

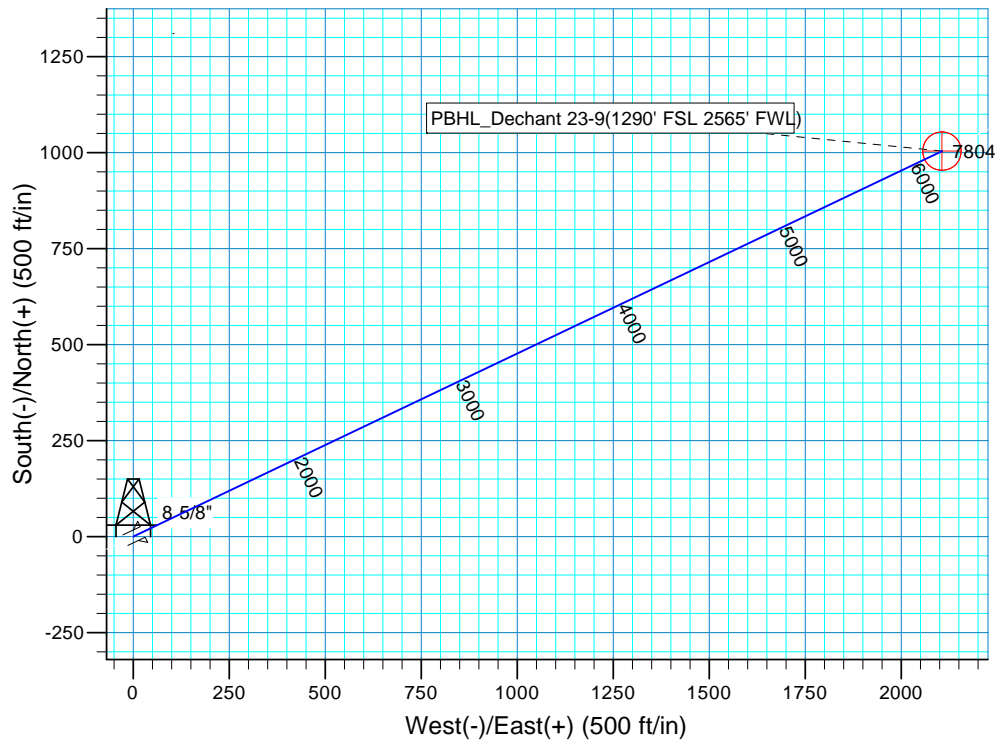
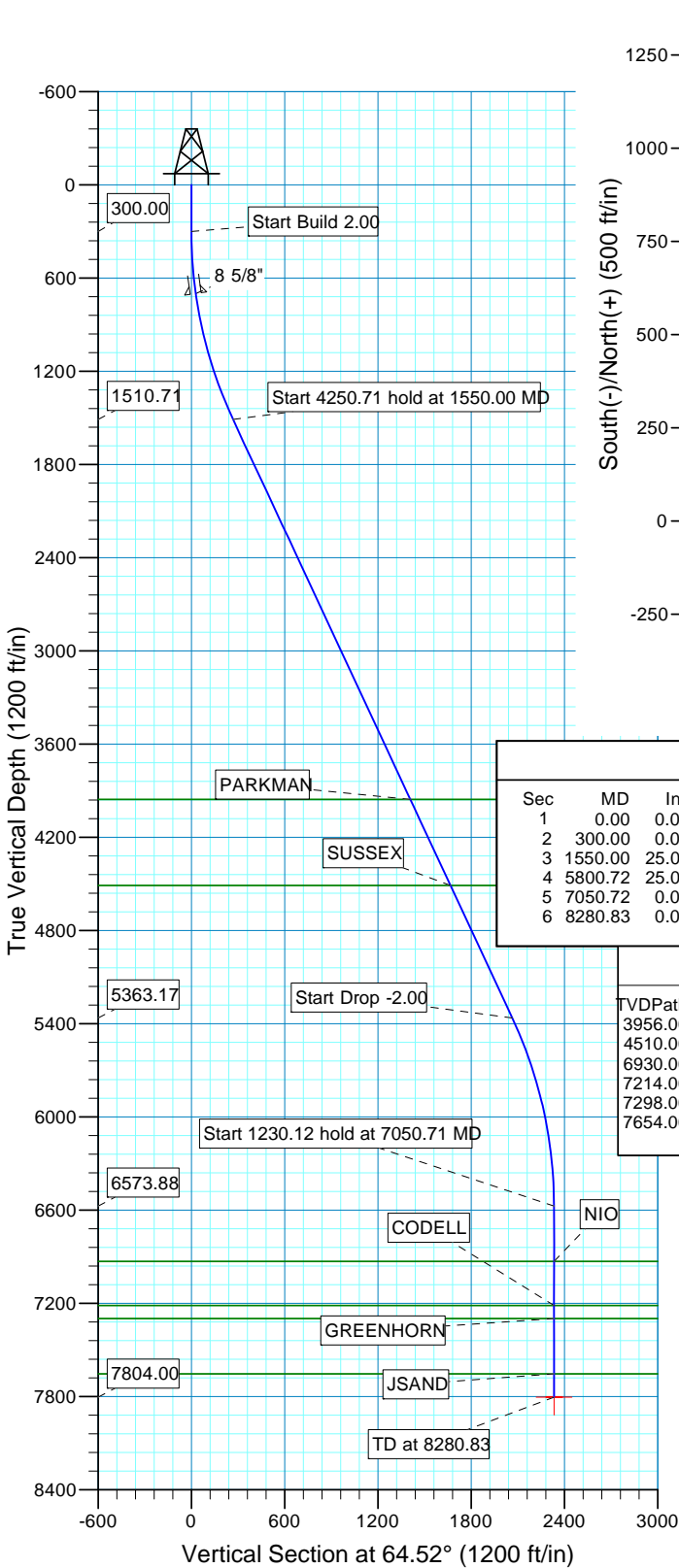
Azimuths to True North
 Magnetic North: 8.92°
 Magnetic Field
 Strength: 53108.1snT
 Dip Angle: 66.89°
 Date: 07/01/2010
 Model: IGRF2010

