

WELL DETAILS: P\_WILDFLOWER 19-27

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1281592.79	3141524.17	40° 6' 18.921 N	104° 59' 38.580 W

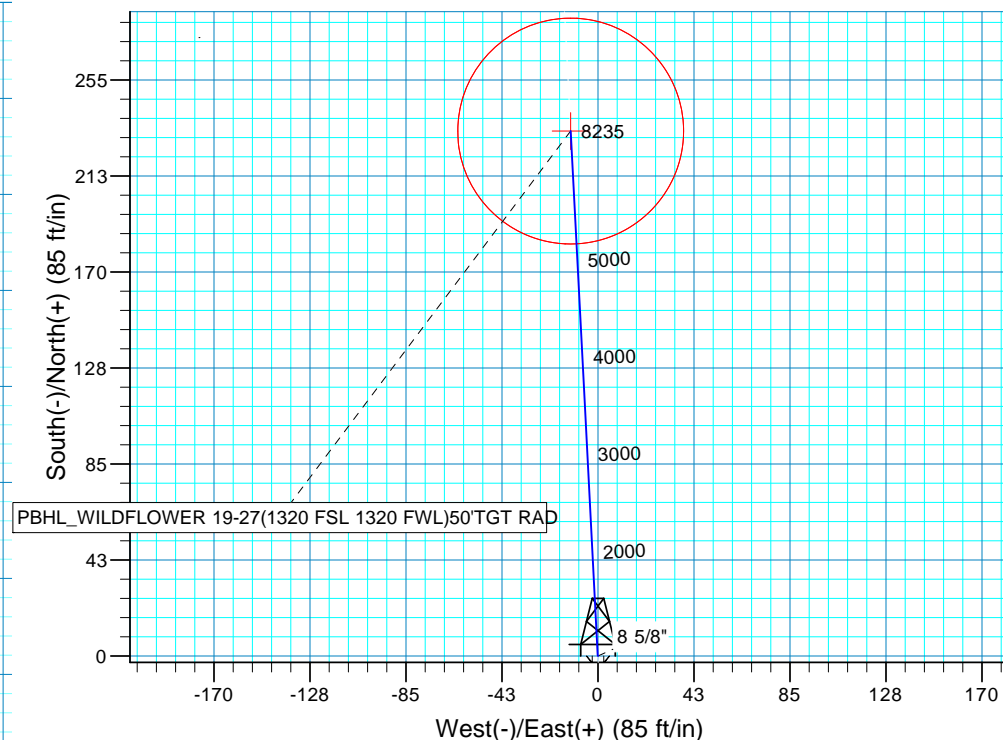
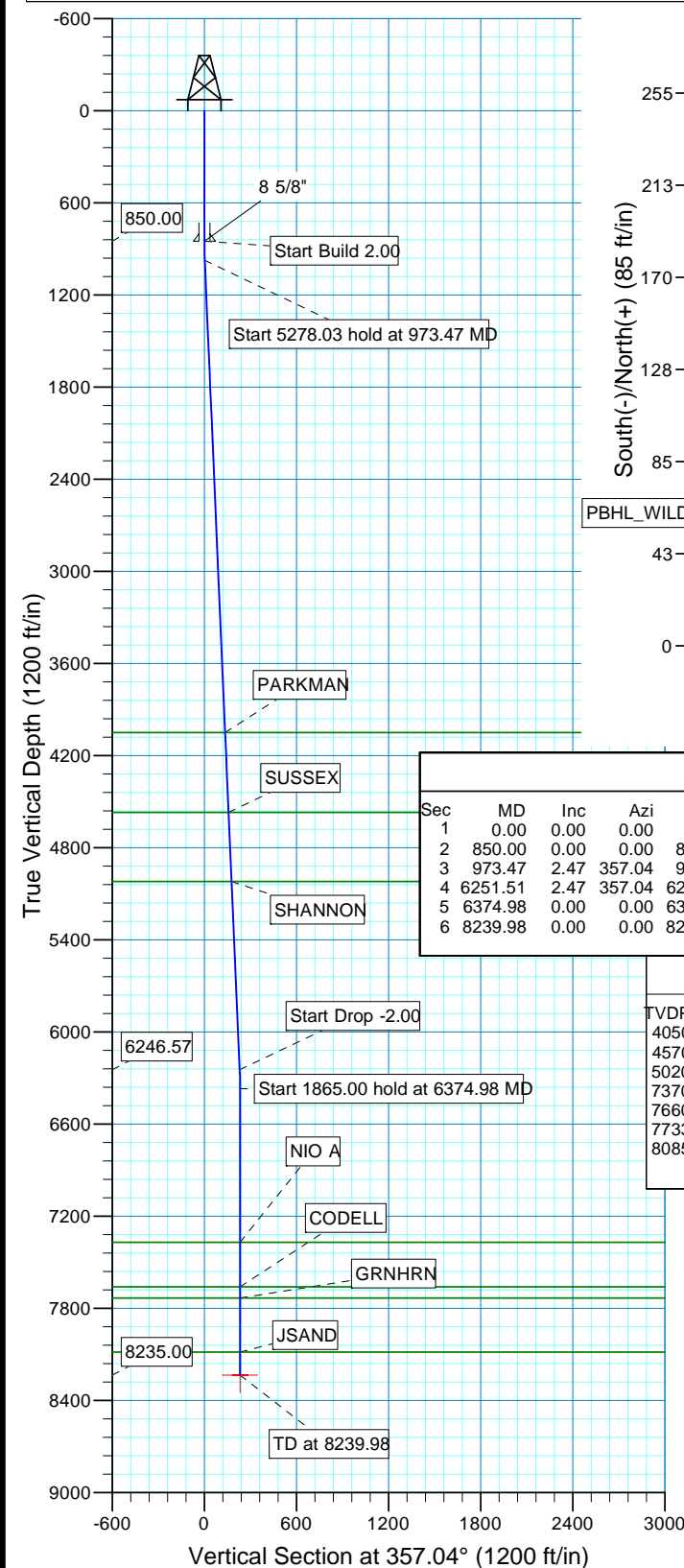
WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8235.00	232.42	-12.03	1281825.14	3141510.82	40° 6' 21.218 N	104° 59' 38.735 W	Circle (Radius: 50.00)



