APPENDIX B BORING LOGS

Date Drilled: 8/17/15 Client: El Monte NP

Equipment: CME75 Truck Rig Driving Weight / Drop / Sampler Size: 140lbs./30in./3.0" O.D.

Surface Elevation(ft): 435 Logged by: VJR Measured Depth to Water(ft): 40.1

							spui to			
					SAM	IPLES		(%)	/Τ.	
	DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	DRIVE	BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
-	- - -		(SM) Silty Sand, fine to medium, few gravel to 2", dark brown	Native	X	, ,	8 8 8	2.4	Dist.	Ring
- -	- 5 - - 5 -			Auger Chatter	X	Z X	11 19 22	1.2	Dist.	Ring SA
-	- - 10 - -				X	7	7 9 14	2.5	117	Ring
-	- - 15 - -				X	7	6 10 14	4.5	104	Ring
-	- 20 - 				X	7	11 11 15	2.1	108	DS, Ring
1/10/15	- 25 - 		(SM) Silty Sand, fine to medium, dark grayish brown		X	, 	3 7 13	8.0 23.9	117	Ring
10331-3 15383-8.GPJ CHJ.GDT 9/10/15	- 30 -			Iron Oxide Staining	X	,	6 11 15	2.8 4.1	106	Ring
103	11000									



SLOPE STABILITY INVESTIGATION 13964 EL MONTE ROAD, LAKESIDE, CALIFORNIA Job No. 15383-8 Enclosure B-1a

Date Drilled: 8/17/15 Client: El Monte NP

Equipment: CME75 Truck Rig Driving Weight / Drop / Sampler Size: 140lbs./30in./3.0" O.D.

Surface Elevation(ft): 435 Logged by: VJR Measured Depth to Water(ft): 40.1

				1.100			- F	water	` '	
					SAM	PLES		(%)	VT.	
(9) 111414	DEРІН (п)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	DRIVE	BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
-	- - -		(SP-SM) Sand, fine to coarse, with silt and few gravel to 1/2", light brownish gray		X		9 14 16	4.1	107	Ring
- 4 - -	40 — - - -		(SM) Silty Sand, fine to medium with coarse, grayish brown	Gröundwater		,	8 11 16	23.0 28.7	103	Ring
- 4 - -	15 — - - -			Sand Plug	X		5 6 9	25.7	97	Ring
- 5 -	50 — - - -						4 9 21	24.7	99	Ring
- 5	55 — - -		(SP-SM) Sand, fine to coarse, with silt and gravel to 1", dark olive gray	Sand Plug	X		5 11 14	11.9	115	Ring
+	- 50 – - -				X	,	8 15 28	10.5 17.4	124	Ring
10331-3 15383-8.GPJ CHJ.GDT 9/10/15	- 55 — - -				X		12 16 21	15.4	113	Ring
103	100									



SLOPE STABILITY INVESTIGATION 13964 EL MONTE ROAD, LAKESIDE, CALIFORNIA Job No. 15383-8 Enclosure B-1b

Date Drilled: 8/17/15 Client: El Monte NP

Equipment: CME75 Truck Rig Driving Weight / Drop / Sampler Size: 140lbs./30in./3.0" O.D.

Surface Elevation(ft): 435 Logged by: VJR Measured Depth to Water(ft): 40.1

						- P	vv attr	` /	
				SAM	PLES		(%	T.	
DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	DRIVE	BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
 		(SP-SM) Sand, fine to coarse, with silt and gravel to 1", dark olive gray		X		6 10 16	N.R.	N.R.	Ring
- 75 - 		(SM) Silty Sand, fine to medium, with gravel to 2", black	Gravel lens			8 17 25	14.4 21.3	118	Ring
- 80 - 		(SP-SM) Sand, fine to coarse, with silt and gravel to 1", dark yellowish olive		X		18 23 27	9.3	149	Ring
- 85 -		(SM) Silty Sand, fine to coarse, with clay and gravel to 2", gray [Consolidated Sediment]	Very Hard drilling, chatter			23 50/1"	17.9	110	Ring
- 90 - 						17 38 50/3"	18.6	116	DS, Ring
95 -				\bowtie		50/5"	13.5	127	Ring
10331-3 15383-8.GPJ CHJ.GDT 9/10/15		END OF BORING AT 105.25' NO REFUSAL, NO FILL, NO BEDROCK				30 50/4"	21.6	115	Ring
10331-3		MODERATE CAVING IN UPPER 10' GROUNDWATER AT 40'		~		50/2"	N.R.	N.R.	Ring



SLOPE STABILITY INVESTIGATION 13964 EL MONTE ROAD, LAKESIDE, CALIFORNIA Job No.

Enclosure B-1c

15383-8 **B-**1

Date Drilled: 8/19/15 Client: El Monte NP

Equipment: CME75 Truck Rig Driving Weight / Drop / Sampler Size: 140lbs./30in./3.0" O.D.

Surface Elevation(ft): 440 Logged by: VJR Measured Depth to Water(ft): 42.3

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					SAM	IPLES		(%)	T.	
	DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	DRIVE	BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
			(SM) Silty Sand, fine with medium, brown	Native						
L					X		2 3 3	2.1	92	Ring
						****	3	2.0		
-								2.8		
-	- 5 -		(CD CM) Cond fine to come with eith and amount to 1!!				4	1.5	Diat	Dina
-			(SP-SM) Sand, fine to coarse, with silt and gravel to 1", light olive brown		X		4 8 8	1.5	Dist.	Ring
-		-	nght onve brown		<u> </u>		8			
-		+ 11								
-								2.0		
ŀ	- 10 -	-				1	5	5.3	98	Ring
-		+			\triangle		5 9 13			
ŀ										
-		1								
ŀ		†								
ľ	- 15 -				∇	1	6	3.3	101	Ring
f							6 8 11			
Ī										
Ī										
	- 20 -									
	- 20 -		(SM) Silty Sand, fine to medIum, dark grayish brown		\bigvee		4 6 7	18.0	97	Ring
							7	12.4		SA
	- 25 -						A	10.7	02	Die -
-					X		4 5 8	19.7	92	Ring
2					<u> </u>		8			
9/10/1										
105 5		-								
CHJ.C	- 30 -		(SP-SM) Sand, fine to coarse, with silt, light olive brown				7	2.7	104	Ring
GPJ -			(Si Sii) Suid, line to course, with siit, light onve flowing		X	***	10 17	2.8		-5
183-8		+					- /			
3 153		†								
10331-3 15383-8.GPJ CHJ.GDT 9/10/15		1								
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SLOPE STABILITY INVESTIGATION 13964 EL MONTE ROAD, LAKESIDE, CALIFORNIA Job No. 15383-8 Enclosure

B-2a

Date Drilled: 8/19/15 Client: El Monte NP

Equipment: CME75 Truck Rig Driving Weight / Drop / Sampler Size: 140lbs./30in./3.0" O.D.

Surface Elevation(ft): 440 Logged by: VJR Measured Depth to Water(ft): 42.3

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				SAM	PLES	. ;	(%)	WT.	
DEPTH (#)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	DRIVE	BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
-		(SM) Silty Sand, fine to medium, few clay, olive gray		X		7 9 11	11.8 12.0	88	Ring
- - - 40	0 -			X	,	4 7 8	33.0	88	Ring
-		dark olive gray	▼ Groundwate: Auger Chatter	r		8			
- 45 - -	5 -			X	,	6 11 15	21.0 19.5	100	DS, Ring
- 50	0	(SM) Silty Sand, fine to medium, few clay, gray		X	, 	2 7 14	27.4 27.2	95	Ring
- - 55	5 -			X		3 6 7	35.1	87	Ring
- 60 - 60	0 -			X		3 7 12	30.5	91	DS, Ring
10331-3 15383-8.GPJ CHJ.GDT 9/10/15	5 -	(SP-SM) Sand, fine to coarse, with silt, dark gray		X		6 17 28	22.0	106	Ring
10331-3 15383-8.		(



SLOPE STABILITY INVESTIGATION 13964 EL MONTE ROAD, LAKESIDE, CALIFORNIA Job No. 15383-8 Enclosure B-2b

Date Drilled: 8/19/15 Client: El Monte NP

Equipment: CME75 Truck Rig Driving Weight / Drop / Sampler Size: 140lbs./30in./3.0" O.D.

Surface Elevation(ft): 440 Logged by: VJR Measured Depth to Water(ft): 42.3

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					SAM	PLES		(%)	Ţ.	
	DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	DRIVE	BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
			(SP-SM) Sand, fine to coarse, with silt, dark gray		\setminus		7 12 18	20.9	107	Ring
- - - -	- 75			Sand Plug	X	,	18 10 21 45	22.0	101	Ring
-	- 80 -		(SM) Silty Sand fine to george with alay and gravel to	Very Hard	X		10 12 50/5"	13.9	123	Ring
-				Drilling						
-	- 85 - - 85 -				><		50/4"	N.R.	N.R.	Ring
-	- 90 - -		END OF BORING		>	****	50/3"	N.R.	N.R.	Ring
- - -			NO REFUSAL, NO FILL, NO BEDROCK SLIGHT CAVING IN UPPER 10' GROUNDWATER AT 42.25'							
10331-3 15383-8.GPJ CHJ.GDT 9/10/15	- 100 -									
1033										



SLOPE STABILITY INVESTIGATION 13964 EL MONTE ROAD, LAKESIDE, CALIFORNIA Job No. 15383-8 Enclosure

B-2c

Date Drilled: 8/18/15 Client: El Monte NP

Equipment: CME75 Truck Rig Driving Weight / Drop / Sampler Size: 140lbs./30in./2.0" O.D.

Surface Elevation(ft): 448 Logged by: VJR Measured Depth to Water(ft): 42.3

_		Z EIC VALION	=======================================	IVICa	Surci	u DC	pm to	water		
	DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	DRIVE	BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
-			(SM) Silty Sand, fine, brown	Native	X	***	5 6 5	2.6		Pass #200, SPT
- - -	- 5 -		(SP) Sand, fine to coarse, few gravel to 1/2", dark brown		X		2 2 3			Pass #200, SPT
-	- 10 -				X	***	2 2 2	1.9		Pass #200, SPT
- - -	- 15 -				X		1 2 3			Pass #200, SPT
-	- 20 -				X		4 4 3			Pass #200, SPT
/10/15	- 25 -		(ML) Sandy Silt, fine with medium, dark brown		X		3 3 4			Pass #200, SPT
10331-3 15383-8.GPJ CHJ.GDT 9/10/15	- 30 -		(SP-SM) Sand, fine to coarse, with silt and few gravel to 1/2", light yellowish brown				3 5 6			Pass #200, SPT
, -∟									'	Zmalagura



SLOPE STABILITY INVESTIGATION 13964 EL MONTE ROAD, LAKESIDE, CALIFORNIA Job No. 15383-8 Enclosure B-3a

Date Drilled: 8/18/15 Client: El Monte NP

Equipment: CME75 Truck Rig Driving Weight / Drop / Sampler Size: 140lbs./30in./2.0" O.D.

Surface Elevation(ft): 448 Logged by: VJR Measured Depth to Water(ft): 42.3

	e Elevation	(ii). 110 = 388	ıvıca.	surc	u D	pm to	water	` ′	
DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	DRIVE	BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
-		(SP) Sand, fine to coarse, few gravel to 1/2", light yellowish brown (ML) Sandy Silt, fine, with clay, olive brown	Iron Oxide Staining	X		3 1 3			Pass #200, SPT
- 40 -	-	(ML) Sandy Silt, fine to coarse, with clay and gravel to 1", dark grayish brown	Interbedded sand and silt lerges Groundwater			3 3 2			DS, Pass #200, SPT
- 45 - -		(SM) Silty Sand, fine to medium with coarse, grayish brown		X		3 6 8			Pass #200, SPT
- 50			Interbedded coarse sand lenses	X		4 9 11			Pass #200, SPT
- 55 -				X		3 5 5			Pass #200, SPT
- 60		(SM) Silty Sand, fine with medium, black		X		3 5 5			Pass #200, SPT
10331-3 15383-8.6PJ CHJ.GDT 9/10/15		(SP-SM) Sand, fine to coarse, with silt and gravel to 1/2", black		X		4 7 12			Pass #200, SPT
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SLOPE STABILITY INVESTIGATION 13964 EL MONTE ROAD, LAKESIDE, CALIFORNIA Job No. 15383-8 Enclosure B-3b

Date Drilled: 8/18/15 Client: El Monte NP

Equipment: CME75 Truck Rig Driving Weight / Drop / Sampler Size: 140lbs./30in./2.0" O.D.

Surface Elevation(ft): 448 Logged by: VJR Measured Depth to Water(ft): 42.3

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				7.0	SAME	PLES	Z.	E (%)	DRY UNIT WT. (pcf)	D
	DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	Æ	×	BLOWS/6 IN.	FIELD MOISTURE (%)	. UNI	LAB/FIELD TESTS
	DEP	GRAJ			DRIVE	BULK		FIELD	DRY (pcf)	LAB
-		-	(SP-SM) Sand, fine to coarse, with silt and gravel to 1/2", black	and Plug			2 4 5			Pass #200, SPT
-	75 -						5 7 10			Pass #200, SPT
-		-					10			
-	80 -						9 10 14			Pass #200, SPT
-	85 -	-					6			Pagg #200
-				ery Hard	X		6 9 13			Pass #200, SPT
-	90 -		2", gray [Consolidated Sediment]	rining			39			Pass #200.
-		-					39 43 25			Pass #200, SPT
	95 -		END OF BORING		X		11 12 18			Pass #200, SPT
10/15		-	PRACTICAL REFUSAL ON HARD SOIL NO BEDROCK, NO FILL, SLIGHT CAVING GROUNDWATER AT 42.25'							
10331-3 15383-8.GPJ CHJ.GDT 9/10/15	100 -		GROOM WITHERTH 12.20							
5383-8.GPJ		_								
10331-3 1										



SLOPE STABILITY INVESTIGATION 13964 EL MONTE ROAD, LAKESIDE, CALIFORNIA Job No.

Enclosure

15383-8 B-3c

Date Drilled: 8/18/15 Client: El Monte NP

Equipment: CME75 Truck Rig Driving Weight / Drop / Sampler Size: 140lbs./30in./3.0" O.D.

Surface Elevation(ft): 443 Logged by: VJR Measured Depth to Water(ft): 36.7

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	H (ft)	НІС	VISUAL CLASSIFICATION	REMARKS		PLES	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
	DEPTH (ft)	GRAPHIC LOG	(SM) Silty Sand, fine, brown	Native REM/	DRIVE	BULK	BLOV	FIELD	DRY (pcf)	LAB/] TEST
-			(SW) Sitty Saild, life, blowii	Native		, 	9 15 19	4.1	108	Ring
-	5 -		(SM) Silty Sand, fine to medium, dark yellowish brown				5 7 9	5.1	104	Ring
-	10 -					, 	6 11 11	6.3	107	Ring SA
-	15 -						4 5 6	4.3	99	DS, Ring
-	20 -		(SP-SM) Sand, fine to coarse, with silt, light yellowish brown (ML) Sandy Silt, fine, few clay, brown		X		6 13 13	16.1	Dist.	Ring
T 9/10/15	25 -		(SP-SM) Sand, fine to coarse, with silt, light olive brown		X		5 8 12	1.7	Dist.	Ring
10331-3 15383-8.GPJ CHJ.GDT 9/10/15	30 -				X	7	6 8 12	N.R.	N.R.	Ring



SLOPE STABILITY INVESTIGATION 13964 EL MONTE ROAD, LAKESIDE, CALIFORNIA Job No. 15383-8 Enclosure

B-4a

Date Drilled: 8/18/15 Client: El Monte NP

Equipment: CME75 Truck Rig Driving Weight / Drop / Sampler Size: 140lbs./30in./3.0" O.D.

Surface Elevation(ft): 443 Logged by: VJR Measured Depth to Water(ft): 36.7

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				SAM	IPLES	ż	3 (%)	WT.	
H (ft)	НІС	VISUAL CLASSIFICATION	ARKS	田		I 9/S/	TUR	UNIT	FIELL S
DEPTH (ft)	GRAPHIC LOG		REMARKS	DRIVE	BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
	-	(SP-SM) Sand, fine to coarse, with silt, light olive brown		X		7 8 11	23.2	97	Ring
	-		▼ Groundwater			11			
- 40 -									
- 40 -				X		3 6 9	20.2	100	Ring
-	-								
- 45 -	-		·			2	N.R.	N.R.	Ring
_				X		3 4 9	IV.IX.	IV.IX.	Kilig
50 -		(SP-SM) Sand, fine to coarse, with silt and gravel to 1",				5	14.6	117	Ring
-	-	dark gray				5 11 19			
-	-								
- 55 -				X		4 18 20	13.6	116	Ring
-	-					20			
- 60 -				X		3 12 13	16.6	110	Ring
cr/UF -	-					13			
103313 15383-8 GPJ 0410715									
75 C45 C45 C45 C45 C45 C45 C45 C45 C45 C4				X		7 17 46	17.2	115	Ring
15585-									
-10301									



SLOPE STABILITY INVESTIGATION 13964 EL MONTE ROAD, LAKESIDE, CALIFORNIA Job No. 15383-8 Enclosure B-4b

Date Drilled: 8/18/15 Client: El Monte NP

Equipment: CME75 Truck Rig Driving Weight / Drop / Sampler Size: 140lbs./30in./3.0" O.D.

Surface Elevation(ft): 443 Logged by: VJR Measured Depth to Water(ft): 36.7

						- F	water		
				SAM	PLES		(%)	VT.	
DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	DRIVE	BULK	BLOWS/6 IN.	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
-	-	(SP-SM) Sand, fine to coarse, with silt and gravel to 1", dark gray	Sand Plug	X		4 4 7	N.R.	N.R.	Ring
- 75 -						8 23 40	16.2	115	Ring
- 80 -	-		Sand Plug	X		9 12 50	9.9	126	Ring
- 85 -		(SM) Silty Sand, fine to medium with coarse, with clay and gravel to 2", dark gray [Consolidated Sediment]	Very Hard Drilling	>		50/4"	6.1	135	Ring
- 90 -		END OF BORING NO REFUSAL, NO FILL, NO BEDROCK SLIGHT CAVING IN UPPER 10'				50	10.1	123	Ring
- - 95 -		GROUNDWATER AT 36.67'							
10331-3 15383-8 GPJ CHJ.GDJ 9/10/15									
ĕ			<u> </u>						



Enclosure B-4c

Job No.

