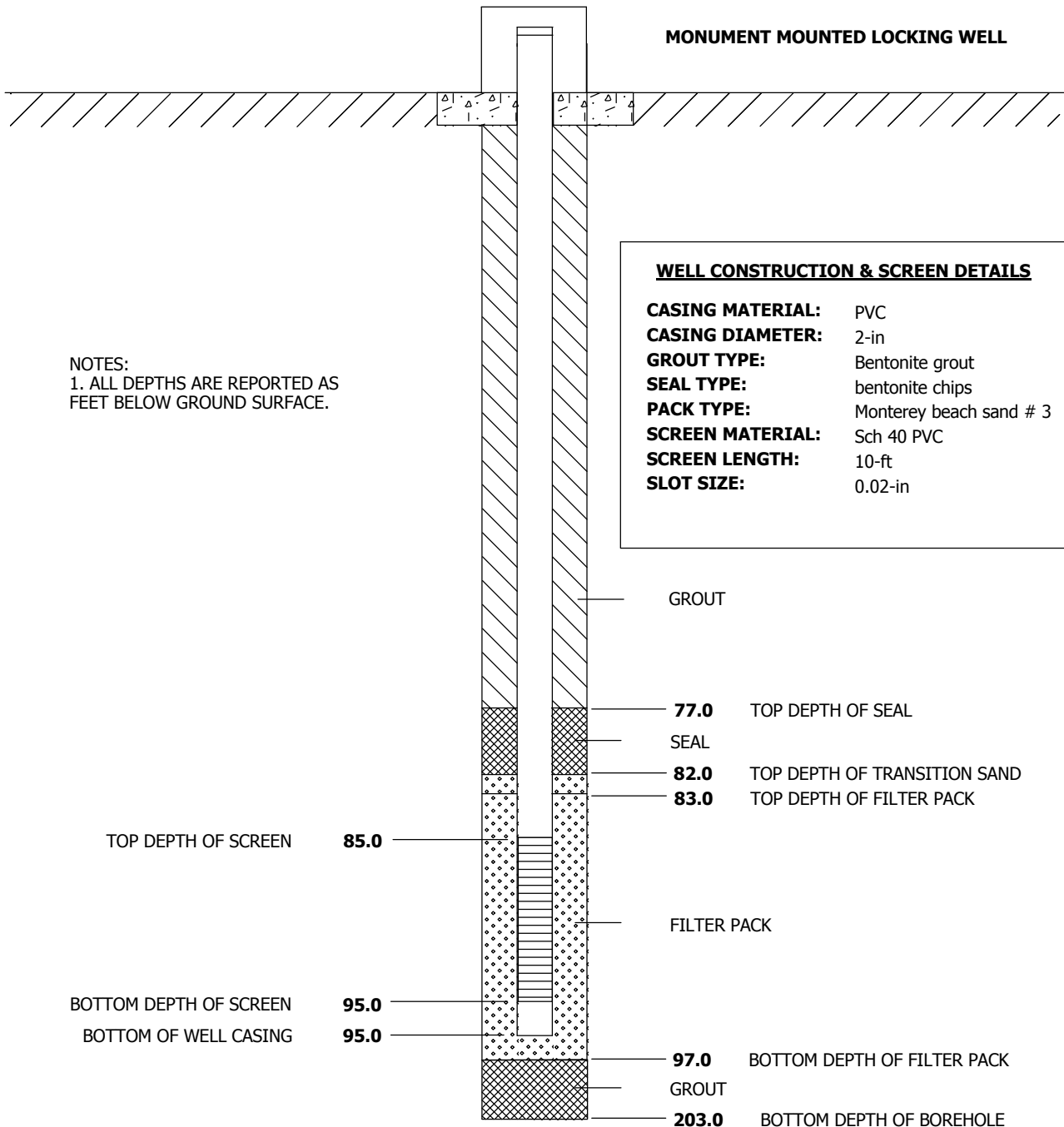


WELL COMPLETION DIAGRAM

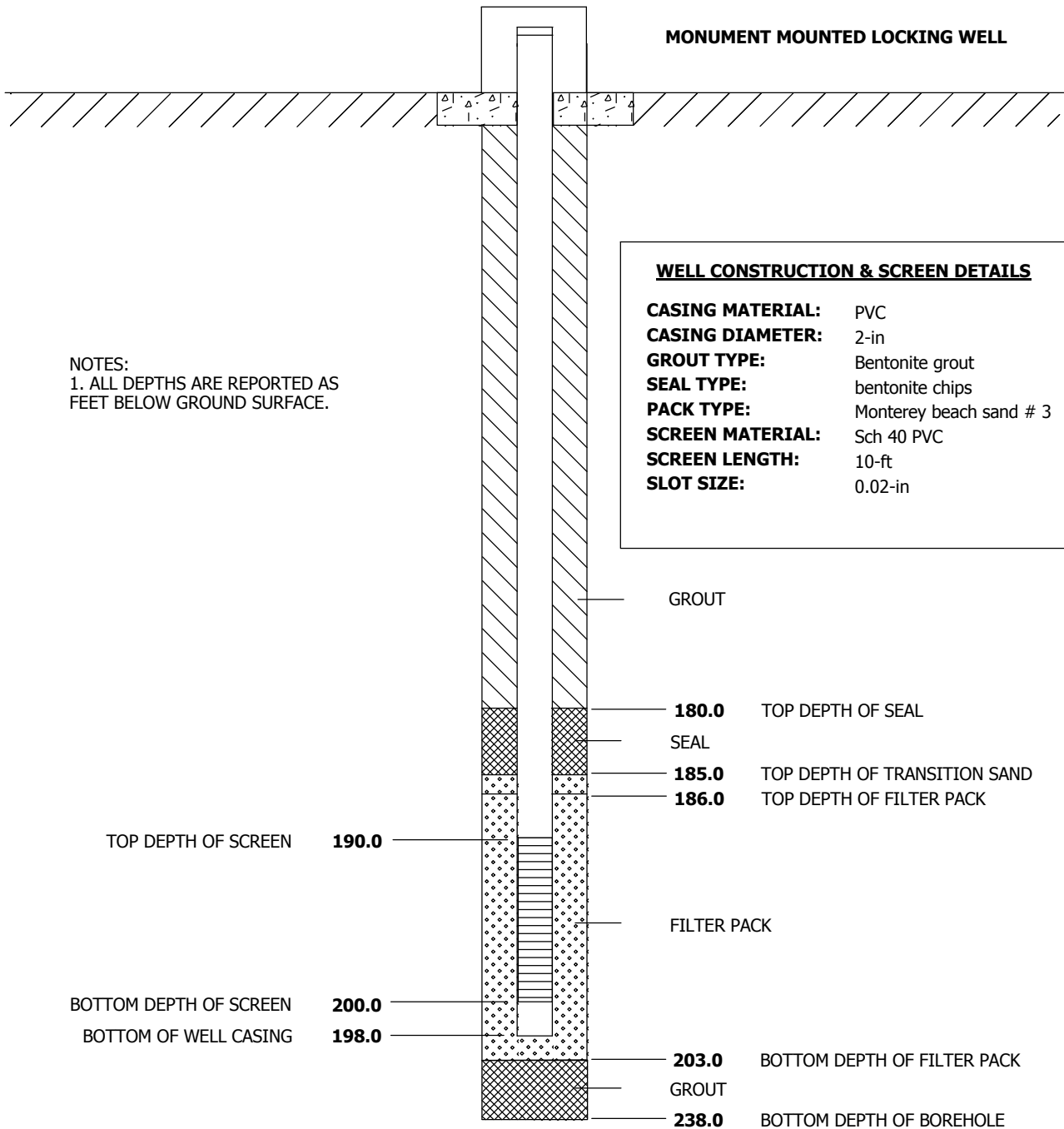
PROJECT NO: 326128.01.16.EN	PROJECT: IMPM Drill Program	WELL NO: <i>MW-50-095</i>
LOCATION: PG&E Compressor Station - Flood Plain, Topock, California		
DRILLING CONTRACTOR: Prosonic (Perry Hormann = Driller)	DRILLING START DATE: 4/4/2006	
DRILLING METHOD: Rotosonic	DRILLING END DATE: 4/20/2006	
LOGGER: J. Blei	WELL COMPLETION DATE: 4/21/2006	
TOP OF WELL CASING (NGVD 29): ---	NORTHING COORDINATE (CCS DAND 27, ZONE 5): 2103069.27	
GROUND SURFACE ELEVATION (NGVD 29): 495.05	EASTING COORDINATE (CCS NAD 27 ZONE 5): 7615599.84	