Azimuths to True North  
Magnetic North: 9.07°

Magnetic Field  
Strength: 53040.6snT  
Dip Angle: 66.80°  
Date: 08/03/2010  
Model: IGRF2010



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	850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	
3	973.47	2.47	357.04	973.43	2.66	-0.14	2.00	357.04	2.66	
4	6251.51	2.47	357.04	6246.57	229.77	-11.89	0.00	0.00	230.07	
5	6374.98	0.00	0.00	6370.00	232.42	-12.03	2.00	180.00	232.73	
6	8239.98	0.00	0.00	8235.00	232.42	-12.03	0.00	0.00	232.73	PBHL_WILDFLOWER 19-27(1320 FSL 1320 FWL)50'TGT RAD

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4050.00	4052.90	PARKMAN
4570.00	4573.38	SUSSEX
5020.00	5023.80	SHANNON
7370.00	7374.98	NIO A
7660.00	7664.98	CODELL
7733.00	7737.98	GRNHRN
8085.00	8089.98	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 27 T2N R68W  
System Datum: Mean Sea Level  
Local North: True

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_WILDFLOWER 19-27 PAD**

**P\_WILDFLOWER 19-27**

**P\_WILDFLOWER 19-27**

**Plan: PLAN #1 8-3-10 RHS**

## **Standard Planning Report**

**03 August, 2010**

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well P_WILDFLOWER 19-27
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5023.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 5023.00ft (Original Well Elev)
<b>Site:</b>	WELD_WILDFLOWER 19-27 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_WILDFLOWER 19-27	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_WILDFLOWER 19-27		
<b>Design:</b>	PLAN #1 8-3-10 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_WILDFLOWER 19-27 PAD, SECTION 27 T2N R68W			
<b>Site Position:</b>		<b>Northing:</b>	1,281,572.77 usft	<b>Latitude:</b> 40° 6' 18.724 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,141,524.29 usft	<b>Longitude:</b> 104° 59' 38.580 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> 0.33 °

<b>Well</b>	P_WILDFLOWER 19-27, 1087' FSL 1332' FWL			
<b>Well Position</b>	<b>+N/-S</b>	20.02 ft	<b>Northing:</b>	1,281,592.79 usft
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	3,141,524.17 usft
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	<b>Ground Level:</b> 5,008.00 ft

