	1.19E+00	0.00E+00	7.65E+00	
Uranium	1.05E+01	0.00E+00	3.17E-05	0.00E+00	2.04E-04	1.94E-05
Vanadium	7.61E+00	0.00E+00	4.81E-07	0.00E+00	3.10E-06	4.08E-07

**Area B: Hazard Quotients Based on 95% UCL Concentrations
Burrowing owl (*Speotyto cunicularia*)**

Chemical Name	Burrowing Owl NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Burrowing Owl HQ
Ammonium		0.00E+00	1.11E-05	0.00E+00	7.17E-05	
Manganese	1.14E+03	0.00E+00	1.47E-05	0.00E+00	9.45E-05	8.30E-08
Molybdenum	2.24E+00	0.00E+00	6.22E-07	0.00E+00	4.02E-06	1.79E-06
Nitrate		0.00E+00	1.71E-03	0.00E+00	1.10E-02	
Selenium	2.76E-01	0.00E+00	1.16E-06	0.00E+00	7.50E-06	2.72E-05
Strontium		0.00E+00	4.30E-04	0.00E+00	2.77E-03	
Sulfate		0.00E+00	9.79E-02	0.00E+00	6.32E-01	
Uranium	1.05E+01	0.00E+00	2.02E-06	0.00E+00	1.30E-05	1.23E-06
Vanadium	7.61E+00	0.00E+00	2.74E-07	0.00E+00	1.77E-06	2.32E-07

**Area B: Hazard Quotients Based on Maximum Concentrations
Red Fox (*Vulpes vulpes*)**

Chemical Name	Red Fox NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Mouse Intake (mg/d)	Total Dose (mg/kg/d)	Red Fox HQ
Ammonium		0.00E+00	6.34E-02	0.00E+00	0.00E+00	1.40E-02	
Manganese	7.55E+01	0.00E+00	2.29E-01	0.00E+00	0.00E+00	5.04E-02	6.68E-04
Molybdenum	1.92E-01	0.00E+00	3.82E-03	0.00E+00	0.00E+00	8.42E-04	4.38E-03
Nitrate	4.59E+02	0.00E+00	4.02E+01	0.00E+00	0.00E+00	8.85E+00	1.93E-02
Selenium	1.71E-01	0.00E+00	3.04E-02	0.00E+00	0.00E+00	6.70E-03	3.91E-02
Strontium	2.26E+02	0.00E+00	5.64E+00	0.00E+00	0.00E+00	1.24E+00	5.51E-03
Sulfate		0.00E+00	1.62E+03	0.00E+00	0.00E+00	3.57E+02	
Uranium	2.26E+00	0.00E+00	4.33E-02	0.00E+00	0.00E+00	9.53E-03	4.21E-03
Vanadium	1.77E-01	0.00E+00	6.57E-04	0.00E+00	0.00E+00	1.45E-04	8.18E-04

**Area B: Hazard Quotients Based on 95% UCL Concentrations
Red Fox (*Vulpes vulpes*)**

Chemical Name	Red Fox NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Mouse Intake (mg/d)	Total Dose (mg/kg/d)	Red Fox HQ
Ammonium		0.00E+00	1.52E-02	0.00E+00	0.00E+00	3.34E-03	
Manganese	7.55E+01	0.00E+00	2.00E-02	0.00E+00	0.00E+00	4.41E-03	5.84E-05
Molybdenum	1.92E-01	0.00E+00	8.50E-04	0.00E+00	0.00E+00	1.87E-04	9.73E-04
Nitrate	4.59E+02	0.00E+00	2.33E+00	0.00E+00	0.00E+00	5.14E-01	1.12E-03
Selenium	1.71E-01	0.00E+00	1.59E-03	0.00E+00	0.00E+00	3.50E-04	2.04E-03
Strontium	2.26E+02	0.00E+00	5.87E-01	0.00E+00	0.00E+00	1.29E-01	5.74E-04
Sulfate		0.00E+00	1.34E+02	0.00E+00	0.00E+00	2.94E+01	
Uranium	2.26E+00	0.00E+00	2.75E-03	0.00E+00	0.00E+00	6.07E-04	2.68E-04
Vanadium	1.77E-01	0.00E+00	3.74E-04	0.00E+00	0.00E+00	8.24E-05	4.66E-04

Area B: Hazard Quotients Based on Maximum Concentrations

Muskrat (*Ondatra zibethicus*)

Chemical Name	Muskrat NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Muskrat Hazard Quotient
Ammonium		1.31E-02	1.82E-02	1.39E-01	1.50E-01	
Manganese	8.20E+01	1.66E+00	6.57E-02	5.30E+01	4.82E+01	5.88E-01
Molybdenum	2.09E-01	9.79E-02	1.10E-03	8.34E-01	8.22E-01	3.93E+00
Nitrate	4.99E+02	2.83E-01	1.15E+01	3.01E+00	1.31E+01	2.62E-02
Selenium	1.86E-01	7.25E-04	8.73E-03	3.08E-03	1.10E-02	5.93E-02
Strontium	2.45E+02	3.26E-01	1.62E+00	8.68E+00	9.36E+00	3.82E-02
Sulfate		1.93E+01	4.65E+02	2.05E+02	6.07E+02	
Uranium	2.46E+00	1.81E-03	1.24E-02	4.44E-04	1.29E-02	5.26E-03
Vanadium	1.92E-01	1.41E-01	1.89E-04	8.24E-03	1.31E-01	6.84E-01

Area B: Hazard Quotients Based on 95% UCL Concentrations

Muskrat (*Ondatra zibethicus*)

Chemical Name	Muskrat NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Muskrat Hazard Quotient
Ammonium		1.10E-02	4.36E-03	1.17E-01	1.17E-01	
Manganese	8.20E+01	1.63E+00	5.75E-03	5.19E+01	4.71E+01	5.75E-01
Molybdenum	2.09E-01	9.79E-02	2.44E-04	8.34E-01	8.21E-01	3.93E+00
Nitrate	4.99E+02	2.19E-01	6.70E-01	2.33E+00	2.84E+00	5.69E-03
Selenium	1.86E-01	7.25E-04	4.56E-04	3.08E-03	3.76E-03	2.02E-02
Strontium	2.45E+02	3.26E-01	1.69E-01	8.66E+00	8.07E+00	3.29E-02
Sulfate		1.71E+01	3.84E+01	1.82E+02	2.09E+02	
Uranium	2.46E+00	1.70E-03	7.91E-04	4.17E-04	2.57E-03	1.04E-03
Vanadium	1.92E-01	1.28E-01	1.07E-04	7.47E-03	1.19E-01	6.20E-01

Area B: Hazard Quotients Based on Maximum Concentrations

Raccoon (*Procyon lotor*)

Chemical Name	Raccoon NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Invertebrate Intake (mg/d)	Fish Intake (mg/d)	Total Dose (mg/kg/d)	Raccoon Hazard Quotient
Ammonium		4.89E-02	7.83E-02	2.08E-01	9.48E-02	1.42E-02	7.74E-02	
Manganese	7.44E+01	6.22E+00	2.82E-01	7.94E+01	5.56E+00	1.22E+00	1.61E+01	2.17E-01
Molybdenum	1.90E-01	3.67E-01	4.72E-03	1.25E+00	1.43E-02	1.14E-02	2.87E-01	1.51E+00
Nitrate	4.52E+02	1.06E+00	4.96E+01	4.51E+00	6.01E+01	9.01E+00	2.17E+01	4.79E-02
Selenium	1.69E-01	2.72E-03	3.76E-02	4.62E-03	3.06E+00	1.17E+00	7.45E-01	4.41E+00
Strontium	2.22E+02	1.22E+00	6.97E+00	1.30E+01	2.00E+01	1.60E+01	9.97E+00	4.49E-02
Sulfate		7.22E+01	2.00E+03	3.07E+02	2.42E+03	3.63E+02	9.00E+02	
Uranium	2.23E+00	6.79E-03	5.34E-02	6.65E-04	4.38E-01	3.51E-01	1.48E-01	6.64E-02
Vanadium	1.74E-01	5.27E-01	6.11E-04	1.23E-02	7.37E-01	5.89E-01	3.25E-01	1.86E+00

Area B: Hazard Quotients Based on 95% UCL Concentrations

Raccoon (*Procyon lotor*)

Chemical Name	Raccoon NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Invertebrate Intake (mg/d)	Fish Intake (mg/d)	Total Dose (mg/kg/d)	Raccoon Hazard Quotient
Ammonium		4.13E-02	1.88E-02	1.76E-01	2.27E-02	3.41E-03	4.56E-02	
Manganese	7.44E+01	6.08E+00	2.47E-02	7.77E+01	4.86E-01	1.07E-01	1.47E+01	1.98E-01
Molybdenum	1.90E-01	3.67E-01	1.05E-03	1.25E+00	3.18E-03	2.54E-03	2.83E-01	1.49E+00
Nitrate	4.52E+02	8.20E-01	2.88E+00	3.49E+00	3.49E+00	5.24E-01	1.95E+00	4.32E-03
Selenium	1.69E-01	2.72E-03	1.96E-03	4.62E-03	1.60E-01	6.13E-02	4.01E-02	2.37E-01
Strontium	2.22E+02	1.22E+00	7.25E-01	1.30E+01	2.09E+00	1.67E+00	3.25E+00	1.46E-02
Sulfate		6.41E+01	1.65E+02	2.73E+02	2.00E+02	3.00E+01	1.28E+02	
Uranium	2.23E+00	6.38E-03	3.40E-03	6.25E-04	2.79E-02	2.23E-02	1.06E-02	4.74E-03
Vanadium	1.74E-01	4.78E-01	4.62E-04	1.12E-02	4.20E-01	3.36E-01	2.17E-01	1.24E+00

**Area B: Hazard Quotients Based on Maximum Concentrations
Mallard (*Anas platyrhynchos*)**

Chemical Name	Mallard NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Invertebrate Intake (mg/d)	Total Dose (mg/kg/d)	Mallard Hazard Quotient
Ammonium		3.52E-03	1.05E-02	9.60E-02	3.89E-03	1.00E-01	
Manganese	1.70E+03	4.48E-01	3.80E-02	3.66E+01	2.28E-01	3.29E+01	1.94E-02
Molybdenum	3.34E+00	2.64E-02	6.35E-04	5.76E-01	5.86E-04	5.32E-01	1.59E-01
Nitrate		7.62E-02	6.68E+00	2.08E+00	2.46E+00	9.96E+00	
Selenium	4.10E-01	1.95E-04	5.05E-03	2.13E-03	1.25E-01	1.17E-01	2.85E-01
Strontium		8.80E-02	9.37E-01	6.00E+00	8.22E-01	6.92E+00	
Sulfate		5.20E+00	2.69E+02	1.42E+02	9.93E+01	4.54E+02	
Uranium	1.57E+01	4.89E-04	7.19E-03	3.07E-04	1.80E-02	2.29E-02	1.46E-03
Vanadium	1.13E+01	3.79E-02	1.09E-04	5.69E-03	3.02E-02	6.52E-02	5.75E-03

**Area B: Hazard Quotients Based on 95% UCL Concentrations
Mallard (*Anas platyrhynchos*)**

Chemical Name	Mallard NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Invertebrate Intake (mg/d)	Total Dose (mg/kg/d)	Mallard Hazard Quotient
Ammonium		2.97E-03	2.52E-03	8.10E-02	9.31E-04	7.71E-02	
Manganese	1.70E+03	4.38E-01	3.32E-03	3.58E+01	1.99E-02	3.20E+01	1.89E-02
Molybdenum	3.34E+00	2.64E-02	1.41E-04	5.76E-01	1.30E-04	5.31E-01	1.59E-01
Nitrate		5.90E-02	3.88E-01	1.61E+00	1.43E-01	1.94E+00	
Selenium	4.10E-01	1.95E-04	2.64E-04	2.13E-03	6.55E-03	8.06E-03	1.96E-02
Strontium		8.78E-02	9.76E-02	5.98E+00	8.55E-02	5.52E+00	
Sulfate		4.61E+00	2.22E+01	1.26E+02	8.20E+00	1.42E+02	
Uranium	1.57E+01	4.59E-04	4.58E-04	2.88E-04	1.14E-03	2.07E-03	1.32E-04
Vanadium	1.13E+01	3.44E-02	6.21E-05	5.16E-03	1.72E-02	5.01E-02	4.42E-03

**Area B: Hazard Quotients Based on Maximum Concentrations
Killdeer (*Charadrius vociferus*)**

Chemical Name	Killdeer NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Invertebrate Intake (mg/d)	Total Dose (mg/kg/d)	Killdeer Hazard Quotient
Ammonium		3.02E-03	2.02E-03	6.11E-03	1.15E-01	
Manganese	1.04E+03	3.84E-01	7.30E-03	3.59E-01	7.76E+00	7.49E-03
Molybdenum	2.04E+00	2.26E-02	1.22E-04	9.22E-04	2.45E-01	1.20E-01
Nitrate		6.54E-02	1.28E+00	3.88E+00	5.41E+01	
Selenium	2.51E-01	1.68E-04	9.70E-04	1.97E-01	2.05E+00	8.19E+00
Strontium		7.55E-02	1.80E-01	1.29E+00	1.60E+01	
Sulfate		4.46E+00	5.16E+01	1.56E+02	2.20E+03	
Uranium	9.59E+00	4.19E-04	1.38E-03	2.83E-02	3.11E-01	3.25E-02
Vanadium	6.92E+00	3.25E-02	2.10E-05	4.75E-02	8.29E-01	1.20E-01

**Area B: Hazard Quotients Based on 95% UCL Concentrations
Killdeer (*Charadrius vociferus*)**

Chemical Name	Killdeer NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Invertebrate Intake (mg/d)	Total Dose (mg/kg/d)	Killdeer Hazard Quotient
Ammonium		2.55E-03	4.84E-04	1.46E-03	4.66E-02	
Manganese	1.04E+03	3.76E-01	6.38E-04	3.14E-02	4.22E+00	4.07E-03
Molybdenum	2.04E+00	2.26E-02	2.71E-05	2.05E-04	2.37E-01	1.16E-01
Nitrate		5.06E-02	7.44E-02	2.25E-01	3.63E+00	
Selenium	2.51E-01	1.68E-04	5.07E-05	1.03E-02	1.09E-01	4.34E-01
Strontium		7.53E-02	1.87E-02	1.35E-01	2.37E+00	
Sulfate		3.96E+00	4.26E+00	1.29E+01	2.19E+02	
Uranium	9.59E+00	3.94E-04	8.79E-05	1.80E-03	2.36E-02	2.46E-03
Vanadium	6.92E+00	2.95E-02	1.19E-05	2.71E-02	5.86E-01	8.46E-02

