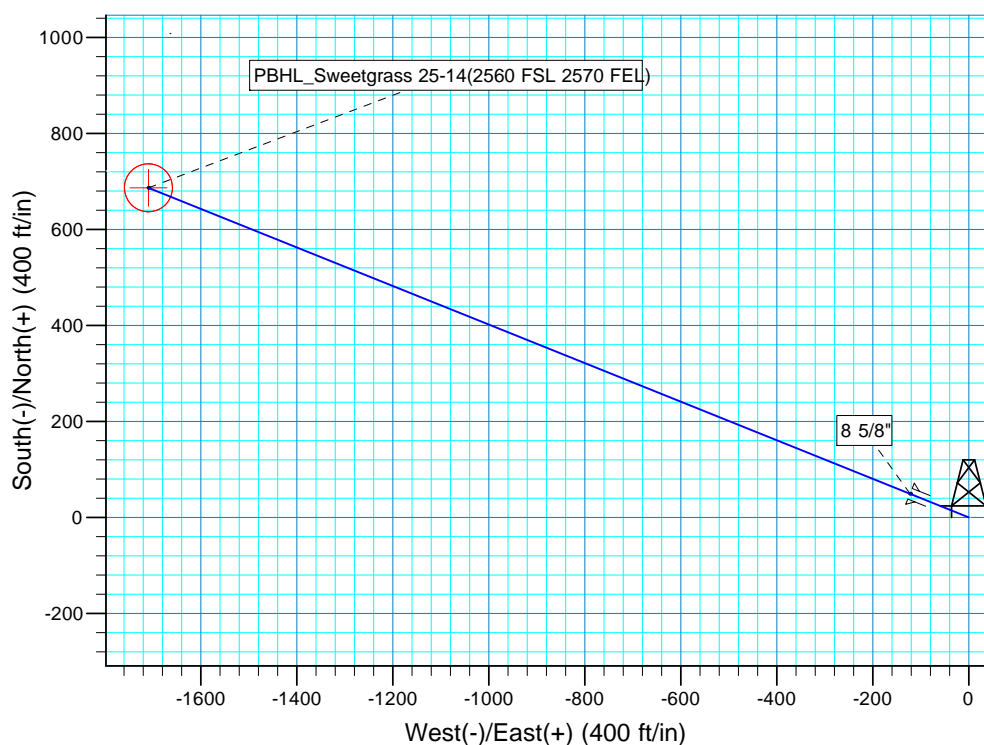
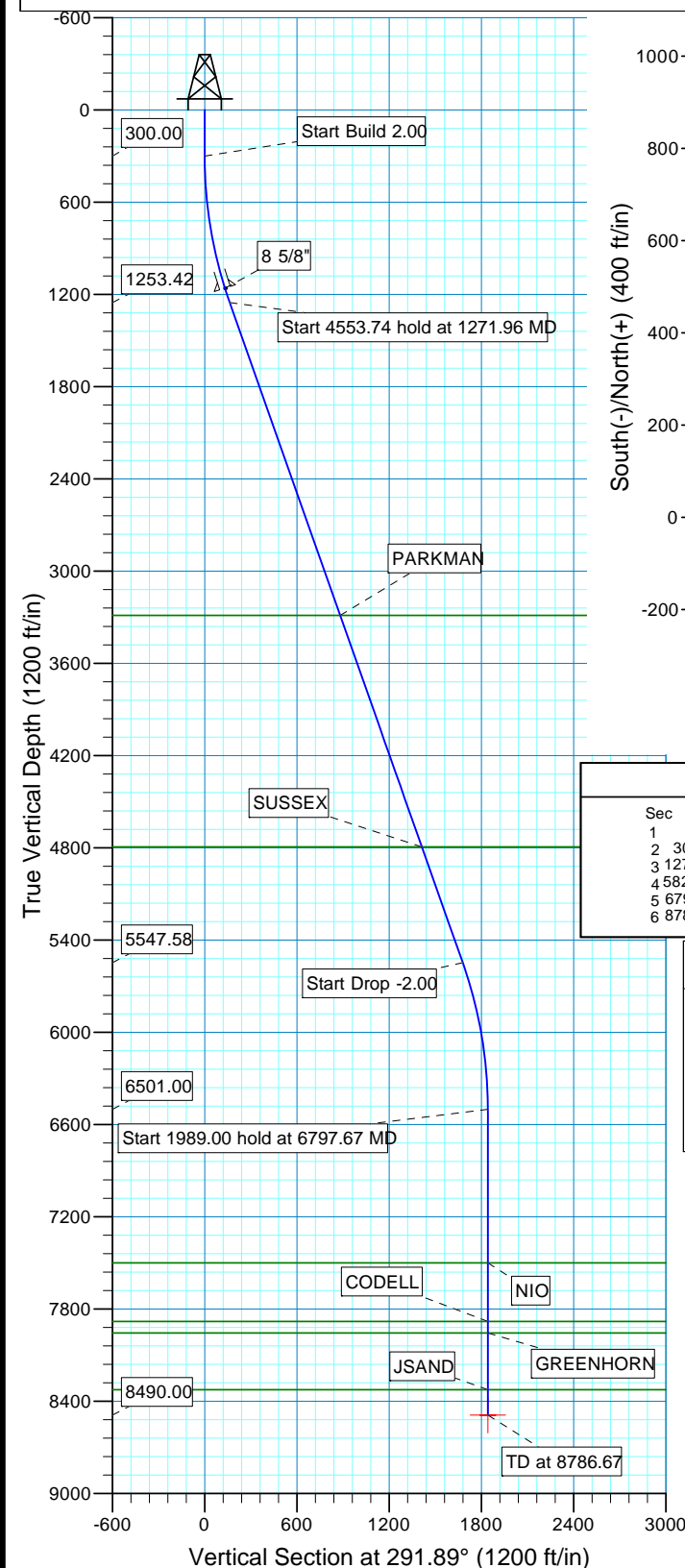
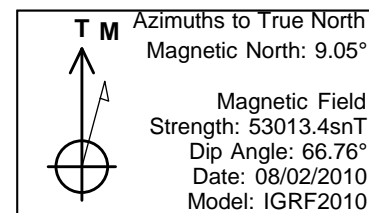


