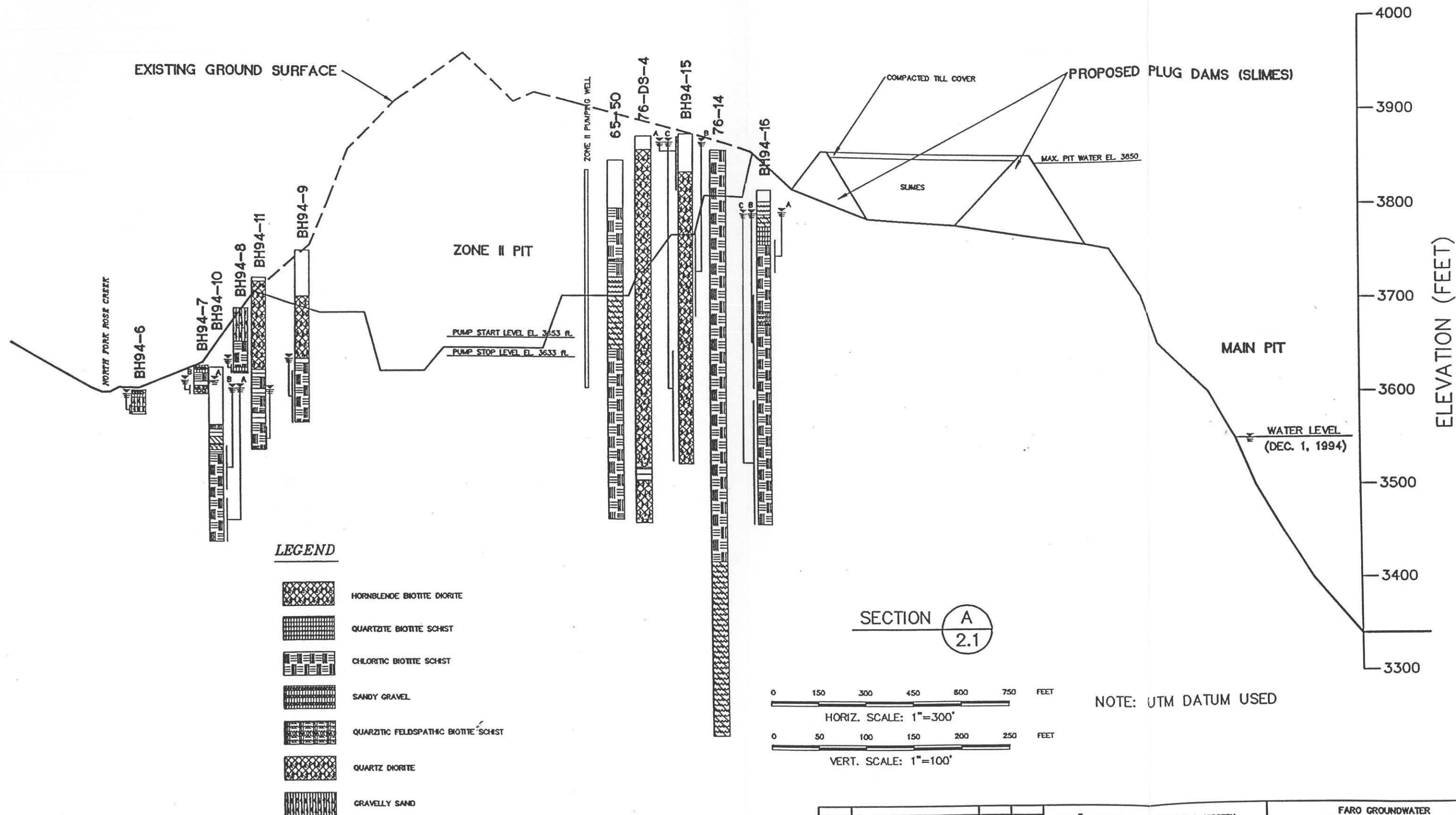


Steffen Robertson and Kirsten

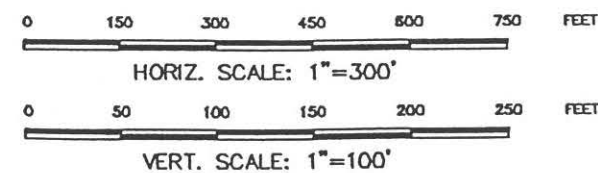
December 1994

Groundwater Investigation North Fork of Rose Creek

Report No. A114101



SECTION A
2.1



NOTE: UTM DATUM USED

NO.	DESCRIPTION	DATE	APPROVED

STEFFEN ROBERTSON & KIRSTEN
Consulting Engineers

ANVIL RANGE MINING CORPORATION

FARO GROUNDWATER			
SECTION A			
FILE NUMBER SECT.DWG	PROJECT NO. A114101	DRAWING NO. 3.1	SHEET 6

TABLE 3.1
Summary of Lithology and Hydraulic Conductivities of the Piezometric Screened Intervals