WELL DETAILS: P_Dechant 23-9

GL 4894' & RKB 15' @ 4909.00ft (ASSUMED) 4894.00					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1297375.75	3230146.88	40° 8' 48.329 N	104° 40' 36.170 W

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7804.00	1003.70	2106.33	1298398.96	3232243.80	40° 8' 58.247 N	104° 40' 9.044 W	Circle (Radius: 50.00)



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	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	64.52	1510.71	115.46	242.30	2.00	64.52	268.41	
4	5800.72	25.00	64.52	5363.17	888.23	1864.03	0.00	0.00	2064.84	
5	7050.72	0.00	0.00	6573.88	1003.70	2106.33	2.00	180.00	2333.25	
6	8280.83	0.00	0.00	7804.00	1003.70	2106.33	0.00	0.00	2333.25	PBHL_Dechant 23-9(1290' FSL 2565' FWL)

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3956.00	4248.08	PARKMAN
4510.00	4859.35	SUSSEX
6930.00	7406.83	NIO
7214.00	7690.83	CODELL
7298.00	7774.83	GREENHORN
7654.00	8130.83	JSAND

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: SECTION 9 T2NR65W
 System Datum: Mean Sea Level
 Local North: True



Scientific Drilling
Rocky Mountain Operations

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_Dechant 14-9 pad

P_Dechant 23-9

P_Dechant 23-9

Plan: PLAN #1 8-2-10 RHS

Standard Planning Report

02 August, 2010



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Dechant 23-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4894' & RKB 15' @ 4909.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4894' & RKB 15' @ 4909.00ft (ASSUMED)
Site:	WELD_Dechant 14-9 pad	North Reference:	True
Well:	P_Dechant 23-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Dechant 23-9		
Design:	PLAN #1 8-2-10 RHS		

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

Site	WELD_Dechant 14-9 pad, SECTION 9 T2NR65W				
Site Position:	Northing:	1,297,364.57 usft	Latitude:	40° 8' 48.217 N	
From:	Lat/Long	Easting:	3,230,158.17 usft	Longitude:	104° 40' 36.026 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.53 °

Well	P_Dechant 23-9, 290' FSL 467' FWL					
Well Position	+N/-S	11.28 ft	Northing:	1,297,375.75 usft	Latitude:	40° 8' 48.329 N
	+E/-W	-11.18 ft	Easting:	3,230,146.88 usft	Longitude:	104° 40' 36.170 W
Position Uncertainty	0.00 ft	Wellhead Elevation:		Ground Level:	4,894.00 ft	

Wellbore	P_Dechant 23-9				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	07/01/2010	8.92	66.89	53,108

Design	PLAN #1 8-2-10 RHS			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	64.52

