

WORK IN PROGRESS – SUBJECT TO REVISION

Appendix B
Hydraulic Conductivity Data

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**Aquifer Testing Summary Tables
(Telesto, 2005)**

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Table B-2 Summary of Aquifer Testing Times and Flow Rates

Monitoring Well	Test Beginning/End Dates		Time				Elapsed Time			Pumping Rates		Drawdown	
	Test started (h:min)	Test stopped (h:min)	Begin Pumping (h:min)	End Pumping (h:min)	End Recovery (date h:min)	Total Test Time (min)	Pumping Time (min)	Recovery Time (min)	Average Pumping Rate (gpm)	Time Weighted Average Pumping Rate (gpm)	Drawdown at End of Pumping (ft)	Drawdown at End of Recovery (ft)	
MW181-2004-01 Test 1	1/17 - 1/17/05	14:33	16:09	14:41	-	-	8	-	-	-	8.1	-	
		"	"	14:44	14:51	-	7	-	-	-	8.1	-	
		"	"	14:55:20	14:55:44	1/17/2005 16:09	0.4	74	-	-	8.1	0.19	
MW181-2004-01 Test 2	1/18 - 1/19/05	11:00	9:04	11:10	11:32	1/19/2005 12:51	22	1519	0.56	-	4.5	0.1	
		"	"	12:51	15:39	1/19/2005 09:04	168	1044	0.47	0.50	7.2	0.0	
MW181-2004-02	1/20 - 1/22/05	9:04	9:30	9:17	9:51	1/22/2005 9:30	34	2858	0.28	0.28	10.8	0.5	
MW181-2004-03	1/20 - 1/21/05	16:53	10:40	17:01	17:30	1/21/2005 10:40	30	1029	0.41	0.41	13.8	8.6	
MW181-2004-04	1/21 - 1/22/05	16:11	9:46	16:46	17:30	-	44	-	1.63	-	0.50	-	
		"	"	17:30	17:50	-	20	-	2.55	-	0.73	-	
		"	"	17:50	18:22	1/22/2005 09:46	92	924	4.90	2.85	1.50	0.04	
MW181-2004-06	1/21 - 1/21/05	11:33	14:34	11:43	11:51	-	8	-	1.32	-	0.14	-	
		"	"	11:51	11:55	-	3	-	2.24	-	0.25	-	
		"	"	11:55	12:07	-	12	-	3.09	-	0.35	-	
		"	"	12:07	12:11	-	4	-	4.23	-	0.45	-	
		"	"	12:11	13:49	-	98	-	4.96	-	0.62	-	
		"	"	13:49	14:24	1/22/2005 09:46	35	1162	6.30	4.85	0.79	-0.01	
MW181-2004-07	1/20 - 1/20/05	12:01	16:22	12:43	15:33	1/20/2005 16:04	170	30	1.14	1.14	2.01	0.08	

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Table B-3 Borehole Completion Information

Monitoring Well	Date Completed	UTM (Zone 12S) Easting	UTM (Zone 12S) Northing	Mine Site Easting	Mine Site Northing	Ground Elevation (ft amsl)	Reference Elevation (ft amsl)	Borehole Diameter (in)	Casing Diameter (in)	Total Well Depth (ft-in bgs)	Stick-up (ft)	Top of Open Interval (ft-bgs)	Bottom of Open Interval (ft-bgs)
MW181-2004-01	12/19/2004	3,638,720	773,431	107,956.8	114,027.7	6710.52	6711.96	7.5	4	35' 3"	2	25' 3"	35' 3"
MW181-2004-02	12/15/2004	3,637,983	772,647	105,304.5	111,719.9	6673.04	6674.72	7.5	4	24	2	3' 4"	23' 4"
MW181-2004-03	12/15/2004	3,637,878	772,687	105,417.5	111,334.7	6650.29	6652.72	7.5	4	22' 5"	3	2' 0"	20' 0"
MW181-2004-04	12/18/2004	3,637,528	773,007	106,470.0	110,180.8	6592.3	6594.3	7.5' - 2'	4	18' 9"	2	4' 8"	9' 8"
MW181-2004-05	12/16/2004	3,638,126	772,495	104,501.3	112,189.5	6713.75	6715.52	7.5	4	37' 6"	2' 2"	27' 6"	37' 6"
MW181-2004-06	12/21/2004	3,636,545	773,358	107,491.6	106,911.5	6487.48	6489.44	8.5" - 9.5"	4	19' 1"	2' 7"	9' 1"	19' 1"
MW181-2004-07	12/18/2004	3,636,564	771,996	103,031.5	107,126.1	6711.92	6713.4	7.5	4	56'	2	39' 6"	54' 6"
MW181-2004-08	12/22/2004	3,634,512	772,423	104,273.6	100,411.3	6332.32	6334.58	7.5	4	16	2' 6"	6	16
MW181-2004-09	12/22/2004	3,634,514	772,427	104,293.6	100,401.2	6331.37	6333.39	8.625 - 7.5	4	83	2' 6"	38	83
MW181-2004-10	12/17/2004	3,638,071	772,574	105,066.7	112,012.6	6686.22	6687.69	8.0	4	30' 8"	2' 1"	20' 8"	30' 8"
MW181-2004-11	12/17/2004	3,638,097	772,558	105,015.0	112,118.6	6692.43	6694.74	8.0	4	24' 8"	2' 1"	14' 8"	24' 8"
MW181-2004-12	12/17/2004	3,638,123	772,602	105,175.6	112,170.9	6686.27	6688.21	8.0	4	25' 1"	2' 6"	10' 1"	25' 1"