<b>Wellbore</b>	P_WILDFLOWER 19-27				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	08/03/2010	9.08	66.80	53,041

<b>Design</b>	PLAN #1 8-3-10 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	357.04

<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	
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00	
973.47	2.47	357.04	973.43	2.66	-0.14	2.00	2.00	0.00	357.04	
6,251.51	2.47	357.04	6,246.57	229.77	-11.89	0.00	0.00	0.00	0.00	
6,374.98	0.00	0.00	6,370.00	232.42	-12.03	2.00	-2.00	0.00	180.00	
8,239.98	0.00	0.00	8,235.00	232.42	-12.03	0.00	0.00	0.00	0.00	PBHL_WILDFLOWEF

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well P_WILDFLOWER 19-27
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5023.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 5023.00ft (Original Well Elev)
<b>Site:</b>	WELD_WILDFLOWER 19-27 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_WILDFLOWER 19-27	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_WILDFLOWER 19-27		
<b>Design:</b>	PLAN #1 8-3-10 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
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
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00 - 8 5/8"									
900.00	1.00	357.04	900.00	0.44	-0.02	0.44	2.00	2.00	0.00
973.47	2.47	357.04	973.43	2.66	-0.14	2.66	2.00	2.00	0.00
Start 5278.03 hold at 973.47 MD									
1,000.00	2.47	357.04	999.94	3.80	-0.20	3.80	0.00	0.00	0.00
1,100.00	2.47	357.04	1,099.84	8.10	-0.42	8.11	0.00	0.00	0.00
1,200.00	2.47	357.04	1,199.75	12.40	-0.64	12.42	0.00	0.00	0.00
1,300.00	2.47	357.04	1,299.66	16.71	-0.86	16.73	0.00	0.00	0.00
1,400.00	2.47	357.04	1,399.57	21.01	-1.09	21.04	0.00	0.00	0.00
1,500.00	2.47	357.04	1,499.47	25.31	-1.31	25.35	0.00	0.00	0.00
1,600.00	2.47	357.04	1,599.38	29.62	-1.53	29.66	0.00	0.00	0.00
1,700.00	2.47	357.04	1,699.29	33.92	-1.76	33.96	0.00	0.00	0.00
1,800.00	2.47	357.04	1,799.19	38.22	-1.98	38.27	0.00	0.00	0.00
1,900.00	2.47	357.04	1,899.10	42.52	-2.20	42.58	0.00	0.00	0.00
2,000.00	2.47	357.04	1,999.01	46.83	-2.42	46.89	0.00	0.00	0.00
2,100.00	2.47	357.04	2,098.92	51.13	-2.65	51.20	0.00	0.00	0.00
2,200.00	2.47	357.04	2,198.82	55.43	-2.87	55.51	0.00	0.00	0.00
2,300.00	2.47	357.04	2,298.73	59.74	-3.09	59.82	0.00	0.00	0.00
2,400.00	2.47	357.04	2,398.64	64.04	-3.31	64.12	0.00	0.00	0.00
2,500.00	2.47	357.04	2,498.54	68.34	-3.54	68.43	0.00	0.00	0.00
2,600.00	2.47	357.04	2,598.45	72.64	-3.76	72.74	0.00	0.00	0.00
2,700.00	2.47	357.04	2,698.36	76.95	-3.98	77.05	0.00	0.00	0.00
2,800.00	2.47	357.04	2,798.27	81.25	-4.20	81.36	0.00	0.00	0.00
2,900.00	2.47	357.04	2,898.17	85.55	-4.43	85.67	0.00	0.00	0.00
3,000.00	2.47	357.04	2,998.08	89.86	-4.65	89.98	0.00	0.00	0.00
3,100.00	2.47	357.04	3,097.99	94.16	-4.87	94.29	0.00	0.00	0.00
3,200.00	2.47	357.04	3,197.89	98.46	-5.10	98.59	0.00	0.00	0.00
3,300.00	2.47	357.04	3,297.80	102.77	-5.32	102.90	0.00	0.00	0.00
3,400.00	2.47	357.04	3,397.71	107.07	-5.54	107.21	0.00	0.00	0.00
3,500.00	2.47	357.04	3,497.62	111.37	-5.76	111.52	0.00	0.00	0.00
3,600.00	2.47	357.04	3,597.52	115.67	-5.99	115.83	0.00	0.00	0.00
3,700.00	2.47	357.04	3,697.43	119.98	-6.21	120.14	0.00	0.00	0.00
3,800.00	2.47	357.04	3,797.34	124.28	-6.43	124.45	0.00	0.00	0.00
3,900.00	2.47	357.04	3,897.24	128.58	-6.65	128.75	0.00	0.00	0.00
4,000.00	2.47	357.04	3,997.15	132.89	-6.88	133.06	0.00	0.00	0.00
4,052.90	2.47	357.04	4,050.00	135.16	-6.99	135.34	0.00	0.00	0.00
PARKMAN									
4,100.00	2.47	357.04	4,097.06	137.19	-7.10	137.37	0.00	0.00	0.00
4,200.00	2.47	357.04	4,196.97	141.49	-7.32	141.68	0.00	0.00	0.00
4,300.00	2.47	357.04	4,296.87	145.79	-7.54	145.99	0.00	0.00	0.00
4,400.00	2.47	357.04	4,396.78	150.10	-7.77	150.30	0.00	0.00	0.00
4,500.00	2.47	357.04	4,496.69	154.40	-7.99	154.61	0.00	0.00	0.00
4,573.38	2.47	357.04	4,570.00	157.56	-8.15	157.77	0.00	0.00	0.00
SUSSEX									

