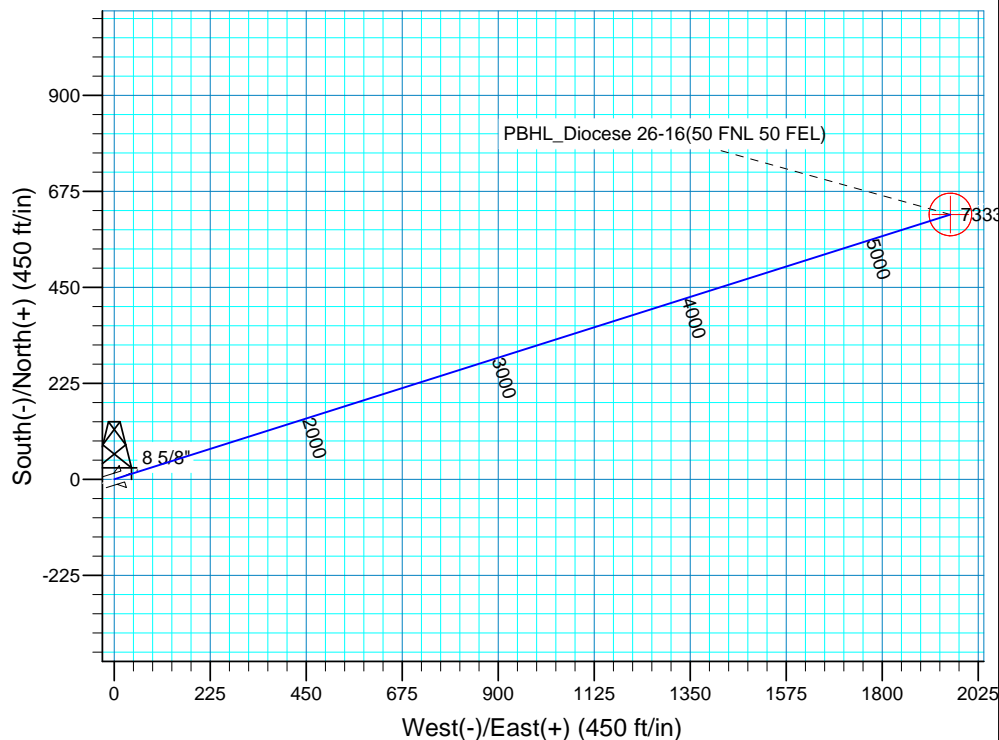
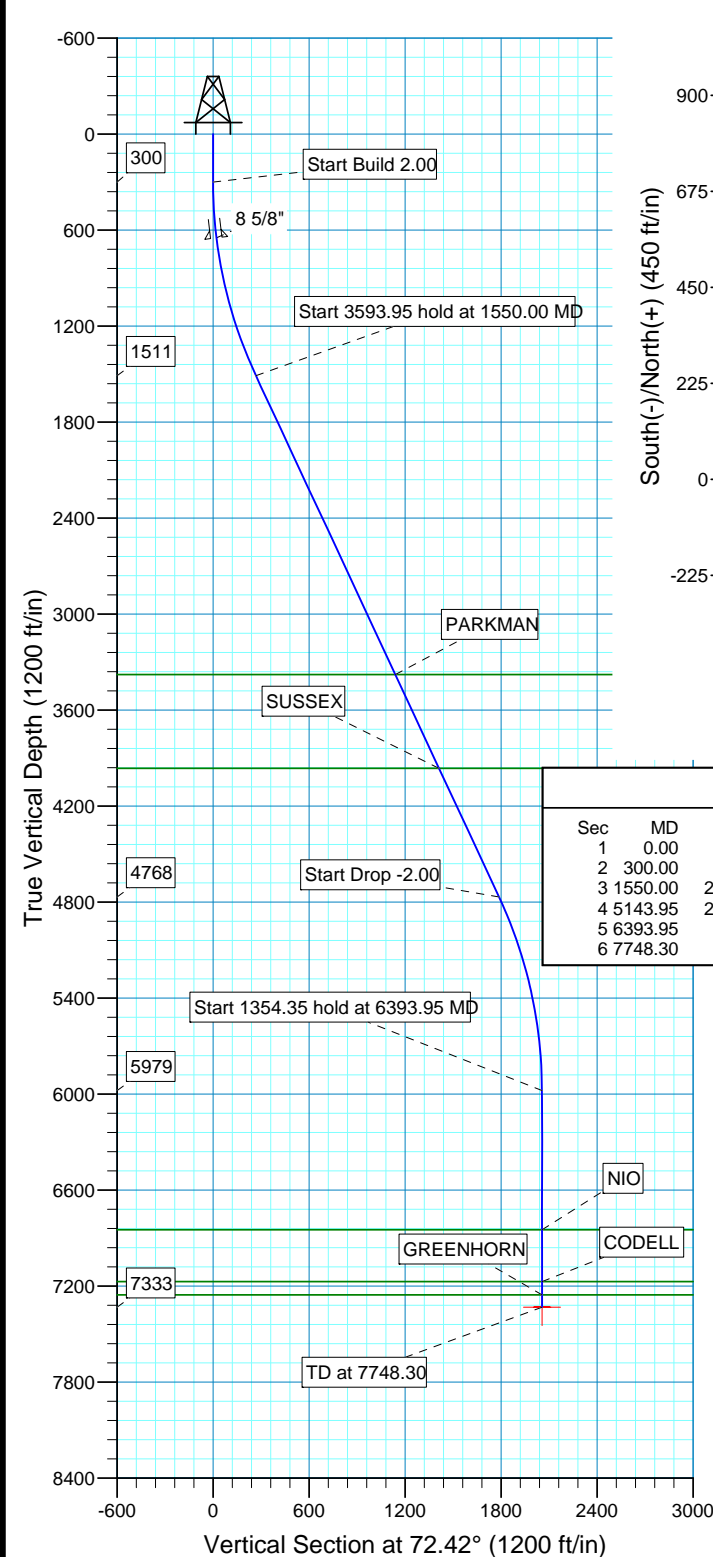
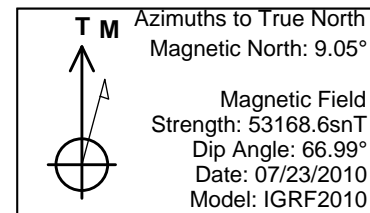