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
0.00	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	64.52	1,510.71	115.46	242.30	2.00	2.00	0.00	64.52	
5,800.72	25.00	64.52	5,363.17	888.23	1,864.03	0.00	0.00	0.00	0.00	
7,050.72	0.00	0.00	6,573.88	1,003.70	2,106.33	2.00	-2.00	0.00	180.00	
8,280.84	0.00	0.00	7,804.00	1,003.70	2,106.33	0.00	0.00	0.00	0.00	PBHL_Dechant 23-9(

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Dechant 23-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4894' & RKB 15' @ 4909.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4894' & RKB 15' @ 4909.00ft (ASSUMED)
Site:	WELD_Dechant 14-9 pad	North Reference:	True
Well:	P_Dechant 23-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Dechant 23-9		
Design:	PLAN #1 8-2-10 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	
Start Build 2.00										
400.00	2.00	64.52	399.98	0.75	1.58	1.75	2.00	2.00	0.00	
500.00	4.00	64.52	499.84	3.00	6.30	6.98	2.00	2.00	0.00	
600.00	6.00	64.52	599.45	6.75	14.17	15.69	2.00	2.00	0.00	
700.00	8.00	64.52	698.70	11.99	25.17	27.88	2.00	2.00	0.00	
701.31	8.03	64.52	700.00	12.07	25.33	28.06	2.00	2.00	0.00	
8 5/8"										
800.00	10.00	64.52	797.47	18.72	39.29	43.52	2.00	2.00	0.00	
900.00	12.00	64.52	895.62	26.93	56.51	62.60	2.00	2.00	0.00	
1,000.00	14.00	64.52	993.06	36.61	76.82	85.10	2.00	2.00	0.00	
1,100.00	16.00	64.52	1,089.64	47.74	100.18	110.98	2.00	2.00	0.00	
1,200.00	18.00	64.52	1,185.27	60.32	126.58	140.21	2.00	2.00	0.00	
1,300.00	20.00	64.52	1,279.82	74.32	155.97	172.77	2.00	2.00	0.00	
1,400.00	22.00	64.52	1,373.17	89.73	188.32	208.60	2.00	2.00	0.00	
1,500.00	24.00	64.52	1,465.21	106.54	223.59	247.67	2.00	2.00	0.00	
1,550.00	25.00	64.52	1,510.71	115.46	242.30	268.41	2.00	2.00	0.00	
Start 4250.71 hold at 1550.00 MD										
1,600.00	25.00	64.52	1,556.03	124.55	261.38	289.54	0.00	0.00	0.00	
1,700.00	25.00	64.52	1,646.66	142.73	299.53	331.80	0.00	0.00	0.00	
1,800.00	25.00	64.52	1,737.29	160.91	337.68	374.06	0.00	0.00	0.00	
1,900.00	25.00	64.52	1,827.92	179.09	375.84	416.32	0.00	0.00	0.00	
2,000.00	25.00	64.52	1,918.55	197.27	413.99	458.59	0.00	0.00	0.00	
2,100.00	25.00	64.52	2,009.18	215.45	452.14	500.85	0.00	0.00	0.00	
2,200.00	25.00	64.52	2,099.81	233.63	490.29	543.11	0.00	0.00	0.00	
2,300.00	25.00	64.52	2,190.44	251.81	528.44	585.37	0.00	0.00	0.00	
2,400.00	25.00	64.52	2,281.07	269.99	566.59	627.63	0.00	0.00	0.00	
2,500.00	25.00	64.52	2,371.70	288.17	604.75	669.90	0.00	0.00	0.00	
2,600.00	25.00	64.52	2,462.34	306.35	642.90	712.16	0.00	0.00	0.00	
2,700.00	25.00	64.52	2,552.97	324.53	681.05	754.42	0.00	0.00	0.00	
2,800.00	25.00	64.52	2,643.60	342.71	719.20	796.68	0.00	0.00	0.00	
2,900.00	25.00	64.52	2,734.23	360.89	757.35	838.94	0.00	0.00	0.00	
3,000.00	25.00	64.52	2,824.86	379.07	795.51	881.20	0.00	0.00	0.00	
3,100.00	25.00	64.52	2,915.49	397.25	833.66	923.47	0.00	0.00	0.00	
3,200.00	25.00	64.52	3,006.12	415.43	871.81	965.73	0.00	0.00	0.00	
3,300.00	25.00	64.52	3,096.75	433.61	909.96	1,007.99	0.00	0.00	0.00	
3,400.00	25.00	64.52	3,187.38	451.79	948.11	1,050.25	0.00	0.00	0.00	
3,500.00	25.00	64.52	3,278.01	469.97	986.26	1,092.51	0.00	0.00	0.00	
3,600.00	25.00	64.52	3,368.64	488.15	1,024.42	1,134.78	0.00	0.00	0.00	
3,700.00	25.00	64.52	3,459.27	506.33	1,062.57	1,177.04	0.00	0.00	0.00	
3,800.00	25.00	64.52	3,549.90	524.51	1,100.72	1,219.30	0.00	0.00	0.00	
3,900.00	25.00	64.52	3,640.54	542.69	1,138.87	1,261.56	0.00	0.00	0.00	
4,000.00	25.00	64.52	3,731.17	560.87	1,177.02	1,303.82	0.00	0.00	0.00	
4,100.00	25.00	64.52	3,821.80	579.05	1,215.17	1,346.09	0.00	0.00	0.00	
4,200.00	25.00	64.52	3,912.43	597.23	1,253.33	1,388.35	0.00	0.00	0.00	
4,248.08	25.00	64.52	3,956.00	605.97	1,271.67	1,408.66	0.00	0.00	0.00	
PARKMAN										
4,300.00	25.00	64.52	4,003.06	615.41	1,291.48	1,430.61	0.00	0.00	0.00	
4,400.00	25.00	64.52	4,093.69	633.59	1,329.63	1,472.87	0.00	0.00	0.00	

