

Permian District

Poker Lake

PLU Big Sinks 26 Fed 1H

PLU Big Sinks 26 Fed 1H

Pilot Hole

Plan: Pilot design 2

Standard Planning Report

14 October, 2009

MR

Chesapeake Operating

Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Well PLU Big Sinks 26 Fed 1H
Company:	Permian District	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Project:	Poker Lake	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	PLU Big Sinks 26 Fed 1H	North Reference:	True
Well:	PLU Big Sinks 26 Fed 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	Pilot design 2		

Project:	Poker Lake, Eddy County, NM		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site:	PLU Big Sinks 26 Fed 1H			
Site Position:		Northing:	430,290.76 ft	Latitude: 32° 10' 55.39000000 N
From:	Lat/Long	Easting:	688,288.82 ft	Longitude: 103° 51' 30.04000000 W
Position Uncertainty:	0.0 ft	Slot Radius:	0.000 in	Grid Convergence: 0.25 °

Well:	PLU Big Sinks 26 Fed 1H			
Well Position	+N/-S	0.0 ft	Northing:	430,290.76 ft
	+E/-W	0.0 ft	Easting:	688,288.82 ft
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft
			Ground Level:	0.0 ft

Wellbore:	Pilot Hole				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	User Defined	10/10/2009	0.00	0.00	0

Design:	Pilot design 2			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	0.00

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
6,783.4	0.00	0.00	6,783.4	0.0	0.0	0.00	0.00	0.00	0.00	
7,783.4	20.00	360.00	7,763.2	172.8	0.0	2.00	2.00	0.00	360.00	
7,863.0	20.00	360.00	7,838.0	200.0	0.0	0.00	0.00	0.00	0.00	Bone Spring Top
11,440.8	20.00	360.00	11,200.0	1,423.7	0.0	0.00	0.00	0.00	0.00	

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Well:	PLU Big Sinks 26 Fed 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	Pilot design 2		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00	