LOG OF TEST BORING NO. B- 5											
Drilling Date		/22/98		ing Equ							
Logged By:		KLS	_ Met	hod/Ho	le Si	ize: HOLLOW STEM AUGER/8" Bottom Elevation: -453'					
Depth (feet) Sample Type	Blow Count (/foot) Dry Density	(pcf) Moisture Content (%)	Lab Tests	SOSO	Graphic Log	MATERIAL DESCRIPTION					
				SM		TOPSOIL: silty sand, loose, moist, brown.					
2	- †	-		św ⊤		ALLUVIUM (Qal): medium to coarse grained sand, loose, damp,					
						gray brown to gray.					
4						<u>-</u>					
├ ┤	7 98	2.7	GS								
F € ₩ H	7 98	2.7	GS								
 											
8											
} -											
-10- B											
H	13					:Becomes medium grained sand.					
-12-											
 											
-14-											
		.		M-SP							
16 H	12 95	24.0	GS S	IVI-SF		(Qal): very silty fine grained micaceous sand, loose to medium dense, wet, gray brown.					
18-				·							
		}				:Becomes fine grained micaceous sand with silt.					
-20-											
Г207	16		-								
						End of boring at -21 ft.					
-22-		.				No free water encountered.					
				1							
-24-											
Drive Energy	Data: Hamme			AD ,							
	Weight Drop		40 lbs. 0 in.								
Diagna refer to	•			shown	on "F	Explanation of Logs"					
				1.6		Project No.: 97157-01					
	S H E P . ENGINEERING	ASSOCI	ATES I	NC.		Log of Took Roging No R E					
	Geotechnical	Consult	ants:		and the second	Log of Test Boring No. B- 5 El Monte Golf Course					
	Engineers-Go				THE AGE	1 of 1					

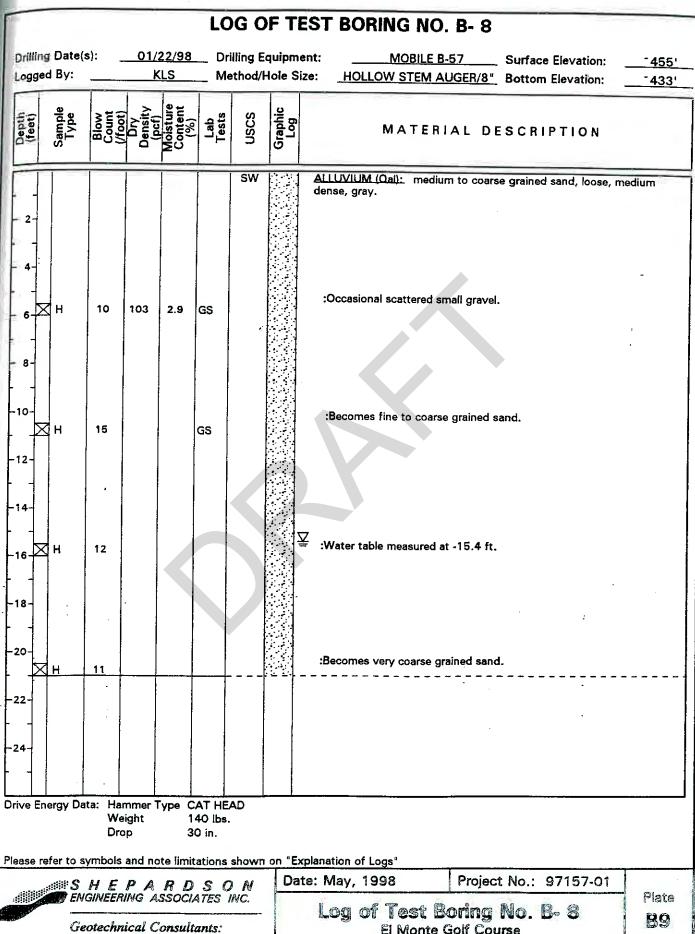
L3 98

	LOG OF TEST BORING NO. B- 6											
	ng Date(s ed By:	s): _		2/98 LS		illing Eq ethod/H						
Depth (feet)	Sample Type	Blow Count (/foot)	Dry Density (pcf)	Moisture Content (%)	Lab Tests	SOSO	Graphic Log	MATERIAL DESCRIPTION				
						SM		TOPSOIL: silty sand, loose, moist, brown.				
- 2-	_ _	 		- 		ร ีм ี -รีพี	1	ALLUVIUM (Oal): fine grained micaceous sand to silty sand, loose, gray brown.				
- 4- 6-	×н	9	105	4.6	GS	- šŵ -		c(Qal): fine to coarse grained sand, loose, damp, gray.				
- 8- - 10-		11										
-12- -14-	Ж											
-16- 	×н	14	-		GS			:Becomes medium to coarse grained sand.				
- 20-	Жн	15						:Becomes fine to medium grained sand.				
-22-								End of boring at -21 ft. No free water encountered.				
-24-												
	Energy D	V	eight rop		140 lb 30 in.	15.	n on '	'Explanation of Logs'				
Pleas								Explanation of Logs* Date: May, 1998 Project No.: 97157-01				
4	E (H L NGINEL Jeoteci Ingine	RING 	ASSOC Consu	iates Liants	NC.		Log of Test Boring No. B- 6 El Monte Golf Course Plate B7 1 of 1				

A1 2 90

LOG OF TEST BORING NO. B- 7 01/22/98 Drilling Equipment: MOBILE B-57 Surface Elevation: **~465**' Drilling Date(s): Method/Hole Size: HOLLOW STEM AUGER/8" Bottom Elevation: -443° Logged By: Graphic Log USCS MATERIAL DESCRIPTION ALLUVIUM: fine grained micaceous silty sand to sand, loose, moist to wet, gray brown to olive. :Becomes fine to coarse grained sand and drier. GS 11 Н GS :Becomes damp. 16 10 :Becomes moist. :Becomes fine to medium grained. 18 :Becomes very wet to saturated. 17 End of boring at -21 ft. Free intergranular moisture at bottom of boring, near the water 22 24 Drive Energy Data: Hammer Type CAT HEAD 140 lbs. Weight Drop 30 in. Please refer to symbols and note limitations shown on "Explanation of Logs" SHEPARDSON Project No.: 97157-01 Date: May, 1998 Plate Log of Test Boring No. B- 7 88 El Monte Golf Course Geotechnical Consultants: 1 of 1 Engineers-Geologists

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Engineers-Geologists

RI 3 98

LOG OF TEST BORING NO. B- 9 Drilling Date(s): 01/23/98 Drilling Equipment: MOBILE B-57 Surface Elevation: 457' HOLLOW STEM AUGER/8" Bottom Elevation: -435' Logged By: ВМН Method/Hole Size: Graphic Log USCS MATERIAL DESCRIPTION ALLUVIUM (Oal): fine to coarse grained sand, loose, damp, light gray. Contains gravel at -1 ft. : Layer of 1" gravels at -3 ft. GS 13 :Becomes moist. 12 : 1" diameter gravels present between -11 ft. and -12ft.. Becomes coarser grained, micaceous. รีพี-รีพี (Oal): fine to medium grained sand to silty sand, medium dense to GS ×П 20 loose, wet to saturated, medium gray. 18 20 :Water standing at -22.8 ft.. 14 End of boring at -21 ft. -22 Water table at -22.8 ft. 24 Drive Energy Data: Hammer Type CAT HEAD Weight 140 lbs. 30 in. Drop Please refer to symbols and note limitations shown on "Explanation of Logs" SHEPARDSON Date: May, 1998 Project No.: 97157-01 Plate ENGINEERING ASSOCIATES INC. Log of Test Boring No. B- 9 810 Geotechnical Consultants: El Monte Golf Course 1 of 1

Engineers-Geologists

LOG OF TEST BORING NO. B-10 Drilling Date(s): 01/23/98 Drilling Equipment: MOBILE B-57 Surface Elevation: 455 Logged By: вмн Method/Hole Size: HOLLOW STEM AUGER/8" Bottom Elevation: 433' Graphic Log USCS MATERIAL DESCRIPTION ALLUVIUM (Qal): fine to coarse grained sand, loose, damp to dry, light gray. :Scattered gravel at - 3 ft.. Н 2 G\$:Becomes gray-tan. <u>GS</u> ŠМ (Qal): silty fine grained sand, loose, moist, medium dark brown. \$W (Qal): fine to coarse grained sand, loose, wet to saturated, gray. 20 :Contains scattered gravel. :Water table measured at -19 ft. (Qai): sandy silt, soft, saturated, dark brown. End of boring at -21 ft.. 22 Water table at -19 ft. 24 Drive Energy Data: Hammer Type CAT HEAD Weight 140 lbs. 30 in. Drop Please refer to symbols and note limitations shown on "Explanation of Logs" Project No.: 97157-01 Date: June, 1998 SHEPARDSON ENGINEERING ASSOCIATES INC. Plate Log of Test Boring No. B-10 B11 Geotechnical Consultants: El Monte Golf Course 1 of 1 Engineers-Geologists

31.3.98

LOG OF TEST BORING NO. B-11 Drilling Date(s): 01/23/98 **Drilling Equipment:** MOBILE B-57 Surface Elevation: ~4531 Logged By: **BMHKLS** Method/Hole Size: HOLLOW STEM AUGER/8" Bottom Elevation: ~431' Graphic Log Sample Type USCS MATERIAL DESCRIPTION ALLUVIUM (Qal): medium to coarse grained sand, loose, moist, SM-SW yellow brown. :Becomes interlayered with silty sand. 10 104 6.5 ΣН İGS :Becomes light gray. Interlayered silty sand layers are 1" to 2" **∄** ⊬ 7 GS thick. 94 4.2 \boxtimes H 14 16 :Water table measured at -18.6 ft.. 20 20 End of boring at -21 ft... 22 Water table at -18.6 ft... Drive Energy Data: Hammer Type CAT HEAD Weight 140 lbs. Drop 30 in. Please refer to symbols and note limitations shown on "Explanation of Logs" Date: May, 1998 Project No.: 97157-01 SHEPARDSON ENGINEERING ASSOCIATES INC. Plate Log of Test Boring No. B-11 **B12** Geotechnical Consultants: El Monte Golf Course

Engineers-Geologists

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LOG OF TEST BORING NO. B-12 Surface Elevation: Drilling Date(s): 01/23/98 Drilling Equipment: MOBILE B-57 ~449¹ HOLLOW STEM AUGER/8" Bottom Elevation: -427' Method/Hole Size: Logged By: **BMH USCS** MATERIAL DESCRIPTION SW ALLUVIUM (Qal): fine to coarse grained sand, loose, damp, light gray. Contains scattered 1" diameter gravel. GS В :Contains 1" size gravel between -5 ft. and -6 ft. 12 10 GS Н 8 :Below -11 ft, contains thin layers or lenses of dark brown silt. -12-17 16 :Water table measured at -16.8 ft. 18-:Becomes coarse grained sand. 20 26 End of boring at -21 ft. Water table measured at -16.8 ft. 22-Drive Energy Data: Hammer Type CAT HEAD 140 lbs. Weight Drop 30 in. Please refer to symbols and note limitations shown on "Explanation of Logs" Project No.: 97157-01 Date: May, 1998 SHEPARDSON ENGINEERING ASSOCIATES INC. Plate Log of Test Boring No. B-12 B13 El Monte Golf Course Geotechnical Consultants: 1 of 1

Engineers-Geologists

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LOG OF TEST BORING NO. B-14										
Drilling Date(s):	01/23/98 Drilling Eq BMH Method/H									
Sample Type Blow Count (/foot)	Density (pcf) Moisture Content (%) Lab Tests	Graphic MATERIAL DESCRIPTION								
2 - 4- - 6 × H 6. 1	03 2.2 GS	ALLUVIUM (Qal): fine to coarse grained sand, loose, damp, yellow brown.								
12-	14 1.4 GS	(Oal): fine to coarse grained micaceous sand, loose, damp to saturated, orange brown. :Becomes medium brown with scattered blebs of silt.								
H 10		≅ :Water table measured at -18.8 ft.								
Drive Energy Data: Hame Weig	ght 140 lbs. o 30 in.	End of boring at -21 ft. Water table at -18.8 ft.								
S H E P ENGINEERIN Geotechnic	PARDSON NG ASSOCIATES INC. cal Consultants:	Date: May, 1998 Project No.: 97157-01 Log of Test Boring No. B-14 El Monte Golf Course 1 of 1								

LOG OF TEST BORING NO. B-15 Drilling Date(s): 01/23/98 Drilling Equipment: MOBILE B-57 Surface Elevation; 436' Logged By: **BMH** Method/Hole Size: HOLLOW STEM AUGER/8" Bottom Elevation: 414 Graphic Log **USCS** MATERIAL DESCRIPTION ALLUVIUM (Oal): fine to medium grained slightly silty sand, loose, medium brown. ŜŴ (Ωal): medium to coarse grained sand, loose, moist, brownish gray to olive gray. 7 GS 13 GS 12-14 ŜМ (Oal): silty fine grained sand, loose, moist, olive gray. :Contains some silt lenses. Becomes wet. End of boring at -21 ft. 22 No free water encountered. 24 Drive Energy Data: Hammer Type CAT HEAD 140 lbs. Weight Drop 30 in. Please refer to symbols and note limitations shown on "Explanation of Logs" Date: May, 1998 Project No.: 97157-01 SHEPARDSON ENGINEERING ASSOCIATES INC. Plate Log of Test Boring No. B-15 El Monte Golf Course **B16** Geotechnical Consultants:

Engineers-Geologists

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LOG OF TEST BORING NO. B-16 447 **Drilling Equipment:** MOBILE B-57 Surface Elevation: Drilling Date(s): 01/26/98 Logged By: **BMH** Method/Hole Size: HOLLOW STEM AUGER/8" Bottom Elevation: ⁻371' Graphic Log **USCS** MATERIAL DESCRIPTION TOPSOIL/ALLUVIUM (Qal): silty fine grained sand, loose, medium dense, silty sand. ΞŴ ALLUVIUM (Oal): fine to coarse grained sand, loose, dry, brown gray. GS 7 6 GS Н 8 ЯΗ 13 :Becomes coarser grained. 20 18 26 ริพี-รีพี ∇ (Qal): variable well graded to silty sand, loose to medium dense, 28 wet to saturated, gray brown. :Water table measured at -28.2 ft. 30 32 ŜŴ. (Oal): fine to coarse grained sand, loose to medium dense, saturated, gray. Contains occasional small amounts of gravel. 34 36-38 Drive Energy Data: Hammer Type CAT HEAD Weight 140 lbs. Drop 30 in. Please refer to symbols and note limitations shown on "Explanation of Logs" Project No.: 97157-01 Date: May, 1998 SHEPARDSON ENGINEERING ASSOCIATES INC. Plate Log of Test Boring No. B-16 817 El Monte Golf Course Geotechnical Consultants:

Engineers-Geologists

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MATERIAL DESCRIPTION State State
(Oal): fine to coarse-grained sand, loose to medium dense, saturated, gray. Contains occasional small amounts of gravel
(Ωal): fine to coarse-grained sand, loose to medium dense, saturated, gray. Contains occasional small amounts of gravel
End of boring at -75 ft. Water table measured at -28.2 ft.
Energy Data: Hammer Type CAT HEAD Weight 140 lbs. Drop 30 in.

Geotechnical Consultants: Engineers-Geologists

LOG OF TEST BORING NO. B-17 Drilling Date(s): 01/26/98 Drilling Equipment: MOBILE 8-57 Surface Elevation: <u>-470'</u> Logged By: **BMH** Method/Hole Size: HOLLOW STEM AUGER/8" Bottom Elevation: ~3931 **USCS** MATERIAL DESCRIPTION ALLUVIUM (Qal): silty fine grained sand, loose, moist, medium dense. ŜЙ Qal: silty fine grained micaceous sand, loose, dry, medium brown. Contains organic fragments, porous. 74 5.3 GS 10 SM-ML Qal: interbedded silt and sand, loose, dry, light gray to medium brown with orange staining, porous. £L Бм-SW (Oal): clean sand with interbeds of silty sand, loose, dry, light gray. SW-SP (Qal): medium to coarse grained sand, loose, dry, light gray. 16 :Becomes mostly fine grained sand, damp to moist. 20 15 :Becomes fine to coarse grained sand, wet. .26-🔀 H 18 :Water table measured at -27.6 ft. -28 19 SS 38 :Becomes medium gray. Drive Energy Data: Hammer Type CAT HEAD Weight 140 lbs. Drop 30 in. Please refer to symbols and note limitations shown on "Explanation of Logs" SHEPARDSON Date: May, 1998 Project No.: 97157-01 Plate Log of Test Boring No. B-17

El Monte Golf Course

Geotechnical Consultants:

Engineers-Geologists

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LOG OF TEST BORING NO. B-17 Drilling Date(s): MOBILE B-57 01/26/98 Drilling Equipment: Surface Elevation: ~470¹ Logged By: Method/Hole Size: HOLLOW STEM AUGER/8" Bottom Elevation: ~393¹ **BMH** nscs MATERIAL DESCRIPTION 18 (Oal): medium to coarse-grained sand, medium dense, saturated, SS dry, light gray 50 :Contains dark gray to black silt interbeds. 19 SS -58 60 -62 64 :Laminated layers of fine to very fine grained sand, dark gray. 20 SS 47 76 End of boring at -76.5 ft. Water table measured at -27.6 ft. 78 Drive Energy Data: Hammer Type CAT HEAD 140 lbs. Weight 30 in. Drop Please refer to symbols and note limitations shown on "Explanation of Logs" SHEPARDSON Date: May, 1998 Project No.: 97157-01 Plate Log of Test Boring No. B-17 818 El Monte Golf Course Geotechnical Consultants:

Engineers-Geologists

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LOG OF TEST BORING NO. B-18 Drilling Date(s): 01/28/98 Drilling Equipment: JEEP RIG Surface Elevation: - 437' 415 Logged By: Method/Hole Size: FLIGHT AUGER/6" **Bottom Elevation: BMH** Graphic Log Sample Type **USCS** MATERIAL DESCRIPTION TOPSOIL/ALLUVIUM 7: silty fine grained sand, loose, moist, medium to dark brown. GS B ŝΨ ALLUVIUM: medium to coarse grained sand, loose, moist, yellow to brownish gray. Contains scattered 1" size gravel. GS 18 -20 End of boring at -20 ft. No free water encountered. 22 Drive Energy Data: Hammer Type Weight ibs. Drop in. Please refer to symbols and note limitations shown on "Explanation of Logs" Date: May, 1998 Project No.: 97157-01 S H E P A R D S O N ENGINEERING ASSOCIATES INC. Plate

Geotechnical Consultants: Engineers-Geologists

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Drilling Date	(s):	02/	10/98	Drilli	ina Ei	quipm	ent: <u>ROTARY WASH</u> Surface Elevation:	⁻ 457'		
Logged By: BMH Method/Ho										
Depth (feet) Sample Type	Blow	Dry Density	Moisture Content (%)	Lab Tests	nscs	Graphic Log	MATERIAL DESCRIPTION			
- 2-		Ī			SW		ALI UVIUM (Qal): welll-graded sand, fine to medium -grained humid, light gray	d, loose,		
4					GM		Qal: gravelly sand, medium dense, moist, light gray, contain rounded gravels	s 1"		
- 6- - 6-	31	119	14.3	-	SW		Ωal: well-graded sand, medium dense, moist, light gray; con scattered 3/4" gravel	tains		
-10-XH	30	116	10.9					-		
-14 - H	44	113	14.1				77			
-18- -20-	16	112	18.2				water table at 16.5 feet : saturated, contains intermittent silt layers, medium stiff			
-24 SS	21						:well-graded sand, medium dense, saturated, medium gray, contains interlayered fine and coarse sand			
28 30- 32-	21						:1 to 4 inch layers of silt, to 32 feet			
34 SS	20						:well-graded sand, minor amounts of silt and gravel, mediun dense, saturated, light gray	n		
38 40 40 42	23							-		
44- 46-		:					ALLUVIUM (Oal): well-graded sand, medium dense, saturated medium gray	d,		
48 SS 50-	10						:becomes loose			
54- 56-										
rive Energy Da	We Dre	eight op	14 30	Olbs. in.		on "E	xplanation of Logs"			
SHEPARDSON ENGINEERING ASSOCIATES INC. Geotechnical Consultants: Engineers-Geologists						Log of Test Boring No. B-19 El Monte Golf Course				

Drilling Date(s): 02/10/98 Drilling Equipment: ROTARY WASH Surface Elevation: Logged By: BMH Method/Hole Size: WASH BORING/3.5" Bottom Elevation:	⁻ 457' -347'		
Logged By: BMH Method/Hole Size: WASH BORING/3.5" Bottom Elevation:	⁻ 347'		
Sample (feet) Sample Type Gount (foot) Dry Dry Dry Dry Dry Dry Count (foot) Count (foot) Dry Dry Dry Dry Dry Dry Dry Dry Dry Count (%) Rests Count (%) Noisture Count (%) Lab Tests USCS USCS			
SS 22 :medium dense			
-60-			
:medium-grained sand with silt, poorly graded, dense, saturadark gray	- sted,		
-72- -74-	0		
:contains 1/2 gravel; well-graded but coarser			
ALL UVIUM (Qal): well-graded sand, medium dense, saturated gray	i, dark		
-84- -86- -88-			
92- 92- :heavy gravels			
CL ALLUVIUM: :clay layer, soft, saturated, blue gray			
GW-SW (Ωal): gravel and sand, dense, saturated, medium gray	•		
SM DECOMPOSED GRANITE BEDROCK: silty sand, coarse, very saturated, dark gray	dense,		
104- 106- 108- 108- 108- 108-			
110 50/2" End of boring at 110.2 feet			
Drive Energy Data: Hammer Type Cable winch			
Weight 140 lbs. Drop 30 in.			
Please refer to symbols and note limitations shown on "Explanation of Logs"			
SHEPARDSON ENGINEERING ASSOCIATES INC. Geotechnical Consultants: Engineers-Geologists Date: May, 1998 Project No.: 97157-01 Log of Test Boring No. B-19 El Monte Golf Course	Date: May, 1998 Project No.: 97157-01 Plate Log of Test Boring No. B-19		