UTM coordinates and completion information from Well Logs
 Site coordinates and elevations from Cobre Well Locations.xls

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Table B-4 Water Level Measurements January, 2005

Monitoring Well	Date	Water Level (ft)	Comments
MW181-2004-01	1/20/2005	6,885.61	Alluvium
MW181-2004-02	1/19/2005	6,861.25	Weathered Hanover-Fiero Stock
MW181-2004-03	1/19/2005	6,643.60	Weathered Hanover-Fiero Stock
MW181-2004-04	1/19/2005	6,585.12	Alluvium
MW181-2004-05	1/19/2005	6,708.16	Alluvium
MW181-2004-06	1/19/2005	6,479.69	Alluvium
MW181-2004-07	1/19/2005	6,675.50	Colluvium
MW181-2004-08	1/19/2005	dry	Alluvium
MW181-2004-09	1/19/2005	dry	Weathered Hanover-Fiero Stock
MW181-2004-10	1/19/2005	6,671.40	Alluvium / Weathered Hanover-Fiero Stock
MW181-2004-11	1/19/2005	6,676.79	Alluvium / Weathered Hanover-Fiero Stock
MW181-2004-12	1/19/2005	6,675.51	Alluvium / Weathered Hanover-Fiero Stock

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Table B-6 Aquifer Hydraulic Properties Estimated from Theis Recovery Method

	$\log(u^2)$	$\log(u^2)^2$	s_1 (ft)	s_2 (ft)	Q (gpm)	T (ft ² /d)	b (ft)	K (ft/d)
MW181-2004-01 Test 2	0.5	1.5	0.486	1.44	0.50	18.5	10.0	1.8
MW181-2004-04	0	1	0	0.22	2.85	457.0	4.3	105.9
MW181-2004-06	1.5	2.5	0	0.11	4.68	1500.9	10.0	150.1
MW181-2004-07	0	1	0	0.1025	1.14	392.3	18.7	21

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Table B-8 Aquifer Hydraulic Properties Estimated from Hvorslev Method

Monitoring Well	Borehole Diameter (in)	Casing Diameter (in)	Stick-up (ft)	TOS (ft-bgs)	TOS (ft-bitoc)	BOS (ft-bgs)	BOS (ft-bitoc)	Area Casing (ft ²)	Area Casing + Bore (ft ²)	Ho (ft-bitoc)	calculated t1 (min)	calculated t2 (min)	calculated log(s1) (log(ft))	calculated log(s2) (log(ft))	t ₉₀ (min)	T (ft ² /day)	b (ft)	K (ft/day)
MW181-2004-01 Test 1	7.5	4	2	25.25	27.25	35.25	37.25	0.087	0.142	26.538	21.4	49.8	0.90	-0.10	28.4	14.54	10.00	1.45
MW181-2004-02	7.5	4	2	3.33	5.33	23.33	25.33	0.087	0.142	13.2	113.3	2190.8	1.00	0.00	2077.5	0.20	12.13	0.0164
MW181-2004-03	7.5	4	3	2.00	5.00	20	23.00	0.087	0.142	9.07	24.8	379.2	1.20	0.20	354.5	1.16	13.93	0.0836

bgs = "below ground surface" bitoc = "below top of casing"