DIAMOND DRILLHOLE PIEZO.	UTM GROUND ELEV. (ft)	UTM CO-ORDINATES		STICKUP ABOVE GROUND ELEVATION (ft)	DEPTH FROM TOP OF PIPE (ft)	WATER LEVEL			FILTER ZONE INTERVAL (ft)		PACKER TEST INTERVAL (ft)		LITHOLOGY IN SPECIFIED INTERVAL	HYDRAULIC CONDUCTIVITY (cm/s)
		North	East			DEPTH TO STATIC (ft)	UTM ELEV. (ft)	DATE (yz/moa/day)	From	To	From	To		
BH94-09	3744	22 682 540	1 919 985	0.42	180.42	111.68	3632.74	94/11/20	125	180			CHL BIOT SCHIST	1C
											150	180	CHL BIOT SCHIST	1C
BH94-10	A	3621	22 682 240	1 919 950	2.82	122.82	24.07	3599.75	94/11/21	140	180		CHL BIOT SCHIST	1C
	B				2.82	182.82	24.07	3599.75	94/11/21	80	120		CHL BIOT SCHIST	1C
											61	93	METABASITE	1F
											95	120	CHL BIOT SCHIST	1C
											132	152	CHL BIOT SCHIST	1C
BH94-11		3715	22 682 580	1 920 305	0.67	180.67	119.08	3596.59	94/11/21	160	180		CHL BIOT SCHIST	1C
											75	105	DIORITE	10E
											103	133	CHL BIOT SCHIST	1C
BH94-15	A	3869	22 683 915	1 919 980	0.69	45.69	10.69	3859.00	94/11/22	10	45		QUARTZ DIORITE	10D
	B				0.00	200.00	10.20	3858.80	94/11/22	100	182		QUARTZ DIORITE	10D
	C				0.69	345.69	10.96	3858.73	94/11/22	235	345		QUARTZ DIORITE	10D
											72	98	QUARTZ DIORITE	10D
											302	327	QUARTZ DIORITE	10D
BH94-16	A	3809	22 683 710	1 919 145	0.66	75.66	24.11	3785.55	94/11/27	NC*	75		CHL BIOT SCHIST	1C
	B				0.49	200.49	23.98	3785.51	94/11/27	100	200		CHL BIOT SCHIST	1C
	C				0.33	280.33	24.01	3785.32	94/11/27	235	280		CHL BIOT SCHIST	1C
											14	49	GRAPHITIC PHYLLITE	1D
											50	80	CHL BIOT SCHIST	1C
											192	222	CHL BIOT SCHIST	1C
AUGER BOREHOLE PIEZO.														
BH94-05		3597	22 681 705	1 919 940	3.28	28.28	8.82	3591.46	94/10/25	18	25		COBBLES	4.4E-04 (F)
BH94-06		3602	22 681 965	1 919 960	2.62	23.12	11.78	3592.84	94/10/25	14	20.5		SANDY GRAVEL	1.0E-04 (F)
BH94-07	A	3623	22 682 260	1 920 080	2.56	31.56	17.42	3608.14	94/10/25	22	29		COBBLES	1.2E-04 (F)
	B				3.28	24.28	18.50	3607.78	94/10/25	14	21		SAND	1.8E-03 (R & F)
BH94-08		3683	22 682 410	1 920 120	2.59	70.09	54.45	3631.14	94/11/22	56	67.5		SCHIST	1C
BH94-12	A	3795	22 683 950	1 922 150	2.19	12.19	6.79	3790.40	94/11/19	3	10		weathered SCHIST	1C
	B				2.56	29.56	6.79	3790.77	94/11/19	18	25		SCHIST	1C
BH94-13	A	3896	22 684 839	1 922 060	1.34	13.84	10.43	3886.91	94/11/21	4.5	12.5		SANDY GRAVEL	no test taken
	B				2.23	29.23	11.41	3886.82	94/10/23	18.5	27		SCHIST	1C
BH94-14	A	3797	22 683 155	1 921 510	0.62	21.12	11.02	3786.60	94/11/19	13.5	20.5		weathered QRTZ DIORITE	10D
	B				2.72	33.22	14.63	3785.09	94/11/19	23.5	30.5		QUARTZ DIORITE	10D

Notes:

1. NC* Filter Zone not completed because water in open borehole froze 2.5 feet below ground elevation.
2. R = Rising Head Test or Bail Down Test
F = Falling Head Test or Injection Slug Test

FARO SEEPAGE INVESTIGATION				ANML RANGE MINING CORPORATION				BOREHOLE NO: BH-05			
MONITORING WELL INSTALLATION				DRILL: CME 750 - HOLLOW STEM AUGERS				PROJECT NO: A114101			
FARO MINE SITE, FARO, YUKON				UTM ZONE: 8 N 22 681 705 E 1 919 940				ELEVATION: 3597.00 (ft)			
SAMPLE TYPE				☒ GRAB SAMPLE ☒ TRICONE CUTNGS ☒ SPT ☐ NO RECOVERY ☐ NW CASING ☐ NO CORE							

DEPTH (ft)	SAMPLE TYPE	SAMPLE NO	SPT(N)	SPT (blows / 12")	SOLIDS - % ZINC	USC	SOIL SYMBOL	GEOLOGIC DESCRIPTION	SLOTTED PIEZOMETER	ADDITIONAL COMMENTS	ELEVATION (ft)
0.0											3597.0
1.0		1						GRAVELLY SAND - some cobble sized stones, loose, (damp)			3596.0
2.0											3595.0
3.0											3594.0
4.0		2	4	■		SM		SILTY SAND - brown, some organics and some rust brown water staining.			3593.0
5.0								- (wet)			3592.0
6.0		3	5	■	0.08					STATIC WATER LEVEL IN PIEZOMETER BH-05 @ 3591.46 ft ELEVATION ON OCTOBER 25, 1994.	3591.0
7.0											3590.0
8.0											3589.0
9.0											3588.0
10.0										DRILL CUTTINGS BACKFILL	3587.0
11.0		4	32	■		GM		SANDY GRAVEL - dark brown, subrounded gravel, medium grained sand.			3586.0
12.0											3585.0
13.0											3584.0
14.0		5	45	■							3583.0
15.0											3582.0
16.0		6	38	■	0.05			- color changes to rust brown			3581.0
17.0										BENTONITE CHIP SEAL	3580.0
18.0								DRILLING: encountered sand lense grading to a sandy gravel with depth.			3579.0
19.0						SM-GM					3578.0
20.0										COLORADO 10-20 SILICA SAND	3577.0

STEFFEN, ROBERTSON AND KIRSTEN Consulting Engineers				LOGGED BY: GRB		COMPLETION DEPTH: 25.5 ft	
				REVIEWED BY: PMH		COMPLETE: 94/09/04	
				Fig. No: A-1		Page 1 of 2	