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LOG OF TEST BORING NO. B-21 Drilling Date(s): 02/18/98 Drilling Equipment: MOBILE B-61 Surface Elevation: ~466° HOLLOW STEM AUGER/8" Bottom Elevation: Logged By: **BMH** Method/Hole Size: -440' Blow Count (/foot) Dry Density (pcf) Voisture Content (%) Graphic Log **USCS** MATERIAL DESCRIPTION ALLUVIUM(Qal): sandy silt, medium stiff, moist, dark brown ML SM-ML Qal: sandy silt to silty sand, medium dense, moist, yellow brown and medium brown, porous Qal: silty fine sand, medium dense, moist, medium gray and SM medium brown Qal: well-graded sand, medium dense, moist, light gray :gravelly layer to 13 feet :becomes more coarse-grained SS 26 16 20 SS 32 SP Qal: poorly-graded fine sand, medium dense, moist, light gray 22 24 :water table encountered at 24.5 feet SS 22 26 End of boring at 26.5 feet 28 Remarks: Please refer to symbols and note limitations shown on "Explanation of Logs" Date: April, 1998 Project No.: 97157-01 S H E P A R D S O N ENGINEERING ASSOCIATES INC. Plate Log of Test Boring No. B-21 B22 El Monte Golf Course Geotechnical Consultants:

Engineers-Geologists

LOG OF TEST BORING NO. B-24 **Drilling Equipment:** Drilling Date(s): 02/20/98 ROTARY WASH Surface Elevation: 436' Logged By: Method/Hole Size: WASH BORING/3.5" <u>BMH</u> **Bottom Elevation:** <u>~331'</u> Graphic Log **USCS** MATERIAL DESCRIPTION ALLUVIUM (Oal): well graded sand, fine to coarse-grained, medium dense, moist, brownish-gray to light gray 16 contains thin silt layers 20--22 :gravelly at 25 feet 26-28 30-32-34 36 :silt layers at 37-38 feet 38-:gravel layer at 42 to 43 feet 46 50-52--54-Drive Energy Data: Hammer Type Cable winch 140 lbs. Weight Drop 30 in. Please refer to symbols and note limitations shown on "Explanation of Logs" Project No.: 97157-01 Date: May, 1998 S H E P A R D S O N ENGINEERING ASSOCIATES INC. **Plate** Log of Test Boring No. B-24 B25 El Monte Golf Course Geotechnical Consultants: 1 of 2 Engineers-Geologists

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	LOG OF TEST BORING NO. B-24											
Drillin	ng Date(:	s): _	02/:	20/98	Dr	illing Ed	mqiup	nent: <u>ROTARY WASH</u> Surface Elevation: <u>*436</u>				
Logg	ed By:		В	мн		ethod/H						
Depth (feet)	Sample Type	Blow Count (/foot)	Dry Density (pcf)	Moisture Content (%)	Lab Tests	nscs	Graphic Log	MATERIAL DESCRIPTION				
-58- -60- -62- -64- -66- -70- -72- -74- -78- -80-						- ģw,-		ALLUVIUM (Ωal): well graded sand, fine to coarse-grained, medium dense, moist, brownish-gray to light gray :silt layers Ωal: sandy gravels, dense, saturated, gray				
-82 -84 -86 -90 -92 -94 -96 -98 -102 -104 -106	ss	69				SM		Cal: Gravel and cobble in a sandy matrix; dense, saturated, gray :layer of sand or smaller gravels to 92 feet DECOMPOSED GRANITE BEDROCK: silty sand, dense to very dense, saturated, yellow gray :hard rock veins or inclusions to 97.5 feet				
108- 10- 10- Drive E	Drive Energy Data: Hammer Type Cable winch Weight 140 lbs. Drop 30 in. Please refer to symbols and note limitations shown on "Explanation of Logs" Beautiful 150.5 feet Please refer to symbols and note limitations shown on "Explanation of Logs" Date: May, 1998 Project No.: 97157-01											
Geotechnical Consultants: Engineers-Geologists						an dhlaam, toya tridiko	Log of Test Boring No. B-24 El Monte Golf Course Plate B25 2 of 2					

rilling Da		2	7/03	Dri	rilling Equipment				Surface Elevation:	
ogged B	y:	BMH Method/					ze: <u>Hollow s</u>	tem auger/8"	Bottom Elevation:	<u>~435</u>
(feet) Sample	Type Blow Count	(floot) Dry Density	Moisture Content (%)	Lab Tests	nscs	Graphic Log	M A	TERIAL C	ESCRIPTION	
В				MD DS	sw		ALLUVIUM (Qal): w dense, moist, medium	ell-graded sand, r n brown to mediur	nedium to coarse-grained, n	nedium
4- 6 × H	32	96	8.6						:	-
Se Se	4				,					
ss	26									
SS.	25		G	s			:cobble layer, appro	cimately one foot	thick	
× 35	50/6									٠
ss	50/2"				5M	₽	DECOMPOSED GRAN to very dense, moist, on groundwater at 28 fo	ange-gray	ck, silty fine to coarse sand,	dense
arks:						1	End of boring at 30.2	feet; boring back	filled with bentonite chips	
	symbols ar				n "Expla					
-	CHE.	DAR	B 6 6	80 6]	Date	: February, 2003	Projec	t No.: 97157-03	F

Geotechnical Consultants: Engineers-Geologists

B34 g

et) SAMPLES OT		(F			DATE DRILLED	2/24/11	BORING NO.	B-2
set) SAM	(%)	(PCF		NOL.	GROUND ELEVATION	ON 438' ± (MSL)	SHEET	OF 5
DEPTH (feet) ulk iven BLOWS/FOOT	TURE	YES!	SYMBOL	CLASSIFICATION U.S.C.S.	METHOD OF DRILL	ING 8" Hollow-Stem Au	ager (Diedrich D-120) (T	ri-County Drilling)
DEP' Bulk Driven BLOV	MOISTURE (%)	DRY DENSITY (PCF)	Sγ	LASS U.3	DRIVE WEIGHT	140 lbs. (Auto. Trip H	ammer) DROF	30"
		DR			SAMPLED BYN	LOGGED BY DESCRIPTION	MBG REVIEW	ED BY
17				SP	ALLUVIUM: (Conti Grayish brown, mois	inued) it, medium dense, poo	rly-graded, fine to co	earse SAND; few gravel.
25 — 12				SP-SM	Grayish brown, mois	et, medium dense, poo	rly-graded, fine to m	edium SAND with silt.
30 — 18				SM	Light brown, moist,	medium dense, silty fi	ine to medium SANI	5. — — — — — — — — — — — — — — — — — — —
35 — 25					Fine to coarse, silty s	sand.		
40	•		<u>HHHH</u>	.			BORING LO	
		10	&	M_{D}	ore		EY MINING, RECLAMATIC RGE PROJECT, LAKESIDE	N, AND GROUNDWATER
_ ~ ▼	J		_	_		PROJECT NO. 106200005	DATE 7/11	FIGURE A-4

	SAMPLES			E)		_	DATE DRILLED	2/24/11	BORING NO.	B-2
eet)	SAM	DOT	(%) :	/ (PC		NOIE :	GROUND ELEVATIO	N 438' ± (MSL)	SHEET	3 OF5
DEPTH (feet)		BLOWS/FOOT	TURE	LSIT	SYMBOL	IFICA S.C.S	METHOD OF DRILLIN	NG 8" Hollow-Stem Auge	er (Diedrich D-120) (Tr	i-County Drilling)
DEP	Bulk Driven	BLOV	MOISTURE (%)	DRY DENSITY (PCF)	S	CLASSIFICATION U.S.C.S.	DRIVE WEIGHT	140 lbs. (Auto. Trip Han	nmer) DROP	30"
	۵			DR		O	SAMPLED BY ME		MBG REVIEW	ED BYGTF
		8				SM	ALLUVIUM: (Contin Light brown, saturated	ued) l, medium dense, silty	fine to coarse SAN	D.
45		67/10"				SP	Light brown, saturated			
50 -		18				SW-SM	Light brown, saturated fine gravel.	, medium dense, well-	-graded, fine to coa	rse SAND with silt; trace
55 -		25					Dense with fine gravel	l.		
60		•			<u>###</u>				BORING LO	
		V/Ź	n_{ℓ}	[0 8	&	Ma	ore	RECHARO	MINING, RECLAMATIO GE PROJECT, LAKESIDE,	
	_	V	U		_			PROJECT NO. 106200005	DATE 7/11	FIGURE A-5

et) SAMPLES OT		F)		_	DATE DRILLED	2/24/11	BORING NO.	B-2
SAM	(%)	/ (PC	_	NOIT :	GROUND ELEVATION	ON 438' ± (MSL)	SHEET	4 OF5
DEPTH (feet) Julk Iven BLOWS/FOOT	TURE	LISN	SYMBOL	S.C.S	METHOD OF DRILL	ING 8" Hollow-Stem Aug	ger (Diedrich D-120) (Tr	i-County Drilling)
DEP Bulk Driven BLOV	MOISTURE (%)	DRY DENSITY (PCF)	S	CLASSIFICATION U.S.C.S.	DRIVE WEIGHT	140 lbs. (Auto. Trip Ha	mmer) DROP	30"
		DR			SAMPLED BY	BG LOGGED BY DESCRIPTION/	MBG REVIEWE	ED BY
15				SW-SM		nued) od, medium dense, wel		
65 — 49				SF-SIVI	Eight orown, surulut	a, delise, postily grade	A, TING STATES WHATE	
70 — 21				SW-SM	Gray, saturated, dens	e, well-graded, fine to	medium SAND with	ı silt.
75 — 23					Dark gray; fine to co	arse sand; trace fine gr	avel.	
	9		uutti	A A -			BORING LOC	
		[D 8	2	Ma	ore	RECHAR	Y MINING, RECLAMATION RGE PROJECT, LAKESIDE,	CALIFORNIA
_ ~ \	U		_	_		PROJECT NO. 106200005	DATE 7/11	FIGURE A-6

DEPTH (feet)	IK SAMPLES en	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED
	Bulk Driven	B	MG	DRY		70	DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30" SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
		25				SM	ALLUVIUM: (Continued) Brownish black, saturated, medium dense, silty fine SAND. Gray; very dense; fine to medium sand.
85 -		50/1"					Refusal to further drilling.
90 -							Total Depth = 85.5 feet. Groundwater encountered at approximately 41 feet during drilling. Backfilled with approximately 30 cubic feet of bentonite grout shortly after drilling on 2/24/11. Note: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.
95 -							
100		Vi		in i	e i	AAn	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA DROJECT NO. DATE EIGURE
		V	-3	, 2		AI	RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE

7/11

DEPTH (feet) Bulk Driven BLOWS/FOOT	MOISTURE (%) DRY DENSITY (PCF) SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED 3/11/11 BORING NO. B-3 GROUND ELEVATION 440' ± (MSL) SHEET1 OF4 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT140 lbs. (Auto. Trip Hammer) DROP30" SAMPLED BYMBGLOGGED BYMBGREVIEWED BYGTFDESCRIPTION/INTERPRETATION
5		SP	ALLUVIUM: Gray, moist, loose, poorly-graded, fine to medium SAND; trace subangular gravel (up to ½ inch).
10 —		SM	Brown, moist, medium dense, silty fine SAND.
15 ————————————————————————————————————		SW	Gray, moist, loose, well-graded, fine to coarse SAND.
20	nyo & j	\	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE

DEPTH (feet) Bulk Driven BLOWS/FOOT	MOISTURE (%) DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	GROUND ELEVATION METHOD OF DRILL DRIVE WEIGHT	3/11/11 ON 440' ± (MSL) ING 8" Hollow-Stem And 140 lbs. (Auto. Trip Hollow LOGGED BY DESCRIPTION	SHEET uger (Diedrich D-120) (Tr	2 OF4
20 14			SW-SM	ALLUVIUM: (Conti Light brown, moist,			n SAND with silt.
9			ML		nedium dense, fine sa		
28			SM	Light brown, moist,	medium dense, silty f	ine SAND.	
35			ML	Dark brown, wet, Too	ose, fine sandy SILT.		
40	<u> </u>			Saturated.			
		_			FI MONTE VALLE	BORING LOC EY MINING, RECLAMATIO	
	nyu :	Š	\mathbf{M}_{I_I}	ore		RGE PROJECT, LAKESIDE,	
Y			Y		106200005	7/11	A-9

DEPTH (feet)	Bulk SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED 3/11/11 BORING NO. B-3 GROUND ELEVATION 440' ± (MSL) SHEET 3 OF 4 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30" SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
45 —		9				SP-SM	ALLUVIUM: (Continued) Dark brown, saturated, medium dense, silty fine SAND; trace fine gravel. Gray, saturated, medium dense, poorly-graded, fine to medium SAND with silt; few fine gravel.
50 —		26					Dark brown, saturated, dense, silty fine to medium SAND.
55 —		30					
60		26					Becomes finer.
00_1	4			in .	e_ 1		BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER
		Y "	44		×	$\mathbf{A}I_{\mathcal{A}}$	EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE
		*				,	106200005 7/11 A-10

et) SAMPLES	L	(9)	CF)		NO	DATE DRILLED3/11/11 BORING NOB-3
DEPTH (feet)	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	BOL	CLASSIFICATION U.S.C.S.	GROUND ELEVATION 440' ± (MSL) SHEET 4 OF 4
EPTF	LOWS	JISTU	DENS	SYMBOL	ASSIFI U.S.0	METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"
DEP Bulk Driven	ā	Ž	DRY		CC	SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF
60	46				SP	DESCRIPTION/INTERPRETATION ALLUVIUM: (Continued)
					OI.	Brown, saturated, dense, poorly-graded, fine to medium SAND.
						Total Depth = 61.5 feet. Groundwater encountered at approximately 39 feet during drilling. Backfilled with approximately 21 cubic feet of bentonite grout on shortly after drilling on 3/11/11.
						Note: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
65						
70						
75						
80						
			in .	o_		BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER
	Y //	14	JU 4	×	$\mathbf{A}I_{\mathcal{A}}$	EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE

DEPTH (feet) Bulk Driven BLOWS/FOOT	MOISTURE (%) DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED GROUND ELEVATION METHOD OF DRILLIN DRIVE WEIGHT SAMPLED BYM	ON 442' ± (MSL) ING 8" Hollow-Stem Au 140 lbs. (Auto. Trip H BG LOGGED BY	SHEET uger (Diedrich D-120) (Transmer) DROP	1OF4
5 - 7			SP	ALLUVIUM: Light brown, moist, le	oose, poorly-graded,		D.
15			SW-SM	Gray; medium dense; Grayish brown, moist sand.		fine to medium SAN	ID with silt; few coarse
25	nyo e	& <u>/</u>	₩a	ore		BORING LOO EY MINING, RECLAMATIO RGE PROJECT, LAKESIDE DATE 7/11	N, AND GROUNDWATER

et) SAMPLES			F)		_	DATE DRILLED	3/11/11 and 3/14/11	BORING NO.	B-4
SAN	ТОС	(%) :	/ (PC		MOLT :	GROUND ELEVATI	ON <u>442' ± (MSL)</u>	SHEE	T2 OF4
DEPTH (feet)	BLOWS/FOOT	TURE	NSIT	SYMBOL	S.C.S	METHOD OF DRILL	ING 8" Hollow-Stem Aug	ger (Diedrich D-120) (Tri-County Drilling)
DEP Bulk Driven	BLOV	MOISTURE (%)	DRY DENSITY (PCF)	ς	CLASSIFICATION U.S.C.S.	DRIVE WEIGHT	140 lbs. (Auto. Trip Har	mmer) DRC	OP
		_	DR		O	SAMPLED BY N	LOGGED BY DESCRIPTION/II	MBG REVIE	WED BYGTF
25 —	17				SP-SM	ALLUVIUM: (Conti Gray, moist, medium	inued) n dense, poorly-graded,	fine to coarse SA	ND; with few fine gravel.
30 —	9				SM	Boring terminated on Boring resumed on 3	nedium dense, silty find n 3/11/11. /14/11. medium dense, fine sand		
35	5	₩.				Saturated; loose.			
				11111111	A A -			BORING LO	
	V//		[0 8	&	Ma	ore	RECHAR	GE PROJECT, LAKESII	
	V	U		_	y -		PROJECT NO. 106200005	DATE 7/11	FIGURE A-13

DEPTH (feet) Bulk SAMPLES Driven BLOWS/FOOT	MOISTURE (%) DRY DENSITY (PCF)	SYMBOL CLASSIFICATION U.S.C.S.	DATE DRILLED 3/11/11 and 3/14/11 BORING NO. B-4 GROUND ELEVATION 442' ± (MSL) SHEET 3 OF 4 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30" SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
21		SM	ALLUVIUM: (Continued) Brown, saturated, medium dense, silty fine to medium SAND.
45 ————————————————————————————————————		SP-SM SM	Brown, saturated, medium dense, poorly-graded, fine to coarse SAND with silt. Brown, saturated, medium dense, silty fine to coarse SAND.
29			
15		SW-SM	Brown, saturated, medium dense, well-graded, fine to coarse SAND with silt.
		. AA-	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER
	nyu s		EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE
Y		V	106200005 7/11 A-14

	Bulk SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED 3/11/11 and 3/14/11 BORING NO. B-4 GROUND ELEVATION 442' ± (MSL) SHEET 4 OF 4 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30" SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION DROP 30"<
60		77/9"	127			SP-SM	ALLUVIUM: (Continued) Grayish brown, saturated, very dense, poorly-graded, fine SAND with silt
65 -							Total Depth = 61.5 feet. Groundwater encountered at approximately 35 feet during drilling. Backfilled with approximately 21 cubic feet of bentonite grout shortly after drilling on 3/14/11. Note: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
70 -					4		
75							
			n	in i	e- 1	AAn	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE
		V "	44		~_	AIn	RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO DATE FIGURE

7/11

DEPTH (feet)	Bulk SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED 3/14/11 BORING NO. B-5 GROUND ELEVATION 450'± (MSL) SHEET1 OF4 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT140 lbs. (Auto. Trip Hammer) DROP30" SAMPLED BYMBGLOGGED BYMBGREVIEWED BYGTF
5						SM	ALLUVIUM: Dark brown, moist, loose, silty fine SAND; trace roots.
-		8				SP-SM	Grayish brown, moist, loose, poorly-graded, fine to medium SAND with silt.
10		5				SM	Dark brown, moist, loose, silty fine SAND. Gray, moist, medium dense, poorly-graded, fine to medium SAND with silt; trace coarse
15		16				SP-SM	sand.
20_1		N #2					BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER
		V //	14		&	\mathbf{M}_{II}	RECHARGE PROJECT, LAKESIDE, CALIFORNIA
		Y	-			▼	PROJECT NO. DATE FIGURE 106200005 7/11 A-16

DEPTH (feet) Bulk Bulk SAMPLES BI OWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL CLASSIFICATION U.S.C.S.	DATE DRILLED GROUND ELEVATION 2 METHOD OF DRILLING DRIVE WEIGHT 14 SAMPLED BY MBG ALLUVIUM: (Continued)	8" Hollow-Stem A 0 lbs. (Auto. Trip H LOGGED BY DESCRIPTION	SHEET uger (Diedrich D-120) (Tr	2 OF4
20			Gi	Gray, moist, medium den	se, poorly-graded		
25			SW-SM	gravel.			with silt; trace angular
7			ML SM	Dark brown, moist, loose			
35			ЭМ				
40	-•					BORING LO	<u> </u>
	M	10 8	M	ore	RECHA	EY MINING, RECLAMATIO RGE PROJECT, LAKESIDE,	N, AND GROUNDWATER CALIFORNIA
_ ~ ▼	U		- 🔻 -		PROJECT NO. 106200005	DATE 7/11	FIGURE A-17

DEPTH (feet) Bulk Bulk Driven BLOWS/FOOT	MOISTURE (%) DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED
6	<u></u>		ML	ALLUVIUM: (Continued) Dark brown, moist, loose, fine sandy SILT. Saturated.
20			SM	Dark brown, saturated, medium dense to dense, silty fine SAND.
22			SP-SM	Dark brown, saturated, medium dense, poorly-graded, fine SAND with silt.
23			SW-SM	Brown, saturated, dense, well-graded, fine to medium SAND with silt.
	nuo	&	Mn	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE
- V	J-		A "	PROJECT NO. DATE FIGURE 106200005 7/11 A-18

	SAMPLES			.F)		7	DATE DRILLED 3/14/11 BORING NO B-5
eet)	SAN	ТОО	(%) =	Y (PC	٦	ATION.S.	GROUND ELEVATION 450' ± (MSL) SHEET 4 OF 4
DEPTH (feet)		BLOWS/FOOT	MOISTURE (%)	NSIT	SYMBOL	CLASSIFICATION U.S.C.S.	METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling)
BE	Bulk	BLO	MOIS	DRY DENSITY (PCF)	်	LASS	DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"
				PA			SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
60		39				SP-SM	ALLUVIUM: (Continued) Dark brown, saturated, medium dense, poorly-graded, fine to medium SAND with silt; trace coarse sand.
							Total Depth = 61.5 feet. Groundwater encountered at approximately 43 feet during drilling. Backfilled with approximately 21 cubic feet of bentonite grout shortly after drilling on 3/14/11.
							Note: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
65 -							variations in precipitation and several outer ractors as discussed in the report.
70 -					<		
75 -							
80							BORING LOG
		Vi		10	&	AAn	EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO DATE FIGURE
		V	J	_		A 7 7	PROJECT NO. DATE FIGURE

