

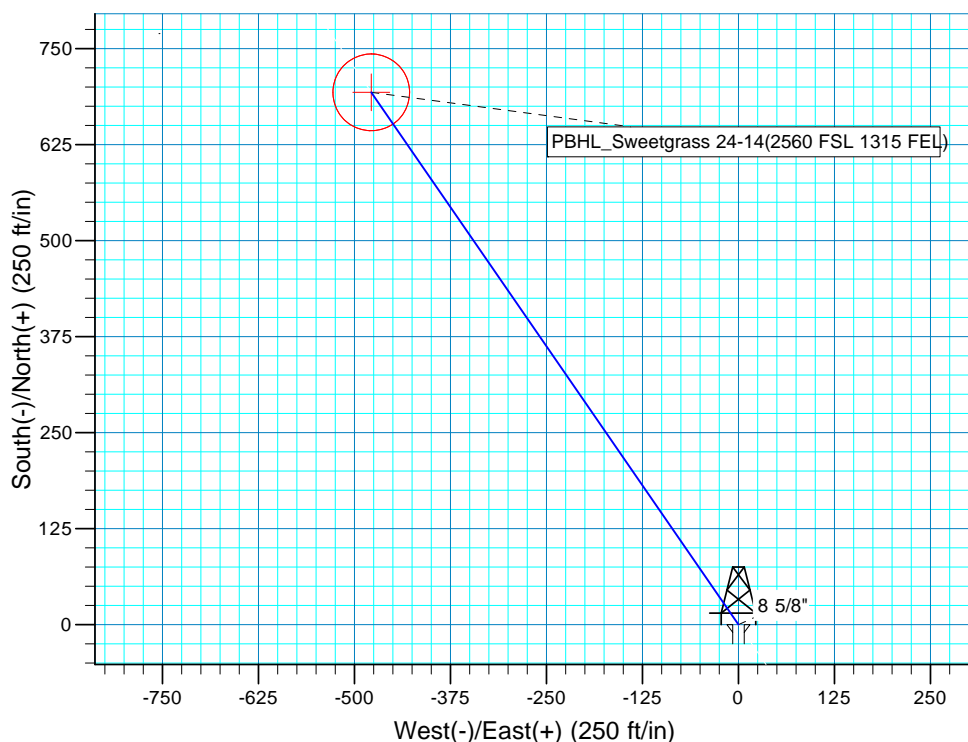
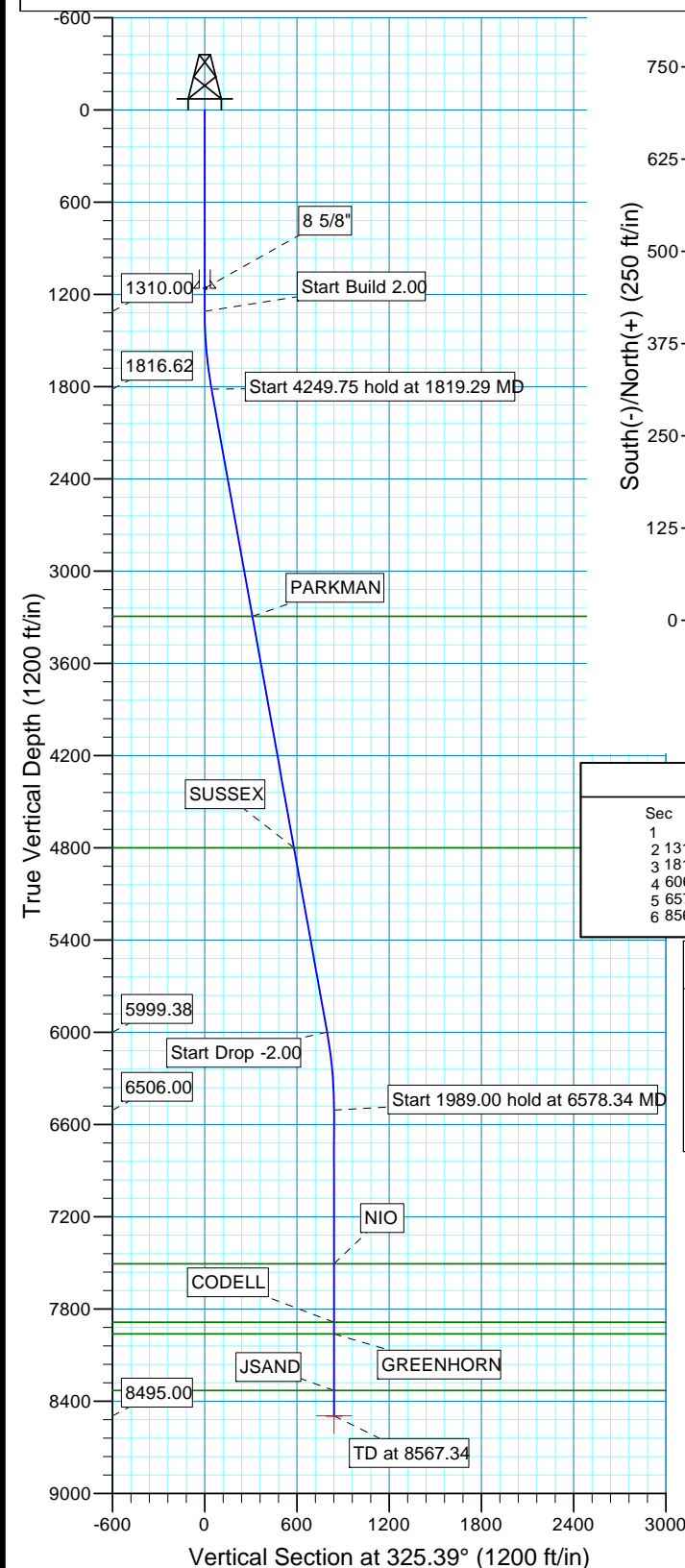
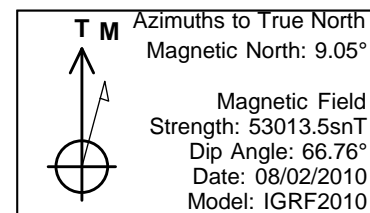
WELL DETAILS: P_Sweetgrass 24-14