FARO SEEPAGE INVESTIGATION				ANMIL RANGE MINING CORPORATION				BOREHOLE NO: BH-05			
MONITORING WELL INSTALLATION				DRILL: CME 750 - HOLLOW STEM AUGERS				PROJECT NO: A114101			
FARO MINE SITE, FARO, YUKON				UTM ZONE: 8 N 22 681 705 E 1 919 940				ELEVATION: 3597.00 (ft)			
SAMPLE TYPE				☒ GRAB SAMPLE ☒ TRICONE CUT'NGS ☒ SPT ☐ NO RECOVERY ☐ NW CASING ☐ NO CORE							

DEPTH (ft)	SAMPLE TYPE	SAMPLE NO	SPT(N)	SPT (blows / 12")	SOLIDS - % ZINC	USC	SOIL SYMBOL	GEOLOGIC DESCRIPTION	SLOTTED PIEZOMETER	ADDITIONAL COMMENTS	ELEVATION (ft)
20.0	X	7	28	■	0.05	SM-GM		- medium grained sandy gravel			3577.0
21.0										COLORADO 10-20 SILICA SAND	3576.0
22.0											3575.0
23.0											3574.0
24.0						CB		DRILLING: encountered cobbles			3573.0
25.0								FALLING HEAD TEST RESULT k = 4.4E-04 cm/sec	3572.0		
26.0											3571.0
27.0								END OF BOREHOLE: cobbles blocked the progress of drilling and SPT sampling			3570.0
28.0								MONITORING WELL INSTALLATION			3569.0
29.0								- 0.5 ft sand layer on bottom			3568.0
30.0								- 5 ft screen + 23.3 ft of 2" PVC pipe			3567.0
31.0								- 3 bags sand to 18 ft below grade			3566.0
32.0								- 1 bag bentonite chips to 15 ft			3565.0
33.0								- backfill borehole with drill cuttings			3564.0
34.0								- install friction (slip off) endcap			3563.0
35.0								- Top of PVC 3.3 ft above ground			3562.0
36.0											3561.0
37.0											3560.0
38.0											3559.0
39.0											3558.0
40.0											3557.0

STEFFEN, ROBERTSON AND KIRSTEN Consulting Engineers		LOGGED BY: GRB	COMPLETION DEPTH: 25.5 ft
		REVIEWED BY: PMH	COMPLETE: 94/09/04
		Fig. No: A-1	Page 2 of 2

FARO SEEPAGE INVESTIGATION				ANML RANGE MINING CORPORATION				BOREHOLE NO: BH-06			
MONITORING WELL INSTALLATION				DRILL: CME 750 - HOLLOW STEM AUGERS				PROJECT NO: A114101			
FARO MINE SITE, FARO, YUKON				UTM ZONE: 8 N 22 681 965 E 1 919 960				ELEVATION: 3602.00 (ft)			
SAMPLE TYPE				☒ GRAB SAMPLE ☒ TRICONE CUTNGS ☒ SPT ☐ NO RECOVERY ☐ NW CASING ☐ NO CORE							

DEPTH (ft)	SAMPLE TYPE	SAMPLE NO	SPT(N)	SPT (blows / 12")	SOLIDS - % ZINC	USC	SOIL SYMBOL	GEOLOGIC DESCRIPTION	SLOTTED PIEZOMETER	ADDITIONAL COMMENTS	ELEVATION (ft)
0.0											3602.0
1.0		1						GRAVELLY SAND - Brown, alluvial outwash - material, medium to coarse grained sand, medium grained gravel, loose, (damp).			3601.0
2.0											3600.0
3.0											3599.0
4.0						SM				DRILL CUTTINGS BACKFILL	3598.0
5.0											3597.0
6.0		2	8		0.09			- some rust brown water staining.			3596.0
7.0											3595.0
8.0											3594.0
9.0											3593.0
10.0						SW				STATIC WATER LEVEL IN PIEZOMETER BH-06 @ 3592.84 FT ELEVATION ON OCTOBER 25, 1994.	3592.0
11.0		3	13		0.03			SAND - clean, grey, medium grained, some organics, native material.			3591.0
12.0											3590.0
13.0						CB		DRILLING: encountered cobble seam.		BENTONITE CHIP SEAL	3589.0
14.0								DRILLING: encountered interbedded gravelly sand and coarse grained sand.			3588.0
15.0						SM-SW					3587.0
16.0											3586.0
17.0						SW		DRILLING: encountered sand lense.			3585.0
18.0								DRILLING: encountered dense sandy gravel.			3584.0
19.0						CB-GM				FALLING HEAD TEST RESULT k = 1.0E-04 cm/sec	3583.0
20.0											3582.0

STEFFEN, ROBERTSON AND KIRSTEN Consulting Engineers		LOGGED BY: GRB	COMPLETION DEPTH: 21.0 ft
		REVIEWED BY: PMH	COMPLETE: 94/10/06
		Fig. No: A-2	Page 1 of 2

FARO SEEPAGE INVESTIGATION				ANML RANGE MINING CORPORATION				BOREHOLE NO: BH-06			
MONITORING WELL INSTALLATION				DRILL: CME 750 - HOLLOW STEM AUGERS				PROJECT NO: A114101			
FARO MINE SITE, FARO, YUKON				UTM ZONE: 8 N 22 681 965 E 1 919 960				ELEVATION: 3602.00 (ft)			
SAMPLE TYPE				☒ GRAB SAMPLE ☒ TRICONE CUTNGS ☒ SPT ☐ NO RECOVERY ☐ NW CASING ☐ NQ CORE							

