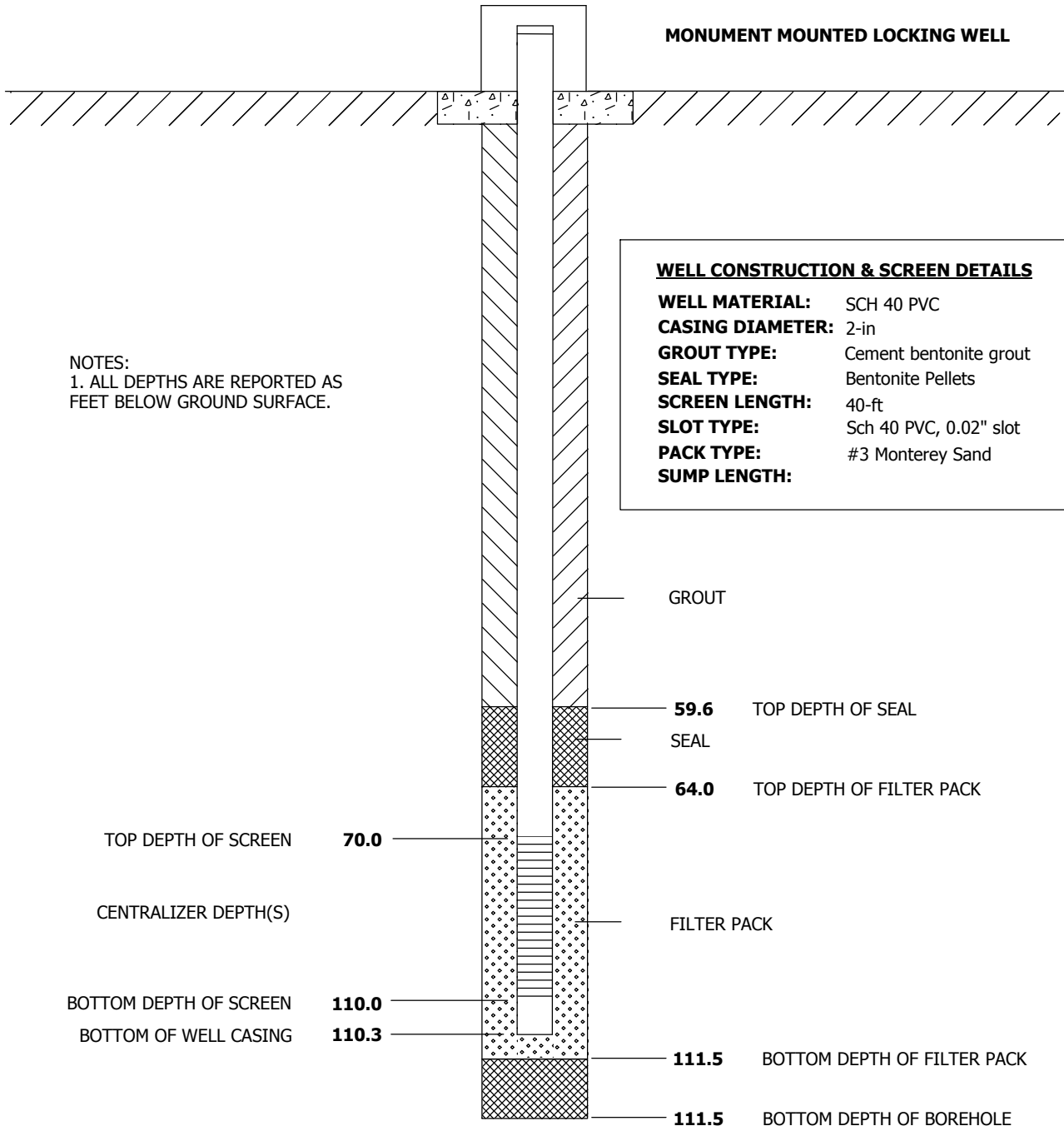


WELL COMPLETION DIAGRAM

PROJECT NO: 326128.01.07.AR	PROJECT: IM-3 Hydrogeologic Investigation, PG&E Topock	WELL NO: OW-5S
LOCATION: East Mesa, Parcel No. 650-151-06		
DRILLING CONTRACTOR: WDC Exploration & Wells, Montclair, CA	DRILLING START DATE: 11/20/2004	
DRILLING METHOD: Rotosonic	DRILLING END DATE: 11/21/2004	
LOGGER: M. Godwin	WELL COMPLETION DATE: 11/21/2004	
TOP OF WELL CASING (NGVD 29): 551.75	NORTHING COORDINATE (CCS DAND 27, ZONE 5): 2103017.60	
GROUND SURFACE ELEVATION (NGVD 29): 549.12	EASTING COORDINATE (CCS NAD 27 ZONE 5): 7613186.81	

MONUMENT MOUNTED LOCKING WELL



WELL CONSTRUCTION & SCREEN DETAILS

WELL MATERIAL:	SCH 40 PVC
CASING DIAMETER:	2-in
GROUT TYPE:	Cement bentonite grout
SEAL TYPE:	Bentonite Pellets
SCREEN LENGTH:	40-ft
SLOT TYPE:	Sch 40 PVC, 0.02" slot
PACK TYPE:	#3 Monterey Sand
SUMP LENGTH:	

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

		GROUT	
	59.6	TOP DEPTH OF SEAL	
	SEAL		
	64.0	TOP DEPTH OF FILTER PACK	
TOP DEPTH OF SCREEN	70.0		
CENTRALIZER DEPTH(S)		FILTER PACK	
BOTTOM DEPTH OF SCREEN	110.0		
BOTTOM OF WELL CASING	110.3		
	111.5	BOTTOM DEPTH OF FILTER PACK	
	111.5	BOTTOM DEPTH OF BOREHOLE	

WELL DIAGRAM IS NOT TO SCALE

SOIL BORING LOG

