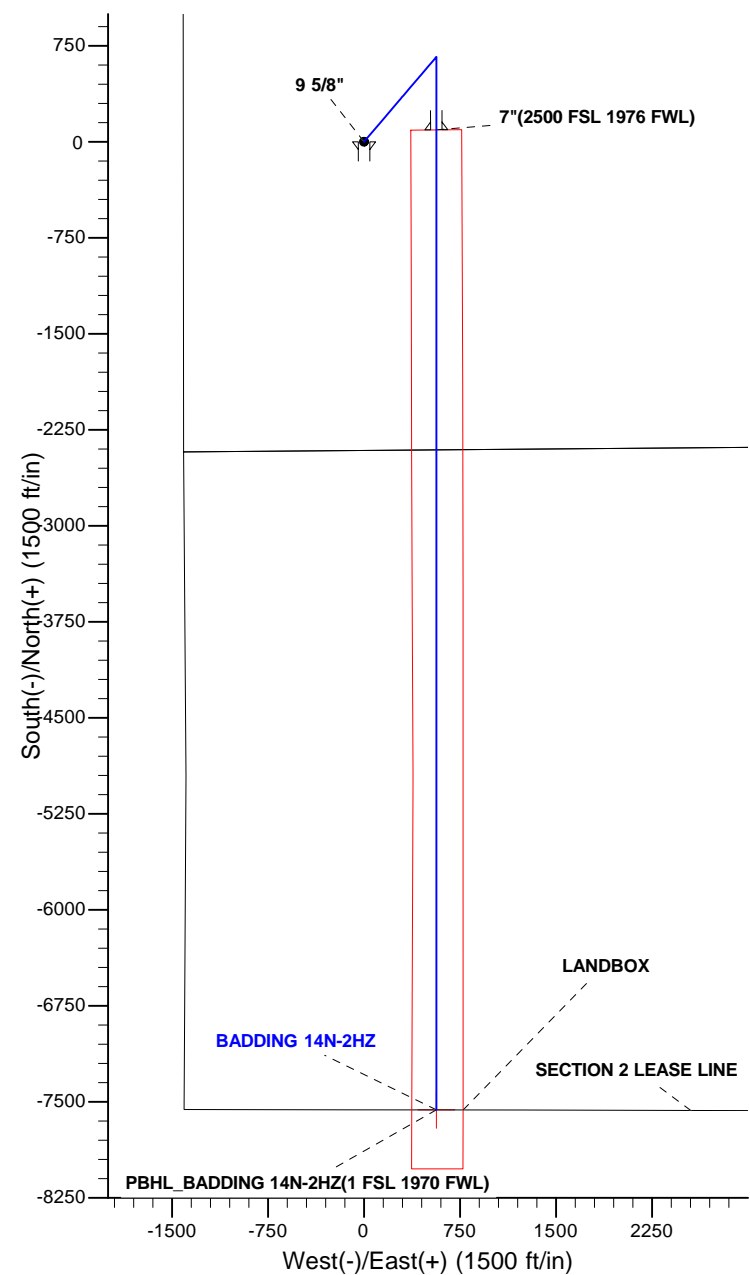
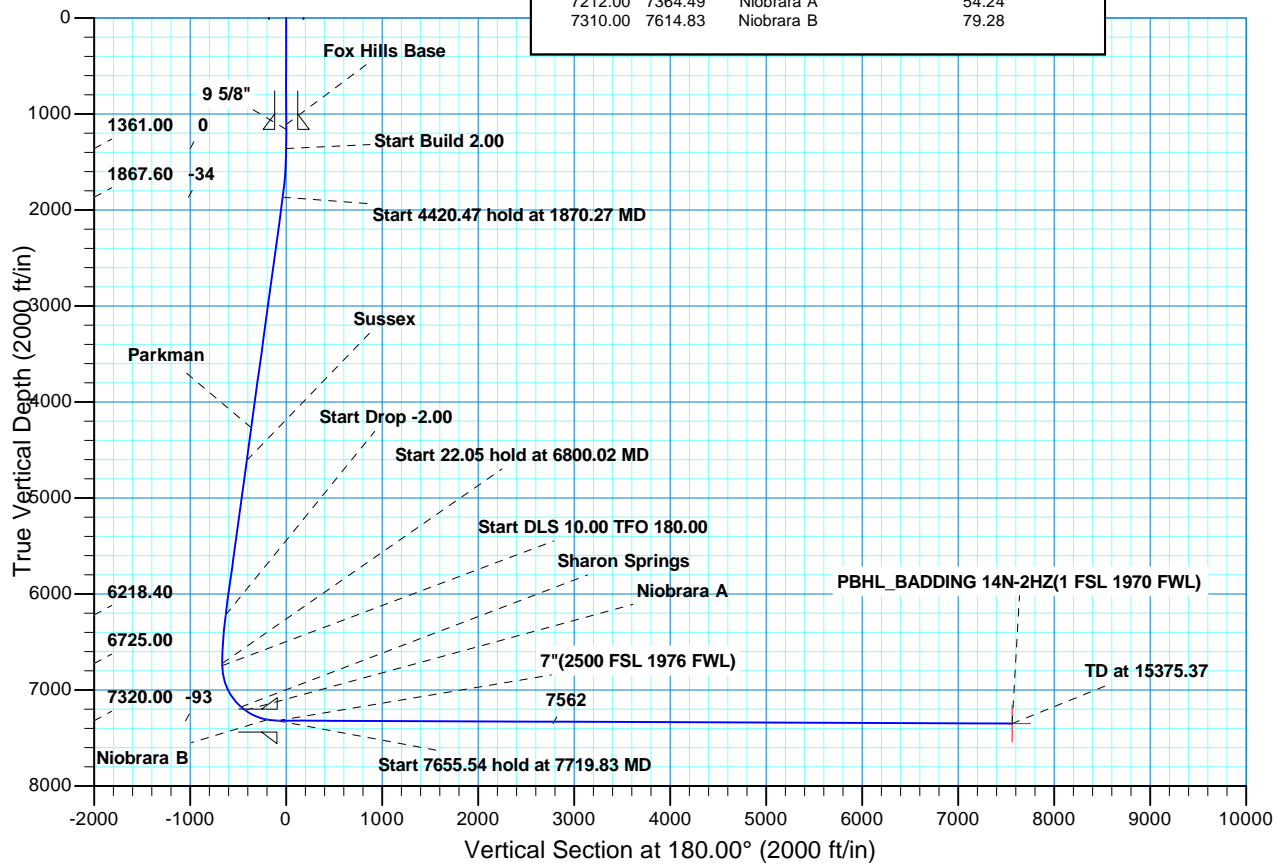