DEPTH (ft)	SAMPLE TYPE	SAMPLE NO	SPT(N)	SPT (blows / 12")	SOLIDS - % ZINC	USC	SOIL SYMBOL	GEOLOGIC DESCRIPTION	SLOTTED PIEZOMETER	ADDITIONAL COMMENTS	ELEVATION (ft)
20.0				■ SPT (blows / 12") ■ 20 40 60 80			CB-GM			COLORADO 10-20 SILICA SAND	3582.0
21.0								END OF BOREHOLE: cobbles blocked the progress of drilling.			3581.0
22.0								MONITORING WELL INSTALLATION			3580.0
23.0								- 0.5 ft sand layer on bottom			3579.0
24.0								- 5 ft screen + 18.12 ft of 2" PVC pipe			3578.0
25.0								- 4 bags sand to 14 ft below grade			3577.0
26.0								- 1 bag bentonite chips to 11.5 ft			3576.0
27.0								- backfill borehole with drill cuttings			3575.0
28.0								- install friction (slip off) endcap			3574.0
29.0								- Top PVC 2.62 ft above ground			3573.0
30.0											3572.0
31.0											3571.0
32.0											3570.0
33.0											3569.0
34.0											3568.0
35.0											3567.0
36.0											3566.0
37.0											3565.0
38.0											3564.0
39.0											3563.0
40.0											3562.0

STEFFEN, ROBERTSON AND KIRSTEN
Consulting Engineers

LOGGED BY: GRB
REVIEWED BY: PMH
Fig. No: A-2

COMPLETION DEPTH: 21.0 ft
COMPLETE: 94/10/06

FARO SEEPAGE INVESTIGATION				ANML RANGE MINING CORPORATION				BOREHOLE NO: BH-07					
MONITORING WELL INSTALLATION				DRILL: CME 750 - HOLLOW STEM AUGERS				PROJECT NO: A114101					
FARO MINE SITE, FARO, YUKON				UTM ZONE: 8 N 22 682 260 E 1 920 080				ELEVATION: 3623.00 (ft)					
SAMPLE TYPE		☒ GRAB SAMPLE		☒ TRICONE CUTTINGS		☒ SPT		☐ NO RECOVERY		☐ NW CASING		☐ NQ CORE	

DEPTH (ft)	SAMPLE TYPE	SAMPLE NO	SPT(N)	SPT (blows / 12")	SOLIDS - % ZINC	USC	SOIL SYMBOL	GEOLOGIC DESCRIPTION	SLOTTED PIEZOMETER A	SLOTTED PIEZOMETER B	ADDITIONAL COMMENTS	ELEVATION (ft)
0.0												3623.0
1.0		1						GRAVELLY SAND - brown gravel-sand-silt mixture, loose, occasional cobble sized stones, (dry).				3622.0
2.0												3621.0
3.0												3620.0
4.0		2	15	■	0.12		GM	- some organics, change in color to rust brown, (damp).				3619.0
5.0												3618.0
6.0		3	9	■	0.10			- angular to subrounded gravel, (moist).				3617.0
7.0												3616.0
8.0								- (wet)				3615.0
9.0		4	14	■				WEATHERED BEDROCK - looks like highly bedrock, phyllitic flakey gravel, rust brown, medium dense.				3614.0
10.0												3613.0
11.0		5,6	18	■	0.12							3612.0
12.0							BR					3611.0
13.0												3610.0
14.0		7	28	■								3609.0
15.0												3608.0
16.0		8,9	21	■								3607.0
17.0												3606.0
18.0							SW	SAND - reddish brown, medium grained, medium dense.				3605.0
19.0												3604.0
20.0												3603.0

STEFFEN, ROBERTSON AND KIRSTEN Consulting Engineers		LOGGED BY: GRB	COMPLETION DEPTH: 30.0 ft
		REVIEWED BY: PMH	COMPLETE: 94/10/05
		Fig. No: A-3	Page 1 of 2

FARO SEEPAGE INVESTIGATION				ANML RANGE MINING CORPORATION				BOREHOLE NO: BH-07				
MONITORING WELL INSTALLATION				DRILL: CME 750 - HOLLOW STEM AUGERS				PROJECT NO: A114101				
FARO MINE SITE, FARO, YUKON				UTM ZONE: 8 N 22 682 260 E 1 920 080				ELEVATION: 3623.00 (ft)				
SAMPLE TYPE				☒ GRAB SAMPLE ☒ TRICONE CUTTINGS ☒ SPT ☐ NO RECOVERY ☐ NW CASING ☐ NO CORE								
DEPTH (ft)	SAMPLE TYPE	SAMPLE NO	SPT(N)	SPT (blows / 12")	SOLIDS - % ZINC	USC	SOIL SYMBOL	GEOLOGIC DESCRIPTION	SLOTTED PIEZOMETER A	SLOTTED PIEZOMETER B	ADDITIONAL COMMENTS	ELEVATION (ft)
20.0	X	10,11	65	■		SW	●	DRILLING: encountered cobble seam, or dense but highly weathered bedrock; air rotary triconed through seam, and cleaned out borehole with hollow stem auger.			BENTONITE CHIP SEAL (BH-07A) COLORADO 10-20 SAND (BH-07B)	3603.0
21.0												3602.0
22.0								TRICONE CUTTINGS: reddish brown, extremely weathered phyllitic bedrock.			COLORADO 10-20 SAND (BH-07A)	3601.0
23.0									3600.0			
24.0												3599.0
25.0	Z	12				BR-CB	■					3598.0
26.0												
27.0												3596.0
28.0												3595.0
29.0												3594.0
30.0												3593.0
31.0								END OF BOREHOLE: Could not progress any further with the air-rotary tricone or				3592.0
32.0								MONITORING WELL INSTALLATION BH-07A				3591.0
33.0								- 1.0 ft sand and slough on bottom				3590.0
34.0								- 5 ft screen + 26.56 ft of 2" PVC pipe				3589.0
35.0								- 3 bags sand to 22 ft below grade				3588.0
36.0								- 1 bag bentonite chips to 20 ft				3587.0
37.0								- backfill borehole with drill cuttings				3586.0
38.0								- install friction (slip off) endcap				3585.0
39.0								- Top of PVC 2.56 ft above ground				3584.0
40.0								MONITORING WELL INSTALLATION BH-07B				3583.0
								- 0.5 ft sand layer on bottom				
								- 5 ft screen + 19.28 ft of 2" PVC pip				
								- 4 bags sand to 14 ft below grade				
								- 1 bag bentonite chips to 11 ft				
								- backfill borehole with drill cuttings				
								- install friction (slip off) endcap				
								- Top of PVC 3.28 ft above ground				
STEFFEN, ROBERTSON AND KIRSTEN Consulting Engineers								LOGGED BY: GRB REVIEWED BY: PMH Fig. No: A-3		COMPLETION DEPTH: 30.0 ft COMPLETE: 94/10/05 Page 2 of 2		