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Wellbore:	Pilot Hole		
Design:	Pilot design 2		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,783.4	0.00	0.00	6,783.4	0.0	0.0	0.0	0.00	0.00	0.00	
6,800.0	0.33	360.00	6,800.0	0.0	0.0	0.0	2.00	2.00	0.00	
6,900.0	2.33	360.00	6,900.0	2.4	0.0	2.4	2.00	2.00	0.00	
7,000.0	4.33	360.00	6,999.8	8.2	0.0	8.2	2.00	2.00	0.00	
7,100.0	6.33	360.00	7,099.4	17.5	0.0	17.5	2.00	2.00	0.00	
7,200.0	8.33	360.00	7,198.5	30.2	0.0	30.2	2.00	2.00	0.00	
7,300.0	10.33	360.00	7,297.2	46.5	0.0	46.5	2.00	2.00	0.00	
7,400.0	12.33	360.00	7,395.2	66.1	0.0	66.1	2.00	2.00	0.00	
7,500.0	14.33	360.00	7,492.5	89.2	0.0	89.2	2.00	2.00	0.00	
7,600.0	16.33	360.00	7,589.0	115.6	0.0	115.6	2.00	2.00	0.00	
7,700.0	18.33	360.00	7,684.4	145.4	0.0	145.4	2.00	2.00	0.00	
7,783.4	20.00	360.00	7,763.2	172.8	0.0	172.8	2.00	2.00	0.00	
7,800.0	20.00	360.00	7,778.8	178.5	0.0	178.5	0.00	0.00	0.00	
7,863.0	20.00	360.00	7,838.0	200.0	0.0	200.0	0.00	0.00	0.00	
7,900.0	20.00	360.00	7,872.8	212.7	0.0	212.7	0.00	0.00	0.00	
8,000.0	20.00	360.00	7,966.8	246.9	0.0	246.9	0.00	0.00	0.00	
8,100.0	20.00	360.00	8,060.7	281.1	0.0	281.1	0.00	0.00	0.00	
8,200.0	20.00	360.00	8,154.7	315.3	0.0	315.3	0.00	0.00	0.00	
8,300.0	20.00	360.00	8,248.7	349.5	0.0	349.5	0.00	0.00	0.00	
8,400.0	20.00	360.00	8,342.6	383.7	0.0	383.7	0.00	0.00	0.00	
8,500.0	20.00	360.00	8,436.6	417.9	0.0	417.9	0.00	0.00	0.00	
8,600.0	20.00	360.00	8,530.6	452.1	0.0	452.1	0.00	0.00	0.00	
8,700.0	20.00	360.00	8,624.5	486.3	0.0	486.3	0.00	0.00	0.00	
8,800.0	20.00	360.00	8,718.5	520.5	0.0	520.5	0.00	0.00	0.00	
8,900.0	20.00	360.00	8,812.5	554.7	0.0	554.7	0.00	0.00	0.00	
9,000.0	20.00	360.00	8,906.4	588.9	0.0	588.9	0.00	0.00	0.00	
9,100.0	20.00	360.00	9,000.4	623.1	0.0	623.1	0.00	0.00	0.00	
9,200.0	20.00	360.00	9,094.4	657.3	0.0	657.3	0.00	0.00	0.00	
9,300.0	20.00	360.00	9,188.4	691.5	0.0	691.5	0.00	0.00	0.00	
9,400.0	20.00	360.00	9,282.3	725.7	0.0	725.7	0.00	0.00	0.00	
9,500.0	20.00	360.00	9,376.3	759.9	0.0	759.9	0.00	0.00	0.00	
9,600.0	20.00	360.00	9,470.3	794.1	0.0	794.1	0.00	0.00	0.00	
9,700.0	20.00	360.00	9,564.2	828.3	0.0	828.3	0.00	0.00	0.00	
9,800.0	20.00	360.00	9,658.2	862.5	0.0	862.5	0.00	0.00	0.00	
9,900.0	20.00	360.00	9,752.2	896.7	0.0	896.7	0.00	0.00	0.00	
10,000.0	20.00	360.00	9,846.1	930.9	0.0	930.9	0.00	0.00	0.00	
10,100.0	20.00	360.00	9,940.1	965.1	0.0	965.1	0.00	0.00	0.00	
10,200.0	20.00	360.00	10,034.1	999.3	0.0	999.3	0.00	0.00	0.00	
10,300.0	20.00	360.00	10,128.0	1,033.5	0.0	1,033.5	0.00	0.00	0.00	

Chesapeake Operating

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Well:	PLU Big Sinks 26 Fed 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	Pilot design 2		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
10,400.0	20.00	360.00	10,222.0	1,067.7	0.0	1,067.7	0.00	0.00	0.00	
10,500.0	20.00	360.00	10,316.0	1,101.9	0.0	1,101.9	0.00	0.00	0.00	
10,600.0	20.00	360.00	10,410.0	1,136.1	0.0	1,136.1	0.00	0.00	0.00	
10,700.0	20.00	360.00	10,503.9	1,170.3	0.0	1,170.3	0.00	0.00	0.00	
10,800.0	20.00	360.00	10,597.9	1,204.5	0.0	1,204.5	0.00	0.00	0.00	
10,900.0	20.00	360.00	10,691.9	1,238.7	0.0	1,238.7	0.00	0.00	0.00	
11,000.0	20.00	360.00	10,785.8	1,272.9	0.0	1,272.9	0.00	0.00	0.00	
11,100.0	20.00	360.00	10,879.8	1,307.1	0.0	1,307.1	0.00	0.00	0.00	
11,200.0	20.00	360.00	10,973.8	1,341.3	0.0	1,341.3	0.00	0.00	0.00	
11,300.0	20.00	360.00	11,067.7	1,375.5	0.0	1,375.5	0.00	0.00	0.00	
11,400.0	20.00	360.00	11,161.7	1,409.7	0.0	1,409.7	0.00	0.00	0.00	
11,440.8	20.00	360.00	11,200.0	1,423.7	0.0	1,423.7	0.00	0.00	0.00	

Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
- hit/miss target										
- Shape										
Start of drop off	0.00	0.00	8,102.0	502.0	0.0	430,792.75	688,286.60	32° 11' 0.35773429 N	3° 51' 30.04000156 W	
- plan misses target center by 193.5ft at 8214.4ft MD (8168.2 TVD, 320.2 N, 0.0 E)										
- Point										
Bone Spring Top	0.00	0.00	7,838.0	200.0	0.0	430,490.76	688,287.94	2° 10' 57.36917714 N	3° 51' 30.04000074 W	
- plan hits target center										
- Point										



Chesapeake Operating, Inc.