PROJECT NAME: IM-3 Hydrogeologic Investigation, PG&E Topock		HOLE DEPTH (ft): 350.0	DRILLING CONTRACTOR: WDC Exploration & Wells, Montclair, CA	
SURFACE ELEVATION: 549.5 ft. MSL	NORTHING (CCS NAD 27 Z 5): 2,102,998.32	EASTING (CCS NAD 27 Z 5): 7,613,185.55	DATE STARTED: 11/09/2004	DATE COMPLETED: 11/14/2004
DRILLING METHOD: Rotasonic		WATER LEVEL (ft): ---	DRILLING EQUIPMENT: Gefco SS-15K-HL	
LOCATION: East Mesa, Parcel No. 650-151-06			LOGGED BY: B. Shearer	

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			0	SP	GRAVELLY SAND (SP) - lt brnsh gray (10YR6/2) 30% f sand, 30% m sand, 25% gravel up to 1", 10% c sand, 5% fines, subang, dry.	0-8' logged from conductor pipe
10						
15		CC-1	5		- coarser grained sand from 16' to 17'	
20				SM	SILTY SAND (SM) - dk gray (10YR4/1) 30% m sand, 20% fines, 20% c sand, 15% f sand, 15% gravel up to 1/2", subang, dense, damp.	broke drill pipe tapered fishing tool (1 hr downtime)
25		CC-2	6			
30				SP		
35		CC-3	0			

SOIL BORING LOG

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SURFACE ELEVATION: 549.5 ft. MSL	NORTHING (CCS NAD 27 Z 5): 2,102,998.32	EASTING (CCS NAD 27 Z 5): 7,613,185.55		DATE STARTED: 11/09/2004	DATE COMPLETED: 11/14/2004
DRILLING METHOD: Rotasonic		WATER LEVEL (ft): ---		DRILLING EQUIPMENT: Gefco SS-15K-HL	
LOCATION: East Mesa, Parcel No. 650-151-06				LOGGED BY: B. Shearer	