WELL DETAILS: BADDING 14N-2HZ											
GL 5103 & 17 @ 5120.00ft (ASSUMED)											
+N/-S		+E/-W		Northing		Easting		Latitude		Longitude	
0.00		0.00		1277952.94		3210189.50		40.0939280		-104.7486910	
SECTION DETAILS											
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
1361.00	0.00	0.00	1361.00	0.00	0.00	0.00	0.00	0.00	0.00		
1870.27	10.19	40.39	1867.60	34.39	29.25	2.00	40.39	-34.39			
6290.75	10.19	40.39	6218.40	629.78	535.77	0.00	0.00	-629.78			
6800.02	0.00	0.00	6725.00	664.17	565.02	2.00	180.00	-664.17			
6800.02	0.00	0.00	6725.00	664.17	565.02	0.00	0.00	-664.17			
6822.07	0.00	0.00	6747.05	664.17	565.02	0.00	0.00	-664.17			
7719.83	89.78	180.00	7320.00	93.46	565.02	10.00	180.00	-93.46			
15375.37	89.78	180.00	7350.00	-7562.03	565.02	0.00	0.007562.03		PBHL_BADDING 14N-2HZ(1 FSL 1970 FWL)		

DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
PBHL	7350.00	-7562.03	565.02	1270395.99	3210818.58	40.0731690	-104.7466720	Circle (Radius: 0.00)	
- plan hits target center									

CASING DETAILS				FORMATION TOP DETAILS			
TVD	MD	Name	Size	TVDPath	MDPath	Formation	Inc
1161.00	1161.00	9 5/8"	9.625	1111.00	1111.00	Fox Hills Base	0.00
7320.00	7719.83	7"	7.000	4269.00	4310.13	Parkman	10.19
				4608.00	4654.56	Sussex	10.19
				7176.00	7306.81	Sharon Springs	48.47
				7212.00	7364.49	Niobrara A	54.24
				7310.00	7614.83	Niobrara B	79.28





