

WELL COMPLETION DIAGRAM

PROJECT NO: 417981.ER.02.FW

PROJECT: ER-TCS Groundwater Investigation

WELL NO: ***MW-68BR-280***

LOCATION: Site 3

DRILLING CONTRACTOR: Boart Longyear (R. Sawrey)

DRILLING START: 8/3/2011

DRILLING METHOD: Rotosonic/Wireline Rotary Core

DRILLING END: 8/11/2011

LOGGER: R. Tweidt (Northstar)

WELL COMPLETION DATE: 8/11/2011

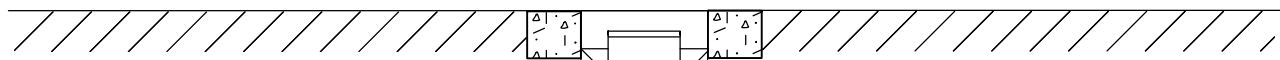
GROUND SURFACE ELEVATION (NAVD 88): 621.4 ft AMSL

GENERAL REMARKS: Open 3.8" diameter borehole from 257 to 279 feet bgs. Centralizers at 50, 100, 150, 200, and 250 ft bgs.

NORTHING (CCS NAD 83 Z 5):
2100767.09

EASTING (CCS NAD 83 Z 5):
7615453.92

SQUARE WELL VAULT (FLUSH WITH GRADE)



9-IN DIAMETER BOREHOLE

NOTES:

1. All depths are reported as feet below ground surface

WELL CONSTRUCTION & SCREEN DETAILS

CONDUCTOR CASING MATERIAL: High-Strength Low Alloy Steel

CONDUCTOR CASING DIAMETER: 5-in

BOREHOLE DIAMETERS: 9-in, 3.8-in

CONCRETE PAD TYPE: 3-ft SQUARE

GROUT TYPE: Type II-V Portland Cement

GROUT

CONDUCTOR CASING

257.0 TOP OF 3.8-IN OPEN BOREHOLE

279.0 BOTTOM DEPTH OF BOREHOLE

WELL DIAGRAM IS NOT TO SCALE



PROJECT NUMBER:
417981.ER.02.FW

BORING NUMBER:
BH-68 SHEET 1 OF 15

SOIL BORING LOG

PROJECT : PG&E Topock, ER-TCS Investigation

LOCATION : Site 3 (2100773.6 N, 7615453.4 E)

ELEVATION : 621.6 ft

DRILLING CONTRACTOR : Boart Longyear (R. Sawrey)

DRILLING EQUIPMENT AND METHOD : RS-350, Rotosonic drill head and tools



ORIENTATION : Vertical

WATER LEVELS : Approx. 164 ft BGS

START : 5/13/2011

END : 5/16/2011



LOGGER : R. Tweidt (Northstar)

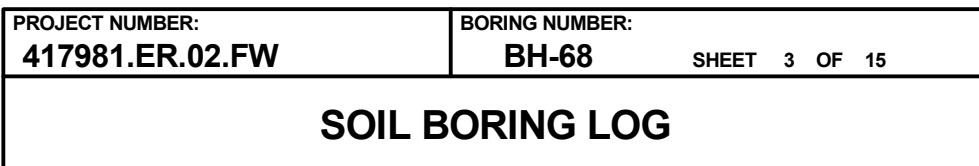
WATER LEVELS: Approx. 104 ft bgs			START: 9/19/2011		END: 9/19/2011		LOGGER: R. Tward (Northstar)	
DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		USCS CODE/ LITHOLOGY	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS		
	RECOVERY (in)	LAB SAMPLE				DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION		
5	0.0	COMPLETE	10301	SP	Poorly Graded Sand (SP) 0.0-17.0' - dark yellowish brown, (10YR 4/4), dry, loose, 5% gravel, 90% sand, 5% fines, angular to subangular, poorly graded, predominantly quartz.		Soil sample collected between 0.0 and 1.0 ft bgs.	
	1.0							
	2.0		10302					
	3.0							
	5.0							
	6.0		10303, 50009					
	9.0							
	10.0		10304					
	14.0							
	15		15.0				10305	
20	19.0		10306	SM	Silty Sand (SM) 17.0-35.0' - brown, (10YR 5/3), dry, loose to partially consolidated, 10% gravel, 60% sand, 30% fines, subangular to subrounded, poorly graded, predominantly quartz.		Soil sample collected between 19.0 and 20.0 ft bgs.	
	20.0							