Field: Eddy Co, NM NAD 83
 Site: PLU Big Sinks 26 Federal 1H
 Well: PLU Big Sinks 26 Federal 1H
 Wellpath: 26 Fed 1H Pilot Hole
 Plan: Plan #1



Azimuths to Grid North
 True North -0 25°
 Magnetic North 7 66°
 Magnetic Field
 Strength: 48786nT
 Dip Angle: 60 16°
 Date: 9/28/2009
 Model: Igr2005

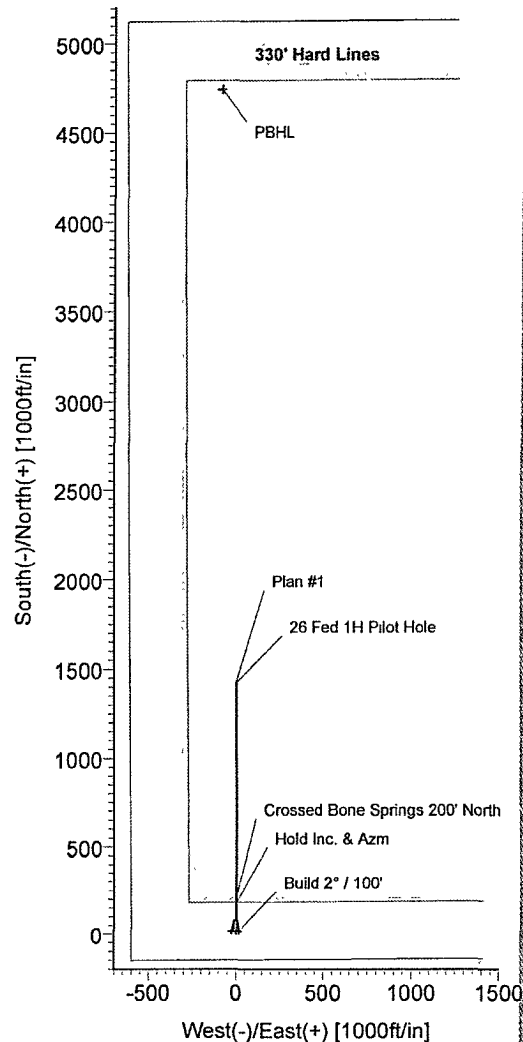
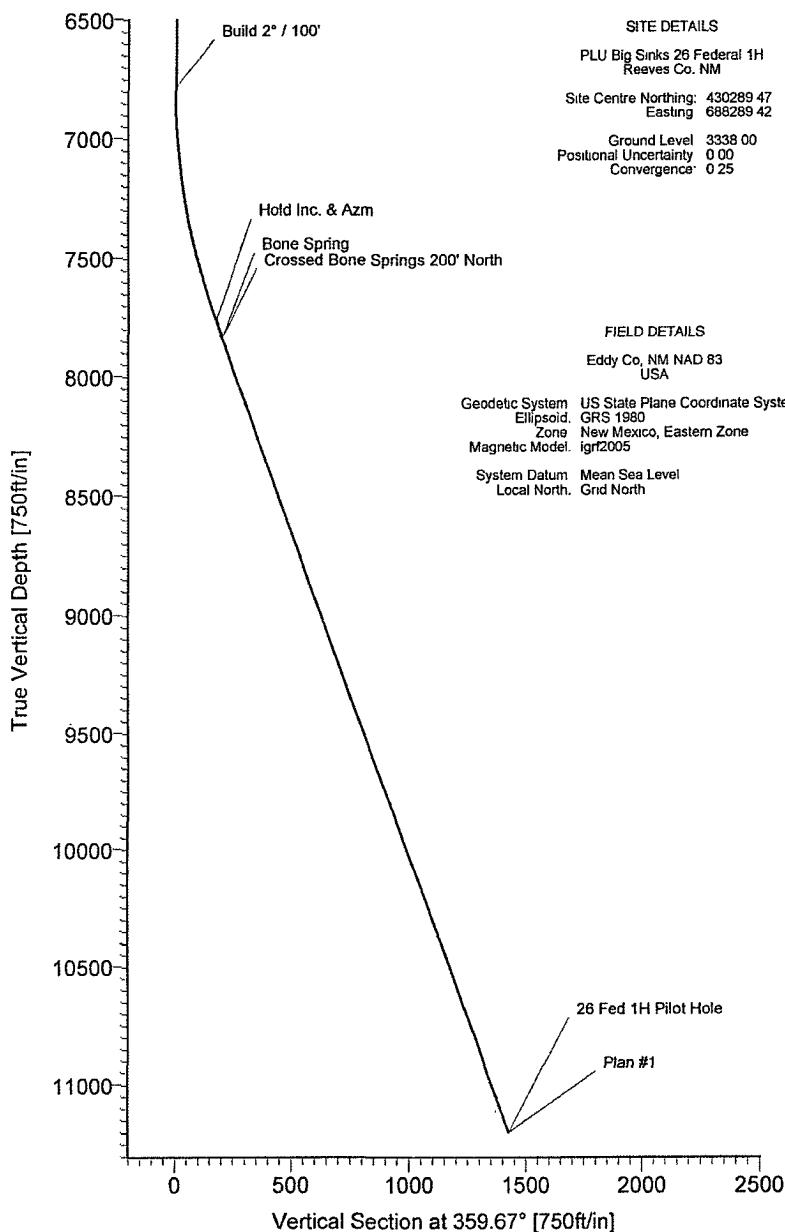
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	6783.40	0.00	0.00	6783.40	0.00	0.00	0.00	0.00	0.00	
3	7783.40	20.00	360.00	7783.22	172.77	0.00	2.00	360.00	172.77	
4	7863.00	20.00	360.00	7838.02	199.99	0.00	0.00	0.00	199.99	
5	11440.80	20.00	360.00	11200.05	1423.67	0.00	0.00	0.00	1423.65	