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		CC-3	10	SP	<p>POORLY GRADED SAND (SP) - pale brn (10YR 6/3) 70% f-c sand, 20% gravel up to 2" in layers, 10% fines, subang, dry.</p> <p>- lt brnish gray (10YR 6/2) 50% sand, 40% gravel, subang, damp</p>	potential boulder	
45		CC-4	9	GP	<p>- layer of silty cemented sand</p> <p>- decreased fines to 20%</p> <p>SANDY GRAVEL (GP) - grayish brn (10YR5/2) 55% subang gravel up to 2", 30% m c sand, 10% f sand, 5% fines, damp.</p>		
50				SW	<p>WELL GRADED SAND (SW) - grayish brn (10YR 5/2) 30% m sand, 20% f sand, 20% c sand, 20% gravel up to 1/2", 10% fines.</p>		
55		CC-5	10	SW	<p>SILTY SAND (SM) - dk gray (10YR4/1) 40% f-m sand, 30% fines, 20% subang gravel up to 1/2", 10% c sand, damp.</p> <p>GRAVELLY SAND (SW) - 50% f-c sand, 40% subang to ang gravel up to 2", 10% fines, gneiss, damp.</p>		driller notes hard drilling
60							layer of increased times @56'
65		CC-6	5	SG	<p>GRAVELLY SAND (SG) - dk gray (10YR4/1) 50% f-c sand, 30% subrnd gravel up to 1.5", 20% fines, dense, damp.</p>		
70				SW	<p>WELL GRADED SAND (SW) - grayish brn (10YR5/2) 60% f-c sand, 20% fines, 20% subang gravel up to 1/2", mm, dry.</p>		

SOIL BORING LOG

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SURFACE ELEVATION: 549.5 ft. MSL	NORTHING (CCS NAD 27 Z 5): 2,102,998.32	EASTING (CCS NAD 27 Z 5): 7,613,185.55	DATE STARTED: 11/09/2004	DATE COMPLETED: 11/14/2004
DRILLING METHOD: Rotasonic		WATER LEVEL (ft): ---	DRILLING EQUIPMENT: Gefco SS-15K-HL	
LOCATION: East Mesa, Parcel No. 650-151-06			LOGGED BY: B. Shearer	

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		CC-7	15	SP	POORLY GRADED SAND (SP) - brn (10YR4/3) 70% f-m sand, 20% fines, 10% subang gravel up to 1/2", silty cemented, dry. - dry crushed boulder	
80	+			SW	WELL GRADED SAND (SW) - brn (10YR4/3) 70% f-c sand, 15% fines, 15% ang to subang gravel, silty cemented, dry .	
85				SM	SILTY SAND (SM) - grayish brn (10YR 5/2) 65% f-c sand, 25% silt, 10% ang to subang gravel, feldspar, wet. - becoming moderately indurated	hit water @ 80'
90		CC-8	0	GW	SANDY GRAVEL (SW) - lt gray (10YR 7/2) 60% subrnd-subang gravel, 30% f-c sand, 10% fines, dry.	potential confining layer @ 86 Driller notes hard drilling
95				SW	WELL GRADED SAND (SW) - dk yellowish brn (10YR4/4) 75% m-c sand, 15% subang gravel up to 1/2", 10% fines, silty cemented, moist.	layer of silt @ 92 dry light gray (10YR 7/2)
100				SM	SILTY SAND (SM) - brn (7.5YR5/2) 60% f-c sand, 30% fines, 10% gravel, subang to ang, wet.	broken drill pipe/wash down casing to 100' to remove it lost 95-100' core
105	+	CC-9	10		- moderately cemented	groundwater grab sample collected from 100-120 ft bgs