GL 5136' & RKB 15'
@ 5151.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1261254.36	3149996.34	40° 2' 57.437 N	104° 57' 51.127 W

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8495.00	692.87	-478.14	1261944.32	3149514.02	40° 3' 4.284 N	104° 57' 57.276 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	1310.00	0.00	0.00	1310.00	0.00	0.00	0.00	0.00	0.00	
3	1819.29	10.19	325.39	1816.62	37.16	-25.64	2.00	325.39	45.15	
4	6069.04	10.19	325.39	5999.38	655.71	-452.50	0.00	0.00	796.69	
5	6578.34	0.00	0.00	6506.00	692.87	-478.14	2.00	180.00	841.84	
6	8567.34	0.00	0.00	8495.00	692.87	-478.14	0.00	0.00	841.84	PBHL_Sweetgrass 24-14(2560 FSL 1315 FEL)

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3294.00	3320.34	PARKMAN
4800.00	4850.45	SUSSEX
7506.00	7578.34	NIO
7886.00	7958.34	CODELL
7962.00	8034.34	GREENHORN
8330.00	8402.34	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 24-14

P_Sweetgrass 24-14

Plan: PLAN #1 8-2-10 RHS

Standard Planning Report

02 August, 2010

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Sweetgrass 24-14
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5136' & RKB 15' @ 5151.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5136' & RKB 15' @ 5151.00ft (ASSUMED)
Site:	WELD_SWEETGRASS 9-14 Pad	North Reference:	True
Well:	P_Sweetgrass 24-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Sweetgrass 24-14		
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_SWEETGRASS 9-14 Pad, SECTION 14 T1N R68W			
Site Position:		Northing:	1,261,248.13 usft	Latitude:	40° 2' 57.376 N
From:	Lat/Long	Easting:	3,149,988.54 usft	Longitude:	104° 57' 51.228 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.35 °

Well	P_Sweetgrass 24-14, 1858' FSL 840' FEL					
Well Position	+N/-S	6.18 ft	Northing:	1,261,254.35 usft	Latitude:	40° 2' 57.437 N
	+E/-W	7.84 ft	Easting:	3,149,996.34 usft	Longitude:	104° 57' 51.127 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,136.00 ft