WELL DETAILS: P_Diocese 26-16					
GL 4833 & RKB 15' @ 4848.00ft (ASSUMED) 4833.00					
+N/-S	+E/-W	Northings	Easting	Latitude	Longitude
0.00	0.00	1359220.33	3169057.38	40° 19' 4.346 N	104° 53' 37.406 W
WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Northings	Easting
PBHL	7333.00	620.83	1959.70	1359854.55	3171012.7840° 19' 10.481 N 104° 53' 12.106 W
Shape: Circle (Radius: 50.00)					



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	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
3	1550.00	25.00	72.42	1510.71	81.06	255.88	2.00	72.42	268.41	
4	5143.95	25.00	72.42	4767.94	539.77	1703.82	0.00	0.00	1787.28	
5	6393.95	0.00	0.00	5978.65	620.83	1959.70	2.00	180.00	2055.69	
6	7748.30	0.00	0.00	7333.00	620.83	1959.70	0.00	0.00	2055.69	PBHL_Diocese 26-16(50 FNL 50 FEL)

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3379.00	3611.43	PARKMAN
3964.00	4256.90	SUSSEX
6849.00	7264.30	NIO
7173.00	7588.30	CODELL
7256.00	7671.30	GREENHORN

PROJECT DETAILS: COLORADO NORTHERN ZONE - 83

Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Northern Zone  
Location: SEC 16 T4N R67W  
System Datum: Mean Sea Level  
Local North: No north reference data is available

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_Diocese 2-16 PAD**

**P\_Diocese 26-16**

**P\_Diocese 26-16**

**Plan: PLAN #1 7-23-10 RHS**

## **Standard Planning Report**

**26 July, 2010**

<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_Diocese 26-16
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4833 & RKB 15' @ 4848.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4833 & RKB 15' @ 4848.00ft (ASSUMED)
<b>Site:</b>	WELD_Diocese 2-16 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_Diocese 26-16	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_Diocese 26-16		
<b>Design:</b>	PLAN #1 7-23-10 RHS		

<b>Project</b>	COLORADO NORTHERN ZONE - 83, KERR MCGEE OIL & GAS ONSHORE LP		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site		WELD_Diocese 2-16 PAD, SEC 16 T4N R67W			
Site Position:		Northing:	1,359,220.33ft	Latitude:	40° 19' 4.346 N
From:	Lat/Long	Easting:	3,169,057.38ft	Longitude:	104° 53' 37.406 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.39 °

