APPENDIX B

BORING AND WELL CONSTRUCTION LOGS

TRC

BORING AND WELL CONSTRUCTION LOG

FORMER ILM FACILITY BORING LOGS (Well I.D.)	McDONNELL DOUGLAS C-6 FACILITY (Well I.D.)	DOUGLAS AIRCRAFT CO. (Well I.D.)	BOEING REALTY CORPORATION (Well I.D.)
P1	WCC-01D	DAC-P1	BL-1
P2	WCC-01S		BL-2
P3	WCC-02S		BL-3
P4	WCC-03S		BL-4
P5	WCC-03D		BL-5
P6	WCC-04S		BL-6
P6B	WCC-05S		BL-7
P7	WCC-07S		BL-8
P8	WCC-10S		
P9	WCC-11S		
P9B	WCC-12S		
P10			
P11B			
P12			
P13B			
P14			
P15			
P16A			
P16B			
P16C			
P17			
P18			
P19			
P20			
P21			
P22			
P23			
P24			
P25			
DB-1			
DB-2			

GERAGHTY & MILLER, INC.

BORING LOG

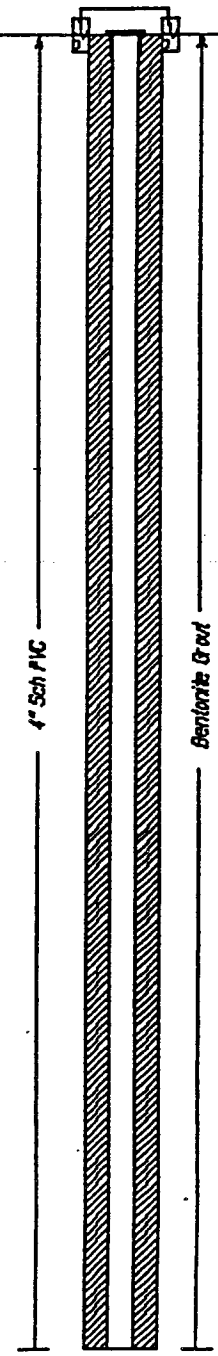
PROJECT International Light Metals
ATION 19200 S. Western
METHOD Hollow Stem Auger
ING METHOD CMSS
BOREHOLE DIAMETER 10.5 inches O.D.

PROJECT NO. CAO 217.012
LOGGED BY Derrick Willis
DRILL CO. Gregg Drilling and Testing, Inc.
RIG TYPE B-61
DRILLER Dino Selders

BORING P-1
DATE STARTED 8/16/94
DATE COMPLETED 8/16/94
BORING DEPTH 82.5 ft.

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
								8 inches conrete, 5 inches gravel
				7		GP		
						ML		SILT with fine Sand, some Clay, dark brown to black, stiff.
						SC		Clayey SAND, fine grained, brown, brittle.
				1				
						SP		SAND, fine grained, some Silt, tan. loose.
				0				
						ML		Clayey SILT, light olive brown (2.5Y, 5/4), semi-stiff, slightly moist.
					8			
				< 1	10			
	100 %		P1 @ 7a		17			
						CL		Silty CLAY, light olive brown (2.5Y, 5/4), semi-stiff, slighty moist.
10					11			
				< 1	12			
	100 %		P1 @ 10		15			
15								

WELL DIAGRAM



DEPTH (ft): 5, 10, 15

GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-1

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
					8	CL		Sandy CLAY, sand is very fine grained, medium olive (5Y, 5/4), soft, slightly moist.		
				< 1	11					
	100 %		P1 @ 15		17					
						ML				
					14			Clayey SILT with minor very fine grained Sand, medium olive (5Y, 5/4), semi-stiff, slightly moist, clayey at top.		20
				2	20					
	100 %		P1 @ 20		32				1" Sch PVC / Bentonite Grout	
						SP				
25					10			SAND, very fine grained, with Silt, olive (5Y, 5/6), loose, slighty moist.		25
				1	16					
	100 %		P1 @ 25a		24					
30										30

GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-1

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
					14	SP		SAND, very fine grained, with minor Silt, olive yellow (5Y, 6/6), loose, slighty moist, abundant shell fragments, minor cementing.		
				< 1	14					
	100 %		P1 @ 30		25					
					26			SAND, very fine grained, pale olive (5Y, 6/4), loose, slightly moist, minor shell fragments at top 6 inches.		35
				1	30					
	100 %		P1 @ 35		40				4" Sch PVC / Bentonite Grout	
40					14			SAND, very fine grained to fine grained, pale olive (5Y, 6/4), loose, slightly moist, abundant shell fragments, minor cementing.		40
				2	14					
	100 %		P1 @ 40		15					
45										45

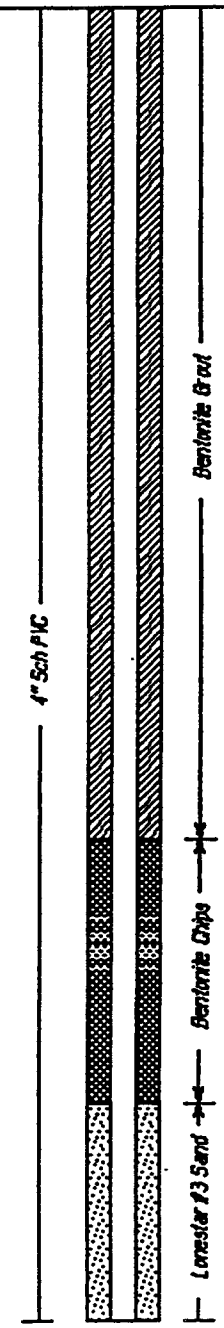
GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-1

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
					17	SP		SAND, very fine grained, pale olive (5Y, 6/3), loose, slightly moist.
				3	23			
	100 %		P1 @ 45		25			
					15			SAND, very fine grained with Silt, pale olive (5Y, 6/3), loose, slightly moist.
				4	30			
	100 %		P1 @ 50a		42			
55					27			SAND with Silt, very fine grained, pale olive (5Y, 6/3), loose, slightly moist, iron staining and clayey at base (bottom 3 inches).
				8	42			
	100 %		P1 @ 55		50@3"			
60						SM		

WELL DIAGRAM



DEPTH (ft): 50, 55, 60

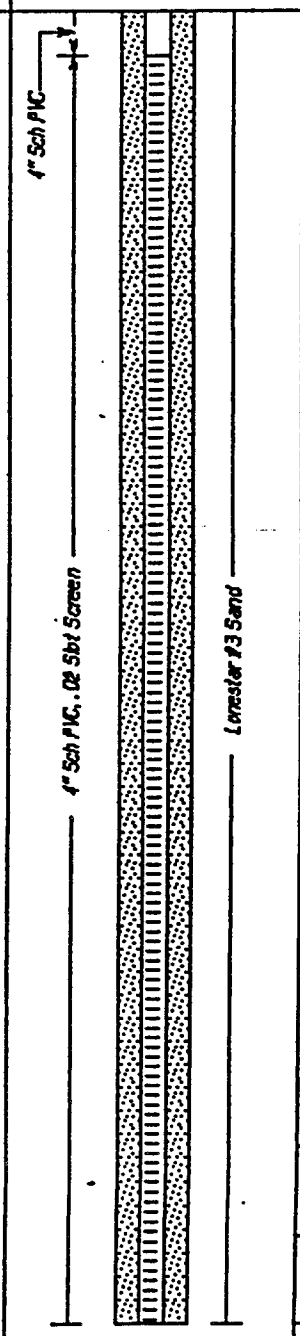
GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

ECT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-1

DEPTH (ft)	RECOVERY %	SAMP.INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
					20	SM		Silty SAND, very fine grained, olive yellow (5Y, 6/6), loose, slightly moist.
				< 1	42			
	100 %		P1 @ 60		50@5"			
						SP		SAND, very fine to fine grained, olive (5Y, 5/4), loose, slightly moist, with reddish tinge at base.
				6	20			
	100 %		P1 @ 61.5		50@5"			
					19			SAND, very fine to fine grained, olive (5Y, 5/6), loose, slightly moist, with reddish tinge at base.
				9	46			
	100 %		P1 @ 63		50@4"			
								SAND, very fine grained, olive (5Y, 5/6), loose, moist, with orange tinge.
				5	29			
	100 %		P1 @ 64.5		50@3"			
					18			SAND, very fine grained, olive (5Y, 5/4), loose, moist, with orange tinge.
				7.5	37			
	100 %		P1 @ 66		50			
					20			SAND, very fine grained, light olive brown (2.5Y, 5/6), loose, moist, with orange tinge.
				7	46			
	100 %		P1 @ 67.5		50@3"			
								SAND, very fine grained, light olive brown (2.5Y, 5/6), loose, moist, slightly clayey at base, with orange tinge.
				4.3	30			
70	100 %		P1 @ 69		50@5"			
								SAND, very fine grained with minor Silt, light olive brown (2.5Y, 5/4), semi loose, wet.
				66	33			
	100 %		P1 @ 70.5		50@5"			
								SAND with Silt, very fine grained, light olive brown (2.5Y, 5/4), semi loose, water saturated.
				20	30			
	100 %		P1 @ 72		50@4"			
								SAND with minor Silt, very fine grained, light olive brown (2.5Y, 5/4), semi-loose, water saturated.
				50	42@3"			
	100 %		P1 @ 73.5		50@3"			
75								

WELL DIAGRAM



DEPTH (ft): 65, 70, 75

GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

_CT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-1

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
				85	46	SP		SAND, with minor Silt, very fine grained, light olive brown (2.5Y, 5/4), semi-loose, water saturated.	4" Sch PVC, .02 Slot Screen; Lonestar #3 Sand	
	100 %		P1 @ 75.0		50@3"					
				80	23			SAND with Silt, very fine grained, light olive brown (2.5Y, 5/4), semi-soft, water saturated.		
	100 %		P1 @ 76.5		50@5"					
				80	20	SC		Clayey SAND, very fine grained, light olive brown, loose, water saturated.		
					32					
	100 %		P1 @ 78.0		50@4"					
				70	20			Clayey SAND, very fine grained, with high clay content, light olive brown, loose, water saturated.		80
	100 %		P1 @ 79.5		50@4"					
				25	8	CL		CLAY, light olive brown (2.5Y, 5/4), stiff, slightly moist.		
					16					
	100 %		P1 @ 81		31					
								End of Boring @ 82.5 ft.		
85										85
								This work was performed under my supervision and I concur with the findings. Anthony C. Ward. Anthony C. Ward, CA R.G. #4782		
90										90

GERAGHTY & MILLER, INC.

BORING LOG

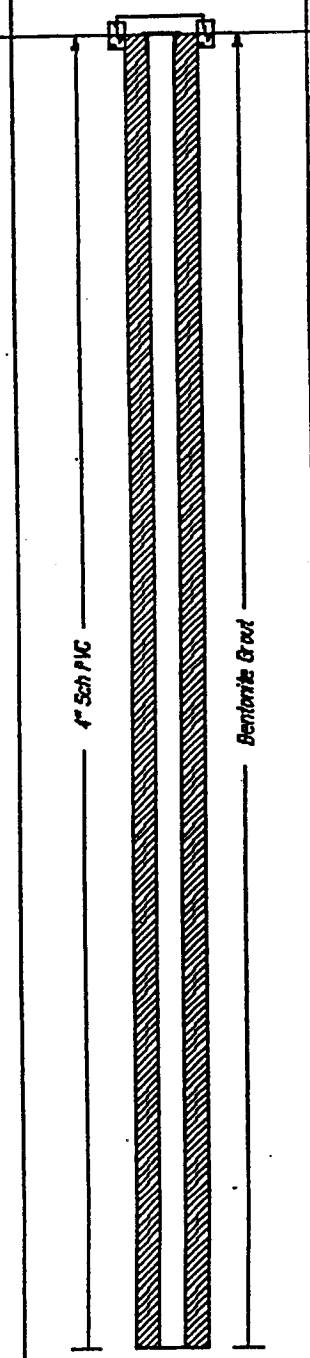
PROJECT International Light Metals
LOCATION 19200 S. Western
DRILLING METHOD Hollow Stem Auger
SAMPLING METHOD CMSS
BOREHOLE DIAMETER 10.5 inches O.D.

PROJECT NO. CAO 217.012
LOGGED BY Lance King
DRILL CO. Gregg Drilling and Testing, Inc.
RIG TYPE B-61
DRILLER Craig Winegarner

BORING P-2
DATE STARTED 8/18/94
DATE COMPLETED 8/19/94
BORING DEPTH 72.0 ft.

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						GW		3 inch asphalt, Gravel fill
						CL		Clay with Silt, dark brown, plastic to stiff.
				< 1				
						SP		
				< 1				SAND, fine grained, trace silt, tan, loose.
5								
				< 1				SAND, fine grained, trace silt, tan, loose.
						CL		
				< 1	9			CLAY with Silt, light olive brown (2.5Y, 5/4), stiff, slightly moist.
					13			
	100 %		P2 @ 7a		17			
10								
				< 1	7			Silty CLAY, light olive brown (2.5Y, 5/4), stiff, slightly moist.
					9			
	100 %		P2 @ 10		12			
15								
				< 1	7			Silty CLAY, light olive brown (2.5Y, 5/4), stiff, slightly moist.
					10			
	100 %		P2 @ 15		10			
20								

WELL DIAGRAM



DEPTH (ft): 5, 10, 15, 20

GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-2

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
	100 %		P2 @ 20	< 1	6, 9, 10	CL		Silty CLAY, light olive brown (2.5Y, 5/4), stiff, slightly moist, some dark flecks (clay blebs).	4" Sch PVC; Bentonite Grout	
25	0 %		P2 @ 25a	10	9, 16, 19	SP		SAND, very fine to fine grained, light olive brown (2.5Y, 5/6), loose slightly moist, shell fragments, trace clay blebs.		25
30	100 %		P2 @ 30	10	16, 22, 33			SAND, very fine grained, olive (5Y, 5/4), loose, slightly moist, shell fragments.		30
35	100 %		P2 @ 35	170	7, 10, 14			SAND, very fine to fine grained, light olive grey (5Y, 6/2), loose, slightly moist, abundant shell fragments.		35
40								Silty SAND, very fine grained, olive (5Y, 5/6), loose, slightly moist, mottled iron staining.		40

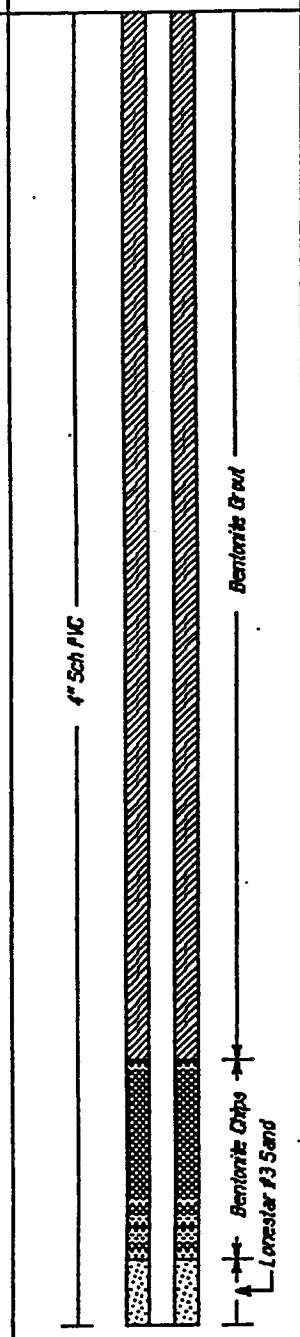
GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-2

DEPTH (ft)	RECOVERY %	SAMP.INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
				4750	15	SP		SAND, very fine to fine grained, light olive grey (5Y, 6/2), loose, slightly moist.
					18			
	100 %		P2 @ 40		23			
45				6700	10			SAND, very fine to fine grained, light olive grey (5Y, 6/2), loose, slightly moist.
					16			
	%		P2 @ 45		17			
50				4900	21			SAND, very fine to fine grained, olive yellow (2.5Y, 6/6), loose, slightly moist.
					28			
	100 %		P2 @ 50a		36			
55				1000	22			SAND, very fine to fine grained, light olive brown (2.5Y, 5/6), loose, slightly moist, heavily iron stained, some mottled.
					27			
	100 %		P2 @ 55		31			
80								

WELL DIAGRAM



DEPTH (ft): 45, 50, 55, 80

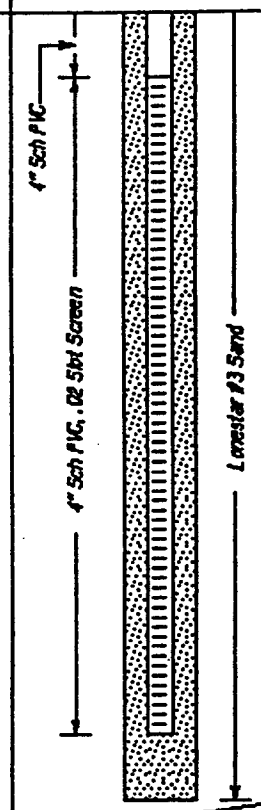
GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-2

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
				4800	38	SP		SAND, very fine to fine grained, light yellowish brown (2.5Y, 6/4), loose, slightly moist, clay blebs (trace) at base, some clay lenses 1 mm thick in sample.
					50			
	100 %		P2 @ 60		> 50			
				5500	23			SAND, very fine grained with trace clay blebs, light yellowish brown (2.5Y, 6/4), loose, slightly moist, some iron staining, changes to olive yellow (2.5Y, 6/6) at 60.5 feet.
					28			
	100 %		P2 @ 61.5		31			
				5200	26			
					31			SAND, very fine grained, olive yellow (2.5Y, 6/6), loose, slightly moist, iron staining, trace clay blebs.
	100 %		P2 @ 63		37			
				7500	27			
65					33			SAND, very fine to fine grained, light olive brown (2.5Y, 5/6), loose, moist (wet in shoe), very minor clay blebs.
	100 %		P2 @ 64.5		39			
				260	17			
					23			SAND, very fine to fine grained, light olive brown (2.5Y, 5/6), loose, wet.
	100 %		P2 @ 66		29			
				15	14			
					15			SAND, very fine to fine grained, light olive brown (2.5Y, 5/4), loose, water saturated.
	100 %		P2 @ 67.5		19			
				125	6	SM		Clayey SAND, very fine grained, grades to CLAY over 2 inches, light olive brown to light browninsh grey (2.5Y, 5/6) to (2.5Y, 6/2), stiff to semi-plastic, water saturated to slightly moist, patches of iron staining in clay.
					12			
70	100 %		P2 @ 69		13			
				60	8	CL		CLAY with some Silt, light brownish grey (2.5Y, 6/2), semi-plastic, slightly moist, patches of iron staining.
					14			
	100 %		P2 @ 70.5		17			
75								
80								

WELL DIAGRAM



End of Boring @ 72.0 feet

This work was performed under my supervision and I concur with the findings.

Anthony C. Ward

Anthony C. Ward, CA R.G. #4782

GERAGHTY & MILLER, INC.

BORING LOG

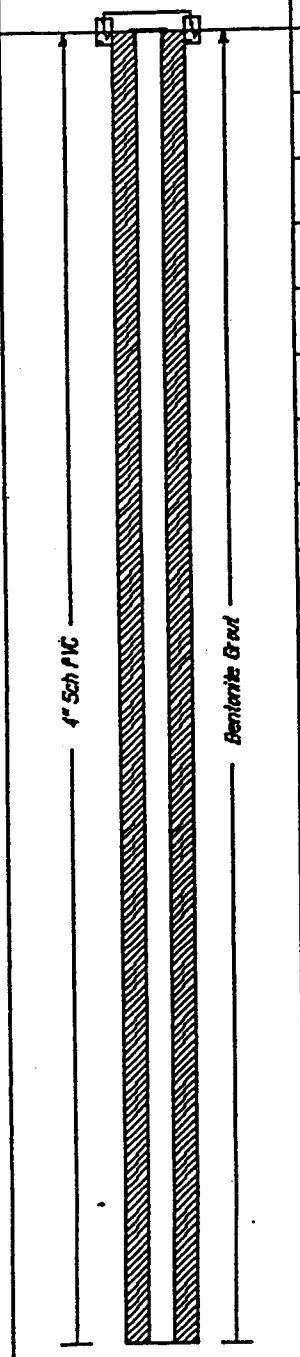
PROJECT: International Light Metals
LOCATION: 19200 S. Western
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: CMSS
BOREHOLE DIAMETER: 10.5 inches O.D.

PROJECT NO.: CAO 217.012
LOGGED BY: Lance King
DRILL CO.: Gregg
RIG TYPE: B-61
DRILLER: Craig Winegarner

BORING: P-3
DATE STARTED: 8/18/94
DATE COMPLETED: 8/18/94
BORING DEPTH: 75.0 ft.

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
								6" concrete, 5" gravel
						SM		SILT with Clay, trace fine Sand, dark brown, stiff.
						ML		SILT, some clay, brown, stiff.
5						SP		SAND, fine grained, some Clay, tan, loose.
						CL		
					8			Silty CLAY, olive brown (2.5Y, 4/4), stiff, slightly moist.
				< 1	9			
	100 %		P3 @ 7a		12			
10					11			
				< 1	14			Silty CLAY, olive (5Y, 4/4), stiff, slightly moist.
	100 %		P3 @ 10		17			
15					4			
				< 1	7			Silty CLAY, olive (5Y, 4/3), stiff, slightly moist.
	100 %		P3 @ 15		8			
20								

WELL DIAGRAM



DEPTH (ft): 5, 10, 15, 20

GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

ECT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-3

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
	100 %		P3 @ 20	< 1	11, 14, 9	CL		Silty CLAY, olive (5Y, 4/3), stiff, slightly moist, with white patches (shells).
25	100 %		P3 @ 25	< 1	10, 13, 17	CL		Silty CLAY, olive (5Y, 5/4), stiff, slightly moist.
30	100 %		P3 @ 30	< 1	17, 12, 14	SM		Silty SAND, very fine grained, with Clay, light brownish grey (2.5Y, 6/2), friable, slightly moist, olive (5Y, 5/4) where stained (iron staining), occasional pebbles, highly mottled, 60% stained, 40% grey in rough layers (interbedded), (5Y, 5/4).
35	100 %		P3 @ 35	< 1	14, 18, 22	SC		Clayey SAND, very fine grained, olive (5Y, 5/6), semi-loose, friable, slightly moist.
40						SP		

WELL DIAGRAM: 4" Sch PVC; Bentonite Grout

DEPTH (ft): 25, 30, 35, 40

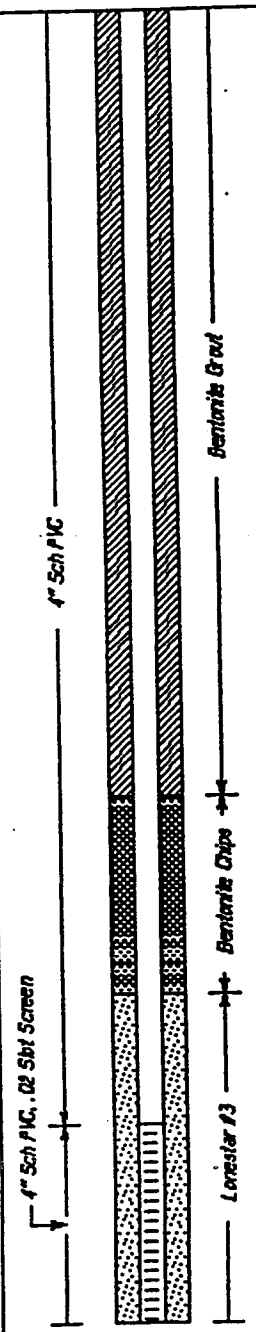
GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-3

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
	100 %		P3 @ 40	1	10, 17, 26	SP		SAND, very fine grained with clay, olive (5Y, 5/3), semi-loose, slightly moist, with interbedded layers (1-3 mm thick) of orange (iron-stained) sand.
45	100 %		P3 @ 45	2	16, 18, 27			SAND, very fine grained with trace clay blebs, olive/orange, (5Y, 5/3), loose, slightly moist, (iron stained) interlayered 1-10 mm thick.
50	100 %		P3 @ 50	< 1	22, 27, 31			SAND, very fine grained, olive (5Y, 5/4), loose, slightly moist.
55	100 %		P3 @ 55	2	28, 30, 37	SC		SAND, very fine grained, olive (5Y, 5/4), loose, slightly moist. Clayey SAND, very fine grained, olive with orange, semi-lorse, mottled, abundant clay blebs, (iron staining) throughout.
60						SP		

WELL DIAGRAM



DEPTH (ft): 45, 50, 55, 60

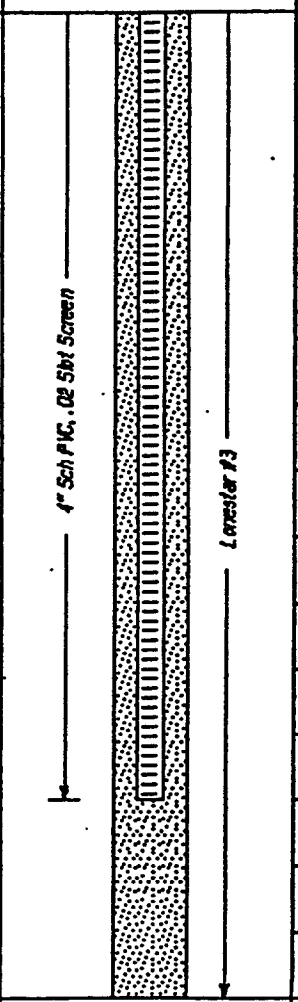
GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-3

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
				15	33	SP		SAND, very fine-grained, pale olive (5Y, 6/3), loose, slightly moist.
					40			
	100 %		P3 @ 60		50			
				40	26			SAND, very fine grained, olive (5Y, 5/4), loose, slightly moist.
					33			
	100 %		P3 @ 61.5		39			
				20	28			SAND, very fine grained, light olive brown (2.5Y, 5/6), loose, slightly moist, with orange (iron stained) mottling.
					35			
	100 %		P3 @ 63		42			
65				20	28			SAND, very fine grained, light olive brown, (2.5Y, 5/6), loose, slightly moist, with orange (iron stained) mottling.
					40			
	100 %		P3 @ 64.5		44			
				10	34			SAND, very fine grained, pale olive yellow, (2.5Y, 6/6), loose, slightly moist, with occassional (10%) orange (iron stained) mottling.
					39			
	100 %		P3 @ 66		45			
				35	23			SAND, very fine grained, olive (5Y, 5/4), loose, moist, with occassional orange (iron stained) blebs and stringers.
					39			
	100 %		P3 @ 67.5		46			
				2	19			SAND, very fine grained, olive (5Y, 5/4), loose, wet, with occassional iron stained blebs.
70					26			
	100 %		P3 @ 69		33			
				1	18			SAND, very fine grained, olive with orange (5Y, 4/3), loose, water saturated, (iron stained) mottling.
					25			
	100 %		P3 @ 70.5		31			
				< 1	18	CL		CLAY with Silt, olive (5Y, 4/4), semi-stiff, slightly moist.
					31			
	100 %		P3 @ 72		40			
				< 1	37	CL		CLAY with minor Silt lenses, olive grey (5Y, 4/2), very stiff, slightly moist, with occassional orange (iron stained) silt lenses.
					60			
	100 %		P3 @ 73.5					
75								End of Boring @ 75.0 feet
								This work was performed under my supervision and I concur with the findings.
								Anthony C. Ward, CA R.G. #4782
80								

WELL DIAGRAM



DEPTH (ft): 65, 70, 75, 80

GERAGHTY & MILLER, INC.

BORING LOG

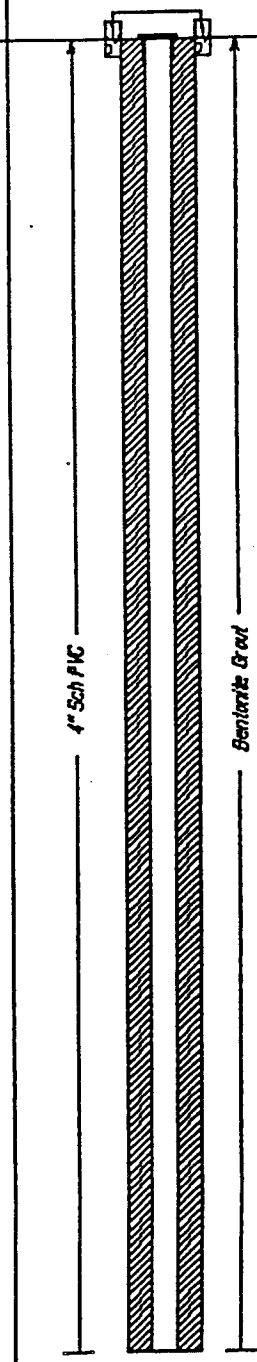
PROJECT: International Light Metals
LOCATION: 19200 S. Western
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: CNSS
BOREHOLE DIAMETER: 10.5 inches O.D.