# Scientific Drilling

## **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**BADDING 22-35 PAD**

**BADDING 14N-2HZ**

**OH**

**Plan: PLAN #1 PRELIMINARY**

## **Standard Planning Report**

**20 August, 2013**

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well BADDING 14N-2HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5103 & 17 @ 5120.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 5103 & 17 @ 5120.00ft (ASSUMED)
<b>Site:</b>	BADDING 22-35 PAD	<b>North Reference:</b>	True
<b>Well:</b>	BADDING 14N-2HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

<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						BADDING 22-35 PAD, NESW SEC. 35 T2N R66W											
Site Position:			Northing:			1,277,952.70 usft			Latitude:			40.0939280					
From:			Lat/Long			Easting:			3,210,159.29 usft			Longitude:			-104.7487990		
Position Uncertainty:			0.00 ft			Slot Radius:			13.200 in			Grid Convergence:			0.49		

Well	BADDING 14N-2HZ, 2411 FSL 1411 FWL					
Well Position	+N/-S	-0.01 ft	Northing:	1,277,952.94 usft	Latitude:	40.0939280
	+E/-W	30.21 ft	Easting:	3,210,189.50 usft	Longitude:	-104.7486910
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,103.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2013	2013/08/15	8.57	66.72	52,671

<b>Design</b>	PLAN #1 PRELIMINARY			
<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	180.00

<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	
1,361.00	0.00	0.00	1,361.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,870.27	10.19	40.39	1,867.60	34.39	29.25	2.00	2.00	0.00	40.39	
6,290.75	10.19	40.39	6,218.40	629.78	535.77	0.00	0.00	0.00	0.00	
6,800.02	0.00	0.00	6,725.00	664.17	565.02	2.00	-2.00	0.00	180.00	
6,800.02	0.00	0.00	6,725.00	664.17	565.02	0.00	0.00	0.00	0.00	
6,822.07	0.00	0.00	6,747.05	664.17	565.02	0.00	0.00	0.00	0.00	
7,719.83	89.78	180.00	7,320.00	93.46	565.02	10.00	10.00	20.05	180.00	
15,375.37	89.78	180.00	7,350.00	-7,562.03	565.02	0.00	0.00	0.00	0.00	PBHL_BADDING 14N

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well BADDING 14N-2HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5103 & 17 @ 5120.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 5103 & 17 @ 5120.00ft (ASSUMED)
<b>Site:</b>	BADDING 22-35 PAD	<b>North Reference:</b>	True
<b>Well:</b>	BADDING 14N-2HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

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
900.00	0.00	0.00	900.00	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
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,111.00	0.00	0.00	1,111.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fox Hills Base</b>									
1,161.00	0.00	0.00	1,161.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 5/8"</b>									
1,200.00	0.00	0.00	1,200.00	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
1,361.00	0.00	0.00	1,361.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
1,400.00	0.78	40.39	1,400.00	0.20	0.17	-0.20	2.00	2.00	0.00
1,500.00	2.78	40.39	1,499.95	2.57	2.18	-2.57	2.00	2.00	0.00
1,600.00	4.78	40.39	1,599.72	7.59	6.46	-7.59	2.00	2.00	0.00
1,700.00	6.78	40.39	1,699.21	15.26	12.98	-15.26	2.00	2.00	0.00
1,800.00	8.78	40.39	1,798.28	25.57	21.75	-25.57	2.00	2.00	0.00
1,870.27	10.19	40.39	1,867.60	34.39	29.25	-34.39	2.00	2.00	0.00
<b>Start 4420.47 hold at 1870.27 MD</b>									
1,900.00	10.19	40.39	1,896.85	38.39	32.66	-38.39	0.00	0.00	0.00
2,000.00	10.19	40.39	1,995.28	51.86	44.12	-51.86	0.00	0.00	0.00
2,100.00	10.19	40.39	2,093.70	65.33	55.58	-65.33	0.00	0.00	0.00
2,200.00	10.19	40.39	2,192.13	78.80	67.04	-78.80	0.00	0.00	0.00
2,300.00	10.19	40.39	2,290.55	92.27	78.49	-92.27	0.00	0.00	0.00
2,400.00	10.19	40.39	2,388.97	105.74	89.95	-105.74	0.00	0.00	0.00
2,500.00	10.19	40.39	2,487.40	119.21	101.41	-119.21	0.00	0.00	0.00
2,600.00	10.19	40.39	2,585.82	132.67	112.87	-132.67	0.00	0.00	0.00
2,700.00	10.19	40.39	2,684.25	146.14	124.33	-146.14	0.00	0.00	0.00
2,800.00	10.19	40.39	2,782.67	159.61	135.79	-159.61	0.00	0.00	0.00
2,900.00	10.19	40.39	2,881.09	173.08	147.24	-173.08	0.00	0.00	0.00
3,000.00	10.19	40.39	2,979.52	186.55	158.70	-186.55	0.00	0.00	0.00
3,100.00	10.19	40.39	3,077.94	200.02	170.16	-200.02	0.00	0.00	0.00
3,200.00	10.19	40.39	3,176.37	213.49	181.62	-213.49	0.00	0.00	0.00
3,300.00	10.19	40.39	3,274.79	226.96	193.08	-226.96	0.00	0.00	0.00
3,400.00	10.19	40.39	3,373.21	240.43	204.54	-240.43	0.00	0.00	0.00
3,500.00	10.19	40.39	3,471.64	253.90	215.99	-253.90	0.00	0.00	0.00
3,600.00	10.19	40.39	3,570.06	267.36	227.45	-267.36	0.00	0.00	0.00
3,700.00	10.19	40.39	3,668.49	280.83	238.91	-280.83	0.00	0.00	0.00
3,800.00	10.19	40.39	3,766.91	294.30	250.37	-294.30	0.00	0.00	0.00
3,900.00	10.19	40.39	3,865.33	307.77	261.83	-307.77	0.00	0.00	0.00
4,000.00	10.19	40.39	3,963.76	321.24	273.28	-321.24	0.00	0.00	0.00
4,100.00	10.19	40.39	4,062.18	334.71	284.74	-334.71	0.00	0.00	0.00
4,200.00	10.19	40.39	4,160.61	348.18	296.20	-348.18	0.00	0.00	0.00
4,300.00	10.19	40.39	4,259.03	361.65	307.66	-361.65	0.00	0.00	0.00
4,310.13	10.19	40.39	4,269.00	363.01	308.82	-363.01	0.00	0.00	0.00
<b>Parkman</b>									