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well P_WILDFLOWER 19-27
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5023.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 5023.00ft (Original Well Elev)
<b>Site:</b>	WELD_WILDFLOWER 19-27 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_WILDFLOWER 19-27	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_WILDFLOWER 19-27		
<b>Design:</b>	PLAN #1 8-3-10 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)
4,600.00	2.47	357.04	4,596.59	158.70	-8.21	158.92	0.00	0.00	0.00
4,700.00	2.47	357.04	4,696.50	163.01	-8.44	163.22	0.00	0.00	0.00
4,800.00	2.47	357.04	4,796.41	167.31	-8.66	167.53	0.00	0.00	0.00
4,900.00	2.47	357.04	4,896.32	171.61	-8.88	171.84	0.00	0.00	0.00
5,000.00	2.47	357.04	4,996.22	175.91	-9.10	176.15	0.00	0.00	0.00
5,023.80	2.47	357.04	5,020.00	176.94	-9.16	177.18	0.00	0.00	0.00
<b>SHANNON</b>									
5,100.00	2.47	357.04	5,096.13	180.22	-9.33	180.46	0.00	0.00	0.00
5,200.00	2.47	357.04	5,196.04	184.52	-9.55	184.77	0.00	0.00	0.00
5,300.00	2.47	357.04	5,295.94	188.82	-9.77	189.08	0.00	0.00	0.00
5,400.00	2.47	357.04	5,395.85	193.13	-9.99	193.38	0.00	0.00	0.00
5,500.00	2.47	357.04	5,495.76	197.43	-10.22	197.69	0.00	0.00	0.00
5,600.00	2.47	357.04	5,595.67	201.73	-10.44	202.00	0.00	0.00	0.00
5,700.00	2.47	357.04	5,695.57	206.03	-10.66	206.31	0.00	0.00	0.00
5,800.00	2.47	357.04	5,795.48	210.34	-10.89	210.62	0.00	0.00	0.00
5,900.00	2.47	357.04	5,895.39	214.64	-11.11	214.93	0.00	0.00	0.00
6,000.00	2.47	357.04	5,995.29	218.94	-11.33	219.24	0.00	0.00	0.00
6,100.00	2.47	357.04	6,095.20	223.25	-11.55	223.55	0.00	0.00	0.00
6,200.00	2.47	357.04	6,195.11	227.55	-11.78	227.85	0.00	0.00	0.00
6,251.51	2.47	357.04	6,246.57	229.77	-11.89	230.07	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
6,300.00	1.50	357.04	6,295.03	231.44	-11.98	231.75	2.00	-2.00	0.00
6,374.98	0.00	0.00	6,370.00	232.42	-12.03	232.73	2.00	-2.00	0.00
<b>Start 1865.00 hold at 6374.98 MD</b>									
6,400.00	0.00	0.00	6,395.02	232.42	-12.03	232.73	0.00	0.00	0.00
6,500.00	0.00	0.00	6,495.02	232.42	-12.03	232.73	0.00	0.00	0.00
6,600.00	0.00	0.00	6,595.02	232.42	-12.03	232.73	0.00	0.00	0.00
6,700.00	0.00	0.00	6,695.02	232.42	-12.03	232.73	0.00	0.00	0.00
6,800.00	0.00	0.00	6,795.02	232.42	-12.03	232.73	0.00	0.00	0.00
6,900.00	0.00	0.00	6,895.02	232.42	-12.03	232.73	0.00	0.00	0.00
7,000.00	0.00	0.00	6,995.02	232.42	-12.03	232.73	0.00	0.00	0.00
7,100.00	0.00	0.00	7,095.02	232.42	-12.03	232.73	0.00	0.00	0.00
7,200.00	0.00	0.00	7,195.02	232.42	-12.03	232.73	0.00	0.00	0.00
7,300.00	0.00	0.00	7,295.02	232.42	-12.03	232.73	0.00	0.00	0.00
7,374.98	0.00	0.00	7,370.00	232.42	-12.03	232.73	0.00	0.00	0.00
<b>NIO A</b>									
7,400.00	0.00	0.00	7,395.02	232.42	-12.03	232.73	0.00	0.00	0.00
7,500.00	0.00	0.00	7,495.02	232.42	-12.03	232.73	0.00	0.00	0.00
7,600.00	0.00	0.00	7,595.02	232.42	-12.03	232.73	0.00	0.00	0.00
7,664.98	0.00	0.00	7,660.00	232.42	-12.03	232.73	0.00	0.00	0.00
<b>CODELL</b>									
7,700.00	0.00	0.00	7,695.02	232.42	-12.03	232.73	0.00	0.00	0.00
7,737.98	0.00	0.00	7,733.00	232.42	-12.03	232.73	0.00	0.00	0.00
<b>GRNHRN</b>									
7,800.00	0.00	0.00	7,795.02	232.42	-12.03	232.73	0.00	0.00	0.00
7,900.00	0.00	0.00	7,895.02	232.42	-12.03	232.73	0.00	0.00	0.00
8,000.00	0.00	0.00	7,995.02	232.42	-12.03	232.73	0.00	0.00	0.00
8,089.98	0.00	0.00	8,085.00	232.42	-12.03	232.73	0.00	0.00	0.00
<b>JSAND</b>									
8,100.00	0.00	0.00	8,095.02	232.42	-12.03	232.73	0.00	0.00	0.00
8,200.00	0.00	0.00	8,195.02	232.42	-12.03	232.73	0.00	0.00	0.00
8,239.98	0.00	0.00	8,235.00	232.42	-12.03	232.73	0.00	0.00	0.00
<b>PBHL_WILDFLOWER 19-27(1320 FSL 1320 FWL)50'TGT RAD</b>									