PROJECT NO.: CAO 217.012
LOGGED BY: Derrick Willis
DRILL CO.: Gregg Drilling and Testing Inc.
RIG TYPE: B-61
DRILLER: Dino Selders

BORING: P-4
DATE STARTED: 8/16/94
DATE COMPLETED: 8/16/94
BORING DEPTH: 81.0 ft.

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
				0				6 inches conrete
				0		CL		CLAY, some Silt, dark brown, stiff.
				7		ML		Clayey SILT with Sand, dark brown, stiff, brittle.
						CL		CLAY, with Silt, dark brown, stiff, brittle.
	100 %		P4 @ 7a	2	13 13 19			Silty CLAY, light olive brown (2.5Y, 5/4), slightly moist, stiff, with olive brown streaks.
10	100 %		P4 @ 10	3	6 5 8	ML		Clayey SILT, light olive brown (2.5Y, 5/4), semi-loose, slightly moist.
15								

WELL DIAGRAM



DEPTH (ft): 5, 10, 15

GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-4

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
				5	9	ML		Clayey SILT, light olive brown (2.5Y, 5/4), semi-stiff, slightly moist.		
					11					
	100 %		P4 @ 15		15					
				8	9			Clayey SILT with minor very fine grained Sand, olive brown (2.5Y, 4/4), semi-loose (crumbly), slightly moist.		20
					15					
	100 %		P4 @ 20		16				4" Sch PVC / Bentonite Grout	
25				5	12			SILT with Clay, light olive brown (2.5Y, 5/6), crumbly, slightly moist.		25
					15					
	100 %		P4 @ 25a		15					
						SM				
30										30

GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-4

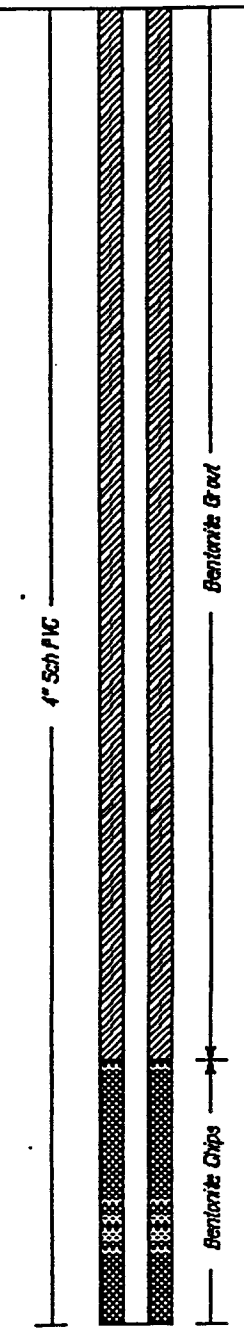
DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
				4	10	SM		Silty SAND, very fine grained, light olive brown (2.5Y, 5/6), loose, slightly moist, trace shell fragments.	4" Sch PVC; Bentonite Grout	
					21					
	100 %		P4 @ 30		30					
						CL				
				11	13			Silty CLAY, olive (5Y, 5/4), semi-soft, slightly moist, with thin reddish orange very fine grained stringers.		35
					27					
	100 %		P4 @ 35		32					
40				11	15			CLAY with very fine grained Sand, olive brown (2.5Y, 4/4), semi-soft, semi plastic, slightly moist, with orange (iron stained), sand stringers (roughly 1 mm – 5 mm thick) throughout.		40
					18					
	100 %		P4 @ 40		22					
						SP				
45										45

GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

ECT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-4

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
					15	SP		SAND, very fine grained with minor Silt, olive (5Y, 5/4), loose, slightly moist.		
				6	18					
	100 %		P4 @ 45		24					
					16			SAND, very fine grained with minor Silt, olive (5Y, 5/4), loose, slightly moist.		50
				7	25					
	100 %		P4 @ 50a		37					
55								SAND, very fine grained with minor Silt and minor Clay lenses, olive (5Y, 5/4), loose, slightly moist.		55
				22						
	100 %		P4 @ 55		NA					
60										60



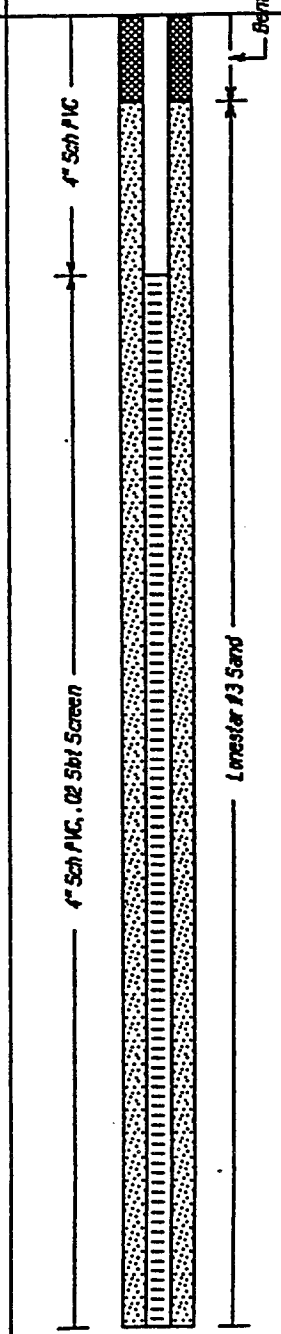
GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

ECT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-4

DEPTH (ft)	RECOVERY %	SAMP.INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
				11	19	SP		SAND, very fine grained, olive (5Y, 5/4), loose, slightly moist, with trace of orange (iron stained) sand stringers.
	100 %		P4 @ 60		50@5"			
				5	39			SAND, very fine grained, olive (5Y, 5/6), loose, slightly moist, with trace of orange (iron stained) sand stringers.
	100 %		P4 @ 61.5		50@4"			
				15	25			SAND, very fine grained, olive yellow (5Y, 6/6), loose, slightly moist, with iron stained (mottled).
	100 %		P4 @ 63		50			
				6	22			SAND, very fine grained, pale olive (5Y, 6/4), loose, slightly moist, with minor iron stained (orange mottled).
	100 %		P4 @ 64.5		50@5"			
				12	11			SAND, very fine grained, pale olive (5Y, 6/4), loose, slightly moist, with minor iron stained (orange mottled).
	100 %		P4 @ 66		50			
				13	18			SAND, very fine grained, olive (5Y, 5/6), loose, slightly moist, orange iron stained.
	100 %		P4 @ 67.5		50@5"			
				2	47			SAND, very fine grained, olive (5Y, 5/6), loose, slightly moist, orange iron stained.
70	100 %		P4 @ 69		50@5"			
				10.5	15			SAND, very fine grained, olive (5Y, 5/6), loose, slightly moist, orange iron stained.
	100 %		P4 @ 70.5		50@5"			
				20	20			SAND, very fine grained, olive (5Y, 5/6), loose, moist to very moist at base, orange iron stained.
	100 %		P4 @ 72		50@3"			
				25	20			SAND, very fine grained, olive (5Y, 5/4), loose, water saturated, with orange mottled.
	80 %		P4 @ 73.5		50@4"			
75								

WELL DIAGRAM



DEPTH (ft): 65, 70, 75

GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

ECT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-4

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
					22	SP		SAND, very fine-grained, olive (5Y, 5/4), loose, water saturated, with orange mottled.	4" Sch PVC, .02 Slot Screen; Lonestar #3 Sand	
				6	45					
	100%		P4 @ 75		50@3"					
					18			SAND, very fine grained, Clay at base, olive (5Y, 5/4), loose, water saturated, with orange mottled.		
					25					
	100%		P4 @ 76.5		50@3"					
					22	CL		CLAY, olive (5Y, 5/4), soft, plastic, slightly moist at base.		
					46					
	NA		P4 @ 78		50@3"					
					9			CLAY, olive (5Y, 5/4), semi soft, plastic, slightly moist.		80
				6	10					
	100%		P4 @ 79.5		12					
								End of Boring @ 81.0 feet		
85										85
90										90

This work was performed under my supervision and I concur with the findings.

Anthony C. Ward

Anthony C. Ward, CA R.G. #4782

GERAGHTY & MILLER, INC.

BORING LOG

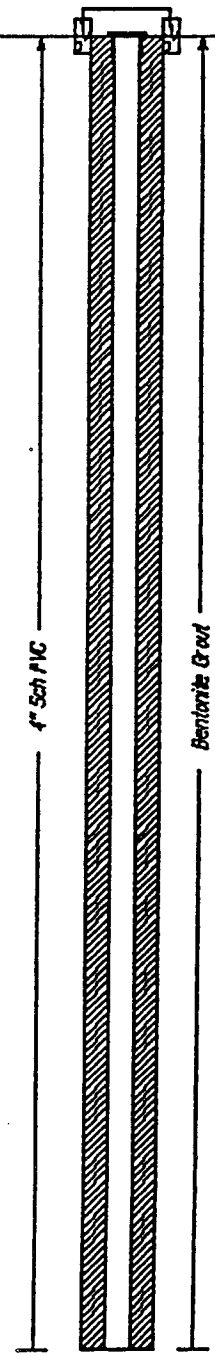
PROJECT: International Light Metals
LOCATION: 19200 S. Western
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: CMSS
BOREHOLE DIAMETER: 10.5 inches O.D.

PROJECT NO.: CAO 217.012
LOGGED BY: Derrick Willis
DRILL CO.: Gregg Drilling and Testing, Inc.
RIG TYPE: B-61
DRILLER: Dino Salders

BORING: P-5
DATE STARTED: 8/17/94
DATE COMPLETED: 8/17/94
BORING DEPTH: 81.0 ft.

DEPTH (ft)	RECOVERY %	SAMP.INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
				1		ML		SILT with Clay, some Sand, black, stiff, plastic.
				0		SM		Silty SAND, fine grained, brown to tan.
				0				SAND, some Silt, fine grained, tan, loose.
				< 1	9	CL		Silty CLAY, olive brown (2.5Y, 4/4), semi-stiff, slightly moist.
					14			
	100 %		P5 @ 7a		14			
10						ML		
				< 1	9			Clayey SILT, olive brown (2.5Y, 4/4), semi-loose, slightly moist.
					10			
	100 %		P5 @ 10		10			
15								

WELL DIAGRAM



DEPTH (ft): 5, 10, 15

GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-5

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
					6	ML		Clayey SILT, olive brown (2.5Y, 4/4), semi-loose, slightly moist.		
				< 1	9					
	100 %		P5 @ 15		12					
						CL				
					4			CLAY with Silt, olive brown (2.5Y, 4/4), soft, semi-plastic, slightly moist to moist.		20
				< 1	5					
	100 %		P5 @ 20		7					
						ML			4" Sch PVC; Bentonite Grout	
25					7			Clayey SILT, light olive brown (2.5Y, 5/4), semi-stiff, crumbly, slightly moist.		25
				< 1	11					
	NA		P5 @ 25a		13					
						SP				
30										30

GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

:CT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-5

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
					12	SP		SAND, very fine grained with Silt, light olive brown (2.5Y, 5/6), loose, slightly moist.		
			P5 @ 30	< 1	14					
	NA				17					
					12			SAND, very fine to fine grained, trace Silt, some Clay blebs, olive yellow (2.5Y, 6/6), loose, slightly moist, drill cuttings 35' to 40' – shell fragments.		35
				< 1	17					
	100 %		P5 @ 35		27				4" Sch PVC; Bentonite Grout	
40					19			SAND, very fine to fine grained with clay blebs, light yellowish brown (2.5Y, 6/4), loose, slightly moist, shell fragments (trace).		40
				< 1	26					
	100 %		P5 @ 40		31					
45										45

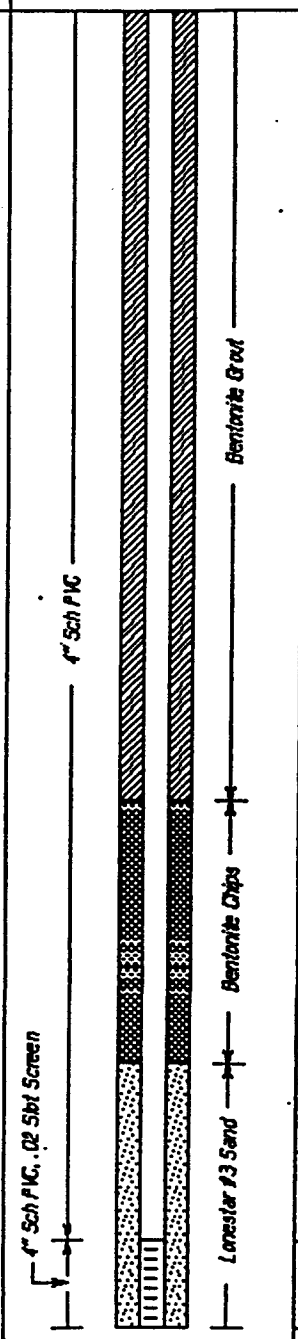
GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

ECT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-5

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
					14	SP		SAND, very fine to fine grained, light olive brown (2.5Y, 5/4), loose, slightly moist, abundant shell fragments.
				< 1	19			
	100 %		P5 @ 45		25			
					19			SAND, very fine to fine grained with Clay, light olive brown (2.5Y, 5/4), loose, slightly moist, trace shell fragments.
				< 1	36			
	100 %		P5 @ 50a		38			
55					16			SAND, very fine to fine grained, light yellowish brown (2.5Y, 6/4), loose, slightly moist, some (2.5Y, 6/8) blebs.
				< 1	38			
	100 %		P5 @ 55		50			
60								

WELL DIAGRAM



DEPTH (ft): 50, 55, 60

GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

_CT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-5

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
					14	SP		SAND, very fine to fine grained, light yellowish brown (2.5Y, 6/4), loose, slightly moist, trace of highly broken shell fragments.	4" Sch PVC, .02 Slot Screen; Lonestar #3 Sand	
				< 1	25					
	100 %		P5 @ 60		31					
					15			SAND, very fine to fine grained, light yellowish brown (2.5Y, 6/4), loose, slightly moist, trace of highly broken shell fragments.		
				< 1	32					
	100 %		P5 @ 61.5		39					
					18			SAND, very fine to fine grained, trace Clay blebs, light yellowish brown (2.5Y, 6/4), loose, slightly moist.		
				< 1	27					
	100 %		P5 @ 63		30					
					12			SAND, very fine to fine grained, trace (larger 1 cm) Clay blebs, light yellowish brown (2.5Y, 6/4), highly rounded, loose, slightly moist, more clay toward bottom, blebs, < 1 mm shell fragments (trace).		65
				< 1	35					
	100 %		P5 @ 64.5		40					
					18			SAND, very fine to fine grained, light yellowish brown (2.5Y, 6/4), loose, slightly moist to moist, fewer clay blebs (less than 5 cm), < 1 mm shell fragments, some calcite, cementing.		
				< 1	28					
	100 %		P5 @ 66		26					
					19			SAND, very fine to fine grained, light olive brown (2.5Y, 5/4), loose, moist, more cementing, up to 1.5 cm chunks, < 1 mm shell fragments.		
				< 1	22					
	100 %		P5 @ 67.5		25					
					15			SAND, fine grained, light brownish grey (2.5Y, 6/2), loose, moist, abundant, shell fragments up to 2 mm.		
				< 1	20					
70	100 %		P5 @ 69		20					70
					18			SAND, fine grained, greyish brown (2.5Y, 5/2), loose, water saturated, abundant shell fragments.		
				500	18					
	100 %		P5 @ 70.5		22			SAND, very dark grey (7.5YR, N3), loose, water saturated, abundant shell fragments, hydrocarbon stained.		
					8					
				1000	20			SAND, fine grained, very dark grey (7.5YR, N3), loose, water saturated, roughly 40% shell fragments.		
	100 %		P5 @ 72		17					
					9			SAND, very fine grianed to fine grained, abundant shell fragments roughly 10%, dark grey (2.5Y, N4), loose, water saturated, some clay at the bottom.		
					18					
	100 %		P5 @ 73.5		20					
75						ML				75

GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

:CT International Light Metals PROJECT NO CAO 217.012 BORING NO. P-5

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
	100 %		P5 @ 75		NA	ML		Clayey SILT, 40% shell fragments, light brownish grey (2.5Y, 6/2), water saturated.	4" Sch PVC, .02 Slot Screen; Lonestar #3 Sand	
	100 %		P5 @ 76.5		10, 17, 21	SC		Clayey SAND, 30% shell fragments, light olive brown (2.5Y, 5/4), loose, water saturated.		
	100 %		P5 @ 78		5, 11, 12	SP		SAND, fine grained, roughly 40% shell fragments, light olive brown (2.5Y, 5/4), loose, plastic, turns to olive brown clay (2.5Y, 4/4).		
	100 %		P5 @ 79.5		4, 7, 10	CL		CLAY, dark grey (2.5Y, N4), plastic, slightly moist, trace shell fragments.		80
85								End of Boring @ 81.0 feet		85
90								This work was performed under my supervision and I concur with the findings. Anthony C. Ward. Anthony C. Ward, CA R.G. #4782		90

GERAGHTY & MILLER, INC.

BORING LOG

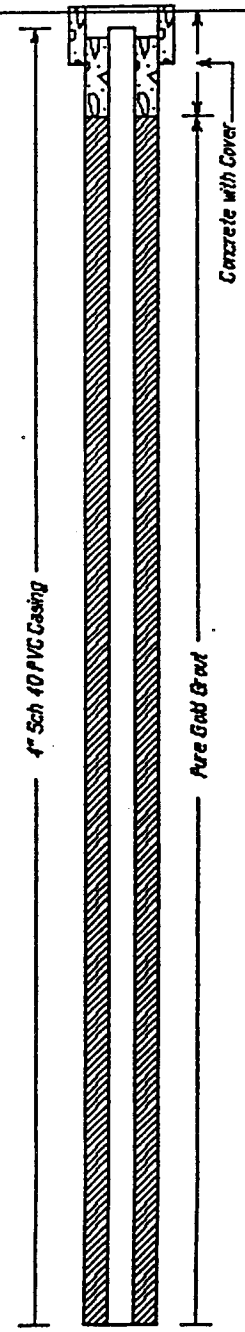
PROJECT International Light Metals
LOCATION 19200 S. Western, Torrance, CA
DRILLING METHOD Hollow Stem Auger
DRILLING METHOD CMSS
BOREHOLE DIAMETER 10 inches O.D.

PROJECT NO. CAO 217.012.002
LOGGED BY M. Shipione
DRILL CO. Gregg Drilling and Testing, Inc.
RIG TYPE B-61
DRILLER C. Winegarner

BORING P-6
DATE STARTED 3/1/95
DATE COMPLETED 3/1/95
BORING DEPTH 80 ft.

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
								Concrete (10")
								Asphalt (8")
						CL		CLAY, little Silt, dark olive gray (5Y, 3/2), high plasticity, stiff, moist.
					7			CLAY, little Silt, dark olive gray (5Y, 3/2), high plasticity, stiff, moist.
	100		P-6 @ 5D	0.8	9			
5	100		P-6 @ 5		13			
						ML		
					9			SILT, little fine grained Sand, trace Clay, dark yellowish brown (10YR, 4/4), non plastic, moist to slightly moist.
				0.8	9			
10	100		P-6 @ 10		14			
					7			SILT, little fine grained Sand, trace Clay, dark yellowish brown (10YR, 4/4), non plastic, moist to slightly moist.
				1.4	10			
15	100		P-6 @ 15		11			
					9			SILT, little fine grained Sand, trace Clay, dark yellowish brown (10YR, 4/4), non plastic, moist to slightly moist.
				3.2	10			
20	100		P-6 @ 20		16			
					9			SILT, some fine grained Sand, trace Clay, dark yellowish brown (10YR, 4/4), non plastic, moist to slightly moist.
	100		P-6 @ 25D	2.8	14			
25	100		P-6 @ 25		18			

WELL DIAGRAM



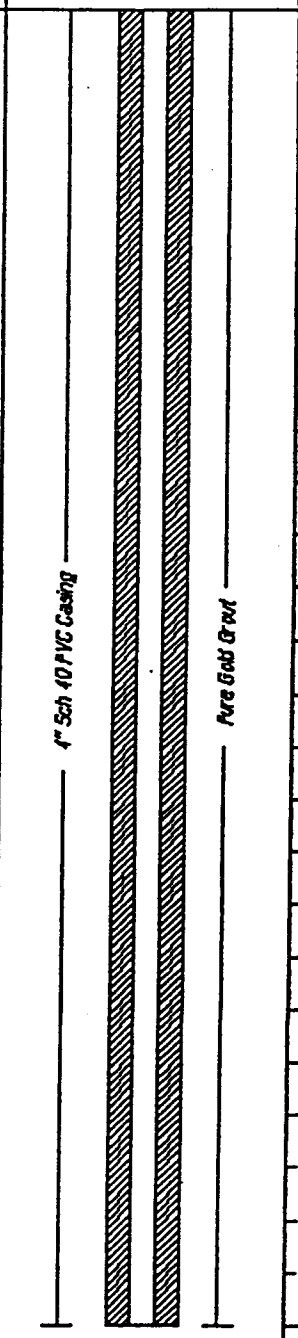
GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

.CT International Light Metals PROJECT NO CAO 217.012.002 BORING NO. P-6

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						ML		
						SP		
				3.2	9 15 20			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), non plastic, moist.
30	100		P-6 @ 30					
				2.4	15 21 30			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), non plastic, moist, some shell fragments, slightly cemented.
35	100		P-6 @ 35					
				2.2	14 23 28			SAND, very fine to fine grained, little Silt, yellowish brown (10YR, 5/8), non plastic, moist, some shell fragments, slightly cemented.
40	100		P-6 @ 40					
						ML		
				3.9	20 26 33			SILT, some fine to very fine grained Sand, dark yellowish brown (10YR, 4/8), low plasticity, moist.
45	100		P-6 @ 45					
						SP		
				2.5	21 31 36			SAND, very fine to fine grained, trace Silt, olive brown (2.5Y, 4/3), moist.
50	100		P-6 @ 50					

WELL DIAGRAM



DEPTH (ft): 30, 35, 40, 45, 50

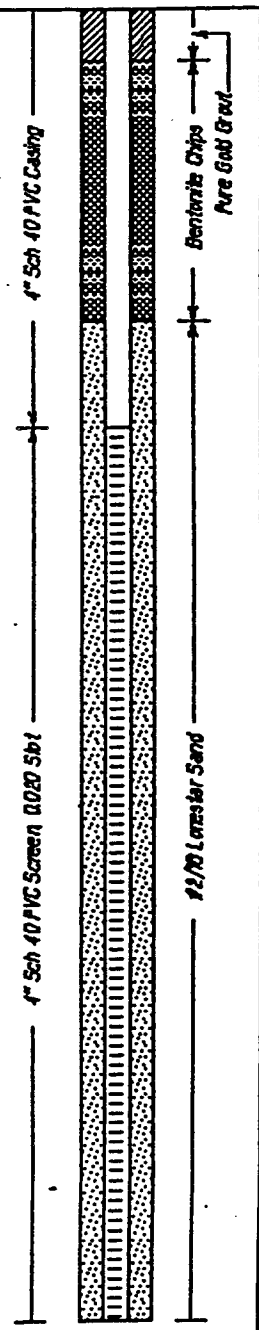
GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

ECT International Light Metals PROJECT NO CAO 217.012.002 BORING NO. P-6

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		
				3.1	19 26 41			SAND, very fine to fine grained, trace Silt, olive brown (2.5Y, 4/3), moist.
55	100		P-6 @ 55					
				2.9	22 39 49			SAND, very fine to fine grained, trace Silt, olive brown (2.5Y, 4/3), moist.
60	100		P-6 @ 60					
				2.1	23 46 55			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/6), moist.
65	100		P-6 @ 65					
				2.3	30 34 48			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/6), moist.
	100		P-6 @ 66.5					
				1.4	31 40 56			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/6), very moist.
	100		P-6 @ 68					
				1.2	28 36 51			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/6), very moist.
	100		P-6 @ 69.5					
70				6.8	26 40 48			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/6), water saturated, hit water at 70.5 ft.
	100		P-6 @ 71					
				4.8	25 37 47			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/6), water saturated.
	100		P-6 @ 72.5					
				3.9	40 41 58			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/6), water saturated.
	100		P-6 @ 74					
75				4.1	31 40			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/6), water saturated.

WELL DIAGRAM



DEPTH (ft): 55, 60, 65, 70, 75

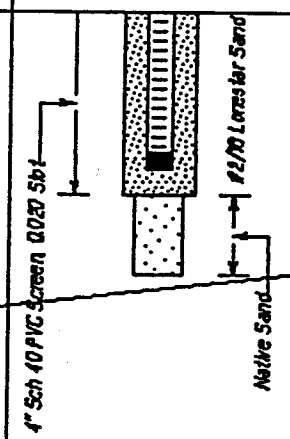
GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

ECT International Light Metals PROJECT NO CAO 217.012.002 BORING NO. P-6

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
	100		P-6 @ 75.5	4.1	52	SP		
				4.0	30	SM		SAND, very fine grained, some Silt, dark yellowish brown (10YR, 5/6), non plastic, water saturated.
					42			
	100		P-6 @ 77		50			
				3.8	32	ML		SILT, some very fine grained Sand, trace to little Clay, dark yellowish brown (10YR, 4/4), non to low plasticity, moist to wet.
					39			
	100		P-6 @ 78.5		46			
				3.9	28	CL		CLAY, some Silt, little to some very fine grained Sand, dark yellowish brown (10YR, 4/4), low to moderate plasticity, very moist.
					35			
80	100		P-6 @ 80		41			End of Boring @ 80.0 ft. Set 4 inch well.
85								
90								
95								
100								

WELL DIAGRAM



This work was performed under my supervision and I concur with the findings.

Anthony C. Ward

Anthony C. Ward, CA R.G. #4782

GERAGHTY & MILLER, INC.

WELL LOG

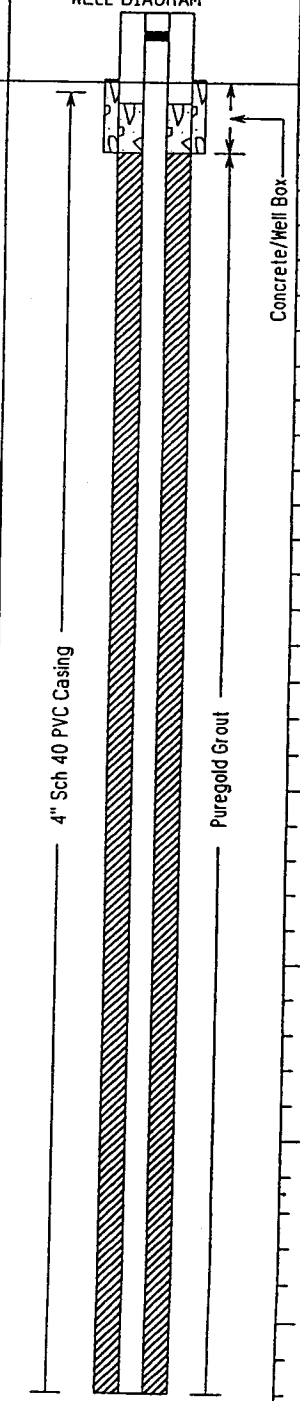
PROJECT International Light Metals
LOCATION 19200 S. Western Ave. Torrance, CA
DRILL METHOD Hollow Stem Auger
SAMPLING METHOD CMSS
BOREHOLE DIAMETER 10 inches O.D.

PROJECT NO. CA0217.034.001
LOGGED BY Lara Urizar
DRILL CO. Gregg Drilling & Testing, Inc.
RIG TYPE CME 75
DRILLER Rick Hastings

BORING P-6B
DATE STARTED 11/24/97
DATE COMPLETED 11/24/97
BORING DEPTH 81.5 ft.

DEPTH (ft)	RECOVERY %	SAMP.INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						ML		Surface is soil, gravel and cobbles to 1 inch. SILT, low plasticity, Sand, fine grained, dark brown (10YR 3/3), silghty moist.
5								
10								Same as above.
						CL		CLAY, low plasticity, trace Sand, fine grained, dark brown (10YR 4/3), slighty moist.
15								
20								Silty CLAY, low plasticity, olive brown (2.5Y 4/4), slighty moist.
						SP		SAND, fine grained, olive yellow (2.5Y 6/6), loose, slighty moist.
25								
30								Same as above.
								Same as above.

WELL DIAGRAM



GERAGHTY & MILLER, INC.