Area B: Hazard Quotients Based on Maximum Concentrations

Great Blue Heron (*Ardea herodias*)

Chemical Name	Great Blue Heron NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Invertebrate Intake (mg/d)	Fish Intake (mg/d)	Total Dose (mg/kg/d)	Great Blue Heron HQ
Ammonium		3.47E-03	1.66E-02	3.16E-02	2.37E-02	3.38E-02	
Manganese	1.94E+03	4.41E-01	5.98E-02	1.85E+00	2.03E+00	1.97E+00	1.01E-03
Molybdenum	3.82E+00	2.60E-02	9.99E-04	4.77E-03	1.91E-02	2.28E-02	5.97E-03
Nitrate		7.51E-02	1.05E+01	2.00E+01	1.50E+01	2.05E+01	
Selenium	4.70E-01	1.93E-04	7.94E-03	1.02E+00	1.96E+00	1.34E+00	2.85E+00
Strontium		8.67E-02	1.47E+00	6.68E+00	2.67E+01	1.57E+01	
Sulfate		5.12E+00	4.23E+02	8.07E+02	6.05E+02	8.26E+02	
Uranium	1.80E+01	4.81E-04	1.13E-02	1.46E-01	5.85E-01	3.33E-01	1.85E-02
Vanadium	1.30E+01	3.74E-02	1.72E-04	2.46E-01	9.82E-01	5.68E-01	4.38E-02

Area B: Hazard Quotients Based on 95% UCL Concentrations

Great Blue Heron (*Ardea herodias*)

Chemical Name	Great Blue Heron NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Invertebrate Intake (mg/d)	Fish Intake (mg/d)	Total Dose (mg/kg/d)	Great Blue Heron HQ
Ammonium		2.93E-03	3.97E-03	7.57E-03	5.68E-03	9.04E-03	
Manganese	1.94E+03	4.31E-01	5.23E-03	1.62E-01	1.78E-01	3.48E-01	1.79E-04
Molybdenum	3.82E+00	2.60E-02	2.22E-04	1.06E-03	4.24E-03	1.41E-02	3.70E-03
Nitrate		5.82E-02	6.10E-01	1.16E+00	8.72E-01	1.21E+00	
Selenium	4.70E-01	1.93E-04	4.15E-04	5.32E-02	1.02E-01	7.00E-02	1.49E-01
Strontium		8.65E-02	1.53E-01	6.95E-01	2.78E+00	1.67E+00	
Sulfate		4.55E+00	3.49E+01	6.66E+01	5.00E+01	7.00E+01	
Uranium	1.80E+01	4.53E-04	7.20E-04	9.30E-03	3.72E-02	2.14E-02	1.19E-03
Vanadium	1.30E+01	3.39E-02	9.77E-05	1.40E-01	5.59E-01	3.29E-01	2.54E-02

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Area C

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Area C: Media Concentrations Based on Maximum Measured Values

Chemical Name	Soil Conc. (mg/kg)	Sediment Conc. (mg/kg)	Water Conc. (mg/L)	K _d	Soil-to-Plant Uptake Parameters		Uplnd Plant Conc. (mg/kgdw)	Wld Plant Conc. (mg/kgdw)	Soil-to-Mammal Uptake Parameters		Mammal Conc. (mg/kgdw)	Invert. BCF	Invert. Conc. (mg/kgdw)	Fish BCF	Fish Conc. (mg/kgdw)
					B ₀	B ₁			B ₀	B ₁					
Ammonium	2.59E+01	3.16E+01	1.02E+00	3.10E+01	1.00E+00	1.00E+00	2.59E+01	3.16E+01	0.00E+00	1.00E+00	0.00E+00	4.00E+00	4.08E+00	3.00E+00	3.06E+00
Boron	1.68E+00	5.60E-01	3.00E+00	4.00E+00	1.00E+00	0.00E+00	6.72E+00	0.0008	1.00E+00	0.00E+00	4.00E+00	2.24E+00	3.00E+00	1.68E+00	
Manganese	7.23E+02	1.19E+03	1.64E+01	6.50E+01	3.00E+00	1.00E+00	1.80E+03	7.04E+02	2.05E-02	1.00E+00	1.48E+01	6.50E+01	1.07E+03	1.78E+01	1.17E+03
Molybdenum	2.48E-01	1.24E-02	2.00E+01	8.00E-01	1.00E+00	0.00E+00	0.00E+00	1.98E-01	1.00E-03	1.00E+00	0.00E+00	1.00E+01	1.24E-01	1.00E+01	4.96E-01
Nitrate	1.01E+03	8.35E+01	2.46E+03	1.00E-02	1.00E+00	1.00E+00	1.01E+03	8.35E+01	0.00E+00	1.00E+00	0.00E+00	4.00E+00	9.96E+03	3.00E+00	7.39E+03
Selenium	2.00E+00	4.20E+00	1.37E-01	3.00E+02	5.08E-01	1.10E+00	3.20E+00	6.40E+00	6.60E-01	3.76E-01	8.57E-01	2.69E+02	3.69E+01	1.29E+02	7.07E+01
Strontium	3.49E+02	1.62E+03	1.98E+01	3.50E+01	2.50E+00	1.00E+00	4.64E+02	1.22E+03	8.00E-03	1.00E+00	1.38E-02	9.50E+00	1.88E+02	9.50E+00	7.52E+02
Sulfate	4.23E+04	1.23E+04	1.71E+04	7.50E+00	1.00E+00	1.00E+00	4.23E+04	1.23E+04	0.00E+00	1.00E+00	0.00E+00	4.00E+00	6.84E+04	3.00E+00	5.13E+04
Uranium	3.56E+01	4.35E+01	6.82E-01	4.50E+02	2.30E-02	1.00E+00	5.90E-01	5.49E+01	3.30E-02	1.00E+00	1.17E+00	2.71E+01	1.85E+01	2.71E+01	7.39E+01
Vanadium	5.60E+00	5.60E-03	1.00E+03	5.50E-03	1.00E+00	0.00E+00	0.00E+00	3.08E-02	1.23E-02	1.00E+00	0.00E+00	3.00E+03	1.68E+01	3.00E+03	6.72E+01

Area C: Media Concentrations Based on 95% UCL Values

Chemical Name	Soil Conc. (mg/kg)	Sediment Conc. (mg/kg)	Water Conc. (mg/L)	K _d	Soil-to-Plant Uptake Parameters		Uplnd Plant Conc. (mg/kgdw)	Wld Plant Conc. (mg/kgdw)	Soil-to-Mammal Uptake Parameters		Mammal Conc. (mg/kgdw)	Invert. BCF	Invert. Conc. (mg/kgdw)	Fish BCF	Fish Conc. (mg/kgdw)
					B ₀	B ₁			B ₀	B ₁					
Ammonium	1.56E+01	5.21E+00	1.68E-01	3.10E+01	1.00E+00	1.00E+00	1.56E+01	5.21E+00	0.00E+00	1.00E+00	0.00E+00	4.00E+00	6.72E-01	3.00E+00	5.04E-01
Boron	1.68E+00	5.60E-01	3.00E+00	4.00E+00	1.00E+00	0.00E+00	6.72E+00	0.0008	1.00E+00	0.00E+00	4.00E+00	2.24E+00	3.00E+00	1.68E+00	
Manganese	3.98E+02	5.78E+02	1.36E+00	6.50E+01	3.00E+00	1.00E+00	6.58E+02	2.61E+02	2.05E-02	1.00E+00	8.16E+00	6.50E+01	8.83E+01	1.78E+01	9.68E+01
Molybdenum	1.72E-01	8.59E-03	2.00E+01	8.00E-01	1.00E+00	0.00E+00	0.00E+00	1.37E-01	1.00E-03	1.00E+00	0.00E+00	1.00E+01	8.59E-02	1.00E+01	3.44E-01
Nitrate	4.44E+02	4.08E+01	2.80E+02	1.00E-02	1.00E+00	1.00E+00	4.44E+02	4.08E+01	0.00E+00	1.00E+00	0.00E+00	4.00E+00	1.12E+03	3.00E+00	8.40E+02
Selenium	1.13E+00	2.76E+00	3.61E-02	3.00E+02	5.08E-01	1.10E+00	2.73E+00	1.60E+00	6.60E-01	3.76E-01	6.91E-01	2.69E+02	9.71E+00	1.29E+02	1.86E+01
Strontium	1.88E+02	5.45E+02	1.13E+01	3.50E+01	2.50E+00	1.00E+00	3.04E+02	7.41E+02	8.00E-03	1.00E+00	9.05E-03	9.50E+00	1.07E+02	9.50E+00	4.29E+02
Sulfate	3.14E+04	7.67E+03	4.79E+03	7.50E+00	1.00E+00	1.00E+00	3.14E+04	7.67E+03	0.00E+00	1.00E+00	0.00E+00	4.00E+00	1.91E+04	3.00E+00	1.44E+04
Uranium	1.46E+01	1.41E+01	2.31E-01	4.50E+02	2.30E-02	1.00E+00	4.19E-01	1.02E+01	3.30E-02	1.00E+00	4.82E-01	2.71E+01	6.26E+00	2.71E+01	2.50E+01
Vanadium	1.91E+00	1.91E-03	1.00E+03	5.50E-03	1.00E+00	0.00E+00	0.00E+00	1.05E-02	1.23E-02	1.00E+00	0.00E+00	3.00E+03	5.73E+00	3.00E+03	2.29E+01

Toxicity Data and Benchmarks

Chemical Name	Mammals			Birds			Plant Benchmark (mg/kg)	Water Benchmark (mg/L)	Sediment Benchmark (mg/kg)
	NOAEL (mg/kg/d)	Test Species	Body Wt. (kg)	NOAEL (mg/kg/d)	Test Species	Body Wt. (kg)			
Ammonium									
Boron	28	rat	0.35	28.8	mallard	1	0.5	0.18	75
Manganese	88	rat	0.35	977	J. quail	0.072	500	1	630
Molybdenum	0.26	mouse	0.03	3.53	chicken	1.5	2	0.08	4
Nitrate	507	guinea pig	0.86					0.24	2440
Selenium	0.20	rat	0.35	0.4	mallard	1	1	177	5
Strontium Sulfate	263	rat	0.35					0.002	49
Uranium	3.07	mouse	0.028	16	black duck	1.25	5	1.5	100
Vanadium	0.21	rat	0.26	11.4	mallard	1.17	2	100	50

Toxicity Data and Benchmarks

Chemical Name	Mammals			Birds			Plant Benchmark (mg/kg)	Water Benchmark (mg/L)	Sediment Benchmark (mg/kg)
	NOAEL (mg/kg/d)	Test Species	Body Wt. (kg)	NOAEL (mg/kg/d)	Test Species	Body Wt. (kg)			
Ammonium									
Boron	28	rat	0.35	28.8	mallard	1	0.5	0.18	75
Manganese	88	rat	0.35	977	J. quail	0.072	500	1	630
Molybdenum	0.26	mouse	0.03	3.53	chicken	1.5	2	0.08	4
Nitrate	507	guinea pig	0.86					0.24	2440
Selenium	0.20	rat	0.35	0.4	mallard	1	1	177	5
Strontium Sulfate	263	rat	0.35					0.002	49
Uranium	3.07	mouse	0.028	16	black duck	1.25	5	1.5	100
Vanadium	0.21	rat	0.26	11.4	mallard	1.17	2	100	50

**Area C: Hazard Quotients Based on Maximum Concentrations
Aquatic and Benthic Organisms and Plants**

Chemical Name	Aquatic Organism HQ	Benthic Organism HQ	Upland Plant HQ	Wetland Plant HQ
Ammonium	5.67E+00	4.22E-01		
Boron	5.60E-01			3.36E+00
Manganese	2.05E+02	1.89E+00	1.45E+00	2.38E+00
Molybdenum	5.17E-02	6.20E-02		1.24E-01
Nitrate	1.39E+01	3.42E-02		
Selenium	6.85E+01	8.40E-01	2.00E+00	4.20E+00
Strontium Sulfate	1.32E+01	3.31E+01		
Uranium	1.71E+02		7.12E+00	8.70E+00
Vanadium	2.62E+02	1.12E-01		2.80E+00

**Area C: Hazard Quotients Based on 95% UCL Concentrations
Aquatic and Benthic Organisms and Plants**

Chemical Name	Aquatic Organism HQ	Benthic Organism HQ	Upland Plant HQ	Wetland Plant HQ
Ammonium	9.33E-01	6.94E-02		
Boron	5.60E-01			3.36E+00
Manganese	1.70E+01	9.17E-01	7.96E-01	1.16E+00
Molybdenum	3.58E-02	4.30E-02		8.59E-02
Nitrate	1.58E+00	1.67E-02		
Selenium	1.81E+01	5.52E-01	1.13E+00	2.76E+00
Strontium Sulfate	7.53E+00	1.11E+01		
Uranium	4.79E+01		2.92E+00	2.82E+00
Vanadium	8.88E+01	3.82E-02		9.55E-01

**Area C: Hazard Quotients Based on Maximum Concentrations
Sheep (*Ovis aries*)**

Chemical Name	Sheep NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Sheep Hazard Quotient
Ammonium		3.52E+00	5.10E+00	5.18E+01	1.21E+00	
Boron	2.08E+01	0.00E+00	2.80E+00	0.00E+00	5.60E-02	2.69E-03
Manganese	6.53E+01	9.83E+01	8.20E+01	3.60E+03	7.56E+01	1.16E+00
Molybdenum	1.67E-01	0.00E+00	6.20E-02	0.00E+00	1.24E-03	7.44E-03
Nitrate	3.97E+02	1.37E+02	1.23E+04	2.02E+03	2.90E+02	7.29E-01
Selenium	1.49E-01	2.72E-01	6.85E-01	6.40E+00	1.47E-01	9.91E-01
Strontium	1.95E+02	4.75E+01	9.90E+01	9.28E+02	2.15E+01	1.10E-01
Sulfate		5.75E+03	8.55E+04	8.46E+04	3.52E+03	
Uranium	1.96E+00	4.84E+00	3.41E+00	1.18E+00	1.89E-01	9.63E-02
Vanadium	1.53E-01	0.00E+00	2.80E-02	0.00E+00	5.60E-04	3.66E-03