FARO SEEPAGE INVESTIGATION		ANML RANGE MINING CORPORATION		BOREHOLE NO: BH-09	
MONITORING WELL INSTALLATION		DRILL: BOYLE OIL 3500 - NQ DIAMOND CORE		PROJECT NO: A114101	
FARO MINE SITE, FARO, YUKON		UTM ZONE: 8 N 22 682 540 E 1 919 985		ELEVATION: 3744.00 (ft)	
SAMPLE TYPE ☒ GRAB SAMPLE		☒ TRICONE CUT'NGS ☒ SPT		☐ NO RECOVERY ☐ NW CASING ☐ NQ CORE	

DEPTH (ft)	SAMPLE TYPE	SOIL SYMBOL	GEOLOGIC DESCRIPTION	DEGREE OF BREAKAGE	PACKER TEST	SLOTTED PIEZOMETER	ADDITIONAL COMMENTS	ELEVATION (ft)
0.0	▲ RECOVERY (%) ▲ 20 40 60 80 ● RQD (%) ● 20 40 60 80							3744.0
5.0								3739.0
10.0								3734.0
15.0								3729.0
20.0								3724.0
25.0								3719.0
30.0								3714.0
35.0			TRICONED AND CASED TO 48 FT				BENTONITIC GROUT SEAL	3709.0
40.0								3704.0
45.0								3699.0
50.0			HORNBLENDE BIOTITE DIORITE - Highly weathered, orange rust colored (oxidized) (originally grey color) VERY BROKEN UP CORE, surface water would have no trouble perculating through this rock type. A LOT OF MISSING CORE indicative of lots of sand and clay. CHUNKS OF BEDROCK themselves are fairly hard but so weathered that they can be pried apart by hand.	B+				3694.0
55.0								3689.0
60.0								3684.0
65.0								3679.0
70.0								3674.0
75.0				B-				3669.0

STEFFEN, ROBERTSON AND KIRSTEN Consulting Engineers		LOGGED BY: GRB	COMPLETION DEPTH: 180.0 ft
		REVIEWED BY: PMH	COMPLETE: 94/11/17
		Fig. No: A-8	Page 1 of 3

FARO SEEPAGE INVESTIGATION			ANML RANGE MINING CORPORATION			BOREHOLE NO: BH-09		
MONITORING WELL INSTALLATION			DRILL: BOYLE OIL 3500 - NQ DIAMOND CORE			PROJECT NO: A114101		
FARO MINE SITE, FARO, YUKON			UTM ZONE: 8 N 22 682 540 E 1 919 985			ELEVATION: 3744.00 (ft)		
SAMPLE TYPE			☒ GRAB SAMPLE ☒ TRIKONE CUT'NGS ☒ SPT ☐ NO RECOVERY ☐ NW CASING ☐ NQ CORE					

DEPTH (ft)	SAMPLE TYPE	SOIL SYMBOL	GEOLOGIC DESCRIPTION	DEGREE OF BREAKAGE	PACKER TEST	SLOTTED PIEZOMETER	ADDITIONAL COMMENTS	ELEVATION (ft)
75.0			HORNBLende BIOTITE DIORITE					3669.0
80.0								3664.0
85.0				B-				3659.0
90.0								3654.0
95.0				B			BENTONITIC GROUT SEAL	3649.0
100.0			GRADING OUT OF THE OXIDIZED ZONE - colour changing from orange to creamy grey.					3644.0
105.0				A				3639.0
110.0				B-			STATIC WATER LEVEL IN PIEZOMETER BH-09 @ 3632.74 ft ELEVATION ON NOVEMBER 20, 1994.	3634.0
115.0			FAULT ZONE - MISSING ENTIRE LENGTH OF CORE	A-				3629.0
120.0			CHLORITIC BIOTITE SCHIST - dark olive green to black colour, some andalusite banding. NOT VERY MANY JOINTS; most dip at 50 degrees to the horizontal, are clean, with some crushed core on the surface, have a narrow separation, and are only slightly rough.					3624.0
125.0			- HOWEVER, HIGHLY FRACTURED AND BROKEN UP BY DRILLING; most of the fractures or drillbreaks are along biotite cleavage planes.	B-				3619.0
130.0			- RECOVERY & RQD are low but improve slightly with depth.	B				3614.0
135.0								3609.0
140.0				C-			COLORADO 10-20 SILICA SAND	3604.0
145.0				C-				3599.0
150.0				B+				3594.0

STEFFEN, ROBERTSON AND KIRSTEN Consulting Engineers		LOGGED BY: GRB	COMPLETION DEPTH: 180.0 ft
		REVIEWED BY: PMH	COMPLETE: 94/11/17
		Fig. No: A-8	Page 2 of 3

FARO SEEPAGE INVESTIGATION		ANML RANGE MINING CORPORATION		BOREHOLE NO: BH-09	
MONITORING WELL INSTALLATION		DRILL: BOYLE OIL 3500 - NQ DIAMOND CORE		PROJECT NO: A114101	
FARO MINE SITE, FARO, YUKON		UTM ZONE: 8 N 22 682 540 E 1 919 985		ELEVATION: 3744.00 (ft)	
SAMPLE TYPE ☒ GRAB SAMPLE		☒ TRICONE CUTNGS ☒ SPT		☐ NO RECOVERY ☐ NW CASING ☐ NQ CORE	