Porosity = 0.25 Shape Factor C = 5.5

Constants:

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Table B-9 Summary of Aquifer Testing Analyses

	Jacob T (ft ² /d)	Theis T (ft ² /d)	Qs T (ft ² /day)	Hvorslev T (ft ² /day)	Geometric Mean (ft ² /day)	Jacob K (ft/d)	Theis K (ft/d)	Qs K (ft/day)	Hvorslev K (ft/day)	Geometric Mean (ft/day)	Geologic Formation
MW181-2004-01 Test 1	-	-	-	14.54	14.5	-	-	-	1.45	1.5	Alluvium
MW181-2004-01 Test 2	3.13 10.0	18.5	24.0	-	10.9	0.31 1.00	1.85	2.40	-	1.1	Alluvium Alluvium
MW181-2004-02	-	-	-	0.2	0.2	-	-	-	0.02	0.02	Weathered Hanover-Fierro Stock
MW181-2004-03	-	-	-	1.2	1.2	-	-	-	0.08	0.1	Weathered Hanover-Fierro Stock
MW181-2004-04	-	457.0	627.5 701.2 628.8	-	596.31	-	105.9	145.4 162.4 145.7	-	138.14	Alluvium Alluvium Alluvium
MW181-2004-06	1816.7 2333.0 1590.7 987.7	1500.9	1539.9	-	1577.16	181.7 233.3 159.1 98.8	150.1	154.0	-	157.72	Alluvium Alluvium Alluvium Alluvium Alluvium
MW181-2004-07	201.1	392.3	108.7	-	204.70	10.8	21.0	5.82	-	10.95	Colluvium

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**Aquifer Testing Summary Tables
(SMI, 1999)**

Table A-1 Summary of Aquifer Testing Times and Flow Rates

Monitoring Well	Test Beginning and End Dates	Time			Elapsed Time			Time Weighted Average Pumping Rate (gpm)	Drawdown at End of Pumping (feet)	Drawdown at End of Recovery (feet)
		Begin Pumping	End Pumping	End Recovery	Total Test Time (min)	Pumping Time (min)	Recovery Time (min)			
MW-1	7/1-7/1/97	13:23	17:35	19:51	388	251.3	136.7	0.361	48.03	16.79
MW-1A	7/3-7/4/97	8:31	10:10	7:51	1400	99	1301	0.886	8.87	0.79
MW-1A	1/28-1/29/99	10:34	14:30	10:10	1416	236	1180	1.2	13.0	1.7
MW-1A	3/4-3/6/99	10:31	22:35	12:35	3004	724	2280	0.79	9.8	1.7
MW-2	7/5-7/6/97	11:39	15:10	7:29	1190	211	979	0.721	62.84	1.85
MW-3	7/5-7/5/97	15:58	16:04	17:05	67	6.0	61	13.6	95.62	24.32
MW-4	7/8-7/8/97	13:02	13:36	13:36	34	34	0	0.617	21.93	-
MW-4A	2/3-2/3/99	N/A	10:01	14:45	278	N/A	278	Rising Head Test	1.8	0.0
MW-5	7/7-7/7/97	13:30	15:30	N/A	120	120	0	1.19	30.74	-
MW-5A	2/4-2/5/99	N/A	14:20	12:26	1,321	N/A	1,321	Rising Head Test	3.3	0.04
MW-8	7/2-7/2/97	9:30	12:00	14:20	290	150	140	0.39 ^(a)	26.94	11.30
MW-10	7/4-7/4/97	12:38	12:56	17:11	273	18	255	1.16	18.16	16.42
MW-12	7/6-7/6/97	9:25	10:47	13:28	243	82	161	0.345	11.17	2.56
MW-14	1/27-1/28/99	9:44	16:05	8:30	1366	381	985	1.11	29.8	4.42
MW-16	3/3-3/4/99	16:45	16:54	8:42	954	8.6	945	Rising Head Test	27	0.0
MW-17	1/19-1/19/99	13:07	16:13	17:51	284	186	98	2.1	7.2	0.37
MW-19	7/8-7/8/97	9:19	10:10	10:10	51	51	0	1.93	3.64	-
MW-20	7/9-7/9/97	15:43	16:39	19:19	216	56	160	0.671	53.55	52.39
MW-21	7/10-7/10/97	10:21	10:21	12:21	120	0	120	Instantaneous	4.01	2.29
MW-22	1/21-1/21/99	10:06	15:30	17:00	414	324	90	4.83	1.19	0.27
MW-24	7/9-7/9/97	8:30	10:12	10:29	119	102	17	Stepped	2.75	-
MW-25	7/9-7/9/97	11:25	11:33	13:26	121	8	113	0.438	12.83	3.67