**Area C: Hazard Quotients Based on 95% UCL Concentrations
Sheep (*Ovis aries*)**

Chemical Name	Sheep NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Sheep Hazard Quotient
Ammonium		2.12E+00	8.40E-01	3.12E+01	6.83E-01	
Boron	2.08E+01	0.00E+00	2.80E+00	0.00E+00	5.60E-02	2.69E-03
Manganese	6.53E+01	5.41E+01	6.80E+00	1.32E+03	2.75E+01	4.21E-01
Molybdenum	1.67E-01	0.00E+00	4.30E-02	0.00E+00	8.59E-04	5.16E-03
Nitrate	3.97E+02	6.04E+01	1.40E+03	8.88E+02	4.70E+01	1.18E-01
Selenium	1.49E-01	1.54E-01	1.81E-01	5.46E+00	1.16E-01	7.80E-01
Strontium	1.95E+02	2.56E+01	5.65E+01	6.08E+02	1.38E+01	7.07E-02
Sulfate		4.28E+03	2.39E+04	6.29E+04	1.82E+03	
Uranium	1.96E+00	1.99E+00	1.16E+00	8.38E-01	7.96E-02	4.06E-02
Vanadium	1.53E-01	0.00E+00	9.55E-03	0.00E+00	1.91E-04	1.25E-03

**Area C: Hazard Quotients Based on Maximum Concentrations
Deer Mouse (*Peromyscus maniculatus*)**

Chemical Name	Deer Mouse NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Deer Mouse HQ
Ammonium		1.93E-03	3.51E-03	9.63E-02	4.26E+00	
Boron	3.29E+01	0.00E+00	1.92E-03	0.00E+00	8.05E-02	2.45E-03
Manganese	1.03E+02	5.38E-02	5.64E-02	6.70E+00	2.85E+02	2.75E+00
Molybdenum	2.64E-01	0.00E+00	4.26E-05	0.00E+00	1.78E-03	6.77E-03
Nitrate	6.29E+02	7.51E-02	8.47E+00	3.76E+00	5.15E+02	8.19E-01
Selenium	2.35E-01	1.49E-04	4.71E-04	1.19E-02	5.24E-01	2.23E+00
Strontium	3.09E+02	2.60E-02	6.81E-02	1.73E+00	7.61E+01	2.46E-01
Sulfate		3.15E+00	5.88E+01	1.57E+02	9.17E+03	
Uranium	3.10E+00	2.65E-03	2.34E-03	2.19E-03	3.01E-01	9.70E-02
Vanadium	2.42E-01	0.00E+00	1.92E-05	0.00E+00	8.05E-04	3.32E-03

**Area C: Hazard Quotients Based on 95% UCL Concentrations
Deer Mouse (*Peromyscus maniculatus*)**

Chemical Name	Deer Mouse NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Deer Mouse HQ
Ammonium		1.16E-03	5.77E-04	5.80E-02	2.50E+00	
Boron	3.29E+01	0.00E+00	1.92E-03	0.00E+00	8.05E-02	2.45E-03
Manganese	1.03E+02	2.96E-02	4.67E-03	2.45E+00	1.04E+02	1.00E+00
Molybdenum	2.64E-01	0.00E+00	2.95E-05	0.00E+00	1.24E-03	4.69E-03
Nitrate	6.29E+02	3.30E-02	9.62E-01	1.65E+00	1.11E+02	1.76E-01
Selenium	2.35E-01	8.41E-05	1.24E-04	1.02E-02	4.34E-01	1.85E+00
Strontium	3.09E+02	1.40E-02	3.88E-02	1.13E+00	4.95E+01	1.60E-01
Sulfate		2.34E+00	1.65E+01	1.17E+02	5.68E+03	
Uranium	3.10E+00	1.09E-03	7.94E-04	1.56E-03	1.44E-01	4.64E-02
Vanadium	2.42E-01	0.00E+00	6.56E-06	0.00E+00	2.75E-04	1.13E-03

**Area C: Hazard Quotients Based on Maximum Concentrations
Burrowing owl (*Speotyto cunicularia*)**

Chemical Name	Burrowing Owl NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Burrowing Owl HQ
Ammonium		8.95E-03	2.89E-04	0.00E+00	5.96E-02	
Boron	1.98E+01	0.00E+00	1.58E-04	0.00E+00	1.02E-03	5.15E-05
Manganese	1.14E+03	2.50E-01	4.64E-03	2.56E-01	3.29E+00	2.89E-03
Molybdenum	2.24E+00	0.00E+00	3.51E-06	0.00E+00	2.26E-05	1.01E-05
Nitrate		3.49E-01	6.97E-01	0.00E+00	6.75E+00	
Selenium	2.76E-01	6.91E-04	3.88E-05	1.48E-02	1.00E-01	3.64E-01
Strontium		1.21E-01	5.60E-03	2.39E-04	8.16E-01	
Sulfate		1.46E+01	4.84E+00	0.00E+00	1.26E+02	
Uranium	1.05E+01	1.23E-02	1.93E-04	2.03E-02	2.12E-01	2.01E-02
Vanadium	7.61E+00	0.00E+00	1.58E-05	0.00E+00	1.02E-05	1.34E-06

**Area C: Hazard Quotients Based on 95% UCL Concentrations
Burrowing owl (*Speotyto cunicularia*)**

Chemical Name	Burrowing Owl NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Burrowing Owl HQ
Ammonium		5.39E-03	4.75E-05	0.00E+00	3.51E-02	
Boron	1.98E+01	0.00E+00	1.58E-04	0.00E+00	1.02E-03	5.15E-05
Manganese	1.14E+03	1.38E-01	3.84E-04	1.41E-01	1.80E+00	1.58E-03
Molybdenum	2.24E+00	0.00E+00	2.43E-06	0.00E+00	1.57E-05	6.99E-06
Nitrate		1.53E-01	7.92E-02	0.00E+00	1.50E+00	
Selenium	2.76E-01	3.90E-04	1.02E-05	1.19E-02	7.96E-02	2.89E-01
Strontium		6.50E-02	3.20E-03	1.56E-04	4.41E-01	
Sulfate		1.09E+01	1.35E+00	0.00E+00	7.88E+01	
Uranium	1.05E+01	5.05E-03	6.54E-05	8.32E-03	8.67E-02	8.22E-03
Vanadium	7.61E+00	0.00E+00	5.40E-07	0.00E+00	3.49E-06	4.58E-07

**Area C: Hazard Quotients Based on Maximum Concentrations
Red Fox (*Vulpes vulpes*)**

Chemical Name	Red Fox NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Mouse Intake (mg/d)	Total Dose (mg/kg/d)	Red Fox HQ
Ammonium		1.73E-01	3.94E-01	1.23E+00	0.00E+00	3.97E-01	
Boron	2.40E+01	0.00E+00	2.16E-01	0.00E+00	0.00E+00	4.77E-02	1.98E-03
Manganese	7.55E+01	4.82E+00	6.34E+00	8.58E+01	2.83E+00	2.20E+01	2.91E-01
Molybdenum	1.92E-01	0.00E+00	4.79E-03	0.00E+00	0.00E+00	1.06E-03	5.48E-03
Nitrate	4.59E+02	6.74E+00	9.52E+02	4.81E+01	0.00E+00	2.22E+02	4.83E-01
Selenium	1.71E-01	1.33E-02	5.29E-02	1.53E-01	1.63E-01	8.42E-02	4.91E-01
Strontium	2.26E+02	2.33E+00	7.65E+00	2.21E+01	2.63E-03	7.07E+00	3.14E-02
Sulfate		2.82E+02	6.61E+03	2.02E+03	0.00E+00	1.96E+03	
Uranium	2.26E+00	2.38E-01	2.63E-01	2.81E-02	2.24E-01	1.66E-01	7.33E-02
Vanadium	1.77E-01	0.00E+00	2.16E-03	0.00E+00	0.00E+00	4.77E-04	2.69E-03

**Area C: Hazard Quotients Based on 95% UCL Concentrations
Red Fox (*Vulpes vulpes*)**

Chemical Name	Red Fox NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Mouse Intake (mg/d)	Total Dose (mg/kg/d)	Red Fox HQ
Ammonium		1.04E-01	6.49E-02	7.44E-01	0.00E+00	2.01E-01	
Boron	2.40E+01	0.00E+00	2.16E-01	0.00E+00	0.00E+00	4.77E-02	1.98E-03
Manganese	7.55E+01	2.66E+00	5.25E-01	3.14E+01	1.56E+00	7.95E+00	1.05E-01
Molybdenum	1.92E-01	0.00E+00	3.32E-03	0.00E+00	0.00E+00	7.31E-04	3.80E-03
Nitrate	4.59E+02	2.96E+00	1.08E+02	2.12E+01	0.00E+00	2.91E+01	6.35E-02
Selenium	1.71E-01	7.54E-03	1.39E-02	1.30E-01	1.32E-01	6.24E-02	3.64E-01
Strontium	2.26E+02	1.25E+00	4.37E+00	1.45E+01	1.72E-03	4.43E+00	1.96E-02
Sulfate		2.10E+02	1.85E+03	1.50E+03	0.00E+00	7.84E+02	
Uranium	2.26E+00	9.74E-02	8.92E-02	2.00E-02	9.19E-02	6.58E-02	2.91E-02
Vanadium	1.77E-01	0.00E+00	7.38E-04	0.00E+00	0.00E+00	1.63E-04	9.19E-04

Area C: Hazard Quotients Based on Maximum Concentrations

Muskrat (*Ondatra zibethicus*)

Chemical Name	Muskrat NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Muskrat Hazard Quotient
Ammonium		2.29E-01	1.13E-01	2.44E+00	2.45E+00	
Boron	2.61E+01	1.22E-02	6.21E-02	5.19E-01	5.22E-01	2.00E-02
Manganese	8.20E+01	8.63E+00	1.82E+00	5.43E+01	5.71E+01	6.96E-01
Molybdenum	2.09E-01	1.80E-03	1.38E-03	1.53E-02	1.63E-02	7.79E-02
Nitrate	4.99E+02	6.06E-01	2.73E+02	6.44E+00	2.47E+02	4.96E-01
Selenium	1.86E-01	3.05E-02	1.52E-02	4.94E-01	4.75E-01	2.55E+00
Strontium	2.45E+02	1.18E+01	2.20E+00	9.42E+01	9.53E+01	3.89E-01
Sulfate		8.92E+01	1.90E+03	9.49E+02	2.59E+03	
Uranium	2.46E+00	3.16E-01	7.57E-02	4.24E+00	4.08E+00	1.66E+00
Vanadium	1.92E-01	4.06E-02	6.21E-04	2.38E-03	3.84E-02	2.00E-01

Area C: Hazard Quotients Based on 95% UCL Concentrations

Muskrat (*Ondatra zibethicus*)

Chemical Name	Muskrat NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Muskrat Hazard Quotient
Ammonium		3.78E-02	1.86E-02	4.02E-01	4.04E-01	
Boron	2.61E+01	1.22E-02	6.21E-02	5.19E-01	5.22E-01	2.00E-02
Manganese	8.20E+01	4.19E+00	1.51E-01	2.01E+01	2.16E+01	2.63E-01
Molybdenum	2.09E-01	1.25E-03	9.53E-04	1.06E-02	1.13E-02	5.40E-02
Nitrate	4.99E+02	2.96E-01	3.11E+01	3.15E+00	3.04E+01	6.10E-02
Selenium	1.86E-01	2.00E-02	4.01E-03	1.23E-01	1.30E-01	6.97E-01
Strontium	2.45E+02	3.95E+00	1.25E+00	5.72E+01	5.50E+01	2.24E-01
Sulfate		5.56E+01	5.31E+02	5.92E+02	1.04E+03	
Uranium	2.46E+00	1.02E-01	2.56E-02	7.87E-01	8.06E-01	3.28E-01
Vanadium	1.92E-01	1.39E-02	2.12E-04	8.11E-04	1.31E-02	6.82E-02

Area C: Hazard Quotients Based on Maximum Concentrations

Raccoon (*Procyon lotor*)

Chemical Name	Raccoon NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Invertebrate Intake (mg/d)	Fish Intake (mg/d)	Total Dose (mg/kg/d)	Raccoon Hazard Quotient
Ammonium		8.59E-01	4.87E-01	3.65E+00	5.89E-01	8.84E-02	9.89E-01	
Boron	2.37E+01	4.56E-02	2.67E-01	7.77E-01	3.24E-01	4.85E-02	2.55E-01	1.08E-02
Manganese	7.44E+01	3.23E+01	7.83E+00	8.14E+01	1.54E+02	3.37E+01	5.39E+01	7.24E-01
Molybdenum	1.90E-01	6.74E-03	5.92E-03	2.29E-02	1.79E-02	1.43E-02	1.18E-02	6.23E-02
Nitrate	4.52E+02	2.27E+00	1.18E+03	9.65E+00	1.42E+03	2.14E+02	4.92E+02	1.09E+00
Selenium	1.69E-01	1.14E-01	6.54E-02	7.40E-01	5.32E+00	2.04E+00	1.44E+00	8.54E+00
Strontium	2.22E+02	4.40E+01	9.45E+00	1.41E+02	2.72E+01	2.17E+01	4.24E+01	1.91E-01
Sulfate		3.34E+02	8.16E+03	1.42E+03	9.88E+03	1.48E+03	3.71E+03	
Uranium	2.23E+00	1.18E+00	3.25E-01	6.34E+00	2.67E+00	2.14E+00	2.21E+00	9.89E-01
Vanadium	1.74E-01	1.52E-01	2.67E-03	3.56E-03	2.43E+00	1.94E+00	7.89E-01	4.52E+00

Area C: Hazard Quotients Based on 95% UCL Concentrations

Raccoon (*Procyon lotor*)

Chemical Name	Raccoon NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Invertebrate Intake (mg/d)	Fish Intake (mg/d)	Total Dose (mg/kg/d)	Raccoon Hazard Quotient
Ammonium		1.41E-01	8.02E-02	6.02E-01	9.71E-02	1.46E-02	1.63E-01	
Boron	2.37E+01	4.56E-02	2.67E-01	7.77E-01	3.24E-01	4.85E-02	2.55E-01	1.08E-02
Manganese	7.44E+01	1.57E+01	6.48E-01	3.02E+01	1.28E+01	2.80E+00	1.08E+01	1.45E-01
Molybdenum	1.90E-01	4.67E-03	4.10E-03	1.59E-02	1.24E-02	9.93E-03	8.19E-03	4.32E-02
Nitrate	4.52E+02	1.11E+00	1.34E+02	4.72E+00	1.62E+02	2.43E+01	5.67E+01	1.25E-01
Selenium	1.69E-01	7.50E-02	1.72E-02	1.85E-01	1.40E+00	5.38E-01	3.86E-01	2.29E+00
Strontium	2.22E+02	1.48E+01	5.39E+00	8.56E+01	1.55E+01	1.24E+01	2.33E+01	1.05E-01
Sulfate		2.08E+02	2.28E+03	8.86E+02	2.77E+03	4.15E+02	1.14E+03	
Uranium	2.23E+00	3.83E-01	1.10E-01	1.18E+00	9.04E-01	7.23E-01	5.75E-01	2.58E-01
Vanadium	1.74E-01	5.19E-02	9.11E-04	1.21E-03	8.28E-01	6.62E-01	2.69E-01	1.54E+00