WELL DETAILS: P_Sweetgrass 25-14						
GL 5136' & RKB 15' @ 5151.00ft (ASSUMED) 136.00						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	1261235.64	3149972.93	40° 2' 57.253 N	104° 57' 51.430 W	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8490.00	686.73	-1709.34	1261912.03	3148259.48	40° 3' 4.039 N	104° 58' 13.411 W	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	1271.96	19.44	291.89	1253.42	60.88	-151.53	2.00	291.89	163.31		
4	5825.71	19.44	291.89	5547.58	625.85	-1557.80	0.00	0.00	1678.82		
5	6797.67	0.00	0.00	6501.00	686.73	-1709.34	2.00	180.00	1842.13		
6	8786.67	0.00	0.00	8490.00	686.73	-1709.34	0.00	0.00	1842.13	PBHL_Sweetgrass 25-14(2560 FSL 2570 FEL)	

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3289.00	3430.59	PARKMAN
4795.00	5027.63	SUSSEX
7501.00	7797.67	NIO
7881.00	8177.67	CODELL
7957.00	8253.67	GREENHORN
8325.00	8621.67	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 14 T1N R68W  
System Datum: Mean Sea Level  
Local North: True

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_SWEETGRASS 9-14 Pad**

**P\_Sweetgrass 25-14**

**P\_Sweetgrass 25-14**

**Plan: PLAN #1 8-2-10 RHS**

## **Standard Planning Report**

**02 August, 2010**

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well P_Sweetgrass 25-14
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5136' & RKB 15' @ 5151.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 5136' & RKB 15' @ 5151.00ft (ASSUMED)
<b>Site:</b>	WELD_SWEETGRASS 9-14 Pad	<b>North Reference:</b>	True
<b>Well:</b>	P_Sweetgrass 25-14	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_Sweetgrass 25-14		
<b>Design:</b>	PLAN #1 8-2-10 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		

<b>Site</b>	WELD_SWEETGRASS 9-14 Pad, SECTION 14 T1N R68W		
<b>Site Position:</b>		<b>Northing:</b>	1,261,248.13 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,149,988.54 usft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in
		<b>Latitude:</b>	40° 2' 57.376 N
		<b>Longitude:</b>	104° 57' 51.228 W
		<b>Grid Convergence:</b>	0.35 °

<b>Well</b>	P_Sweetgrass 25-14, 1840' FSL 864' FEL		
<b>Well Position</b>	<b>+N/-S</b>	-12.40 ft	<b>Northing:</b>
	<b>+E/-W</b>	-15.68 ft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	
		<b>Latitude:</b>	40° 2' 57.253 N
		<b>Longitude:</b>	104° 57' 51.430 W
		<b>Ground Level:</b>	5,136.00 ft