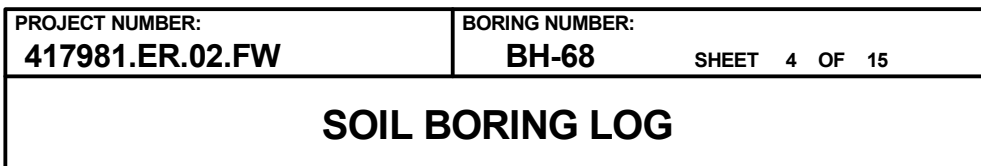


PROJECT NUMBER: 417981.ER.02.FW	BORING NUMBER: BH-68
SHEET 2 OF 15	
SOIL BORING LOG	

PROJECT : PG&E Topock, ER-TCS Investigation	LOCATION : Site 3 (2100773.6 N, 7615453.4 E)
ELEVATION : 621.6 ft	DRILLING CONTRACTOR : Boart Longyear (R. Sawrey)
DRILLING EQUIPMENT AND METHOD : RS-350, Rotasonic drill head and tools	ORIENTATION : Vertical
WATER LEVELS : Approx. 164 ft BGS	START : 5/13/2011 END : 5/16/2011 LOGGER : R. Tweidt (Northstar)

WATER LEVELS : Approx. 104 ft bgs				START : 9/19/2011		END : 9/19/2011		LOGGER : R. Twardt (Northstar)	
DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)			USCS CODE/ LITHOLOGY	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS		
	RECOVERY (in)		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION						
	LAB SAMPLE								
25	COMPLETE			SM	Silty Sand (SM) 17.0-35.0' - brown, (10YR 5/3), dry, loose to partially consolidated, 10% gravel, 60% sand, 30% fines, subangular to subrounded, poorly graded, predominantly quartz.		Soil sample collected between 29.0 and 30.0 ft bgs.		
30	29.0 30.0	10307							
35									
40	39.0 40.0	10308		SW	Well Graded Sand With Gravel (SW) 35.0-62.0' - brown, (10YR 5/3), dry, loose to partially consolidated, 25% gravel, 75% sand, subrounded to subangular, predominantly quartz.		Soil sample collected between 39.0 and 40.0 ft bgs.		





LOGGER : R. Tweidt (Northstar)

DEPTH BELOW EXISTING GRADE (ft)				USCS CODE/ LITHOLOGY	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
INTERVAL (ft)		RECOVERY (in)	LAB SAMPLE		SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
		COMPLETE		SW	Well Graded Sand With Gravel (SW) 35.0-62.0' - brown, (10YR 5/3), dry, loose to partially consolidated, 25% gravel, 75% sand, subrounded to subangular, predominantly quartz.		
65				GW	Well Graded Gravel (GW) 62.0-243.0' - greyish brown, (10YR 5/2), dry, loose to partially consolidated, 40% gravel, 40% sand, 20% fines, angular to subangular, no dominant mineralogy.		
70	69.0 70.0		10311		69' - color change to light yellow brown, (2.5Y 6/3) 70.0-71.0' - Rock flour		Soil sample collected between 69.0 and 70.0 ft bgs.
75							
80	79.0 80.0		10312				Soil sample collected between 79.0 and 80.0 ft bgs.



PROJECT NUMBER: 417981.ER.02.FW	BORING NUMBER: BH-68
SHEET 5 OF 15	
SOIL BORING LOG	

PROJECT : PG&E Topock, ER-TCS Investigation	LOCATION : Site 3 (2100773.6 N, 7615453.4 E)
ELEVATION : 621.6 ft	DRILLING CONTRACTOR : Boart Longyear (R. Sawrey)
DRILLING EQUIPMENT AND METHOD : RS-350, Rotosonic drill head and tools	ORIENTATION : Vertical
WATER LEVELS : Approx. 164 ft BGS	START : 5/13/2011 END : 5/16/2011 LOGGER : R. Tweidt (Northstar)