WELL DIAGRAM IS NOT TO SCALE

WELL COMPLETION DIAGRAM

PROJECT NO: 326128.01.16.EN	PROJECT: IMPM Drill Program	WELL NO: <i>MW-50-200</i>
LOCATION: PG&E Compressor Station - Flood Plain, Topock, California		
DRILLING CONTRACTOR: Prosonic (Perry Hormann = Driller)	DRILLING START DATE: 4/4/2006	
DRILLING METHOD: Rotosonic	DRILLING END DATE: 4/20/2006	
LOGGER: J. Blei	WELL COMPLETION DATE: 4/21/2006	
TOP OF WELL CASING (NGVD 29): ---	NORTHING COORDINATE (CCS DAND 27, ZONE 5): 2103069.62	
GROUND SURFACE ELEVATION (NGVD 29): 495.05	EASTING COORDINATE (CCS NAD 27 ZONE 5): 7615599.91	



WELL CONSTRUCTION & SCREEN DETAILS

CASING MATERIAL:	PVC
CASING DIAMETER:	2-in
GROUT TYPE:	Bentonite grout
SEAL TYPE:	bentonite chips
PACK TYPE:	Monterey beach sand # 3
SCREEN MATERIAL:	Sch 40 PVC
SCREEN LENGTH:	10-ft
SLOT SIZE:	0.02-in

NOTES:
1. ALL DEPTHS ARE REPORTED AS FEET BELOW GROUND SURFACE.

		GROUT	
	180.0	SEAL	TOP DEPTH OF SEAL
	185.0	SEAL	TOP DEPTH OF TRANSITION SAND
	186.0	SEAL	TOP DEPTH OF FILTER PACK
TOP DEPTH OF SCREEN	190.0	SEAL	
		SEAL	FILTER PACK
BOTTOM DEPTH OF SCREEN	200.0	SEAL	
BOTTOM OF WELL CASING	198.0	SEAL	
		SEAL	GROUT
	203.0	SEAL	BOTTOM DEPTH OF FILTER PACK
		SEAL	GROUT
	238.0	SEAL	BOTTOM DEPTH OF BOREHOLE

WELL DIAGRAM IS NOT TO SCALE

SOIL BORING LOG

PROJECT NAME: IMPM Drill Program		HOLE DEPTH (ft): 248.0		DRILLING CONTRACTOR:	
SURFACE ELEVATION: 495.1 ft. MSL		NORTHING (CCS NAD 27 Z 5): 2,103,069.27		EASTING (CCS NAD 27 Z 5): 7,615,599.84	
DRILLING METHOD:			DATE STARTED: 3/25/2004		
LOCATION: PG&E Compressor Station - Flood Plain, Topock, California			DATE COMPLETED:		
DRILLING EQUIPMENT:			LOGGED BY: L. Kelly		