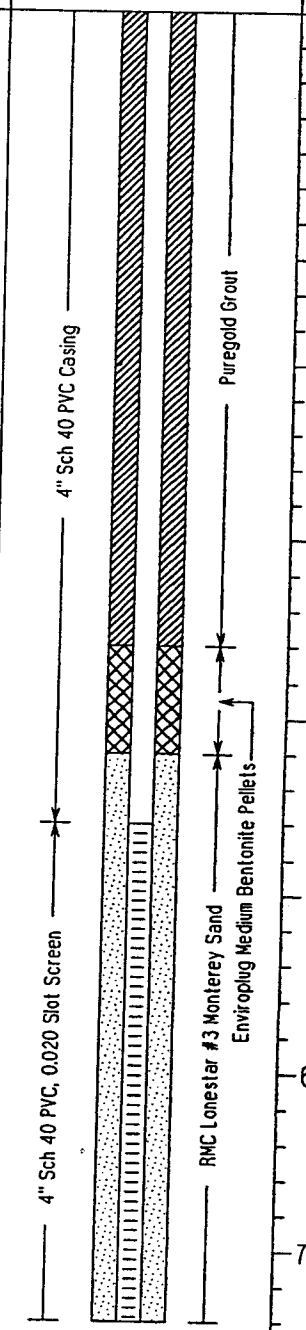
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CA0217.034.001 BORING NO. P-6B

DEPTH (ft)	RECOVERY %	SAMP.INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		SAND, fine grained, trace Silt, light olive brown (2.5Y 5/4), trace shell fragments, loose, slighty moist.
42								
								Same as above.
47						CL		CLAY with Silt and Sand, low plasticity, fine grained, olive brown (2.5Y 4/4), slighty moist.
52								
								Same as above.
57						SP		SAND, fine grained, trace Silt, trace clay, olive brown (2.5Y 4/4), loose, slighty moist.
62								
						SM		SAND, fine grained, pale olive (5Y 6/3), trace Silt, loose, slighty moist.
67			P-6B @ 66.5	NR	50/5			Silty SAND, fine grained, olive brown (2.5Y 4/4), loose, slighty moist.
			P-6B @ 68	NR	50/6			Same as above.
			P-6B @ 70	NR	30/6 50/4			Same as above, very moist at top of sampler.
72								Silty SAND, fine grained, light olive brown (2.5Y 5/4), saturated.

WELL DIAGRAM



DEPTH (ft): 42, 47, 52, 57, 62, 67, 72

GERAGHTY & MILLER, INC.

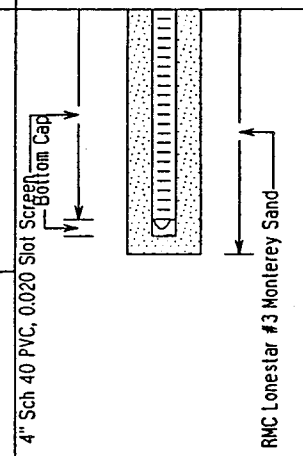
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CA0217.034.001 BORING NO. P-6B

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
		X	P-6B @ 75	NR	50/6	SM		Same as above.
								SILT with Sand, fine grained, olive (5Y 5/3), saturated.
		X	P-6B @ 76.5	NR	50/5			Same as above.
79						SC		Silty SAND, fine grained, olive (5Y 4/3), saturated.
								Sandy CLAY, fine grained, low to medium plasticity, olive (5Y 4/3), saturated.
								Total Depth of Boring: 81.5 feet bgs.
84								
89								
94								
99								
104								
9								

WELL DIAGRAM



DEPTH (ft): 79, 84, 89, 94, 99, 104, 109

GERAGHTY & MILLER, INC.

BORING LOG

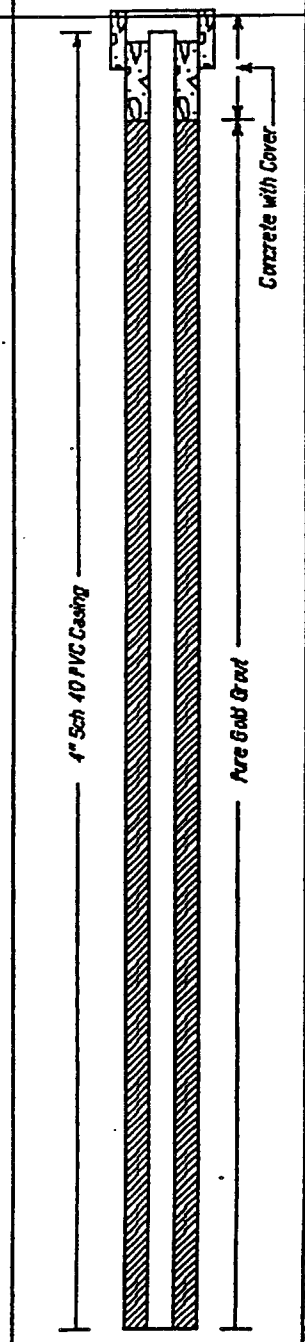
PROJECT International Light Metals
LOCATION 19200 S. Western, Torrance, CA
DRILLING METHOD Hollow Stem Auger
SAMPLING METHOD CMSS
BOREHOLE DIAMETER 10 inches O.D.

PROJECT NO. CAO 217.012.002
LOGGED BY N. Shipione
DRILL CO. Gregg Drilling and Testing, Inc.
RIG TYPE B-61
DRILLER C. Winegarner

BORING P-7
DATE STARTED 3/2/95
DATE COMPLETED 3/2/95
BORING DEPTH 84.5 ft.

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
								Concrete (12")
								Asphalt (8")
						CL		CLAY, little Silt, little very fine grained Sand, dark olive gray (5Y, 3/2), high plasticity, stiff, moist.
					4			CLAY, little Silt, little very fine grained Sand, dark olive gray (5Y, 3/2), high plasticity, stiff, moist.
	100		P-7 @ 5D	2.1	7			
5	100		P-7 @ 5		6			
						ML		SILT, little fine grained Sand, trace Clay, dark yellowish brown (10YR, 4/4), non plastic, moist.
					8			SILT, little fine grained Sand, trace Clay, dark yellowish brown (10YR, 4/4), non plastic, moist.
				3.2	10			
10	100		P-7 @ 10		15			
					12			SILT, little fine grained Sand, trace Clay, dark yellowish brown (10YR, 4/4), non plastic, moist.
				10.4	16			
15	100		P-7 @ 15		20			
					9			SILT, little fine grained Sand, trace Clay, dark yellowish brown (10YR, 4/4), non plastic, moist.
				4.8	14			
20	100		P-7 @ 20		15			
						SM		
					9			SAND, very fine to fine grained, some Silt, yellowish brown (10YR, 5/6), non plastic, moist.
	100		P-7 @ 25D	7.9	12			
25	100		P-7 @ 25		15			

WELL DIAGRAM



DEPTH (ft): 5, 10, 15, 20, 25

GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

ECT International Light Metals PROJECT NO CAO 217.012.002 BORING NO. P-7

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
						SM				
						SP				
				9.2	10			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), moist.		
					10					
30	100		P-7 @ 30		9					30
				11.4	16			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), moist.		
					22					
35	100		P-7 @ 35		29					35
				17.2	21			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), moist.		
					26					
40	100		P-7 @ 40		30					40
				4.6	17			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), moist, some iron oxide staining.		
					23					
45	100		P-7 @ 45		29					45
				6.9	14			SAND, very fine to fine grained, trace Silt, pale brown (10YR, 6/3), moist.		
	100		P-7 @ 50D		26					
50	100		P-7 @ 50		33					50

4" Sch 40 PVC Casing

Pure Gold Grout

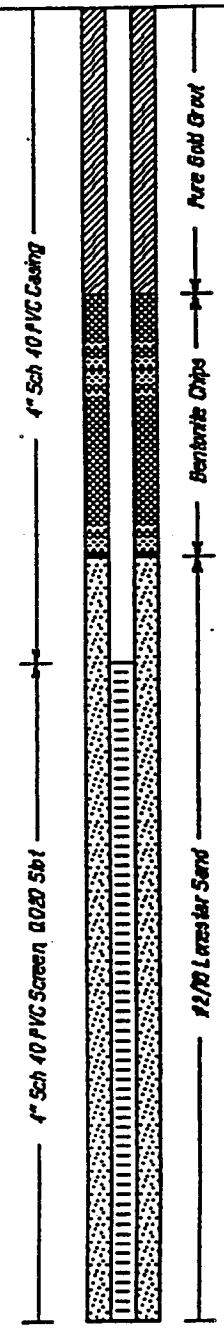
GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

CT International Light Metals PROJECT NO CAO 217.012.002 BORING NO. P-7

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		
				6.8	32			SAND, very fine to fine grained, trace Silt, pale brown (10YR, 6/3), moist.
					50			
55	100		P-7 @ 55		56			
				7.3	29			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/6), moist.
					42			
60	100		P-7 @ 60		52			
65				3.9	34			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/6), moist.
					51			
	100		P-7 @ 66.5		56			
				4.8	31			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/6), very moist.
					56			
	100		P-7 @ 68		61			
				1.9	36			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/6), very moist.
					59			
	100		P-7 @ 69.5		67			
70				30.2	35			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/6), very moist to wet.
					56			
	100		P-7 @ 71		62			
				25.2	44			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/6), water saturated, hit water at 71.2 to 71.5 ft.
					52			
	100		P-7 @ 72.5		66			
				35.5	29			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), water saturated.
					36			
	10		P-7 @ 74		41			
				17.1	34			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), water saturated.
75					40			

WELL DIAGRAM



DEPTH (ft): 55, 60, 65, 70, 75

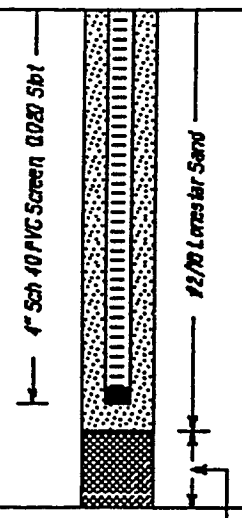
GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.012.002 BORING NO. P-7

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
	100		P-7 @ 75.5	17.1	51	SP		SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), water saturated.
					27			
				15.2	35			
	100		P-7 @ 77		38			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), water saturated.
					25			
				19.4	36			
	100		P-7 @ 78.5		38			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), water saturated.
					24			
				13.6	29			
	100		P-7 @ 80		35			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), water saturated.
80					21			
				9.3	31			
	100		P-7 @ 81.5		33			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), water saturated.
					16			
				10.1	23			
	100		P-7 @ 83		27			
					18	CL		CLAY, pale olive (5Y, 6/3), high plasticity, stiff, very moist.
				4.1	25			
	100		P-7 @ 84.5		32			
85								End of Boring @ 84.5 ft. Set 4 inch well.
90								
95								
100								

WELL DIAGRAM



This work was performed under my supervision and I concur with the findings.

Anthony C. Ward

Anthony C. Ward, CA R.G. #4782

GERAGHTY & MILLER, INC.

BORING LOG

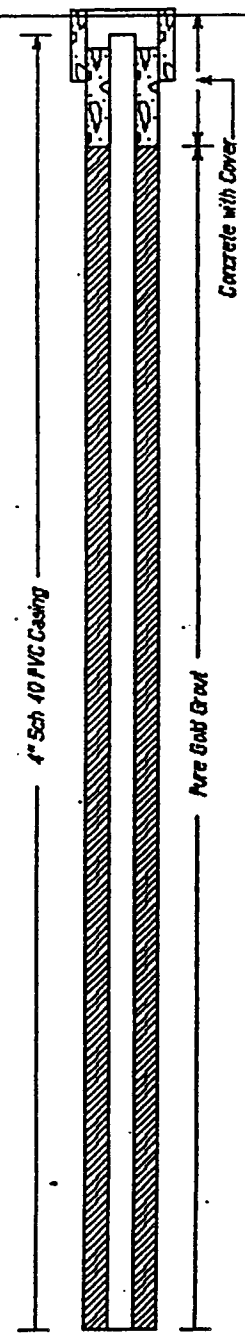
PROJECT: International Light Metals
LOCATION: 19200 S. Western, Torrance, CA
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: CMSS
BOREHOLE DIAMETER: 10 inches O.D.

PROJECT NO.: CAO 217.012.002
LOGGED BY: M. Shiplone
DRILL CO.: Gregg Drilling and Testing, Inc.
RIG TYPE: B-61
DRILLER: C. Winegarner

BORING: P-8
DATE STARTED: 3/6/95
DATE COMPLETED: 3/6/95
BORING DEPTH: 95.0 ft.

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
								Concrete (12")
						SP		SAND, fine to medium grained, little Silt, yellowish red (5YR, 5/8), wet.
						CL		CLAY, little Silt, dark olive gray (5Y, 3/2), high plasticity, stiff, moist.
					4			
	100		P-8 @ 5D	4.1	5			
	100		P-8 @ 5		6			
5								
						ML		SILT, little very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, slightly moist.
					7			
				1.3	6			
	100		P-8 @ 10		11			
10								
					9			SILT, little very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, slightly moist.
				5.5	15			
	100		P-8 @ 15		19			
15								
					11			SILT, little very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, slightly moist.
				3.1	12			
	100		P-8 @ 20		16			
20								

WELL DIAGRAM



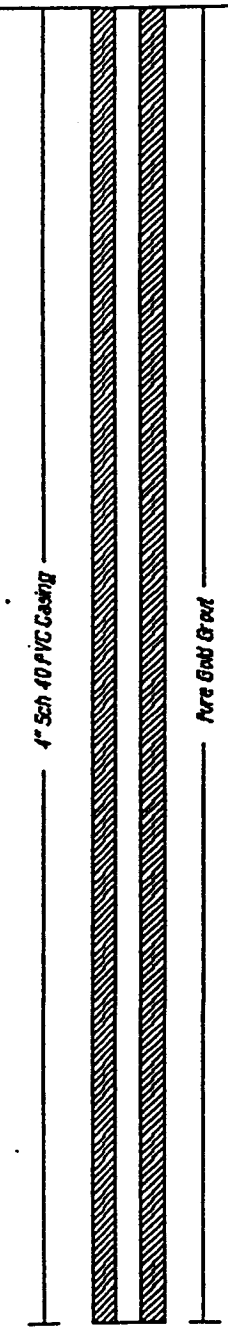
GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

:CT International Light Metals PROJECT NO CAO 217.012.002 BORING NO. P-8

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						ML		
					12			SILT, little very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, slightly moist, some iron oxide staining.
	100		P-8 @ 25D	4.6	20			
25	100		P-8 @ 25		22			
						SP		
					13			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), slightly moist.
				19.2	18			
30	100		P-8 @ 30		24			
					15			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), slightly moist.
				2.1	19			
35	100		P-8 @ 35		27			
					18			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), moist.
				1.6	27			
40	100		P-8 @ 40		36			

WELL DIAGRAM



DEPTH (ft): 25, 30, 35, 40

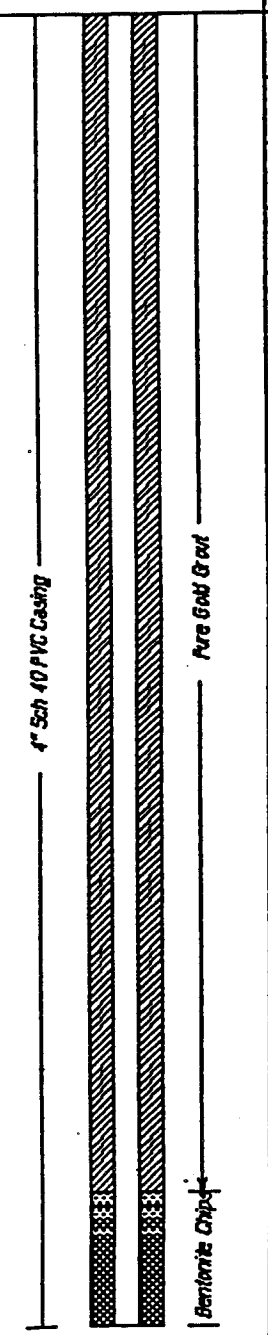
GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

ECT International Light Metals PROJECT NO CAO 217.012.002 BORING NO. P-8

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		
				3.6	26 30 41			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), moist.
45	100		P-8 @ 45					
				3.9	32 50 57			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), moist.
	100 100		P-8 @ 50D P-8 @ 50					
50								
				4.6	36 45 59			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), very moist.
	100		P-8 @ 55					
55								
				4.5	41 50 62			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), very moist.
	100		P-8 @ 60					
60								

WELL DIAGRAM



DEPTH (ft): 45, 50, 55, 60

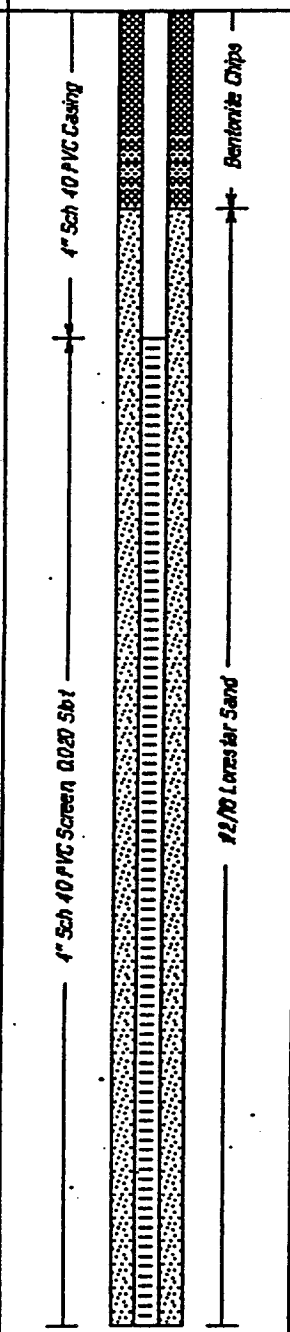
GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

:CT International Light Metals PROJECT NO CAO 217.012.002 BORING NO. P-8

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		
85					46			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/6), very moist.
				2.1	56			
	100		P-8 @ 66.5		62			
					100/4in			SAND, very fine grained, yellowish brown (10YR, 5/6), some rock fragments, well cemented, no sample taken.
70					100/2in			Sandstone, rock Cobble, will auger to 71 to 72 ft.
					63			SAND, very fine to fine grained, yellowish brown (10YR, 5/8), very moist, rock fragments in top ring.
				1.6	85			
	80		P-8 @ 73		100			
				11.2	68			SAND, very fine to fine grained, light yellowish brown (10YR, 6/4), very moist to wet, water encountered at 74.0 to 74.2 ft.
	75		P-8 @ 74		70			
					44			SAND, very fine to fine grained, light yellowish brown (10YR, 6/4), water saturated.
				12.6	47			
75	100		P-8 @ 75.5		61			
					40			SAND, very fine to fine grained, light yellowish brown (10YR, 6/4), water saturated.
				19.6	56			
	100		P-8 @ 77		65			
					38			SAND, very fine to fine grained, light yellowish brown (10YR, 6/4), water saturated.
				12.6	42			
	100		P-8 @ 78.5		47			
					32			SAND, very fine to fine grained, light yellowish brown (10YR, 6/4), water saturated.
				11.1	40			
80	100		P-8 @ 80		44			

WELL DIAGRAM



DEPTH (ft): 85, 70, 75, 80

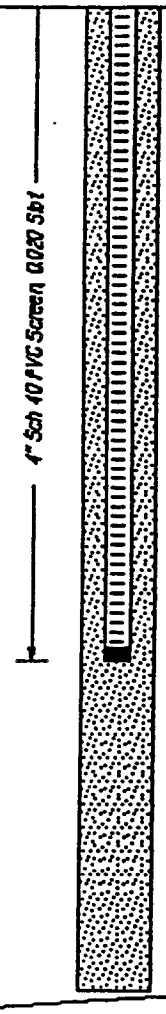
GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

CT International Light Metals PROJECT NO CAO 217.012.002 BORING NO. P-8

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
				10.8	30 38 42	SP		SAND, very fine to fine grained, light yellowish brown (10YR, 6/4), water saturated.
	100		P-8 @ 81.5					
				11.9	28 34 36			SAND, very fine to fine grained, light yellowish brown (10YR, 6/4), water saturated.
	100		P-8 @ 83					
				14.5	22 30 37			SAND, very fine to fine grained, light yellowish brown (10YR, 6/4), water saturated.
	100		P-8 @ 84.5					
85				23.9	25 26 32			SAND, very fine to fine grained, light yellowish brown (10YR, 6/4), water saturated.
	100		P-8 @ 86					
				26.5	28 34 39			SAND, very fine to fine grained, light yellowish brown (10YR, 6/4), water saturated.
	100		P-8 @ 87.5					
				29.8	27 33 41			SAND, very fine to fine grained, light yellowish brown (10YR, 6/4), water saturated.
	100		P-8 @ 89.0					
90				22.5	30 39 45			SAND, very fine to fine grained, some medium grained Sand, light yellowish brown (10YR, 6/4), water saturated.
	100		P-8 @ 90.5					
				14.1	33 42 48			SAND, very fine to fine grained, some medium to coarse grained Sand, light yellowish brown (10YR, 6/4), water saturated.
	100		P-8 @ 92					
				13.3	33 41 45			SAND, very fine to fine grained, some medium to coarse grained Sand, light yellowish brown (2.5Y, 6/4), water saturated.
	100		P-8 @ 93.5					
95				11.2	35 43 47	SP CL		SAND, very fine to fine grained, some medium to coarse grained Sand, light yellowish brown (2.5Y, 6/4), water saturated, few thin (1-inch) clay sand interbeds.
	100		P-8 @ 95					

WELL DIAGRAM



End of Boring @ 95.0 ft. Set 4" well.

This work was performed under my supervision and I concur with the findings.

Anthony C. Ward

Anthony C. Ward, CA R.G. #4782

GERAGHTY & MILLER, INC.

BORING LOG

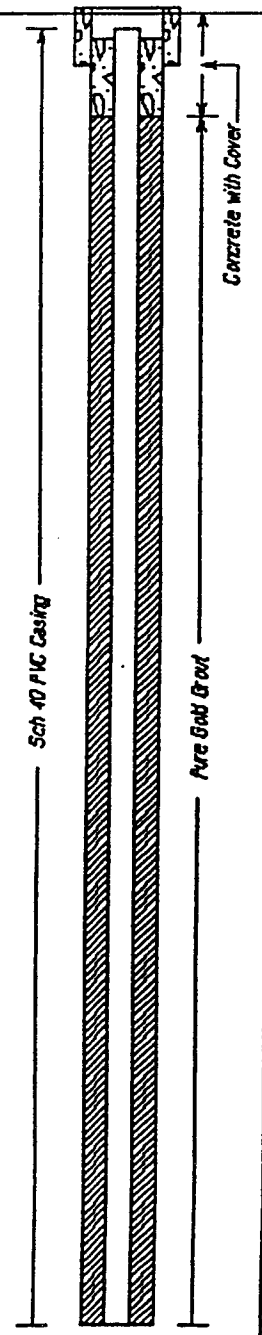
PROJECT International Light Metals
LOCATION 19200 S. Western, Torrance, CA
DRILLING METHOD Hollow Stem Auger
SAMPLING METHOD CMSS
BOREHOLE DIAMETER 10 inches O.D.

PROJECT NO. CAO 217.012.002
LOGGED BY M. Shipione
DRILL CO. Gregg Drilling and Testing, Inc.
RIG TYPE B-61
DRILLER C. Winegarner

BORING P-9
DATE STARTED 3/7/95
DATE COMPLETED 3/7/95
BORING DEPTH 86.0 ft.

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
								Asphalt (12")
				0.4	3, 4	SP		Gravelly SAND, little Silt, little Clay, yellowish red (5YR, 5/8), low plasticity, moist.
	100		P-9 @ 2.5		4	CL		CLAY, little Silt, little very fine grained Sand, dark olive gray (5Y, 3/2), high plasticity, moist.
				0.6	5, 7, 8			CLAY, little Silt, little very fine grained Sand, dark olive gray (5Y, 3/2), high plasticity, moist.
	100		P-9 @ 5D					
5	100		P-9 @ 5					
						ML		
				1.1	7, 9, 13			SILT, little very fine grained Sand, trace Clay, dark yellowish brown (10YR, 4/4), slightly moist to moist.
10	100		P-9 @ 10					
				1.0	5, 7, 8			SILT, some very fine grained Sand, trace Clay, dark yellowish brown (10YR, 4/4), slightly moist to moist.
15	100		P-9 @ 15					
						SM		
				0.9	9, 10, 15			SAND, little to some Silt, yellowish brown (10YR, 5/6), non plastic, moist.
20	100		P-9 @ 20					
						SP		
				1.0	7, 14, 18			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), moist.
	.00		P-9 @ 25D					
25	100		P-9 @ 25					

WELL DIAGRAM



GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

_CT International Light Metals PROJECT NO CAO 217.012.002 BORING NO. P-9

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
						SP				
				1.1	11 19 25			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), moist.		
30	100		P-9 @ 30							30
				0.8	9 20 22			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), moist.		
35	100		P-9 @ 35							35
				0.7	14 26 31			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), moist.	Sch 40 PVC Casing Pure Gold Grout	
40	100		P-9 @ 40							40
				1.2	20 31 38			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), moist.		
45	100		P-9 @ 45							45
	100		P-9 @ 50D	0.6	29 34			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), moist.		
50	100		P-9 @ 50		37					50

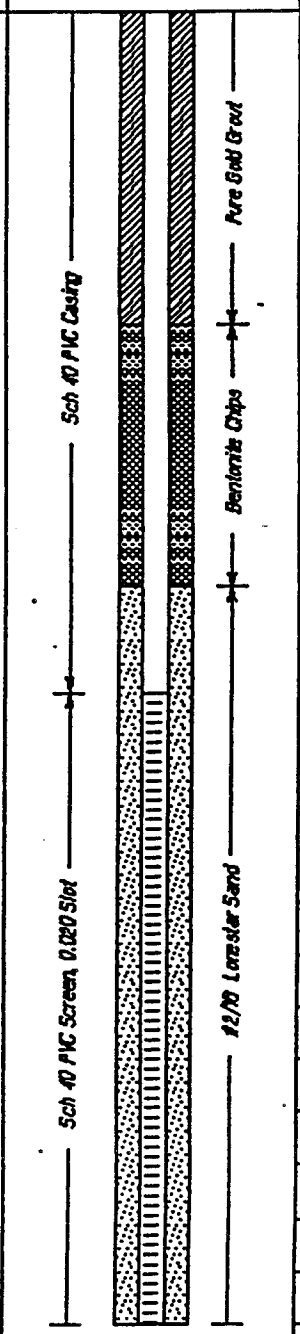
GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

ECT International Light Metals PROJECT NO CAO 217.012.002 BORING NO. P-9

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		
				0.9	19 26 40			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), very moist.
55	100		P-9 @ 55					
				0.8	21 27 34			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), very moist.
60	100		P-9 @ 60					
65				0.6	20 30 37			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), very moist.
	100		P-9 @ 66.5					
				1.7	23 32 39			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), very moist.
	100		P-9 @ 68					
				2.2	26 40 42			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), very moist to wet.
	100		P-9 @ 69.5					
70				3.0	14 19 26			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), water saturated, water encountered at 70 ft.
	100		P-9 @ 71					
				3.6	14 17 21			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), water saturated.
	100		P-9 @ 72.5					
				7.0	12 15 18			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), water saturated.
	00		P-9 @ 74					
75				6.2	18 23			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), water saturated.

WELL DIAGRAM



DEPTH (ft): 55, 60, 65, 70, 75

GERAGHTY & MILLER, INC.

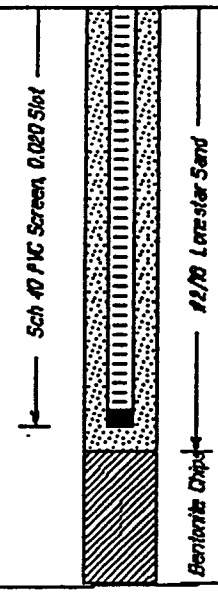
BORING LOG
(continuation)

ECT International Light Metals PROJECT NO CAO 217.012.002 BORING NO. P-9

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
	100		P-9 @ 75.5	6.2	20	SP		SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/4), water saturated.
				6.7	19			
					30			
	100		P-9 @ 77		33			
				3.5	17			SAND, very fine to fine grained, little Silt, yellowish brown (10YR, 5/4), water saturated.
					28			
	100		P-9 @ 78.5		31			
				3.1	14	SM		SAND, very fine grained, some Silt, dark yellowish brown (10YR, 5/4), non plastic, water saturated.
					15			
	100		P-9 @ 80		19			
80				3.0	13			SAND, very fine grained, some Silt, dark yellowish brown (10YR, 5/4), non plastic, water saturated.
					16			
	100		P-9 @ 81.5		20			
				1.5	15	SM ML		SAND, very fine grained, some Silt, trace Clay, dark yellowish brown (10YR, 5/4), non plastic, water saturated.
					20			
	100		P-9 @ 83		27			
				0.5	12	ML CL		Silty CLAY, olive (5Y, 5/3), high plasticity, stiff, moist.
					14			
	100		P-9 @ 84.5		16			
85				0.4	8	CL		CLAY, some Silt, olive gray (5Y, 4/2), high plasticity, stiff, moist.
					11			
	100		P-9 @ 86		11			

End of Boring @ 86.0 ft. Set 4 inch well.

WELL DIAGRAM



This work was performed under my supervision and I concur with the findings.

Anthony C. Ward

Anthony C. Ward, CA R.G. #4782

GERAGHTY & MILLER, INC.