Wellbore	P_Sweetgrass 24-14				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	08/02/2010	9.05	66.76	53,013

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	325.39	

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	
1,310.00	0.00	0.00	1,310.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,819.29	10.19	325.39	1,816.62	37.16	-25.64	2.00	2.00	0.00	325.39	
6,069.04	10.19	325.39	5,999.38	655.71	-452.50	0.00	0.00	0.00	0.00	
6,578.34	0.00	0.00	6,506.00	692.87	-478.14	2.00	-2.00	0.00	180.00	
8,567.34	0.00	0.00	8,495.00	692.87	-478.14	0.00	0.00	0.00	0.00	PBHL_Sweetgrass 24

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Sweetgrass 24-14
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5136' & RKB 15' @ 5151.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5136' & RKB 15' @ 5151.00ft (ASSUMED)
Site:	WELD_SWEETGRASS 9-14 Pad	North Reference:	True
Well:	P_Sweetgrass 24-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Sweetgrass 24-14		
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	0.00
100.00	0.00	0.00	100.00	0.00	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	0.00
300.00	0.00	0.00	300.00	0.00	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	0.00
500.00	0.00	0.00	500.00	0.00	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	0.00
700.00	0.00	0.00	700.00	0.00	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	0.00
900.00	0.00	0.00	900.00	0.00	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	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,160.00	0.00	0.00	1,160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8 5/8"										
1,200.00	0.00	0.00	1,200.00	0.00	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	0.00
1,310.00	0.00	0.00	1,310.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00										
1,400.00	1.80	325.39	1,399.99	1.16	-0.80	1.41	2.00	2.00	2.00	0.00
1,500.00	3.80	325.39	1,499.86	5.18	-3.58	6.30	2.00	2.00	2.00	0.00
1,600.00	5.80	325.39	1,599.51	12.07	-8.33	14.67	2.00	2.00	2.00	0.00
1,700.00	7.80	325.39	1,698.80	21.82	-15.05	26.51	2.00	2.00	2.00	0.00
1,800.00	9.80	325.39	1,797.61	34.41	-23.74	41.80	2.00	2.00	2.00	0.00
1,819.29	10.19	325.39	1,816.62	37.16	-25.64	45.15	2.00	2.00	2.00	0.00
Start 4249.75 hold at 1819.29 MD										
1,900.00	10.19	325.39	1,896.05	48.91	-33.75	59.42	0.00	0.00	0.00	0.00
2,000.00	10.19	325.39	1,994.47	63.46	-43.80	77.11	0.00	0.00	0.00	0.00
2,100.00	10.19	325.39	2,092.90	78.02	-53.84	94.79	0.00	0.00	0.00	0.00
2,200.00	10.19	325.39	2,191.32	92.57	-63.88	112.48	0.00	0.00	0.00	0.00
2,300.00	10.19	325.39	2,289.75	107.13	-73.93	130.16	0.00	0.00	0.00	0.00
2,400.00	10.19	325.39	2,388.17	121.68	-83.97	147.84	0.00	0.00	0.00	0.00
2,500.00	10.19	325.39	2,486.59	136.24	-94.02	165.53	0.00	0.00	0.00	0.00
2,600.00	10.19	325.39	2,585.02	150.79	-104.06	183.21	0.00	0.00	0.00	0.00
2,700.00	10.19	325.39	2,683.44	165.35	-114.10	200.90	0.00	0.00	0.00	0.00
2,800.00	10.19	325.39	2,781.86	179.90	-124.15	218.58	0.00	0.00	0.00	0.00
2,900.00	10.19	325.39	2,880.29	194.46	-134.19	236.27	0.00	0.00	0.00	0.00
3,000.00	10.19	325.39	2,978.71	209.01	-144.24	253.95	0.00	0.00	0.00	0.00
3,100.00	10.19	325.39	3,077.14	223.57	-154.28	271.63	0.00	0.00	0.00	0.00
3,200.00	10.19	325.39	3,175.56	238.12	-164.33	289.32	0.00	0.00	0.00	0.00
3,300.00	10.19	325.39	3,273.98	252.68	-174.37	307.00	0.00	0.00	0.00	0.00
3,320.34	10.19	325.39	3,294.00	255.64	-176.41	310.60	0.00	0.00	0.00	0.00
PARKMAN										
3,400.00	10.19	325.39	3,372.41	267.23	-184.41	324.69	0.00	0.00	0.00	0.00
3,500.00	10.19	325.39	3,470.83	281.79	-194.46	342.37	0.00	0.00	0.00	0.00
3,600.00	10.19	325.39	3,569.26	296.34	-204.50	360.06	0.00	0.00	0.00	0.00
3,700.00	10.19	325.39	3,667.68	310.90	-214.55	377.74	0.00	0.00	0.00	0.00
3,800.00	10.19	325.39	3,766.10	325.45	-224.59	395.42	0.00	0.00	0.00	0.00
3,900.00	10.19	325.39	3,864.53	340.01	-234.64	413.11	0.00	0.00	0.00	0.00
4,000.00	10.19	325.39	3,962.95	354.56	-244.68	430.79	0.00	0.00	0.00	0.00