7/11

DEPTH (feet) Bulk Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED 2/25/11 BORING NO. B-6 GROUND ELEVATION 455' ± (MSL) SHEET1 OF4 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP
5	9				SM	ALLUVIUM: Light brown, damp, loose, silty, fine to medium SAND. Grayish brown, damp, loose, well-graded, medium to coarse SAND.
10 —	12				SM-SM	Brown, moist, loose, silty SAND; trace roots. Gray, damp, loose, well-graded, fine to medium SAND with silt. Gray and light brown, moist, medium dense, poorly-graded, fine to medium SAND with
20	13	1 4	10 s	& /	Νa	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE 106200005 7/11 A-20

et) SAMPLES OT		(-			DATE DRILLED2/25/11 BORING NOB-6
et) SAMI	(%)	PCF		CLASSIFICATION U.S.C.S.	GROUND ELEVATION 455' ± (MSL) SHEET _ 2 OF _ 4
DEPTH (feet) ulk SAl iven SAl	URE	\TIS\	SYMBOL		METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling)
DEP7 Bulk Driven BLOW	MOISTURE (%)	DRY DENSITY (PCF)	λS	ASSI U.8	DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"
		DR		Ö	SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
20				SW-SM	ALLUVIUM: (Continued) Dark brown, moist, medium dense, well-graded, fine to coarse SAND with silt and gravel.
25 20				SP-SM	Grayish brown, moist, medium dense to dense, poorly-graded, fine to medium SAND with silt.
30 ————————————————————————————————————					Medium dense.
35 10	¥				Saturated.
	<u> </u>		<u>116661</u>		BORING LOG
	N	[0 8	&	Ma	EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE
- V	U		_		PROJECT NO. DATE FIGURE 106200005 7/11 A-21

SAMPLES OT (%) (PCF)	DATE DRILLED
SAM SAM (%) (%) LION LION	GROUND ELEVATION 455' ± (MSL) SHEET3 OF4
DEPTH (feet) sulk iven BLOWS/FOOT MOISTURE (%) Y DENSITY (PC SYMBOL ASSIFICATIO U.S.C.S.	METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling)
DEPTH (feet) Bulk Driven BLOWS/FOOT MOISTURE (%) DRY DENSITY (PCF) SYMBOL CLASSIFICATION U.S.C.S.	DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"
	SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
40 8 ML 45 2 50/2"	ALLUVIUM: (Continued) Dark brown, saturated, loose, fine sandy SILT. Very dense.
50 50/2"	METAVOLCANIC ROCK: Dark brown, saturated, soft, weathered METAVOLCANIC ROCK.
55 50/5"	Light brown and gray.
60	BORING LOG
<i>Minyo & M</i> o	EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA
'Y3- 'Y\-	PROJECT NO. DATE FIGURE 106200005 7/11 A-22

t t	SAMPLES	Τ	%)	PCF)		SYMBOL CLASSIFICATION U.S.C.S.	DATE DRILLED 2/25/11 BORING NO. B-6 GROUND ELEVATION 455' ± (MSL) SHEET 4 OF 4
DEPTH (feet)	05	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL		METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling)
===	Bulk Driven	NOM8	OIST	DEN	SYN	ASSIF U.S.	DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"
	P. D.	ш	2	DRY		J	SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF
60		50/4"			#55.5		DESCRIPTION/INTERPRETATION METAVOL CANIC ROCK: (Continued)
							METAVOLCANIC ROCK: (Continued) Light brown and gray, saturated, soft, weathered METAVOLCANIC ROCK. Total Depth = 60.3 feet.
							Groundwater encountered at approximately 35 feet during drilling. Backfilled with approximately 21 cubic feet of bentonite grout shortly after drilling on 2/25/11. Note:
							Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
65 -							
70 -							
/0							
75 -							
/3							
80							
		A #2				44-	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER
		Y //	14		&	\mathbf{M}_{II}	EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE

et) SAMPLES OT	(%)	(PCF)		CLASSIFICATION U.S.C.S.	DATE DRILLED 3/1/11 BORING NO. B-7 GROUND ELEVATION 453' ± (MSL) SHEET 1 OF 5
DEPTH (feet) ulk iven SAl	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL		METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling)
DEPT Bulk Driven	NOIST	/ DEN	SYN	ASSIF U.S	DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"
	2	DR		Ö	SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
				SM	ALLUVIUM: Brown, moist, loose, silty fine to medium SAND.
5 —————————————————————————————————————				SP	Grayish brown, damp, medium dense, poorly-graded, fine to coarse SAND with fine gravel.
10 — 15				SP-SM	Light brown, moist, medium dense, poorly-graded, fine to medium SAND with silt; trace roots.
15				SW-SM	Gray to light brown, moist, medium dense, well-graded, fine to medium SAND with silt.
			uututi.		BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER
	74	JU 8	&	\mathbf{M}_{II}	EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE
Y				▼	106200005 7/11 A-24

DEPTH (feet) Bulk Driven BLOWS/FOOT	MOISTURE (%) DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED 3/1/11 BORING NO. B-7 GROUND ELEVATION 453' ± (MSL) SHEET _ 2 OF _ 5 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT			
20 18		C)	SW-SM	ALLUVIUM: (Continued) Gray to light brown, moist, medium dense, well-graded, fine to coarse SAND with silt.			
19							
17		, ,	SP-SM	Gray to light brown, saturated, medium dense, poorly-graded, fine to medium SAND with silt; micaceous			
17			ML	Brown, saturated, medium dense, fine sandy SILT; micaceous.			
40		<u></u>		BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER			
	nyo	Š	M_{II}	RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE			
Y			Y	106200005 7/11 A-25			

DEPTH (feet) Bulk SAMPLES Driven BLOWS/FOOT	MOISTURE (%) DRY DENSITY (PCF) SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED
40 25		ML_ SP-SM	ALLUVIUM: (Continued) Brown, saturated, medium dense, fine sandy SILT; micaceous. Brown, saturated, dense, poorly-graded, fine to medium SAND with silt.
45 ————————————————————————————————————		SM	Brown, saturate, dense, silty fine SAND; micaceous.
50		SP	Light brown, saturated, medium dense, poorly-graded, fine to coarse SAND.
55 — 27		SW-SM	Light brown, saturated, dense, well-graded, fine to coarse SAND with silt.
	nyo	AA n	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA
- - - - - - - - - -	7	A 7 7	PROJECT NO. DATE FIGURE 106200005 7/11 A-26

Bulk SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	S CLASSIFICATION U.S.C.S.	DATE DRILLED 3/1/11 BORING NO. B-7 GROUND ELEVATION 453'± (MSL) SHEET 4 OF 5 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30" SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION ALLUVIUM: (Continued)
65 —	26				<u>-</u> ML	Reddish brown, saturated, dense, silty fine to coarse SAND; few gravel. Reddish brown, saturated, medium dense, fine sandy SILT.
70 —	19				SM	Reddish brown, saturated, medium dense, silty fine to coarse SAND with fine gravel.
75 —	18					
80	23					Dense; no gravel. BORING LOG
	V ii	74	10	&	Mα	EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE
	Y				▼	106200005 7/11 A-27

DEPTH (feet)	Bulk SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED 3/1/11 BORING NO. B-7 GROUND ELEVATION 453' ± (MSL) SHEET 5 OF 5 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30" SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
		89/11"			(できないが、ないないないない)	SM	ALLUVIUM: (Continued) Dark brown, saturated, very dense, silty fine to medium SAND; with fine gravel. METAVOLCANIC ROCK: Yellow and brown, saturated, soft, weathered METAVOLCANIC ROCK.
		76			The state of the s		Total Depth = 86.5 feet. Groundwater encountered at approximately 30 feet during drilling. Backfilled with approximately 30 cubic feet of bentonite grout shortly after drilling on 3/1/11. Note: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
		Vi		10	&	Mo	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA DROJECT NO. DATE EIGURE
		V		_			PRO JECT NO DATE FIGURE

7/11

DEPTH (feet) Bulk SAMPLES Driven BLOWS/FOOT	MOISTURE (%) DRY DENSITY (PCF)	SYMBOL CLASSIFICATION U.S.C.S.	DATE DRILLED 3/3/11 BORING NO. B-8 GROUND ELEVATION 456' ± (MSL) SHEET1 OF4 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT140 lbs. (Auto. Trip Hammer) DROP30" SAMPLED BYMBGLOGGED BYMBGREVIEWED BYGTF
5 — 22		SM	ALLUVIUM: Brown, moist, loose, silty fine SAND. Gray, moist, medium dense, poorly-graded, fine to medium SAND; trace coarse sand and gravel (up to ½ inch).
15 20		SP-SM	Gray, moist, medium dense, poorly-graded, fine to medium SAND with silt. Medium dense to dense.
	nyo	· Ma	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE
,		y	106200005 7/11 A-29

DEPTH (feet) Bulk SAMPLES Driven BLOWS/FOOT	MOISTURE (%) DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED
27			SP	ALLUVIUM: (Continued) Gray, moist, medium dense, poorly-graded, fine to medium SAND. Reddish brown; fine to coarse sand.
25 — 36			SM	Brown, wet, dense to very dense, silty fine SAND; with gravel.
			SW 	Gray, moist, very dense, well-graded, fine to coarse SAND with some gravel (up to 1 inch). Reddish brown, wet, dense, fine sandy SILT; micaceous.
29				
51				
40	<u> </u>			BORING LOG
	nya	&	Mα	EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA
_ 🔻	.		▼ _	PROJECT NO. DATE FIGURE 106200005 7/11 A-30

et) SAMPLES OT	<u>(</u>		DATE DRILLED3/3/11 BORING NOB-8
SAM	(%) (PCF	NOIT:	GROUND ELEVATION 456' ± (MSL) SHEET 3 OF 4
DEPTH (feet) ulk SAI	MOISTURE (%)	SYMBOL SSIFICAT U.S.C.S.	METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling)
DEP Bulk Driven BLOV	MOISTURE (%) DRY DENSITY (PCF)	SYMBOL CLASSIFICATION U.S.C.S.	DRIVE WEIGHT140 lbs. (Auto. Trip Hammer) DROP30"
		0	SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
15	<u></u>	ML	ALLUVIUM: (Continued) Reddish brown, saturated, medium dense, fine sandy SILT.
45		 SM	Grayish brown, saturated, dense, silty fine to coarse SAND.
27			Trace gravel (up to ½ inch).
50			
55			Reddish brown; silty fine sand.
55			
79/8"		,6°C °2, °C	METAVOLCANIC ROCK:
60			Dark gray, saturated, soft, weathered METAVOLCANIC ROCK.
			BORING LOG
	740 s	\$ M 0	EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE
V	•	T	PROJECT NO. DATE FIGURE 106200005 7/11 A-31

	SAMPLES)	CF)			DATE DRILLED3/3/11 BORING NOB-8	
(feet)	-SA	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	占	S.	GROUND ELEVATION 456' ± (MSL) SHEET 4 OF 4	
DEPTH (feet)		WS/F	STUR	ISNE	SYMBOL	CLASSIFICATION U.S.C.S.	YMB SIFIC	METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling)
	Bulk	BLC	MOIS	א אצ	S	CLAS	DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"	
							SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION	
60	1	50/5"			(18) = (18) = (18) =		METAVOLCANIC ROCK: (Continued) Dark gray, saturated, soft, weathered METAVOLCANIC ROCK.	
	\coprod	30/5"			· 1888		Dark gray, saturated, soft, weathered METAVOLCANIC ROCK. Total Depth = 61.0 feet.	
							Groundwater encountered at approximately 40 feet during drilling. Backfilled with approximately 21 cubic feet of bentonite grout shortly after drilling on 3/3/11. Note: Groundwater may rise to a level higher than that measured in borehole due to seasonal	
65 -							variations in precipitation and several other factors as discussed in the report.	
70 -						4		
					<			
75 -								
	+							
	+							
80_							DODING LOG	
		A / i		in.	e I	AAn	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO DATE FIGURE	
		7 **	4		~	AIn	RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE	

DEPTH (feet) Bulk	DRY DENSITY (PCF) SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED 3/2/11 BORING NO. B-9 GROUND ELEVATION 460' ± (MSL) SHEET 1 OF 4 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30" SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
		SP SP	ALLUVIUM: Brown, moist, loose, silty fine to medium SAND. Gray, moist, medium dense, poorly-graded, fine to medium SAND; trace fine to coarse gravel.
5 —————————————————————————————————————			
22		SW-SM	Gray, moist, dense, well-graded, fine to coarse SAND with silt.
16			Medium dense.
	TA e		BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER
Miny		AIn	RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE 106200005 7/11 A-33

DEPTH (feet) Bulk SAMPLES Driven BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL CLASSIFICATION	GROUND ELEVAT	CION 460' ± (MSL) LING 8" Hollow-Stem Au 140 lbs. (Auto. Trip Ha	ager (Diedrich D-120) (Tri	2 OF 4 -County Drilling)
20 6			ML		tinued) pose, fine sandy SILT; r	nicaceous.	
25 — 17			SM		ense, well-graded, fine		
24							
28	₩/		SP-S	micaceous.	, saturated, medium der		
40			SW-S	Gray, saturated, ver	y dense, well-graded, fi	ne to coarse SAND v	vith silt.
				l		BORING LOC	
		1 8	: //	oore		Y MINING, RECLAMATION RGE PROJECT, LAKESIDE,	N, AND GROUNDWATER
_ ~ ▼ -	J	_	- Y •		PROJECT NO. 106200005	DATE 7/11	FIGURE A-34

DEPTH (feet) Bulk SAMPLES Driven BLOWS/FOOT	MOISTURE (%) DRY DENSITY (PCF)	STMBOL CLASSIFICATION U.S.C.S.	DATE DRILLED 3/2/11 BORING NO. B-9 GROUND ELEVATION 460' ± (MSL) SHEET 3 OF 4 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30" SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
51		SW-SM	ALLUVIUM: (Continued) Gray, saturated, very dense, well-graded, fine to coarse SAND with silt; trace fine to coarse gravel.
23		SM	Reddish brown, saturated, dense, silty fine SAND; micaceous.
59		ML	Reddish brown, saturated, dense, fine sandy SILT.
31			
	niin .	AAc	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER
	nyo &	Min	
<u> </u>		······································	106200005 7/11 A-35

DEPTH (feet)	Bulk SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	GROUND ELEVATION METHOD OF DRILL DRIVE WEIGHT	3/2/11 ON 460' ± (MSL) ING 8" Hollow-Stem Au 140 lbs. (Auto. Trip H BG LOGGED BY DESCRIPTION	SHEET ager (Diedrich D-120) (Tr ammer) DROP	4 OF4
60		18				ML		rated, medium dense,		
		50/6"				SP-SM	to coarse gravel.			AND with silt; some fine
		65			さいないが、おきないないないか	SM	METAVOLCANIC	nse, silty fine SAND. ROCK: urated, soft, weathere		PROCK.
		53			メラット でいかい		Backfilled with appr 3/2/11. Note: Groundwater may ris	tered at approximatel oximately 27 cubic fe	et of bentonite grout s an that measured in bo or factors as discussed	orehole due to seasonal in the report.
		Vi	T L	10 8	& <i> </i>	DN	ore		BORING LOC EY MINING, RECLAMATION RGE PROJECT, LAKESIDE,	N, AND GROUNDWATER
		V	J					PROJECT NO. 106200005	DATE 7/11	FIGURE A-36

DEPTH (feet) Bulk SAMPLES	WS/FO	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	GROUND ELEVATI		SHEET uger (Diedrich D-120) (Tr	1OF4
5——————————————————————————————————————	6				SM	ALLUVIUM: Grayish brown, mois Medium dense; few	st, loose, silty fine SA		
15	8				SM SM	Brown, moist, mediu	m dense, well-graded, find SA	AND.	
	Ŋi	ny	[0	&	Mα	ore		BORING LOC EY MINING, RECLAMATIO RGE PROJECT, LAKESIDE, DATE 7/11	N, AND GROUNDWATER

Bulk SAMPLES Driven BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED GROUND ELEVATION METHOD OF DRILLIN DRIVE WEIGHT SAMPLED BYM	ON 475' ± (MSL) NG 8" Hollow-Stem At 140 lbs. (Auto. Trip H BG LOGGED BY DESCRIPTION	SHEE siger (Diedrich D-120) (Sammer) DRO	Γ <u>2</u> OF <u>4</u>
7				ML	ALLUVIUM: (Conting Dark brown, moist, lo	oose to medium dense	•	
25 ————————————————————————————————————				SM	Light brown, moist, n	nedium dense, silty fi	ine SAND.	
21					Dense; trace medium Boring terminated on Boring resumed on 3/			
35 ————————————————————————————————————				SW-SM	Light brown, moist, n coarse sand.	nedium dense, well-g	raded, fine to mediu	ım SAND with silt; little
40				SM	Grayish brown, moist	, medium dense, silty	fine to coarse SAN	ĪD.
	9			A A -			BORING LC	
		[D 8	&	Ma	ore	RECHA	RGE PROJECT, LAKESID	
- 7	U	'	_	V -		PROJECT NO. 106200005	DATE 7/11	FIGURE A-38

et) SAMPLES			CF)		z	DATE DRILLED
feet)	.00T	MOISTURE (%)	DRY DENSITY (PCF)	٦٢ ا	CLASSIFICATION U.S.C.S.	GROUND ELEVATION <u>475' ± (MSL)</u> SHEET <u>3</u> OF <u>4</u>
DEPTH (feet)	BLOWS/FOOT	STUR	INSI	SYMBOL	SIFIC.	METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling)
DEP Bulk Driven	BLO	MOIS	۲Y DE	S	CLAS	DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"
			<u> </u>			SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
40	15				SM	ALLUVIUM: (Continued) Grayish brown to dark brown, wet, medium dense, silty fine SAND.
45 —	20	\ <u>\</u>				Brown, saturated, medium dense to dense, silty fine to medium SAND; trace coarse sand
50					SW-SM	Brown, saturated, dense, well-graded, fine to medium SAND with silt.
	26					
55	50/2"				SM	Dark brown, saturated, very dense, silty fine SAND; trace gravel (up to 11/4 inches).
	50/3"					
60				<u> </u>		BORING LOG
	VŽ	n_{ℓ}	10	&	Ma	EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE
	V	U			V -	PROJECT NO. DATE FIGURE 106200005 7/11 A-39

DEPTH (feet)	SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED 3/9/11 - 3/10/11 BORING NO. B-10 GROUND ELEVATION 475' ± (MSL) SHEET 4 OF 4 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling)
DEP.	Bulk Driven	BLOV	SIOM	DRY DEI	SY		DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30" SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
60		34				SM	ALLUVIUM: (Continued) Dark brown, saturated, very dense, silty fine SAND.
65 -							Total Depth = 61.5 feet. Groundwater encountered at approximately 44 feet during drilling. Backfilled with approximately 21 cubic feet of bentonite grout shortly after drilling on 3/10/11. Note: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
70 -					<		
75 -							
80_					<u> </u>	A A -	BORING LOG
		Y //	14		&	\mathbf{M}_{II}	EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE

	Bulk SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED
5 10 15		11 7	3.2	91.1		SW	ALLUYIUM: Grayish and yellowish brown, damp, loose, well-graded, fine to medium SAND; trace silt; micaceous. Loose to medium dense; well-graded, fine to coarse SAND; fewer silt. Dry to damp; medium dense.
20		V i	74	10	&	Μa	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE

DEPTH (feet) Bulk SAMPLES Driven BLOWS/FOOT	MOISTURE (%) DRY DENSITY (PCF)	CLASSIFICATION U.S.C.S.	DATE DRILLED			
20 7		SM	ALLUVIUM: (Continued) Dark brown, damp to moist, loose to medium dense, silty fine SAND; micaceous. Grayish brown, dry to damp, medium dense, well-graded, fine to coarse SAND;			
25 28	4.1 100.7	SW	Grayish brown, dry to damp, medium dense, well-graded, fine to coarse SAND; micaceous.			
30 —			Total Depth = 26.5 feet. Groundwater not encountered. Backfilled with approximately 9 cubic feet of bentonite grout shortly after drilling on 2/23/11. Note: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.			
35						
	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE					