Area C: Hazard Quotients Based on Maximum Concentrations

Mallard (*Anas platyrhynchos*)

Chemical Name	Mallard NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Invertebrate Intake (mg/d)	Total Dose (mg/kg/d)	Mallard Hazard Quotient
Ammonium		6.18E-02	6.55E-02	1.69E+00	2.42E-02	1.62E+00	
Boron	2.95E+01	3.28E-03	3.59E-02	3.58E-01	1.33E-02	3.62E-01	1.23E-02
Manganese	1.70E+03	2.33E+00	1.05E+00	3.75E+01	6.31E+00	4.16E+01	2.46E-02
Molybdenum	3.34E+00	4.85E-04	7.96E-04	1.06E-02	7.35E-04	1.11E-02	3.33E-03
Nitrate		1.63E-01	1.58E+02	4.45E+00	5.84E+01	1.95E+02	
Selenium	4.10E-01	8.21E-03	8.79E-03	3.41E-01	2.18E-01	5.08E-01	1.24E+00
Strontium		3.17E+00	1.27E+00	6.50E+01	1.11E+00	6.23E+01	
Sulfate		2.40E+01	1.10E+03	6.56E+02	4.05E+02	1.92E+03	
Uranium	1.57E+01	8.50E-02	4.38E-02	2.93E+00	1.09E-01	2.79E+00	1.78E-01
Vanadium	1.13E+01	1.09E-02	3.59E-04	1.64E-03	9.95E-02	9.92E-02	8.75E-03

Area C: Hazard Quotients Based on 95% UCL Concentrations

Mallard (*Anas platyrhynchos*)

Chemical Name	Mallard NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Invertebrate Intake (mg/d)	Total Dose (mg/kg/d)	Mallard Hazard Quotient
Ammonium		1.02E-02	1.08E-02	2.78E-01	3.98E-03	2.67E-01	
Boron	2.95E+01	3.28E-03	3.59E-02	3.58E-01	1.33E-02	3.62E-01	1.23E-02
Manganese	1.70E+03	1.13E+00	8.72E-02	1.39E+01	5.23E-01	1.38E+01	8.14E-03
Molybdenum	3.34E+00	3.36E-04	5.51E-04	7.33E-03	5.09E-04	7.69E-03	2.30E-03
Nitrate		7.98E-02	1.80E+01	2.18E+00	6.63E+00	2.37E+01	
Selenium	4.10E-01	5.40E-03	2.32E-03	8.53E-02	5.75E-02	1.33E-01	3.24E-01
Strontium		1.07E+00	7.25E-01	3.95E+01	6.36E-01	3.70E+01	
Sulfate		1.50E+01	3.07E+02	4.09E+02	1.13E+02	7.45E+02	
Uranium	1.57E+01	2.76E-02	1.48E-02	5.44E-01	3.71E-02	5.50E-01	3.50E-02
Vanadium	1.13E+01	3.73E-03	1.23E-04	5.60E-04	3.39E-02	3.38E-02	2.99E-03

Area C: Hazard Quotients Based on Maximum Concentrations

Killdeer (*Charadrius vociferus*)

Chemical Name	Killdeer NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Invertebrate Intake (mg/d)	Total Dose (mg/kg/d)	Killdeer Hazard Quotient
Ammonium		5.30E-02	1.26E-02	3.80E-02	1.07E+00	
Boron	1.80E+01	2.82E-03	6.90E-03	2.09E-02	3.17E-01	1.75E-02
Manganese	1.04E+03	2.00E+00	2.02E-01	9.93E+00	1.26E+02	1.21E-01
Molybdenum	2.04E+00	4.16E-04	1.53E-04	1.16E-03	1.78E-02	8.75E-03
Nitrate		1.40E-01	3.04E+01	9.18E+01	1.27E+03	
Selenium	2.51E-01	7.04E-03	1.69E-03	3.43E-01	3.64E+00	1.45E+01
Strontium		2.72E+00	2.44E-01	1.75E+00	4.88E+01	
Sulfate		2.06E+01	2.11E+02	6.37E+02	8.99E+03	
Uranium	9.59E+00	7.30E-02	8.41E-03	1.72E-01	2.62E+00	2.74E-01
Vanadium	6.92E+00	9.39E-03	6.90E-05	1.57E-01	1.72E+00	2.48E-01

Area C: Hazard Quotients Based on 95% UCL Concentrations

Killdeer (*Charadrius vociferus*)

Chemical Name	Killdeer NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Invertebrate Intake (mg/d)	Total Dose (mg/kg/d)	Killdeer Hazard Quotient
Ammonium		8.73E-03	2.07E-03	6.26E-03	1.77E-01	
Boron	1.80E+01	2.82E-03	6.90E-03	2.09E-02	3.17E-01	1.75E-02
Manganese	1.04E+03	9.69E-01	1.67E-02	8.23E-01	1.87E+01	1.81E-02
Molybdenum	2.04E+00	2.88E-04	1.06E-04	8.00E-04	1.24E-02	6.06E-03
Nitrate		6.84E-02	3.45E+00	1.04E+01	1.44E+02	
Selenium	2.51E-01	4.63E-03	4.45E-04	9.05E-02	9.89E-01	3.95E+00
Strontium		9.14E-01	1.39E-01	1.00E+00	2.13E+01	
Sulfate		1.29E+01	5.90E+01	1.78E+02	2.59E+03	
Uranium	9.59E+00	2.36E-02	2.85E-03	5.83E-02	8.78E-01	9.16E-02
Vanadium	6.92E+00	3.20E-03	2.35E-05	5.34E-02	5.86E-01	8.47E-02

Area C: Hazard Quotients Based on Maximum Concentrations

Great Blue Heron (*Ardea herodias*)

Chemical Name	Great Blue Heron NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Invertebrate Intake (mg/d)	Fish Intake (mg/d)	Total Dose (mg/kg/d)	Great Blue Heron HQ
Ammonium		6.09E-02	1.03E-01	1.96E-01	1.47E-01	2.28E-01	
Boro	3.38E+01	3.24E-03	5.65E-02	1.08E-01	8.09E-02	1.11E-01	3.30E-03
Manganese	1.94E+03	2.29E+00	1.66E+00	5.13E+01	5.62E+01	5.00E+01	2.58E-02
Molybdenum	3.82E+00	4.78E-04	1.25E-03	5.97E-03	2.39E-02	1.42E-02	3.71E-03
Nitrate		1.61E-01	2.49E+02	4.75E+02	3.56E+02	4.84E+02	
Selenium	4.70E-01	8.09E-03	1.38E-02	1.77E+00	3.40E+00	2.33E+00	4.97E+00
Strontium		3.12E+00	2.00E+00	9.06E+00	3.62E+01	2.26E+01	
Sulfate		2.37E+01	1.73E+03	3.29E+03	2.47E+03	3.37E+03	
Uranium	1.80E+01	8.38E-02	6.88E-02	8.90E-01	3.56E+00	2.06E+00	1.15E-01
Vanadium	1.30E+01	1.08E-02	5.65E-04	8.09E-01	3.24E+00	1.82E+00	1.40E-01

Area C: Hazard Quotients Based on 95% UCL Concentrations

Great Blue Heron (*Ardea herodias*)

Chemical Name	Great Blue Heron NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Invertebrate Intake (mg/d)	Fish Intake (mg/d)	Total Dose (mg/kg/d)	Great Blue Heron HQ
Ammonium		1.00E-02	1.70E-02	3.24E-02	2.43E-02	3.75E-02	
Boron	3.38E+01	3.24E-03	5.65E-02	1.08E-01	8.09E-02	1.11E-01	3.30E-03
Manganese	1.94E+03	1.11E+00	1.37E-01	4.25E+00	4.66E+00	4.56E+00	2.35E-03
Molybdenum	3.82E+00	3.31E-04	8.67E-04	4.14E-03	1.65E-02	9.81E-03	2.57E-03
Nitrate		7.86E-02	2.83E+01	5.39E+01	4.04E+01	5.51E+01	
Selenium	4.70E-01	5.32E-03	3.64E-03	4.68E-01	8.97E-01	6.16E-01	1.31E+00
Strontium		1.05E+00	1.14E+00	5.17E+00	2.07E+01	1.26E+01	
Sulfate		1.48E+01	4.83E+02	9.22E+02	6.91E+02	9.47E+02	
Uranium	1.80E+01	2.72E-02	2.33E-02	3.01E-01	1.21E+00	6.99E-01	3.89E-02
Vanadium	1.30E+01	3.68E-03	1.93E-04	2.76E-01	1.10E+00	6.21E-01	4.79E-02

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Area D

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Area D: Media Concentrations Based on Maximum Measured Values

Chemical Name	Soil Conc. (mg/kg)	Sediment Conc. (mg/kg)	Water Conc. (mg/L)	K _d	Soil-to-Plant Uptake Parameters		Uplnd Plant Conc. (mg/kgdw)	Wld Plant Conc. (mg/kgdw)	Soil-to-Mammal Uptake Parameters		Mammal Conc. (mg/kgdw)	Invert. BCF	Invert. Conc. (mg/kgdw)	Fish BCF	Fish Conc. (mg/kgdw)
					B ₀	B ₁			B ₀	B ₁					
Ammonium	1.47E+01	1.47E+01	5.00E+00	3.10E+01	1.00E+00	1.00E+00	1.47E+01	1.47E+01	0.00E+00	1.00E+00	0.00E+00	4.00E+00	2.00E+01	3.00E+00	1.50E+01
Manganese	2.62E+02	5.33E+02	5.68E-02	6.50E+01	3.00E+00	1.00E+00	7.86E+02	2.23E+02	2.05E-02	1.00E+00	5.37E+00	6.50E+01	3.69E+00	1.78E+01	4.04E+00
Molybdenum	4.10E-01	2.05E-02	2.00E+01	8.00E-01	1.00E+00	1.00E+00	0.00E+00	3.28E-01	1.00E-03	1.00E+00	0.00E+00	1.00E+01	2.05E-01	1.00E+01	8.20E-01
Nitrate	1.12E+03	1.12E+03	2.11E+03	1.00E-02	1.00E+00	1.00E+00	1.12E+03	1.12E+03	0.00E+00	1.00E+00	0.00E+00	4.00E+00	8.45E+03	3.00E+00	6.34E+03
Selenium	5.70E-01	4.50E-01	1.19E-01	3.00E+02	5.08E-01	1.10E+00	2.73E-01	2.10E-01	6.60E-01	3.76E-01	5.34E-01	2.69E+02	3.20E+01	1.29E+02	6.14E+01
Strontium	4.07E+02	2.32E+02	1.25E+01	3.50E+01	2.50E+00	1.00E+00	1.02E+03	1.94E+03	8.00E-03	1.00E+00	3.03E-02	9.50E+00	1.19E+02	9.50E+00	4.75E+02
Sulfate	5.02E+04	5.02E+04	1.29E+04	7.50E+00	1.00E+00	1.00E+00	5.02E+04	5.02E+04	0.00E+00	1.00E+00	0.00E+00	4.00E+00	5.17E+04	3.00E+00	3.88E+04
Uranium	4.02E+01	3.84E+00	2.42E+00	4.50E+02	2.30E-02	1.00E+00	9.25E-01	7.50E-01	3.30E-02	1.00E+00	1.33E+00	2.71E+01	6.54E+01	2.71E+01	2.62E+02
Vanadium	5.20E+00	5.20E-03	1.00E+03	5.50E-03	1.00E+00	1.00E+00	0.00E+00	2.86E-02	1.23E-02	1.00E+00	0.00E+00	3.00E+03	1.56E+01	3.00E+03	6.24E+01

Area D: Media Concentrations Based on 95% UCL Values

Chemical Name	Soil Conc. (mg/kg)	Sediment Conc. (mg/kg)	Water Conc. (mg/L)	K _d	Soil-to-Plant Uptake Parameters		Uplnd Plant Conc. (mg/kgdw)	Wld Plant Conc. (mg/kgdw)	Soil-to-Mammal Uptake Parameters		Mammal Conc. (mg/kgdw)	Invert. BCF	Invert. Conc. (mg/kgdw)	Fish BCF	Fish Conc. (mg/kgdw)
					B ₀	B ₁			B ₀	B ₁					
Ammonium	1.47E+01	1.47E+01	1.13E+00	3.10E+01	1.00E+00	1.00E+00	1.47E+01	1.47E+01	0.00E+00	1.00E+00	0.00E+00	4.00E+00	4.52E+00	3.00E+00	3.39E+00
Manganese	2.62E+02	5.33E+02	2.56E-02	6.50E+01	3.00E+00	1.00E+00	7.86E+02	1.69E+02	2.05E-02	1.00E+00	5.37E+00	6.50E+01	1.66E+00	1.78E+01	1.82E+00
Molybdenum	3.16E-01	1.58E-02	2.00E+01	8.00E-01	1.00E+00	1.00E+00	0.00E+00	2.53E-01	1.00E-03	1.00E+00	0.00E+00	1.00E+01	1.58E-01	1.00E+01	6.32E-01
Nitrate	1.12E+03	1.12E+03	6.28E+02	1.00E-02	1.00E+00	1.00E+00	1.12E+03	1.12E+03	0.00E+00	1.00E+00	0.00E+00	4.00E+00	2.51E+03	3.00E+00	1.88E+03
Selenium	5.70E-01	4.50E-01	3.92E-02	3.00E+02	5.08E-01	1.10E+00	2.73E-01	1.55E-01	6.60E-01	3.76E-01	5.34E-01	2.69E+02	1.05E+01	1.29E+02	2.02E+01
Strontium	4.07E+02	2.32E+02	1.19E+01	3.50E+01	2.50E+00	1.00E+00	1.02E+03	1.22E+03	8.00E-03	1.00E+00	3.03E-02	9.50E+00	1.13E+02	9.50E+00	4.52E+02
Sulfate	5.02E+04	5.02E+04	5.65E+03	7.50E+00	1.00E+00	1.00E+00	5.02E+04	5.02E+04	0.00E+00	1.00E+00	0.00E+00	4.00E+00	2.26E+04	3.00E+00	1.70E+04
Uranium	4.02E+01	3.84E+00	1.22E+00	4.50E+02	2.30E-02	1.00E+00	9.25E-01	5.25E-01	3.30E-02	1.00E+00	1.33E+00	2.71E+01	3.30E+01	2.71E+01	1.32E+02
Vanadium	5.20E+00	5.20E-03	1.00E+03	5.50E-03	1.00E+00	1.00E+00	0.00E+00	2.86E-02	1.23E-02	1.00E+00	0.00E+00	3.00E+03	1.56E+01	3.00E+03	6.24E+01