DEPTH BGS (feet)	SAMPLE			USCS CODE	SOIL DESCRIPTION SOIL NAME, USCS SYMBOL, COLOR, PERCENT COMPOSITION, GRADING, GRAIN SHAPE, MINERALOGY, DENSITY/CONSISTENCY, STRUCTURE, MOISTURE.	COMMENTS DRILLING OBSERVATIONS AND OPERATIONS, DAILY START AND END TIMES, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
	INTERVAL	TYPE/NUMBER	RECOVERY (ft)			
5					NO RECOVERY	
10			0			
15						
20						
25			5	GM		SILTY GRAVEL w/ SAND, BOULDERS, AND COBBLES (GM) - brn (10YR 4/3), 55% rnd to subrnd f to c gravel up to 14cm, 25% f to c sand, 20% fines, mostly met
25			2	SM	SILTY SAND w/ GRAVEL (SM) - brn (10YR5/3), 15% ang to subrnd f gravel up to 2.5cm, 45% f to c sand, 40% fines, mostly met gravel, some chloritic alteration, fines clay in part, minor chert, loose, dry	
30			5	GM	SILTY GRAVEL w/ SAND (GM) - dr yellowish brn (10YR4/4), 50% f to c and to subrnd gravel up to 6.5cm, 35% f to c sand, 15% fines, mostly met, occasional ig,, mod to v calcareous, loose, dry	
35			2	GW	WELL GRADED GRAVEL w/ SAND (GW) - dr yellow brn (10YR4/4), 50% ang to subrnd f to c gravel up to 6cm, 40% f to c sand, 10% fines, mostly met, very cal, loose, dry	



SOIL BORING LOG

PROJECT NAME: IMPM Drill Program		HOLE DEPTH (ft): 248.0		DRILLING CONTRACTOR:	
SURFACE ELEVATION: 495.1 ft. MSL	NORTHING (CCS NAD 27 Z 5): 2,103,069.27	EASTING (CCS NAD 27 Z 5): 7,615,599.84	DATE STARTED: 3/25/2004	DATE COMPLETED:	
DRILLING METHOD:			DRILLING EQUIPMENT:		
LOCATION: PG&E Compressor Station - Flood Plain, Topock, California			LOGGED BY: L. Kelly		

DEPTH BGS (feet)	SAMPLE			USCS CODE	SOIL DESCRIPTION SOIL NAME, USCS SYMBOL, COLOR, PERCENT COMPOSITION, GRADING, GRAIN SHAPE, MINERALOGY, DENSITY/CONSISTENCY, STRUCTURE, MOISTURE.	COMMENTS DRILLING OBSERVATIONS AND OPERATIONS, DAILY START AND END TIMES, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.	
	INTERVAL	TYPE/NUMBER	RECOVERY (ft)				
40			5	SW	WELL GRADED SAND w/ GRAVEL (SW) - dk yellowish brn (10YR4/4), 40% subang to subrnd mostly f gravel up to 2cm, 50% f to c sand, 10% fines, mostly met, mod cal, loose to poorly consolidated, dry to damp - groundwater at 35' bgs	Drill rate = 0.15' to 0.25' / min	
45			5	SM	SILTY SAND w/ GRAVEL (SM) - brn (10YR5/3), 30% subang to subrnd f to c gravel up to 6cm, 40% f to c sand, 30% mod clayey fines, mostly met gravel, minor chert, mod to v cal, non to mod plasticity, loose, dry		
50			5	GW	WELL GRADED GRAVEL w/ SAND (GW) - dr yellow brn (10YR5/3), well graded ang to subrnd f to c gravel up to 7cm, f to c sand, mod clayey fines, mostly met, mod cal, loose to poorly consolidated, moist to wet		
55			6	SW/SM	WELL GRADED SAND w/ GRAVEL (SW) - brn (10YR4/3), 20% subang to subrnd mostly f gravel up to 2cm, 75% f to c sand, 5% mostly silt fines, mostly met w/ chlorite alteration, v cal, loose to poorly consolidated, moist to wet		
60			6	SW	WELL GRADED SAND w/ GRAVEL (SW) - brn (10YR4/3), 30% subang to rnd mostly f gravel up to 7cm, 65% f to c sand, 5% mostly silt fines, mostly met w/ some chlorite alteration, mod to v cal, loose to poorly consolidated, wet - SM interbedded with SW, 20% gravel, 65% sand, 15% fines		
65			9	GW	WELL GRADED GRAVEL w/ SAND (GW) - brn (10YR4/3), 55% ang to subrnd f to c gravel up to 7cm, 40% f to c sand, 5% fines, mod cal, loose to poorly consolidated, wet - as above, 50% subang to subrnd gravel up to 7.5cm, 45% sand, 5% fines, mostly met w/ occ chert and ig		Drill rate = 0.4' to 0.5' / min
70				SM	SILTY SAND (SM) - dk brn (10YR3/3), 5% subang f to c gravel up to 8cm, 70% f to c sand, 20% fines, loose sand, wet		