(a) MW-8: 0-70 min; Q = 0.59 gpm First Step
 70-149 min; Q = 0.22 gpm Second Step
 Weighted Average = 0.39 gpm

Table A-2 Borehole Completion Information

Monitoring Well	Total Well Depth (feet bgs)	Top of Open Interval (feet bgs)	Borehole Diameter (feet)	Casing Diameter (feet)	Pump Type Used in Testing	Depth to Water at Beginning of Pumping (feet btc)	Depth to Water at End of Pumping (feet btc)
MW-1	235	205	0.67	0.33	Portable	7.11	55.14
MW-1A ¹	80	37	0.67	0.33	Portable	52.1	60.97
MW-1A ²	80	37	0.67	0.33	Portable	51.4	64.4
MW-1A ³	80	37	0.67	0.33	Portable	52.72	62.5
MW-2	235	205	0.67	0.33	Dedicated	31.16	94
MW-3	150	125	0.67	0.33	Dedicated	4.08	99.7
MW-4	225	170	0.67	0.33	Dedicated	164.6	186.6
MW-4A	129	106	0.67	0.33	Portable	116.6	118.4
MW-5	255	225	0.67	0.33	Dedicated	199.47	230.21
MW-5A	130	97	0.67	0.33	Portable	116.0	119.3
MW-8	65	44	0.67	0.33	Portable	22.88	49.82
MW-10	40	8	0.67	0.33	Dedicated	17.41	35.57
MW-12	75	54	0.67	0.33	Dedicated	53.87	65.04
MW-14	120	87	0.67	0.33	Portable	52.2	82
MW-16	77	40	0.67	0.33	Portable	46	73
MW-17	28.5	2.5	0.67	0.33	Portable	8.77	15.6
MW-19	28	13.3	0.67	0.33	Portable	19.78	23.42
MW-20	125	73.6	0.50	0.17	Portable	54.87	108.42
MW-21	90	54.8	0.50	0.17	Portable	85.34	89.35
MW-22	40	12	0.67	0.33	Portable	20.0	21.19
MW-24	30	7	0.50	0.17	Portable	19.15	21.9
MW-25	25	4	0.50	0.17	Portable	9.72	22.55