4,100.00	10.19	325.39	4,061.38	369.12	-254.72	448.48	0.00	0.00	0.00	0.00
4,200.00	10.19	325.39	4,159.80	383.67	-264.77	466.16	0.00	0.00	0.00	0.00
4,300.00	10.19	325.39	4,258.22	398.23	-274.81	483.85	0.00	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Sweetgrass 24-14
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5136' & RKB 15' @ 5151.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5136' & RKB 15' @ 5151.00ft (ASSUMED)
Site:	WELD_SWEETGRASS 9-14 Pad	North Reference:	True
Well:	P_Sweetgrass 24-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Sweetgrass 24-14		
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)	
4,400.00	10.19	325.39	4,356.65	412.78	-284.86	501.53	0.00	0.00	0.00	
4,500.00	10.19	325.39	4,455.07	427.34	-294.90	519.21	0.00	0.00	0.00	
4,600.00	10.19	325.39	4,553.50	441.89	-304.95	536.90	0.00	0.00	0.00	
4,700.00	10.19	325.39	4,651.92	456.45	-314.99	554.58	0.00	0.00	0.00	
4,800.00	10.19	325.39	4,750.34	471.00	-325.03	572.27	0.00	0.00	0.00	
4,850.45	10.19	325.39	4,800.00	478.34	-330.10	581.19	0.00	0.00	0.00	
SUSSEX										
4,900.00	10.19	325.39	4,848.77	485.56	-335.08	589.95	0.00	0.00	0.00	
5,000.00	10.19	325.39	4,947.19	500.11	-345.12	607.64	0.00	0.00	0.00	
5,100.00	10.19	325.39	5,045.62	514.67	-355.17	625.32	0.00	0.00	0.00	
5,200.00	10.19	325.39	5,144.04	529.22	-365.21	643.00	0.00	0.00	0.00	
5,300.00	10.19	325.39	5,242.46	543.78	-375.25	660.69	0.00	0.00	0.00	
5,400.00	10.19	325.39	5,340.89	558.33	-385.30	678.37	0.00	0.00	0.00	
5,500.00	10.19	325.39	5,439.31	572.89	-395.34	696.06	0.00	0.00	0.00	
5,600.00	10.19	325.39	5,537.73	587.44	-405.39	713.74	0.00	0.00	0.00	
5,700.00	10.19	325.39	5,636.16	602.00	-415.43	731.42	0.00	0.00	0.00	
5,800.00	10.19	325.39	5,734.58	616.55	-425.48	749.11	0.00	0.00	0.00	
5,900.00	10.19	325.39	5,833.01	631.11	-435.52	766.79	0.00	0.00	0.00	
6,000.00	10.19	325.39	5,931.43	645.66	-445.56	784.48	0.00	0.00	0.00	
6,069.04	10.19	325.39	5,999.38	655.71	-452.50	796.69	0.00	0.00	0.00	
Start Drop -2.00										
6,100.00	9.57	325.39	6,029.88	660.08	-455.52	802.00	2.00	-2.00	0.00	
6,200.00	7.57	325.39	6,128.76	672.34	-463.98	816.89	2.00	-2.00	0.00	
6,300.00	5.57	325.39	6,228.10	681.75	-470.47	828.33	2.00	-2.00	0.00	
6,400.00	3.57	325.39	6,327.78	688.30	-474.99	836.29	2.00	-2.00	0.00	
6,500.00	1.57	325.39	6,427.67	691.99	-477.54	840.77	2.00	-2.00	0.00	
6,578.34	0.00	0.00	6,506.00	692.87	-478.14	841.84	2.00	-2.00	0.00	
Start 1989.00 hold at 6578.34 MD										
6,600.00	0.00	0.00	6,527.66	692.87	-478.14	841.84	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,627.66	692.87	-478.14	841.84	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,727.66	692.87	-478.14	841.84	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,827.66	692.87	-478.14	841.84	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,927.66	692.87	-478.14	841.84	0.00	0.00	0.00	
7,100.00	0.00	0.00	7,027.66	692.87	-478.14	841.84	0.00	0.00	0.00	
7,200.00	0.00	0.00	7,127.66	692.87	-478.14	841.84	0.00	0.00	0.00	
7,300.00	0.00	0.00	7,227.66	692.87	-478.14	841.84	0.00	0.00	0.00	
7,400.00	0.00	0.00	7,327.66	692.87	-478.14	841.84	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,427.66	692.87	-478.14	841.84	0.00	0.00	0.00	
7,578.34	0.00	0.00	7,506.00	692.87	-478.14	841.84	0.00	0.00	0.00	
NIO										
7,600.00	0.00	0.00	7,527.66	692.87	-478.14	841.84	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,627.66	692.87	-478.14	841.84	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,727.66	692.87	-478.14	841.84	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,827.66	692.87	-478.14	841.84	0.00	0.00	0.00	
7,958.34	0.00	0.00	7,886.00	692.87	-478.14	841.84	0.00	0.00	0.00	
CODELL										
8,000.00	0.00	0.00	7,927.66	692.87	-478.14	841.84	0.00	0.00	0.00	
8,034.34	0.00	0.00	7,962.00	692.87	-478.14	841.84	0.00	0.00	0.00	
GREENHORN										
8,100.00	0.00	0.00	8,027.66	692.87	-478.14	841.84	0.00	0.00	0.00	
8,200.00	0.00	0.00	8,127.66	692.87	-478.14	841.84	0.00	0.00	0.00	