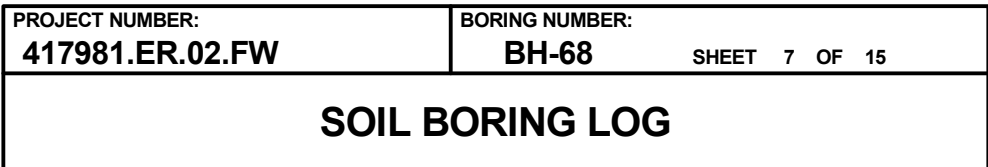
DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	RECOVERY (in)	LAB SAMPLE	USCS CODE/ LITHOLOGY	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
					Well Graded Gravel (GW) 62.0-243.0' - light yellow brown, (2.5Y 6/3), dry, loose to partially consolidated, 40% gravel, 40% sand, 20% fines, angular to subangular, no dominant mineralogy.		
85		COMPLETE			84' - Change to unconsolidated		
90	89.0 90.0		10313	GW			Soil sample collected between 89.0 and 90.0 ft bgs.
95							
100	99.0 100.0		10314, 50010				Soil sample collected between 99.0 and 100.0 ft bgs.



PROJECT NUMBER: 417981.ER.02.FW	BORING NUMBER: BH-68
SHEET 6 OF 15	
SOIL BORING LOG	

PROJECT : PG&E Topock, ER-TCS Investigation	LOCATION : Site 3 (2100773.6 N, 7615453.4 E)
ELEVATION : 621.6 ft	DRILLING CONTRACTOR : Boart Longyear (R. Sawrey)
DRILLING EQUIPMENT AND METHOD : RS-350, Rotasonic drill head and tools	ORIENTATION : Vertical
WATER LEVELS : Approx. 164 ft BGS	START : 5/13/2011 END : 5/16/2011 LOGGER : R. Tweidt (Northstar)

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	RECOVERY (in)	LAB SAMPLE	USCS CODE/ LITHOLOGY	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
					Well Graded Gravel (GW) 62.0-243.0' - light yellow brown, (2.5Y 6/3), dry, loose to partially consolidated, 40% gravel, 40% sand, 20% fines, angular to subangular, no dominant mineralogy.		
					102' - Change to partially consolidated		
105					105' - Color change to light yellow brown (2.5Y 6/3)		
					109.0-110.0' - Rock flour		Soil sample collected between 109.0 and 110.0 ft bgs.
110	109.0 110.0		10315	GW	111.5-112.0' - Rock flour		
					115.0-115.5' - Rock flour		
115							
							Soil sample collected between 119.0 and 120.0 ft bgs.
120	119.0 120.0		10316				




LOGGER : R. Tweidt (Northstar)

[illegible]



PROJECT NUMBER: 417981.ER.02.FW	BORING NUMBER: BH-68
SHEET 8 OF 15	
SOIL BORING LOG	

PROJECT : PG&E Topock, ER-TCS Investigation	LOCATION : Site 3 (2100773.6 N, 7615453.4 E)
ELEVATION : 621.6 ft	DRILLING CONTRACTOR : Boart Longyear (R. Sawrey)
DRILLING EQUIPMENT AND METHOD : RS-350, Rotosonic drill head and tools	ORIENTATION : Vertical
WATER LEVELS : Approx. 164 ft BGS	START : 5/13/2011 END : 5/16/2011 LOGGER : R. Tweidt (Northstar)

WATER LEVEL: 7.75 DIA. 104 R.D.S.		START: 9/13/2017		END: 9/13/2017		EQUIP. R. Field (Hemstar)	
DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)		USCS CODE/ LITHOLOGY	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS	
	RECOVERY (in)	LAB SAMPLE				DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION	
145		COMPLETE	GW	Well Graded Gravel (GW) 62.0-243.0' - light yellow brown, (2.5Y 6/3), dry, 40% gravel, 40% sand, 20% fines, angular to subangular, no dominant mineralogy, partially consolidated from 102.0 ft		Soil sample collected between 149.0 and 150.0 ft bgs.	
150	149.0 150.0	10319					
155							
160	159.0 160.0	10320					



PROJECT NUMBER:
417981.ER.02.FW

BORING NUMBER:
BH-68 SHEET 9 OF 15

SOIL BORING LOG

PROJECT : PG&E Topock, ER-TCS Investigation

LOCATION : Site 3 (2100773.6 N, 7615453.4 E)

ELEVATION : 621.6 ft

DRILLING CONTRACTOR : Boart Longyear (R. Sawrey)

DRILLING EQUIPMENT AND METHOD : RS-350, Rotosonic drill head and tools

ORIENTATION : Vertical

WATER LEVELS : Approx. 164 ft BGS

START : 5/13/2011

END : 5/16/2011

LOGGER : R. Tweidt (Northstar)