¹ Test date from July 1997

² Test data from January 1999

³ Test data from March 1999

bgs = below ground surface

btc = below to of casing

Table A-3 Results of Field Measurements

Sample Identification	Date	Parameter	Value	Units	Comments
MW-1	01-Jul-97	Depth to Water	7.11	feet	-
MW-1A	03-Jul-97	Depth to Water	52.1	feet	-
MW-2	05-Jul-97	Depth to Water	31.16	feet	-
MW-3	05-Jul-97	Depth to Water	4.08	feet	-
MW-5	07-Jul-97	Depth to Water	199.47	feet	-
MW-8	02-Jul-97	Depth to Water	22.88	feet	-
MW-10	04-Jul-97	Depth to Water	17.41	feet	-
MW-12	06-Jul-97	Depth to Water	53.87	feet	-
MW-19	08-Jul-97	Depth to Water	19.78	feet	-
MW-20	09-Jul-97	Depth to Water	54.87	feet	-
MW-21	10-Jul-97	Depth to Water	85.34	feet	-
MW-24	09-Jul-97	Depth to Water	19.15	feet	-
MW-25	09-Jul-97	Depth to Water	9.72	feet	-
MW-4	08-Jul-97	Depth to Water	164.64	feet	-
MW-1A	03-Jul-97	Electrical Conductivity	850	µmhos/cm	T = 17.8 °C
MW-2	05-Jul-97	Electrical Conductivity	1509	µmhos/cm	T = 20.2 °C
MW-3	05-Jul-97	Electrical Conductivity	1227	µmhos/cm	T = 17.2 °C
MW-5	07-Jul-97	Electrical Conductivity	-	µmhos/cm	Sample Spilled
MW-8	02-Jul-97	Electrical Conductivity	2660	µmhos/cm	T = 21.9 °C
MW-10	04-Jul-97	Electrical Conductivity	1115	µmhos/cm	T = 21.3 °C
MW-12	06-Jul-97	Electrical Conductivity	1771	µmhos/cm	T = 19.6 °C
MW-19	08-Jul-97	Electrical Conductivity	2540	µmhos/cm	T = 15.9 °C
MW-20	09-Jul-97	Electrical Conductivity	1856	µmhos/cm	T = 18.2 °C
MW-21	10-Jul-97	Electrical Conductivity	1840	µmhos/cm	T = 18.0 °C
MW-24	09-Jul-97	Electrical Conductivity	1805	µmhos/cm	T = 17.1 °C
MW-25	09-Jul-97	Electrical Conductivity	3330	µmhos/cm	T = 28.4 °C
MW-4	08-Jul-97	Electrical Conductivity	862	µmhos/cm	T = 20.7 °C
MW-1A	03-Jul-97	pH (field)	6.86	-	T = 18.5 °C
MW-2	05-Jul-97	pH (field)	7.74	-	T = 20.2 °C
MW-3	05-Jul-97	pH (field)	7.47	-	T = 15.9 °C
MW-5	07-Jul-97	pH (field)	6.84	-	T = 19.4 °C
MW-8	02-Jul-97	pH (field)	6.7	-	T = 22.1 °C
MW-10	04-Jul-97	pH (field)	6.97	-	T = 22.2 °C
MW-12	06-Jul-97	pH (field)	7.23	-	T = 19.8 °C
MW-19	08-Jul-97	pH (field)	6.63	-	T = 16.4 °C
MW-20	09-Jul-97	pH (field)	7	-	T = 18.9 °C
MW-21	10-Jul-97	pH (field)	5.87	-	T = 18.4 °C
MW-24	09-Jul-97	pH (field)	5.27	-	T = 17.7 °C
MW-25	09-Jul-97	pH (field)	5.94	-	T = 28.3 °C
MW-4	08-Jul-97	pH (field)	7.41	-	T = 20.2 °C

Table A-4 Aquifer Hydraulic Property Estimates from the Jacob Method

Monitoring Well	Q gpm	T feet ² /day	Aquifer thickness (feet)	K feet/day	K cm/s
MW-1	0.36	2.7×10^{-1}	210.97	1.3×10^{-3}	4.5×10^{-7}
MW-1A ¹	0.89	9.80	23.57	4.2×10^{-1}	1.5×10^{-4}
MW-1A ²	1.2	6.33	23.6	2.7×10^{-1}	9.5×10^{-5}
MW-1A ³	0.79	7.0 - 11.2	24	$(2.9 - 4.7) \times 10^{-1}$	$(1.0 - 1.7) \times 10^{-4}$
MW-2	0.72	8.2×10^{-1}	148.92	5.5×10^{-3}	1.95×10^{-6}
MW-5	1.9	3.25	40.16	8.1×10^{-2}	2.85×10^{-5}
MW-8	0.59	9.95×10^{-1}	28.12	3.5×10^{-2}	1.25×10^{-5}
MW-12	0.35	2.90	15.54	1.9×10^{-1}	6.6×10^{-5}
MW-14	1.11	3.52	54.4	6.5×10^{-2}	2.3×10^{-5}
MW-17	2.1	23.0	19.2	1.2	4.2×10^{-4}
MW-19	1.89	29.0	6.40	4.54	1.6×10^{-3}
MW-22	4.83	325	30.9	10.5	3.7×10^{-3}

¹ Test data from July 1997

² Test data from January 1999

³ Test data from March 1999. A possible recharging boundary condition was noted in the drawdown data at late-times as evident by the change in slope of the straight-line portion. A range in conductivity is reported.