WELL LOG

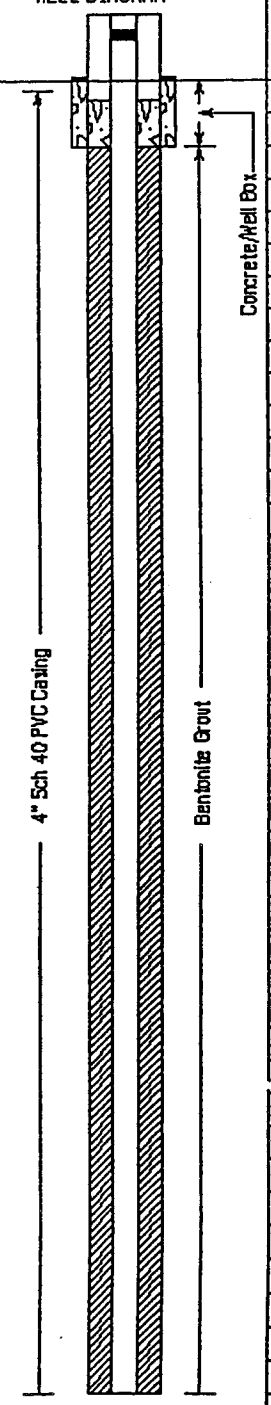
PROJECT: International Light Metals
LOCATION: 19200 S. Western Ave. Torrance, CA
DRILL METHOD: Hollow Stem Auger
SAMPLING METHOD: CMSS
BOREHOLE DIAMETER: 10 inches O.D.

PROJECT NO.: CA0217.034.001
LOGGED BY: Bettie Bechtel
DRILL CO.: Gregg Drilling & Testing, Inc.
RIG TYPE: Mobile B-53
DRILLER: Jeff

BORING: P-9B
DATE STARTED: 10/07/97
DATE COMPLETED: 10/07/97
BORING DEPTH: 77 ft.

DEPTH (ft)	RECOVERY %	SAMP.INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						ML		
5								
10		X						SILT.
15		X						SILT.
20		X						SILT with little Sand.
						SM		
25		X						SAND, very fine grained, little Silt.
						SP		
30		X						SAND, very fine grained.
35		X						Same as above.
40								

WELL DIAGRAM



GERAGHTY & MILLER, INC.

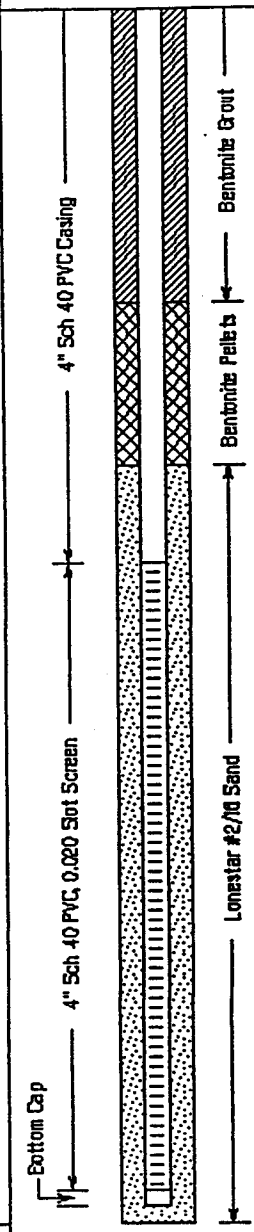
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CA0217.034.001 BORING NO. P-8B

DEPTH (ft)	RECOVERY %	SAMP.INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		Same as above.
45								Same as above.
50								Same as above.
55								Same as above.
60								Same as above.
	NA		P-8B @ 63.5	NA	NA			
65								Same as above.
								SAND, very fine grained, very wet.
	NA		P-8B @ 66.5	NA	NA			SAND, very fine grained, saturated.
70								Same as above.
	NA		P-8B @ 70	NA	NA			
75								Same as above.
	NA		P-8B @ 75	NA	NA			
						CL		CLAY.
								Total Depth of Boring: 77 feet bgs.
80								

WELL DIAGRAM



DEPTH (ft): 45, 50, 55, 60, 65, 70, 75, 80

GERAGHTY & MILLER, INC.

BORING LOG

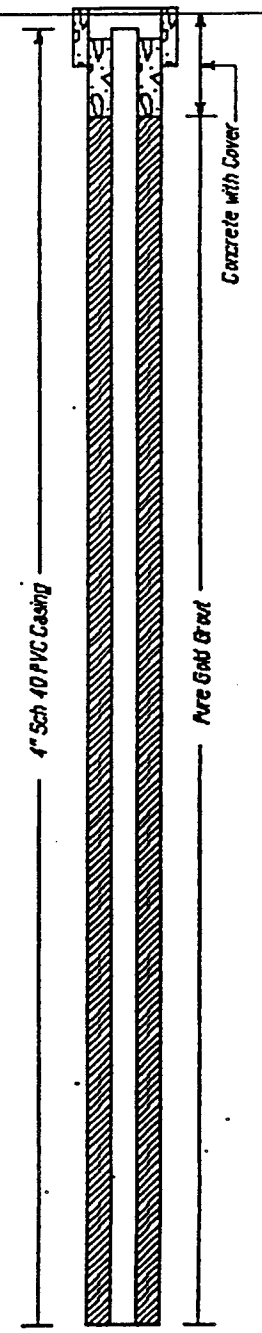
PROJECT International Light Metals
ATION 19200 S. Western, Torrance, CA
METHOD Hollow Stem Auger
ING METHOD CMSS
BOREHOLE DIAMETER 10 inches O.D.

PROJECT NO. CAO 217.012.002
LOGGED BY M. Shipione
DRILL CO. Gregg Drilling and Testing, Inc.
RIG TYPE B-61
DRILLER C. Winegarner

BORING P-10
DATE STARTED 3/3/95
DATE COMPLETED 3/3/95
BORING DEPTH 78.5 ft.

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
								Asphalt (6")
					4	CL		CLAY, little Silt, dark olive gray (5Y, 3/2), high plasticity, stiff, moist.
				0.4	4			
	100		P-10 @ 15		9			
						ML		SILT, some very fine grained Sand, trace Clay, dark yellowish brown (10YR, 4/4), non plastic, moist.
	80		P-10 @ 50	0.4	100	SM		
5	80		P-10 @ 5		150			SAND, very fine to fine grained, little to some Silt, yellowish brown (10YR, 5/6), well cemented, dry to slightly moist.
						SP		
					18			SAND, very fine grained, trace Silt, yellowish brown (10YR,5/6), poorly to moderately cemented, dry.
				0.4	24			
10	100		P-10 @ 10		24			
					14			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), non cemented, moist.
				0.4	17			
15	100		P-10 @ 15		22			
					19			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), non cemented, moist.
				0.4	24			
20	100		P-10 @ 20		26			
					15			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), non cemented, moist.
	.00		P-10 @ 250	0.4	20			
25	100		P-10 @ 25		24			

WELL DIAGRAM

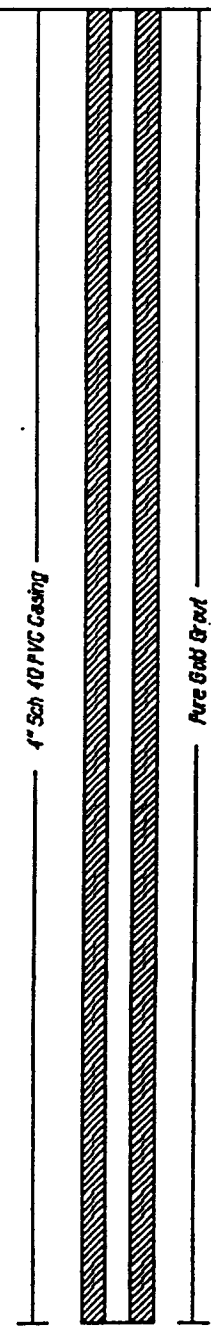


GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

ECT International Light Metals PROJECT NO CAO 217.012.002 BORING NO. P-10

DEPTH (ft)	RECOVERY %	SAMP.INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
						SP				
					19			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), non cemented, moist.		
				0.4	25					
30	100		P-10 @ 30		29					30
					18			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), non cemented, moist to very moist.		
				0.4	26					
35	100		P-10 @ 35		31					35
					24			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), non cemented, moist to very moist.		
				0.4	30					
40	100		P-10 @ 40		35					40
					16			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), non cemented, moist to very moist.		
				0.4	26					
45	100		P-10 @ 45		37					45
					21			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), non cemented, moist to very moist.		
	100		P-10 @ 50D	0.4	27					
50	100		P-10 @ 50		37					50



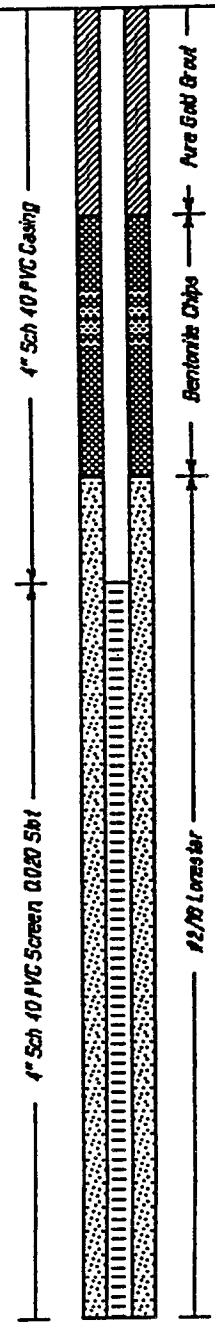
GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

.ECT International Light Metals PROJECT NO CAO 217.012.002 BORING NO. P-10

DEPTH (ft)	RECOVERY %	SAMP.INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), non cemented, moist to very moist.
				0.4	17			
					29			
55	100		P-10 @ 55		40			
								SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), non cemented, moist to very moist.
				0.4	30			
					37			
60	100		P-10 @ 60		48			
								SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), non cemented, moist to very moist.
65				0.4	38			
					53			
	100		P-10 @ 66.5		61			
				0.4	27			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), non cemented, moist to very moist.
					41			
	100		P-10 @ 68		56			
				0.4	40			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), non cemented, water saturated, water at 68 ft.
					46			
	100		P-10 @ 69.5		53			
70				0.4	38			SAND, very fine to fine grained, trace Silt, yellowish brown (10YR, 5/8), non cemented, water saturated.
					48			
	100		P-10 @ 71		55			
				0.4	18			SAND, very fine to fine grained, dark yellowish brown (10YR, 4/6), water saturated.
					22			
	100		P-10 @ 72.5		27			
				0.4	13			SAND, very fine to fine grained, dark yellowish brown (10YR, 4/6), water saturated.
					17			
	00		P-10 @ 74		20			
				0.4	10			SAND, very fine to fine grained, dark yellowish brown (10YR, 4/6), water saturated.
75					15			

WELL DIAGRAM



DEPTH (ft): 55, 60, 65, 70, 75

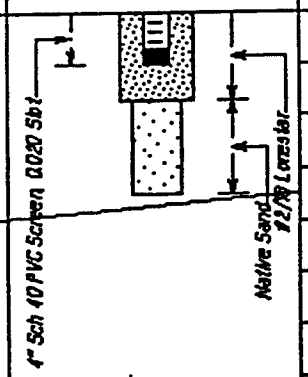
GERAGHTY & MILLER, INC.

BORING LOG
(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.012.002 BORING NO. P-10

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
	100		P-10 @ 75.5	0.4	19	SP		SAND, very fine to fine grained, dark yellowish brown (10YR, 4/6), water saturated.
				0.4	12			
					17			
	100		P-10 @ 77		29	CL		CLAY, little to some Silt, olive (5Y, 5/4), high plasticity, stiff, slightly moist to moist.
				0.4	19			
					25			CLAY, little to some Silt, olive (5Y, 5/4), high plasticity, stiff, slightly moist to moist.
	100		P-10 @ 78.5		30			
80								End of Boring @ 78.5 ft. Set 4 inch well.
85								
90								
95								
100								

WELL DIAGRAM



This work was performed under my supervision and I concur with the findings.

Anthony C. Ward

Anthony C. Ward, CA R.G. #4782

GERAGHTY & MILLER, INC.

WELL LOG

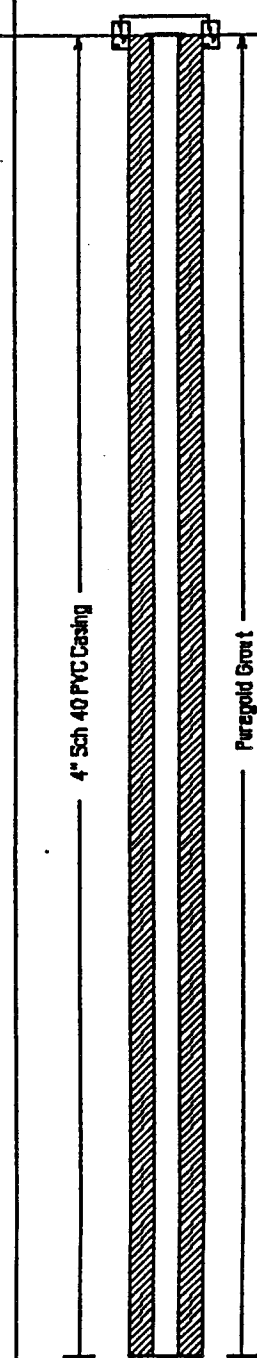
PROJECT International Light Metals
LOCATION 19200 S. Western, Torrance, CA
DRILLING METHOD Hollow Stem Auger
SAMPLING METHOD CMSS
BOREHOLE DIAMETER 10 inches O.D.

PROJECT NO. CAO 217.020.002
LOGGED BY M. Shipione
DRILL CO. Gregg Drilling and Testing, Inc.
RIG TYPE B-61
DRILLER C. Winegarner

BORING P-11B
DATE STARTED 11/16/95
DATE COMPLETED 11/16/95
BORING DEPTH 74.5 ft.

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
								Concrete (8")
						CL		CLAY, little Silt, dark olive gray (5Y, 3/2), high plasticity, stiff, moist.
						ML		
					4			SILT, trace Clay, trace very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, moist.
				0.0	7			
5	100		P-11B @ 5		7			
					17			SILT, trace Clay, trace very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, moist.
				0.0	26			
10	100		P-11B @ 10		33			
					10			SILT, trace Clay, trace very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, moist.
				0.0	11			
15	100		P-11B @ 15		13			
						SM		
					13			Silty SAND, very fine grained, some Silt, brownish yellow (10YR, 6/6), moist.
				0.0	17			
20	100		P-11B @ 20		18			

WELL DIAGRAM



DEPTH (ft): 5, 10, 15, 20

GERAGHTY & MILLER, INC.

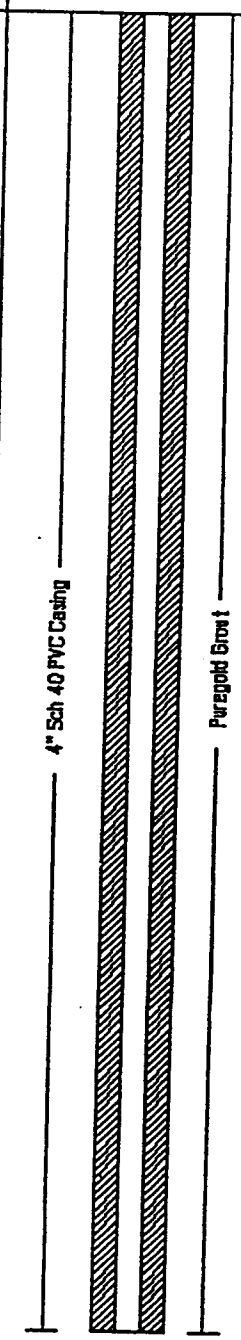
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-11B

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SM		
						SP		
	100		P-11B @ 25	0.0	8, 13, 17			SAND, very fine grained, yellowish brown (10YR, 5/6), moist.
25								
	100		P-11B @ 30	0.0	16, 22, 27			SAND, very fine grained, yellowish brown (10YR, 5/6), moist.
30								
	100		P-11B @ 35	61.2	11, 13, 22			SAND, very fine grained, yellowish brown (10YR, 5/6), moist.
35								
	100		P-11B @ 40	12.3	13, 18, 24			SAND, very fine grained, yellowish brown (10YR, 5/6), moist.
40								

WELL DIAGRAM



DEPTH (ft): 25, 30, 35, 40

GERAGHTY & MILLER, INC.

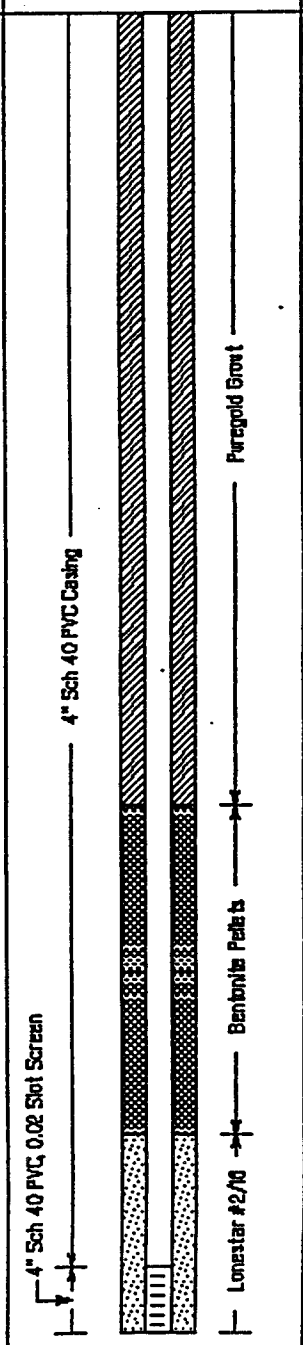
WELL LOG

(continuation)

CT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-11B

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		
				26.1	10 17 20			SAND, very fine grained, light gray (10YR, 7/1), moist.
45	100		P-11B @ 45					
				45.8	14 23 28			SAND, very fine grained, light gray (10YR, 7/1), moist.
50	100		P-11B @ 50					
				24.2	23 30 37			SAND, very fine grained, yellowish brown (10YR, 5/8), moist.
55	100		P-11B @ 55					
				28.7	17 23 28			SAND, very fine grained, yellowish brown (10YR, 5/8), moist.
80	100		P-11B @ 60					

WELL DIAGRAM



DEPTH (ft): 45, 50, 55, 80

GERAGHTY & MILLER, INC.

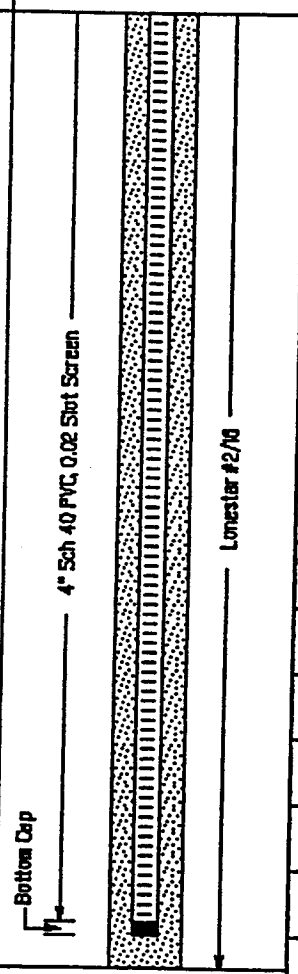
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-11B

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		
				48.1	11			SAND, very fine grained, yellowish brown (10YR, 5/8), wet.
					21			
	100		P-11B @ 65		24			
65								
								Water encountered at 68 ft.
					14			SAND, very fine grained, yellowish brown (10YR, 5/8), water saturated.
			P-11B @ 70	38.2	20			
	100				26			
70								
					7			
				7.3	12	ML CL		SILT, little Clay, light olive brown (2.5Y, 5/3), moderate to high plasticity, moist.
	100		P-11B @ 74		14			
75								End of Boring @ 74.5 ft. Set 4-inch groundwater monitoring well at 74 ft. COMMENTS: Location of monitoring well P-11.
								This work was performed under my supervision and I concur with the findings. Anthony C. Ward. Anthony C. Ward, CA R.G. #4782
80								

WELL DIAGRAM



DEPTH (ft): 65, 70, 75, 80

GERAGHTY & MILLER, INC.

WELL LOG

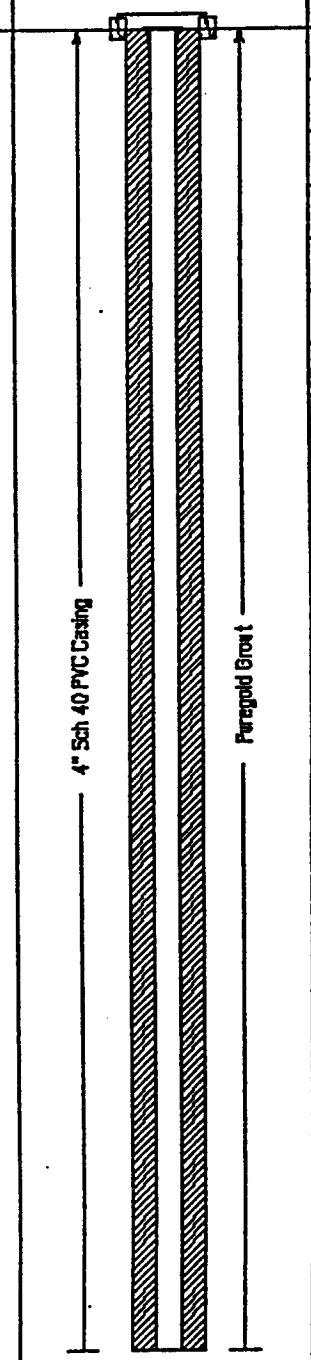
PROJECT International Light Metals
LOCATION 19200 S. Western, Torrance, CA
DRILLING METHOD Hollow Stem Auger
SAMPLING METHOD CMSS
BOREHOLE DIAMETER 10 inches O.D.

PROJECT NO. CAO 217.020.002
LOGGED BY M. Shipione
DRILL CO. Gregg Drilling and Testing, Inc.
RIG TYPE B-61
DRILLER C. Winegarner

BORING P-12
DATE STARTED 11/13/95
DATE COMPLETED 11/20/95
BORING DEPTH 80.5 ft.

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
								Concrete (8")
						SM		
				0.0	3, 5, 5			SAND, very fine grained, some Silt, strong brown (7.5YR, 4/6), low plasticity, moist.
5	100		P-12 @ 5					
						CL		CLAY, trace Silt, dark olive gray (7.5YR, 4/6), high plasticity, stiff, moist.
				0.0	11, 14, 15	ML		SILT, trace Clay, trace very fine grained Sand, dark yellowish brown (10YR, 4/6), non to low plasticity, moist.
10	100		P-12 @ 10					
				0.0	10, 13, 18			SILT, trace Clay, trace very fine grained Sand, dark yellowish brown (10YR, 4/6), non to low plasticity, moist.
15	100		P-12 @ 15					
				230	10, 14, 17			SILT, trace Clay, increasing in fine grained Sand, dark yellowish brown (10YR, 4/6), non to low plasticity, moist.
20	100		P-12 @ 20					
						SM		
				619	7, 8, 12			Silty SAND, very fine grained, some Silt, yellowish brown (10YR, 5/6), non plastic, moist.
25	100		P-12 @ 25					

WELL DIAGRAM



DEPTH (ft): 5, 10, 15, 20, 25

GERAGHTY & MILLER, INC.

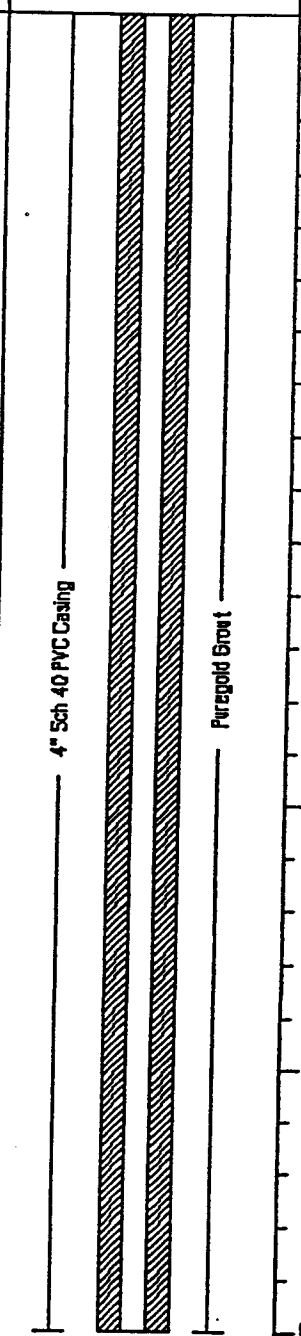
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-12

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SM		
						SM ML		
				1834	14 17 21			Silty SAND, very fine grained, increasing in Silt, yellowish brown (10YR, 5/6), non plastic, moist.
30	100		P-12 @ 30					
				>2500	16 20 27			Silty SAND, very fine grained, increasing in Silt, yellowish brown (10YR, 5/6), non plastic, moist.
35	100		P-12 @ 35					
						ML		
				>2500	16 24 30			SILT, some very fine grained Sand, olive brown (2.5Y, 4/3), non plastic, moist.
40	100		P-12 @ 40					
						SP		
				1483	17 20 28			SAND, very fine grained, trace Silt, light olive brown (2.5Y, 5/4), non plastic, moist.
45	100		P-12 @ 45					
						CL ML		
				>2500	20 28 31			CLAY, some Silt, olive (5Y, 5/4), low plasticity, slightly moist.
50	100		P-12 @ 50					

WELL DIAGRAM



DEPTH (ft): 30, 35, 40, 45, 50

GERAGHTY & MILLER, INC.

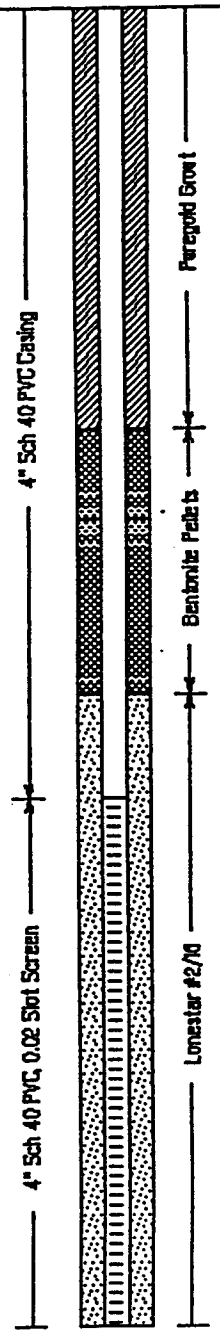
WELL LOG

(continuation)

_CT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-12

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						CL ML		
						SP		
	100		P-12 @ 55	423	12, 17, 24			SAND, very fine grained, little Silt, olive (5Y, 5/3), moist.
55								
	100		P-12 @ 60	0.0	21, 27, 34			SAND, very fine grained, little Silt, olive (5Y, 5/3), moist.
60								
	100		P-12 @ 65	0.0	23, 30, 37			SAND, very fine grained, little Silt, light yellowish brown (10YR, 6/4), moist.
65								
	100		P-12 @ 70	461	26, 30, 38			SAND, very fine grained, little Silt, light yellowish brown (10YR, 6/4), very moist.
70								
	100		P-12 @ 75	1734	14, 23, 28			SAND, very fine grained, little Silt, light yellowish brown (10YR, 6/4), water saturated, water encountered at 75 ft-bgs.
75								

WELL DIAGRAM



DEPTH (ft): 55, 60, 65, 70, 75

GERAGHTY & MILLER, INC.

WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-12

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
						SP				
					12					
				815	13	SP ML		Clayey SILT, trace fine grained Sand, olive (5Y, 5/4), moderate plasticity, moist.		
80	100		P-12 @ 80		18					80
								End of Boring @ 80.5 ft. Set 4-inch groundwater monitoring well at 80 ft.	4" Sch 40 PVC, 0.02 Slot Screen Bottom Cap; Lonestar #2/10	
85										85
90										90
95										95
100										100

This work was performed under my supervision and I concur with the findings.

Anthony C. Ward

Anthony C. Ward, CA R.G. #4782

GERAGHTY & MILLER, INC.

WELL LOG

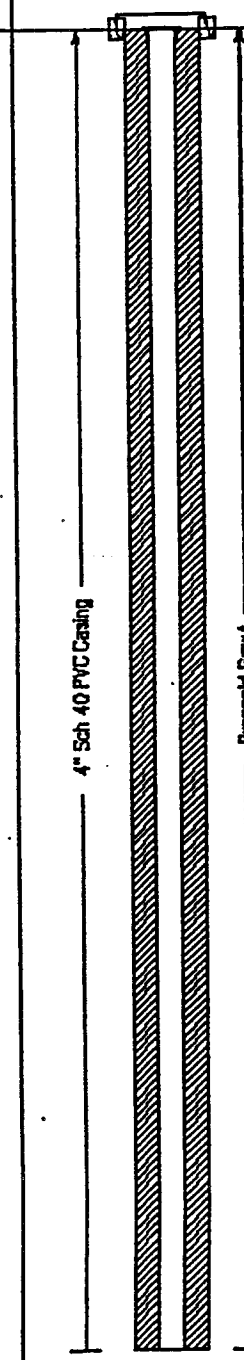
PROJECT International Light Metals
LOCATION 19200 S. Western, Torrance, CA
DRILLING METHOD Hollow Stem Auger
DRILLING METHOD CMSS
BOREHOLE DIAMETER 10 inches O.D.