DEPTH (ft)	SAMPLE TYPE	SOIL SYMBOL	GEOLOGIC DESCRIPTION	DEGREE OF BREAKAGE	PACKER TEST	SLOTTED PIEZOMETER	ADDITIONAL COMMENTS	ELEVATION (ft)
150.0	▲ RECOVERY (%) ▲ 20 40 60 80 ● RQD (%) ● 20 40 60 80		CHLORITIC BIOTITE SCHIST					3594.0
155.0				A-			COLORADO 10-20 SILICA SAND	3589.0
160.0				C-				3584.0
165.0			- BELOW THE WATER TABLE: core is slightly weathered and there is some evidence of water movement (staining), BUT NO DEPOSITS ON FRACTURES OR JOINTS SO SEEPAGE CANNOT BE DRAMATIC.	B+			PACKER TEST RESULT k = 4.5E-05 cm/sec	3579.0
170.0				C				3574.0
175.0				C-				3569.0
180.0			END OF BOREHOLE: design depth attained. MONITORING WELL INSTALLATION					3564.0
185.0			- clean, firm bedrock at bottom					3559.0
190.0			- 5 ft screen + 175.42 ft 3/4" PVC pipe					3554.0
195.0			- 6 bags sand to 125 ft below grade					3549.0
200.0			- mixed 10 bags grout + 100 gal. water					3544.0
205.0			- grouted to surface					3539.0
210.0			- install copper slip off endcap and					3534.0
215.0			tape on with electrician's tape					3529.0
220.0			- Top of PVC 0.42 ft above ground					3524.0
225.0								3519.0

STEFFEN, ROBERTSON AND KIRSTEN Consulting Engineers		LOGGED BY: GRB	COMPLETION DEPTH: 180.0 ft
		REVIEWED BY: PMH	COMPLETE: 94/11/17
		Fig. No: A-8	Page 3 of 3

FARO SEEPAGE INVESTIGATION				ANML RANGE MINING CORPORATION				BOREHOLE NO: BH-12			
MONITORING WELL INSTALLATION				DRILL: CME 750 - HOLLOW STEM AUGERS				PROJECT NO: A114101			
FARO MINE SITE, FARO, YUKON				UTM ZONE: 8 N 22 683 950 E 1 922 150				ELEVATION: 3795.00 (ft)			
SAMPLE TYPE				☒ GRAB SAMPLE ☒ TRICONE CUTNGS ☒ SPT ☐ NO RECOVERY ☐ NW CASING ☐ NO CORE							

DEPTH (ft)	SAMPLE TYPE	SAMPLE NO	SPT(N)	SPT (blows / 12")	SOLIDS - % ZINC	USC	SOIL SYMBOL	GEOLOGIC DESCRIPTION	SLOTTED PIEZOMETER B SLOTTED PIEZOMETER A	ADDITIONAL COMMENTS	ELEVATION (ft)
0.0											3795.0
1.0											3794.0
2.0		1				SM		GRAVELLY SAND - light brown, medium grained, loose, (dry).		BENTONITE CHIP SEAL	3793.0
3.0											3792.0
4.0											3791.0
5.0		2	100			BR		WEATHERED BEDROCK - very dense, light grey weathered bedrock, (wet).		STATIC WATER LEVEL IN PIEZOMETER BH-12B @ 3790.77 ft ELEVATION ON NOVEMBER 19, 1994. STATIC WATER LEVEL IN PIEZOMETER BH-12A @ 3790.40 ft ELEVATION ON NOVEMBER 19, 1994.	3790.0
6.0											3789.0
7.0											3788.0
8.0		3	100					- not consolidated enough to tricone.		COLORADO 10-20 SILICA SAND	3787.0
9.0										RISING/FALLING HEAD TEST k = 5.3E-04 cm/sec	3786.0
10.0											3785.0
11.0								BEDROCK - consolidated. - begin air-rotary triconing.			3784.0
12.0											3783.0
13.0											3782.0
14.0											3781.0
15.0						BR				BENTONITE CHIP SEAL	3780.0
16.0											3779.0
17.0											3778.0
18.0		4						- soft, phyllitic schist.			3777.0
19.0										COLORADO 10-20 SILICA SAND	3776.0
20.0											3775.0

STEFFEN, ROBERTSON AND KIRSTEN				LOGGED BY: GRB				COMPLETION DEPTH: 27.0 ft			
Consulting Engineers				REVIEWED BY: PMH				COMPLETE: 94/10/08			
				Fig. No: A-5				Page 1 of 2			

FARO SEEPAGE INVESTIGATION				ANML RANGE MINING CORPORATION				BOREHOLE NO: BH-12					
MONITORING WELL INSTALLATION				DRILL: CME 750 - HOLLOW STEM AUGERS				PROJECT NO: A114101					
FARO MINE SITE, FARO, YUKON				UTM ZONE: 8 N 22 683 950 E 1 922 150				ELEVATION: 3795.00 (ft)					
SAMPLE TYPE		☒ GRAB SAMPLE		☒ TRICONE CUT'NGS		☒ SPT		☐ NO RECOVERY		☐ NW CASING		☐ NQ CORE	

DEPTH (ft)	SAMPLE TYPE	SAMPLE NO	SPT(N)	SPT (blows / 12") 20 40 60 80	SOLIDS - % ZINC	USC	SOIL SYMBOL	GEOLOGIC DESCRIPTION	SLOTTED PIEZOMETER B	SLOTTED PIEZOMETER A	ADDITIONAL COMMENTS	ELEVATION (ft)
20.0												3775.0
21.0												3774.0
22.0												3773.0
23.0		5				BR		- soft, phyllitic schist.				3772.0
24.0											RISEING HEAD TEST RESULT k = 2.4E-06 cm/sec	3771.0
25.0												3770.0
26.0								END OF BOREHOLE: design depth of 15 ft into bedrock attained.				3769.0
27.0								MONITORING WELL INSTALLATION BH-12B - firm bedrock at bottom - 5 ft screen + 24.56 ft 2" PVC pipe - 2.5 bags sand to 18 ft below grade - 1.5 bags bentonite chips to 10.5 ft - install friction (slip off) endcap - Top of PVC 2.56 ft above ground				3768.0
28.0								MONITORING WELL INSTALLATION BH-12A - 0.5 ft silica sand on bentonite seal - 5 ft screen + 7.19 ft 2" PVC pipe - 2.5 bags sand to 3 ft below grade - 0.5 bags bentonite chips to surface - install friction (slip off) endcap - Top of PVC 2.19 ft above ground				3767.0
29.0												3766.0
30.0												3765.0
31.0												3764.0
32.0												3763.0
33.0												3762.0
34.0												3761.0
35.0												3760.0
36.0												3759.0
37.0												3758.0
38.0												3757.0
39.0												3756.0
40.0												3755.0