Table A-5 Aquifer Hydraulic Properties Estimated from the Theis Recovery Method

Monitoring Well	T feet ² /day	Aquifer thickness (feet)	K feet/day	K cm/s
MW-1	0.30	210.97	1.4×10^{-3}	5.0×10^{-7}
MW-1A ¹	5.10	26.95	1.9×10^{-1}	6.7×10^{-5}
MW-1A ²	3.92	23.6	1.7×10^{-1}	5.7×10^{-5}
MW-1A ³	4.36	24	1.8×10^{-1}	6.4×10^{-5}
MW-2	1.1	149.0	7.4×10^{-3}	2.6×10^{-6}
MW-3	5.1	78.5	6.5×10^{-3}	2.3×10^{-6}
MW-8	0.55	28.12	1.95×10^{-2}	6.9×10^{-6}
MW-14	5.13	54.4	9.4×10^{-2}	3.3×10^{-5}
MW-17	44.4	19.2	2.32	8.2×10^{-4}
MW-22	398	30.9	12.9	4.6×10^{-3}

¹ Test data from July 1997

² Test data from January 1999

³ Test data from March 1999

Table A-6 Aquifer Hydraulic Properties Estimated from Specific Capacity Method

Monitoring Well	Q gpm	s feet	T = Q/s feet ² /day	$b = \frac{hw + h_0}{2}$ feet	K feet/day	K cm/s
MW-8	0.23	27.8	1.58	28.12	2.73×10^{-2}	9.6×10^{-6}
MW-24	1.35	1.27	204.13	13.21	15.5	5.5×10^{-3}
MW-24	2.40	1.74	265.20	12.98	20.4	7.2×10^{-3}
MW-24	3.32	1.96	325.80	12.87	25.3	8.9×10^{-3}
MW-24	3.91	2.78	271.31	12.46	21.8	7.7×10^{-3}

Table A-7 Hydraulic Conductivity Estimated from Slug Test Analysis

Monitoring Well	C --	K feet/day	K cm/sec
MW-4A	2.3	4.4×10^{-2}	1.5×10^{-5}
MW-5A	2.3	1.1×10^{-2}	3.9×10^{-6}
MW-10	3.1	4.7×10^{-3}	1.6×10^{-6}
MW-16	5	3.0×10^{-2}	1.1×10^{-5}
MW-20	6.2	4.6×10^{-4}	1.6×10^{-7}
MW-21	1.7	2.1×10^{-2}	7.3×10^{-6}
MW-25	3.0	4.2×10^{-2}	1.5×10^{-5}

Table A-8 Aquifer Hydraulic Properties Estimated from Aquifer Test During 1996 Field Event

Monitoring Well	C	K feet/day	K cm/s	Method
MW-3	2.9	4.6×10^{-2}	1.6×10^{-5}	Hvorslev
MW-5	3	3.1×10^{-1}	1.1×10^{-4}	Hvorslev
Borehole-22	5	7.7×10^{-4}	2.7×10^{-7}	Hvorslev

Table A-9 Summary of Aquifer Testing Analyses

Monitoring Well	Well Location	Jacob Analysis (cm/s)	Theis Recovery (cm/s)	Specific Capacity (cm/s)	Slug Test (cm/s)	Probable Geologic Formation Associated with Test Interval
MW-1	W. of Mine Office	4.5×10^{-7}	5.0×10^{-7}	-	-	Colorado Formation
MW-1A ¹	N. of Hanover Mountain	1.5×10^{-4}	6.7×10^{-5}	-	-	Colorado Formation
MW-1A ²	N. of Hanover Mountain	9.5×10^{-5}	5.7×10^{-5}	-	-	Colorado Formation
MW-1A ³	N. of Hanover Mountain	1.6×10^{-4}	6.4×10^{-5}	-	-	Colorado Formation
MW-2	S. of Tailings	2.0×10^{-6}	2.6×10^{-6}	-	-	Hanover-Fierro Stock
MW-3	S. of MW-2	-	-	-	1.6×10^{-5}	Hanover-Fierro Stock
MW-4	S. of South Waste Rock Dump	-	-	-	-	Montoya-Fusselman Dolomite
MW-4A		-	-	-	1.5×10^{-5}	Syenodiorite porphyry
MW-5	S. of West Waste Rock Dump	2.9×10^{-5}	-	-	-	Lake Valley Limestone
MW-5A		-	-	-	3.9×10^{-6}	Barringer fault in Colorado fm
MW-8	W. of Fan Discharge	1.3×10^{-5}	6.9×10^{-6}	9.61×10^{-6}	-	Hanover-Fierro Stock
MW-10	E. of Church	-	-	-	1.6×10^{-6}	Hanover-Fierro Stock and Alluvium
MW-12	E. of South Waste Rock Dump	6.6×10^{-5}	-	-	-	Hanover-Fierro Stock
MW-14		2.3×10^{-5}	3.3×10^{-5}	-	-	Hanover-Fierro Stock
MW-16		-	-	-	1.1×10^{-5}	Hornblende quartz diorite
MW-17		4.2×10^{-4}	8.2×10^{-4}	-	-	Hanover-Fierro Stock