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Dechant 23-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4894' & RKB 15' @ 4909.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4894' & RKB 15' @ 4909.00ft (ASSUMED)
Site:	WELD_Dechant 14-9 pad	North Reference:	True
Well:	P_Dechant 23-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Dechant 23-9		
Design:	PLAN #1 8-2-10 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)	
4,500.00	25.00	64.52	4,184.32	651.77	1,367.78	1,515.13	0.00	0.00	0.00	
4,600.00	25.00	64.52	4,274.95	669.95	1,405.93	1,557.39	0.00	0.00	0.00	
4,700.00	25.00	64.52	4,365.58	688.13	1,444.09	1,599.66	0.00	0.00	0.00	
4,800.00	25.00	64.52	4,456.21	706.31	1,482.24	1,641.92	0.00	0.00	0.00	
4,859.35	25.00	64.52	4,510.00	717.10	1,504.88	1,667.00	0.00	0.00	0.00	
SUSSEX										
4,900.00	25.00	64.52	4,546.84	724.49	1,520.39	1,684.18	0.00	0.00	0.00	
5,000.00	25.00	64.52	4,637.47	742.67	1,558.54	1,726.44	0.00	0.00	0.00	
5,100.00	25.00	64.52	4,728.10	760.85	1,596.69	1,768.70	0.00	0.00	0.00	
5,200.00	25.00	64.52	4,818.74	779.03	1,634.84	1,810.97	0.00	0.00	0.00	
5,300.00	25.00	64.52	4,909.37	797.20	1,673.00	1,853.23	0.00	0.00	0.00	
5,400.00	25.00	64.52	5,000.00	815.38	1,711.15	1,895.49	0.00	0.00	0.00	
5,500.00	25.00	64.52	5,090.63	833.56	1,749.30	1,937.75	0.00	0.00	0.00	
5,600.00	25.00	64.52	5,181.26	851.74	1,787.45	1,980.01	0.00	0.00	0.00	
5,700.00	25.00	64.52	5,271.89	869.92	1,825.60	2,022.27	0.00	0.00	0.00	
5,800.00	25.00	64.52	5,362.52	888.10	1,863.75	2,064.54	0.00	0.00	0.00	
5,800.71	25.00	64.52	5,363.17	888.23	1,864.03	2,064.84	0.00	0.00	0.00	
Start Drop -2.00										
5,900.00	23.01	64.52	5,453.86	905.61	1,900.49	2,105.23	2.00	-2.00	0.00	
6,000.00	21.01	64.52	5,546.56	921.73	1,934.33	2,142.71	2.00	-2.00	0.00	
6,100.00	19.01	64.52	5,640.52	936.46	1,965.22	2,176.94	2.00	-2.00	0.00	
6,200.00	17.01	64.52	5,735.61	949.76	1,993.14	2,207.86	2.00	-2.00	0.00	
6,300.00	15.01	64.52	5,831.73	961.62	2,018.04	2,235.45	2.00	-2.00	0.00	
6,400.00	13.01	64.52	5,928.75	972.04	2,039.90	2,259.66	2.00	-2.00	0.00	
6,500.00	11.01	64.52	6,026.55	981.00	2,058.69	2,280.48	2.00	-2.00	0.00	
6,600.00	9.01	64.52	6,125.02	988.48	2,074.39	2,297.87	2.00	-2.00	0.00	
6,700.00	7.01	64.52	6,224.04	994.47	2,086.98	2,311.81	2.00	-2.00	0.00	
6,800.00	5.01	64.52	6,323.49	998.98	2,096.44	2,322.28	2.00	-2.00	0.00	
6,900.00	3.01	64.52	6,423.23	1,001.99	2,102.76	2,329.28	2.00	-2.00	0.00	
7,000.00	1.01	64.52	6,523.17	1,003.50	2,105.93	2,332.80	2.00	-2.00	0.00	
7,050.71	0.00	64.52	6,573.88	1,003.70	2,106.33	2,333.25	2.00	-2.00	0.00	
Start 1230.12 hold at 7050.71 MD										
7,100.00	0.00	0.00	6,623.17	1,003.70	2,106.33	2,333.25	0.00	0.00	0.00	
7,200.00	0.00	0.00	6,723.17	1,003.70	2,106.33	2,333.25	0.00	0.00	0.00	
7,300.00	0.00	0.00	6,823.17	1,003.70	2,106.33	2,333.25	0.00	0.00	0.00	
7,400.00	0.00	0.00	6,923.17	1,003.70	2,106.33	2,333.25	0.00	0.00	0.00	
7,406.84	0.00	0.00	6,930.00	1,003.70	2,106.33	2,333.25	0.00	0.00	0.00	
NIO										
7,500.00	0.00	0.00	7,023.17	1,003.70	2,106.33	2,333.25	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,123.17	1,003.70	2,106.33	2,333.25	0.00	0.00	0.00	
7,690.84	0.00	0.00	7,214.00	1,003.70	2,106.33	2,333.25	0.00	0.00	0.00	
CODELL										
7,700.00	0.00	0.00	7,223.17	1,003.70	2,106.33	2,333.25	0.00	0.00	0.00	
7,774.84	0.00	0.00	7,298.00	1,003.70	2,106.33	2,333.25	0.00	0.00	0.00	
GREENHORN										
7,800.00	0.00	0.00	7,323.17	1,003.70	2,106.33	2,333.25	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,423.17	1,003.70	2,106.33	2,333.25	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,523.17	1,003.70	2,106.33	2,333.25	0.00	0.00	0.00	
8,100.00	0.00	0.00	7,623.17	1,003.70	2,106.33	2,333.25	0.00	0.00	0.00	
8,130.84	0.00	0.00	7,654.00	1,003.70	2,106.33	2,333.25	0.00	0.00	0.00	
JSAND										