SOIL BORING LOG

PROJECT NAME: IMPM Drill Program		HOLE DEPTH (ft): 248.0		DRILLING CONTRACTOR:	
SURFACE ELEVATION: 495.1 ft. MSL		NORTHING (CCS NAD 27 Z 5): 2,103,069.27		EASTING (CCS NAD 27 Z 5): 7,615,599.84	
DRILLING METHOD:			DATE STARTED: 3/25/2004		
LOCATION: PG&E Compressor Station - Flood Plain, Topock, California			DATE COMPLETED:		
DRILLING EQUIPMENT:			LOGGED BY: L. Kelly		

DEPTH BGS (feet)	SAMPLE			USCS CODE	SOIL DESCRIPTION SOIL NAME, USCS SYMBOL, COLOR, PERCENT COMPOSITION, GRADING, GRAIN SHAPE, MINERALOGY, DENSITY/CONSISTENCY, STRUCTURE, MOISTURE.	COMMENTS DRILLING OBSERVATIONS AND OPERATIONS, DAILY START AND END TIMES, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
	INTERVAL	TYPE/NUMBER	RECOVERY (ft)			
75			10	SM	SILTY SAND (SM) - dk brn (10YR3/3), 5% subang f to c gravel up to 8cm, 50% f to m sand, 45% fines, wet - sand w/ gravel, strong brn	
				SM	SILTY SAND w/ GRAVEL (SM) - strong brn (7.5YR3/6), 15% subrnd gravel up to 6cm, 60% m sand, 25% fines, mostly met, wet	
80					SILTY SAND (SM) - strong brn (7.5YR3/6), 10% subang gravel up to 6cm, 60% m to c sand, 30% fines, met gravel, wet	
85						
90			20	SM		
95						
100					WELL GRADED SAND w/ SILT and GRAVEL (SW) - strong brn (7.5YR4/6), 15% met subang gravel up to 8cm, 50% m to c sand, 35% fines, wet	
105				SW		

SOIL BORING LOG

PROJECT NAME: IMPM Drill Program		HOLE DEPTH (ft): 248.0		DRILLING CONTRACTOR:	
SURFACE ELEVATION: 495.1 ft. MSL		NORTHING (CCS NAD 27 Z 5): 2,103,069.27		EASTING (CCS NAD 27 Z 5): 7,615,599.84	
DRILLING METHOD:			DATE STARTED: 3/25/2004		
LOCATION: PG&E Compressor Station - Flood Plain, Topock, California			DATE COMPLETED:		
DRILLING METHOD:			DRILLING EQUIPMENT:		
LOCATION: PG&E Compressor Station - Flood Plain, Topock, California			LOGGED BY: L. Kelly		

DEPTH BGS (feet)	SAMPLE			USCS CODE	SOIL DESCRIPTION SOIL NAME, USCS SYMBOL, COLOR, PERCENT COMPOSITION, GRADING, GRAIN SHAPE, MINERALOGY, DENSITY/CONSISTENCY, STRUCTURE, MOISTURE.	COMMENTS DRILLING OBSERVATIONS AND OPERATIONS, DAILY START AND END TIMES, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
	INTERVAL	TYPE/NUMBER	RECOVERY (ft)			
110			20		WELL GRADED SAND w/ SILT and GRAVEL (SW) - strong brn (7.5YR4/6), 15% met subang gravel up to 8cm, 50% m to c sand, 35% fines, wet	
115				SW	WELL GRADED SAND w/ GRAVEL (SW) - dk brn (7.5YR3/2), 25% met ang gravel up to 4cm, 70% f to c sand, 5% fines, wet	
120				SW	WELL GRADED SAND w/ SILT and GRAVEL (SW) - strong brn (7.5YR4/6), 15% met subang gravel up to 8cm, 50% m to c sand, 35% fines, wet	
125					SILTY SAND (SM) - dk brn (7.5YR3/4), 5% met ang gravel up to 4cm, 75% f to m sand, 20% fines, wet	
130			20	SM	- increased gravel content and size, 15% met subang gravel up to 8cm, 65% sand, 20% fines, wet	
135						
140					WELL GRADED SAND w/ SILT and GRAVEL (SW/SM) - dk brn (7.5YR3/4), 15% subang met f to c gravel up to 6cm, 75% f to c sand, 10% fines, clasts poorly cemented, wet	