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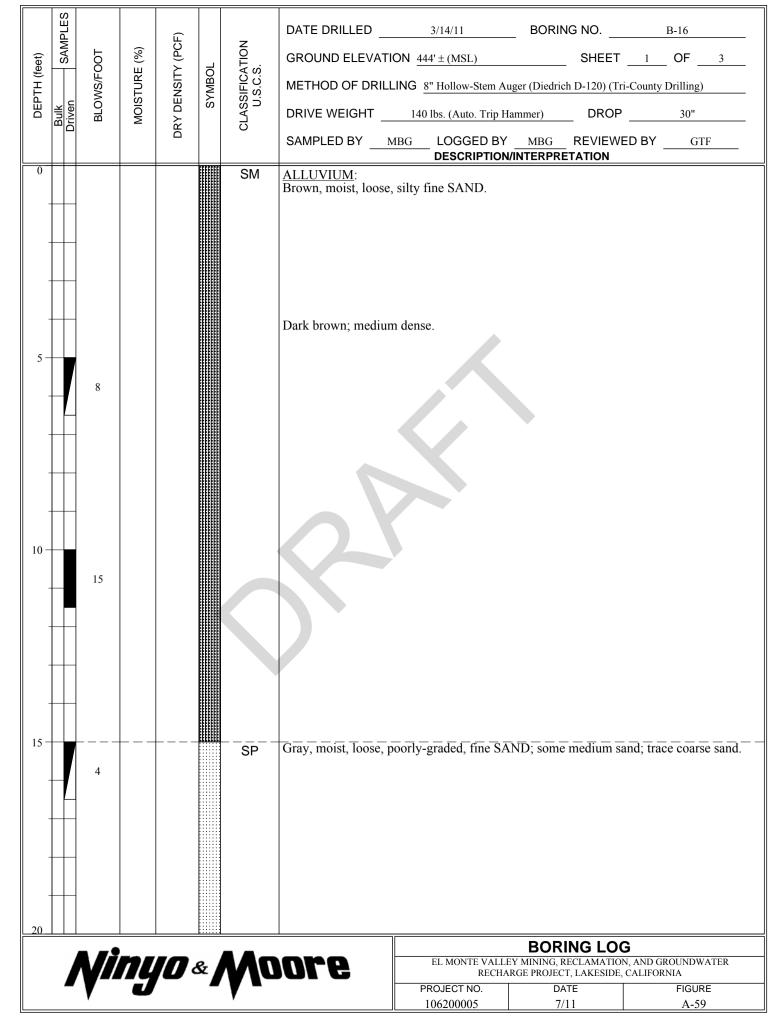
DEPTH (feet) Bulk Driven BLOWS/FOOT MOISTURE (%) DRY DENSITY (PCF)	SYMBOL CLASSIFICATION U.S.C.S.	DATE DRILLED
10	ML	Dark brown, damp, loose to medium dense, fine sandy SILT; scattered medium to coarse sand; micaceous. Dark brown, damp, loose to medium dense, silty fine SAND; scattered medium to coarse sand; micaceous.
Minyo	× Mi	
		106200005 7/11 A-54

DEPTH (feet) Bulk Driven BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF) SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED				
25			SM	ALLUVIUM: (Continued) Dark brown, damp, loose to medium dense, silty fine SAND; scattered medium to coarse sand; micaceous. Few medium to coarse sand; fewer silt.				
30								
35								
40	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE							
_ 🔻	U		V -	PROJECT NO. DATE FIGURE 106200005 7/11 A-55				

DEPTH (feet) Bulk Driven BLOWS/FOOT MOISTURE (%) DRY DENSITY (PCF) SYMBOL CLASSIFICATION U.S.C.S.	DATE DRILLED 2/23/11 BORING NO. GROUND ELEVATION 436' ± (MSL) SHEET METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (T DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROF SAMPLED BY MJB LOGGED BY MJB REVIEW DESCRIPTION/INTERPRETATION	ri-County Drilling) 3 OF 5 ri-County Drilling)
40 SM	Brown, damp, medium dense, silty fine SAND; some medium	
45 SW	Grayish brown, saturated, medium dense to dense, well-graded micaceous.	, fine to coarse SAND;
55	DODING I O	C
<i>Ninyo & M</i>	EL MONTE VALLEY MINING, RECLAMATION RECHARGE PROJECT, LAKESIDE PROJECT NO. DATE 106200005 7/11	ON, AND GROUNDWATER

eet)	DOT	(%) :	DRY DENSITY (PCF)	ب	CLASSIFICATION U.S.C.S.	DATE DRILLED	2/23/11 ON 436' ± (MSL)	BORING NO	B-15 4 OF5
DEPTH (feet)	iven Car	MOISTURE (%)	NSIT	SYMBOL		METHOD OF DRILL	ING 8" Hollow-Stem Au	ger (Diedrich D-120) (Tr	ri-County Drilling)
DEP	Oriven BLO	MOIS	۲Y DE	S		DRIVE WEIGHT _	140 lbs. (Auto. Trip Ha	ammer) DROP	30"
			AQ					MJB REVIEW	ED BY GTF
60	20				SW-SM	ALLUVIUM: (Cont Grayish brown, satur with silt; micaceous.	rated, medium dense to	o dense, well-graded,	, fine to coarse SAND
65	51					Dense.			
75	21								
-	39				SW+GW	Medium dense.	vn, saturated, very den	se well-graded fine	to coarse SAND and
80				3	SVV+GVV	GRAVEL; micaceou		so, wen-graded, fille	to coarse SAND and
		50 F		_			FL MONTE VALLE	BORING LO	
	/ \//	14	JU 8	Ý	\mathbf{M}_{I}	ore		RGE PROJECT, LAKESIDE, DATE	
	▼	3			▼		106200005	7/11	A-57

DEPTH (fee	Driven SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED 2/23/11 BORING NO. B-15 GROUND ELEVATION 436' ± (MSL) SHEET 5 OF 5 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30" SAMPLED BY MJB LOGGED BY MJB REVIEWED BY GTF DESCRIPTION/INTERPRETATION
85		50/4"				SW+GW	
90 —		50/4"				GP-GM	Gray, saturated, very dense, poorly-graded, fine to coarse GRAVEL with silt; some cobbles. Refusal to further drilling. Total Depth = 91.0 feet. Groundwater encountered at approximately 45 feet during drilling. Backfilled with approximately 32 cubic feet of bentonite grout shortly after drilling on 2/23/11. Note: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
100		Vii	74	10	&	Μa	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE
	_	Y	U		_	V	PROJECT NO. DATE FIGURE 106200005 7/11 A-58



DEPTH (feet) Bulk SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED 3/14/11 BORING NO. B-16 GROUND ELEVATION 444' ± (MSL) SHEET 2 OF 3 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30" SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF				
20	12				SP-SM	ALLUVIUM: (Continued) Gray, damp, medium dense, fine sandy SILT; trace medium sand.				
25	9				SM	Brown to gray, moist, medium dense, silty fine SAND.				
30	16				ØP	Gray, moist, medium dense, poorly-graded, fine SAND.				
35	9				SM	Gray to brown, moist, medium dense, silty fine SAND.				
40				意		METAVOLCANIC ROCK: Yellow, moist, soft, weathered METAVOLCANIC ROCK. ROPING LOG				
	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE 106200005 7/11 A-60									

DATE DRILL (A) (B) (B) (B) (B) (B) (B) (B)	LED
\$\\ \frac{1}{2} \rightarrow \frac{1} \rightarrow \frac{1}{2} \rightarrow \frac{1}{2} \rightarrow \f	SHEET 3 OF 3 OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling)
BLOWS	GHT 140 lbs. (Auto. Trip Hammer) DROP 30"
SAMPLED	
40 METAVOI	DESCRIPTION/INTERPRETATION CANIC ROCK: (Continued)
Yellow, mo	ist, soft, weathered METAVOLCANIC ROCK.
45 Refusal to fi	urther drilling. = 45.2 feet.
Groundwater Groundwater	r not encountered.
Backfilled v 3/14/11.	vith approximately 16 cubic feet of bentonite grout shortly after drilling on
Note:	
due to seaso	r, though not encountered at the time of drilling, may rise to a higher level nal variations in precipitation and several other factors as discussed in the
report.	
50	
55	
<i>Ninyo & M</i> oore	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER

7/11

A-61

DEPTH (feet) Bulk SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED GROUND ELEVATION METHOD OF DRILLI DRIVE WEIGHT SAMPLED BYMI	DN 443' ± (MSL) ING 8" Hollow-Stem At 140 lbs. (Auto. Trip H BG LOGGED BY	ammer) DROP	1 OF2 i-County Drilling)
0					SM	ALLUVIUM: Grayish brown, damp			
5	9	3.8	100.0		SW	Gray, dry to damp, lo	ose, well-graded, fine	e to coarse SAND.	
10	14	15.2	97.4		SM	Light brown, moist, n	nedium dense, silty, 1	fine to coarse SAND;	trace roots.
20	14	15.2	97.4			Brown.			
			in i	e- 1	AAn	nro		BORING LOC	N, AND GROUNDWATER
		"3		× /	AIG	ore	RECHA PROJECT NO. 106200005	RGE PROJECT, LAKESIDE, DATE 7/11	CALIFORNIA FIGURE A-62

	Bulk SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED 2/25/11 BORING NO. B-17 GROUND ELEVATION 443' ± (MSL) SHEET 2 OF 2 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30" SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
20		8				SM SW	ALLUVIUM: (Continued) Brown, moist, medium dense, silty fine to coarse SAND. Gray, dry to damp, medium dense, well-graded, fine to medium SAND.
25 +			3.2	101.0		SM	Brown, moist, medium dense, silty SAND. Total Depth = 26.5 feet. Groundwater not encountered.
30 —							Backfilled with approximately 9 cubic feet of bentonite grout shortly after drilling on 2/25/11. Note: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.
35 —							
40		V i	ny	[0 8	&	W a	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE

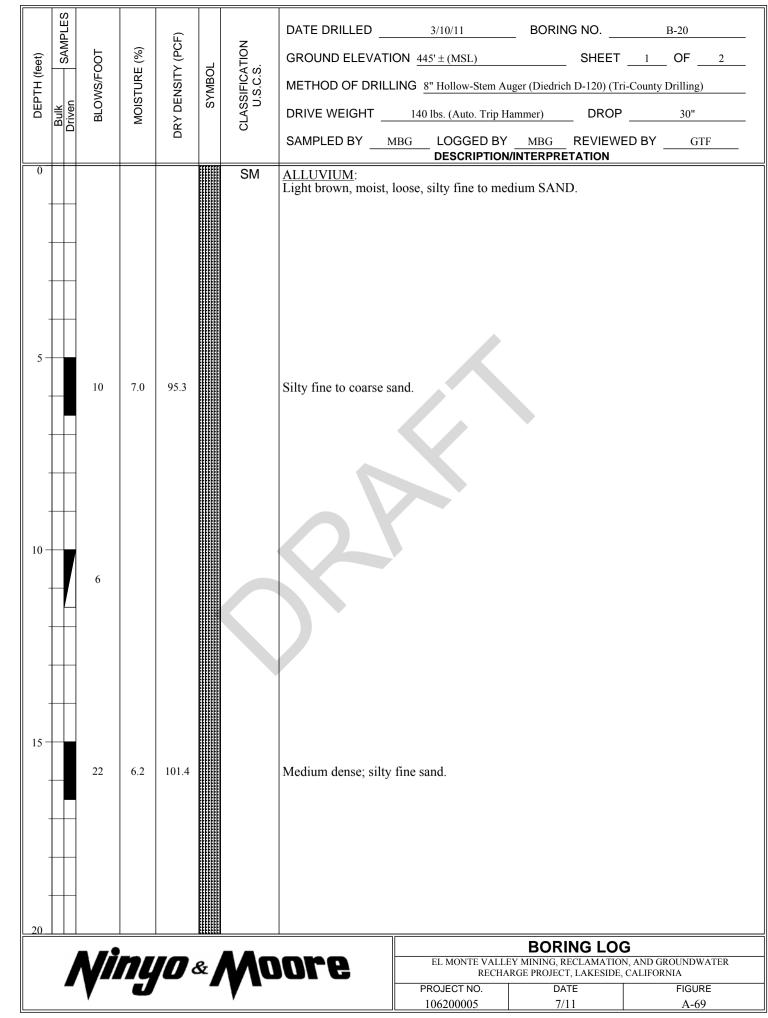
7/11

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DEPTH (feet) Bulk Driven BLOWS/FOOT	MOISTURE (%) DRY DENSITY (PCF)	SYMBOL CLASSIFICATION U.S.C.S.	DATE DRILLED 3/10/11 - 3/11/11 BOF GROUND ELEVATION 444' ± (MSL) METHOD OF DRILLING 8" Hollow-Stem Auger (Diec DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) SAMPLED BY MBG LOGGED BY MBG DESCRIPTION/INTERF	SHEET _ 1 OF _ 3 drich D-120) (Tri-County Drilling) DROP _ 30" G REVIEWED BY GTF			
5 — 20		SW	ALLUVIUM: Light brown, moist, loose, well-graded, fine to coa	arse SAND.			
15 18		SW-SM	Gray, moist, medium dense, well-graded, fine to n				
	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE						
'		· · · · · · · · · · · · · · · · · · ·	106200005	7/11 A-66			

et) SAMPLES			F)		-	DATE DRILLED	3/10/11 - 3/11/11	BORING NO.	B-19	
set)	700	(%)	Y (PC	SYMBOL	ب	ATION .	GROUND ELEVATION	ON 444' ± (MSL)	SHEET	2 OF3
DEPTH (feet)	BLOWS/FOOT	TURE	NSIT		CLASSIFICATION U.S.C.S.	METHOD OF DRILL	ING 8" Hollow-Stem Aug	ger (Diedrich D-120) (Tr	i-County Drilling)	
DEP Bulk Driven	BLO\	MOISTURE (%)	DRY DENSITY (PCF)	S	LASS U.	DRIVE WEIGHT	140 lbs. (Auto. Trip Ha	mmer) DROP	30"	
			DR			SAMPLED BY M	BG LOGGED BY DESCRIPTION/	MBG REVIEWI	ED BY	
20	7				SM SW-SM		nued) bose to medium dense, t, medium dense, well-		um SAND with silt.	
25	27					Boring terminated on Boring resumed on 3	/11/11.	Alima CAND		
30	4	↓			SM		t, loose, silty fine to m			
40	17				SP	Grayish brown, satur	ated, medium dense, p	oorly-graded, fine to	medium SAND.	
	1 /2				44-	one	EL MONTE WALLEY	BORING LOC		
	V//	$I_{+}^{\prime\prime}$		&	$\mathbf{M}_{\boldsymbol{\mathcal{G}}}$	ore	RECHAR	MINING, RECLAMATIO GE PROJECT, LAKESIDE,	CALIFORNIA	
	V			_	V		PROJECT NO. 106200005	DATE 7/11	figure A-67	

	Bulk SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	GROUND ELEVATI METHOD OF DRILL DRIVE WEIGHT		SHEET ager (Diedrich D-120) (Tr ammer) DROP	3 OF3
45 —		19				SP	coarse sand.	ed, medium dense, poo		edium SAND; little
-		9				SM	Dark brown, saturate	ed, medium dense, silt	y fine SAND.	
50		10					Loose.			
55 —		21					Dense. Refusal on gravel an	d cobbles		
60		50/1"			EFFEFE		Total Depth = 57.1 f Groundwater encour Backfilled with appr 3/11/11. Note: Groundwater i	eet. Attered at approximately oximately 20 cubic fermay rise to a level high	et of bentonite grout her than that measure	shortly after drilling on
	1		5e =	ıe	_			FI MONTE VALLE	BORING LOC	
		Y //	14		Ý	\mathbf{M}_{I_I}	ore		RGE PROJECT, LAKESIDE, DATE	
		7				▼		106200005	7/11	A-68



et) SAMPLES)T(PCF)		NOI	DATE DRILLED 3/10/11 BORING NO. B-20 GROUND ELEVATION 445' ± (MSL) SHEET 2 OF 2
DEPTH (feet)	BLOWS/FOOT	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling)
DEPT Bulk Driven	BLOW	Y DEN	SYI	LASSI U.S	DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"
		DR		O	SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
20	21			SM	ALLUVIUM: (Continued) Light brown, moist, dense, silty fine SAND.
	+-	+		ML	Dark brown, moist, loose, fine sandy SILT; some fine to medium sand.
25 ———	12				
					Total Depth = 26.5 feet. Groundwater not encountered.
					Backfilled with approximately 9 cubic feet of bentonite grout shortly after drilling on 3/10/11.
					Note: Groundwater, though not encountered at the time of drilling, may rise to a higher level
30					due to seasonal variations in precipitation and several other factors as discussed in the report.
35					
40					BORING LOG
	/in	yo a	&	Ma	EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE

et) SAMPLES OT		(-		DATE DRILLED	3/10/11	BORING NO.	B-21
et) SAMI	(%)	DRY DENSITY (PCF)	NO E .	GROUND ELEVATION	N 450' ± (MSL)	SHEET	1OF2
DEPTH (feet) ulk iven SAI	IURE		MBOI IFICA S.C.S	METHOD OF DRILLIN	IG 8" Hollow-Stem Aug	ger (Diedrich D-120) (Tri	i-County Drilling)
DEP' Bulk Driven BLOW	MOISTURE (%)		SYMBOL CLASSIFICATION U.S.C.S.	DRIVE WEIGHT	140 lbs. (Auto. Trip Ha	mmer) DROP	30"
	_	DR	Ö	SAMPLED BY MB		MBG REVIEWE	ED BY
5			SM	ALLUVIUM: Brown, moist, loose, s Trace coarse sand; trace Trace gravel (up to 3/4) Silty fine to medium sales	ilty fine SAND.		
		<u></u>				BORING LOC	
	NY	1 8	M	ore	RECHAR	Y MINING, RECLAMATION GE PROJECT, LAKESIDE,	N, AND GROUNDWATER CALIFORNIA
- V	J	·	- y -		PROJECT NO. 106200005	DATE 7/11	FIGURE A-71

Bulk SAMPLES Driven BLOWS/FOOT	MOISTURE (%) DRY DENSITY (PCF) SYMBOL	CLA	DATE DRILLED 3/10/11 BORING NO. B-21 GROUND ELEVATION 450' ± (MSL) SHEET 2 OF 2 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30" SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
25		SM	
40	nyo &	₩a	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE

et) SAMPLES OT	(E		_	DATE DRILLED	2/24/11	BORING NO.	B-22
SAM	(%)	(PCF	CLASSIFICATION U.S.C.S.	GROUND ELEVATION	ON 454' ± (MSL)	SHEET	1OF2
DEPTH (feet) sulk iven SA	TURE NSIT)	SYMBOL		METHOD OF DRILL	ING 8" Hollow-Stem A	uger (Diedrich D-120) (Tr	ri-County Drilling)
DEP Bulk Driven BLOV	MOISTURE (%) DRY DENSITY (PCF)	S	LASS U.	DRIVE WEIGHT	140 lbs. (Auto. Trip H	ammer) DROP	30"
	RO RO		0	SAMPLED BYM	LOGGED BY DESCRIPTION	MBG REVIEW	ED BYGTF
			SM		silty, fine to medium		
5 — 18			SW	Gray, moist, medium	dense, well-graded,	fine to coarse SAND.	
9				Loose.			
15 ————————————————————————————————————	3.6 103.7			Dry to damp; mediur	n dense.		
20							
					FI MONTE VALLE	BORING LOC EY MINING, RECLAMATIO	
	nyu	&	\mathbf{M}_{I}	ore		RGE PROJECT, LAKESIDE,	
Y			▼		106200005	7/11	A-73

DEPTH (feet) Bulk Briven BLOWS/FOOT	MOISTURE (%) DRY DENSITY (PCF)	CLASSIFICATION U.S.C.S.	DATE DRILLED 2/24/11 BORING NO. B-22 GROUND ELEVATION 454' ± (MSL) SHEET2 OF2 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT140 lbs. (Auto. Trip Hammer) DROP30" SAMPLED BYMBG LOGGED BYMBG REVIEWED BYGTF
18		ML	ALLUVIUM: (Continued) Gray to grayish brown, moist, medium dense, fine sandy SILT.
19		SC	Brown, moist, stiff, clayey fine SAND. Total Depth = 26.5 feet. Groundwater not encountered. Backfilled with approximately 9 cubic feet of bentonite grout shortly after drilling on 2/24/11. Note: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the
30			report.
35			
	nyo & j	Wa	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE

DEPTH (feet) Bulk Bulk BLOWS/FOOT MOISTURE (%) DRY DENSITY (PCF) SYMBOL CLASSIFICATION U.S.C.S.	DATE DRILLED	455' ± (MSL) 8" Hollow-Stem Au 140 lbs. (Auto. Trip Ha LOGGED BY	SHEET ger (Diedrich D-120) (Tr	1OF5
5 - SM	ALLUVIUM: Brown, damp, loose, silt Medium dense; scattered	ty fine to medium S	SAND.	
<i>Ninyo & Mo</i>	ore $ar{}$	RECHAF	BORING LOO Y MINING, RECLAMATION RGE PROJECT, LAKESIDE,	N, AND GROUNDWATER CALIFORNIA
, 6		PROJECT NO. 106200005	DATE 7/11	FIGURE A-75

et) SAMPLES OT		(DATE DRILLED 2/28/11 and 3/1/11 BORING NO B-23
et) SAMI	(%)	(PCF	NOIL	GROUND ELEVATION 455' ± (MSL) SHEET _ 2 OF _ 5
DEPTH (feet) ulk ven sLOWS/FOOT	JURE	DENSITY (FICAT	METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling)
DEPTH (feet) Bulk Driven BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF) SYMBOL	CLASSIFICATION U.S.C.S.	DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"
		DR,	Ö	SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
20			SM	ALLUVIUM: (Continued) Brown, damp, medium dense, silty fine to medium SAND.
25 —				Brown, damp, medium dense, silty fine to medium SAND. Scattered fine to coarse gravel.
30				
35	<u> </u>			Saturated.
40				
A /3				BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER
	1141	, &	\mathbf{M}_{I}	EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE
Y			▼	106200005 7/11 A-76

et) SAMPLES OT		(-		DATE DRILLED2/28/11 and 3/1/11 BORING NO B-23
et) SAMI	(%)	(PCF	CLASSIFICATION U.S.C.S.	GROUND ELEVATION 455' ± (MSL) SHEET 3 OF 5
DEPTH (feet) ulk ven sLOWS/FOOT	J. J. L.	DENSITY (METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling)
DEPTH (feet) Bulk Driven BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	ASSI U.S	DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"
		DR	ਹ	SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
45			SM	SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION ALLUVIUM: (Continued) Brown, saturated, medium dense, silty fine to medium SAND. Dense.
60				
		.		BORING LOG EL MONTE VALLEY MINING DECLAMATION, AND GROUNDWATER
	744	. &	\mathbf{M}_{I}	EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE
- 🔻	U		V -	PROJECT NO. DATE FIGURE 106200005 7/11 A-77

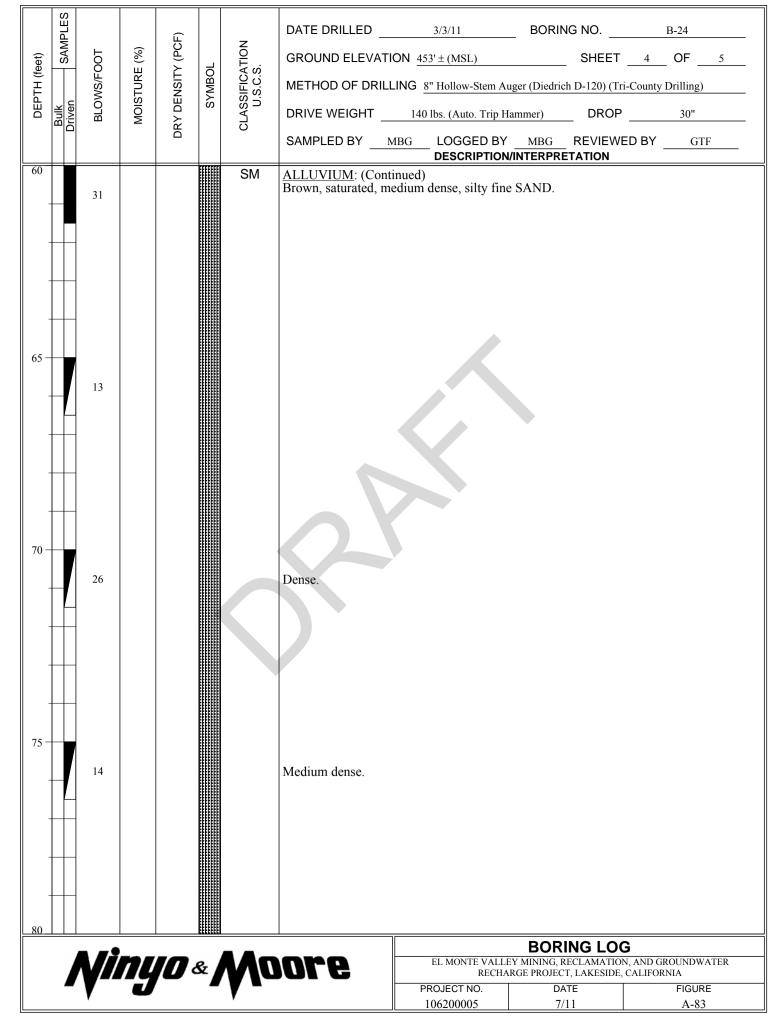
DEPTH (feet) Bulk Driven BLOWS/FOOT	MOISTURE (%) DRY DENSITY (PCF) SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED
65 41		SP-SM	ALLUVIUM: (Continued) Brown to grayish brown, saturated, dense, poorly-graded, fine to medium SAND with silt. Very dense; fine to coarse sand; scattered gravel; trace roots.
70 50		SW-SM	Brown to grayish brown, saturated, very dense, well-graded, fine to coarse SAND with silt.
75 — 34			Gray.
		AAn	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER
	140 & 1	A	RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE 106200005 7/11 A-78

SAMPLES OT (%) (PCF)	DATE DRILLED2/28/11 and 3/1/11 BORING NOB-23
SAM SAM (%) (PC (PC	GROUND ELEVATION 455' ± (MSL) SHEET5 OF5
DEPTH (feet) Stulk Sulk Sulk Sulk Sulk Sulk Sulk Sulk S	METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling)
DEPTH (feet) Bulk Driven BLOWS/FOOT MOISTURE (%) DRY DENSITY (PCF) SYMBOL CLASSIFICATION U.S.C.S.	DRIVE WEIGHT140 lbs. (Auto. Trip Hammer) DROP30"
	SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
59	ALLUVIUM: (Continued) Gray, saturated, very dense, poorly-graded, fine to medium SAND. Boring terminated on 2/28/11. Boring resumed on 3/1/11.
85	Gray. saturated, very dense, well-graded, fine to coarse SAND with silt. Trace cobbles.
The state of the s	Refusal to further drilling. Total Depth = 88.0 feet. Groundwater encountered at approximately 35 feet during drilling.
90 ——	Backfilled with approximately 31 cubic feet of bentonite grout shortly after drilling on 3/1/11. Note: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
95	
100	BORING LOG
<i>Ninyo & M</i> o	EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA
, , , , , , , , , , , , , , , , , , ,	PROJECT NO. DATE FIGURE 106200005 7/11 A-79

et) SAMPLES	(F)		7	DATE DRILLED 3/3/11 BORING NO B-24
set) SAN	: (%) Y (PC	پ ا	CLASSIFICATION U.S.C.S.	GROUND ELEVATION 453' ± (MSL) SHEET 1 OF 5
DEPTH (feet) sulk iven SA	MOISTURE (%)	SYMBOL		METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling)
DEP Bulk Driven BLO\	MOISTURE (%) DRY DENSITY (PCF)	S	LASS U.	DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"
	AO N		0	SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
5			SP	ALLUVIUM: Light brown, damp, loose, poorly-graded, fine SAND. Medium dense; trace gravel (up to ½ inch). Light brown, damp, medium dense, silty fine SAND; little coarse sand.
20	nyo	&	W	Moist; trace roots. BORING LOG
_ 🔻	U		▼ -	PROJECT NO. DATE FIGURE 106200005 7/11 A-80

DEPTH (feet) Bulk Driven	BLOWS/FOOT MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL CLASSIFICATION U.S.C.S.	GROUND ELEVATI METHOD OF DRILL DRIVE WEIGHT	LING 8" Hollow-Stem Au 140 lbs. (Auto. Trip H 4BG LOGGED BY	SHEET uger (Diedrich D-120) (Transmer) DROP	2 OF 5 ii-County Drilling)
25			SM	Brown; wet.	inued) medium dense, silty fi); trace roots. I; little coarse sand; tra		ium to coarse sand; trace
40	<i>jing</i>	10 &	SW SW	Brown, moist, dense		BORING LOCEY MINING, RECLAMATIO RGE PROJECT, LAKESIDE, DATE 7/11	N, AND GROUNDWATER

DEPTH (feet) Bulk Driven BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL CLASSIFICATION U.S.C.S.	GROUND ELEVATION METHOD OF DRILL		SHEET uger (Diedrich D-120) (Tr	3OF5	
40	<u> </u>		SW	ALLUVIUM: (Conti Brown, saturated, de				
45								
50								
55				Grayish brown; mica	aceous.			
60								
	"	U	Alg	oui e	PROJECT NO. 106200005	ARGE PROJÉCT, LAKESIDE DATE 7/11	CALIFORNIA FIGURE A-82	



DEPTH (feet) Bulk Driven BLOWS/FOOT	MOISTURE (%) DRY DENSITY (PCF) SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED 3/3/11 BORING NO. B-24 GROUND ELEVATION 453' ± (MSL) SHEET 5 OF 5 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30" SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
80 12		SM SP-SM	ALLUVIUM: (Continued) Brown, saturated, medium dense, silty fine SAND. Brown, saturated, medium dense, poorly-graded, fine SAND with silt.
90			Refusal to further drilling. Total Depth = 87.0 feet. Groundwater encountered at approximately 40 feet during drilling. Backfilled with approximately 30 cubic feet of bentonite grout shortly after drilling on 3/3/11. Note: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
95			
	nyo & j	Μa	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE 106200005 7/11 A-84

DEPTH (feet) Bulk SAMPLES Driven BLOWS/FOOT	MOISTURE (%) DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED 3/4/11 BORING NO. B-25 GROUND ELEVATION 465' ± (MSL) SHEET 1 OF 2 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30" SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
5 — 19	3.5 110.5		SM SW-SM	ALLUVIUM: Gray, damp, loose, silty fine to medium SAND. Gray, damp, medium dense, well-graded, fine to coarse SAND with silt.
15 — 45	6.2 100.0			Dense.
20	nyo	& <u>/</u>	Μa	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE 106200005 7/11 A-85

DEPTH (feet) Bulk Driven BLOWS/FOOT	MOISTURE (%) DRY DENSITY (PCF) SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED 3/4/11 BORING NO. B-25 GROUND ELEVATION 465' ± (MSL) SHEET 2 OF 2 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"			
			SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION			
20		SM	ALLUVIUM: (Continued) Gray, damp, medium dense, silty fine SAND.			
25 — 6		ML	Brown, moist, medium dense, fine sandy SILT. Loose.			
30 —			Total Depth = 26.5 feet. Groundwater not encountered. Backfilled with approximately 9 cubic feet of bentonite grout shortly after drilling on 3/4/11. Note: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.			
35						
BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE						

et) SAMPLES OT	(F)		DATE DRILLED 3/4/11 BORING NO B-26			
set) SAN	E (%)	YTION .	GROUND ELEVATION 469' ± (MSL) SHEET 1 OF 6			
DEPTH (feet) sulk iven SA	MOISTURE (%)	SSIFICAT U.S.C.S.	METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling)			
DEP Bulk Driven BLO\	MOISTURE (%) DRY DENSITY (PCF)	SYMBOL CLASSIFICATION U.S.C.S.	DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"			
	AQ	0	SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION			
5		ML	ALLUVIUM: Brown, moist, loose to medium dense, silty fine SAND.			
			Trace coarse sand.			
20						
BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWARECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE						
	iyu «	MI	RECHARGE PROJECT, LAKESIDE, ĆALIFORNIA PROJECT NO. DATE FIGURE			
Y		▼	106200005 7/11 A-87			

et) SAMPLES OT		-)			DATE DRILLED 3/4/11 BORING NO. B-26
et) SAM	(%)	. (PCF		NOIT .	GROUND ELEVATION 469' ± (MSL) SHEET 2 OF 6
DEPTH (feet) ulk SAI	URE	YZ	SYMBOL	IFICA S.C.S.	METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling)
DEP7 Bulk Driven BLOW	MOISTURE (%)	DRY DENSITY (PCF)	λS	CLASSIFICATION U.S.C.S.	DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"
	_	DR		Ö	SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
25				SM	
40					
BORING LOG					
	74	D &	&	Ma	EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA
- y	U		_		PROJECT NO. DATE FIGURE 106200005 7/11 A-88

SM ALLUMUM: (Continued) Brown, wet, medium dense, silty fine to coarse SAND. Saturated; micaccous. Trace gravel (up to ½ inch). Silty fine sand; trace coarse sand. ML Dark brown, saturated, dense, fine sandy SILT.	DEPTH (feet) Bulk SAMPLES Driven BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	GROUND ELEVATI		SHEE- uger (Diedrich D-120) (T	Γ <u>3</u> OF <u>6</u>
	45 ————————————————————————————————————					ALLUVIUM: (Cont. Brown, wet, medium) Saturated; micaceous Trace gravel (up to 1)	inued) in dense, silty fine to conservations.	oarse SAND.	
BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE									

et)	2		(F)		7	DATE DRILLED	3/4/11	BORING NO.	B-26	
eet)	TOC	(%) :	r (PC	بِ	TION .	GROUND ELEVATION	ON 469' ± (MSL)	SHEET	4 OF6	
DEPTH (feet)	iven 574 BLOWS/FOOT	TURE	MOISTURE (%) DRY DENSITY (PCF)		CLASSIFICATION U.S.C.S.	METHOD OF DRILL	ING 8" Hollow-Stem Au	ger (Diedrich D-120) (Tri	i-County Drilling)	
DEP	Driven BLO	MOIS	۲Y DE	S)LASS	DRIVE WEIGHT	140 lbs. (Auto. Trip Ha	ammer) DROP	30"	
			<u> </u>		_			INTERPRETATION	ED BY GTF	
60	20				SM	ALLUVIUM: (Conti Dark brown, saturate	nued) d, medium dense, silty	y fine SAND.		
					SW	Dark gray, saturated,	medium dense to den	se, well-graded, fine	to coarse SAND.	
					SM	Grayish brown, satur	ated, dense, silty fine	SAND.		
65	23									
70					4					
	55				SW-SM	Grayish brown, satur	ated, dense, well-grad	ed, fine to coarse SA	ND with silt.	
75										
	42					Very dense; few grav	few gravel up to $(1\frac{1}{2} \text{ inch})$.			
80										
	A #9			********	A A -			BORING LOC		
EL MONTE VALLEY MINING, REC							Y MINING, RECLAMATION RGE PROJECT, LAKESIDE,			
	- V	J	· 	_	_		PROJECT NO. 106200005	DATE 7/11	figure A-90	

et) SAMPLES OT		F)		_	DATE DRILLED3/4/11 BORING NOB-26
set) SAM	(%)	r (PC	_	TION.	GROUND ELEVATION 469' ± (MSL) SHEET 5 OF 6
DEPTH (feet) tulk iven SA BLOWS/FOOT	TURE	LISN	SYMBOL	S.C.S	METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling)
DEP Bulk Driven BLO\	MOISTURE (%)	DRY DENSITY (PCF)	Ś	CLASSIFICATION U.S.C.S.	DRIVE WEIGHT140 lbs. (Auto. Trip Hammer) DROP30"
		DR		O	SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
38				SP-SM	ALLUVIUM: (Continued) Grayish brown, saturated, very dense, poorly-graded, fine to medium SAND with silt; micaceous.
85				SW-SM	Gray, saturated, very dense, well-graded, fine to coarse SAND with silt.
78/10"				SM	Grayish brown, saturated, very dense, silty fine to medium SAND.
95				Sivi	Fine to coarse sand.
24					Dense. Dark brown; silty fine sand.
	• <u> </u>		<u>cettttt</u>	A A -	BORING LOG
	$n_{\underline{I}}$	[D 8	ž	$N_{\it 0}$	EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE
_ 🔻	U		_	V -	PROJECT NO. DATE FIGURE 106200005 7/11 A-91

	SAMPLES			CF)		Z	DATE DRILLED 3/4/11 BORING NOB-26
feet)	SA	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	7	CLASSIFICATION U.S.C.S.	GROUND ELEVATION 469' ± (MSL) SHEET 6 OF 6
DEPTH (feet)		WS/F	STUR	ISNE	SYMBOL	SIFIC J.S.C.	METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling)
B	Bulk	BLC	MO	RY DI	o	CLAS	DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"
				О			SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
100		50/3"				SM	ALLUVIUM: (Continued) Dark brown, saturated, very dense, silty fine SAND; some gravel (up to 2 inches).
							Refusal to further drilling. Total Depth = 101.0 feet. Groundwater encountered at approximately 45 feet during drilling. Backfilled with approximately 35 cubic feet of bentonite grout shortly after drilling on 3/4/11. Note:
105 -							Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
110 -							
115 -							
120							BORING LOG
		Mi	n	10	&	Μπ	EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA
	<i>Ninyo & M</i> oore					A 7.	PROJECT NO. DATE FIGURE

106200005

7/11

et) SAMPLES OT		(:			DATE DRILLED
et) SAME	(%)	(PCF		NOI NOI	GROUND ELEVATION 477' ± (MSL) SHEET 1 OF 2
DEPTH (feet) Ulk ven SLOWS/FOOT	URE	ISITY	SYMBOL	FICA:	METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling)
DEPTH (feet) Bulk Driven BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SΥ	CLASSIFICATION U.S.C.S.	DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"
		DR		Ö	SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
0				SM	ALLUVIUM: Brown, damp, medium dense, silty SAND.
5——					Scattered gravel (up to 1 inch).
52	6.0	121.2			Dense; trace gravel (up to 1 inch).
20					Medium dense to dense; trace roots; few gravel.
34					Medium dense.
20)		EEEEEE		BORING LOG
	74	[0 8	&	Ma	EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA
<i>Ninyo & M</i> oore					PROJECT NO. DATE FIGURE 106200005 7/11 A-93

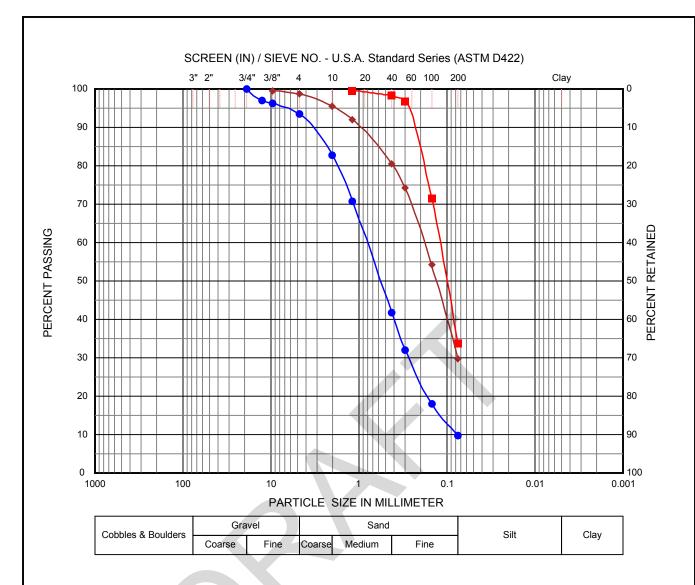
DEPTH (feet) Bulk CAMPLES	WS/FO	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED 2/25/11 BORING NO. B-27 GROUND ELEVATION 477' ± (MSL) SHEET 2 OF 2 METHOD OF DRILLING 8" Hollow-Stem Auger (Diedrich D-120) (Tri-County Drilling) DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30" SAMPLED BY MBG LOGGED BY MBG REVIEWED BY GTF DESCRIPTION/INTERPRETATION
20	24	3.1	103.1		SW	ALLUVIUM: (Continued) Gray, dry to damp, medium dense, well-graded, fine to coarse SAND.
25 —	22				SM	Grayish brown, damp, dense, silty fine to coarse SAND. Total Depth = 26.5 feet.
30 —				•		Groundwater not encountered. Backfilled with approximately 9 cubic feet of bentonite grout shortly after drilling on 2/25/11. Note: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.
35 —						
40	Ŋi	ny	10	&	Μa	BORING LOG EL MONTE VALLEY MINING, RECLAMATION, AND GROUNDWATER RECHARGE PROJECT, LAKESIDE, CALIFORNIA PROJECT NO. DATE FIGURE