DEPTH BELOW EXISTING GRADE (ft)			USCS CODE/ LITHOLOGY	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
INTERVAL (ft)	RECOVERY (in)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION		
	LAB SAMPLE					
165	COMPLETE		GW	Well Graded Gravel (GW) 62.0-243.0' - greyish brown, (10YR 5/2), dry, loose to partially consolidated, 40% gravel, 40% sand, 20% fines, angular to subangular, no dominant mineralogy. 163' - Increase in metadiorite fraction of gravel; increase in average gravel size to coarse; change to subangular. 164' - Saturated 		



PROJECT NUMBER: 417981.ER.02.FW	BORING NUMBER: BH-68
SHEET 10 OF 15	
SOIL BORING LOG	

PROJECT : PG&E Topock, ER-TCS Investigation	LOCATION : Site 3 (2100773.6 N, 7615453.4 E)
ELEVATION : 621.6 ft	DRILLING CONTRACTOR : Boart Longyear (R. Sawrey)
DRILLING EQUIPMENT AND METHOD : RS-350, Rotosonic drill head and tools	ORIENTATION : Vertical
WATER LEVELS : Approx. 164 ft BGS	START : 5/13/2011 END : 5/16/2011 LOGGER : R. Tweidt (Northstar)

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	RECOVERY (in)	LAB SAMPLE	USCS CODE/ LITHOLOGY	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
					Well Graded Gravel (GW) 62.0-243.0' - light yellow brown, (2.5Y 6/3), 40% gravel, 40% sand, 20% fines, highly angular from 173.0 ft bgs, predominantly metadiorite gravel from 163.0 ft bgs, partially consolidated from 102.0 ft bgs, matrix-supported, saturated from 164.0 ft bgs.		
185		COMPLETE	BH-68-20301				
187.0							Grab groundwater sample collected from borehole between 187.0 and 197.0 ft bgs.
190				GW			
195							
200					197.0-198.0' - Metadiorite boulder		



PROJECT NUMBER: 417981.ER.02.FW	BORING NUMBER: BH-68
SHEET 11 OF 15	
SOIL BORING LOG	

PROJECT : PG&E Topock, ER-TCS Investigation	LOCATION : Site 3 (2100773.6 N, 7615453.4 E)
ELEVATION : 621.6 ft	DRILLING CONTRACTOR : Boart Longyear (R. Sawrey)
DRILLING EQUIPMENT AND METHOD : RS-350, Rotasonic drill head and tools	ORIENTATION : Vertical
WATER LEVELS : Approx. 164 ft BGS	START : 5/13/2011 END : 5/16/2011 LOGGER : R. Tweidt (Northstar)

WATER LEVELS : Approx. 104 ft bgs			START : 9/19/2011		END : 9/19/2011		LOGGER : R. Twardt (Northstar)	
DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)			USCS CODE/ LITHOLOGY	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS	
	RECOVERY (in)		LAB SAMPLE					
		COMPLETE			Well Graded Gravel (GW) 62.0-243.0' - light yellow brown, (2.5Y 6/3), 40% gravel, 40% sand, 20% fines, highly angular from 173.0 ft bgs, predominantly metadiorite gravel from 163.0 ft bgs, partially consolidated from 102.0 ft bgs, matrix-supported, saturated from 164.0 ft bgs.			
205					205.0-207.0' - Coarse-grained sand			
207.0							Grab groundwater sample collected from borehole between 207.0 and 217.0 ft bgs.	
210				GW				
			BH-68-20302		212' - Color change to pale olive (5Y 6/3)			
215								
217.0							Stop 05/14/2011 at 1700 at 217 ft bgs. Resume 05/15/2011 at 1130	
220								



PROJECT NUMBER:
417981.ER.02.FW

BORING NUMBER:
BH-68 SHEET 12 OF 15

SOIL BORING LOG

PROJECT : PG&E Topock, ER-TCS Investigation

LOCATION : Site 3 (2100773.6 N, 7615453.4 E)

ELEVATION : 621.6 ft

DRILLING CONTRACTOR : Boart Longyear (R. Sawrey)