STEFFEN, ROBERTSON AND KIRSTEN Consulting Engineers				LOGGED BY: GRB REVIEWED BY: PMH Fig. No: A-5		COMPLETION DEPTH: 27.0 ft COMPLETE: 94/10/08	
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FARO SEEPAGE INVESTIGATION				ANVIL RANGE MINING CORPORATION				BOREHOLE NO: BH-13			
MONITORING WELL INSTALLATION				DRILL: CME 750 - HOLLOW STEM AUGERS				PROJECT NO: A114101			
FARO MINE SITE, FARO, YUKON				UTM ZONE: 8 N 22 684 830 E 1 922 060				ELEVATION: 3896.00 (ft)			
SAMPLE TYPE		☐ GRAB SAMPLE ☒ TRICONE CUTTINGS ☒ SPT ☐ NO RECOVERY ☐ NW CASING ☐ NQ CORE									

DEPTH (ft)	SAMPLE TYPE	SAMPLE NO	SPT(N)	SPT (blows / 12")	SOLIDS - % ZINC	USC	SOIL SYMBOL	GEOLOGIC DESCRIPTION	SLOTTED PIEZOMETER B	SLOTTED PIEZOMETER A	ADDITIONAL COMMENTS	ELEVATION (ft)
0.0		1				DR		VOLCANIC ASH - at 2", white. ORGANIC SAND - at 6", medium grained, black.			BENTONITE CHIP SEAL (BH-13A) DRILL CUTTINGS (BH-13B)	3896.0
1.0								GRAVELLY SAND - medium to rust brown, medium grained sand, angular to sub-angular gravel, loose, (dry).				3895.0
2.0												3894.0
3.0		2									DRILL CUTTINGS (BH-13A) DRILL CUTTINGS (BH-13B)	3893.0
4.0						GM						3892.0
5.0											COLORADO 10-20 SAND (BH-13A) DRILL CUTTINGS (BH-13B)	3891.0
6.0		3						- density increasing with depth.				3890.0
7.0												3889.0
8.0		4										3888.0
9.0						GP		SANDY GRAVEL - brownish grey, dense, (dry)			STATIC WATER LEVEL IN PIEZOMETER BH-13A @ 3886.91 ft ELEVATION ON NOVEMBER 21, 1994.	3887.0
10.0											STATIC WATER LEVEL IN PIEZOMETER BH-13B @ 3886.82 ft ELEVATION ON OCTOBER 23, 1994.	3886.0
11.0		5						- some phyllitic gravel slices.				3885.0
12.0												3884.0
13.0								BEDROCK - consolidated. - begin air-rotary triconing.				3883.0
14.0												3882.0
15.0		6						- soft, phyllitic schist.				3881.0
16.0						BR						3880.0
17.0											BENTONITE CHIP SEAL (BH-13B)	3879.0
18.0												3878.0
19.0												3877.0
20.0											COLORADO 10-20 SAND (BH-13B)	3876.0

STEFFEN, ROBERTSON AND KIRSTEN Consulting Engineers				LOGGED BY: GRB REVIEWED BY: PMH Fig. No: A-6		COMPLETION DEPTH: 27.0 ft COMPLETE: 94/09/30	
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FARO SEEPAGE INVESTIGATION				ANML RANGE MINING CORPORATION				BOREHOLE NO: BH-13					
MONITORING WELL INSTALLATION				DRILL: CME 750 - HOLLOW STEM AUGERS				PROJECT NO: A114101					
FARO MINE SITE, FARO, YUKON				UTM ZONE: 8 N 22 684 830 E 1 922 060				ELEVATION: 3896.00 (ft)					
SAMPLE TYPE		☒ GRAB SAMPLE		☒ TRICONE CUT'NGS		☒ SPT		☐ NO RECOVERY		☐ NW CASING		☐ NO CORE	

DEPTH (ft)	SAMPLE TYPE	SAMPLE NO	SPT(N)	SPT (blows / 12") 20 40 60 80	SOLIDS - % ZINC	USC	SOIL SYMBOL	GEOLOGIC DESCRIPTION	SLOTTED PIEZOMETER B	SLOTTED PIEZOMETER A	ADDITIONAL COMMENTS	ELEVATION (ft)
20.0												3876.0
21.0												3875.0
22.0												3874.0
23.0		7					BR	- soft, phyllitic schist.				3873.0
24.0											COLORADO 10-20 SAND (BH-13B)	3872.0
25.0												3871.0
26.0												3870.0
27.0												3869.0
28.0								END OF BOREHOLE: design depth of 15 ft into bedrock attained.				3868.0
29.0								MONITORING WELL INSTALLATION BH-13B				3867.0
30.0								- firm bedrock at bottom				3866.0
31.0								- 5 ft screen + 24.23 ft 2" PVC pipe				3865.0
32.0								- 3.5 bags sand to 18.5 ft below grade				3864.0
33.0								- mixed 0.75 bags grout + 10 gal. water				3863.0
34.0								- grouted to 16.0 ft below grade				3862.0
35.0								- backfill borehole with drill cuttings				3861.0
36.0								- install friction (slip off) endcap				3860.0
37.0								- Top of PVC 2.23 ft above ground				3859.0
38.0								MONITORING WELL INSTALLATION BH-13A				3858.0
39.0								- 0.5 ft sand layer on bottom				3857.0
40.0								- 5 ft screen + 8.84 ft 2" PVC pipe				3856.0
								- 2.5 bags sand to 4.5 ft below grade				
								- backfill with drill cuttings to 1.5 ft				
								- mixed 0.5 bags grout + 7 gal. water				
								- grouted to surface				
								- install friction (slip off) endcap				
								- Top of PVC 1.34 ft above ground				