PROJECT NO. CAO 217.020.002
LOGGED BY M. Shipione
DRILL CO. Gregg Drilling and Testing, Inc.
RIG TYPE B-61
DRILLER C. Winegarner

BORING P-13B
DATE STARTED 11/16/95
DATE COMPLETED 11/17/95
BORING DEPTH 84 ft.

DEPTH (ft)	RECOVERY %	SAMP.INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
								Concrete (8")
						CL		CLAY, little Silt, dark olive gray (5Y, 3/2), high plasticity, stiff, moist.
				3.8	4			
					8			
5	100		P-13B @ 5		8			
						ML		SILT, trace Clay, trace very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, moist.
				2.1	7			
					8			
10	100		P-13B @ 10		10			
				6.2	7			SILT, trace Clay, trace very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, moist.
					14			
15	100		P-13B @ 15		17			
				8.8	6			SILT, trace Clay, trace very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, moist.
					6			
20	100		P-13B @ 20		8			
				7.1	8			SILT, trace Clay, trace very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, moist.
					11			
25	100		P-13B @ 25		14			

WELL DIAGRAM



DEPTH (ft): 5, 10, 15, 20, 25

GERAGHTY & MILLER, INC.

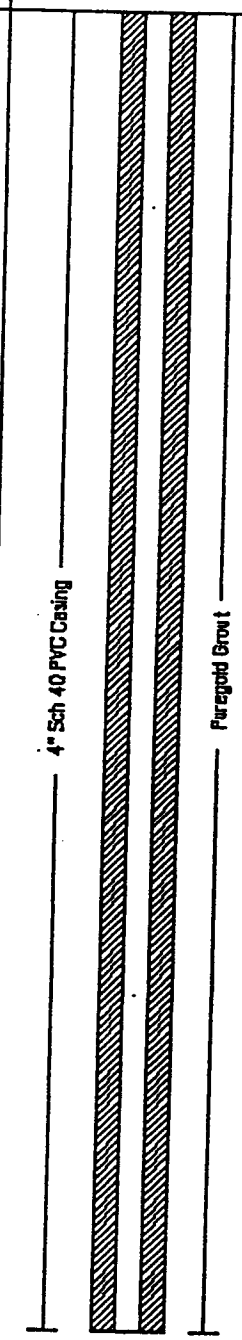
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-13B

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						ML		
						SP		
30	100		P-13B @ 30	1.8	12, 17, 26			SAND, very fine grained, trace to little Silt, yellowish brown (10YR, 5/6), moist.
35	100		P-13B @ 35	2.4	19, 27, 30			SAND, very fine grained, trace to little Silt, light olive brown (2.5Y, 5/4), moist.
40	100		P-13B @ 40	5.1	20, 29, 36			SAND, very fine grained, light olive brown (2.5Y, 5/4), moist.
45	100		P-13B @ 45	13.5	17, 25, 37			SAND, very fine grained, little Silt, light olive brown (2.5Y, 5/4), moist.
50	100		P-13B @ 50	13.4	13, 21, 26			SAND, very fine grained, little Silt, light olive brown (2.5Y, 5/4), very moist, some FeO_2 staining.

WELL DIAGRAM



DEPTH (ft): 30, 35, 40, 45, 50

GERAGHTY & MILLER, INC.

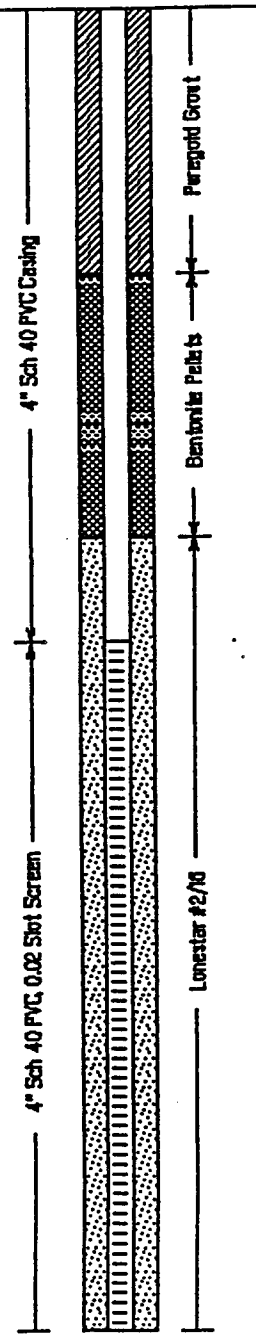
WELL LOG

(continuation)

CT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-13B

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		
						SM		
				0.7	11 / 18 / 19			Silty SAND, very fine grained, some Silt, light olive brown (2.5Y, 5/4), very moist.
55	100		P-13B @ 55					
						ML		
			P-12B @ 000	0.7	12 / 18			SILT, little very fine grained Sand, olive (5Y, 4/4), moderate plasticity, moist.
60	100		P-13B @ 60		21			
						SP		
				2.2	9 / 15			SAND, trace Silt, light yellowish brown (2.5Y, 6/4), moist.
65	100		P-13B @ 65		18			
			P-13B @ 70	0.0	11 / 18			SAND, trace Silt, light yellowish brown (2.5Y, 6/4), very moist.
70	100				21			
								Water encountered at 73 ft-bgs.
				0.8	8 / 13			SAND, trace Silt, light yellowish brown (2.5Y, 6/4), water saturated.
75	100		P-13B @ 75		17			

WELL DIAGRAM



DEPTH (ft): 55, 60, 65, 70, 75

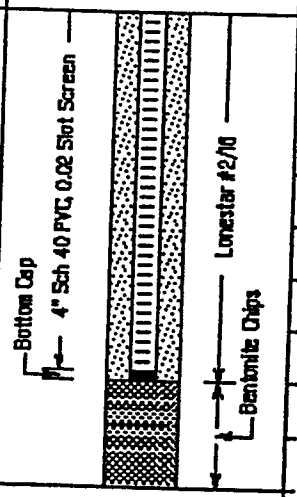
GERAGHTY & MILLER, INC.

WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-13B

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
						SP				
						ML SM				
				0.0	10 13 17			Sandy SILT, very fine grained Sand, olive brown (2.5Y, 4/4), water saturated.		
80	100		P-13B @ 80							80
						ML				
				0.0	9 14 20			SILT, trace Clay, very fine grained Sand, olive (5Y, 4/3), very moist.		
	100		P-13B @ 84							
85								End of Boring @ 84.0 ft. Set 4-inch groundwater monitoring well at 82 ft.		85
90								COMMENTS: * Location of monitoring well P-13.		90
95										95
100								This work was performed under my supervision and I concur with the findings. Anthony C. Ward. Anthony C. Ward, CA R.G. #4782		100



GERAGHTY & MILLER, INC.

WELL LOG

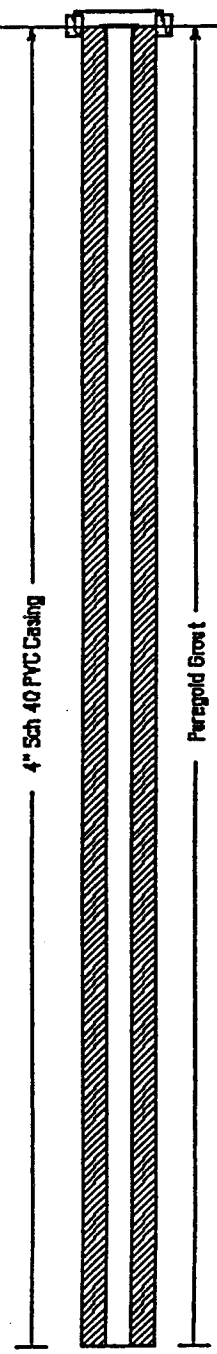
PROJECT International Light Metals
LOCATION 19200 S. Western, Torrance, CA
METHOD Hollow Stem Auger
DRILLING METHOD CMSS
BOREHOLE DIAMETER 10 inches O.D.

PROJECT NO. CAO 217.020.002
LOGGED BY M. Shipione
DRILL CO. Gregg Drilling and Testing, Inc.
RIG TYPE B-61
DRILLER C. Winegarner

BORING P-14
DATE STARTED 11/14/95
DATE COMPLETED 11/14/95
BORING DEPTH 85.3 ft.

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
								Concrete (8")
						CL		
				0.0	7, 7, 10			CLAY, little Silt, dark olive gray (5Y, 3/2), high plasticity, stiff, moist.
5	100		P-14 @ 5					
						ML		
				0.0	8, 9, 13			SILT, trace Clay, trace very fine grained Sand, yellowish brown (10YR, 5/6), non plastic, stiff, slightly moist.
10	100		P-14 @ 10					
						ML/SM		
				0.0	7, 11, 12			SILT, trace Clay, increasing in very fine grained Sand, yellowish brown (10YR, 5/6), non plastic, stiff, slightly moist.
15	100		P-14 @ 15					
						ML		
				0.0	5, 8, 9			SILT, trace Clay, little very fine grained Sand, yellowish brown (10YR, 5/6), non plastic, stiff, slightly moist.
20	100		P-14 @ 20					
				0.0	5, 6, 11			SILT, trace Clay, trace very fine grained Sand, yellowish brown (10YR, 5/6), non plastic, stiff, slightly moist.
25	100		P-14 @ 25					

WELL DIAGRAM



GERAGHTY & MILLER, INC.

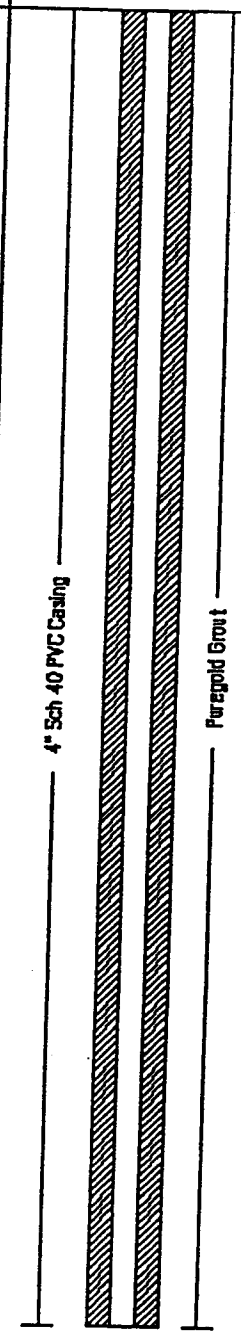
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-14

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						ML		
						SP		
30	100		P-14 @ 30	0.0	13, 15, 27			SAND, very fine grained, yellowish brown (10YR, 5/8), moist.
35	100		P-14 @ 35	0.0	8, 12, 17			SAND, very fine grained, yellowish brown (10YR, 5/8), moist.
40	100		P-14 @ 40	0.0	26, 30, 37			SAND, very fine grained, yellowish brown (10YR, 5/8), moist.
45	100		P-14 @ 45	0.0	20, 28, 31			SAND, very fine grained, yellowish brown (10YR, 5/8), moist.
						ML		
50	100		P-14 @ 50	0.0	12, 15, 18			SILT, little very fine grained Sand, olive (5Y, 5/3), moderate plasticity, moist.

WELL DIAGRAM



DEPTH (ft): 30, 35, 40, 45, 50

GERAGHTY & MILLER, INC.

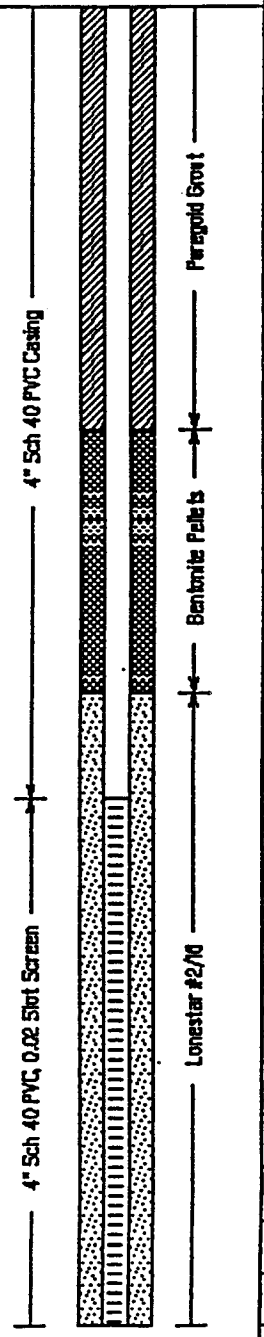
WELL LOG

(continuation)

CT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-14

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						ML		
				0.0	11, 16, 17			SILT, increasing in very fine grained Sand, olive (5Y, 5/3), moderate plasticity, moist.
55	100		P-14 @ 55					
						SM		
				0.0	10, 13, 19			Silty SAND, very fine grained, little to some Silt, very dark gray (5Y, 3/1), non plastic, very moist.
60	100		P-14 @ 60					
						SP		
				44.0	9, 14, 17			SAND, very fine grained, little Silt, dark yellowish brown (10YR, 4/4), moist to very moist.
65	100		P-14 @ 65					
				101	8, 15, 16			SAND, very fine grained, trace to no Silt, dark yellowish brown (10YR, 4/4), moist to very moist.
			P-14 @ 70					
70	100							
								Water encountered at 73.5 ft-bgs.
				1857	8, 13, 21			SAND, very fine grained, trace to no Silt, dark yellowish brown (10YR, 4/4), water saturated.
75	100		P-14 @ 75					

WELL DIAGRAM



DEPTH (ft): 55, 60, 65, 70, 75

GERAGHTY & MILLER, INC.

WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-14

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
						SP				
				1216	12 16 17			SAND, little Silt, dark yellowish brown (10YR, 4/4), water saturated.		
80	100		P-14 @ 80							80
				1718	10 13 16			SAND, trace Silt, olive (10YR, 5/4), water saturated, numerous shell fragments.		
	100		P-14 @ 83							
				431	8 14 19					
85	100		P-14 @ 84.5			CL		Silty CLAY, olive (10YR, 5/4), high plasticity, moist to water saturated.	Bottom Cap; 4" Sch 40 PVC, 0.02 Slot Screen; Lonestar #2/10	85
								End of Boring @ 85.3 ft. Set 4-inch groundwater monitoring well at 85 ft.		
90										90
95										95
								This work was performed under my supervision and I concur with the findings. Anthony C. Ward Anthony C. Ward, CA R.G. #4782		
100										100

GERAGHTY & MILLER, INC.

WELL LOG

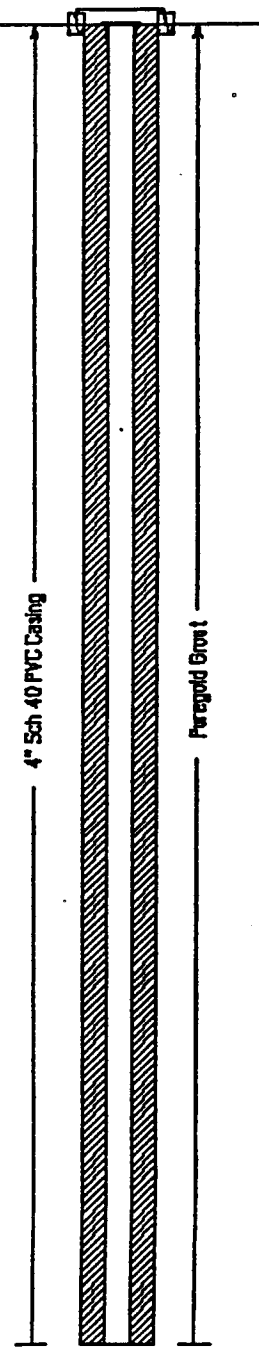
PROJECT International Light Metals
TION 19200 S. Western, Torrance, CA
METHOD Hollow Stem Auger
SAMPLING METHOD CMSS
BOREHOLE DIAMETER 10 inches O.D.

PROJECT NO. CAO 217.020.002
LOGGED BY M. Shipione
DRILL CO. Gregg Drilling and Testing, Inc.
RIG TYPE B-61
DRILLER C. Winegarner

BORING P-15
DATE STARTED 11/21/95
DATE COMPLETED 11/22/95
BORING DEPTH 80 ft.

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
								Concrete (8")
						CL		CLAY, little Silt, dark olive gray (5Y, 3/2), high plasticity, stiff, moist.
				2.0	4 12 13			CLAY, little Silt, dark olive gray (5Y, 3/2), high plasticity, stiff, moist.
5	100		P-15 @ 5					
						ML		
				4.5	10 16 19			SILT, trace Clay, trace very fine grained Sand, dark yellowish brown (10YR, 4/4), moderate plasticity, moist.
10	100		P-15 @ 10					
				8.0	7 8 10			SILT, trace Clay, trace very fine grained Sand, dark yellowish brown (10YR, 4/4), moderate plasticity, moist.
15	100		P-15 @ 15					
				12.7	8 8 14			SILT, trace Clay, increasing in very fine grained Sand, dark yellowish brown (10YR, 4/4), moderate plasticity, moist.
20	100		P-15 @ 20					
						SP		
				28.8	10 13 17			SAND, very fine grained, little Silt, yellowish brown (10YR, 5/8), moist.
25	100		P-15 @ 25					

WELL DIAGRAM



DEPTH (ft): 5, 10, 15, 20, 25

GERAGHTY & MILLER, INC.

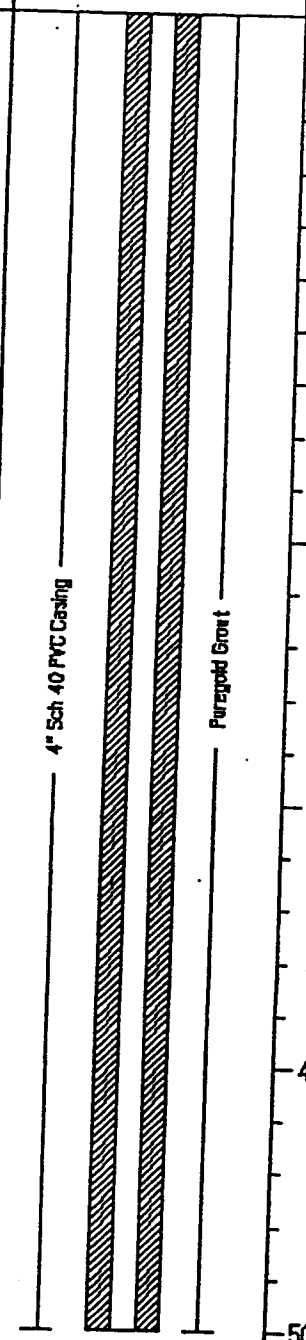
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-15

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		
30	100		P-15 @ 30	8.4	13, 16, 20			SAND, very fine grained, little Silt, yellowish brown (10YR, 5/6), moist.
35	100		P-15 @ 35	3.4	15, 22, 26			SAND, very fine grained, little Silt, yellowish brown (10YR, 5/6), moist.
						SM		
40	100		P-15 @ 40	44.3	16, 23, 30			Silty SAND, very fine grained, some Silt, light olive brown (2.5Y, 5/3), moist.
						ML		
45	100		P-15 @ 45D, P-15 @ 45	56.2	8, 13, 18			SILT, little very fine grained Sand, light olive brown (2.5Y, 5/4), non to low plastictity, moist.
						SP		
50	100		P-15 @ 50	64.6	11, 14, 18			SAND, trace Silt, brownish yellow (10YR, 6/6), moist.

WELL DIAGRAM



DEPTH (ft): 30, 35, 40, 45, 50

GERAGHTY & MILLER, INC.

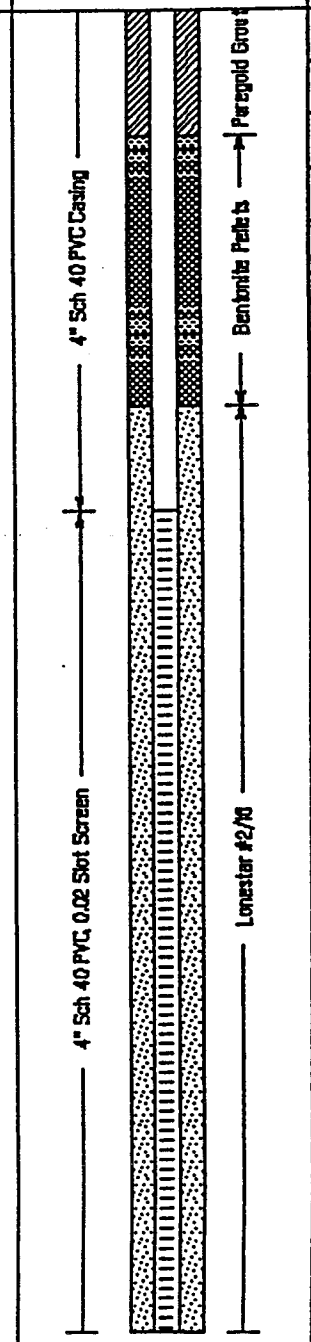
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-15

DEPTH (ft)	RECOVERY %	SAMP.INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		
					22			SAND, trace Silt, light yellowish brown (10YR, 6/4), very moist.
				45.8	36			
55	100		P-15 @ 55		41			
					37			SAND, trace Silt, light yellowish brown (10YR, 6/4), very moist.
				9.8	50			
80	100		P-15 @ 60					
					29			SAND, trace Silt, light yellowish brown (10YR, 6/4), very moist.
				38.0	36			
85	100		P-15 @ 65		39			
								Water encountered at 68.5 to 69.0 ft-bgs.
					14			SAND, trace Silt, light yellowish brown (10YR, 6/4), water saturated.
			P-15 @ 70	248	22			
70	100				27			
								SAND, trace Silt, light yellowish brown (10YR, 6/4), water saturated.
					17			
				355	22			
75	100		P-15 @ 75		31			

WELL DIAGRAM



DEPTH (ft): 55, 80, 85, 70, 75

GERAGHTY & MILLER, INC.

WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-15

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
						SP		SAND, trace Silt, light yellowish brown (10YR, 6/4), water saturated.		
				12	13 15 16	SP CL		Silty CLAY, olive (5Y, 5/3), high plasticity, stiff, moist.		
80	100		P-15 @ 80					End of Boring @ 80.0 ft. Set 4-inch groundwater monitoring well at 84.5 ft.	4" Sch 40 PVC 0.02 Slot Screen Bottom Cap Lonestar #2/10	80
85										85
90										90
95										95
100								This work was performed under my supervision and I concur with the findings. Anthony C. Ward Anthony C. Ward, CA R.G. #4782		100

GERAGHTY & MILLER, INC.

WELL LOG

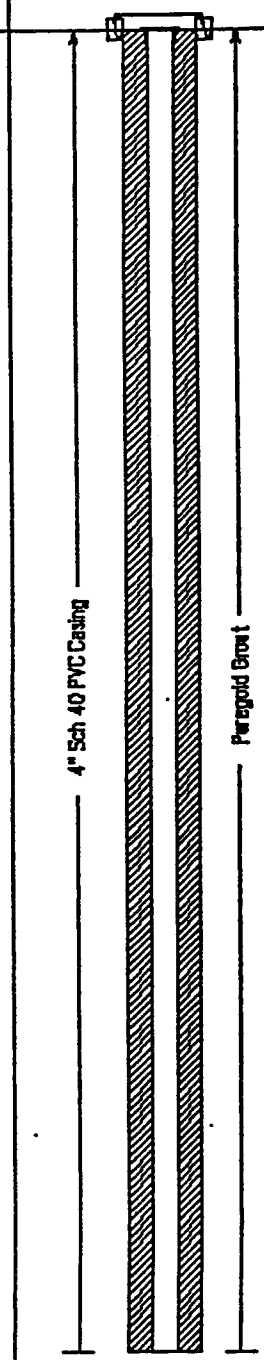
PROJECT International Light Metals
LOCATION 19200 S. Western, Torrance, CA
METHOD Hollow Stem Auger
DRILLING METHOD CMSS
BOREHOLE DIAMETER 10 inches O.D.

PROJECT NO. CAO 217.020.002
LOGGED BY M. Shipione
DRILL CO. Gregg Drilling and Testing, Inc.
RIG TYPE B-61
DRILLER T. Garver

BORING P-16A
DATE STARTED 11/29/95
DATE COMPLETED 11/29/95
BORING DEPTH 87 ft.

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
								Concrete (8")
						CL		
				0.0	7, 9, 12			CLAY, little Silt, dark olive gray (5Y, 3/2), high plasticity, stiff, moist.
5	100		P-16A @ 5					
						ML		
				0.0	8, 12, 16			SILT, trace Clay, trace very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, moist.
10	100		P-16A @ 10					
				0.0	9, 14, 21			SILT, trace Clay, trace very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, moist.
15	100		P-16A @ 15					
				0.0	8, 16, 25			SILT, trace Clay, increasing in very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, moist.
20	100		P-16A @ 20					
				0.0	9, 14, 22			SILT, trace Clay, increasing in very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, moist.
25	100		P-16A @ 25					

WELL DIAGRAM



DEPTH (ft): 5, 10, 15, 20, 25

GERAGHTY & MILLER, INC.

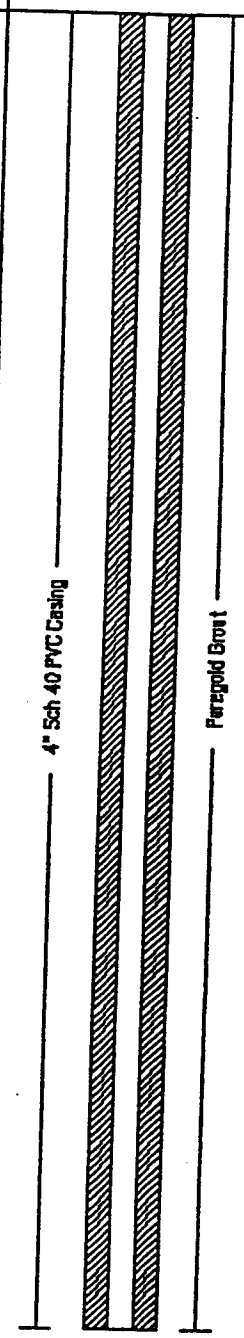
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-18A

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						ML		
						SP		
30	100		P-18A @ 30	0.0	18, 33, 45			SAND, very fine grained, yellowish brown (10YR, 5/8), slightly moist to moist.
35	100		P-18A @ 35	0.0	10, 24, 38			SAND, very fine grained, yellowish brown (10YR, 5/8), slightly moist to moist.
40	100		P-18A @ 40	0.0	13, 30, 50			SAND, very fine grained, yellowish brown (10YR, 5/8), slightly moist to moist.
45	100		P-18A @ 45	0.0	30, 50/5			SAND, very fine grained, yellowish brown (10YR, 5/8), slightly moist to moist.
50	100		P-18A @ 50	0.0	12, 30, 44			SAND, very fine grained, yellowish brown (10YR, 5/8), slightly moist to moist.

WELL DIAGRAM



DEPTH (ft): 30, 35, 40, 45, 50

GERAGHTY & MILLER, INC.

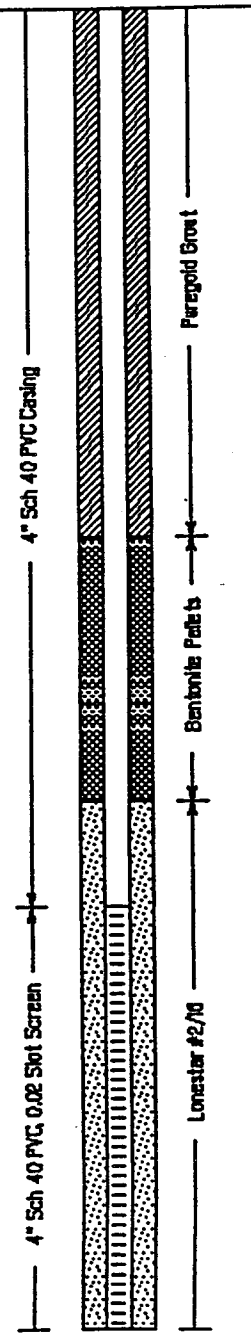
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-10A

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		
	100		P-10A @ 55	0.0	18, 40, 50/5			SAND, very fine grained, yellowish brown (10YR, 5/8), slightly moist to moist.
55								
	100		P-10A @ 60	0.0	34, 38, 50			SAND, very fine grained, yellowish brown (10YR, 5/8), moist.
60								
	100		P-10A @ 65	0.0	22, 30, 50			SAND, very fine grained, yellowish brown (10YR, 5/8), moist.
65								
	100		P-10A @ 70	0.0	16, 50/6			SAND, very fine grained, yellowish brown (10YR, 5/8), very moist.
70								
								Water encountered at 73.5 ft-bgs.
	100		P-10A @ 75	103	20, 50/6			SAND, very fine grained, yellowish brown (10YR, 5/8), water saturated.
75								

WELL DIAGRAM



DEPTH (ft): 55, 60, 65, 70, 75

GERAGHTY & MILLER, INC.

