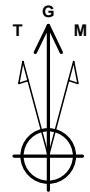




Company: Carrizo Oil & Gas
 Site: Allred
 Well: 25-44-8-60
 Project: Weld County, Colorado (NAD83)
 Rig Name: KB



Planning: 936.442.2510 Fax: 936.442.2515
 Operations: 936.442.2500 Fax: 936.442.2599



Azimuths to Grid North
 True North: -0.95°
 Magnetic North: 7.56°

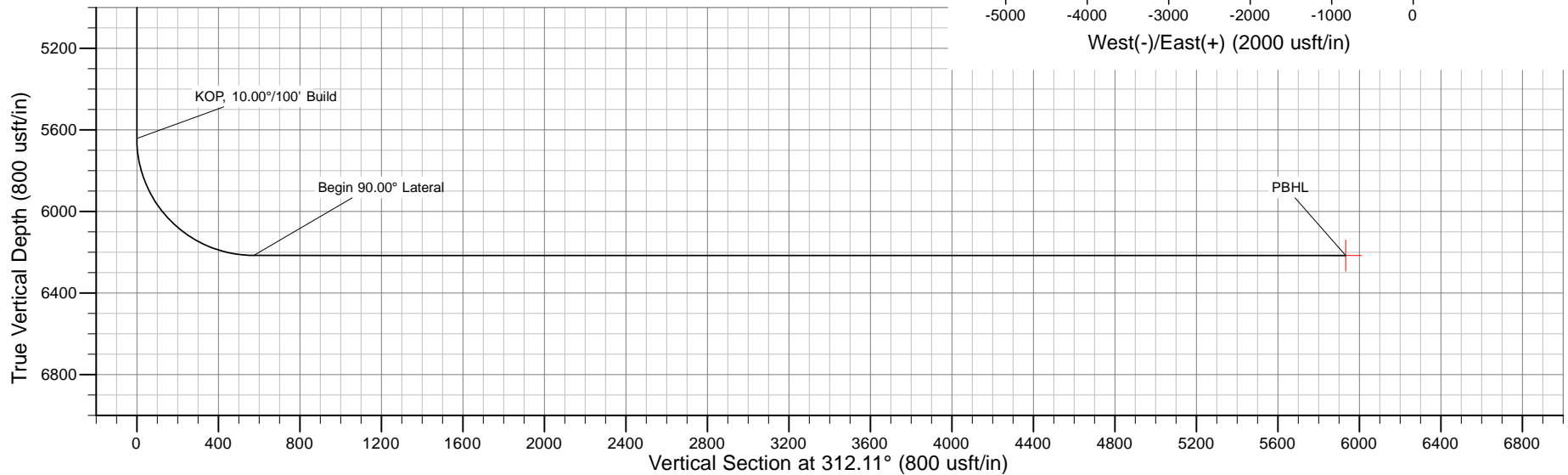
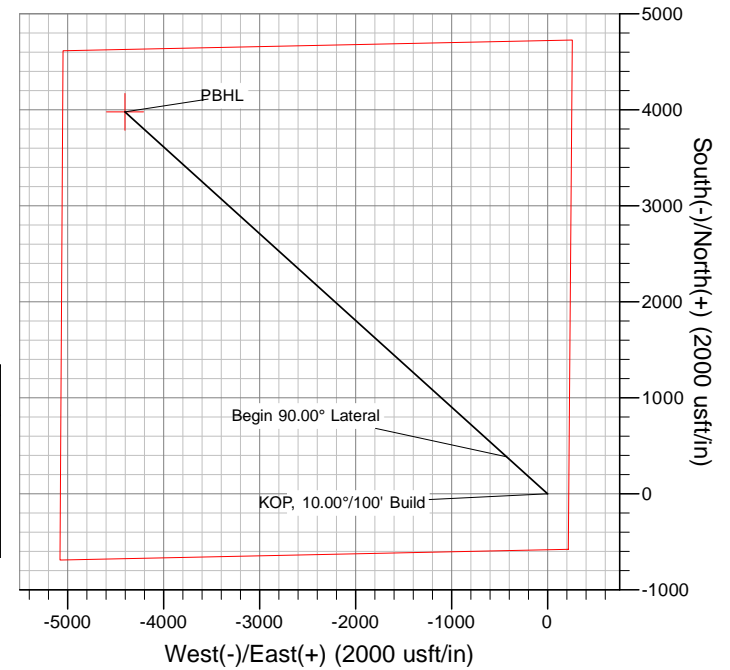
Magnetic Field
 Strength: 53363.5snT
 Dip Angle: 67.36°
 Date: 3/15/2011
 Model: WMM_2010