SOIL BORING LOG

PROJECT NAME: IM-3 Hydrogeologic Investigation, PG&E Topock		HOLE DEPTH (ft): 350.0	DRILLING CONTRACTOR: WDC Exploration & Wells, Montclair, CA	
SURFACE ELEVATION: 549.5 ft. MSL	NORTHING (CCS NAD 27 Z 5): 2,102,998.32	EASTING (CCS NAD 27 Z 5): 7,613,185.55	DATE STARTED: 11/09/2004	DATE COMPLETED: 11/14/2004
DRILLING METHOD: Rotosonic		WATER LEVEL (ft): ---	DRILLING EQUIPMENT: Gefco SS-15K-HL	
LOCATION: East Mesa, Parcel No. 650-151-06			LOGGED BY: B. Shearer	

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				SM SW	SILTY SAND (SM) - brn (7.5YR5/2) 60% f-c sand, 30% fines, 10% gravel, subang to ang, wet. WELL GRADED SAND (SW) - dk yellowish brn (10YR4/4) 75% m-c sand, 15% fines, 10% subang gravel up to 1/2", silty cemented, moist to damp. - increasing subang gravel	Grain size sample collected 11:00 11/10/04
115		CC-10	10		SILTY SAND (SM) - brn (7.5YR4/3) 60% c sand, 30 fines, 10% m ang gravel up to 1/2", dense, wet. - increase in grain size of sand	
120						
125				SM	- grayish brn (10YR 5/2) 60% m-c sand, 20% fines, 20% ang gravel up to 1/2", m dense, wet dk yellowish brn (10YR4/4), wet	
130		CC-11	0			
135				SG	GRAVELLY SAND (SG) - brn (7.5YR4/4) 65% f-c sand, 30% ang gravel up to 6", 5% fines, damp.	
140				SW	WELL GRADED SAND (SW) - brn (7.5YR4/4) 75% m c sand, 15% fines, 10% m ang loose gravel up to 1/2", wet.	

SOIL BORING LOG

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SURFACE ELEVATION: 549.5 ft. MSL	NORTHING (CCS NAD 27 Z 5): 2,102,998.32	EASTING (CCS NAD 27 Z 5): 7,613,185.55	DATE STARTED: 11/09/2004	DATE COMPLETED: 11/14/2004
DRILLING METHOD: Rotasonic		WATER LEVEL (ft): ---	DRILLING EQUIPMENT: Gefco SS-15K-HL	
LOCATION: East Mesa, Parcel No. 650-151-06			LOGGED BY: B. Shearer	

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				SM	SILTY SAND (SM) - dk gray (10YR4/1) 65% m c sand, 30% fines, 5% subang gravel up to 1/4", m dense, wet. - layer of subrnd gravel - denser	
150		CC-12	20	SG	GRAVELLY SAND (SG) - grayish brn (10YR5/2) 50% f-c sand, 35% subang gravel up to 3/4", 25% fines, damp. - cobble	groundwater grab sample collected from 150-170 ft bgs
155				SM	SILTY SAND (SM) - dk grayish brn (10YR5/2) 60% f-m sand, 25% fines, 15% subang to ang gravel up to 1/2", m dense, wet. - lt grayish brn 10YR6/2 70% f-m sand, 20% fines, 10% subang subrnd gravel up to 3/4", damp to dry	potentially a cobble pulverized drilling
160						
165		CC-13	10	SW	WELL GRADED SAND (SW) dk grayish brn (10YR5/2) 50% c sand, 25-30% m sand, 5-10% f sand 10% gravel from 1/2" to 2 1/2", 5% silt, subang mm, wet.	
170				SM	SILTY SAND (SM) - dk grayish brn (10YR4/2) 25% c sand, 25% mm gravel, 20% f sand, 15% m sand, 15% silt, subang from 1/4" to 2 1/2", moist.	grain size sample collected 11/11/04 11:00
175		CC-14	10	GM	SILTY GRAVEL (GM) - gray (7.5YR5/11), 65% ang gravel up to 2 1/2", 30% silt, 15% f-m sand, v dense, damp.	
				SM	SILTY SAND (SM) - brn (10YR4/4) 70% f-m sand, 20% fines, 10% subang gravel up to 1/2", dense, moist.	
				SW	WELL GRADED SAND (SW) W/GRAVEL - brn (10YR5/3) 60% m-c sand, 20% fines, 20% subang gravel, loose, wet.	