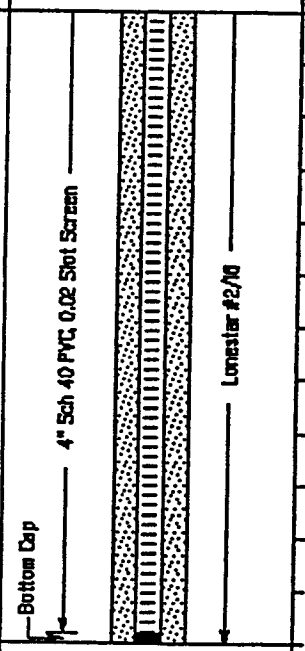
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-10A

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		
	100		P-10A @ 80	79.7	18, 50/6			SAND, very fine grained, yellowish brown (10YR, 5/8), water saturated.
80								
	100		P-10A @ 82	48.0	12, 38, 50			SAND, very fine grained, yellowish brown (10YR, 5/8), water saturated.
	100		P-10A @ 85	82.4	13, 25, 44			SAND, very fine grained, yellowish brown (10YR, 5/8), water saturated.
85								
	100		P-10A @ 87	82.7	16, 30, 46			SAND, very fine grained, yellowish brown (10YR, 5/8), water saturated.
								End of Boring @ 87.0 ft. Set 4-inch groundwater monitoring well at 87 ft.
90								
95								
100								

WELL DIAGRAM



DEPTH (ft): 80, 85, 90, 95, 100

This work was performed under my supervision and I concur with the findings.

Anthony C. Ward

Anthony C. Ward, CA R.G. #4782

GERAGHTY & MILLER, INC.

BORING LOG

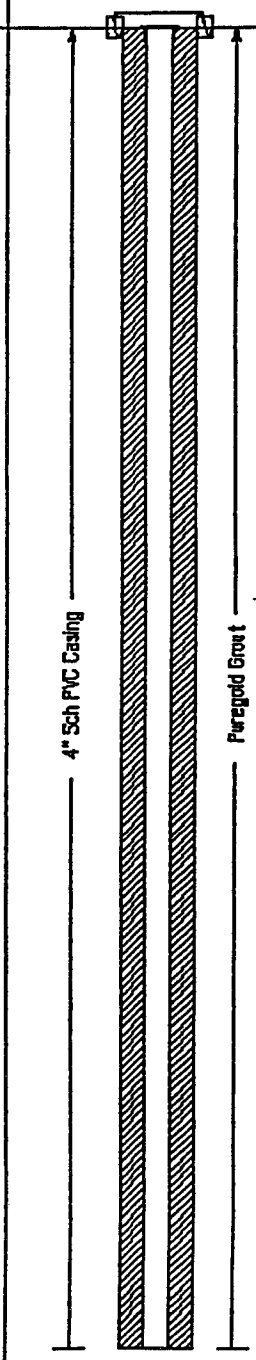
PROJECT International Light Metals
LOCATION 19200 S. Western, Torrance, CA
METHOD Rotosonic
DRILLING METHOD Core Barrel
BOREHOLE DIAMETER 8 inches O.D.

PROJECT NO. CAO 217.020.002
LOGGED BY B. Bechtel/D. Willis
DRILL CO. Lang
RIG TYPE Rotosonic
DRILLER D. Casey

BORING P-16B
DATE STARTED 12/2/95
DATE COMPLETED 12/3/95
BORING DEPTH 120 ft.

DEPTH (ft)	RECOVERY %	SAMP.INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
								Concrete (8")
						CL		
					7			CLAY, little Silt, dark olive gray (5Y, 3/2), high plasticity, stiff, moist. (*)
				0.0	9			
5	100		P-16A @ 5		12			
						ML		
					8			SILT, trace Clay, trace very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, moist. (*)
				0.0	12			
10	100		P-16A @ 10		16			
					9			SILT, trace Clay, trace very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, moist. (*)
				0.0	14			
15	100		P-16A @ 15		21			
					8			SILT, trace Clay, increasing in very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, moist. (*)
				0.0	16			
20	100		P-16A @ 20		25			
					9			SILT, trace Clay, increasing in very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, moist. (*)
				0.0	14			
25	100		P-16A @ 25		22			

WELL DIAGRAM



DEPTH (ft): 5, 10, 15, 20, 25

GERAGHTY & MILLER, INC.

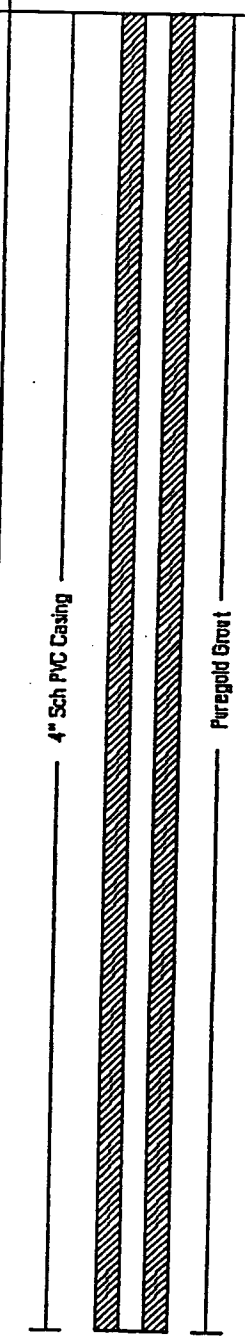
BORING LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-16B

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						ML		
						SP		
30	100		P-16A @ 30	0.0	18, 33, 45			SAND, very fine grained, yellowish brown (10YR, 5/8), slightly moist to moist. (*)
35	100		P-16A @ 35	0.0	10, 24, 38			SAND, very fine grained, yellowish brown (10YR, 5/8), slightly moist to moist. (*)
40	100		P-16A @ 40	0.0	13, 30, 50			SAND, very fine grained, yellowish brown (10YR, 5/8), slightly moist to moist. (*)
45	100		P-16A @ 45	0.0	30, 50/5			SAND, very fine grained, yellowish brown (10YR, 5/8), slightly moist to moist. (*)
50	100		P-16A @ 50	0.0	12, 30, 44			SAND, very fine grained, yellowish brown (10YR, 5/8), slightly moist to moist. (*)

WELL DIAGRAM



DEPTH (ft): 30, 35, 40, 45, 50

GERAGHTY & MILLER, INC.

BORING LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-16B

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
						SP				
55	100		P-16A @ 55	0.0	18 40 50/5			SAND, very fine grained, yellowish brown (10YR, 5/8), slightly moist to moist. (*)		55
80	100		P-16A @ 80	0.0	34 38 50			SAND, very fine grained, yellowish brown (10YR, 5/8), moist. (*)		80
85	100		P-16A @ 85	0.0	22 30 50			SAND, very fine grained, yellowish brown (10YR, 5/8), moist. (*)	4" Sch PVC Casing Puregold Grout	85
70	100		P-16A @ 70	0.0	16 50/6			SAND, very fine grained, yellowish brown (10YR, 5/8), very moist. (*)		70
75	100		P-16A @ 75	103	20 50/6			Water encountered at 73.5 ft-bgs. (*) SAND, very fine grained, yellowish brown (10YR, 5/8), water saturated. (*)		75

GERAGHTY & MILLER, INC.

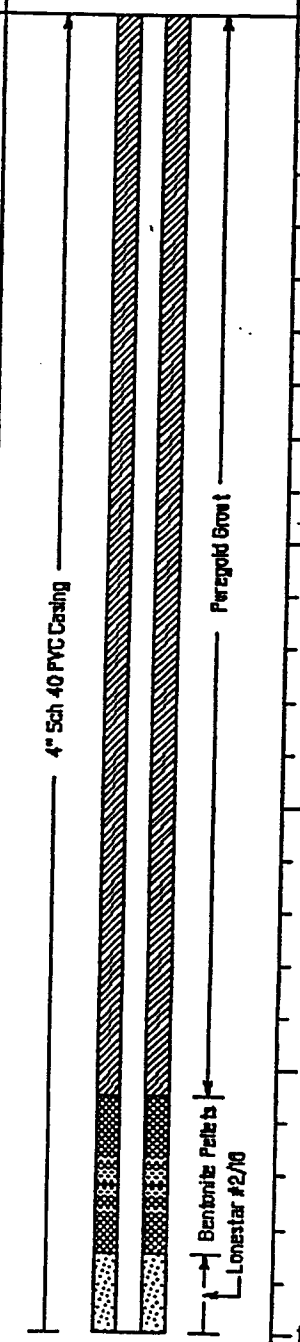
BORING LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-10B

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		(*) THE FIRST 80 FT OF LITHOLOGIC DESCRIPTION WAS TAKEN FROM BORING P-10A
80	NA	2.5-3	NA	NA	NA			SAND, very fine grained, minor Clay, light olive brown (2.5Y, 5/6), loose, wet to water saturated, homogeneous, 95% silica, 3-4% black grains, 1-2% feldspars, grains are subrounded.
85								SAND, very fine grained, minor Clay, light olive brown (2.5Y, 5/6), loose, water saturated, homogeneous, 95% silica, 3-4% black grains, 1-2% feldspars, grains are subrounded.
								Color change to yellowish brown (10YR, 5/6).
	NA	2.5-3	NA	NA	NA			Color change to light olive brown (2.5Y, 5/6), slightly more clay.
	NA	2.5-3	NA	NA	NA			SAND, very fine grained, few coarser grains, light olive brown (2.5Y, 5/4), water saturated, subrounded to subangular, more feldspar (3%).
90	NA	1-2.5	NA	NA	NA			Clayey SAND, very fine grained, few coarser grains, light olive brown (2.5Y, 5/4), dense, iron staining in stringers.
						SC		
	NA	0.5-2	NA	NA	NA	SW		SAND, fine to medium grained, minor Clay, with gravel (1.5 - 6 cm), light yellowish brown (2.5Y, 6/4), water saturated, loose, some iron staining in stringers.
						SP		
	NA	0.5-2.5	NA	NA	NA			SAND, fine to medium grained, little Clay, light olive brown (2.5Y, 5/4), loose, water saturated, few blebs of clay.
95	NA	0.5-2	NA	NA	NA			SAND, fine to medium grained, few coarser grains, some Clay, yellowish brown (10YR, 5/6), loose, water saturated, homogeneous, 3-5% feldspar, 1-2% black grains.
	100	0.5-1.5	NA	<1	NA	SW		SAND, fine to medium grained, trace Clay blebs, brownish yellow (2.5Y, 5/6), very loose, water saturated.
100								

WELL DIAGRAM



DEPTH (ft): 80, 85, 90, 95, 100

GERAGHTY & MILLER, INC.

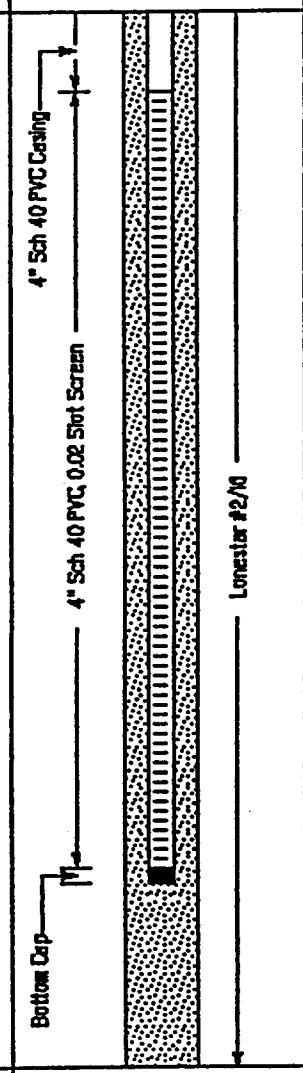
BORING LOG

(continuation)

CT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-10B

DEPTH (ft)	RECOVERY %	MENT. SCALE φ	SAMPLE NO.	PID (ppm)	UNCND STRENGTH (tons/ft²)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SW		SAND, fine to medium grained, trace Clay blebs, brownish yellow (2.5Y, 5/6), very loose, water saturated.
						SP		SAND, fine to medium grained, trace Clay, brownish yellow (2.5Y, 5/6), very loose, water saturated, 1-2% elongated clay blebs 1-10 cm long and 0.5-3 cm thick.
105						SW		SAND, fine to medium grained, light olive brown (2.5Y, 5/6), very loose, water saturated, 95% silica, 3-4% feldspar, 1-2% black minerals, heavily Fe stained stringers 1-3 cm thick from 105-108 ft (orange).
	NA	0.5-1.5	P-10B @ 110	<1	NA			
110								
115								As above, with no Fe stained stringers and trace clay.
	NA	NA	NA	<1	>5	ML		Sandy, Clayey, SILT, olive (5Y, 5/3), very stiff, slightly moist, 20% sand, 20% clay, 60% silt, massive.
	NA	NA	P-10B @ 119	NA	0.5	CL		CLAY, dark gray (5Y, 4/1), plastic, soft, slightly moist, massive, fat.
120								End of Boring @ 120 ft. Set 4-inch groundwater monitoring well at 116.5 ft.
								This work was performed under my supervision and I concur with the findings. Anthony C. Ward. Anthony C. Ward, CA R.G. #4782
125								

WELL DIAGRAM



DEPTH (ft): 105, 110, 115, 120, 125

GERAGHTY & MILLER, INC.

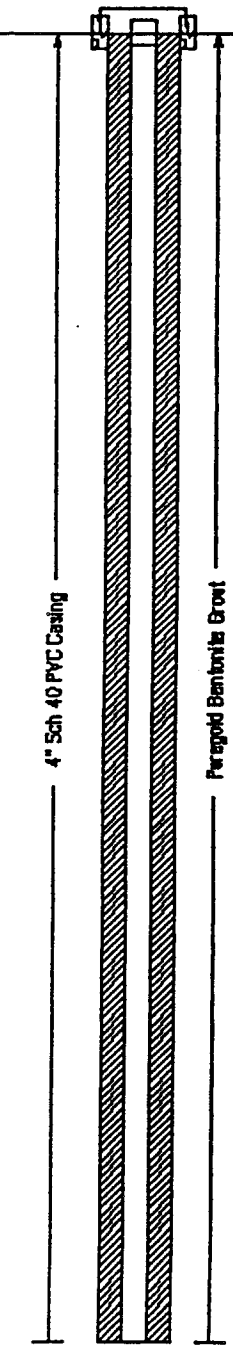
WELL LOG

PROJECT International Light Metals
LOCATION 19200 S. Western, Torrance, CA
DRILL METHOD Hollow Stem Auger
SAMPLING METHOD CMSS
BOREHOLE DIAMETER 6 and 10 inches O.D.

PROJECT NO. CA0217.020
LOGGED BY Lara Urizar
DRILL CO. Gregg Drilling and Testing, Inc.
RIG TYPE M-12
DRILLER Dino Seldors

BORING P-16C
DATE STARTED 8/7/96
DATE COMPLETED 8/7/96
BORING DEPTH 120 ft.

DEPTH (ft)	RECOVERY %	SAMP.INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
								Concrete		
						CL		CLAY, little Silt, dark olive gray (5Y, 3/2), high plasticity, stiff, moist.		5
						ML		SILT, trace Clay, trace very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, moist.		10
								SILT, trace Clay, trace very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, moist.		15



GERAGHTY & MILLER, INC.

WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CA0217.020 BORING NO. P-18C

DEPTH (ft)	RECOVERY %	SAMP.INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
						ML		SILT, trace Clay, increasing in very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, moist.	4" Sch 40 PVC Casing; Penngold Bentonite Grout	
21										21
								SILT, trace Clay, increasing in very fine grained Sand, dark yellowish brown (10YR, 4/4), non plastic, moist.		
26										26
						SP		SAND, very fine grained, yellowish brown (10YR, 5/8), slightly moist to moist.		
31										31

GERAGHTY & MILLER, INC.

WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CA0217.020 BORING NO. P-16C

DEPTH (ft)	RECOVERY %	SAMP.INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
						SP		SAND, very fine grained, yellowish brown (10YR, 5/8), slightly moist to moist.	4" Sch 40 PVC Casing; Paragold Bentonite Grout	
								SAND, very fine grained, yellowish brown (10YR, 5/8), slightly moist to moist.		37
42								SAND, very fine grained, yellowish brown (10YR, 5/8), slightly moist to moist.		42
										47

GERAGHTY & MILLER, INC.

WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CA0217.020 BORING NO. P-16C

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
						SP		SAND, very fine grained, yellowish brown (10YR, 5/8), slightly moist to moist.		
53								SAND, very fine grained, yellowish brown (10YR, 5/8), slightly moist to moist.	4" Sch 40 PVC Casing; Pureguid Bentonite Grout	53
58								SAND, very fine grained, yellowish brown (10YR, 5/8), moist.		58
63								SAND, very fine grained, yellowish brown (10YR, 5/8), moist.		63

GERAGHTY & MILLER, INC.

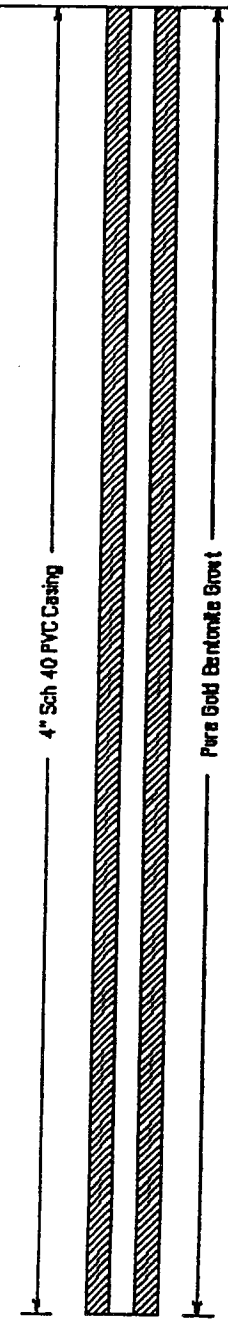
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CA0217.020 BORING NO. P-18C

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		
	55		NA	0.0	10 10 27			SAND, very fine grained, light yellowish brown (10YR 6/4), loose, slightly moist.
	75		NA	0.0	16 33 40			SAND, very fine grained, trace silt laminae, yellowish brown (10YR 5/6), iron oxide staining, slightly orange near laminae, semi-loose, slightly moist.
	60		NA	0.0	12 28 40			SAND, trace silt, very fine grained, trace silt laminae, iron oxide staining, slightly orange near laminae, semi-loose, moist.
	75		NA	0.0	27 38 45			SAND, as above, silt laminae (friable siltstone), lenses of fine to medium grained sand, iron oxide staining, slightly orange, moist.
	80		NA	0.0	28 50 50			SAND, as above, trace silt, some iron oxide staining, semi-loose, wet. Groundwater at 72 feet, trace clay, slight partially lithified silt, iron oxide staining.
74	55		NA	0.0	10 24 36			SAND, trace silt, light brownish yellow (10 YR 6/4), loose, water saturated.

WELL DIAGRAM



DEPTH (ft): 69, 74, 79

GERAGHTY & MILLER, INC.

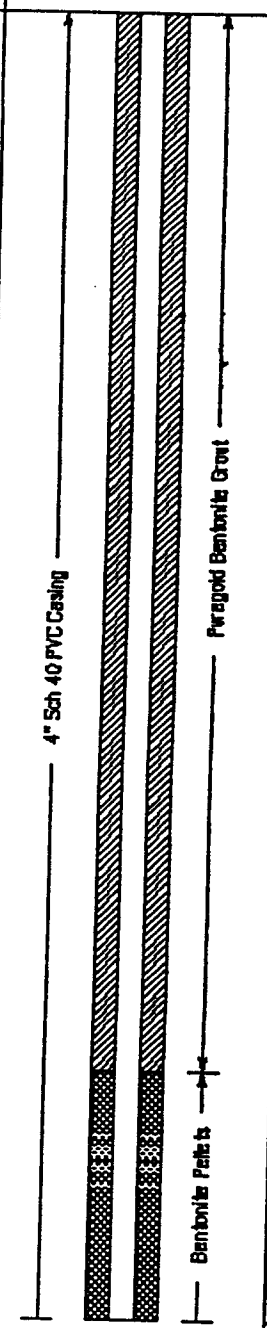
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CA0217.020 BORING NO. P-16C

DEPTH (ft)	RECOVERY %	SAMP.INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		SAND, very fine grained, minor Clay, light olive brown (2.5Y, 5/6), loose, wet to water saturated, homogeneous, 95% silica, 3-4% black grains, 1-2% feldspars, grains are subrounded.
85								SAND, very fine grained, minor Clay, light olive brown (2.5Y, 5/6), loose, water saturated, homogeneous, 95% silica, 3-4% black grains, 1-2% feldspars, grains are subrounded.
								Color change to yellowish brown (10YR, 5/6).
								Color change to light olive brown (2.5Y, 5/6), slightly more clay.
90								SAND, very fine grained, few coarser grains, light olive brown (2.5Y, 5/4), water saturated, subrounded to subangular, more feldspar (3%).
						SC		Clayey SAND, very fine grained, few coarser grains, light olive brown (2.5Y, 5/4), dense, iron staining in stringers.
						SW		SAND, fine to medium grained, minor Clay, with gravel (1.5 - 6 cm), light yellowish brown (2.5Y, 6/4), water saturated, loose, some iron staining in stringers.
						SP		SAND, fine to medium grained, little Clay, light olive brown (2.5Y, 5/4), loose, water saturated, few blebs of clay.
95								SAND, fine to medium grained, few coarser grains, some Clay, yellowish brown (10YR, 5/6), loose, water saturated, homogeneous, 3-5% feldspar, 1-2% black grains.
						SW		

WELL DIAGRAM



DEPTH (ft): 85, 90, 95

GERAGHTY & MILLER, INC.

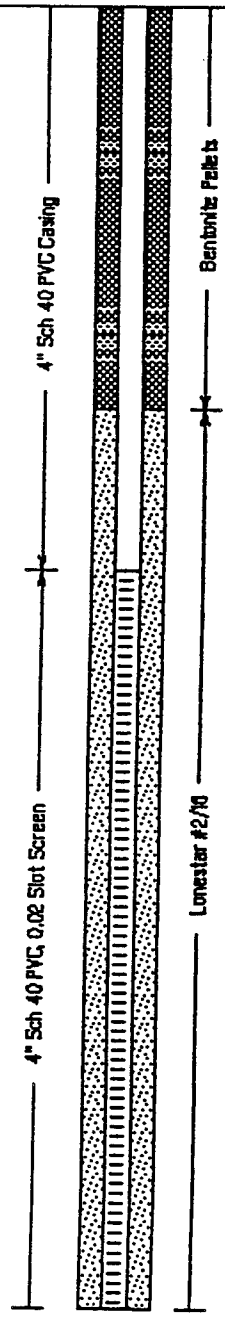
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CA0217.020 BORING NO. P-18C

DEPTH (ft)	RECOVERY %	SAMP.INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SW		SAND, fine to medium grained, trace Clay blebs, brownish yellow (2.5Y, 5/6), very loose, water saturated.
								SAND, fine to medium grained, trace Clay blebs, brownish yellow (2.5Y, 5/6), very loose, water saturated.
						SP		SAND, fine to medium grained, trace Clay, brownish yellow (2.5Y, 5/6), very loose, water saturated, 1-2% elongated clay blebs 1-10 cm long and 0.5-3 cm thick.
106						SW		SAND, fine to medium grained, light olive brown (2.5Y, 5/6), very loose, water saturated, 85% silica, 3-4% feldspar, 1-2% black minerals, heavily Fe stained stringers 1-3 cm thick from 105-108 ft (orange).

WELL DIAGRAM



DEPTH (ft): 101, 106, 111

GERAGHTY & MILLER, INC.

WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CA0217.020 BORING NO. P-10C

DEPTH (ft)	RECOVERY %	SAMP.INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
						SW		As above, with no Fe stained stringers and trace clay.	Bottom Well Cap; 4" Sch 40 PVC, 0.02 Slot Screen; Lonestar #2/16	
117						ML		Sandy, Clayey, SILT, olive (5Y, 5/3), very stiff, slightly moist, 20% sand, 20% clay, 60% silt, massive.		117
						CL		CLAY, dark gray (5Y, 4/1), plastic, soft, slightly moist, massive, fat.		
122								End of Boring @ 120 ft. Set 4 inch groundwater monitoring well at 118 ft-bgs Comments: Drilled with a 8 in. auger to 74 ft-bgs. Pulled auger and drilled with 10 in. auger to 120 ft-bgs. Pulled auger out and redrilled to 118 ft-bgs. Lithologic information from P-10A was used to complete this log from 0-65 ft-bgs. Lithologic information from P-10B was used to complete this log from 74-120 ft-bgs.		122
127								This work was performed under my supervision and I concur with the findings. Anthony C. Ward Anthony C. Ward, CA R.G. #4782		127

GERAGHTY & MILLER, INC.

WELL LOG

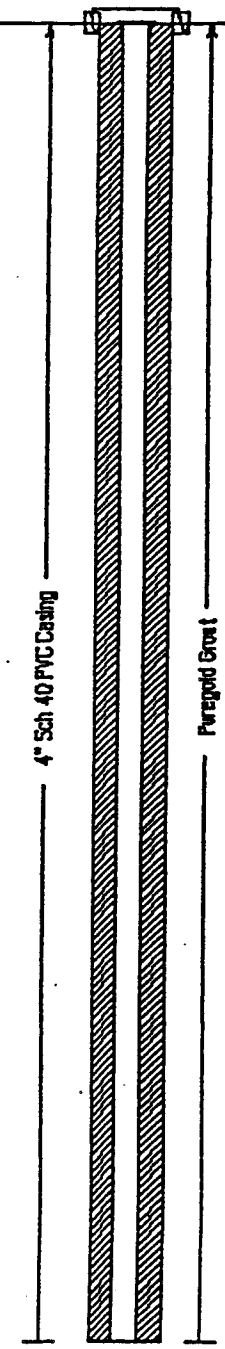
PROJECT International Light Metals
LOCATION 19200 S. Western, Torrance, CA
DRILL METHOD Hollow Stem Auger
SAMPLING METHOD CMSS
BOREHOLE DIAMETER 10 inches O.D.

PROJECT NO. CAO 217.020.002
LOGGED BY B. Bechtel
DRILL CO. Gregg Drilling and Testing, Inc.
RIG TYPE B-61
DRILLER C. Winegarner

BORING P-17
DATE STARTED 12/6/95
DATE COMPLETED 12/6/95
BORING DEPTH 120 ft.

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
								Concrete (12")
						CL		
				4.1	7, 7, 8			CLAY, trace Silt, few coarse grained Sand, dark grayish brown (2.5Y, 4/2), moderate plasticity, slightly moist.
5	100		P-17 @ 5					
						ML		
				4.3	8, 8, 10			SILT, light olive brown (2.5Y, 5/4), non plastic, slightly moist.
10	100		P-17 @ 10					
				4.4	8, 8, 12			SILT, light olive brown (2.5Y, 5/4), non plastic, slightly moist, occassional pebbles approximately 1 cm diameter.
15	100		P-17 @ 15					
				5.3	8, 7, 11			SILT, trace Clay, light olive brown (2.5Y, 5/4), non plastic, slightly moist.
20	100		P-17 @ 20					
				5.5	13, 18, 20			SILT, little Clay, trace very fine grained Sand, light olive brown (2.5Y, 5/4), non plastic, contains yellow streaks and spots (2.5Y, 6/8).
25	100		P-17 @ 25					

WELL DIAGRAM



GERAGHTY & MILLER, INC.

WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-17

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
						ML				
	100		P-17 @ 30	14.3	12, 16, 24			SILT, some Clay, olive (5Y, 5/3), non plastic, slightly moist, heavy iron staining.		30
						SP				
35	100		P-17 @ 35	5.4	18, 26, 31			SAND, very fine grained, little Clay, olive yellow (2.5Y, 6/6), loose, slightly moist, clay is in small blebs.		35
40	100		P-17 @ 40	6.3	22, 29, 34			SAND, very fine grained, light yellowish brown (2.5Y, 6/4), loose, slightly moist, iron staining in mottled pattern.	4" Sch 40 PVC Casing; Puregold Grout	40
45	100		P-17 @ 45	10.3	23, 28, 40			SAND, very fine grained, light yellowish brown (2.5Y, 6/4), loose, slightly moist, iron staining in mottled pattern, silty clay in bottom of shoe.		45
						SM				
50	100		P-17 @ 50	8.0	24, 31, 38			Silty SAND, very fine grained, light olive brown (2.5, 5/4), loose, slightly moist.		50

GERAGHTY & MILLER, INC.