Well	P_Diocese 26-16, 737 FNL 2013 FEL					
Well Position	+N-S	0.00 ft	Northing:	1,359,220.33 ft	Latitude:	40° 19' 4.346 N
	+E-W	0.00 ft	Easting:	3,169,057.38 ft	Longitude:	104° 53' 37.406 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,833.00 ft

<b>Wellbore</b>	P_Diocese 26-16				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	07/23/2010	9.05	66.99	53,169

<b>Design</b>	PLAN #1 7-23-10 RHS			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	72.42

<b>Plan Sections</b>										
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
0.00	0.00	0.00	0.00	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	
1,550.00	25.00	72.42	1,510.71	81.06	255.88	2.00	2.00	0.00	72.42	
5,143.95	25.00	72.42	4,767.94	539.77	1,703.82	0.00	0.00	0.00	0.00	
6,393.95	0.00	0.00	5,978.65	620.83	1,959.70	2.00	-2.00	0.00	180.00	
7,748.30	0.00	0.00	7,333.00	620.83	1,959.70	0.00	0.00	0.00	0.00	PBHL_Diocese 26-

<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_Diocese 26-16
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4833 & RKB 15' @ 4848.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4833 & RKB 15' @ 4848.00ft (ASSUMED)
<b>Site:</b>	WELD_Diocese 2-16 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_Diocese 26-16	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_Diocese 26-16		
<b>Design:</b>	PLAN #1 7-23-10 RHS		

#### 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)
0.00	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
<b>Start Build 2.00</b>									
400.00	2.00	72.42	399.98	0.53	1.66	1.75	2.00	2.00	0.00
500.00	4.00	72.42	499.84	2.11	6.65	6.98	2.00	2.00	0.00
600.00	6.00	72.42	599.45	4.74	14.96	15.69	2.00	2.00	0.00
650.88	7.02	72.42	650.00	6.48	20.46	21.46	2.00	2.00	0.00
<b>8 5/8"</b>									
700.00	8.00	72.42	698.70	8.42	26.58	27.88	2.00	2.00	0.00
800.00	10.00	72.42	797.47	13.14	41.49	43.52	2.00	2.00	0.00
900.00	12.00	72.42	895.62	18.91	59.68	62.60	2.00	2.00	0.00
1,000.00	14.00	72.42	993.06	25.70	81.12	85.10	2.00	2.00	0.00
1,100.00	16.00	72.42	1,089.64	33.52	105.80	110.98	2.00	2.00	0.00
1,200.00	18.00	72.42	1,185.27	42.35	133.67	140.21	2.00	2.00	0.00
1,300.00	20.00	72.42	1,279.82	52.18	164.70	172.77	2.00	2.00	0.00
1,400.00	22.00	72.42	1,373.17	63.00	198.86	208.60	2.00	2.00	0.00
1,500.00	24.00	72.42	1,465.21	74.80	236.11	247.67	2.00	2.00	0.00
1,550.00	25.00	72.42	1,510.71	81.06	255.88	268.41	2.00	2.00	0.00
<b>Start 3593.95 hold at 1550.00 MD</b>									
1,600.00	25.00	72.42	1,556.03	87.44	276.02	289.54	0.00	0.00	0.00
1,700.00	25.00	72.42	1,646.66	100.21	316.31	331.80	0.00	0.00	0.00
1,800.00	25.00	72.42	1,737.29	112.97	356.60	374.06	0.00	0.00	0.00
1,900.00	25.00	72.42	1,827.92	125.73	396.88	416.32	0.00	0.00	0.00
2,000.00	25.00	72.42	1,918.55	138.50	437.17	458.59	0.00	0.00	0.00
2,100.00	25.00	72.42	2,009.18	151.26	477.46	500.85	0.00	0.00	0.00
2,200.00	25.00	72.42	2,099.81	164.02	517.75	543.11	0.00	0.00	0.00
2,300.00	25.00	72.42	2,190.44	176.79	558.04	585.37	0.00	0.00	0.00
2,400.00	25.00	72.42	2,281.07	189.55	598.33	627.63	0.00	0.00	0.00
2,500.00	25.00	72.42	2,371.70	202.31	638.62	669.90	0.00	0.00	0.00
2,600.00	25.00	72.42	2,462.34	215.08	678.90	712.16	0.00	0.00	0.00
2,700.00	25.00	72.42	2,552.97	227.84	719.19	754.42	0.00	0.00	0.00
2,800.00	25.00	72.42	2,643.60	240.60	759.48	796.68	0.00	0.00	0.00
2,900.00	25.00	72.42	2,734.23	253.37	799.77	838.94	0.00	0.00	0.00
3,000.00	25.00	72.42	2,824.86	266.13	840.06	881.20	0.00	0.00	0.00
3,100.00	25.00	72.42	2,915.49	278.89	880.35	923.47	0.00	0.00	0.00
3,200.00	25.00	72.42	3,006.12	291.66	920.63	965.73	0.00	0.00	0.00
3,300.00	25.00	72.42	3,096.75	304.42	960.92	1,007.99	0.00	0.00	0.00
3,400.00	25.00	72.42	3,187.38	317.18	1,001.21	1,050.25	0.00	0.00	0.00
3,500.00	25.00	72.42	3,278.01	329.95	1,041.50	1,092.51	0.00	0.00	0.00
3,600.00	25.00	72.42	3,368.64	342.71	1,081.79	1,134.78	0.00	0.00	0.00
3,611.43	25.00	72.42	3,379.00	344.17	1,086.39	1,139.61	0.00	0.00	0.00
<b>PARKMAN</b>									
3,700.00	25.00	72.42	3,459.27	355.47	1,122.08	1,177.04	0.00	0.00	0.00
3,800.00	25.00	72.42	3,549.90	368.24	1,162.37	1,219.30	0.00	0.00	0.00
3,900.00	25.00	72.42	3,640.54	381.00	1,202.65	1,261.56	0.00	0.00	0.00
4,000.00	25.00	72.42	3,731.17	393.76	1,242.94	1,303.82	0.00	0.00	0.00
4,100.00	25.00	72.42	3,821.80	406.53	1,283.23	1,346.08	0.00	0.00	0.00
4,200.00	25.00	72.42	3,912.43	419.29	1,323.52	1,388.35	0.00	0.00	0.00
4,256.90	25.00	72.42	3,964.00	426.55	1,346.44	1,412.40	0.00	0.00	0.00
<b>SUSSEX</b>									
4,300.00	25.00	72.42	4,003.06	432.05	1,363.81	1,430.61	0.00	0.00	0.00