SOIL BORING LOG

PROJECT NAME: IM-3 Hydrogeologic Investigation, PG&E Topock		HOLE DEPTH (ft): 350.0	DRILLING CONTRACTOR: WDC Exploration & Wells, Montclair, CA	
SURFACE ELEVATION: 549.5 ft. MSL	NORTHING (CCS NAD 27 Z 5): 2,102,998.32	EASTING (CCS NAD 27 Z 5): 7,613,185.55	DATE STARTED: 11/09/2004	DATE COMPLETED: 11/14/2004
DRILLING METHOD: Rotasonic		WATER LEVEL (ft): ---	DRILLING EQUIPMENT: Gefco SS-15K-HL	
LOCATION: East Mesa, Parcel No. 650-151-06			LOGGED BY: B. Shearer	

DEPTH BGS (feet)	SAMPLE			USCS CODE	SOIL DESCRIPTION	COMMENTS
	INTERVAL	TYPE/NUMBER	RECOVERY (ft)			
180		CC-14	0	SW	<p>WELL GRADED SAND (SW) W/GRAVEL - brn (10YR5/3) 60% m-c sand, 20% fines, 20% subang gravel, loose, wet.</p> <p>- subtle color change</p>	
185						
190		CC-15	18	SM	<p>SILTY SAND (SM) - brn (7.5YR4/3) 60% f-m sand, 30% silt, 10% subang gravel up to 1/2", sand fining, mm, dense, wet.</p> <p>- cored through ~1' of gneissic cobbles</p> <p>brn (7.5YR4/3) 50% f-c sand, 30% silt, 20% subang gravel, trace caliche, dense, mm, moist</p>	
195						
200						
205		CC-16	20			
210						



SOIL BORING LOG

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DRILLING METHOD: Rotasonic		WATER LEVEL (ft): ---	DRILLING EQUIPMENT: Gefco SS-15K-HL	
LOCATION: East Mesa, Parcel No. 650-151-06			LOGGED BY: B. Shearer	

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	+	CC-16	20	ML	SILTY SAND (SM) - brn (7.5YR4/3) 60% f-m sand, 30% silt, 10% subang gravel up to 1/2", sand fining, mm, dense, wet. - dk grayish brn (10YR4/2) 60% f-c grained sand, 20% silt 15-20% subang gravel, dry			
								SANDY SILT WITH GRAVEL (ML) - 15% gravel 30% f c sand 55% silt .
							SM	SILTY SAND (SM) - brn (7.5YR4/3) 50% f-c sand, 30% silt, 20% subang gravel, trace caliche, dense, mm, moist.
220				- gray SG/S2 grayish green 10R4/8 red weathered mms				
225				WELL GRADED SAND No loggable core, USCS type determined from washed grab sample.				
230				SW				
235								
240								
245	+	CC-17	10		WELL GRADED SAND brn 50% m sand, 20% c sand, 10-15% silt, 10-15% gravel, 5% f sand, traces of caliche, mm, dry. - brn 50% m sand, 20% c sand, 10-15% silt, 10-15% gravel, 5% f sand, traces of caliche, mm, dry	1225: grab sample for grain size analysis at 245'		

SOIL BORING LOG

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DRILLING METHOD: Rotasonic		WATER LEVEL (ft): ---	DRILLING EQUIPMENT: Gefco SS-15K-HL	
LOCATION: East Mesa, Parcel No. 650-151-06			LOGGED BY: B. Shearer	