106200005

7/11

A-94

APPENDIX C LABORATORY TEST RESULTS



	Sample No.	Gravel	Sand	Fines	Clay	\mathbf{D}_{10}	D_{30}	\mathbf{D}_{50}	\mathbf{D}_{60}	C_u	$\mathbf{C}_{\mathbf{c}}$	
	1B (10 - 13 ft)	6.5	83.8	9.8		0.0768	0.275	0.565	0.798	10.4	1.2	
	(SW-SM) Well-graded sand with silt, fine to coarse											
_	2C (20 - 22 ft)		66.2	33.8			0.070	0.099	0.118			
_	(SM) Silty sand, fine	(SM) Silty sand, fine										
	4B (10 - 13 ft)	1.3	69.0	29.8			0.075	0.132	0.179			
•	(SM) Silty sand, fine	to medium										



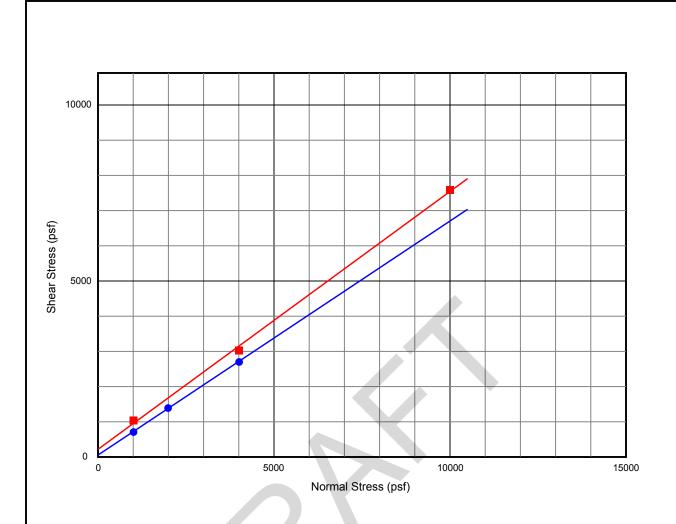
	PARTICLE	SIZE DISTR	IBUTION (A	ASTM D422)					
Project:	Slope Stabilit	lope Stability Investigation							
Location:	13964 EI MO	13964 El MOnte Road, Lakeside, California							
Job Number:	15383-8	Engineer:	fy	Enclosure:	C-1				

FINES CONTENT (ASTM C117)

Boring No.	3	3	3	3	3
Depth (ft)	0 - 5	5 - 25	25 - 30	30 - 35	35 - 40
Original Dry Mass	189.9	195.8	165.4	197.2	153.1
Dry Mass after Washing	122.1	189.3	78.9	190.2	48.1
Fine Contents (%)	35.7	3.3	52.3	3.5	68.6
Classification	SM	SP	ML	SP	ML
Boring No.	3	3	3	3	3
					Ŭ
Depth (ft)	40 - 45	45 - 60	60 - 65	65 - 87	87 - 95
			60 - 65		
Depth (ft)	40 - 45	45 - 60		65 - 87	87 - 95
Depth (ft) Original Dry Mass	40 - 45 158.7	45 - 60 158.2	151.2	65 - 87 168.8	87 - 95 166



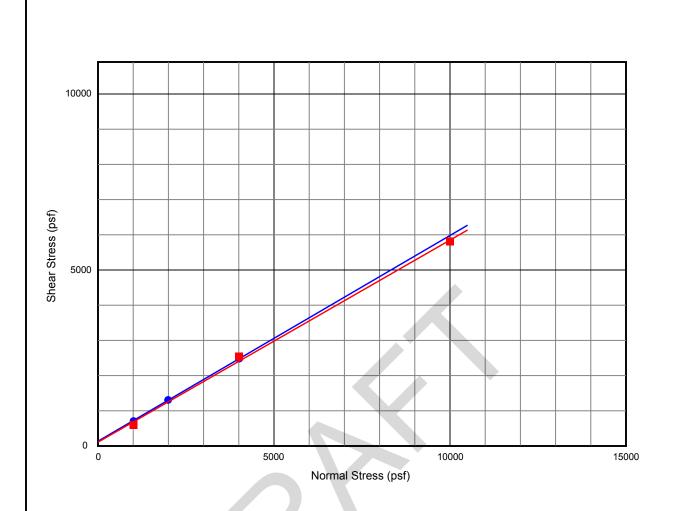
	TEST DATA SUMMARY								
Project:	Slope Stabilit	Slope Stability Investigation							
Location:	13964 EI MO	nte Road, Lak	eside, Californ	ia					
Job Number:	15383-8	Engineer:	fy	Enclosure:	C-2				



	Boring No.	Depth (ft)	_d (pcf)	w (%)	C _{pk} (psf)	pk (°)	C _{rs} (psf)	rs (°)		
	1	20	108.0	2.1	134.0	36.8	57.5	33.6		
	(SP-SM) Sand, fine to coarse / Undisturbed									
_	1	90	116.0	18.6	362.2	40.7	229.9	36.2		
•	(SM) Silty sar	nd, fine to coarse	/ Undisturbed							



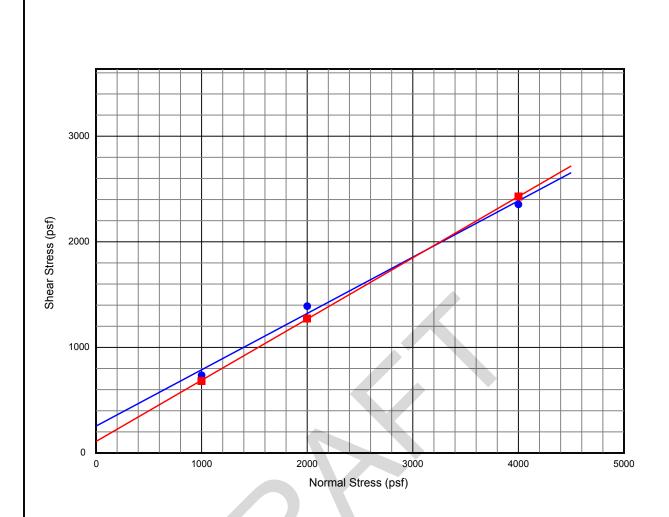
	DIRECT SHEAR TESTS (ASTM D3080)									
Project:	Slope Stabilit	Slope Stability Investigation								
Location:	13964 EI MO	13964 El MOnte Road, Lakeside, California								
Job Number:	15383-8	Engineer:	fy	Enclosure:	C-3					



	Boring No.	Depth (ft)	_d (pcf)	w (%)	C _{pk} (psf)	pk (°)	C _{rs} (psf)	rs (°)		
	2	45	100.0	21.0	198.7	32.9	144.4	30.2		
	(SP-SM) Sand, fine to coarse / Undisturbed									
	2	60	91.0	30.5	245.1	31.7	107.4	29.9		
•	(SM) Silty sar	nd, fine to mediu	m / Undisturbed							



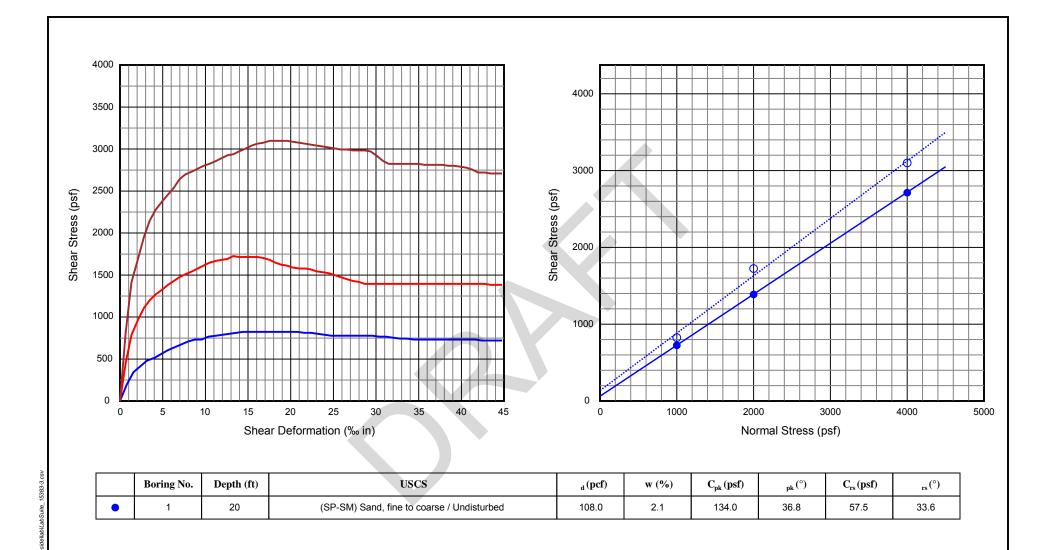
	DIRECT SHEAR TESTS (ASTM D3080)									
Project:	Slope Stabilit	Slope Stability Investigation								
Location:	13964 EI MO	nte Road, Lak	eside, Californ	ia						
Job Number:	15383-8	Engineer:	fy	Enclosure:	C-4					



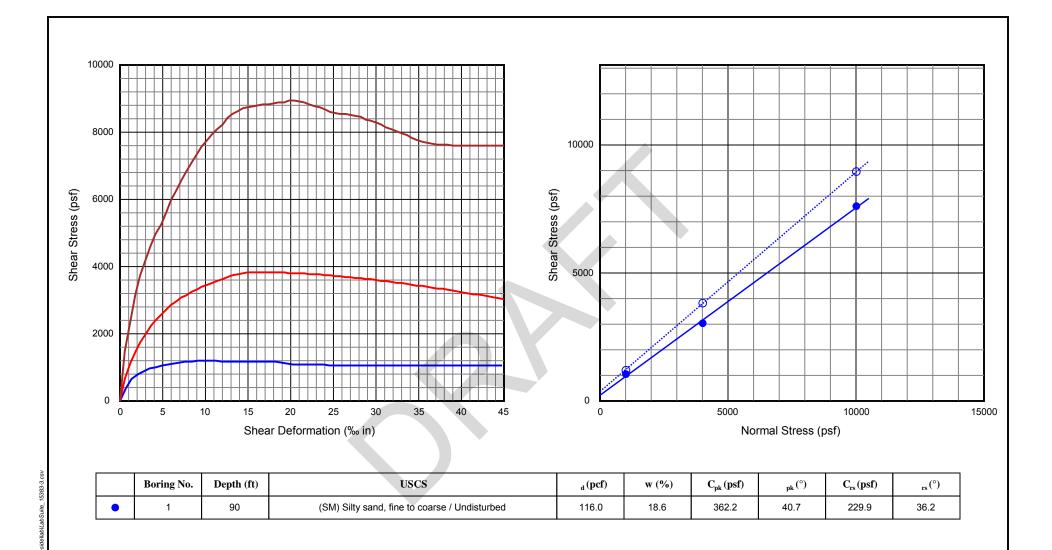
	Boring No.	Depth (ft)	_d (pcf)	w (%)	C _{pk} (psf)	pk (°)	C _{rs} (psf)	rs (°)
	3	40	92.0	28.0	214.2	29.8	250.0	28.1
	(ML) Sandy silt, fine / Remolded (RC=80%)							
_	4	15	99.0	4.3	117.0	30.0	108.6	30.1
-	(SM) Silty sar	nd, fine to mediu	m / Undisturbed					



	DIRECT SHEAR TESTS (ASTM D3080)					
Project:	Slope Stability Investigation					
Location:	13964 El MOnte Road, Lakeside, California					
Job Number: 15383-8 Engineer: fy Enclosure: C-5					C-5	

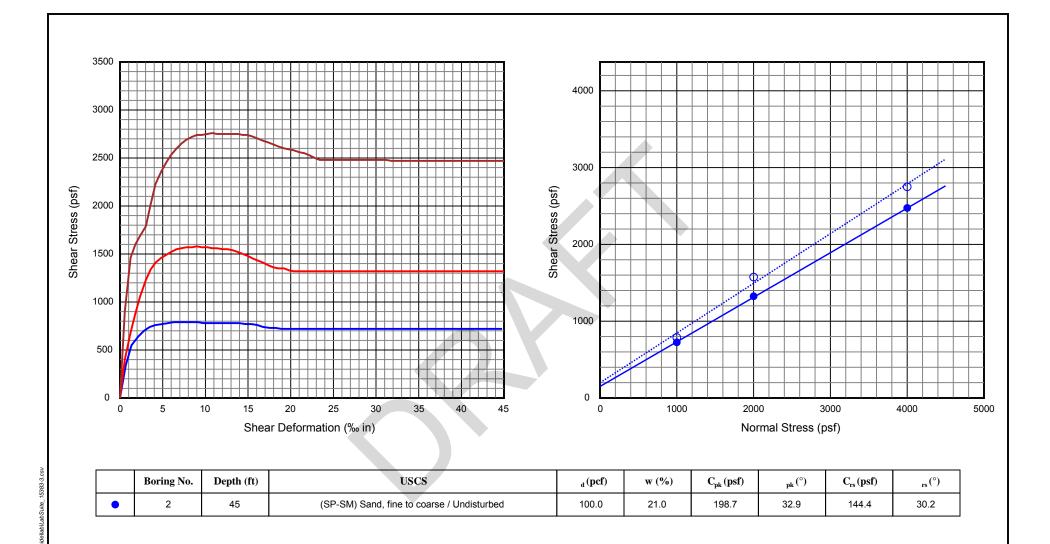


	DIRECT SHEAR TESTS (ASTM D3080)					
Project: Slope Stability Investigation						
	Location: 13964 El MOnte Road, Lakeside, California					
Job Number: 15383-8 Engineer: fy Enclosure: C-6					C-6	



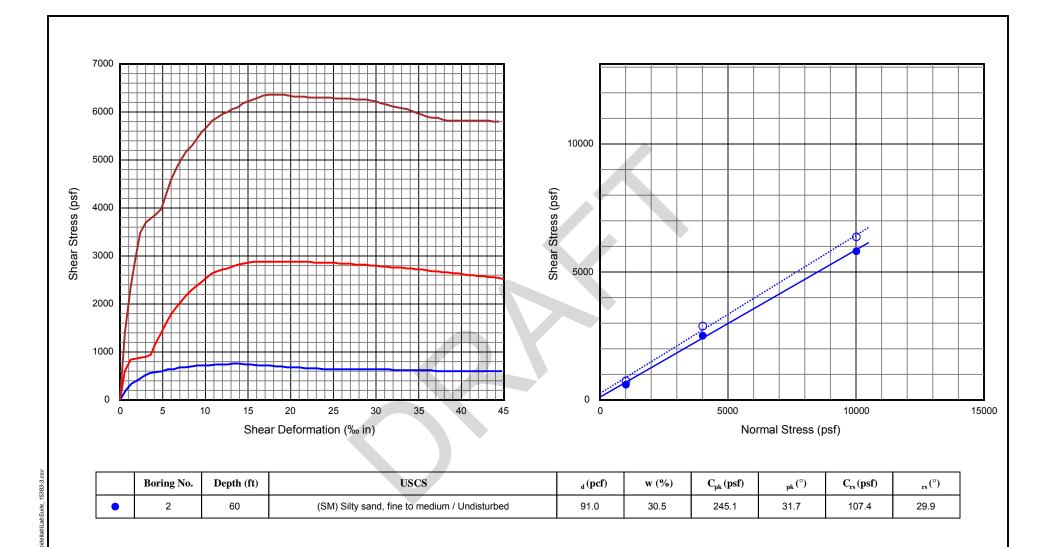
(4) C	HJ	Consultants
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	DIRECT SHEAR TESTS (ASTM D3080)						
Project: Slope Stability Investigation							
	Location: 13964 El MOnte Road, Lakeside, California						
Job Number: 15383-8 Engineer: fy Enclosure:					C-7		



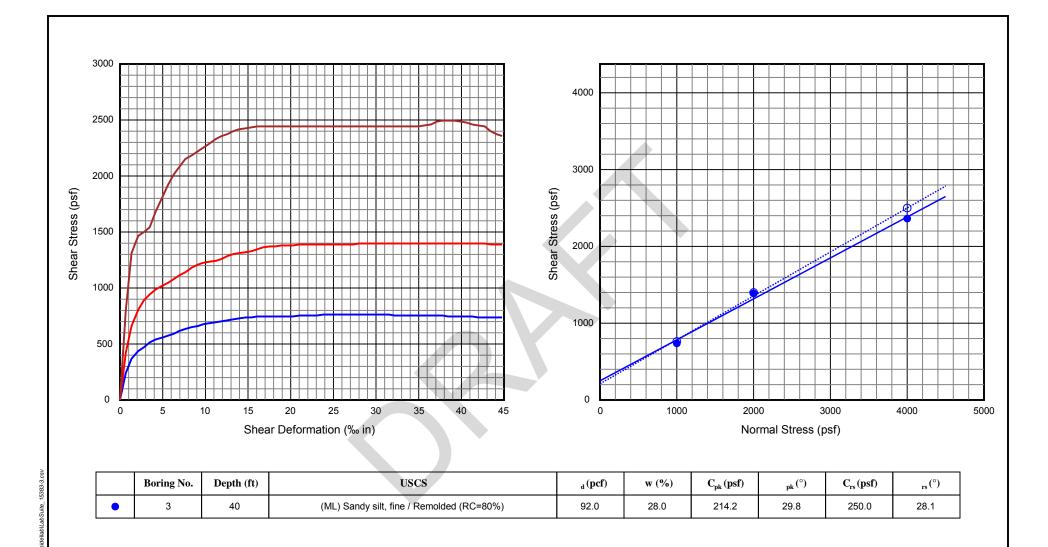
CHJ Cons	sultants
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	DIRECT SHEAR TESTS (ASTM D3080)						
Project: Slope Stability Investigation							
	Location: 13964 El MOnte Road, Lakeside, California						
Job Number: 15383-8 Engineer: fy Enclosure: C					C-8		

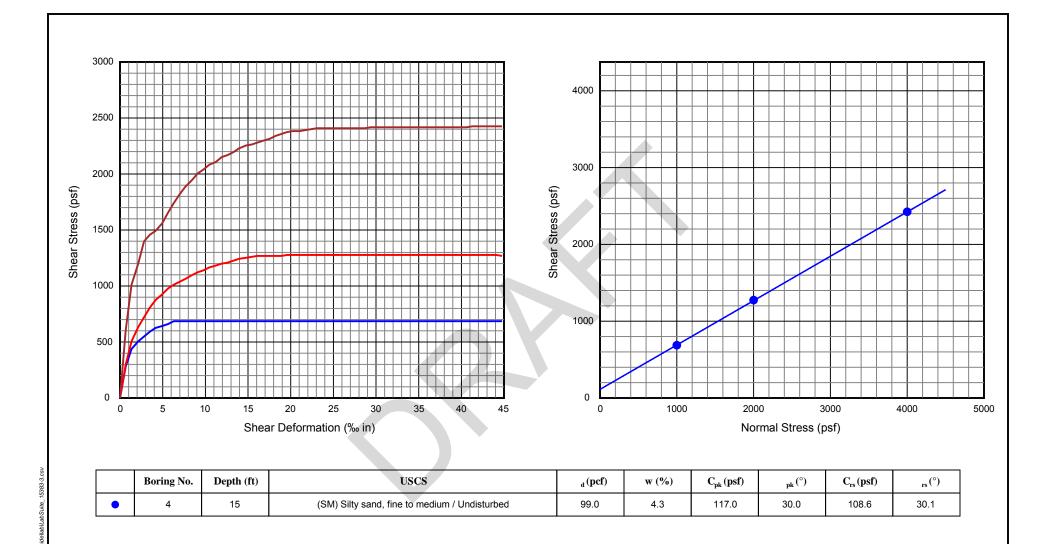


	CHJ	Consultants
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	DIRECT SHEAR TESTS (ASTM D3080)						
Project: Slope Stability Investigation							
	Location: 13964 El MOnte Road, Lakeside, California						
Job Number: 15383-8 Engineer: fy Enclosure:					C-9		