DRILLING EQUIPMENT AND METHOD : RS-350, Rotasonic drill head and tools

ORIENTATION : Vertical

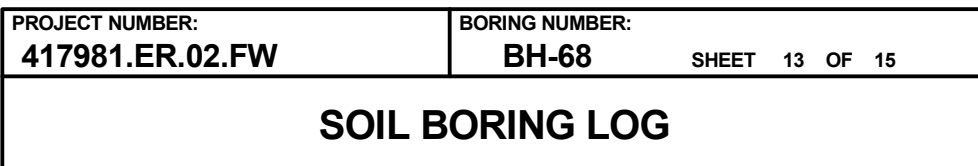
WATER LEVELS : Approx. 164 ft BGS

START : 5/13/2011

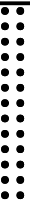
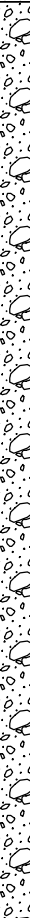
END : 5/16/2011

LOGGER : R. Tweidt (Northstar)

DEPTH BELOW EXISTING GRADE (ft)			USCS CODE/ LITHOLOGY	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
INTERVAL (ft)	RECOVERY (in)	LAB SAMPLE		SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
	COMPLETE		GW	Well Graded Gravel (GW) 62.0-243.0' - olive grey, (5Y 5/2), 40% gravel, 40% sand, 20% fines, highly angular from 173.0 ft bgs, predominantly metadiorite gravel from 163.0 ft bgs, partially consolidated from 102.0 ft bgs, matrix-supported, saturated from 164.0 ft bgs.		
225			CL	Clay With Silt (CL) 226.5-227.0' - olive grey, (5Y 5/2), saturated, 100% fines, low dilatancy, soft, matrix-supported		
			GW	Well Graded Gravel (GW) 227.0-243.0' - pale olive, (5Y 6/3), saturated, 40% gravel, 40% sand, 20% fines, angular to subangular, predominantly metadiorite gravel, dense. 229.0-230.0' - Rock flour 233.0-234.0' - Change to 40% gravel, 50% sand, 10% fines, color change to light olive brown (2.5Y 5/3) 238.5-239.0' - Color change to black 239' - Color change to brown (10YR 5/3)		
230						
	235.0					
235						



LOGGER : R. Tweidt (Northstar)

WATER LEVELS: Approx. 104 ft bgs				START: 5/13/2011		END: 5/10/2011		LOGGER: R. Twardt (Northstar)	
DEPTH BELOW EXISTING GRADE (ft)				USCS CODE/ LITHOLOGY	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS		
INTERVAL (ft)	RECOVERY (in)		LAB SAMPLE				DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION		
		COMPLETE		BH-68-20303	GW	Well Graded Gravel (GW) 227.0-243.0' - brown, (10YR 5/3), saturated, 40% gravel, 40% sand, 20% fines, angular to subangular, poorly graded, predominantly metadiorite gravel, dense, matrix-supported,			
					Tmc	Conglomerate (Tmc) 243.0-257.0' - massive, red (2.5YR 4/8)			
245	245.0						Stop 05/15/2011 at 1630 at 245 ft bgs. Resume 05/16/2011 at 1000		
							Stop 05/16/2011 at 1100. Drilling complete.		
							Initiate rock core drilling at 1115 on 8/10/2011		



PROJECT NUMBER:
417981.ER.02.FW

BORING NUMBER:

BH-68

SHEET 14 OF 15

ROCK CORE LOG

PROJECT : PG&E Topock, ER-TCS Investigation

LOCATION : Site 3 (2100773.6 N, 7615453.4 E)

ELEVATION : 621.6 ft

DRILLING CONTRACTOR : Boart Longyear (R. Sawrey)

CORING EQUIPMENT AND METHOD : RS-350, Wire-Line Rotary

ORIENTATION : Vertical

WATER LEVELS : Approx. 164 ft BGS

START : 5/13/2011

END : 5/16/2011

LOGGER : R. Tweidt (Northstar)