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)			
250		CC-17	10	SW	WELL GRADED SAND brn 50% m sand, 20% c sand, 10-15% silt, 10-15% gravel, 5% f sand, traces of caliche, mm, dry.	
255		CC-18	6	SM	SILTY SAND (SM) WITH GRAVEL - grayish brn (10YR5/2) 40% m sand, 15% gravel avg 3/4", 15% f sand, 15% c sand, 15% silt, subang, mm, moist. - brn (7.5YR4/2) 50% m sand, 20% c sand, 10-20% f sand, 10-20% silt, wet	very hard drilling, cobbles or boulders shut down due to lightning
260				SP	POORLY GRADED SAND (SP) - brn (7.5YR4/2) gradually coarsening subang sand, 5% silt, mm, moist. No recovery - quartzite cobble / broken boulder.	
265				SW	POORLY GRADED SAND (SP) - brn (7.5YR5/2) 50% m sand, 45% c sand, 5% silt, subang to ang, mm, wet. WELL GRADED SAND (SW) - brn (7.5YR 5/2) 65% c sand, 20% m sand, 5% f sand, 5% silt, 5% gravel, subang, mm, wet. - metamorphic cobble	
270		CC-19	19	GW-GM	WELL GRADED GRAVEL WITH SILT AND SAND (GW-GM) - brn (7.5YR5/2) 50% gravel from 1/2" to 2", 20% m sand, 20% c sand, 5% silt, 5% f sand, subang to ang, wet.	grab sample for grain size analysis @ 253 ft fining upwards sequence 11/13/04: began drilling at 0640 0712: collected core
275				SW	WELL GRADED SAND (SW) - brn (7.5YR 5/2) 65% c sand, 20% m sand, 5% f sand, 5% silt, 5% gravel, subang, mm, wet.	
280				SW-SM	WELL GRADED SAND WITH SILT AND GRAVEL (SW-SM) - brn (7.5YR4/3) 330% m sand, 25% c sand, 20% f sand, 10-15% gravel, 10-15% silt, subang-ang, weathered mm (gray 5F4/2, red 2.5YR4/8), dry. - caliche development	

SOIL BORING LOG

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DRILLING METHOD: Rotosonic		WATER LEVEL (ft): ---	DRILLING EQUIPMENT: Gefco SS-15K-HL	
LOCATION: East Mesa, Parcel No. 650-151-06			LOGGED BY: B. Shearer	

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)			
285				SW	WELL GRADED SAND (SW) - brn (7.5YR4/3) 40% m sand, 20% c sand, 20% f gravel, 10% f sand, 10% silt ang to subang, weathered mm, wet .	collecting core, drill bit melted
290		CC-20	20			
295						
300				SC	CLAYEY SAND (SC) - brn (7.5YR 4/3) 65% f c sand, 30% clay, 5% gravel, subang to ang, wet. - cemented unit burned by drilling	weathered red fanglomerate
305				SW	WELL GRADED SAND (SW) dark reddish brn (2.5YR3/4) 40% m sand, 30% c sand, 10% gravel, 10% f sand, 5% silt, subang to ang, mm, wet.	strong color change to dark red-brown
310		CC-21	20			
315						



SOIL BORING LOG

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SURFACE ELEVATION: 549.5 ft. MSL	NORTHING (CCS NAD 27 Z 5): 2,102,998.32	EASTING (CCS NAD 27 Z 5): 7,613,185.55	DATE STARTED: 11/09/2004	DATE COMPLETED: 11/14/2004
DRILLING METHOD: Rotosonic		WATER LEVEL (ft): ---	DRILLING EQUIPMENT: Gefco SS-15K-HL	
LOCATION: East Mesa, Parcel No. 650-151-06			LOGGED BY: B. Shearer	