WELLPATH DETAILS

26 Fed 1H Pilot Hole

Rig:	Latchshaw # 6		
Ref. Datum.	SITE	3360.00ft	
V Section Angle	Origin +N/-S	Origin +E/-W	Starting From TVD
359.67°	0.00	0.00	0.00



Ryan Energy Technologies
 19510 Oil Center Blvd
 Houston, TX 77073
 Ph: 281-443-1414
 Fx: 281-443-1676



Plan: Plan #1 (PLU Big Sinks 26 Federal 1H Pilot Hole)
 Created By: Michael A. Lawson Date: 10/14/2009
 Checked: _____ Date: _____
 Reviewed: _____ Date: _____
 Approved: _____ Date: _____



Ryan Energy Technologies Planning Report



Company: Chesapeake Operating, Inc. Date: 10/14/2009 Time: 16:19:22 Page: 1
Field: Eddy Co, NM NAD 83 Co-ordinate(NE) Reference: PLU Big Sinks 26 Federal 1H
Site: PLU Big Sinks 26 Federal 1H Vertical (TVD) Reference: SITE 3360.0
Well: PLU Big Sinks 26 Federal 1H Section (VS) Reference: Well (0.00N,0.00E,359.67Azi)
Wellpath: 26 Fed 1H Pilot Hole Plan: Plan #1

Field: Eddy Co, NM NAD 83

USA
Map System: US State Plane Coordinate System 1983
Geo Datum: GRS 1980
Sys Datum: Mean Sea Level

Map Zone: New Mexico, Eastern Zone
Coordinate System: Site Centre
Geomagnetic Model: igrf2005

Site: PLU Big Sinks 26 Federal 1H

Reeves Co. NM

Site Position: Northing: 430289.47 ft Latitude: 32 10 55.377 N
From: Map Easting: 688289.42 ft Longitude: 103 51 30.033 W
Position Uncertainty: 0.00 ft North Reference: Grid
Ground Level: 3338.00 ft Grid Convergence: 0.25 deg

Well: PLU Big Sinks 26 Federal 1H

Slot Name:

Well Position: +N/-S 0.00 ft Northing: 430289.47 ft Latitude: 32 10 55.377 N
+E/-W 0.00 ft Easting: 688289.42 ft Longitude: 103 51 30.033 W
Position Uncertainty: 0.00 ft

Wellpath: 26 Fed 1H Pilot Hole

Current Datum: SITE
Magnetic Data: 9/28/2009
Field Strength: 48786 nT
Vertical Section: Depth From (TVD)
ft

Height: 3360.00 ft

Drilled From: Surface
Tie-on Depth: 0.00 ft
Above System Datum: Mean Sea Level
Declination: 7.91 deg
Mag Dip Angle: 60.16 deg
+N/-S
ft
+E/-W
ft
Direction
deg

0.00 0.00 0.00 359.67

Plan: Plan #1

Date Composed: 9/28/2009
Version: 1
Tied-to: From Surface

Principal: Yes

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6783.40	0.00	0.00	6783.40	0.00	0.00	0.00	0.00	0.00	0.00	
7783.40	20.00	360.00	7763.22	172.77	0.00	2.00	2.00	0.00	360.00	
7863.00	20.00	360.00	7838.02	199.99	0.00	0.00	0.00	0.00	0.00	
11440.80	20.00	360.00	11200.05	1423.67	0.00	0.00	0.00	0.00	0.00	

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
6783.40	0.00	0.00	6783.40	0.00	0.00	0.00	0.00	0.00	0.00	Build 2° / 100'
6800.00	0.33	360.00	6800.00	0.05	0.00	0.05	2.00	2.00	0.00	
6900.00	2.33	360.00	6899.97	2.37	0.00	2.37	2.00	2.00	0.00	
7000.00	4.33	360.00	6999.79	8.18	0.00	8.18	2.00	2.00	0.00	
7100.00	6.33	360.00	7099.36	17.48	0.00	17.48	2.00	2.00	0.00	
7200.00	8.33	360.00	7198.53	30.24	0.00	30.24	2.00	2.00	0.00	Hold Inc. & Azm
7300.00	10.33	360.00	7297.20	46.45	0.00	46.45	2.00	2.00	0.00	
7400.00	12.33	360.00	7395.25	66.10	0.00	66.10	2.00	2.00	0.00	
7500.00	14.33	360.00	7492.55	89.16	0.00	89.16	2.00	2.00	0.00	
7600.00	16.33	360.00	7588.99	115.60	0.00	115.60	2.00	2.00	0.00	
7700.00	18.33	360.00	7684.44	145.39	0.00	145.39	2.00	2.00	0.00	
7783.40	20.00	360.00	7763.22	172.77	0.00	172.77	2.00	2.00	0.00	
7800.00	20.00	360.00	7778.81	178.45	0.00	178.44	0.00	0.00	0.00	
7862.98	20.00	360.00	7838.00	199.99	0.00	199.98	0.00	0.00	0.00	
7863.00	20.00	360.00	7838.02	199.99	0.00	199.99	0.00	0.00	0.00	
7900.00	20.00	360.00	7872.78	212.65	0.00	212.64	0.00	0.00	0.00	Bone Spring Crossed Bone Springs 200'



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Wellpath: 26 Fed 1H Pilot Hole

Date: 10/14/2009 **Time:** 16:19:22 **Page:** 2
Co-ordinate(NE) Reference: PLU Big Sinks 26 Federal 1H
Vertical (TVD) Reference: SITE 3360.0
Section (VS) Reference: Well (0.00N,0.00E,359.67Azi)
Plan: Plan #1