US State Plane 1983
 Colorado Northern Zone

Created By: Vanessa Thom
 Date: 16:01, March 15 2011
 Plan: Design #1

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
5643.04	0.00	0.00	5643.04	0.00	0.00	0.00	0.00	KOP, 10.00°/100' Build
6543.04	90.00	312.11	6216.00	384.18	-425.08	572.96	572.96	Begin 90.00° Lateral
11903.09	90.00	312.11	6216.00	3978.16	-4401.68	5933.00	5933.00	PBHL



The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented. Any decisions made or wells drilled utilizing this or any other information supplied by MS Energy are at the sole risk and responsibility of the customer. MS Energy is not responsible for the accuracy of this schematic or the information contained herein.



Carrizo Oil & Gas

Weld County, Colorado (NAD83)

Allred

25-44-8-60

Wellbore #1

Plan: Design #1

Standard Planning Report

15 March, 2011

Database:	Southern Region	Local Co-ordinate Reference:	Well 25-44-8-60
Company:	Carrizo Oil & Gas	TVD Reference:	WELL @ 4949.70usft (KB)
Project:	Weld County, Colorado (NAD83)	MD Reference:	WELL @ 4949.70usft (KB)
Site:	Allred	North Reference:	Grid
Well:	25-44-8-60	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Weld County, Colorado (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Well	25-44-8-60			
Well Position	+N/-S	1,474,929.88 usft	Northing:	1,474,929.88 usft
	+E/-W	3,407,680.67 usft	Easting:	3,407,680.67 usft
Position Uncertainty		0.00 usft	Wellhead Elevation:	Latitude: 40° 37' 40.119 N
				Longitude: 104° 1' 52.346 W
				Ground Level: 4,934.70 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	WMM_2010	3/15/2011	8.51	67.36	53,363

Design	Design #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	312.11

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,643.04	0.00	0.00	5,643.04	0.00	0.00	0.00	0.00	0.00	0.00	
6,543.04	90.00	312.11	6,216.00	384.18	-425.08	10.00	10.00	0.00	312.11	
11,903.09	90.00	312.11	6,216.00	3,978.16	-4,401.68	0.00	0.00	0.00	0.00	25-44-8-60 - PBHL v1

Database:	Southern Region	Local Co-ordinate Reference:	Well 25-44-8-60
Company:	Carrizo Oil & Gas	TVD Reference:	WELL @ 4949.70usft (KB)
Project:	Weld County, Colorado (NAD83)	MD Reference:	WELL @ 4949.70usft (KB)
Site:	Allred	North Reference:	Grid
Well:	25-44-8-60	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00