Toxicity Data and Benchmarks

Chemical Name	Mammals			Birds			Plant Benchmark (mg/kg)	Water Benchmark (mg/L)	Sediment Benchmark (mg/kg)
	NOAEL (mg/kg/d)	Test Species	Body Wt. (kg)	NOAEL (mg/kg/d)	Test Species	Body Wt. (kg)			
Ammonium									
Manganese	88	rat	0.35	977	J. quail	0.072	500	0.18	75
Molybdenum	0.26	mouse	0.03	3.53	chicken	1.5	2	0.08	630
Nitrate	507	guinea pig	0.86					0.24	4
Selenium	0.20	rat	0.35	0.4	mallard	1	1	177	2440
Strontium	263	rat	0.35					0.002	5
Sulfate								1.5	49
Uranium	3.07	mouse	0.028	16	black duck	1.25	5	100	
Vanadium	0.21	rat	0.26	11.4	mallard	1.17	2	0.0026	
								0.019	50

Toxicity Data and Benchmarks

Chemical Name	Mammals			Birds			Plant Benchmark (mg/kg)	Water Benchmark (mg/L)	Sediment Benchmark (mg/kg)
	NOAEL (mg/kg/d)	Test Species	Body Wt. (kg)	NOAEL (mg/kg/d)	Test Species	Body Wt. (kg)			
Ammonium									
Manganese	88	rat	0.35	977	J. quail	0.072	500	0.18	75
Molybdenum	0.26	mouse	0.03	3.53	chicken	1.5	2	0.08	630
Nitrate	507	guinea pig	0.86					0.24	4
Selenium	0.20	rat	0.35	0.4	mallard	1	1	177	2440
Strontium	263	rat	0.35					0.002	5
Sulfate								1.5	49
Uranium	3.07	mouse	0.028	16	black duck	1.25	5	100	
Vanadium	0.21	rat	0.26	11.4	mallard	1.17	2	0.0026	
								0.019	50

**Area D: Hazard Quotients Based on Maximum Concentrations
Aquatic and Benthic Organisms and Plants**

Chemical Name	Aquatic Organism HQ	Benthic Organism HQ	Upland Plant HQ	Wetland Plant HQ
Ammonium	2.78E+01	1.96E-01		
Manganese	7.10E-01	8.46E-01	5.24E-01	1.07E+00
Molybdenum	8.54E-02	1.03E-01		2.05E-01
Nitrate	1.19E+01	4.59E-01		
Selenium	5.95E+01	9.00E-02	5.70E-01	4.50E-01
Strontium	8.33E+00	4.73E+00		
Sulfate	1.29E+02			
Uranium	9.29E+02		8.04E+00	7.68E-01
Vanadium	2.74E-01	1.04E-01		2.60E+00

**Area D: Hazard Quotients Based on 95% UCL Concentrations
Aquatic and Benthic Organisms and Plants**

Chemical Name	Aquatic Organism HQ	Benthic Organism HQ	Upland Plant HQ	Wetland Plant HQ
Ammonium	6.28E+00	1.96E-01		
Manganese	3.20E-01	8.46E-01	5.24E-01	1.07E+00
Molybdenum	6.58E-02	7.90E-02		1.58E-01
Nitrate	3.55E+00	4.59E-01		
Selenium	1.96E+01	9.00E-02	5.70E-01	4.50E-01
Strontium	7.93E+00	4.73E+00		
Sulfate	5.65E+01			
Uranium	4.68E+02		8.04E+00	7.68E-01
Vanadium	2.74E-01	1.04E-01		2.60E+00

**Area D: Hazard Quotients Based on Maximum Concentrations
Sheep (*Ovis aries*)**

Chemical Name	Sheep NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Sheep Hazard Quotient
Ammonium		2.00E+00	2.50E+01	2.94E+01	1.13E+00	
Manganese	6.53E+01	3.56E+01	2.84E-01	1.57E+03	3.22E+01	4.92E-01
Molybdenum	1.67E-01	0.00E+00	1.03E-01	0.00E+00	2.05E-03	1.23E-02
Nitrate	3.97E+02	1.52E+02	1.06E+04	2.24E+03	2.59E+02	6.52E-01
Selenium	1.49E-01	7.75E-02	5.95E-01	5.46E-01	2.44E-02	1.64E-01
Strontium	1.95E+02	5.54E+01	6.25E+01	2.04E+03	4.31E+01	2.20E-01
Sulfate		6.83E+03	6.46E+04	1.00E+05	3.44E+03	
Uranium	1.96E+00	5.47E+00	1.21E+01	1.85E+00	3.88E-01	1.98E-01
Vanadium	1.53E-01	0.00E+00	2.60E-02	0.00E+00	5.20E-04	3.39E-03

**Area D: Hazard Quotients Based on 95% UCL Concentrations
Sheep (*Ovis aries*)**

Chemical Name	Sheep NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Sheep Hazard Quotient
Ammonium		2.00E+00	5.65E+00	2.94E+01	7.41E-01	
Manganese	6.53E+01	3.56E+01	1.28E-01	1.57E+03	3.22E+01	4.92E-01
Molybdenum	1.67E-01	0.00E+00	7.90E-02	0.00E+00	1.58E-03	9.48E-03
Nitrate	3.97E+02	1.52E+02	3.14E+03	2.24E+03	1.11E+02	2.78E-01
Selenium	1.49E-01	7.75E-02	1.96E-01	5.46E-01	1.64E-02	1.10E-01
Strontium	1.95E+02	5.54E+01	5.95E+01	2.04E+03	4.30E+01	2.20E-01
Sulfate		6.83E+03	2.83E+04	1.00E+05	2.71E+03	
Uranium	1.96E+00	5.47E+00	6.09E+00	1.85E+00	2.68E-01	1.37E-01
Vanadium	1.53E-01	0.00E+00	2.60E-02	0.00E+00	5.20E-04	3.39E-03

**Area D: Hazard Quotients Based on Maximum Concentrations
Deer Mouse (*Peromyscus maniculatus*)**

Chemical Name	Deer Mouse NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Deer Mouse HQ
Ammonium		1.09E-03	1.72E-02	5.47E-02	3.05E+00	
Manganese	1.03E+02	1.95E-02	1.95E-04	2.92E+00	1.23E+02	1.19E+00
Molybdenum	2.64E-01	0.00E+00	7.05E-05	0.00E+00	2.95E-03	1.12E-02
Nitrate	6.29E+02	8.33E-02	7.26E+00	4.17E+00	4.82E+02	7.66E-01
Selenium	2.35E-01	4.24E-05	4.09E-04	1.02E-03	6.14E-02	2.61E-01
Strontium	3.09E+02	3.03E-02	4.30E-02	3.78E+00	1.61E+02	5.22E-01
Sulfate		3.73E+00	4.44E+01	1.87E+02	9.83E+03	
Uranium	3.10E+00	2.99E-03	8.30E-03	3.44E-03	6.16E-01	1.99E-01
Vanadium	2.42E-01	0.00E+00	1.79E-05	0.00E+00	7.48E-04	3.09E-03

**Area D: Hazard Quotients Based on 95% UCL Concentrations
Deer Mouse (*Peromyscus maniculatus*)**

Chemical Name	Deer Mouse NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Deer Mouse HQ
Ammonium		1.09E-03	3.88E-03	5.47E-02	2.50E+00	
Manganese	1.03E+02	1.95E-02	8.80E-05	2.92E+00	1.23E+02	1.19E+00
Molybdenum	2.64E-01	0.00E+00	5.43E-05	0.00E+00	2.27E-03	8.62E-03
Nitrate	6.29E+02	8.33E-02	2.16E+00	4.17E+00	2.68E+02	4.27E-01
Selenium	2.35E-01	4.24E-05	1.35E-04	1.02E-03	4.99E-02	2.12E-01
Strontium	3.09E+02	3.03E-02	4.09E-02	3.78E+00	1.61E+02	5.22E-01
Sulfate		3.73E+00	1.94E+01	1.87E+02	8.78E+03	
Uranium	3.10E+00	2.99E-03	4.19E-03	3.44E-03	4.44E-01	1.43E-01
Vanadium	2.42E-01	0.00E+00	1.79E-05	0.00E+00	7.48E-04	3.09E-03

**Area D: Hazard Quotients Based on Maximum Concentrations
Burrowing owl (*Speotyto cunicularia*)**

Chemical Name	Burrowing Owl NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Burrowing Owl HQ
Ammonium		5.08E-03	1.41E-03	0.00E+00	4.19E-02	
Manganese	1.14E+03	9.05E-02	1.61E-05	9.28E-02	1.18E+00	1.04E-03
Molybdenum	2.24E+00	0.00E+00	5.80E-06	0.00E+00	3.74E-05	1.67E-05
Nitrate		3.87E-01	5.98E-01	0.00E+00	6.35E+00	
Selenium	2.76E-01	1.97E-04	3.37E-05	9.23E-03	6.10E-02	2.21E-01
Strontium		1.41E-01	3.54E-03	5.23E-04	9.34E-01	
Sulfate		1.73E+01	3.66E+00	0.00E+00	1.36E+02	
Uranium	1.05E+01	1.39E-02	6.83E-04	2.29E-02	2.42E-01	2.30E-02
Vanadium	7.61E+00	0.00E+00	1.47E-06	0.00E+00	9.49E-06	1.25E-06

**Area D: Hazard Quotients Based on 95% UCL Concentrations
Burrowing owl (*Speotyto cunicularia*)**

Chemical Name	Burrowing Owl NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Burrowing Owl HQ
Ammonium		5.08E-03	3.20E-04	0.00E+00	3.48E-02	
Manganese	1.14E+03	9.05E-02	7.24E-06	9.28E-02	1.18E+00	1.04E-03
Molybdenum	2.24E+00	0.00E+00	4.47E-06	0.00E+00	2.88E-05	1.29E-05
Nitrate		3.87E-01	1.78E-01	0.00E+00	3.64E+00	
Selenium	2.76E-01	1.97E-04	1.11E-05	9.23E-03	6.09E-02	2.21E-01
Strontium		1.41E-01	3.37E-03	5.23E-04	9.32E-01	
Sulfate		1.73E+01	1.60E+00	0.00E+00	1.22E+02	
Uranium	1.05E+01	1.39E-02	3.45E-04	2.29E-02	2.40E-01	2.27E-02
Vanadium	7.61E+00	0.00E+00	1.47E-06	0.00E+00	9.49E-06	1.25E-06

**Area D: Hazard Quotients Based on Maximum Concentrations
Red Fox (*Vulpes vulpes*)**

Chemical Name	Red Fox NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Mouse Intake (mg/d)	Total Dose (mg/kg/d)	Red Fox HQ
Ammonium		9.81E-02	1.93E+00	7.01E-01	0.00E+00	6.01E-01	
Manganese	7.55E+01	1.75E+00	2.19E-02	3.75E+01	1.02E+00	8.87E+00	1.18E-01
Molybdenum	1.92E-01	0.00E+00	7.92E-03	0.00E+00	0.00E+00	1.74E-03	9.07E-03
Nitrate	4.59E+02	7.47E+00	8.16E+02	5.34E+01	0.00E+00	1.93E+02	4.21E-01
Selenium	1.71E-01	3.80E-03	4.60E-02	1.30E-02	1.02E-01	3.63E-02	2.11E-01
Strontium	2.26E+02	2.72E+00	4.83E+00	4.85E+01	5.77E-03	1.23E+01	5.47E-02
Sulfate		3.35E+02	4.99E+03	2.39E+03	0.00E+00	1.70E+03	
Uranium	2.26E+00	2.68E-01	9.33E-01	4.41E-02	2.53E-01	3.30E-01	1.46E-01
Vanadium	1.77E-01	0.00E+00	2.01E-03	0.00E+00	0.00E+00	4.43E-04	2.50E-03

**Area D: Hazard Quotients Based on 95% UCL Concentrations
Red Fox (*Vulpes vulpes*)**

Chemical Name	Red Fox NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Mouse Intake (mg/d)	Total Dose (mg/kg/d)	Red Fox HQ
Ammonium		9.81E-02	4.37E-01	7.01E-01	0.00E+00	2.72E-01	
Manganese	7.55E+01	1.75E+00	9.89E-03	3.75E+01	1.02E+00	8.86E+00	1.17E-01
Molybdenum	1.92E-01	0.00E+00	6.10E-03	0.00E+00	0.00E+00	1.34E-03	6.99E-03
Nitrate	4.59E+02	7.47E+00	2.43E+02	5.34E+01	0.00E+00	6.68E+01	1.46E-01
Selenium	1.71E-01	3.80E-03	1.51E-02	1.30E-02	1.02E-01	2.95E-02	1.72E-01
Strontium	2.26E+02	2.72E+00	4.60E+00	4.85E+01	5.77E-03	1.23E+01	5.45E-02
Sulfate		3.35E+02	2.18E+03	2.39E+03	0.00E+00	1.08E+03	
Uranium	2.26E+00	2.68E-01	4.71E-01	4.41E-02	2.53E-01	2.28E-01	1.01E-01
Vanadium	1.77E-01	0.00E+00	2.01E-03	0.00E+00	0.00E+00	4.43E-04	2.50E-03

**Area D: Hazard Quotients Based on Maximum Concentrations
Muskrat (*Ondatra zibethicus*)**

Chemical Name	Muskrat NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Muskrat Hazard Quotient
Ammonium		1.07E-01	5.55E-01	1.13E+00	1.58E+00	
Manganese	8.20E+01	3.87E+00	6.30E-03	1.72E+01	1.86E+01	2.27E-01
Molybdenum	2.09E-01	2.97E-03	2.27E-03	2.53E-02	2.69E-02	1.29E-01
Nitrate	4.99E+02	8.13E+00	2.34E+02	8.64E+01	2.90E+02	5.81E-01
Selenium	1.86E-01	3.26E-03	1.32E-02	1.62E-02	2.88E-02	1.54E-01
Strontium	2.45E+02	1.68E+00	1.39E+00	1.50E+02	1.35E+02	5.49E-01
Sulfate		3.64E+02	1.43E+03	3.87E+03	5.00E+03	
Uranium	2.46E+00	2.79E-02	2.68E-01	5.79E-02	3.12E-01	1.27E-01
Vanadium	1.92E-01	3.77E-02	5.77E-04	2.21E-03	3.57E-02	1.86E-01