SOIL BORING LOG

PROJECT NAME: IMPM Drill Program		HOLE DEPTH (ft): 248.0		DRILLING CONTRACTOR:	
SURFACE ELEVATION: 495.1 ft. MSL		NORTHING (CCS NAD 27 Z 5): 2,103,069.27	EASTING (CCS NAD 27 Z 5): 7,615,599.84		DATE STARTED: 3/25/2004
DRILLING METHOD:		DRILLING EQUIPMENT:			
LOCATION: PG&E Compressor Station - Flood Plain, Topock, California				LOGGED BY: L. Kelly	

DEPTH BGS (feet)	SAMPLE			USCS CODE	SOIL DESCRIPTION SOIL NAME, USCS SYMBOL, COLOR, PERCENT COMPOSITION, GRADING, GRAIN SHAPE, MINERALOGY, DENSITY/CONSISTENCY, STRUCTURE, MOISTURE.	COMMENTS DRILLING OBSERVATIONS AND OPERATIONS, DAILY START AND END TIMES, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
	INTERVAL	TYPE/NUMBER	RECOVERY (ft)			
145			20	SW/SM	<p>WELL GRADED SAND w/ SILT and GRAVEL (SW/SM) - dk brn (7.5YR3/4), 15% subang met f to c gravel up to 6cm, 75% f to c sand, 10% fines, clasts poorly cemented, wet</p> <p>- increased gravel content, 25% gravel up to 8cm, 65% sand, 10% fines</p>	
150						
155						
160					<p>POORLY GRADED SAND (SP) - yellowish red (5YR 4/6), 10% gravel, 85% c sand, 5% fines, weak cementation becoming stronger w/ depth, wet</p> <p>- very evident color change from dk brn to yellowish red</p>	
165			17	SP		
170						
175					<p>- lg met cobble up to 12cm, increased gravel content</p> <p>- trans to SILTY GRAVEL w/ SAND, 40% met ang gravel up to 5cm, 30% sand, 30% fines</p>	

SOIL BORING LOG

PROJECT NAME: IMPM Drill Program		HOLE DEPTH (ft): 248.0		DRILLING CONTRACTOR:	
SURFACE ELEVATION: 495.1 ft. MSL		NORTHING (CCS NAD 27 Z 5): 2,103,069.27		DATE STARTED: 3/25/2004	
		EASTING (CCS NAD 27 Z 5): 7,615,599.84		DATE COMPLETED:	
DRILLING METHOD:				DRILLING EQUIPMENT:	
LOCATION: PG&E Compressor Station - Flood Plain, Topock, California				LOGGED BY: L. Kelly	

DEPTH BGS (feet)	SAMPLE			USCS CODE	SOIL DESCRIPTION SOIL NAME, USCS SYMBOL, COLOR, PERCENT COMPOSITION, GRADING, GRAIN SHAPE, MINERALOGY, DENSITY/CONSISTENCY, STRUCTURE, MOISTURE.	COMMENTS DRILLING OBSERVATIONS AND OPERATIONS, DAILY START AND END TIMES, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
	INTERVAL	TYPE/NUMBER	RECOVERY (ft)			
					POORLY GRADED SAND (SP) - yellowish red (5YR 4/6), 10% gravel, 85% c sand, 5% fines, weak cementation becoming stronger w/ depth, wet	
180				GW/GM	WELL GRADED GRAVEL w/ SILT and SAND (GW/GM) - dk reddish brn (5YR3/4), 50% met subang f to c gravel up to 5cm, 40% f to c sand, 10% fines, wet	
185			18	SM	SILTY SAND w/ GRAVEL (SM) - yellowish red (5YR4/6), 25% met subang gravel up to 4cm, 60% f to c sand, 15% fines, weak to mod cementation, wet	Drill rate = 0.1' / min
190						
195						
200					SILTY SAND w/ GRAVEL (SM) - dk reddish brn (5YR3/4), 10% subang f to c gravel, 50% f to c sand, 40% fines, cloritic alteration, cementation increasing to mod, moist	Drill rate = 1' / min
205						
210			20	SM		