STEFFEN, ROBERTSON AND KIRSTEN		LOGGED BY: GRB		COMPLETION DEPTH: 27.0 ft	
Consulting Engineers		REVIEWED BY: PMH		COMPLETE: 94/09/30	
		Fig. No: A-6		Page 2 of 2	

FARO SEEPAGE INVESTIGATION				ANVIL RANGE MINING CORPORATION				BOREHOLE NO: BH-14					
MONITORING WELL INSTALLATION				DRILL: CME 750 - HOLLOW STEM AUGERS				PROJECT NO: A114101					
FARO MINE SITE, FARO, YUKON				UTM ZONE: 8 N 22 683 155 E 1 921 510				ELEVATION: 3797.00 (ft)					
SAMPLE TYPE		☒ GRAB SAMPLE		☒ TRICONE CUT'NGS		☒ SPT		☐ NO RECOVERY		☐ NW CASING		☐ NO CORE	

DEPTH (ft)	SAMPLE TYPE	SAMPLE NO	SPT(N)	SPT (blows / 12") 20 40 60 80	SOLIDS - % ZINC	USC	SOIL SYMBOL	GEOLOGIC DESCRIPTION	SLOTTED PIEZOMETER B	SLOTTED PIEZOMETER A	ADDITIONAL COMMENTS	ELEVATION (ft)
0.0								ORGANIC MATTER - to 2"				3797.0
1.0		1						VOLCANIC ASH - to 6"				3796.0
2.0								GRAVELLY SAND - dark brown, medium grained loose to medium density, (moist).				3795.0
3.0		2										3794.0
4.0								- changing colour to light brown.				3793.0
5.0		3						- (dry)				3792.0
6.0											DRILL CUTTINGS BACKFILL	3791.0
7.0								WEATHERED BEDROCK				3790.0
8.0		4	100									3789.0
9.0											STATIC WATER LEVEL IN PIEZOMETER BH-14A @ 3786.60 ft ELEVATION ON NOVEMBER 19, 1994.	3788.0
10.0											STATIC WATER LEVEL IN PIEZOMETER BH-14B @ 3785.09 ft ELEVATION ON NOVEMBER 19, 1994.	3787.0
11.0												3786.0
12.0												3785.0
13.0											BENTONITE CHIP SEAL	3784.0
14.0												3783.0
15.0		5	100					- weathered bedrock, not consolidated enough to air-rotary tricone.				3782.0
16.0												3781.0
17.0											COLORADO 10-20 SILICA SAND	3780.0
18.0												3779.0
19.0											RISING HEAD TEST RESULT k = 2.2E-05 cm/sec	3778.0
20.0												3777.0

STEFFEN, ROBERTSON AND KIRSTEN Consulting Engineers				LOGGED BY: GRB		COMPLETION DEPTH: 30.5 ft	
				REVIEWED BY: PMH		COMPLETE: 94/10/07	
				Fig. No: A-7		Page 1 of 2	

FARO SEEPAGE INVESTIGATION				ANML RANGE MINING CORPORATION				BOREHOLE NO: BH-14					
MONITORING WELL INSTALLATION				DRILL: CME 750 - HOLLOW STEM AUGERS				PROJECT NO: A114101					
FARO MINE SITE, FARO, YUKON				UTM ZONE: 8 N 22 683 155 E 1 921 510				ELEVATION: 3797.00 (ft)					
SAMPLE TYPE		☒ GRAB SAMPLE		☒ TRICONE CUTNGS		☒ SPT		☐ NO RECOVERY		☐ NW CASING		☐ NQ CORE	

DEPTH (ft)	SAMPLE TYPE	SAMPLE NO	SPT(N)	SPT (blows / 12")	SOLIDS - % ZINC	USC	SOIL SYMBOL	GEOLOGIC DESCRIPTION	SLOTTED PIEZOMETER B	SLOTTED PIEZOMETER A	ADDITIONAL COMMENTS	ELEVATION (ft)
20.0								BEDROCK - consolidated - begin air-rotary triconing.			COLORADO 10-20 SILICA SAND	3777.0
21.0												3776.0
22.0											BENTONITIC CHIP SEAL	3775.0
23.0												3774.0
24.0												3773.0
25.0		6				BR		- hard quartz diorite			COLORADO 10-20 SILICA SAND	3772.0
26.0												3771.0
27.0												3770.0
28.0												3769.0
29.0											RIISING HEAD TEST RESULT k = 1.1E-05 cm/sec	3768.0
30.0												3767.0
31.0								END OF BOREHOLE: design depth of 30 ft attained.				3766.0
32.0								MONITORING WELL INSTALLATION BH-14B - firm bedrock at bottom - 5 ft screen + 28.22 ft 2" PVC pipe - 3 bags sand to 23.5 ft below grade - 1 bag bentonite chips to 21 ft - install friction (slip off) endcap - Top of PVC 2.72 ft above ground				3765.0
33.0												3764.0
34.0								MONITORING WELL INSTALLATION BH-14A - 0.5 ft silica sand on bentonite seal - 5 ft screen + 16.12 ft 2" PVC pipe - 4 bags sand to 13.5 ft below grade - 1 bag bentonite chips to 10.5 ft - backfill borehole with drill cuttings - install flush threaded endcap - Top of PVC 0.62 ft above ground				3763.0
35.0												3762.0
36.0												3761.0
37.0												3760.0
38.0												3759.0
39.0												3758.0
40.0												3757.0

STEFFEN, ROBERTSON AND KIRSTEN		LOGGED BY: GRB		COMPLETION DEPTH: 30.5 ft	
Consulting Engineers		REVIEWED BY: PMH		COMPLETE: 94/10/07	
		Fig. No: A-7		Page 2 of 2	