Database:	Southern Region	Local Co-ordinate Reference:	Well 25-44-8-60
Company:	Carrizo Oil & Gas	TVD Reference:	WELL @ 4949.70usft (KB)
Project:	Weld County, Colorado (NAD83)	MD Reference:	WELL @ 4949.70usft (KB)
Site:	Allred	North Reference:	Grid
Well:	25-44-8-60	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,643.04	0.00	0.00	5,643.04	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 10.00°/100' Build									
5,650.00	0.70	312.11	5,650.00	0.03	-0.03	0.04	10.00	10.00	0.00
5,700.00	5.70	312.11	5,699.91	1.90	-2.10	2.83	10.00	10.00	0.00
5,750.00	10.70	312.11	5,749.38	6.67	-7.39	9.95	10.00	10.00	0.00
5,800.00	15.70	312.11	5,798.04	14.33	-15.85	21.36	10.00	10.00	0.00
5,850.00	20.70	312.11	5,845.53	24.79	-27.43	36.97	10.00	10.00	0.00
5,900.00	25.70	312.11	5,891.47	37.99	-42.04	56.66	10.00	10.00	0.00
5,950.00	30.70	312.11	5,935.53	53.83	-59.56	80.28	10.00	10.00	0.00
6,000.00	35.70	312.11	5,977.35	72.18	-79.86	107.64	10.00	10.00	0.00
6,050.00	40.70	312.11	6,016.64	92.90	-102.79	138.55	10.00	10.00	0.00
6,100.00	45.70	312.11	6,053.07	115.84	-128.17	172.77	10.00	10.00	0.00
6,150.00	50.70	312.11	6,086.39	140.82	-155.82	210.02	10.00	10.00	0.00
6,200.00	55.70	312.11	6,116.34	167.66	-185.51	250.05	10.00	10.00	0.00
6,250.00	60.70	312.11	6,142.68	196.14	-217.02	292.53	10.00	10.00	0.00
6,300.00	65.70	312.11	6,165.22	226.06	-250.12	337.14	10.00	10.00	0.00
6,350.00	70.70	312.11	6,183.79	257.17	-284.55	383.55	10.00	10.00	0.00
6,400.00	75.70	312.11	6,198.24	289.26	-320.05	431.40	10.00	10.00	0.00
6,450.00	80.70	312.11	6,208.46	322.06	-356.35	480.32	10.00	10.00	0.00
6,500.00	85.70	312.11	6,214.38	355.34	-393.17	529.96	10.00	10.00	0.00
6,543.04	90.00	312.11	6,216.00	384.18	-425.08	572.96	10.00	10.00	0.00
Begin 90.00° Lateral									
6,600.00	90.00	312.11	6,216.00	422.37	-467.33	629.92	0.00	0.00	0.00
6,700.00	90.00	312.11	6,216.00	489.42	-541.52	729.92	0.00	0.00	0.00
6,800.00	90.00	312.11	6,216.00	556.47	-615.71	829.92	0.00	0.00	0.00
6,900.00	90.00	312.11	6,216.00	623.52	-689.90	929.92	0.00	0.00	0.00
7,000.00	90.00	312.11	6,216.00	690.57	-764.09	1,029.92	0.00	0.00	0.00
7,100.00	90.00	312.11	6,216.00	757.62	-838.28	1,129.92	0.00	0.00	0.00
7,200.00	90.00	312.11	6,216.00	824.68	-912.47	1,229.92	0.00	0.00	0.00
7,300.00	90.00	312.11	6,216.00	891.73	-986.66	1,329.92	0.00	0.00	0.00
7,400.00	90.00	312.11	6,216.00	958.78	-1,060.85	1,429.92	0.00	0.00	0.00
7,500.00	90.00	312.11	6,216.00	1,025.83	-1,135.04	1,529.92	0.00	0.00	0.00
7,600.00	90.00	312.11	6,216.00	1,092.88	-1,209.23	1,629.92	0.00	0.00	0.00
7,700.00	90.00	312.11	6,216.00	1,159.93	-1,283.42	1,729.92	0.00	0.00	0.00
7,800.00	90.00	312.11	6,216.00	1,226.98	-1,357.61	1,829.92	0.00	0.00	0.00
7,900.00	90.00	312.11	6,216.00	1,294.03	-1,431.80	1,929.92	0.00	0.00	0.00
8,000.00	90.00	312.11	6,216.00	1,361.09	-1,505.99	2,029.92	0.00	0.00	0.00
8,100.00	90.00	312.11	6,216.00	1,428.14	-1,580.18	2,129.92	0.00	0.00	0.00
8,200.00	90.00	312.11	6,216.00	1,495.19	-1,654.37	2,229.92	0.00	0.00	0.00
8,300.00	90.00	312.11	6,216.00	1,562.24	-1,728.56	2,329.92	0.00	0.00	0.00
8,400.00	90.00	312.11	6,216.00	1,629.29	-1,802.75	2,429.92	0.00	0.00	0.00
8,500.00	90.00	312.11	6,216.00	1,696.34	-1,876.94	2,529.92	0.00	0.00	0.00
8,600.00	90.00	312.11	6,216.00	1,763.39	-1,951.13	2,629.92	0.00	0.00	0.00
8,700.00	90.00	312.11	6,216.00	1,830.45	-2,025.32	2,729.92	0.00	0.00	0.00
8,800.00	90.00	312.11	6,216.00	1,897.50	-2,099.51	2,829.92	0.00	0.00	0.00
8,900.00	90.00	312.11	6,216.00	1,964.55	-2,173.70	2,929.92	0.00	0.00	0.00
9,000.00	90.00	312.11	6,216.00	2,031.60	-2,247.89	3,029.92	0.00	0.00	0.00
9,100.00	90.00	312.11	6,216.00	2,098.65	-2,322.08	3,129.92	0.00	0.00	0.00
9,200.00	90.00	312.11	6,216.00	2,165.70	-2,396.27	3,229.92	0.00	0.00	0.00
9,300.00	90.00	312.11	6,216.00	2,232.75	-2,470.46	3,329.92	0.00	0.00	0.00