SOIL BORING LOG

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SURFACE ELEVATION: 495.1 ft. MSL		NORTHING (CCS NAD 27 Z 5): 2,103,069.27		EASTING (CCS NAD 27 Z 5): 7,615,599.84	
DRILLING METHOD:		DATE STARTED: 3/25/2004		DATE COMPLETED:	
LOCATION: PG&E Compressor Station - Flood Plain, Topock, California				DRILLING EQUIPMENT:	
				LOGGED BY: L. Kelly	

DEPTH BGS (feet)	SAMPLE			USCS CODE	SOIL DESCRIPTION SOIL NAME, USCS SYMBOL, COLOR, PERCENT COMPOSITION, GRADING, GRAIN SHAPE, MINERALOGY, DENSITY/CONSISTENCY, STRUCTURE, MOISTURE.	COMMENTS DRILLING OBSERVATIONS AND OPERATIONS, DAILY START AND END TIMES, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
	INTERVAL	TYPE/NUMBER	RECOVERY (ft)			
215					SILTY SAND w/ GRAVEL (SM) - dk reddish brn (5YR3/4), 10% subang f to c gravel, 50% f to c sand, 40% fines, cloritic alteration, cementation increasing to mod, moist - reworked miocene becomes finer grained/ more massive	
220				SM	SILTY SAND w/ GRAVEL (SM) - dk reddish brn (5YR3/4), 10% met subang c gravel up to 8cm, 60% f to c sand, 30% fines, strat layer (8") of dry well-cemented conglom w/ 1' layers of wet clean sand	Drill rate = 2' / min
225			16			Drill Rate = 0.50' / min
230					MIOCENE CONGLOMERATE (BR) - firm, well-consolidated, matrix supported conglomerate, moist (BR), top of weathered bedrock ? - bedrock less weathered and dryer	Drill rate = 0.25' / min
235				BR		
240			0			
245						

SOIL BORING LOG

PROJECT NAME: IMPM Drill Program		HOLE DEPTH (ft): 248.0		DRILLING CONTRACTOR:	
SURFACE ELEVATION: 495.1 ft. MSL		NORTHING (CCS NAD 27 Z 5): 2,103,069.27		EASTING (CCS NAD 27 Z 5): 7,615,599.84	
DRILLING METHOD:		DATE STARTED: 3/25/2004		DATE COMPLETED:	
LOCATION: PG&E Compressor Station - Flood Plain, Topock, California				DRILLING EQUIPMENT:	
				LOGGED BY: L. Kelly	

DEPTH BGS (feet)	SAMPLE			USCS CODE	SOIL DESCRIPTION SOIL NAME, USCS SYMBOL, COLOR, PERCENT COMPOSITION, GRADING, GRAIN SHAPE, MINERALOGY, DENSITY/CONSISTENCY, STRUCTURE, MOISTURE.	COMMENTS DRILLING OBSERVATIONS AND OPERATIONS, DAILY START AND END TIMES, DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.
	INTERVAL	TYPE/ NUMBER	RECOVERY (ft)			
					MIOCENE CONGLOMERATE (BR)	
					<i>Boring Terminated at 248 ft</i>	
					ABBREVIATIONS <i>cc = continuous core run</i> <i>brn = brown</i> <i>lt = light</i> <i>dk = dark</i> <i>vf = very fine-grained</i> <i>f = fine-grained</i> <i>m = medium-grained</i> <i>c = coarse-grained</i> <i>vc = very coarse-grained</i> <i>ang = angular</i> <i>subang = subangular</i> <i>subrnd = subrounded</i> <i>rnd = rounded</i> <i>br = bedrock formation</i> <i>ss = sandstone</i> <i>conglom = conglomerate</i> <i>comptd = compacted</i> <i>qtz = quartz</i>	