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well BADDING 14N-2HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5103 & 17 @ 5120.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 5103 & 17 @ 5120.00ft (ASSUMED)
<b>Site:</b>	BADDING 22-35 PAD	<b>North Reference:</b>	True
<b>Well:</b>	BADDING 14N-2HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

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	40.39	4,357.45	375.12	319.12	-375.12	0.00	0.00	0.00
4,500.00	10.19	40.39	4,455.88	388.59	330.58	-388.59	0.00	0.00	0.00
4,600.00	10.19	40.39	4,554.30	402.06	342.03	-402.06	0.00	0.00	0.00
4,654.56	10.19	40.39	4,608.00	409.40	348.29	-409.40	0.00	0.00	0.00
<b>Sussex</b>									
4,700.00	10.19	40.39	4,652.73	415.52	353.49	-415.52	0.00	0.00	0.00
4,800.00	10.19	40.39	4,751.15	428.99	364.95	-428.99	0.00	0.00	0.00
4,900.00	10.19	40.39	4,849.57	442.46	376.41	-442.46	0.00	0.00	0.00
5,000.00	10.19	40.39	4,948.00	455.93	387.87	-455.93	0.00	0.00	0.00
5,100.00	10.19	40.39	5,046.42	469.40	399.33	-469.40	0.00	0.00	0.00
5,200.00	10.19	40.39	5,144.85	482.87	410.78	-482.87	0.00	0.00	0.00
5,300.00	10.19	40.39	5,243.27	496.34	422.24	-496.34	0.00	0.00	0.00
5,400.00	10.19	40.39	5,341.70	509.81	433.70	-509.81	0.00	0.00	0.00
5,500.00	10.19	40.39	5,440.12	523.28	445.16	-523.28	0.00	0.00	0.00
5,600.00	10.19	40.39	5,538.54	536.75	456.62	-536.75	0.00	0.00	0.00
5,700.00	10.19	40.39	5,636.97	550.21	468.08	-550.21	0.00	0.00	0.00
5,800.00	10.19	40.39	5,735.39	563.68	479.53	-563.68	0.00	0.00	0.00
5,900.00	10.19	40.39	5,833.82	577.15	490.99	-577.15	0.00	0.00	0.00
6,000.00	10.19	40.39	5,932.24	590.62	502.45	-590.62	0.00	0.00	0.00
6,100.00	10.19	40.39	6,030.66	604.09	513.91	-604.09	0.00	0.00	0.00
6,200.00	10.19	40.39	6,129.09	617.56	525.37	-617.56	0.00	0.00	0.00
6,290.75	10.19	40.39	6,218.40	629.78	535.77	-629.78	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
6,300.00	10.00	40.39	6,227.51	631.02	536.82	-631.02	2.00	-2.00	0.00
6,400.00	8.00	40.39	6,326.28	642.93	546.95	-642.93	2.00	-2.00	0.00
6,500.00	6.00	40.39	6,425.53	652.22	554.85	-652.22	2.00	-2.00	0.00
6,600.00	4.00	40.39	6,525.14	658.85	560.50	-658.85	2.00	-2.00	0.00
6,700.00	2.00	40.39	6,625.00	662.84	563.89	-662.84	2.00	-2.00	0.00
6,800.00	0.00	40.39	6,724.98	664.17	565.02	-664.17	2.00	-2.00	0.00
6,800.02	0.00	0.00	6,725.00	664.17	565.02	-664.17	2.00	-2.00	0.00
<b>Start 22.05 hold at 6800.02 MD</b>									