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Sweetgrass 24-14
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5136' & RKB 15' @ 5151.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5136' & RKB 15' @ 5151.00ft (ASSUMED)
Site:	WELD_SWEETGRASS 9-14 Pad	North Reference:	True
Well:	P_Sweetgrass 24-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Sweetgrass 24-14		
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)	
8,300.00	0.00	0.00	8,227.66	692.87	-478.14	841.84	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,327.66	692.87	-478.14	841.84	0.00	0.00	0.00	
8,402.34	0.00	0.00	8,330.00	692.87	-478.14	841.84	0.00	0.00	0.00	
JSAND										
8,500.00	0.00	0.00	8,427.66	692.87	-478.14	841.84	0.00	0.00	0.00	
8,567.34	0.00	0.00	8,495.00	692.87	-478.14	841.84	0.00	0.00	0.00	
PBHL_Sweetgrass 24-14(2560 FSL 1315 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 24-14	0.00	0.00	8,495.00	692.87	-478.14	1,261,944.32	3,149,514.02	40° 3' 4.284 N	104° 57' 57.276 W	
- plan hits target center										
- Circle (radius 50.00)										

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

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,320.34	3,294.00	PARKMAN				
4,850.45	4,800.00	SUSSEX				
7,578.34	7,506.00	NIO				
7,958.34	7,886.00	CODELL				
8,034.34	7,962.00	GREENHORN				
8,402.34	8,330.00	JSAND				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
1,310.00	1,310.00	0.00	0.00	Start Build 2.00	
1,819.29	1,816.62	37.16	-25.64	Start 4249.75 hold at 1819.29 MD	
6,069.04	5,999.38	655.71	-452.50	Start Drop -2.00	
6,578.34	6,506.00	692.87	-478.14	Start 1989.00 hold at 6578.34 MD	
8,567.34	8,495.00	692.87	-478.14	TD at 8567.34	