<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_Diocese 26-16
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4833 & RKB 15' @ 4848.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4833 & RKB 15' @ 4848.00ft (ASSUMED)
<b>Site:</b>	WELD_Diocese 2-16 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_Diocese 26-16	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_Diocese 26-16		
<b>Design:</b>	PLAN #1 7-23-10 RHS		

#### 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)
4,400.00	25.00	72.42	4,093.69	444.82	1,404.10	1,472.87	0.00	0.00	0.00
4,500.00	25.00	72.42	4,184.32	457.58	1,444.38	1,515.13	0.00	0.00	0.00
4,600.00	25.00	72.42	4,274.95	470.34	1,484.67	1,557.39	0.00	0.00	0.00
4,700.00	25.00	72.42	4,365.58	483.11	1,524.96	1,599.66	0.00	0.00	0.00
4,800.00	25.00	72.42	4,456.21	495.87	1,565.25	1,641.92	0.00	0.00	0.00
4,900.00	25.00	72.42	4,546.84	508.63	1,605.54	1,684.18	0.00	0.00	0.00
5,000.00	25.00	72.42	4,637.47	521.40	1,645.83	1,726.44	0.00	0.00	0.00
5,100.00	25.00	72.42	4,728.10	534.16	1,686.12	1,768.70	0.00	0.00	0.00
5,143.95	25.00	72.42	4,767.94	539.77	1,703.82	1,787.28	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
5,200.00	23.88	72.42	4,818.96	546.77	1,725.93	1,810.47	2.00	-2.00	0.00
5,300.00	21.88	72.42	4,911.09	558.51	1,762.99	1,849.34	2.00	-2.00	0.00
5,400.00	19.88	72.42	5,004.52	569.28	1,796.96	1,884.98	2.00	-2.00	0.00
5,500.00	17.88	72.42	5,099.14	579.05	1,827.81	1,917.34	2.00	-2.00	0.00
5,600.00	15.88	72.42	5,194.82	587.82	1,855.49	1,946.37	2.00	-2.00	0.00
5,700.00	13.88	72.42	5,291.47	595.57	1,879.96	1,972.05	2.00	-2.00	0.00
5,800.00	11.88	72.42	5,388.95	602.30	1,901.21	1,994.33	2.00	-2.00	0.00
5,900.00	9.88	72.42	5,487.14	608.00	1,919.20	2,013.21	2.00	-2.00	0.00
6,000.00	7.88	72.42	5,585.94	612.66	1,933.92	2,028.64	2.00	-2.00	0.00
6,100.00	5.88	72.42	5,685.21	616.28	1,945.33	2,040.62	2.00	-2.00	0.00
6,200.00	3.88	72.42	5,784.85	618.85	1,953.44	2,049.12	2.00	-2.00	0.00
6,300.00	1.88	72.42	5,884.72	620.37	1,958.23	2,054.14	2.00	-2.00	0.00
6,393.95	0.00	0.00	5,978.65	620.83	1,959.70	2,055.69	2.00	-2.00	0.00
<b>Start 1354.35 hold at 6393.95 MD</b>									
6,400.00	0.00	0.00	5,984.70	620.83	1,959.70	2,055.69	0.00	0.00	0.00
6,500.00	0.00	0.00	6,084.70	620.83	1,959.70	2,055.69	0.00	0.00	0.00
6,600.00	0.00	0.00	6,184.70	620.83	1,959.70	2,055.69	0.00	0.00	0.00
6,700.00	0.00	0.00	6,284.70	620.83	1,959.70	2,055.69	0.00	0.00	0.00