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Dechant 23-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4894' & RKB 15' @ 4909.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4894' & RKB 15' @ 4909.00ft (ASSUMED)
Site:	WELD_Dechant 14-9 pad	North Reference:	True
Well:	P_Dechant 23-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Dechant 23-9		
Design:	PLAN #1 8-2-10 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)	
8,200.00	0.00	0.00	7,723.17	1,003.70	2,106.33	2,333.25	0.00	0.00	0.00	
8,280.83	0.00	0.00	7,804.00	1,003.70	2,106.33	2,333.25	0.00	0.00	0.00	
TD at 8280.83 - PBHL_Dechant 23-9(1290' FSL 2565' FWL)										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
PBHL_Dechant 23-9(12' - hit/miss target - Shape - plan hits target center - Circle (radius 50.00)	0.00	0.00	7,804.00	1,003.70	2,106.33	1,298,398.96	3,232,243.80	40° 8' 58.247 N	104° 40' 9.044 W	

Casing Points							
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)			
701.31	700.00	8 5/8"	8.620	11.000			

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,248.08	3,956.00	PARKMAN				
4,859.35	4,510.00	SUSSEX				
7,406.84	6,930.00	NIO				
7,690.84	7,214.00	CODELL				
7,774.84	7,298.00	GREENHORN				
8,130.84	7,654.00	JSAND				

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	115.46	242.30	Start 4250.71 hold at 1550.00 MD	
5,800.71	5,363.17	888.23	1,864.03	Start Drop -2.00	
7,050.71	6,573.88	1,003.70	2,106.33	Start 1230.12 hold at 7050.71 MD	
8,280.83	7,804.00	1,003.70	2,106.33	TD at 8280.83	