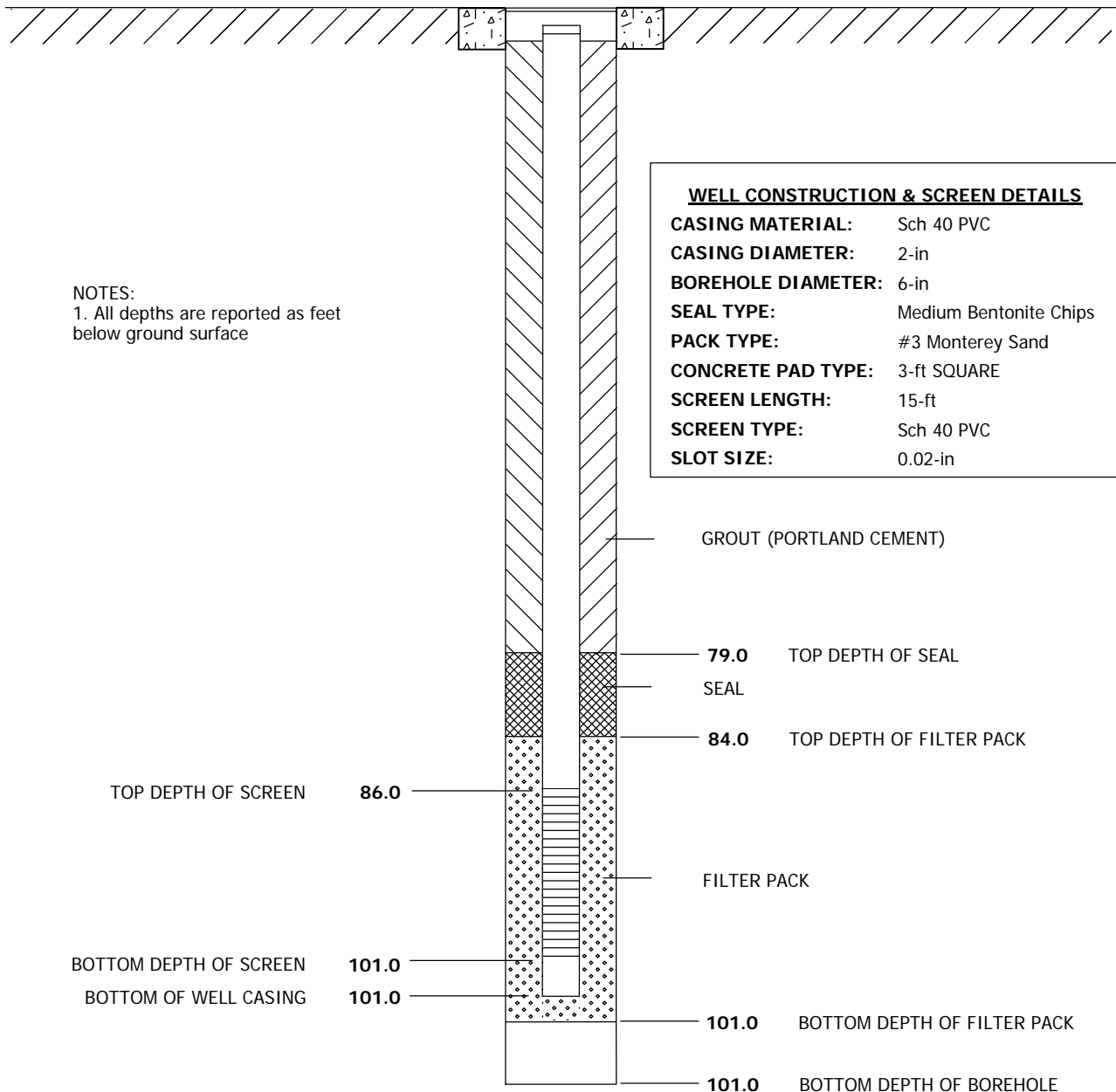


WELL COMPLETION DIAGRAM

PROJECT NO: 382653.FP.04.FW	PROJECT: PG&E Topock - ERGI	WELL NO: <i>MW-59-100</i>
LOCATION: Site G		
DRILLING CONTRACTOR: Boart Longyear (D. Roberts)	DRILLING START: 2/25/2009	
DRILLING METHOD: Rotosonic	DRILLING END: 2/26/2009	
LOGGER: A. Brewster (Northstar)	WELL COMPLETION DATE: 2/26/2009	
GROUND SURFACE ELEVATION (NAVD 88): 538.94 ft AMSL	GENERAL REMARKS: Alias during field work: MW-59	
NORTHING (CCS NAD 83 Z 5): 2100851.96		

12-IN DIAMETER MONUMENT CASING



<u>WELL CONSTRUCTION & SCREEN DETAILS</u>	
CASING MATERIAL:	Sch 40 PVC
CASING DIAMETER:	2-in
BOREHOLE DIAMETER:	6-in
SEAL TYPE:	Medium Bentonite Chips
PACK TYPE:	#3 Monterey Sand
CONCRETE PAD TYPE:	3-ft SQUARE
SCREEN LENGTH:	15-ft
SCREEN TYPE:	Sch 40 PVC
SLOT SIZE:	0.02-in

NOTES:
1. All depths are reported as feet below ground surface

WELL DIAGRAM IS NOT TO SCALE



PROJECT NUMBER:
382653.FP.04.FW

BORING NUMBER:
MW-59

SHEET 1 OF 6

SOIL BORING LOG

PROJECT : PG&E Topock - ERGI

LOCATION : Site G (2100852.0 N, 7616081.9 E)

ELEVATION : 538.9 ft

DRILLING CONTRACTOR : Boart Longyear (D. Roberts)