DEPTH BELOW SURFACE (ft)	CORE RUN LENGTH AND RECOVERY (%)	DISCONTINUITIES			SYMBOLIC LOG	LITHOLOGY	COMMENTS
		RQD (%)	FRACTURES PER FOOT	DESCRIPTION			
				DEPTH, TYPE, ORIENTATION, ROUGHNESS, PLANARITY, INFILLING MATERIAL AND THICKNESS, SURFACE STAINING, AND TIGHTNESS		ROCK TYPE, COLOR, MINERALOGY, TEXTURE, HARDNESS, WEATHERING, AND ROCK MASS CHARACTERISTICS	SIZE AND DEPTH OF CASING, FLUID LOSS, CORING RATE AND SMOOTHNESS, CAVING ROD DROPS, TEST RESULTS, ETC.
257.0	R1 3 ft 70%	28	NR			Miocene Conglomerate (Tmc) 257.0-257.8' - moderate brown, (5YR 4/4)	Run 1 (257 ft - 260 ft), Drill rate = 0.55 ft/min
260	260.0		8	258.0-258.5' - abundant joints, no dominant orientation, not healed, rough, dry			
			>10	258.5-263.5' - fracture zone, no dominant orientation, presence of moderately to totally healed fractures, some 60 degree dip angles between 262 and 263 ft bgs.		Metadiorite (pTbr) 257.8-280.5' - pale yellowish brown (10YR 8/6), non-foliated, uniform, slightly to moderately decomposed, slightly disintegrated, slightly to moderately fractured	
			>10				Run 2 (260 ft - 264.5 ft), Drill rate = 0.28 ft/min
			3				
	R2 4.5 ft 75%	44	>10	263.0-264.5' - shear zone, dry, rough			
			>10				
265	264.5		>10	264.5-269.5' - undulating, few joints observed, narrow presence of totally healed fractures, mineralization, dry		265.5' - Color change to dusky yellow green (5GY 5/2)	Run 3 (264.5 ft - 269.5 ft), Drill rate = 0.41 ft/min
			2				
	R3 5 ft 80%	93	1				
			1				
			1				
270	269.5		>10	269.5-273.5' - undulating, fracture zones, no dominant orientation, not healed, dry			Run 4 (269.5 ft - 270.5 ft), Drill rate = 0.44 ft/min
	R4 1 ft 50%	0	>10				Run 5 (270.5 ft - 275.5 ft), Drill rate = 0.45 ft/min
			>10				
			>10				
	R5 5 ft 70%	15	>10				
			3				
			5				
275	275.5		>10	276.0-280.5' - undulating, fracture zone, no dominant orientation, not healed, surface staining			Run 6 (275.5 ft - 280.5 ft), Drill rate = 0.3 ft/min
			>10				



PROJECT NUMBER:
417981.ER.02.FW

BORING NUMBER:
BH-68

SHEET 15 OF 15

ROCK CORE LOG

PROJECT : PG&E Topock, ER-TCS Investigation

LOCATION : Site 3 (2100773.6 N, 7615453.4 E)

ELEVATION : 621.6 ft

DRILLING CONTRACTOR : Boart Longyear (R. Sawrey)

CORING EQUIPMENT AND METHOD : RS-350, Wire-Line Rotary

ORIENTATION : Vertical

WATER LEVELS : Approx. 164 ft BGS

START : 5/13/2011

END : 5/16/2011

LOGGER : R. Tweidt (Northstar)

DEPTH BELOW SURFACE (ft)	CORE RUN LENGTH AND RECOVERY (%)	DISCONTINUITIES			SYMBOLIC LOG	LITHOLOGY	COMMENTS
		R Q D (%)	FRACTURES PER FOOT	DESCRIPTION		ROCK TYPE, COLOR, MINERALOGY, TEXTURE, HARDNESS, WEATHERING, AND ROCK MASS CHARACTERISTICS	SIZE AND DEPTH OF CASING, FLUID LOSS, CORING RATE AND SMOOTHNESS, CAVING ROD DROPS, TEST RESULTS, ETC.
				DEPTH, TYPE, ORIENTATION, ROUGHNESS, PLANARITY, INFILLING MATERIAL AND THICKNESS, SURFACE STAINING, AND TIGHTNESS			
280	R6 5 ft 70%	15	>10	276.0-280.5' - undulating, fracture zone, no dominant orientation, not healed, surface staining		Metadiorite (pTbr) 257.8-280.5' - pale yellowish brown (10YR 8/6), non-foliated, uniform, slightly to moderately decomposed, slightly disintegrated, slightly to moderately fractured	
			>10				
			>10				
280.5			>10				
						End Drilling on 5/16/2011 Total Borehole Depth: 280.5 ft bgs	This borehole was converted into the following monitoring well(s): MW-68-180, MW-68-240, and MW-68BR-280
285							
290							
295							