<b>Wellbore</b>	P_Sweetgrass 25-14				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	08/02/2010	9.05	66.76	53,013

<b>Design</b>	PLAN #1 8-2-10 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	291.89

<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	
1,271.96	19.44	291.89	1,253.42	60.88	-151.53	2.00	2.00	0.00	291.89	
5,825.71	19.44	291.89	5,547.58	625.85	-1,557.80	0.00	0.00	0.00	0.00	
6,797.67	0.00	0.00	6,501.00	686.73	-1,709.34	2.00	-2.00	0.00	180.00	
8,786.67	0.00	0.00	8,490.00	686.73	-1,709.34	0.00	0.00	0.00	0.00	PBHL_Sweetgrass 25'

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well P_Sweetgrass 25-14
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5136' & RKB 15' @ 5151.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 5136' & RKB 15' @ 5151.00ft (ASSUMED)
<b>Site:</b>	WELD_SWEETGRASS 9-14 Pad	<b>North Reference:</b>	True
<b>Well:</b>	P_Sweetgrass 25-14	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_Sweetgrass 25-14		
<b>Design:</b>	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	
<b>Start Build 2.00</b>										
400.00	2.00	291.89	399.98	0.65	-1.62	1.75	2.00	2.00	0.00	
500.00	4.00	291.89	499.84	2.60	-6.48	6.98	2.00	2.00	0.00	
600.00	6.00	291.89	599.45	5.85	-14.56	15.69	2.00	2.00	0.00	
700.00	8.00	291.89	698.70	10.39	-25.87	27.88	2.00	2.00	0.00	
800.00	10.00	291.89	797.47	16.22	-40.39	43.52	2.00	2.00	0.00	
900.00	12.00	291.89	895.62	23.34	-58.09	62.60	2.00	2.00	0.00	
1,000.00	14.00	291.89	993.06	31.72	-78.96	85.10	2.00	2.00	0.00	
1,100.00	16.00	291.89	1,089.64	41.37	-102.98	110.98	2.00	2.00	0.00	
1,173.47	17.47	291.89	1,160.00	49.26	-122.61	132.13	2.00	2.00	0.00	
<b>8 5/8"</b>										
1,200.00	18.00	291.89	1,185.27	52.27	-130.11	140.21	2.00	2.00	0.00	
1,271.96	19.44	291.89	1,253.42	60.88	-151.53	163.31	2.00	2.00	0.00	
<b>Start 4553.74 hold at 1271.96 MD</b>										
1,300.00	19.44	291.89	1,279.86	64.36	-160.19	172.64	0.00	0.00	0.00	
1,400.00	19.44	291.89	1,374.16	76.77	-191.08	205.92	0.00	0.00	0.00	
1,500.00	19.44	291.89	1,468.46	89.17	-221.96	239.20	0.00	0.00	0.00	
1,600.00	19.44	291.89	1,562.76	101.58	-252.84	272.48	0.00	0.00	0.00	
1,700.00	19.44	291.89	1,657.06	113.99	-283.72	305.76	0.00	0.00	0.00	
1,800.00	19.44	291.89	1,751.36	126.39	-314.60	339.04	0.00	0.00	0.00	
1,900.00	19.44	291.89	1,845.66	138.80	-345.48	372.32	0.00	0.00	0.00	
2,000.00	19.44	291.89	1,939.96	151.21	-376.37	405.60	0.00	0.00	0.00	
2,100.00	19.44	291.89	2,034.26	163.61	-407.25	438.88	0.00	0.00	0.00	
2,200.00	19.44	291.89	2,128.56	176.02	-438.13	472.16	0.00	0.00	0.00	
2,300.00	19.44	291.89	2,222.86	188.43	-469.01	505.45	0.00	0.00	0.00	
2,400.00	19.44	291.89	2,317.16	200.83	-499.89	538.73	0.00	0.00	0.00	
2,500.00	19.44	291.89	2,411.46	213.24	-530.77	572.01	0.00	0.00	0.00	
2,600.00	19.44	291.89	2,505.76	225.65	-561.65	605.29	0.00	0.00	0.00	
2,700.00	19.44	291.89	2,600.05	238.05	-592.54	638.57	0.00	0.00	0.00	
2,800.00	19.44	291.89	2,694.35	250.46	-623.42	671.85	0.00	0.00	0.00	
2,900.00	19.44	291.89	2,788.65	262.87	-654.30	705.13	0.00	0.00	0.00	
3,000.00	19.44	291.89	2,882.95	275.27	-685.18	738.41	0.00	0.00	0.00	
3,100.00	19.44	291.89	2,977.25	287.68	-716.06	771.69	0.00	0.00	0.00	
3,200.00	19.44	291.89	3,071.55	300.09	-746.94	804.97	0.00	0.00	0.00	
3,300.00	19.44	291.89	3,165.85	312.49	-777.83	838.25	0.00	0.00	0.00	
3,400.00	19.44	291.89	3,260.15	324.90	-808.71	871.53	0.00	0.00	0.00	
3,430.59	19.44	291.89	3,289.00	328.70	-818.15	881.71	0.00	0.00	0.00	
<b>PARKMAN</b>										
3,500.00	19.44	291.89	3,354.45	337.31	-839.59	904.81	0.00	0.00	0.00	
3,600.00	19.44	291.89	3,448.75	349.71	-870.47	938.09	0.00	0.00	0.00	
3,700.00	19.44	291.89	3,543.05	362.12	-901.35	971.37	0.00	0.00	0.00	
3,800.00	19.44	291.89	3,637.35	374.53	-932.23	1,004.65	0.00	0.00	0.00	
3,900.00	19.44	291.89	3,731.65	386.93	-963.12	1,037.94	0.00	0.00	0.00	
4,000.00	19.44	291.89	3,825.95	399.34	-994.00	1,071.22	0.00	0.00	0.00	
4,100.00	19.44	291.89	3,920.25	411.75	-1,024.88	1,104.50	0.00	0.00	0.00	
4,200.00	19.44	291.89	4,014.55	424.16	-1,055.76	1,137.78	0.00	0.00	0.00	
4,300.00	19.44	291.89	4,108.85	436.56	-1,086.64	1,171.06	0.00	0.00	0.00	
4,400.00	19.44	291.89	4,203.15	448.97	-1,117.52	1,204.34	0.00	0.00	0.00	