Database:	Southern Region	Local Co-ordinate Reference:	Well 25-44-8-60
Company:	Carrizo Oil & Gas	TVD Reference:	WELL @ 4949.70usft (KB)
Project:	Weld County, Colorado (NAD83)	MD Reference:	WELL @ 4949.70usft (KB)
Site:	Allred	North Reference:	Grid
Well:	25-44-8-60	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,400.00	90.00	312.11	6,216.00	2,299.80	-2,544.65	3,429.92	0.00	0.00	0.00	
9,500.00	90.00	312.11	6,216.00	2,366.86	-2,618.83	3,529.92	0.00	0.00	0.00	
9,600.00	90.00	312.11	6,216.00	2,433.91	-2,693.02	3,629.92	0.00	0.00	0.00	
9,700.00	90.00	312.11	6,216.00	2,500.96	-2,767.21	3,729.92	0.00	0.00	0.00	
9,800.00	90.00	312.11	6,216.00	2,568.01	-2,841.40	3,829.92	0.00	0.00	0.00	
9,900.00	90.00	312.11	6,216.00	2,635.06	-2,915.59	3,929.92	0.00	0.00	0.00	
10,000.00	90.00	312.11	6,216.00	2,702.11	-2,989.78	4,029.92	0.00	0.00	0.00	
10,100.00	90.00	312.11	6,216.00	2,769.16	-3,063.97	4,129.92	0.00	0.00	0.00	
10,200.00	90.00	312.11	6,216.00	2,836.22	-3,138.16	4,229.92	0.00	0.00	0.00	
10,300.00	90.00	312.11	6,216.00	2,903.27	-3,212.35	4,329.92	0.00	0.00	0.00	
10,400.00	90.00	312.11	6,216.00	2,970.32	-3,286.54	4,429.92	0.00	0.00	0.00	
10,500.00	90.00	312.11	6,216.00	3,037.37	-3,360.73	4,529.92	0.00	0.00	0.00	
10,600.00	90.00	312.11	6,216.00	3,104.42	-3,434.92	4,629.92	0.00	0.00	0.00	
10,700.00	90.00	312.11	6,216.00	3,171.47	-3,509.11	4,729.92	0.00	0.00	0.00	
10,800.00	90.00	312.11	6,216.00	3,238.52	-3,583.30	4,829.92	0.00	0.00	0.00	
10,900.00	90.00	312.11	6,216.00	3,305.58	-3,657.49	4,929.92	0.00	0.00	0.00	
11,000.00	90.00	312.11	6,216.00	3,372.63	-3,731.68	5,029.92	0.00	0.00	0.00	
11,100.00	90.00	312.11	6,216.00	3,439.68	-3,805.87	5,129.92	0.00	0.00	0.00	
11,200.00	90.00	312.11	6,216.00	3,506.73	-3,880.06	5,229.92	0.00	0.00	0.00	
11,300.00	90.00	312.11	6,216.00	3,573.78	-3,954.25	5,329.92	0.00	0.00	0.00	
11,400.00	90.00	312.11	6,216.00	3,640.83	-4,028.44	5,429.92	0.00	0.00	0.00	
11,500.00	90.00	312.11	6,216.00	3,707.88	-4,102.63	5,529.92	0.00	0.00	0.00	
11,600.00	90.00	312.11	6,216.00	3,774.93	-4,176.82	5,629.92	0.00	0.00	0.00	
11,700.00	90.00	312.11	6,216.00	3,841.99	-4,251.01	5,729.92	0.00	0.00	0.00	
11,800.00	90.00	312.11	6,216.00	3,909.04	-4,325.20	5,829.92	0.00	0.00	0.00	
11,903.09	90.00	312.11	6,216.00	3,978.16	-4,401.68	5,933.00	0.00	0.00	0.00	
PBHL										

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
25-44-8-60 - PBHL v1	0.00	0.00	6,216.00	3,978.16	-4,401.68	1,478,908.04	3,403,278.99	40° 38' 20.140 N	104° 2' 48.581 W
- hit/miss target									
- Shape									
- plan hits target center									
- Point									

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,643.04	5,643.04	0.00	0.00	KOP, 10.00°/100' Build
6,543.04	6,216.00	384.18	-425.08	Begin 90.00° Lateral
11,903.09	6,216.00	3,978.16	-4,401.68	PBHL