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)			
320				SW	WELL GRADED SAND (SW) dark reddish brn (2.5YR3/4) 40% m sand, 30% c sand, 10% gravel, 10% f sand, 5% silt, subang to ang, mm, wet.	becoming SM > 315
325		CC-22	20	SW SC ML SC	WELL GRADED SAND (SW) - reddish brn (2.5YR4/4) 30% m sand, 30% c sand, 20% f sand, 10% fines, 10% gravel. CLAYEY SAND (SC) - brn (7.5 YR 7/2) 30% m sand, 30% c sand, 15% clay, 15% f gravel, 10% f sand, mm, wet. SILT (ML) greenish gray (GGCY5G5/1) stiff. CLAYEY SAND (SC) -brn, (7.5 YR 4/4), 15% gravel, 15% fines, 70% fine-coarse sand, 326-328 as logged 324-326, brn (7.5 YR 4/4), traces of 2.5 YR 3/4, dark reddish brn, 327-328 indurated. - brn (7.5YR7/2) traces of (2.5YR3/4) - indurated	Sand with gravel
330				SC	CLAYEY SAND WITH GRAVEL(SC) with gravel, (7.5 YR 4/4), 25% gravel, 15% clays, 60% fine to coarse sand, subangular, metamorphic, wet, avg grain size gravel: 2cm, stiff.	groundwater grab sample collected from 330-150 ft bgs
335		CC-23	10	SW / SC SC	WELL GRADED SAND WITH CLAY AND GRAVEL (SW-SC) brn (7.5 YR 4/4), 10% fines, 20% gravel, 70% fine to coarse sand, subangular, metamorphic, wet, grayish green, weathered metamorphics. CLAYEY SAND (SC) dark reddish brn (2.5 YR 3/3), 15% clay, 60% m sand, 20% fine gravel.	
340				SW	WELL GRADED SAND WITH SILT AND GRAVEL (SW) dark reddish brn (2.5 YR 3/3), 20% gravel, 10% silt, 65-70% fine to coarse sand, subangular, metamorphic.	reworked fanglomerate deeply weathered mm clasts (photo)
345		CC-24	10	SC	CLAYEY SAND WITH GRAVEL (SC) dark reddish brn (7.5 YR 4/3), 15% gravel, 15% clay, 70% fine to coarse sand, subangular, metamorphic gravel 1-6 cm dry.	collected grab sample for grain size analysis @ 344 ft
350				BR	CONGLOMERATE (BR) - dk reddish brn (1.5YR3/3) 35% m sand, 25% gravel, 20% f sand, 10% fines, subang, weathered metamorphic clasts, indurated, dry.	Miocene conglomerate bedrock at 346', hard drilling noted

SOIL BORING LOG

PROJECT NAME: IM-3 Hydrogeologic Investigation, PG&E Topock		HOLE DEPTH (ft): 350.0	DRILLING CONTRACTOR: WDC Exploration & Wells, Montclair, CA	
SURFACE ELEVATION: 549.5 ft. MSL	NORTHING (CCS NAD 27 Z 5): 2,102,998.32	EASTING (CCS NAD 27 Z 5): 7,613,185.55	DATE STARTED: 11/09/2004	DATE COMPLETED: 11/14/2004
DRILLING METHOD: Rotosonic		WATER LEVEL (ft): ---	DRILLING EQUIPMENT: Gefco SS-15K-HL	
LOCATION: East Mesa, Parcel No. 650-151-06			LOGGED BY: B. Shearer	

DEPTH BGS (feet)	SAMPLE			USCS CODE	SOIL DESCRIPTION	COMMENTS
	INTERVAL	TYPE/ NUMBER	RECOVERY (ft)			
					Boring Terminated at 350 ft ABBREVIATIONS cc = continuous core run brn = brown lt = light dk = dark vf = very fine-grained f = fine-grained m = medium-grained c = coarse-grained vc = very coarse-grained ang = angular subang = subangular subrnd = subrounded rnd = rounded br = bedrock formation ss = sandstone conglom = conglomerate comptd = compacted qtz = quartz	DRILLING OBSERVATIONS AND OPERATIONS, DAILY START AND END TIMES , DRILL RATE, REFUSALS, SAMPLING AND TESTING NOTES.