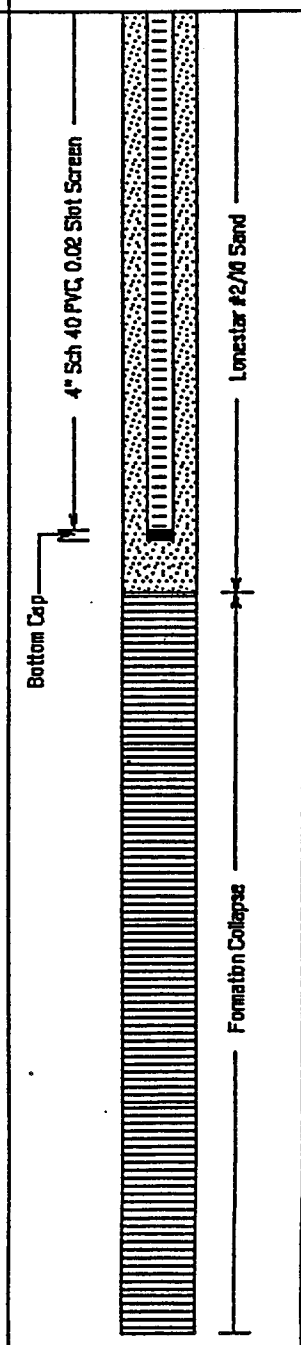
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-17

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		
	100		P-17 @ 80	187	25, 30, 38			SAND, very fine grained, light olive brown (2.5Y, 5/4), loose, water saturated, few clay blebs approximately 0.5 cm or less in diameter.
80								
	100		P-17 @ 85	155	28, 33, 38			SAND, very fine grained, trace Clay, light olive brown, slightly dense, water saturated.
85								
	100		P-17 @ 90	132	14, 18, 23			SAND, very fine grained, trace Clay, light olive brown, slightly dense, water saturated.
90								
	100		P-17 @ 95	264	20, 26, 32			SAND, medium grained, trace Clay, light yellowish brown (2.5Y, 6/4), loose, water saturated.
95								
	100		P-17 @ 100	137	24, 28, 32			SAND, medium grained, trace Clay, light yellowish brown (10YR, 6/4), loose, water saturated.
100								

WELL DIAGRAM



DEPTH (ft): 80, 85, 90, 95, 100

GERAGHTY & MILLER, INC.

WELL LOG

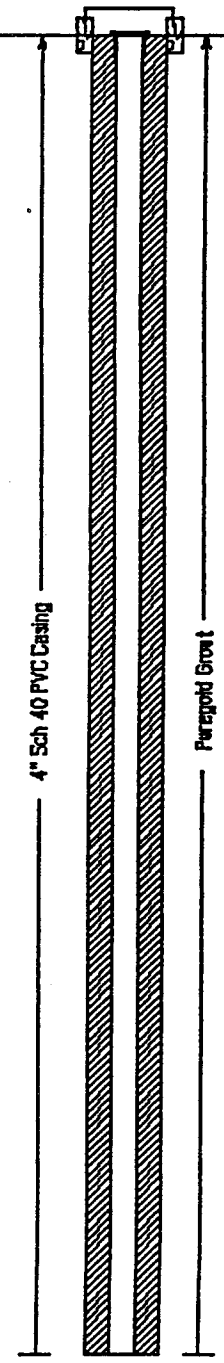
PROJECT International Light Metals
LOCATION 19200 S. Western, Torrance, CA
METHOD Hollow Stem Auger
DRILLING METHOD CMSS
BOREHOLE DIAMETER 10 inches O.D.

PROJECT NO. CAO 217.020.002
LOGGED BY B. Bechtel
DRILL CO. Gregg Drilling and Testing, Inc.
RIG TYPE B-61
DRILLER C. Winegarner

BORING P-18
DATE STARTED 12/5/95
DATE COMPLETED 12/5/95
BORING DEPTH 100 ft.

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
								Concrete (8")
						CL		
					4			Silty CLAY, dark grayish brown (10YR, 4/2), moderate plasticity, moderately stiff, slightly moist.
				3.0	6			
	100		P-18 @ 5		8			
						ML		
					6			SILT, trace Clay, light olive brown (2.5Y, 5/6), non plastic, slighlty moist.
				2.7	8			
10	100		P-18 @ 10		8			
					9			SILT, trace Clay, light olive brown (2.5Y, 5/6), non plastic, dry.
				2.9	17			
15	100		P-18 @ 15		23			

WELL DIAGRAM



DEPTH (ft): 5, 10, 15

GERAGHTY & MILLER, INC.

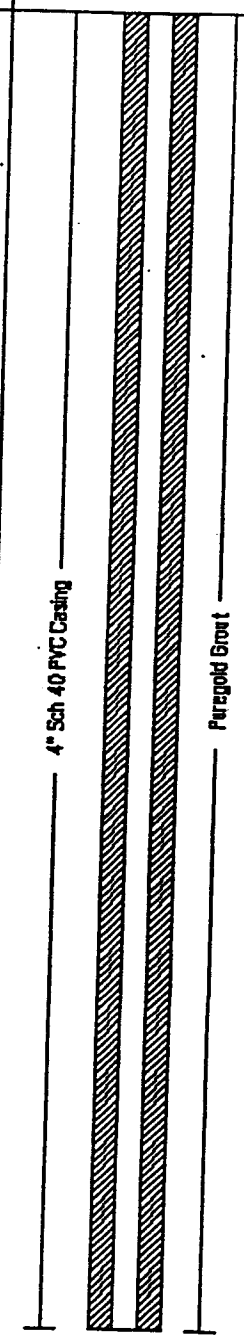
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-18

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						ML		
						CL		
				3.2	11			Silty CLAY, yellowish brown (2.5Y, 6/4), stiff, iron staining in small nodules.
					17			
	100		P-18 @ 20		28			
20								
						ML		
					13			Clayey SILT, some very fine grained Sand, light olive brown (2.5Y, 5/4), non plastic, slightly moist, heavy iron staining.
				3.8	32			
	100		P-18 @ 25		21			
25								
					19			Sandy SILT, very fine grained Sand, olive yellow (2.5Y, 6/6), non plastic, slightly moist, heavy iron stairing.
				3.5	23			
	100		P-18 @ 30		30			
30								

WELL DIAGRAM



DEPTH (ft): 20, 25, 30

GERAGHTY & MILLER, INC.

WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-18

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
						ML				
						SP				
					20			SAND, very fine grained, olive yellow (2.5Y, 6/6), loose, slightly moist.		
				2.5	23					
	100		P-18 @ 35		28					35
					22			SAND, very fine grained, olive yellow (2.5Y, 6/6), loose, slightly moist.	4" Sch 40 PVC Casing; Pureguard Grout	
				2.5	30					
40	100		P-18 @ 40		37					40
					30			SAND, very fine grained, light yellowish brown (2.5Y, 6/4), loose, slightly moist.		
				2.5	38					
45	100		P-18 @ 45		46					45

GERAGHTY & MILLER, INC.

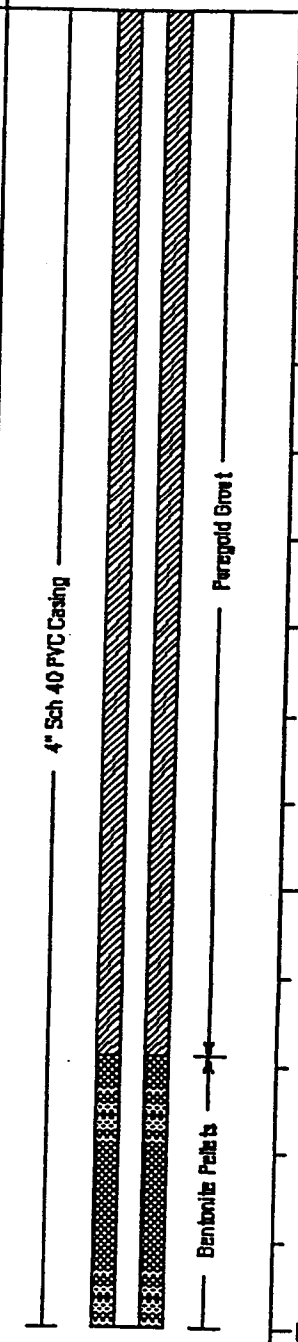
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-18

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		
				2.3	28			SAND, very fine grained, light yellowish brown (2.5Y, 6/4), loose, slightly moist.
					33			
50	100		P-18 @ 50		38			
				2.4	20			SAND, very fine grained, light yellowish brown (2.5Y, 6/4), loose, slightly moist.
					28			
55	100		P-18 @ 55		30			
				2.2	28			SAND, very fine grained, olive yellow (2.5Y, 6/6), loose, slightly moister, little iron staining in streaks.
					40			
60	100		P-18 @ 60		46			

WELL DIAGRAM



DEPTH (ft): 50, 55, 60

GERAGHTY & MILLER, INC.

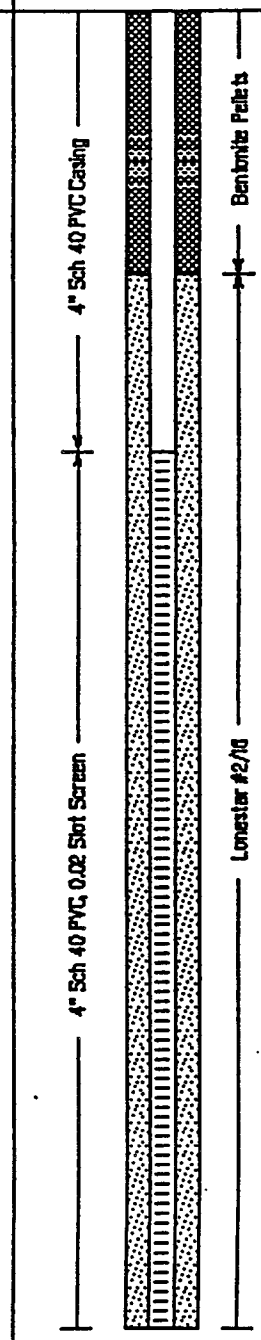
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-18

DEPTH (ft)	RECOVERY %	SAMP.INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		
				2.0	30			SAND, very fine grained, olive yellow (2.5Y, 6/6), loose, slightly moister.
					37			
	100		P-18 @ 65		42			
				2.8	28			SAND, very fine grained, light yellowish brown (2.5Y, 6/4), loose, moist.
			P-18 @ 70		36			
70	100				38			
				7.1	16			SAND, very fine grained, light yellowish brown (2.5Y, 6/4), loose, water saturated, water encountered at 74 ft-bgs.
					20			
75	100		P-18 @ 75		29			

WELL DIAGRAM



DEPTH (ft): 65, 70, 75

GERAGHTY & MILLER, INC.

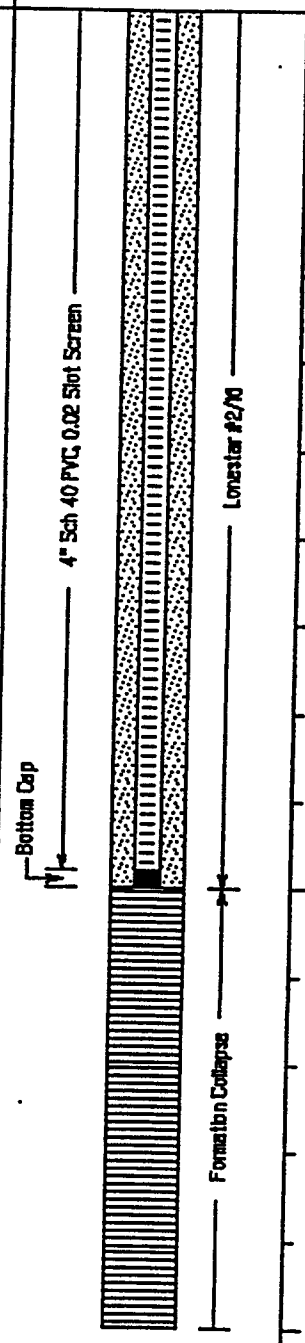
WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-18

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		
				0.2	20 26 30			SAND, very fine grained, olive yellow (2.5Y, 6/6), loose, water saturated.
80	100		P-18 @ 80					
				4.0	22 30 36			SAND, very fine grained, trace Clay, light yellowish brown (2.5Y, 6/4), loose to dense, water saturated, some iron stained spots.
85	100		P-18 @ 85					
				4.3	18 23 28			SAND, medium grained, some Clay, light olive brown (2.5Y, 5/4), loose, water saturated.
90	100		P-18 @ 90					

WELL DIAGRAM



DEPTH (ft)

GERAGHTY & MILLER, INC.

WELL LOG

(continuation)

PROJECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-18

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL	WELL DIAGRAM	DEPTH (ft)
						SP				
					NA			SAND, medium grained, some Clay, light olive brown (2.5Y, 5/4), loose, water saturated.		
				3.2	NA					
	100		P-18 @ 85		NA				Formation Collapse	95
								Heaving SANDS, no sample taken at 100 ft-bgs.		
100								End of Boring @ 100 ft. Set 4-inch groundwater monitoring well at 85 ft.		100
								This work was performed under my supervision and I concur with the findings. Anthony C. Ward. Anthony C. Ward, CA R.G. #4782		
105										105

GERAGHTY & MILLER, INC.

WELL LOG

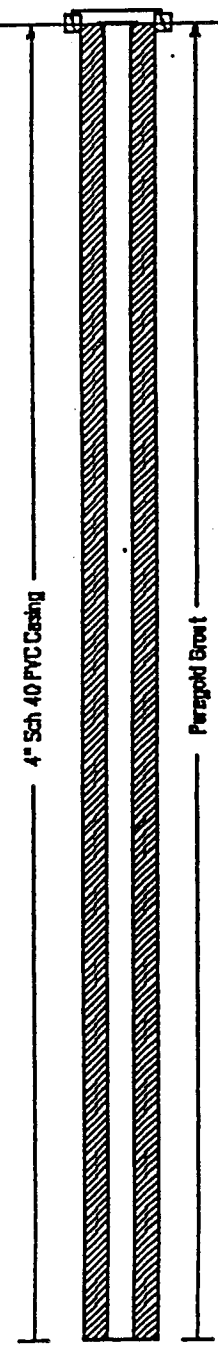
PROJECT International Light Metals
LOCATION 19200 S. Western, Torrance, CA
DRILL METHOD Hollow Stem Auger
SAMPLING METHOD CMSS
BOREHOLE DIAMETER 10 inches O.D.

PROJECT NO. CAO 217.020.002
LOGGED BY B. Bechtel
DRILL CO. Gregg Drilling and Testing, Inc.
RIG TYPE B-61
DRILLER C. Winegarner

BORING P-19
DATE STARTED 12/4/95
DATE COMPLETED 12/4/95
BORING DEPTH 100 ft.

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						ML		Asphalt (3")
5	100		P-19 @ 5	0.8	6, 6, 8			SILT, with Clay, trace very fine grained Sand, dark yellowish brown (10YR, 4/4), stiff, slightly moist.
	100		P-19 @ 10	1.1	7, 9, 12			SILT, light olive brown (2.5Y, 5/4), slightly plastic, slightly moist.
15	100		P-19 @ 15	0.8	11, 12, 15			SILT, light olive brown (2.5Y, 5/4), slightly plastic, slightly moist.
20	100		P-19 @ 20	0.5	9, 13, 14			SILT, light olive brown (2.5Y, 5/4), slightly plastic, slightly moist.
25	100		P-19 @ 25	0.7	10, 13, 17			SILT, trace very fine grained Sand, light olive brown (2.5Y, 5/6), moderately loose, slightly moist, micaceous.
30	100		P-19 @ 30	0.7	11, 11, 16	SM / SP		Silty SAND, very fine grained, light olive brown (2.5Y, 5/4), loose, slightly moist, iron staining. Shoe contains very fine grained SAND, light yellowish brown (2.5Y, 6/4).

WELL DIAGRAM



DEPTH (ft): 5, 10, 15, 20, 25, 30

GERAGHTY & MILLER, INC.

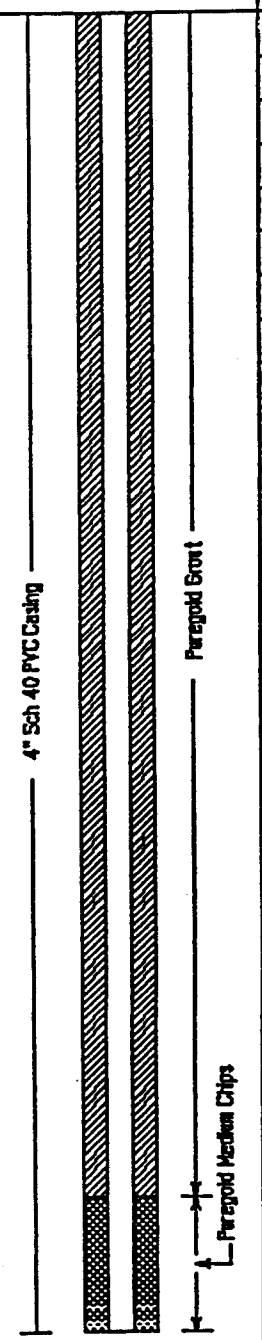
WELL LOG

(continuation)

...ECT International Light Metals PROJECT NO CAO 217.020.002 BORING NO. P-19

DEPTH (ft)	RECOVERY %	SAMP. INTERVAL	SAMPLE NO.	PID (ppm)	BLOWS/6 in.	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION OF MATERIAL
						SP		
35	100		P-19 @ 35	0.7	13, 18, 23			SAND, very fine grained, light yellowish brown (2.5Y, 6/4), loose, slightly moist.
	100		P-19 @ 40	1.0	12, 18, 20			SAND, very fine grained, light yellowish brown (2.5Y, 6/4), loose, moist.
45	100		P-19 @ 45	0.8	13, 15, 21			SAND, very fine grained, light yellowish brown (2.5Y, 6/4), loose, moist.
50	100		P-19 @ 50	0.8	14, 23, 28			SAND, very fine grained, yellow (2.5Y, 7/6), loose, slightly moist.
55	100		P-19 @ 55	1.0	22, 25, 29			SAND, very fine grained, yellow (2.5Y, 7/6), loose, slightly moist.
60	100		P-19 @ 60	1.2	17, 23, 28			SAND, very fine grained, olive yellow (2.5Y, 6/6), loose, slightly moist.

WELL DIAGRAM



DEPTH (ft): 35, 40, 45, 50, 55, 60

ARCADIS
GERAGHTY & MILLER

LOG OF BORING BL-8

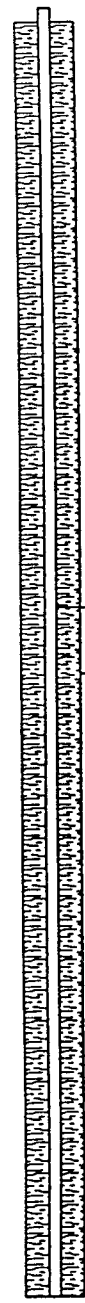
ILM
BRC Property

CA000280.0002.00002

Date Completed	: February 16, 1999	Driller	: Craig Winegamer
Logged By	: Mike Flaugher	Diameter	: 8" O.D. augers
Checked By	: Mike Flaugher		
Drilling Company	: Gregg Drilling		
Drill Rig	: Mobile B-61		

Well: BL-8
Elev.: NA

Depth in Feet	Recovery %	Sample Interval	Sample No.	PID (ppm)	Blow Count	USCS	GRAPHIC	DESCRIPTION
0						GM		SILTY GRAVEL with SAND, very dark grayish brown (10YR 3/2), dry to moist, fine to coarse gravel, angular, poorly graded, sand is fine to medium grained, poorly graded, subangular to subrounded, FILL.
2								
4								
6								
8						CL		CLAY, very dark grayish brown (10YR 3/2), firm, moist, no dilatency, medium toughness, mottled gray, clay is lean.
10	100		BL-8-9.5	0	7 9 11	SC		CLAYEY SAND, brown (10YR 4/3), medium dense, moist to dry, fine grained, poorly graded, subangular to subrounded, trace gypsum strings.
12	100		BL-8-12	0	12 12 14	SM		SILTY SAND, brown (10YR 4/3), medium dense, dry to moist, fine grained, poorly graded, subangular to subrounded, trace mica, trace clay clumps.
14								
16								
18								
20								
22	100		BL-8-22	0	20 27 32			
24								
26								
28								
30								
32	100		BL-8-32	0	16 22 25	SP-SM		SAND with SILT, olive (5Y 5/4), medium dense, moist, fine grained, poorly graded, well sorted, subangular to subrounded, 70% quartz, 15% feldspar, 15% weathered biotite and lithics, oxidation present.
34								
36								
38								
40								At 41', color changes to yellowish brown (10YR 5/4), 50% quartz, 10% weathered biotite, 5% feldspar, 35% shell fragments. Fragments are pulverized with jagged edges, dense.
42	100		BL-8-42	0	25 35 36			
44								



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05-10-19

ARCADIS
GERAGHTY&MILLER

LOG OF BORING BL-8

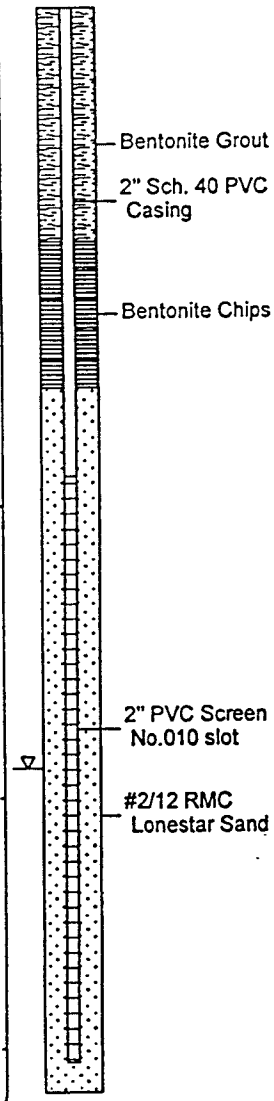
ILM
BRC Property

CA000280.0002.00002

Date Completed	: February 16, 1999	Driller	: Craig Winegarner
Logged By	: Mike Flaugher	Diameter	: 8" O.D. augers
Checked By	: Mike Flaugher		
Drilling Company	: Gregg Drilling		
Drill Rig	: Mobile B-61		

Well: BL-8
Elev.: NA

Depth in Feet	Recovery %	Sample Interval	Sample No.	PID (ppm)	Blow Count	USCS	GRAPHIC	DESCRIPTION
44								
46								
48						SP-SM		
50								
52	100	☒	BL-8-52	0	32 45 61	SM		SILTY SAND, dark grayish brown (10YR 4/2), dense to very dense, moist, fine grained, poorly graded, subangular to subrounded, 80% quartz, 5% feldspar, 15% weathered biotite, trace clay clumps, oxidized in lenses, becoming more oxidized throughout downward.
54								
56								
58								
60								
62	100	☒	BL-8-62	0	14 14 15	SC		CLAYEY SAND, reddish brown (5YR 4/3), medium dense, moist, fine grained, poorly graded, subangular to subrounded, oxidized.
64								
66								
68								
70								At 70', first encountered groundwater.
72	100	☐		N/A	22 30 38	SP		SAND, yellowish brown (10YR 5/4), very dense, wet to saturated, fine grained, poorly graded, well sorted, subangular to subrounded, 70% quartz, 20% feldspar, 10% weathered biotite.
74								
76								
78								
80	100	☐		N/A	25 80 62	SP-SM		SAND with SILT, yellowish brown (10YR 5/4), wet to saturated, fine grained, poorly graded, subangular to subrounded, well sorted, 70% quartz, 20% feldspar, 10% weathered biotite.
82								
84								
86								
88								



Total depth of boring: 81 feet.

ARCADIS
GERAGHTY & MILLER

LOG OF BORING BL-7

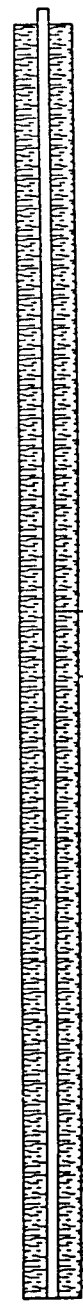
ILM
BRC Property

CA000280.0002.00002

Date Completed	: February 8, 1999	Driller	: Craig Winegarner
Logged By	: Mike Flaugher	Diameter	: 8" O.D. augers
Checked By	: Mike Flaugher		
Drilling Company	: Gregg Drilling		
Drill Rig	: Mobile B-61		

Well: BL-7
Elev.: NA

Depth in Feet	Recovery %	Sample Interval	Sample No.	PID (ppm)	Blow Count	USCS	GRAPHIC	DESCRIPTION
0						GM		SILTY GRAVEL with SAND, very dark grayish brown (10YR 3/2), dry to moist, fine to coarse gravel, angular to rounded, sand is fine grained, trace medium and coarse grains, poorly graded, subangular to subrounded, FILL.
2								
4								
6								
8								
	100					SM		SILTY SAND with GRAVEL, FILL.
10	75			0	9 14 16	ML		SANDY SILT, brown (10YR 4/3), medium dense, moist, fine grained, poorly graded, subangular to subrounded, small vertical hollow tubes.
12	100		BL-7-12	0	7 10 14			At 11.5' color changes to yellowish brown (10YR 5/4), trace clay clumps.
14	95		BL-7-14.5	4	8 8 14			
16								
18								
20								
22								
24	100		BL-7-24.5	5	11 16 22	SP-SM		SAND with SILT, dark yellowish brown (10YR 4/6), medium dense, moist, fine grained, poorly graded, subangular to subrounded, trace clay clumps, 75% quartz, 10% feldspar, 15% mica (weathered biotite).
26								
28								
30								
32								
34	100		BL-7-34.5	5	24 29 32	SP		SAND, light yellowish brown (10YR 6/4), dense, dry to moist, fine grained, poorly graded, well sorted, subangular to subrounded, trace silt, trace clay clumps, 55% quartz, 20% feldspar, 20% weathered biotite, 5% lithics and red chert, oxidized intermittently.
36								
38								
40								At 43', same as above, color change to brown (10YR 5/3), shell fragments (65% shell fragments, 5% weathered biotite, 25% quartz, 5% lithics).
42								



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ARCADIS
GERAGHTY & MILLER

LOG OF BORING BL-7

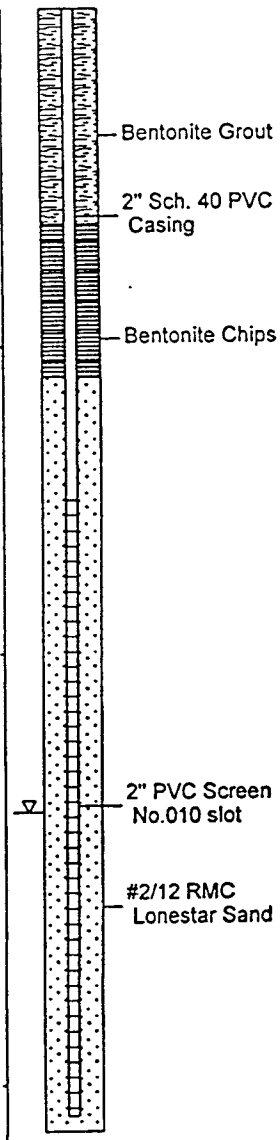
ILM
BRC Property

CA000280.0002.00002

Date Completed	: February 8, 1999	Driller	: Craig Winegamer
Logged By	: Mike Flaugher	Diameter	: 8" O.D. augers
Checked By	: Mike Flaugher		
Drilling Company	: Gregg Drilling		
Drill Rig	: Mobile B-61		

Well: BL-7
Elev.: NA

Depth in Feet	Recovery %	Sample Interval	Sample No.	PID (ppm)	Blow Count	USCS	GRAPHIC	DESCRIPTION
42						SP		
44	100	☒	BL-7-44.5	5	16 20 26	ML		SILT with SAND, yellowish brown (10YR 5/6), hard, moist to dry, slow dilatency, non plastic, micaceous, sand is fine grained, poorly graded, subangular to subrounded.
46						CH		CLAY, dark grayish brown (10YR 4/2), hard, moist, fat, medium toughness, no dilatency.
48								
50								
52								
54	100	☒	BL-7-54.5	15	19 30 32	SP-SM		SAND with SILT, dark yellowish brown (10YR 4/4), dense, moist, fine grained, poorly graded, subangular to subrounded, 40% weathered biotite, 50% quartz, 8% feldspar, 2% lithics.
56								
58								
60								
62								
64	90	☒	BL-7-64.5	10	41 60 75	SP		SAND, yellowish brown (10YR 5/4), very dense, fine grained, moist to wet, poorly graded, well sorted, subangular to subrounded, 75% quartz, 10% feldspar, 5% weathered biotite, 10% lithics, oxidized slightly.
66								
68								At 68.2', first encountered groundwater.
70								
72	100	☐		10	48 69 130			At 73', same as above, trace medium quartz grains, wet.
74								
76								
78	100	☐			63 75 90	SM		SILTY SAND, yellowish brown (10YR 5/4), very dense, wet, fine grained, poorly graded, well sorted, subangular to subrounded, trace clay clumps, slight oxidation, 75% quartz, 10% feldspar, 5% weathered biotite, 10% lithics.
80								
82								
84								



Total depth of boring: 78.5 feet.