**Area D: Hazard Quotients Based on 95% UCL Concentrations
Muskrat (*Ondatra zibethicus*)**

Chemical Name	Muskrat NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Muskrat Hazard Quotient
Ammonium		1.07E-01	1.25E-01	1.13E+00	1.20E+00	
Manganese	8.20E+01	3.87E+00	2.84E-03	1.30E+01	1.49E+01	1.82E-01
Molybdenum	2.09E-01	2.29E-03	1.75E-03	1.95E-02	2.08E-02	9.93E-02
Nitrate	4.99E+02	8.13E+00	6.97E+01	8.64E+01	1.45E+02	2.90E-01
Selenium	1.86E-01	3.26E-03	4.35E-03	1.20E-02	1.72E-02	9.25E-02
Strontium	2.45E+02	1.68E+00	1.32E+00	9.45E+01	8.59E+01	3.50E-01
Sulfate		3.64E+02	6.27E+02	3.87E+03	4.29E+03	
Uranium	2.46E+00	2.79E-02	1.35E-01	4.05E-02	1.79E-01	7.29E-02
Vanadium	1.92E-01	3.77E-02	5.77E-04	2.21E-03	3.57E-02	1.86E-01

**Area D: Hazard Quotients Based on Maximum Concentrations
Raccoon (*Procyon lotor*)**

Chemical Name	Raccoon NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Invertebrate Intake (mg/d)	Fish Intake (mg/d)	Total Dose (mg/kg/d)	Raccoon Hazard Quotient
Ammonium		3.99E-01	2.39E+00	1.70E+00	2.89E+00	4.33E-01	1.36E+00	
Manganese	7.44E+01	1.45E+01	2.71E-02	2.58E+01	5.33E-01	1.17E-01	7.13E+00	9.58E-02
Molybdenum	1.90E-01	1.11E-02	9.78E-03	3.79E-02	2.96E-02	2.37E-02	1.95E-02	1.03E-01
Nitrate	4.52E+02	3.04E+01	1.01E+03	1.29E+02	1.22E+03	1.83E+02	4.48E+02	9.90E-01
Selenium	1.69E-01	1.22E-02	5.68E-02	2.43E-02	4.62E+00	1.77E+00	1.13E+00	6.69E+00
Strontium	2.22E+02	6.30E+00	5.96E+00	2.24E+02	1.72E+01	1.37E+01	4.66E+01	2.09E-01
Sulfate		1.36E+03	6.17E+03	5.80E+03	7.47E+03	1.12E+03	3.82E+03	
Uranium	2.23E+00	1.04E-01	1.15E+00	8.67E-02	9.45E+00	7.56E+00	3.20E+00	1.43E+00
Vanadium	1.74E-01	1.41E-01	2.48E-03	3.31E-03	2.25E+00	1.80E+00	7.32E-01	4.20E+00

**Area D: Hazard Quotients Based on 95% UCL Concentrations
Raccoon (*Procyon lotor*)**

Chemical Name	Raccoon NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Invertebrate Intake (mg/d)	Fish Intake (mg/d)	Total Dose (mg/kg/d)	Raccoon Hazard Quotient
Ammonium		3.99E-01	5.39E-01	1.70E+00	6.53E-01	9.79E-02	5.90E-01	
Manganese	7.44E+01	1.45E+01	1.22E-02	1.95E+01	2.40E-01	5.27E-02	5.98E+00	8.03E-02
Molybdenum	1.90E-01	8.58E-03	7.54E-03	2.92E-02	2.28E-02	1.83E-02	1.51E-02	7.94E-02
Nitrate	4.52E+02	3.04E+01	3.00E+02	1.29E+02	3.63E+02	5.44E+01	1.53E+02	3.38E-01
Selenium	1.69E-01	1.22E-02	1.87E-02	1.79E-02	1.52E+00	5.84E-01	3.76E-01	2.22E+00
Strontium	2.22E+02	6.30E+00	5.68E+00	1.41E+02	1.63E+01	1.31E+01	3.19E+01	1.43E-01
Sulfate		1.36E+03	2.70E+03	5.80E+03	3.26E+03	4.90E+02	2.37E+03	
Uranium	2.23E+00	1.04E-01	5.81E-01	6.07E-02	4.77E+00	3.81E+00	1.63E+00	7.29E-01
Vanadium	1.74E-01	1.41E-01	2.48E-03	3.31E-03	2.25E+00	1.80E+00	7.32E-01	4.20E+00

**Area D: Hazard Quotients Based on Maximum Concentrations
Mallard (*Anas platyrhynchos*)**

Chemical Name	Mallard NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Invertebrate Intake (mg/d)	Total Dose (mg/kg/d)	Mallard Hazard Quotient
Ammonium		2.87E-02	3.21E-01	7.84E-01	1.18E-01	1.10E+00	
Manganese	1.70E+03	1.04E+00	3.65E-03	1.19E+01	2.19E-02	1.14E+01	6.74E-03
Molybdenum	3.34E+00	8.01E-04	1.32E-03	1.75E-02	1.21E-03	1.84E-02	5.50E-03
Nitrate		2.19E+00	1.36E+02	5.97E+01	5.00E+01	2.18E+02	
Selenium	4.10E-01	8.80E-04	7.64E-03	1.12E-02	1.90E-01	1.85E-01	4.50E-01
Strontium		4.54E-01	8.02E-01	1.03E+02	7.03E-01	9.29E+01	
Sulfate		9.81E+01	8.30E+02	2.68E+03	3.06E+02	3.45E+03	
Uranium	1.57E+01	7.51E-03	1.55E-01	4.00E-02	3.88E-01	5.20E-01	3.32E-02
Vanadium	1.13E+01	1.02E-02	3.34E-04	1.52E-03	9.24E-02	9.21E-02	8.13E-03

**Area D: Hazard Quotients Based on 95% UCL Concentrations
Mallard (*Anas platyrhynchos*)**

Chemical Name	Mallard NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Invertebrate Intake (mg/d)	Total Dose (mg/kg/d)	Mallard Hazard Quotient
Ammonium		2.87E-02	7.25E-02	7.84E-01	2.68E-02	8.04E-01	
Manganese	1.70E+03	1.04E+00	1.64E-03	9.01E+00	9.86E-03	8.87E+00	5.23E-03
Molybdenum	3.34E+00	6.18E-04	1.01E-03	1.35E-02	9.36E-04	1.41E-02	4.24E-03
Nitrate		2.19E+00	4.03E+01	5.97E+01	1.49E+01	1.03E+02	
Selenium	4.10E-01	8.80E-04	2.52E-03	8.26E-03	6.25E-02	6.54E-02	1.59E-01
Strontium		4.54E-01	7.64E-01	6.53E+01	6.70E-01	5.92E+01	
Sulfate		9.81E+01	3.63E+02	2.68E+03	1.34E+02	2.88E+03	
Uranium	1.57E+01	7.51E-03	7.82E-02	2.80E-02	1.96E-01	2.73E-01	1.74E-02
Vanadium	1.13E+01	1.02E-02	3.34E-04	1.52E-03	9.24E-02	9.21E-02	8.13E-03

**Area D: Hazard Quotients Based on Maximum Concentrations
Killdeer (*Charadrius vociferus*)**

Chemical Name	Killdeer NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Invertebrate Intake (mg/d)	Total Dose (mg/kg/d)	Killdeer Hazard Quotient
Ammonium		2.47E-02	6.16E-02	1.86E-01	2.82E+00	
Manganese	1.04E+03	8.94E-01	7.00E-04	3.44E-02	9.62E+00	9.28E-03
Molybdenum	2.04E+00	6.88E-04	2.53E-04	1.91E-03	2.95E-02	1.45E-02
Nitrate		1.88E+00	2.60E+01	7.87E+01	1.10E+03	
Selenium	2.51E-01	7.55E-04	1.47E-03	2.98E-01	3.11E+00	1.24E+01
Strontium		3.89E-01	1.54E-01	1.11E+00	1.71E+01	
Sulfate		8.42E+01	1.59E+02	4.82E+02	7.51E+03	
Uranium	9.59E+00	6.44E-03	2.98E-02	6.10E-01	6.69E+00	6.97E-01
Vanadium	6.92E+00	8.72E-03	6.41E-05	1.45E-01	1.60E+00	2.30E-01

**Area D: Hazard Quotients Based on 95% UCL Concentrations
Killdeer (*Charadrius vociferus*)**

Chemical Name	Killdeer NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Invertebrate Intake (mg/d)	Total Dose (mg/kg/d)	Killdeer Hazard Quotient
Ammonium		2.47E-02	1.39E-02	4.21E-02	8.35E-01	
Manganese	1.04E+03	8.94E-01	3.16E-04	1.55E-02	9.42E+00	9.09E-03
Molybdenum	2.04E+00	5.30E-04	1.95E-04	1.47E-03	2.27E-02	1.11E-02
Nitrate		1.88E+00	7.74E+00	2.34E+01	3.42E+02	
Selenium	2.51E-01	7.55E-04	4.83E-04	9.82E-02	1.03E+00	4.11E+00
Strontium		3.89E-01	1.47E-01	1.05E+00	1.64E+01	
Sulfate		8.42E+01	6.96E+01	2.11E+02	3.77E+03	
Uranium	9.59E+00	6.44E-03	1.50E-02	3.08E-01	3.41E+00	3.55E-01
Vanadium	6.92E+00	8.72E-03	6.41E-05	1.45E-01	1.60E+00	2.30E-01

**Area D: Hazard Quotients Based on Maximum Concentrations
Great Blue Heron (*Ardea herodias*)**

Chemical Name	Great Blue Heron NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Invertebrate Intake (mg/d)	Fish Intake (mg/d)	Total Dose (mg/kg/d)	Great Blue Heron HQ
Ammonium		2.83E-02	5.05E-01	9.63E-01	7.22E-01	9.95E-01	
Manganese	1.94E+03	1.03E+00	5.73E-03	1.78E-01	1.95E-01	6.30E-01	3.25E-04
Molybdenum	3.82E+00	7.90E-04	2.07E-03	9.87E-03	3.95E-02	2.34E-02	6.13E-03
Nitrate		2.16E+00	2.13E+02	4.07E+02	3.05E+02	4.16E+02	
Selenium	4.70E-01	8.67E-04	1.20E-02	1.54E+00	2.96E+00	2.02E+00	4.31E+00
Strontium		4.47E-01	1.26E+00	5.72E+00	2.29E+01	1.36E+01	
Sulfate		9.67E+01	1.30E+03	2.49E+03	1.87E+03	2.58E+03	
Uranium	1.80E+01	7.40E-03	2.44E-01	3.15E+00	1.26E+01	7.18E+00	4.00E-01
Vanadium	1.30E+01	1.00E-02	5.25E-04	7.51E-01	3.00E+00	1.69E+00	1.30E-01

**Area D: Hazard Quotients Based on 95% UCL Concentrations
Great Blue Heron (*Ardea herodias*)**

Chemical Name	Great Blue Heron NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Invertebrate Intake (mg/d)	Fish Intake (mg/d)	Total Dose (mg/kg/d)	Great Blue Heron HQ
Ammonium		2.83E-02	1.14E-01	2.18E-01	1.63E-01	2.35E-01	
Manganese	1.94E+03	1.03E+00	2.58E-03	8.01E-02	8.78E-02	5.37E-01	2.77E-04
Molybdenum	3.82E+00	6.09E-04	1.59E-03	7.61E-03	3.04E-02	1.81E-02	4.72E-03
Nitrate		2.16E+00	6.34E+01	1.21E+02	9.07E+01	1.24E+02	
Selenium	4.70E-01	8.67E-04	3.96E-03	5.08E-01	9.74E-01	6.67E-01	1.42E+00
Strontium		4.47E-01	1.20E+00	5.44E+00	2.18E+01	1.29E+01	
Sulfate		9.67E+01	5.70E+02	1.09E+03	8.16E+02	1.15E+03	
Uranium	1.80E+01	7.40E-03	1.23E-01	1.59E+00	6.36E+00	3.62E+00	2.02E-01
Vanadium	1.30E+01	1.00E-02	5.25E-04	7.51E-01	3.00E+00	1.69E+00	1.30E-01

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Area E

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Area E: Media Concentrations Based on Maximum Measured Values

Chemical Name	Soil Conc. (mg/kg)	Sediment Conc. (mg/kg)	Water Conc. (mg/L)	K _d	Soil-to-Plant Uptake Parameters		Uplnd Plant Conc. (mg/kgdw)	Wld Plant Conc. (mg/kgdw)	Soil-to-Mammal Uptake Parameters		Mammal Conc. (mg/kgdw)	Invert. BCF	Invert. Conc. (mg/kgdw)	Fish BCF	Fish Conc. (mg/kgdw)
					B ₀	B ₁			B ₀	B ₁					
Ammonium		1.17E+01	2.05E+00	3.10E+01	1.00E+00	1.00E+00	0.00E+00	1.17E+01	0.00E+00	1.00E+00	0.00E+00	4.00E+00	8.20E+00	3.00E+00	6.15E+00
Molybdenum		2.70E+00	1.35E-01	2.00E+01	8.00E-01	1.00E+00	0.00E+00	2.16E+00	1.00E-03	1.00E+00	0.00E+00	1.00E+01	1.35E+00	1.00E+01	5.40E+00
Nitrate		1.30E+03	8.06E+03	1.00E-02	1.00E+00	1.00E+00	0.00E+00	1.30E+03	0.00E+00	1.00E+00	0.00E+00	4.00E+00	3.22E+04	3.00E+00	2.42E+04
Selenium		4.40E-01	7.01E+00	3.00E+02	5.08E-01	1.10E+00	0.00E+00	2.05E-01	6.60E-01	3.76E-01	0.00E+00	2.69E+02	1.89E+03	1.29E+02	3.62E+03
Strontium		1.84E+02	1.61E+01	3.50E+01	2.50E+00	1.00E+00	0.00E+00	4.60E+02	8.00E-03	1.00E+00	0.00E+00	9.50E+00	1.53E+02	9.50E+00	6.12E+02
Sulfate		1.96E+04	7.28E+04	7.50E+00	1.00E+00	1.00E+00	0.00E+00	1.96E+04	0.00E+00	1.00E+00	0.00E+00	4.00E+00	2.91E+05	3.00E+00	2.18E+05
Uranium		8.60E-01	6.30E-01	4.50E+02	2.30E-02	1.00E+00	0.00E+00	1.98E-02	3.30E-02	1.00E+00	0.00E+00	2.71E+01	1.71E+01	2.71E+01	6.83E+01