Table A-9 (continued) Summary of Aquifer Testing Analyses

Monitoring Well	Well Location	Jacob Analysis (cm/s)	Theis Recovery (cm/s)	Specific Capacity (cm/s)	Slug Test (cm/s)	Best Estimate (cm/s)	Probable Geologic Formation Associated with Test Interval
MW-19	SE. of Rubber Pond	1.6×10^{-3}	-	-	-	-	Alluvium
MW-20	E. West Waste Rock Dump	-	-	-	1.6×10^{-7}	-	Percha Shale
MW-21	Pierson-Barnes Area	-	-	-	7.3×10^{-6}	-	Upper Lake Valley Formation
MW-22		3.7×10^{-3}	4.6×10^{-3}	-	-	-	Percha shale & unknown diorite
MW-24	E. of MW-2	-	-	7.3×10^{-3}	-	-	Alluvium
MW-25	S. of Magnetite Dam	-	-	-	1.5×10^{-5}	-	Alluvium and Hanover-Fierro Stock
PP-01	NE. Hanover Mountain	-	-	1×10^{-5}	-	-	Colorado Formation
PP-02	NW. Hanover Mountain	-	-	7×10^{-7}	-	-	Colorado Formation
PP-05	S. Hanover Mountain	-	-	1.5×10^{-5}	-	-	Colorado Formation
PP-05	S. Hanover Mountain	-	-	4.2×10^{-5}	-	-	Beartooth Quartzite
Borehole-22	NW. Tailings Reclaim Pond	-	-	-	2.7×10^{-7}	-	Syenodiorite Sill
WTH-1		-	5×10^{-5}	-	-	-	Various
WTH-2		-	$1.6-16 \times 10^{-5}$	-	-	-	Various
WTH-6		-	$4.7-5.5 \times 10^{-5}$	-	-	-	Various
PW-1 ⁴		-	-	-	-	1×10^{-5}	Lake Valley Limestone

¹ Test data from July 1997

² Test data from January 1999

³ Test data from March 1999

⁴ Based on Schafer Associates (1995a)

Table A-10. Summary Results from Specific Capacity Analysis on Exploration Borehole Data.

Formation	Minimum Hydraulic Conductivity (cm/sec)	Maximum Hydraulic Conductivity (cm/sec)	Geometric Mean Hydraulic Conductivity (cm/sec)	Number of Measurements
Cs	-	-	3.87×10^{-5}	1
Percha Shale Intrusive	-	-	3.18×10^{-5}	1
Fault in Colorado Fm	-	-	1.87×10^{-5}	1
Beartooth Fm	-	-	2.54×10^{-5}	1
Colorado Fm	1.21×10^{-6}	2.57×10^{-5}	4.60×10^{-6}	3
El Paso Fm	1.80×10^{-5}	1.67×10^{-4}	5.88×10^{-5}	6
Oswaldo Fm	1.35×10^{-5}	2.36×10^{-5}	1.66×10^{-5}	4
Syrena Fm	4.24×10^{-6}	7.69×10^{-6}	5.71×10^{-6}	2
Montoya - Fusselman Fm	9.47×10^{-7}	9.93×10^{-5}	1.52×10^{-5}	17
Continental Breccia - Colorado Fm	1.94×10^{-5}	4.42×10^{-5}	2.69×10^{-5}	3
Hanover Fierro Stock - Fusselman Fm	-	-	7.02×10^{-5}	1
Hanover Fierro Stock Overall	9.47×10^{-7}	2.79×10^{-4}	2.79×10^{-4}	1
			8.09×10^{-5}	1
			2.11×10^{-5}	45

FIGURES