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well P_Sweetgrass 25-14
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5136' & RKB 15' @ 5151.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 5136' & RKB 15' @ 5151.00ft (ASSUMED)
<b>Site:</b>	WELD_SWEETGRASS 9-14 Pad	<b>North Reference:</b>	True
<b>Well:</b>	P_Sweetgrass 25-14	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_Sweetgrass 25-14		
<b>Design:</b>	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	19.44	291.89	4,297.45	461.38	-1,148.41	1,237.62	0.00	0.00	0.00	
4,600.00	19.44	291.89	4,391.75	473.78	-1,179.29	1,270.90	0.00	0.00	0.00	
4,700.00	19.44	291.89	4,486.05	486.19	-1,210.17	1,304.18	0.00	0.00	0.00	
4,800.00	19.44	291.89	4,580.34	498.60	-1,241.05	1,337.46	0.00	0.00	0.00	
4,900.00	19.44	291.89	4,674.64	511.00	-1,271.93	1,370.74	0.00	0.00	0.00	
5,000.00	19.44	291.89	4,768.94	523.41	-1,302.81	1,404.02	0.00	0.00	0.00	
5,027.63	19.44	291.89	4,795.00	526.84	-1,311.35	1,413.22	0.00	0.00	0.00	
<b>SUSSEX</b>										
5,100.00	19.44	291.89	4,863.24	535.82	-1,333.69	1,437.30	0.00	0.00	0.00	
5,200.00	19.44	291.89	4,957.54	548.22	-1,364.58	1,470.58	0.00	0.00	0.00	
5,300.00	19.44	291.89	5,051.84	560.63	-1,395.46	1,503.86	0.00	0.00	0.00	
5,400.00	19.44	291.89	5,146.14	573.04	-1,426.34	1,537.15	0.00	0.00	0.00	
5,500.00	19.44	291.89	5,240.44	585.44	-1,457.22	1,570.43	0.00	0.00	0.00	
5,600.00	19.44	291.89	5,334.74	597.85	-1,488.10	1,603.71	0.00	0.00	0.00	
5,700.00	19.44	291.89	5,429.04	610.26	-1,518.98	1,636.99	0.00	0.00	0.00	
5,800.00	19.44	291.89	5,523.34	622.66	-1,549.87	1,670.27	0.00	0.00	0.00	
5,825.71	19.44	291.89	5,547.58	625.85	-1,557.80	1,678.82	0.00	0.00	0.00	
<b>Start Drop -2.00</b>										
5,900.00	17.95	291.89	5,617.95	634.73	-1,579.90	1,702.64	2.00	-2.00	0.00	
6,000.00	15.95	291.89	5,713.60	645.60	-1,606.96	1,731.80	2.00	-2.00	0.00	
6,100.00	13.95	291.89	5,810.21	655.22	-1,630.90	1,757.60	2.00	-2.00	0.00	
6,200.00	11.95	291.89	5,907.66	663.58	-1,651.70	1,780.01	2.00	-2.00	0.00	
6,300.00	9.95	291.89	6,005.83	670.66	-1,669.33	1,799.01	2.00	-2.00	0.00	
6,400.00	7.95	291.89	6,104.61	676.46	-1,683.77	1,814.57	2.00	-2.00	0.00	
6,500.00	5.95	291.89	6,203.87	680.97	-1,695.00	1,826.68	2.00	-2.00	0.00	
6,600.00	3.95	291.89	6,303.49	684.19	-1,703.01	1,835.31	2.00	-2.00	0.00	
6,700.00	1.95	291.89	6,403.35	686.11	-1,707.79	1,840.46	2.00	-2.00	0.00	
6,797.67	0.00	0.00	6,501.00	686.73	-1,709.34	1,842.13	2.00	-2.00	0.00	
<b>Start 1989.00 hold at 6797.67 MD</b>										
6,800.00	0.00	0.00	6,503.33	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,603.33	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,703.33	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
7,100.00	0.00	0.00	6,803.33	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
7,200.00	0.00	0.00	6,903.33	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
7,300.00	0.00	0.00	7,003.33	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