Area E: Media Concentrations Based on 95% UCL Values

Chemical Name	Soil Conc. (mg/kg)	Sediment Conc. (mg/kg)	Water Conc. (mg/L)	K _d	Soil-to-Plant Uptake Parameters		Uplnd Plant Conc. (mg/kgdw)	Wld Plant Conc. (mg/kgdw)	Soil-to-Mammal Uptake Parameters		Mammal Conc. (mg/kgdw)	Invert. BCF	Invert. Conc. (mg/kgdw)	Fish BCF	Fish Conc. (mg/kgdw)
					B ₀	B ₁			B ₀	B ₁					
Ammonium		1.17E+01	8.39E-01	3.10E+01	1.00E+00	1.00E+00	0.00E+00	1.17E+01	0.00E+00	1.00E+00	0.00E+00	4.00E+00	3.36E+00	3.00E+00	2.52E+00
Molybdenum		2.40E+00	1.20E-01	2.00E+01	8.00E-01	1.00E+00	0.00E+00	1.92E+00	1.00E-03	1.00E+00	0.00E+00	1.00E+01	1.20E+00	1.00E+01	4.79E+00
Nitrate		1.30E+03	4.90E+03	1.00E-02	1.00E+00	1.00E+00	0.00E+00	1.30E+03	0.00E+00	1.00E+00	0.00E+00	4.00E+00	1.96E+04	3.00E+00	1.47E+04
Selenium		4.40E-01	4.02E+00	3.00E+02	5.08E-01	1.10E+00	0.00E+00	2.05E-01	6.60E-01	3.76E-01	0.00E+00	2.69E+02	1.08E+03	1.29E+02	2.07E+03
Strontium		1.84E+02	1.24E+01	3.50E+01	2.50E+00	1.00E+00	0.00E+00	4.60E+02	8.00E-03	1.00E+00	0.00E+00	9.50E+00	1.18E+02	9.50E+00	4.71E+02
Sulfate		1.96E+04	3.56E+04	7.50E+00	1.00E+00	1.00E+00	0.00E+00	1.96E+04	0.00E+00	1.00E+00	0.00E+00	4.00E+00	1.42E+05	3.00E+00	1.07E+05
Uranium		8.60E-01	3.02E-01	4.50E+02	2.30E-02	1.00E+00	0.00E+00	1.98E-02	3.30E-02	1.00E+00	0.00E+00	2.71E+01	6.18E+00	2.71E+01	3.27E+01

Toxicity Data and Benchmarks

Chemical Name	Mammals			Birds			Plant Benchmark (mg/kg)	Water Benchmark (mg/L)	Sediment Benchmark (mg/kg)
	NOAEL (mg/kg/d)	Test Species	Body Wt. (kg)	NOAEL (mg/kg/d)	Test Species	Body Wt. (kg)			
Ammonium	0.26	mouse	0.03	3.53	chicken	1.5	2	0.18	75
Molybdenum	507	guinea pig	0.86					0.24	4
Nitrate	0.20	rat	0.35	0.4	mallard	1	1	177	2440
Selenium	263	rat	0.35					0.002	5
Strontium Sulfate	3.07	mouse	0.028	16	black duck	1.25	5	1.5	49
Uranium								100	
								0.0026	

Toxicity Data and Benchmarks

Chemical Name	Mammals			Birds			Plant Benchmark (mg/kg)	Water Benchmark (mg/L)	Sediment Benchmark (mg/kg)
	NOAEL (mg/kg/d)	Test Species	Body Wt. (kg)	NOAEL (mg/kg/d)	Test Species	Body Wt. (kg)			
Ammonium	0.26	mouse	0.03	3.53	chicken	1.5	2	0.18	75
Molybdenum	507	guinea pig	0.86					0.24	4
Nitrate	0.20	rat	0.35	0.4	mallard	1	1	177	2440
Selenium	263	rat	0.35					0.002	5
Strontium Sulfate	3.07	mouse	0.028	16	black duck	1.25	5	1.5	49
Uranium								100	
								0.0026	

**Area E: Hazard Quotients Based on Maximum Concentrations
Aquatic and Benthic Organisms and Plants**

Chemical Name	Aquatic Organism HQ	Benthic Organism HQ	Upland Plant HQ	Wetland Plant HQ
Ammonium	1.14E+01	1.56E-01		
Molybdenum	5.63E-01	6.75E-01		1.35E+00
Nitrate	4.55E+01	5.33E-01		
Selenium	3.51E+03	8.80E-02		4.40E-01
Strontium Sulfate	1.07E+01	3.76E+00		
Uranium	2.42E+02			1.72E-01

**Area E: Hazard Quotients Based on 95% UCL Concentrations
Aquatic and Benthic Organisms and Plants**

Chemical Name	Aquatic Organism HQ	Benthic Organism HQ	Upland Plant HQ	Wetland Plant HQ
Ammonium	4.66E+00	1.56E-01		
Molybdenum	4.99E-01	5.99E-01		1.20E+00
Nitrate	2.77E+01	5.33E-01		
Selenium	2.01E+03	8.80E-02		4.40E-01
Strontium Sulfate	8.27E+00			
Uranium	3.56E+02			1.72E-01

**Area E: Hazard Quotients Based on Maximum Concentrations
Sheep (*Ovis aries*)**

Chemical Name	Sheep NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Sheep Hazard Quotient
Ammonium		0.00E+00	1.03E+01	0.00E+00	2.05E-01	
Molybdenum	1.67E-01	0.00E+00	6.75E-01	0.00E+00	1.35E-02	8.10E-02
Nitrate	3.97E+02	0.00E+00	4.03E+04	0.00E+00	8.06E+02	2.03E+00
Selenium	1.49E-01	0.00E+00	3.51E+01	0.00E+00	7.01E-01	4.72E+00
Strontium	1.95E+02	0.00E+00	8.05E+01	0.00E+00	1.61E+00	8.24E-03
Sulfate		0.00E+00	3.64E+05	0.00E+00	7.28E+03	
Uranium	1.96E+00	0.00E+00	3.15E+00	0.00E+00	6.30E-02	3.22E-02

**Area E: Hazard Quotients Based on 95% UCL Concentrations
Sheep (*Ovis aries*)**

Chemical Name	Sheep NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Sheep Hazard Quotient
Ammonium		0.00E+00	4.20E+00	0.00E+00	8.39E-02	
Molybdenum	1.67E-01	0.00E+00	5.99E-01	0.00E+00	1.20E-02	7.19E-02
Nitrate	3.97E+02	0.00E+00	2.45E+04	0.00E+00	4.90E+02	1.23E+00
Selenium	1.49E-01	0.00E+00	2.01E+01	0.00E+00	4.02E-01	2.71E+00
Strontium	1.95E+02	0.00E+00	6.20E+01	0.00E+00	1.24E+00	6.35E-03
Sulfate		0.00E+00	1.78E+05	0.00E+00	3.56E+03	
Uranium	1.96E+00	0.00E+00	1.51E+00	0.00E+00	3.02E-02	1.54E-02

**Area E: Hazard Quotients Based on Maximum Concentrations
Deer Mouse (*Peromyscus maniculatus*)**

Chemical Name	Deer Mouse NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Deer Mouse HQ
Ammonium		0.00E+00	7.05E-03	0.00E+00	2.95E-01	
Molybdenum	2.64E-01	0.00E+00	4.64E-04	0.00E+00	1.94E-02	7.37E-02
Nitrate	6.29E+02	0.00E+00	2.77E+01	0.00E+00	1.16E+03	1.84E+00
Selenium	2.35E-01	0.00E+00	2.41E-02	0.00E+00	1.01E+00	4.29E+00
Strontium	3.09E+02	0.00E+00	5.53E-02	0.00E+00	2.32E+00	7.49E-03
Sulfate		0.00E+00	2.50E+02	0.00E+00	1.05E+04	
Uranium	3.10E+00	0.00E+00	2.17E-03	0.00E+00	9.06E-02	2.92E-02

**Area E: Hazard Quotients Based on 95% UCL Concentrations
Deer Mouse (*Peromyscus maniculatus*)**

Chemical Name	Deer Mouse NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Deer Mouse HQ
Ammonium		0.00E+00	2.88E-03	0.00E+00	1.21E-01	
Molybdenum	2.64E-01	0.00E+00	4.12E-04	0.00E+00	1.72E-02	6.54E-02
Nitrate	6.29E+02	0.00E+00	1.69E+01	0.00E+00	7.05E+02	1.12E+00
Selenium	2.35E-01	0.00E+00	1.38E-02	0.00E+00	5.78E-01	2.46E+00
Strontium	3.09E+02	0.00E+00	4.26E-02	0.00E+00	1.78E+00	5.77E-03
Sulfate		0.00E+00	1.22E+02	0.00E+00	5.11E+03	
Uranium	3.10E+00	0.00E+00	1.04E-03	0.00E+00	4.34E-02	1.40E-02

**Area E: Hazard Quotients Based on Maximum Concentrations
Burrowing owl (*Speotyto cunicularia*)**

Chemical Name	Burrowing Owl NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Burrowing Owl HQ
Ammonium		0.00E+00	5.80E-04	0.00E+00	3.74E-03	
Molybdenum	2.24E+00	0.00E+00	3.82E-05	0.00E+00	2.46E-04	1.10E-04
Nitrate		0.00E+00	2.28E+00	0.00E+00	1.47E+01	
Selenium	2.76E-01	0.00E+00	1.98E-03	0.00E+00	1.28E-02	4.64E-02
Strontium		0.00E+00	4.55E-03	0.00E+00	2.94E-02	
Sulfate		0.00E+00	2.06E+01	0.00E+00	1.33E+02	
Uranium	1.05E+01	0.00E+00	1.78E-04	0.00E+00	1.15E-03	1.09E-04

**Area E: Hazard Quotients Based on 95% UCL Concentrations
Burrowing owl (*Speotyto cunicularia*)**

Chemical Name	Burrowing Owl NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Burrowing Owl HQ
Ammonium		0.00E+00	2.37E-04	0.00E+00	1.53E-03	
Molybdenum	2.24E+00	0.00E+00	3.39E-05	0.00E+00	2.19E-04	9.75E-05
Nitrate		0.00E+00	1.39E+00	0.00E+00	8.95E+00	
Selenium	2.76E-01	0.00E+00	1.14E-03	0.00E+00	7.34E-03	2.66E-02
Strontium		0.00E+00	3.51E-03	0.00E+00	2.26E-02	
Sulfate		0.00E+00	1.01E+01	0.00E+00	6.49E+01	
Uranium	1.05E+01	0.00E+00	8.54E-05	0.00E+00	5.51E-04	5.23E-05

**Area E: Hazard Quotients Based on Maximum Concentrations
Red Fox (*Vulpes vulpes*)**

Chemical Name	Red Fox NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Mouse Intake (mg/d)	Total Dose (mg/kg/d)	Red Fox HQ
Ammonium		0.00E+00	7.92E-01	0.00E+00	0.00E+00	1.74E-01	
Molybdenum	1.92E-01	0.00E+00	5.22E-02	0.00E+00	0.00E+00	1.15E-02	5.97E-02
Nitrate	4.59E+02	0.00E+00	3.11E+03	0.00E+00	0.00E+00	6.86E+02	1.49E+00
Selenium	1.71E-01	0.00E+00	2.71E+00	0.00E+00	0.00E+00	5.97E-01	3.48E+00
Strontium	2.26E+02	0.00E+00	6.22E+00	0.00E+00	0.00E+00	1.37E+00	6.08E-03
Sulfate		0.00E+00	2.81E+04	0.00E+00	0.00E+00	6.20E+03	
Uranium	2.26E+00	0.00E+00	2.43E-01	0.00E+00	0.00E+00	5.36E-02	2.37E-02

**Area E: Hazard Quotients Based on 95% UCL Concentrations
Red Fox (*Vulpes vulpes*)**

Chemical Name	Red Fox NOAEL	Soil Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Mouse Intake (mg/d)	Total Dose (mg/kg/d)	Red Fox HQ
Ammonium		0.00E+00	3.24E-01	0.00E+00	0.00E+00	7.14E-02	
Molybdenum	1.92E-01	0.00E+00	4.63E-02	0.00E+00	0.00E+00	1.02E-02	5.30E-02
Nitrate	4.59E+02	0.00E+00	1.89E+03	0.00E+00	0.00E+00	4.17E+02	9.10E-01
Selenium	1.71E-01	0.00E+00	1.55E+00	0.00E+00	0.00E+00	3.42E-01	1.99E+00
Strontium	2.26E+02	0.00E+00	4.79E+00	0.00E+00	0.00E+00	1.06E+00	4.68E-03
Sulfate		0.00E+00	1.37E+04	0.00E+00	0.00E+00	3.03E+03	
Uranium	2.26E+00	0.00E+00	1.17E-01	0.00E+00	0.00E+00	2.57E-02	1.14E-02

**Area E: Hazard Quotients Based on Maximum Concentrations
Muskrat (*Ondatra zibethicus*)**

Chemical Name	Muskrat NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Muskrat Hazard Quotient
Ammonium		8.49E-02	2.27E-01	9.03E-01	1.07E+00	
Molybdenum	2.09E-01	1.96E-02	1.50E-02	1.67E-01	1.77E-01	8.48E-01
Nitrate	4.99E+02	9.43E+00	8.94E+02	1.00E+02	8.85E+02	1.77E+00
Selenium	1.86E-01	3.19E-03	7.78E-01	1.58E-02	7.02E-01	3.77E+00
Strontium	2.45E+02	1.33E+00	1.79E+00	3.55E+01	3.40E+01	1.39E-01
Sulfate		1.42E+02	8.08E+03	1.51E+03	8.57E+03	
Uranium	2.46E+00	6.24E-03	6.99E-02	1.53E-03	6.84E-02	2.78E-02

**Area E: Hazard Quotients Based on 95% UCL Concentrations
Muskrat (*Ondatra zibethicus*)**

Chemical Name	Muskrat NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Muskrat Hazard Quotient
Ammonium		8.49E-02	9.31E-02	9.03E-01	9.52E-01	
Molybdenum	2.09E-01	1.74E-02	1.33E-02	1.48E-01	1.57E-01	7.53E-01
Nitrate	4.99E+02	9.43E+00	5.44E+02	1.00E+02	5.76E+02	1.16E+00
Selenium	1.86E-01	3.19E-03	4.46E-01	1.58E-02	4.10E-01	2.20E+00
Strontium	2.45E+02	1.33E+00	1.38E+00	3.55E+01	3.37E+01	1.37E-01
Sulfate		1.42E+02	3.94E+03	1.51E+03	4.93E+03	
Uranium	2.46E+00	6.24E-03	3.35E-02	1.53E-03	3.64E-02	1.48E-02