DRILLING EQUIPMENT AND METHOD : Track-mounted Rig, Rotosonic drill head and tools

ORIENTATION : Vertical

WATER LEVELS : Approx. 84 ft BGS

START : 2/25/2009

END : 2/26/2009

LOGGER : A. Brewster (Northstar)

DEPTH BELOW EXISTING GRADE (ft)		USCS CODE/ LITHOLOGY	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
INTERVAL (ft)	RECOVERY (in)				
			Silty Sand (SM) 0-82.0' - brown, (10YR 4/3), dry, loose, 10% gravel, 75% sand, 15% fines, angular to subangular, poor to moderate grading, matrix supported, max clast size = 80 mm.		Target depth of boring is 15 feet past static water level.
		SM	3.5-18.5' - yellowish brown, (10YR 5/4)		
			18.5-71.0' brown, (10YR 4/3)		



PROJECT NUMBER: 382653.FP.04.FW	BORING NUMBER: MW-59	SHEET 2 OF 6
SOIL BORING LOG		

PROJECT : PG&E Topock - ERGI	LOCATION : Site G (2100852.0 N, 7616081.9 E)
ELEVATION : 538.9 ft	DRILLING CONTRACTOR : Boart Longyear (D. Roberts)
DRILLING EQUIPMENT AND METHOD : Track-mounted Rig, Rotosonic drill head and tools	ORIENTATION : Vertical
WATER LEVELS : Approx. 84 ft BGS	START : 2/25/2009 END : 2/26/2009 LOGGER : A. Brewster (Northstar)

DEPTH BELOW EXISTING GRADE (ft)			USCS CODE/ LITHOLOGY	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
INTERVAL (ft)	RECOVERY (in)	LAB SAMPLE				
25	COMPLETE		SM	Silty Sand (SM) 0-82.0' - brown from 18.5', (10YR 4/3), dry, loose, 10% gravel, 75% sand, 15% fines, angular to subangular, poor to moderate grading, matrix supported, max clast size = 80 mm.	(Symbolic log representation of soil texture)	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
30						
35						
40						



PROJECT NUMBER: 382653.FP.04.FW	BORING NUMBER: MW-59
SHEET 3 OF 6	
<h2 style="margin: 0;">SOIL BORING LOG</h2>	

PROJECT : PG&E Topock - ERGI	LOCATION : Site G (2100852.0 N, 7616081.9 E)
ELEVATION : 538.9 ft	DRILLING CONTRACTOR : Boart Longyear (D. Roberts)
DRILLING EQUIPMENT AND METHOD : Track-mounted Rig, Rotosonic drill head and tools	ORIENTATION : Vertical
WATER LEVELS : Approx. 84 ft BGS	START : 2/25/2009 END : 2/26/2009 LOGGER : A. Brewster (Northstar)

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	RECOVERY (in)	LAB SAMPLE	USCS CODE/ LITHOLOGY	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
					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
45		COMPLETE		SM	Silty Sand (SM) 0-82.0' - brown from 18.5', (10YR 4/3), dry, loose, 10% gravel, 75% sand, 15% fines, angular to subangular, poor to moderate grading, matrix supported, max clast size = 80 mm.		
50							
55							
60							



PROJECT NUMBER: 382653.FP.04.FW	BORING NUMBER: MW-59	SHEET 4 OF 6
SOIL BORING LOG		

PROJECT : PG&E Topock - ERGI	LOCATION : Site G (2100852.0 N, 7616081.9 E)
ELEVATION : 538.9 ft	DRILLING CONTRACTOR : Boart Longyear (D. Roberts)
DRILLING EQUIPMENT AND METHOD : Track-mounted Rig, Rotasonic drill head and tools	ORIENTATION : Vertical
WATER LEVELS : Approx. 84 ft BGS	START : 2/25/2009 END : 2/26/2009 LOGGER : A. Brewster (Northstar)

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)			USCS CODE/ LITHOLOGY	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	SYMBOLIC LOG	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
	RECOVERY (in)		LAB SAMPLE				
	COMPLETE						
65				SM	Silty Sand (SM) 0-82.0' - brown from 18.5', (10YR 4/3), dry, loose, 10% gravel, 75% sand, 15% fines, angular to subangular, poor to moderate grading, matrix supported, max clast size = 80 mm.		
70					71.0-82.0' brown, (7.5YR 4/3)		
75							
80							



PROJECT NUMBER: 382653.FP.04.FW	BORING NUMBER: MW-59
SHEET 6 OF 6	
<h2 style="margin: 0;">SOIL BORING LOG</h2>	

PROJECT : PG&E Topock - ERGI	LOCATION : Site G (2100852.0 N, 7616081.9 E)
ELEVATION : 538.9 ft	DRILLING CONTRACTOR : Boart Longyear (D. Roberts)
DRILLING EQUIPMENT AND METHOD : Track-mounted Rig, Rotasonic drill head and tools	ORIENTATION : Vertical
WATER LEVELS : Approx. 84 ft BGS	START : 2/25/2009 END : 2/26/2009 LOGGER : A. Brewster (Northstar)

DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	RECOVERY (in)	LAB SAMPLE	USCS CODE/ LITHOLOGY	SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
					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
105	COMPLETE			SP	Poorly Graded Sand With Gravel (SP) 82.0-101.0' - mixture of very dark greyish brown, (10YR 3/2), and dark reddish brown, (5YR 3/4), from 97.0', loose to medium dense, 40% gravel, 60% sand, 0% fines, subangular to subrounded, poorly graded, saturated from 84.0', matrix supported, max clast size = 50 mm. End Drilling on 2/26/2009 Total Borehole Depth: 101.0 ft bgs	SYMBOLIC LOG	
110							
115							
120							