ARCADIS
GERAGHTY & MILLER

LOG OF BORING BL-6

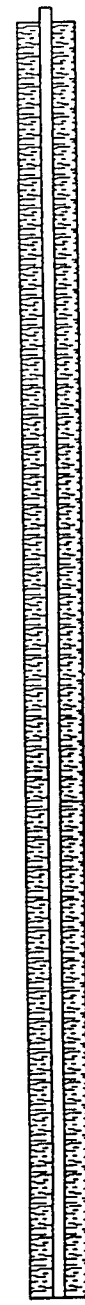
ILM
BRC Property

CA000280.0002.00002

Date Completed	: February 4, 1999	Driller	: Tony Garver
Logged By	: Mike Flaugher	Diameter	: 8" O.D. augers
Checked By	: Mike Flaugher		
Drilling Company	: Gregg Drilling		
Drill Rig	: Mobile B-61		

Well: BL-6
Elev.: NA

Depth in Feet	Recovery %	Sample Interval	Sample No.	PID (ppm)	Blow Count	USCS	GRAPHIC	DESCRIPTION
0						GM		SILTY GRAVEL with SAND, dark grayish brown (10YR 4/2), dry to moist, gravel is fine to coarse sized, angular to subrounded, sand is fine to medium grained, poorly graded, subangular to subrounded, FILL.
6						CL		CLAY, brown (10YR 4/3), firm, moist, lean, no dilatency, medium toughness, trace mica.
8	100	☒	BL-6-8.5	0	7 9 10			
10	100	☒	BL-6-11	1	7 8 12	ML		SANDY SILT, yellowish brown (10YR 5/4), soft to firm, moist, slow dilatency, non plastic, sand is fine grained, poorly graded, subangular to subrounded.
20	100	☒	BL-6-21	1	9 12 14			
30	100	☒	BL-6-31 BL-6-33.7	1	9 12 18	SM		SILTY SAND, yellowish brown (10YR 5/6), medium dense, dry to moist, sand is fine grained, poorly graded, well sorted, subangular to subrounded, 60% quartz, 30% feldspar, 10% weathered biotite.
40	100	☒	BL-6-41	0	15 28 33	SP		SAND, yellowish brown (10YR 5/4), medium dense to dense, dry to moist, fine grained, poorly graded, well sorted, 65% quartz, 20% feldspar, 15% weathered biotite, trace silt.
44								



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ARCADIS
GERAGHTY&MILLER

LOG OF BORING BL-6

ILM
BRC Property

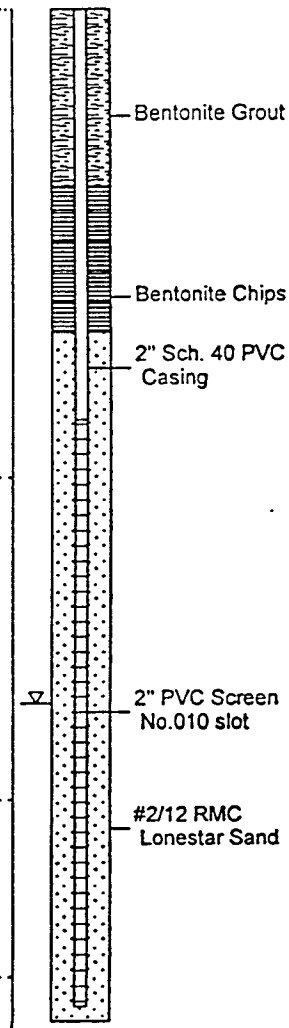
CA000280.0002.00002

Date Completed	: February 4, 1999	Driller	: Tony Garver
Logged By	: Mike Flaugher	Diameter	: 8" O.D. augers
Checked By	: Mike Flaugher		
Drilling Company	: Gregg Drilling		
Drill Rig	: Mobile B-61		

Well: BL-6
Elev.: NA

Depth in Feet	Recovery %	Sample Interval	Sample No.	PID (ppm)	Blow Count	USCS	GRAPHIC	DESCRIPTION
44								
46								
48								
50	100	☒	BL-6-51	0	14 18 29	SP		Same as above, 60% shell fragments, yellowish brown in color (10YR 5/6), pulverized, with jagged edges, 35% quartz, 5% lithics, trace silt.
52								
54								
56								
58								
60	100	☒	BL-6-61	1	13 19 24	SM		SILTY SAND, brown (10YR 4/3), medium dense, moist, fine grained, poorly graded, subangular to subrounded, 60% quartz, 30% feldspar, 10% weathered biotite, oxidized in layers, trace clay clumps, no shell fragments.
62								
64								
66								At 67.7', first encountered groundwater.
68								
70	100	☐		N/A	13 19 27			Same as above, becomes wet.
72						SC		CLAYEY SAND, grayish brown (10YR 5/2), medium dense, moist, fine grained, poorly graded, subangular to subrounded, no shells.
74								
76								
78	100	☐		N/A	19 30 35	SM		SILTY SAND, yellowish brown (10YR 5/4), dense, moist to wet, fine grained, poorly graded, subangular to subrounded, well sorted, 80% quartz, 10% feldspar, 8% lithics, 2% weathered biotite, oxidized in layers.
80								
82								
84								
86								
88								

Total depth of boring: 78.5 feet.



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05-10-19

ARCADIS
GERAGHTY & MILLER

LOG OF BORING BL-5

ILM
BRC Property

CA000280.0002.00002

Date Completed	: February 4, 1999	Driller	: Tony Garver
Logged By	: Mike Flaugher	Diameter	: 8" O.D. augers
Checked By	: Mike Flaugher		
Drilling Company	: Gregg Drilling		
Drill Rig	: Mobile B-61		

Well: BL-5
Elev.: NA

Depth in Feet	Recovery %	Sample Interval	Sample No.	PID (ppm)	Blow Count	USCS	GRAPHIC	DESCRIPTION
0						GP		GRAVEL with SAND, dark reddish brown (5YR 3/2), moist, gravel is fine to coarse, angular to rounded, poorly graded, sand is fine to medium grained, poorly graded, subangular to subrounded, trace silt, FILL.
5	100	☒	BL-5-8	1	9 11 12	SM		SILTY SAND, brown (10YR 4/3), medium dense, moist, fine grained, poorly graded, subangular to subrounded, trace mica.
10	80	☒	BL-5-10	0	9 12 16			
15								
20	100	☒	BL-5-20	0	8 9 14			Same as above, increase in mica content.
25								
30	100	☒	BL-5-30	0	12 17 21			Same as above, decrease in silt content, becomes quartz rich.
35								
40	100	☒	BL-5-40	0	8 14 21	SP-SM		SAND with SILT, light yellowish brown (10YR 6/4), medium dense, moist to dry, fine grained, poorly graded, well sorted, subangular to subrounded, trace shell fragments, 60% quartz, 20% feldspar, 20% weathered biotite.
45								

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ARCADIS
GERAGHTY & MILLER

LOG OF BORING BL-5

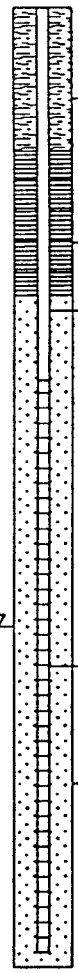
ILM
BRC Property

CA000280.0002.00002

Date Completed	: February 4, 1999	Driller	: Tony Garver
Logged By	: Mike Flaugher	Diameter	: 8" O.D. augers
Checked By	: Mike Flaugher		
Drilling Company	: Gregg Drilling		
Drill Rig	: Mobile B-61		

Well: BL-5
Elev.: NA

Depth in Feet	Recovery %	Sample Interval	Sample No.	PID (ppm)	Blow Count	USCS	GRAPHIC	DESCRIPTION
45						SP-SM		
50	100	☒	BL-5-50	0	17 31 26	SM		SILTY SAND, yellowish brown (10YR 5/4), medium dense, dry to moist, fine grained, poorly graded, well sorted, subangular to subrounded, 60% quartz, 20% feldspar, 20% weathered biotite, trace clay clumps.
55								
60	100	☒	BL-5-60	0	9 14 18	SP-SM		SAND with SILT, yellowish brown (10YR 5/4), medium dense, dry to moist, fine grained, poorly graded, subangular to subrounded, 70% shell fragments, 5% feldspar, 5% weathered biotite, 20% quartz, shells are pulverized with jagged edges, no clay found, 1" shell fragments.
65								At 66.6', first encountered groundwater.
70	100	☒	BL-5-70		8 10 19	SP		SAND, yellowish brown (10YR 5/4), medium dense, wet, fine grained, poorly graded, subangular to subrounded, 70% quartz, 10% feldspar, 10% lithics, 10% weathered biotite, well sorted, trace silt.
75	100	☐			15 32 40	SM		SILTY SAND, brown (10YR 4/3), dense, moist, fine grained, poorly graded, subangular to subrounded, well sorted, 70% quartz, 10% feldspar, 10% lithics, 10% weathered biotite.
80								
85								
90								



Total depth of boring: 78.5 feet.

ARCADIS
GERAGHTY & MILLER

LOG OF BORING BL-4

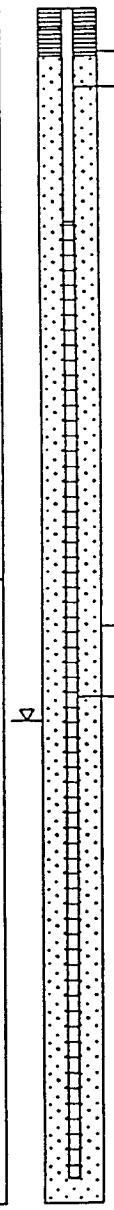
ILM
BRC Property

CA000280.0002.00002

Date Completed	: February 16, 1999	Driller	: Craig Winegarner
Logged By	: Mike Flaugher	Diameter	: 8" O.D. augers
Checked By	: Mike Flaugher		
Drilling Company	: Gregg Drilling		
Drill Rig	: Mobile B-61		

Well: BL-4
Elev.: NA

Depth in Feet	Recovery %	Sample Interval	Sample No.	PID (ppm)	Blow Count	USCS	GRAPHIC	DESCRIPTION
54								
57	100	☒	BL-4-57	0	14 20 27	SM		At 56', same as above, color change to yellowish brown (10YR 5/4), 60% quartz, 30% feldspar, 10% lithics, (no mica), oxidation in layers.
60								
63								
66	100	☒	BL-4-67	0	37 60 63	SP		SAND, yellowish brown (10YR 5/4), very dense, moist to wet, fine grained, poorly graded, well sorted, subangular to subrounded, 70% quartz, 20% feldspar, 10% weathered biotite.
69								At 69', first encountered groundwater.
72								
75								
78	100			N/A	43 56 80			
81								



Total depth of boring: 79 feet.

ARCADIS
GERAGHTY&MILLER

LOG OF BORING BL-4

ILM
BRC Property

CA000280.0002.00002

Date Completed	: February 16, 1999	Driller	: Craig Winegarner
Logged By	: Mike Flaugher	Diameter	: 8" O.D. augers
Checked By	: Mike Flaugher		
Drilling Company	: Gregg Drilling		
Drill Rig	: Mobile B-61		

Well: BL-4
Elev.: NA

Depth in Feet	Recovery %	Sample Interval	Sample No.	PID (ppm)	Blow Count	USCS	GRAPHIC	DESCRIPTION
0						SM		SILTY SAND with GRAVEL, very dark grayish brown (10YR 3/2), moist, sand is fine to medium grained subangular to subrounded, gravel is fine to coarse, angular to rounded, FILL.
3	80			N/A		GP		GRAVEL with SAND, very dark grayish brown (10YR 3/2), moist, fine to coarse gravel, angular, volcanic detrital, sand is fine grained, poorly graded, subangular to subrounded, road base, FILL.
					11 14	CL		
	80	☒	BL-4-4.5	2	17	SC		CLAY, very dark grayish brown (10YR 3/2), firm to hard, moist, no dilatency, medium toughness, slightly mottled gray.
6					16 28			CLAYEY SAND, dark yellowish brown (10YR 4/4), medium dense, dry to moist, fine grained, poorly graded, subangular to subrounded, tiny vertical hollow tubes, gypsum strings.
	100	☒	BL-4-7	0	50			
9								SILTY SAND with CLAY, brown (10YR 4/3), dense to very dense, moist, fine grained, poorly graded, subangular to subrounded, micaceous, trace clay clumps.
12								
15								
					18 19	SM		At 16', same as above, trace fine gravel.
	100	☒	BL-4-17	0	26			
18								
21								
24								
					20 23	SP-SM		
27								

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ARCADIS
GERAGHTY & MILLER

LOG OF BORING BL-4

ILM
BRC Property

CA000280.0002.00002

Date Completed	: February 16, 1999	Driller	: Craig Winegarner
Logged By	: Mike Flaugher	Diameter	: 8" O.D. augers
Checked By	: Mike Flaugher		
Drilling Company	: Gregg Drilling		
Drill Rig	: Mobile B-61		

Well: BL-4
Elev.: NA

Depth in Feet	Recovery %	Sample Interval	Sample No.	PID (ppm)	Blow Count	USCS	GRAPHIC	DESCRIPTION
27	100	☒	BL-4-27	0	30			SAND with SILT, yellowish brown (10YR 5/4), medium dense, moist, fine grained, well sorted, poorly graded, subangular to subrounded, 80% quartz, 5% feldspar, 15% weathered biotite and lithics.
30								
33								
36					28 43	SP-SM		At 36', same as above, increase in weathered biotite content to 25%.
	100	☒	BL-4-37	0	50			At 37.5', few shell fragments.
39								
42								
45								
	100	☒	BL-4-47	0	16 24 32	SM SP		SILTY SAND, light olive brown (2.5Y 5/6), medium dense, moist, fine grained, poorly graded, subangular to subrounded, well sorted, 60% quartz, 20% feldspar, 20% weathered biotite and lithics, trace clay clumps.
48						SM		SAND, light brownish gray (2.5Y 6/2), medium dense, moist, fine grained, well sorted, poorly graded, subangular to subrounded, 90% quartz, 10% weathered biotite.
51								SILTY SAND, light olive brown (2.5Y 5/6), medium dense, moist, fine grained, poorly graded, subangular to subrounded, well sorted, 60% quartz, 20% feldspar, 20% weathered biotite and lithics, trace clay clumps.
54								

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ARCADIS
GERAGHTY&MILLER

LOG OF BORING BL-3

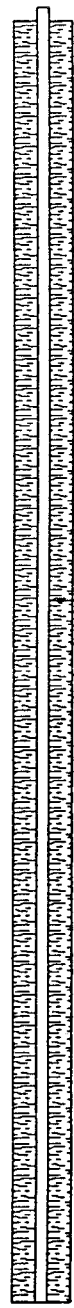
ILM
BRC Property

CA000280.0002.00002

Date Completed	: February 8, 1999	Driller	: Craig Winegarner
Logged By	: Mike Flaugher	Diameter	: 8" O.D. augers
Checked By	: Mike Flaugher		
Drilling Company	: Gregg Drilling		
Drill Rig	: Mobile B-61		

Well: BL-3
Elev.: NA

Depth in Feet	Recovery %	Sample Interval	Sample No.	PID (ppm)	Blow Count	USCS	GRAPHIC	DESCRIPTION
0								
2						GM		SILTY GRAVEL with SAND, very dark grayish brown (10YR 3/2), dry to moist, fine to coarse gravel, angular to rounded, sand is fine to medium grained, poorly graded, subangular to subrounded, FILL.
4								
6	100							
8	100							
10	100		BL-3-10.5 BL-3-8.7	0	9 23 26	CL		CLAY, brown (10YR 4/3), dry to moist, no dilatency, hard, medium toughness, lean, trace fine sand, mottled gray, slightly calcareous, trace tiny hollow vertical tubes, dense.
12	100		BL-3-13	0	16 19 22	SC		CLAYEY SAND, brown (10YR 4/3), medium dense, dry to moist, fine grained, poorly graded, subangular to subrounded.
14								
16								
18								
20								
22	100		BL-3-23	0	13 16 19	ML		SANDY SILT, brown (10YR 4/3), hard, dry to moist, fine grained, poorly graded, subangular to subrounded, some black specks, trace clay clumps. At 23' color changed to dark yellowish brown (10YR 4/4).
24								
26								
28								
30								
32	100		BL-3-33	0	21 23 32	SP-SM		SAND with SILT, yellowish brown (10YR 5/4), medium dense to dense, dry to moist, fine grained, poorly graded, well sorted, subangular to subrounded, 60% quartz, 20% feldspar, 20% weathered biotite. At 41.5', same as above, 60% shell fragments, 5% weathered biotite, 5% lithics, 30% quartz, trace red (2.5YR 4/8) silty sand globules, few black (10YR 2/1) 1/2" pebbles.
34								
36								
38								
40								
42	100		BL-3-43	0	17 24 30	ML		SILT with SAND, dark yellowish brown (10YR 4/4), hard, moist, fine grained, poorly graded, subangular to subrounded, nonplastic, rapid dilatency, slightly oxidized.
44								
46								



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05-10-19

ARCADIS
GERAGHTY & MILLER

LOG OF BORING BL-3

ILM
BRC Property

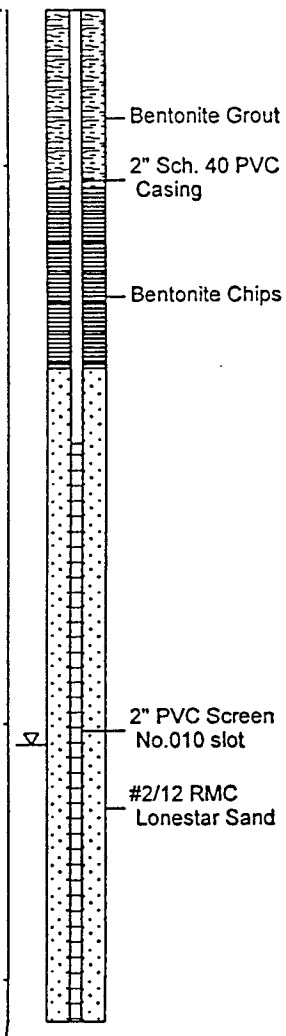
CA000280.0002.00002

Date Completed	: February 8, 1999	Driller	: Craig Winegamer
Logged By	: Mike Flaugher	Diameter	: 8" O.D. augers
Checked By	: Mike Flaugher		
Drilling Company	: Gregg Drilling		
Drill Rig	: Mobile B-61		

Well: BL-3
Elev.: NA

Depth in Feet	Recovery %	Sample Interval	Sample No.	PID (ppm)	Blow Count	USCS	GRAPHIC	DESCRIPTION
46								
48						ML		
50								
52	100	☒	BL-3-53	0	27 36 40	SP-SM		SAND with SILT, dark yellowish brown (10YR 4/4), dense, moist, fine grained, poorly graded, angular to subrounded, 40% weathered biotite, 50% quartz, 8% feldspar, 2% lithics.
54								
56								
58								
60								
62	100	☒	BL-3-63	NA	20 23 30			At 61.5', same as above, decrease in silt content. At 62.5', same as above, increase in mica content, increase in silt content, medium dense.
64								
66								
68								
70								
72	100	☐			47 70 93	SP		SAND, dark yellowish brown (10YR 4/6), very dense, moist to wet, fine grained, poorly graded, subangular to subrounded, 75% quartz, 10% feldspar, 5% weathered biotite, 10% lithics, slightly oxidized. At 72.25', first encountered groundwater.
74								
76								
78								
80	100	☐		NA	58 70 89	SM		SILTY SAND, dark grayish brown (10YR 4/2), very dense, wet, medium grained, poorly graded, subangular to subrounded, trace clay clumps, 70% quartz, 20% feldspar, 10% weathered biotite.
82								
84								
86								
88								
90								
92								

Total depth of boring: 82 feet.



ARCADIS
GERAGHTY & MILLER

LOG OF BORING BL-2

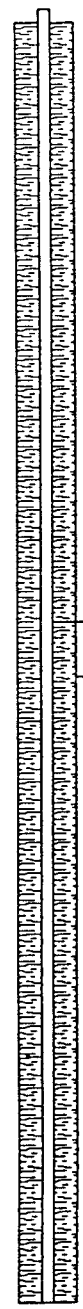
ILM
BRC Property

CA000280.0002.00002

Date Completed	: February 3, 1999	Driller	: Tony Garver
Logged By	: Mike Flaugher	Diameter	: 8" O.D. augers
Checked By	: Mike Flaugher		
Drilling Company	: Gregg Drilling		
Drill Rig	: Mobile B-61		

Well: BL-2
Elev.: NA

Depth in Feet	Recovery %	Sample Interval	Sample No.	PID (ppm)	Blow Count	USCS	GRAPHIC	DESCRIPTION
0						GM		SILTY GRAVEL with SAND, very dark grayish brown (10YR 3/2), dry to moist, fine to coarse gravel, angular to rounded, sand is fine to medium grained, poorly graded, subangular to subrounded, FILL.
8	100	☒	BL-2-9	2	9 17 22	CL		CLAY, brown (10YR 4/3), hard, moist, no dilatency, medium toughness, lean, trace medium sand.
12	80	☒	BL-2-11.5	0	9 14 16	ML		SANDY SILT, brown (10YR 5/3), firm to hard, moist, slow dilatency, non plastic, trace mica, sand is fine grained, poorly graded, subangular to subrounded.
22	100	☒	BL-2-21.5	0	8 11 14			
28						SM		SILTY SAND with CLAY, brown (10YR 4/3), moist, fine grained, poorly graded, subangular to subrounded, trace mica.
32	100	☒	BL-2-31.5	0	9 16 23	SP		SAND, yellowish brown (10YR 5/4), medium dense, moist, fine grained, poorly graded, well sorted, 70% quartz, 10% feldspar, 15% weathered biotite, 5% lithics, trace silt.
42	80	☒	BL-2-41.5	2	16 26 33	SP-SM		SAND with SILT, light yellowish brown (10YR 6/4), medium dense to dense, dry to moist, fine grained, poorly graded, subangular to subrounded, 50% quartz, 10% feldspar, 10% weathered biotite, 30% shell fragments, shells are yellowish brown (10YR 5/6), slightly pulverized, with jagged edges, trace clay clumps.



0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46

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ARCADIS
GERAGHTY & MILLER

LOG OF BORING BL-2

ILM
BRC Property

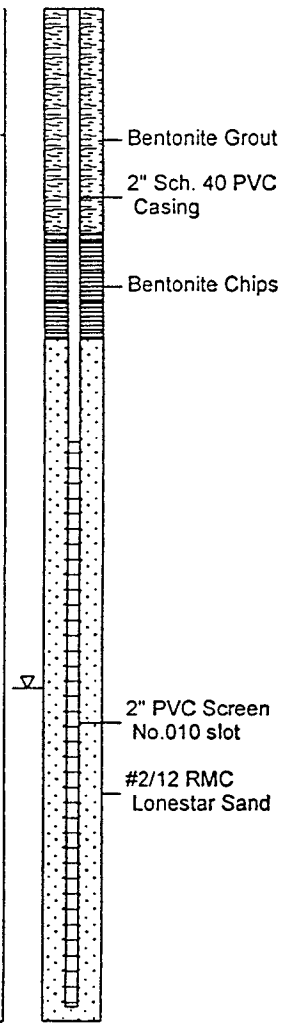
CA000280.0002.00002

Date Completed	: February 3, 1999	Driller	: Tony Garver
Logged By	: Mike Flaugher	Diameter	: 8" O.D. augers
Checked By	: Mike Flaugher		
Drilling Company	: Gregg Drilling		
Drill Rig	: Mobile B-61		

Well: BL-2
Elev.: NA

Depth in Feet	Recovery %	Sample Interval	Sample No.	PID (ppm)	Blow Count	USCS	GRAPHIC	DESCRIPTION
46								
48						SP-SM		
50					13 20 29			
52	90		BL-2-51.5	5				SILTY SAND, brown (10YR 4/3), medium dense, dry to moist, fine grained, poorly graded, subangular to subrounded, 60% quartz, 30% feldspar, 10% weathered biotite, no shell fragments, slightly oxidized.
54								
56								
58								
60					14 18 26			
62	100		BL-2-61.5	2				Same as above, becomes 90% quartz, 5% feldspar, 5% weathered biotite, trace clay clumps.
64								
66						SM		
68								
70					21 28 35			At 70.25', first encountered groundwater. Same as above, color changes to dark yellowish brown (10YR 4/4), well sorted, 65% quartz, 5% feldspar, 28% lithics, 2% weathered biotite, trace clay clumps.
72	100			0				
74								
76								
78								
80					11 17 19			At 80.5', increase in silt content, becomes 60% quartz, 10% feldspar, 30% weathered biotite, trace clay, oxidized.
82	100			NA				
84								
86								
88								
90								
92								

Total depth of boring: 82 feet.



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05-10-1

ARCADIS
GERAGHTY & MILLER

LOG OF BORING BL-1

ILM
BRC Property

CA000280.0002.00002

Date Completed	: February 2, 1999	Driller	: Tony Garver
Logged By	: Mike Flaugher	Diameter	: 8" O.D. augers
Checked By	: Mike Flaugher		
Drilling Company	: Gregg Drilling		
Drill Rig	: Mobile B-61		

Well: BL-1
Elev.: NA

Depth in Feet	Recovery %	Sample Interval	Sample No.	PID (ppm)	Blow Count	USCS	GRAPHIC	DESCRIPTION
0						GM		GRAVEL with SAND, dark reddish brown (5YR 3/3), moist, gravel is fine to coarse, well rounded, poorly graded, sand is fine to coarse grained, poorly graded, subangular to subrounded, trace silt, FILL.
5						CL		CLAY with SAND, yellowish brown (10YR 5/4), moist, hard, no dilatency, medium toughness, fine grained sand, poorly graded, clay is lean.
10	100	☒	BL-1-10	0	13 20 21			
	85	☒	BL-1-11.5	0	11 20 22			
15								
20	100	☒	BL-1-21 BL-1-23.7	0	8 14 17	SM		SILTY SAND, yellowish brown (10YR 5/4), medium dense, moist, fine grained, poorly graded, subangular to subrounded, 50% quartz, 30% feldspar, 17% weathered biotite, 3% lithics, trace clay.
25								
30	100	☒	BL-1-31	0	8 28 32			Same as above, decrease in silt content.
35								
40	90	☒	BL-1-41	0	14 28 30			Same as above, dense, increase in weathered biotite content, decrease in feldspar content.
45								

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05-10-15

ARCADIS
GERAGHTY & MILLER

LOG OF BORING BL-1

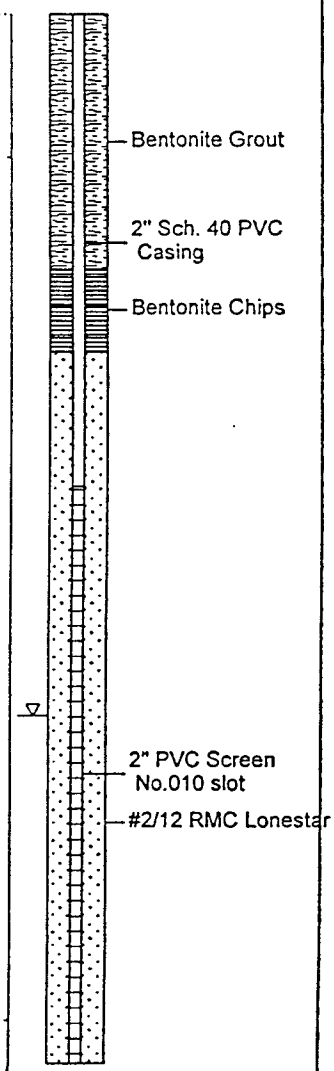
ILM
BRC Property

CA000280.0002.00002

Date Completed	: February 2, 1999	Driller	: Tony Garver
Logged By	: Mike Flaugher	Diameter	: 8" O.D. augers
Checked By	: Mike Flaugher		
Drilling Company	: Gregg Drilling		
Drill Rig	: Mobile B-61		

Well: BL-1
Elev.: NA

Depth in Feet	Recovery %	Sample Interval	Sample No.	PID (ppm)	Blow Count	USCS	GRAPHIC	DESCRIPTION
45						SM		
50	100	☒	BL-1-51	0	19 28 32	SP-SM		SAND with SILT, light yellowish brown (10YR 6/4), medium dense to dense, dry to moist, sand is fine grained, poorly graded, subangular to subrounded, 65% quartz, 30% feldspar, 5% weathered biotite and lithics, shell fragments, trace clay clumps.
55								
60	100	☒	BL-1-61	0	17 23 30			Same as above, color changes to reddish yellow (5YR 6/6), increase in shell fragments (60% shell fragments, 5% feldspar, 5% weathered biotite, 30% quartz), shells are yellowish brown (10YR 5/6) pulverized, jagged edges, medium dense, no clay.
65								
70	50	☒	BL-1-71	0	22 30 34			At 69.5', first encountered groundwater. Same as above, trace clay clumps, very dense.
75								
80	60	☒	BL-1-81	N/A	11 16 21	SC		CLAYEY SAND, yellowish brown (10YR 5/4), medium dense, moist, fine to medium grained, poorly graded, rounded to angular, 30% coarse shell fragments (max. 1"), 30% lithics, 40% quartz, oxidized.
85								
90								



Total depth of boring: 81.5 feet.

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