**Area E: Hazard Quotients Based on Maximum Concentrations
Raccoon (*Procyon lotor*)**

Chemical Name	Raccoon NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Invertebrate Intake (mg/d)	Fish Intake (mg/d)	Total Dose (mg/kg/d)	Raccoon Hazard Quotient
Ammonium		3.18E-01	9.78E-01	1.35E+00	1.18E+00	1.78E-01	6.99E-01	
Molybdenum	1.90E-01	7.33E-02	6.44E-02	2.50E-01	1.95E-01	1.56E-01	1.29E-01	6.78E-01
Nitrate	4.52E+02	3.53E+01	3.85E+03	1.50E+02	4.66E+03	6.99E+02	1.64E+03	3.61E+00
Selenium	1.69E-01	1.19E-02	3.34E+00	2.37E-02	2.72E+02	1.05E+02	6.63E+01	3.92E+02
Strontium	2.22E+02	5.00E+00	7.68E+00	5.32E+01	2.21E+01	1.77E+01	1.84E+01	8.27E-02
Sulfate		5.32E+02	3.47E+04	2.27E+03	4.21E+04	6.31E+03	1.50E+04	
Uranium	2.23E+00	2.34E-02	3.01E-01	2.29E-03	2.47E+00	1.97E+00	8.30E-01	3.72E-01

**Area E: Hazard Quotients Based on 95% UCL Concentrations
Raccoon (*Procyon lotor*)**

Chemical Name	Raccoon NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Invertebrate Intake (mg/d)	Fish Intake (mg/d)	Total Dose (mg/kg/d)	Raccoon Hazard Quotient
Ammonium		3.18E-01	4.00E-01	1.35E+00	4.85E-01	7.27E-02	4.58E-01	
Molybdenum	1.90E-01	6.51E-02	5.72E-02	2.22E-01	1.73E-01	1.38E-01	1.14E-01	6.02E-01
Nitrate	4.52E+02	3.53E+01	2.34E+03	1.50E+02	2.83E+03	4.25E+02	1.01E+03	2.23E+00
Selenium	1.69E-01	1.19E-02	1.92E+00	2.37E-02	1.56E+02	5.99E+01	3.80E+01	2.25E+02
Strontium	2.22E+02	5.00E+00	5.92E+00	5.32E+01	1.70E+01	1.36E+01	1.65E+01	7.42E-02
Sulfate		5.32E+02	1.70E+04	2.27E+03	2.05E+04	3.08E+03	7.56E+03	
Uranium	2.23E+00	2.34E-02	1.44E-01	2.29E-03	1.18E+00	9.46E-01	4.00E-01	1.79E-01

**Area E: Hazard Quotients Based on Maximum Concentrations
Mallard (*Anas platyrhynchos*)**

Chemical Name	Mallard NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Invertebrate Intake (mg/d)	Total Dose (mg/kg/d)	Mallard Hazard Quotient
Ammonium		2.29E-02	1.32E-01	6.24E-01	4.86E-02	7.29E-01	
Molybdenum	3.34E+00	5.28E-03	8.67E-03	1.15E-01	8.00E-03	1.21E-01	3.62E-02
Nitrate		2.54E+00	5.17E+02	6.93E+01	1.91E+02	6.88E+02	
Selenium	4.10E-01	8.60E-04	4.50E-01	1.09E-02	1.12E+01	1.03E+01	2.50E+01
Strontium		3.60E-01	1.03E+00	2.45E+01	9.06E-01	2.37E+01	
Sulfate		3.83E+01	4.67E+03	1.04E+03	1.72E+03	6.60E+03	
Uranium	1.57E+01	1.68E-03	4.04E-02	1.05E-03	1.01E-01	1.27E-01	8.11E-03

**Area E: Hazard Quotients Based on 95% UCL Concentrations
Mallard (*Anas platyrhynchos*)**

Chemical Name	Mallard NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Plant Intake (mg/d)	Invertebrate Intake (mg/d)	Total Dose (mg/kg/d)	Mallard Hazard Quotient
Ammonium		2.29E-02	5.39E-02	6.24E-01	1.99E-02	6.35E-01	
Molybdenum	3.34E+00	4.68E-03	7.69E-03	1.02E-01	7.10E-03	1.07E-01	3.21E-02
Nitrate		2.54E+00	3.15E+02	6.93E+01	1.16E+02	4.43E+02	
Selenium	4.10E-01	8.60E-04	2.58E-01	1.09E-02	6.41E+00	5.89E+00	1.44E+01
Strontium		3.60E-01	7.96E-01	2.45E+01	6.98E-01	2.33E+01	
Sulfate		3.83E+01	2.28E+03	1.04E+03	8.42E+02	3.71E+03	
Uranium	1.57E+01	1.68E-03	1.94E-02	1.05E-03	4.85E-02	6.23E-02	3.97E-03

**Area E: Hazard Quotients Based on Maximum Concentrations
Killdeer (*Charadrius vociferus*)**

Chemical Name	Killdeer NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Invertebrate Intake (mg/d)	Total Dose (mg/kg/d)	Killdeer Hazard Quotient
Ammonium		1.96E-02	2.53E-02	7.64E-02	1.26E+00	
Molybdenum	2.04E+00	4.53E-03	1.66E-03	1.26E-02	1.94E-01	9.53E-02
Nitrate		2.18E+00	9.93E+01	3.00E+02	4.16E+03	
Selenium	2.51E-01	7.38E-04	8.64E-02	1.76E+01	1.83E+02	7.29E+02
Strontium		3.09E-01	1.98E-01	1.43E+00	2.00E+01	
Sulfate		3.29E+01	8.97E+02	2.71E+03	3.77E+04	
Uranium	9.59E+00	1.44E-03	7.76E-03	1.59E-01	1.74E+00	1.82E-01

**Area E: Hazard Quotients Based on 95% UCL Concentrations
Killdeer (*Charadrius vociferus*)**

Chemical Name	Killdeer NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Invertebrate Intake (mg/d)	Total Dose (mg/kg/d)	Killdeer Hazard Quotient
Ammonium		1.96E-02	1.03E-02	3.13E-02	6.34E-01	
Molybdenum	2.04E+00	4.02E-03	1.48E-03	1.12E-02	1.72E-01	8.45E-02
Nitrate		2.18E+00	6.04E+01	1.83E+02	2.54E+03	
Selenium	2.51E-01	7.38E-04	4.95E-02	1.01E+01	1.05E+02	4.18E+02
Strontium		3.09E-01	1.53E-01	1.10E+00	1.61E+01	
Sulfate		3.29E+01	4.38E+02	1.33E+03	1.86E+04	
Uranium	9.59E+00	1.44E-03	3.72E-03	7.63E-02	8.43E-01	8.79E-02

Area E: Hazard Quotients Based on Maximum Concentrations

Great Blue Heron (*Ardea herodias*)

Chemical Name	Great Blue Heron NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Invertebrate Intake (mg/d)	Fish Intake (mg/d)	Total Dose (mg/kg/d)	Great Blue Heron HQ
Ammonium		2.25E-02	2.07E-01	3.95E-01	2.96E-01	4.13E-01	
Molybdenum	3.82E+00	5.20E-03	1.36E-02	6.50E-02	2.60E-01	1.54E-01	4.04E-02
Nitrate		2.50E+00	8.14E+02	1.55E+03	1.16E+03	1.58E+03	
Selenium	4.70E-01	8.47E-04	7.08E-01	9.08E+01	1.74E+02	1.19E+02	2.54E+02
Strontium		3.54E-01	1.63E+00	7.36E+00	2.95E+01	1.74E+01	
Sulfate		3.77E+01	7.35E+03	1.40E+04	1.05E+04	1.43E+04	
Uranium	1.80E+01	1.66E-03	6.36E-02	8.22E-01	3.29E+00	1.87E+00	1.04E-01

Area E: Hazard Quotients Based on 95% UCL Concentrations

Great Blue Heron (*Ardea herodias*)

Chemical Name	Great Blue Heron NOAEL	Sediment Intake (mg/d)	Water Intake (mg/d)	Invertebrate Intake (mg/d)	Fish Intake (mg/d)	Total Dose (mg/kg/d)	Great Blue Heron HQ
Ammonium		2.25E-02	8.47E-02	1.62E-01	1.21E-01	1.75E-01	
Molybdenum	3.82E+00	4.61E-03	1.21E-02	5.77E-02	2.31E-01	1.37E-01	3.58E-02
Nitrate		2.50E+00	4.95E+02	9.44E+02	7.08E+02	9.65E+02	
Selenium	4.70E-01	8.47E-04	4.06E-01	5.21E+01	9.99E+01	6.83E+01	1.46E+02
Strontium		3.54E-01	1.25E+00	5.67E+00	2.27E+01	1.34E+01	
Sulfate		3.77E+01	3.59E+03	6.85E+03	5.14E+03	7.00E+03	
Uranium	1.80E+01	1.66E-03	3.05E-02	3.94E-01	1.58E+00	8.98E-01	5.00E-02

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Area F

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Area F: Media Concentrations Based on Maximum Measured Values

Chemical Name	Upld Plant Conc. (mg/kgdw)	Soil-to-Mammal Uptake Parameters		Mammal Conc. (mg/kgdw)
		B0	B1	
Manganese	2.00E+02	6.60E-02	1.00E+00	4.91E-02
Strontium	2.85E+02	8.00E-03	1.00E+00	8.48E-03
Uranium	1.70E+00	1.30E-01	1.00E+00	8.22E-04

Area F: Media Concentrations Based on 95% UCL Values

Chemical Name	Upld Plant Conc. (mg/kgdw)	Soil-to-Mammal Uptake Parameters		Mammal Conc. (mg/kgdw)
		B0	B1	
Manganese	2.00E+02	6.60E-02	1.00E+00	4.91E-02
Strontium	2.85E+02	8.00E-03	1.00E+00	8.48E-03
Uranium	1.70E+00	1.30E-01	1.00E+00	8.22E-04

Toxicity Data

Chemical Name	Mammals			Birds		
	NOAEL (mg/kg/d)	Test Species	Body Wt (kg)	NOAEL (mg/kg/d)	Test Species	Body Wt (kg)
Manganese	88	rat	0.35	977	J. quail	0.072
Strontium	263	rat	0.35			
Uranium	3.07	mouse	0.028	16	black duck	1.25

Toxicity Data

Chemical Name	Mammals			Birds		
	NOAEL (mg/kg/d)	Test Species	Body Wt (kg)	NOAEL (mg/kg/d)	Test Species	Body Wt (kg)
Manganese	88	rat	0.35	977	J. quail	0.072
Strontium	263	rat	0.35			
Uranium	3.07	mouse	0.028	16	black duck	1.25

**Area F: Hazard Quotients Based on Maximum Concentrations
Sheep (*Ovis aries*)**

Chemical Name	Sheep NOAEL	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Sheep Hazard Quotient
Manganese	6.53E+01	4.00E+02	8.00E+00	1.22E-01
Strontium	1.95E+02	5.70E+02	1.14E+01	5.84E-02
Uranium	1.96E+00	3.40E+00	6.80E-02	3.47E-02

**Area F: Hazard Quotients Based on 95% UCL Concentrations
Sheep (*Ovis aries*)**

Chemical Name	Sheep NOAEL	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Sheep Hazard Quotient
Manganese	6.53E+01	4.00E+02	8.00E+00	1.22E-01
Strontium	1.95E+02	5.70E+02	1.14E+01	5.84E-02
Uranium	1.96E+00	3.40E+00	6.80E-02	3.47E-02

**Area F: Hazard Quotients Based on Maximum Concentrations
Deer Mouse (*Peromyscus maniculatus*)**

Chemical Name	Deer Mouse NOAEL	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Deer Mouse HQ
Manganese	1.03E+02	7.44E-01	3.11E+01	3.01E-01
Strontium	3.09E+02	1.06E+00	4.44E+01	1.44E-01
Uranium	3.10E+00	6.32E-03	2.65E-01	8.54E-02

**Area F: Hazard Quotients Based on 95% UCL Concentrations
Deer Mouse (*Peromyscus maniculatus*)**

Chemical Name	Deer Mouse NOAEL	Plant Intake (mg/d)	Total Dose (mg/kg/d)	Deer Mouse HQ
Manganese	1.03E+02	7.44E-01	3.11E+01	3.01E-01
Strontium	3.09E+02	1.06E+00	4.44E+01	1.44E-01
Uranium	3.10E+00	6.32E-03	2.65E-01	8.54E-02

**Area F: Hazard Quotients Based on Maximum Concentrations
Burrowing owl (*Speotyto cunicularia*)**

Chemical Name	Burrowing Owl NOAEL	Mouse Intake (mg/d)	Total Dose (mg/kg/d)	Burrowing Owl HQ
Manganese	1.14E+03	8.48E-04	5.47E-03	4.81E-06
Strontium		1.47E-04	9.45E-04	
Uranium	1.05E+01	1.42E-05	9.16E-05	8.69E-06

**Area F: Hazard Quotients Based on 95% UCL Concentrations
Burrowing owl (*Speotyto cunicularia*)**

Chemical Name	Burrowing Owl NOAEL	Mouse Intake (mg/d)	Total Dose (mg/kg/d)	Burrowing Owl HQ
Manganese	1.14E+03	8.48E-04	5.47E-03	4.81E-06
Strontium		1.47E-04	9.45E-04	
Uranium	1.05E+01	1.42E-05	9.16E-05	8.69E-06

**Area F: Hazard Quotients Based on Maximum Concentrations
Red Fox (*Vulpes vulpes*)**

Chemical Name	Red Fox NOAEL	Plant Intake (mg/d)	Mouse Intake (mg/d)	Total Dose (mg/kg/d)	Red Fox HQ
Manganese	7.55E+01	9.53E+00	9.36E-03	2.10E+00	2.79E-02
Strontium	2.26E+02	1.36E+01	1.62E-03	2.99E+00	1.33E-02
Uranium	2.26E+00	8.10E-02	1.57E-04	1.79E-02	7.90E-03

**Area F: Hazard Quotients Based on 95% UCL Concentrations
Red Fox (*Vulpes vulpes*)**

Chemical Name	Red Fox NOAEL	Plant Intake (mg/d)	Mouse Intake (mg/d)	Total Dose (mg/kg/d)	Red Fox HQ
Manganese	7.55E+01	9.53E+00	9.36E-03	2.10E+00	2.79E-02
Strontium	2.26E+02	1.36E+01	1.62E-03	2.99E+00	1.33E-02
Uranium	2.26E+00	8.10E-02	1.57E-04	1.79E-02	7.90E-03