7,400.00	0.00	0.00	7,103.33	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,203.33	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,303.33	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,403.33	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
7,797.67	0.00	0.00	7,501.00	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
<b>NIO</b>										
7,800.00	0.00	0.00	7,503.33	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,603.33	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,703.33	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
8,100.00	0.00	0.00	7,803.33	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
8,177.67	0.00	0.00	7,881.00	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
<b>CODELL</b>										
8,200.00	0.00	0.00	7,903.33	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
8,253.67	0.00	0.00	7,957.00	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
<b>GREENHORN</b>										
8,300.00	0.00	0.00	8,003.33	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well P_Sweetgrass 25-14
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5136' & RKB 15' @ 5151.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 5136' & RKB 15' @ 5151.00ft (ASSUMED)
<b>Site:</b>	WELD_SWEETGRASS 9-14 Pad	<b>North Reference:</b>	True
<b>Well:</b>	P_Sweetgrass 25-14	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_Sweetgrass 25-14		
<b>Design:</b>	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)	
8,400.00	0.00	0.00	8,103.33	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,203.33	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,303.33	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
8,621.67	0.00	0.00	8,325.00	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
JSAND										
8,700.00	0.00	0.00	8,403.33	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
8,786.67	0.00	0.00	8,490.00	686.73	-1,709.34	1,842.13	0.00	0.00	0.00	
PBHL_Sweetgrass 25-14(2560 FSL 2570 FEL)										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
PBHL_Sweetgrass 25-1-	0.00	0.00	8,490.00	686.73	-1,709.34	1,261,912.03	3,148,259.48	40° 3' 4.039 N	104° 58' 13.411 W	
- plan hits target center										
- Circle (radius 50.00)										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,173.47	1,160.00	8 5/8"	8.625	11.000	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,430.59	3,289.00	PARKMAN				
5,027.63	4,795.00	SUSSEX				
7,797.67	7,501.00	NIO				
8,177.67	7,881.00	CODELL				
8,253.67	7,957.00	GREENHORN				
8,621.67	8,325.00	JSAND				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
300.00	300.00	0.00	0.00	Start Build 2.00	
1,271.96	1,253.42	60.88	-151.53	Start 4553.74 hold at 1271.96 MD	
5,825.71	5,547.58	625.85	-1,557.80	Start Drop -2.00	
6,797.67	6,501.00	686.73	-1,709.34	Start 1989.00 hold at 6797.67 MD	
8,786.67	8,490.00	686.73	-1,709.34	TD at 8786.67	