6,800.00	0.00	0.00	6,384.70	620.83	1,959.70	2,055.69	0.00	0.00	0.00
6,900.00	0.00	0.00	6,484.70	620.83	1,959.70	2,055.69	0.00	0.00	0.00
7,000.00	0.00	0.00	6,584.70	620.83	1,959.70	2,055.69	0.00	0.00	0.00
7,100.00	0.00	0.00	6,684.70	620.83	1,959.70	2,055.69	0.00	0.00	0.00
7,200.00	0.00	0.00	6,784.70	620.83	1,959.70	2,055.69	0.00	0.00	0.00
7,264.30	0.00	0.00	6,849.00	620.83	1,959.70	2,055.69	0.00	0.00	0.00
<b>NIO</b>									
7,300.00	0.00	0.00	6,884.70	620.83	1,959.70	2,055.69	0.00	0.00	0.00
7,400.00	0.00	0.00	6,984.70	620.83	1,959.70	2,055.69	0.00	0.00	0.00
7,500.00	0.00	0.00	7,084.70	620.83	1,959.70	2,055.69	0.00	0.00	0.00
7,588.30	0.00	0.00	7,173.00	620.83	1,959.70	2,055.69	0.00	0.00	0.00
<b>CODELL</b>									
7,600.00	0.00	0.00	7,184.70	620.83	1,959.70	2,055.69	0.00	0.00	0.00
7,671.30	0.00	0.00	7,256.00	620.83	1,959.70	2,055.69	0.00	0.00	0.00
<b>GREENHORN</b>									
7,700.00	0.00	0.00	7,284.70	620.83	1,959.70	2,055.69	0.00	0.00	0.00
7,748.30	0.00	0.00	7,333.00	620.83	1,959.70	2,055.69	0.00	0.00	0.00
<b>PBHL_Diocese 26-16(50 FNL 50 FEL)</b>									

<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well P_Diocese 26-16
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4833 & RKB 15' @ 4848.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4833 & RKB 15' @ 4848.00ft (ASSUMED)
<b>Site:</b>	WELD_Diocese 2-16 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_Diocese 26-16	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_Diocese 26-16		
<b>Design:</b>	PLAN #1 7-23-10 RHS		

#### Targets

##### Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
PBHL_Diocese 26-16	0.00	0.00	7,333.00	620.83	1,959.70	1,359,854.55	3,171,012.78	40° 19' 10.481 N	104° 53' 12.106 W
- plan hits target center									
- Circle (radius 50.00)									

#### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
650.88	650.00	8 5/8"	8.625	11.000

#### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,264.30	6,849.00	NIO			
7,588.30	7,173.00	CODELL			
7,671.30	7,256.00	GREENHORN			
3,611.43	3,379.00	PARKMAN			
4,256.90	3,964.00	SUSSEX			

#### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
300.00	300.00	0.00	0.00	Start Build 2.00
1,550.00	1,510.71	81.06	255.88	Start 3593.95 hold at 1550.00 MD
5,143.95	4,767.94	539.77	1,703.82	Start Drop -2.00
6,393.95	5,978.65	620.83	1,959.70	Start 1354.35 hold at 6393.95 MD
7,748.30	7,333.00	620.83	1,959.70	TD at 7748.30