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well P_WILDFLOWER 19-27
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5023.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 5023.00ft (Original Well Elev)
<b>Site:</b>	WELD_WILDFLOWER 19-27 PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_WILDFLOWER 19-27	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_WILDFLOWER 19-27		
<b>Design:</b>	PLAN #1 8-3-10 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)

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_WILDFLOWER 1	0.00	0.00	8,235.00	232.42	-12.03	1,281,825.14	3,141,510.82	40° 6' 21.218 N	104° 59' 38.735 W
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
850.00	850.00	8 5/8"	8.620	11.000	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,052.90	4,050.00	PARKMAN				
4,573.38	4,570.00	SUSSEX				
5,023.80	5,020.00	SHANNON				
7,374.98	7,370.00	NIO A				
7,664.98	7,660.00	CODELL				
7,737.98	7,733.00	GRNHRN				
8,089.98	8,085.00	JSAND				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
850.00	850.00	0.00	0.00	Start Build 2.00	
973.47	973.43	2.66	-0.14	Start 5278.03 hold at 973.47 MD	
6,251.51	6,246.57	229.77	-11.89	Start Drop -2.00	
6,374.98	6,370.00	232.42	-12.03	Start 1865.00 hold at 6374.98 MD	
8,239.98	8,235.00	232.42	-12.03	TD at 8239.98	