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
8000.00	20.00	360.00	7966.75	246.85	0.00	246.85	0.00	0.00	0.00	
8100.00	20.00	360.00	8060.72	281.05	0.00	281.05	0.00	0.00	0.00	
8200.00	20.00	360.00	8154.69	315.25	0.00	315.25	0.00	0.00	0.00	
8300.00	20.00	360.00	8248.66	349.46	0.00	349.45	0.00	0.00	0.00	
8400.00	20.00	360.00	8342.63	383.66	0.00	383.65	0.00	0.00	0.00	
8500.00	20.00	360.00	8436.60	417.86	0.00	417.85	0.00	0.00	0.00	
8600.00	20.00	360.00	8530.57	452.06	0.00	452.05	0.00	0.00	0.00	
8613.23	20.00	360.00	8543.00	456.59	0.00	456.58	0.00	0.00	0.00	PBHL
8700.00	20.00	360.00	8624.54	486.26	0.00	486.26	0.00	0.00	0.00	
8800.00	20.00	360.00	8718.51	520.47	0.00	520.46	0.00	0.00	0.00	
8900.00	20.00	360.00	8812.48	554.67	0.00	554.66	0.00	0.00	0.00	
9000.00	20.00	360.00	8906.45	588.87	0.00	588.86	0.00	0.00	0.00	
9100.00	20.00	360.00	9000.41	623.07	0.00	623.06	0.00	0.00	0.00	
9200.00	20.00	360.00	9094.38	657.27	0.00	657.26	0.00	0.00	0.00	
9300.00	20.00	360.00	9188.35	691.48	0.00	691.46	0.00	0.00	0.00	
9400.00	20.00	360.00	9282.32	725.68	0.00	725.67	0.00	0.00	0.00	
9500.00	20.00	360.00	9376.29	759.88	0.00	759.87	0.00	0.00	0.00	
9600.00	20.00	360.00	9470.26	794.08	0.00	794.07	0.00	0.00	0.00	
9700.00	20.00	360.00	9564.23	828.28	0.00	828.27	0.00	0.00	0.00	
9800.00	20.00	360.00	9658.20	862.49	0.00	862.47	0.00	0.00	0.00	
9900.00	20.00	360.00	9752.17	896.69	0.00	896.67	0.00	0.00	0.00	
10000.00	20.00	360.00	9846.14	930.89	0.00	930.87	0.00	0.00	0.00	
10100.00	20.00	360.00	9940.11	965.09	0.00	965.08	0.00	0.00	0.00	
10200.00	20.00	360.00	10034.08	999.29	0.00	999.28	0.00	0.00	0.00	
10300.00	20.00	360.00	10128.05	1033.50	0.00	1033.48	0.00	0.00	0.00	
10400.00	20.00	360.00	10222.02	1067.70	0.00	1067.68	0.00	0.00	0.00	
10500.00	20.00	360.00	10315.98	1101.90	0.00	1101.88	0.00	0.00	0.00	
10600.00	20.00	360.00	10409.95	1136.10	0.00	1136.08	0.00	0.00	0.00	
10700.00	20.00	360.00	10503.92	1170.30	0.00	1170.28	0.00	0.00	0.00	
10800.00	20.00	360.00	10597.89	1204.51	0.00	1204.49	0.00	0.00	0.00	
10900.00	20.00	360.00	10691.86	1238.71	0.00	1238.69	0.00	0.00	0.00	
11000.00	20.00	360.00	10785.83	1272.91	0.00	1272.89	0.00	0.00	0.00	
11100.00	20.00	360.00	10879.80	1307.11	0.00	1307.09	0.00	0.00	0.00	
11200.00	20.00	360.00	10973.77	1341.31	0.00	1341.29	0.00	0.00	0.00	
11300.00	20.00	360.00	11067.74	1375.52	0.00	1375.49	0.00	0.00	0.00	
11400.00	20.00	360.00	11161.71	1409.72	0.00	1409.69	0.00	0.00	0.00	
11440.80	20.00	360.00	11200.05	1423.67	0.00	1423.65	0.00	0.00	0.00	

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude --->	<--- Longitude --->
PBHL			8543.00	4744.84	-86.10	435034.31	688203.32	32 11 42.335 N	103 51 30.791 W
-Plan out by 4289.11 at			8543.00	456.59	0.00	430746.06	688289.42	32 10 59.896 N	103 51 30.010 W

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
8613.23	8543.00	Target Line		0.00	359.67
7862.98	7838.00	Bone Spring		0.00	0.00



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Section (VS) Reference: Well (0.00N,0.00E,359.67Azi)
Plan: Plan #1

Annotation

MD ft	TVD ft	
6783.40	6783.40	Build 2° / 100'
7783.40	7763.22	Hold Inc. & Azm
7863.00	7838.02	Crossed Bone Springs 200' North