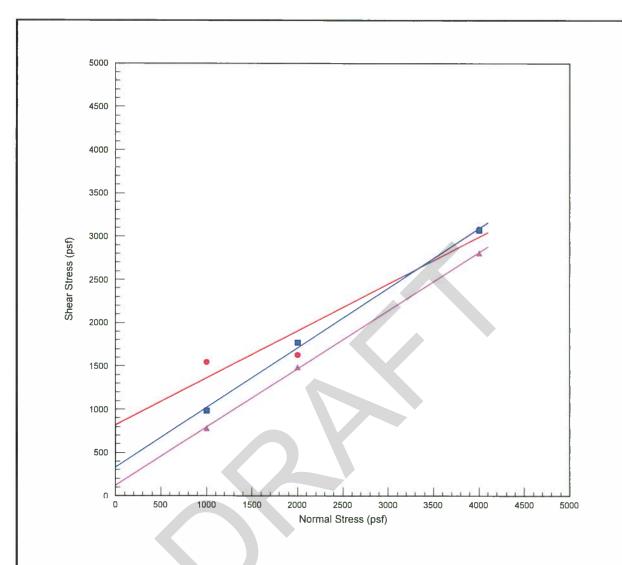


	DIRECT SHEAR TESTS (ASTM D3080)						
Project: Slope Stability Investigation							
	Location: 13964 El MOnte Road, Lakeside, California						
Job Number: 15383-8 Engineer: fy Enclosure:					C-10		



CH1	Consultants
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DIRECT SHEAR TESTS (ASTM D3080)					
Project:	Slope Stability Investigation				
Location:	13964 El MOnte Road, Lakeside, California				
Job Number:	15383-8	Engineer:	fy	Enclosure:	C-11

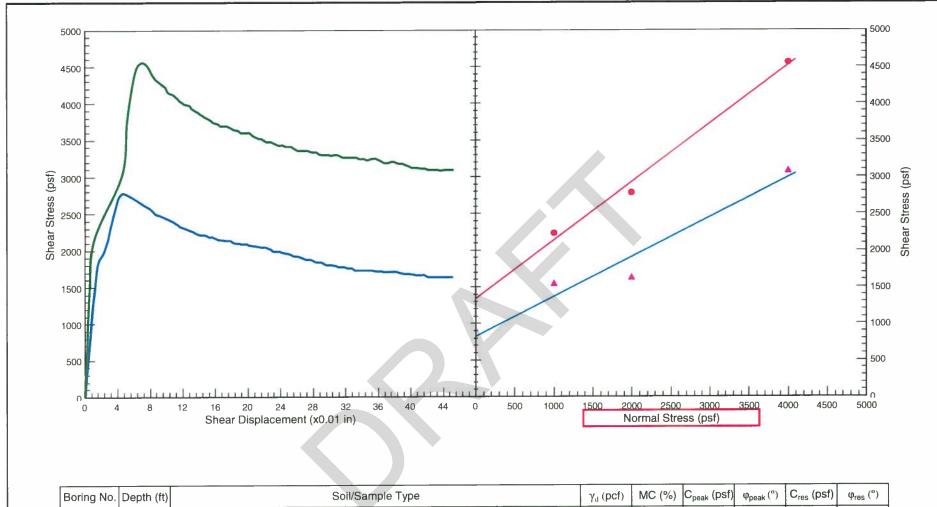


	Boring No.	Depth (ft)	Soil/Sample Type	γ _d (pcf)	MC(%)	C (psf)	φ(°)
•	2	10	(MH) Elastic silt	51	73.0	822	28
=	3	20	(MH) Elastic silt	57	71.6	336	35
A	3	45	(MH) Elastic silt	56	69.9	120	34



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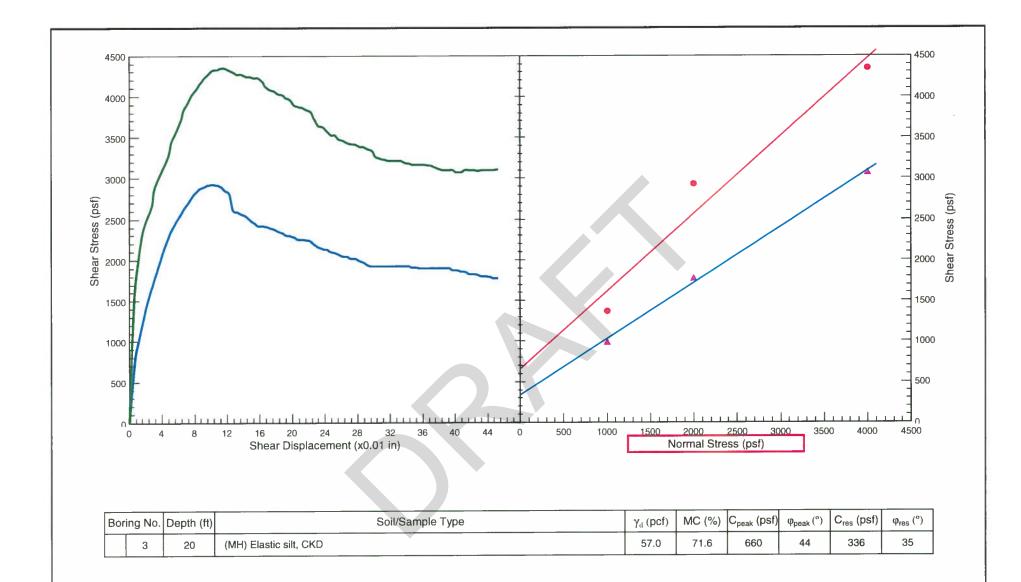
DIRECT SHEAR TEST					
Project:	Proposed Amended Reclamation of CalPortland Colton Cement Plant				
Location:	Colton, California				
Job No.:	11691-3 Enclosure:				



Во	ring No.	Depth (ft)	Soil/Sample Type	γ _d (pcf)	MC (%)	C _{peak} (psf)	φ _{peak} (°)	C _{res} (psf)	φ _{res} (°)
	2	10	(MH) Elastic silt, CKD	51.0	73.0	1344	38	822	28

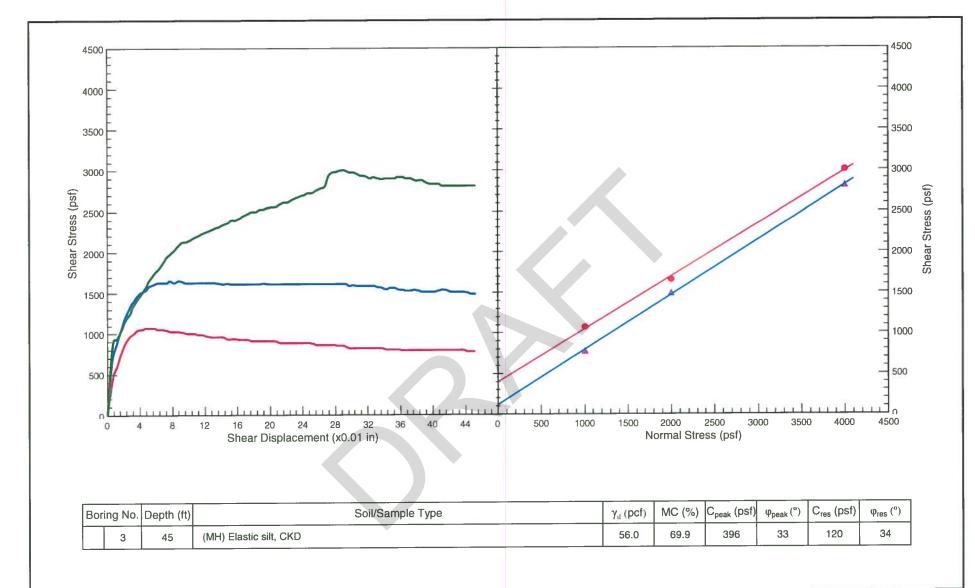


DIRECT SHEAR TEST					
Project:	Proposed Amended Reclamation of CalPortland Colton Cement Pl Colton, California				
Location					
Job Number	11691-3	Enclosure	9 3 790 0		





	DIRECT SHEA	R TEST		
Project: Proposed Amended Reclamation of CalPortland Colton Cement				
Location	Colton, California			
Job Number	11691-3	Enclosure	C-15	

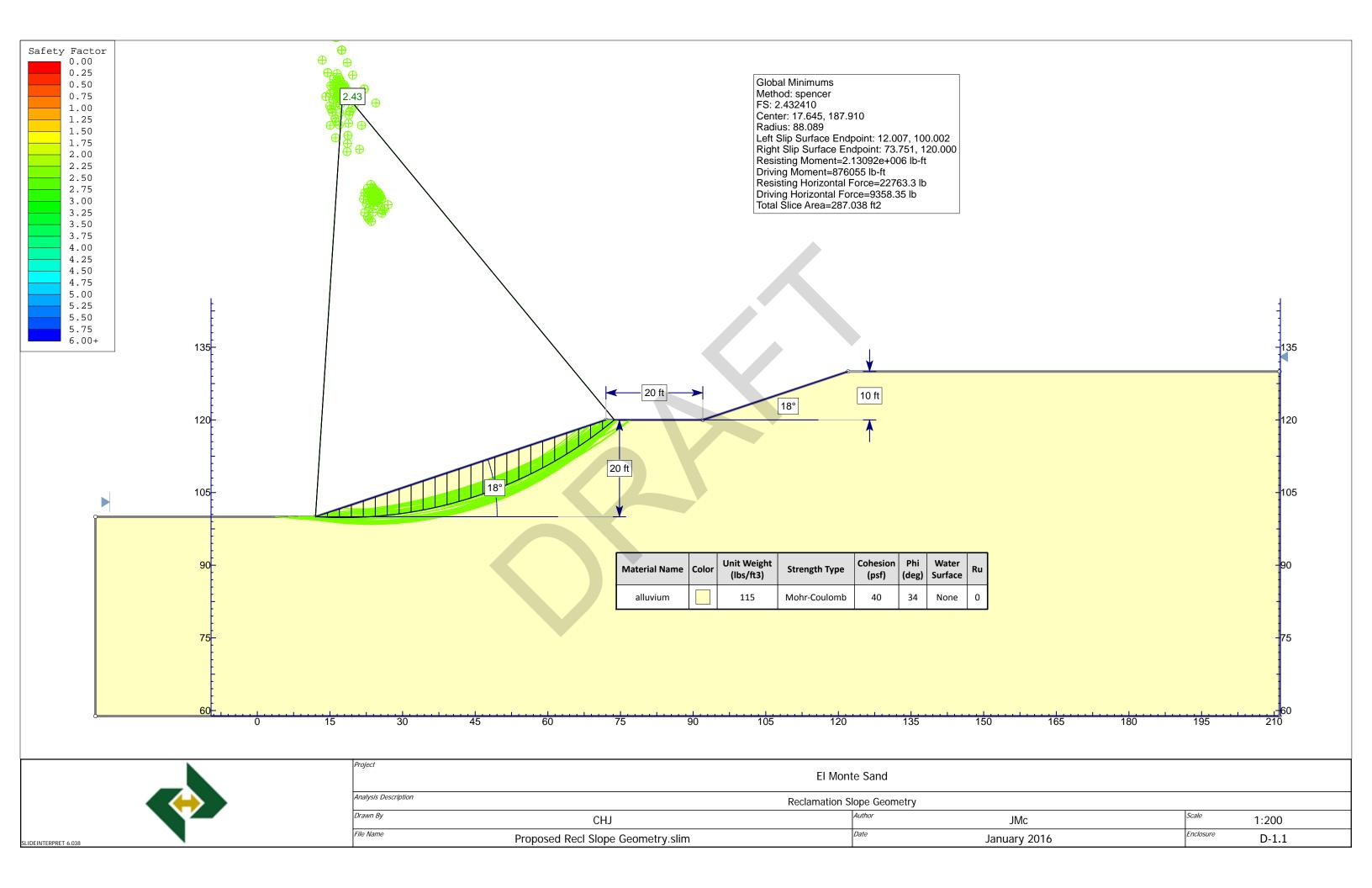


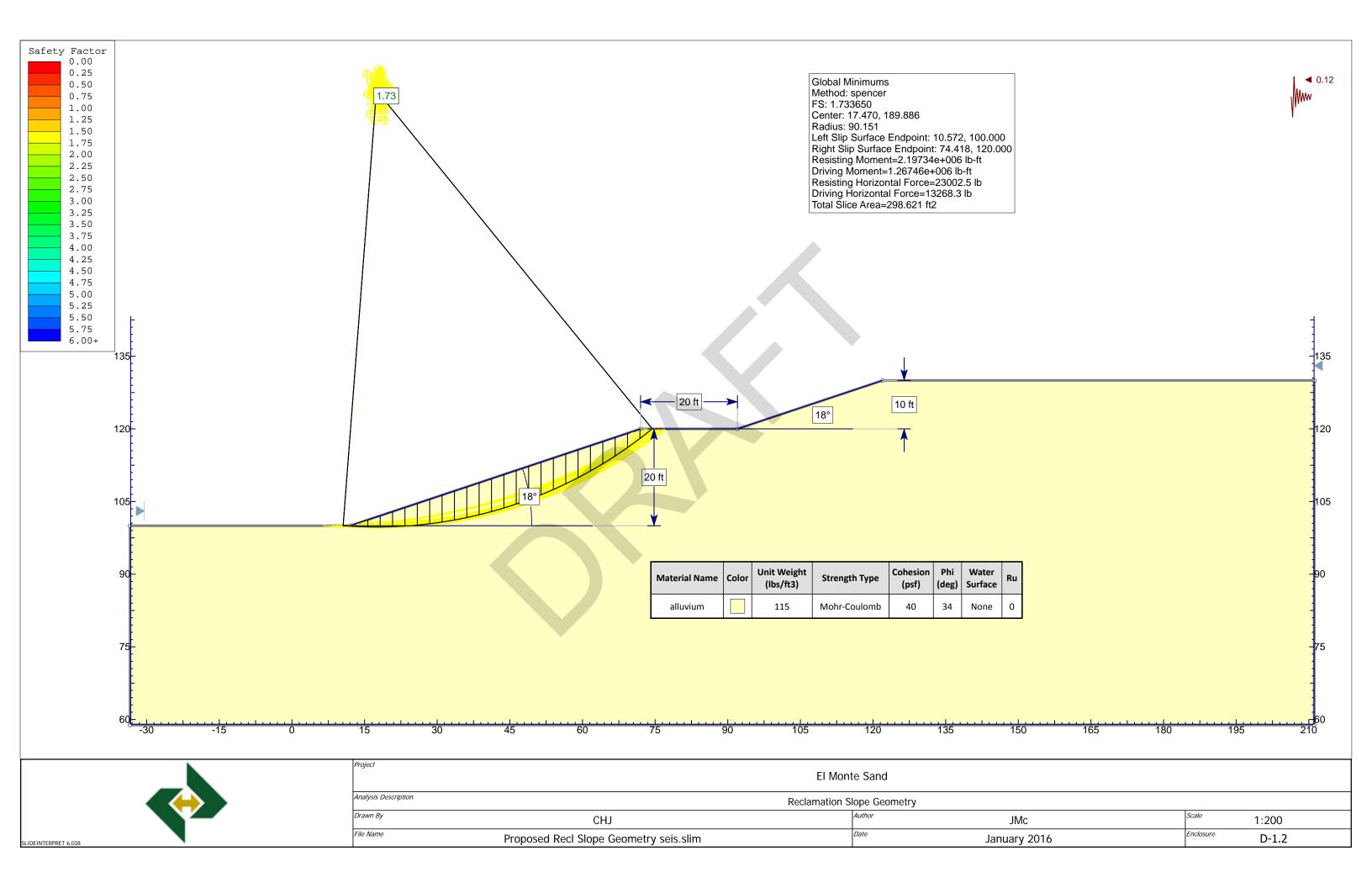


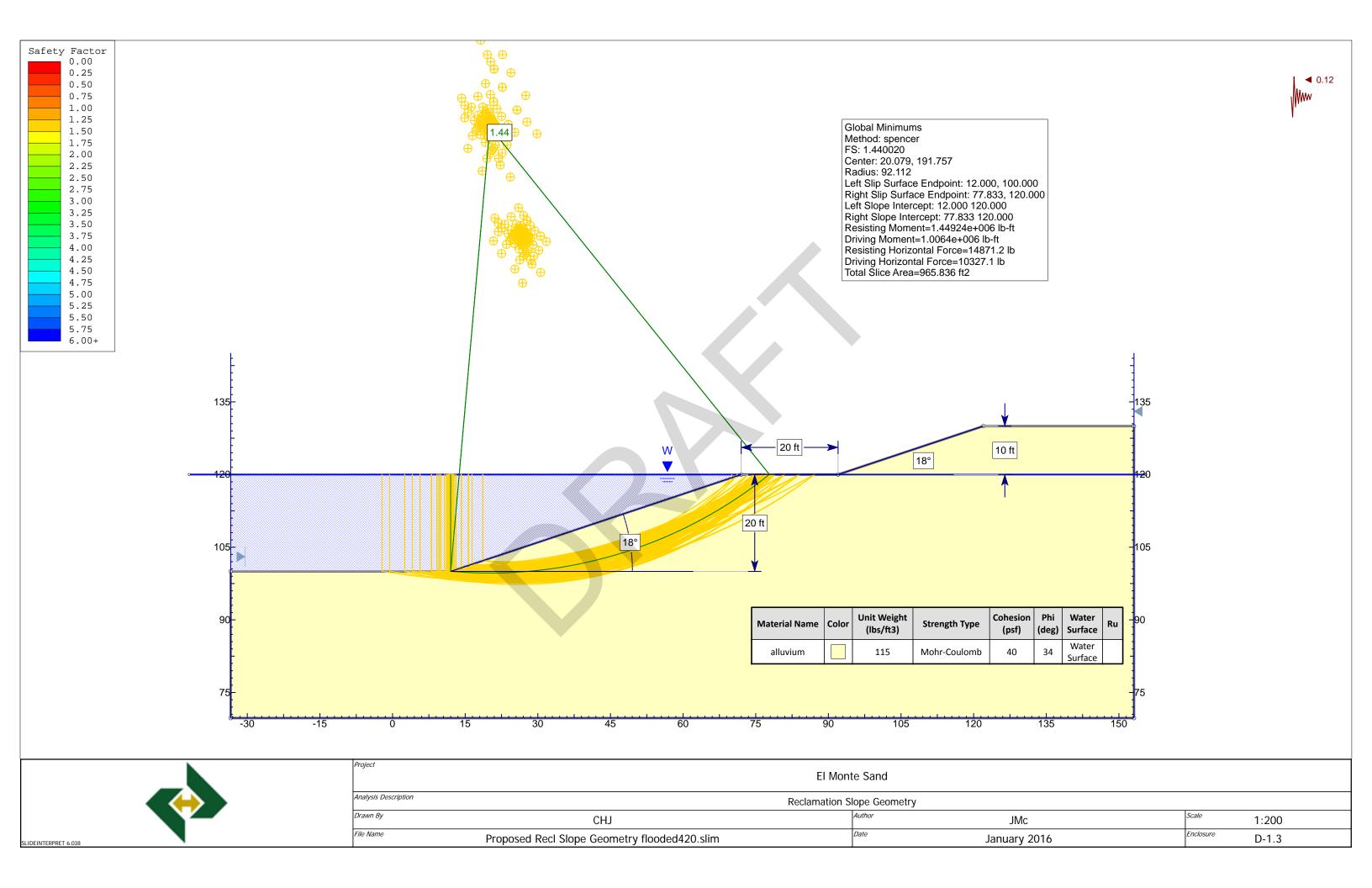
C.H.J. Incorporated

	DIRECT SHEA	R TEST			
Project:	Project: Proposed Amended Reclamation of CalPortland Colton Cement Plan				
Location	Colton, California				
Job Number	11691-3	Enclosure	C-17		

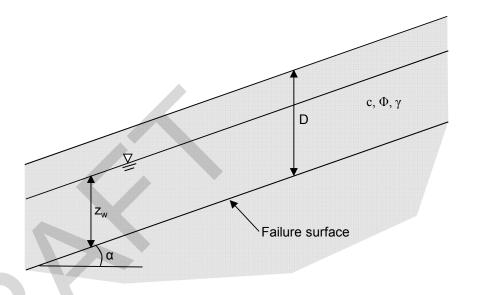
APPENDIX D GLOBAL STABILITY CALCULATIONS







D:	4	ft
z_w :	4	ft
γ:	99	pcf
$\gamma_{\rm w}$:	62.4	pcf
slope, α	26.5	0
Friction Angle, Φ'	30	o
Cohesion, c'	117	psf
Factor of Safety, F:	1.17	



$$F = \frac{c' + [\gamma D - \gamma_w z_w] \cos^2 \alpha \tan \phi'}{\gamma D \sin \alpha \cos \alpha}$$



Surficial Stability Analysis					
Project:	El Monte Sand Reclamation Slopes				
Location:	Lakeside Area, San Diego County				
Job Number:	15383-8 Enclosure: D-2				

APPENDIX E GEOTECHNICAL CALCULATIONS