6,822.07	0.00	0.00	6,747.05	664.17	565.02	-664.17	0.00	0.00	0.00
<b>Start DLS 10.00 TFO 180.00</b>									
6,900.00	7.79	180.00	6,824.74	658.88	565.02	-658.88	10.00	10.00	0.00
7,000.00	17.79	180.00	6,922.13	636.76	565.02	-636.76	10.00	10.00	0.00
7,100.00	27.79	180.00	7,014.21	598.07	565.02	-598.07	10.00	10.00	0.00
7,200.00	37.79	180.00	7,098.16	543.98	565.02	-543.98	10.00	10.00	0.00
7,300.00	47.79	180.00	7,171.45	476.13	565.02	-476.13	10.00	10.00	0.00
7,306.81	48.47	180.00	7,176.00	471.06	565.02	-471.06	10.00	10.00	0.00
<b>Sharon Springs</b>									
7,364.49	54.24	180.00	7,212.00	426.03	565.02	-426.03	10.00	10.00	0.00
<b>Niobrara A</b>									
7,400.00	57.79	180.00	7,231.85	396.59	565.02	-396.59	10.00	10.00	0.00
7,500.00	67.79	180.00	7,277.51	307.76	565.02	-307.76	10.00	10.00	0.00
7,600.00	77.79	180.00	7,307.05	212.36	565.02	-212.36	10.00	10.00	0.00
7,614.83	79.28	180.00	7,310.00	197.83	565.02	-197.83	10.00	10.00	0.00
<b>Niobrara B</b>									
7,700.00	87.79	180.00	7,319.58	113.28	565.02	-113.28	10.00	10.00	0.00
7,719.83	89.78	180.00	7,320.00	93.45	565.02	-93.45	10.00	10.00	0.00
<b>Start 7655.54 hold at 7719.83 MD - 7"(2500 FSL 1976 FWL)</b>									
7,800.00	89.78	180.00	7,320.32	13.28	565.02	-13.28	0.00	0.00	0.00
7,900.00	89.78	180.00	7,320.71	-86.72	565.02	86.72	0.00	0.00	0.00
8,000.00	89.78	180.00	7,321.10	-186.71	565.02	186.71	0.00	0.00	0.00

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well BADDING 14N-2HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5103 & 17 @ 5120.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 5103 & 17 @ 5120.00ft (ASSUMED)
<b>Site:</b>	BADDING 22-35 PAD	<b>North Reference:</b>	True
<b>Well:</b>	BADDING 14N-2HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

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)
8,100.00	89.78	180.00	7,321.49	-286.71	565.02	286.71	0.00	0.00	0.00
8,200.00	89.78	180.00	7,321.89	-386.71	565.02	386.71	0.00	0.00	0.00
8,300.00	89.78	180.00	7,322.28	-486.71	565.02	486.71	0.00	0.00	0.00
8,400.00	89.78	180.00	7,322.67	-586.71	565.02	586.71	0.00	0.00	0.00
8,500.00	89.78	180.00	7,323.06	-686.71	565.02	686.71	0.00	0.00	0.00
8,600.00	89.78	180.00	7,323.45	-786.71	565.02	786.71	0.00	0.00	0.00
8,700.00	89.78	180.00	7,323.84	-886.71	565.02	886.71	0.00	0.00	0.00
8,800.00	89.78	180.00	7,324.24	-986.71	565.02	986.71	0.00	0.00	0.00
8,900.00	89.78	180.00	7,324.63	-1,086.71	565.02	1,086.71	0.00	0.00	0.00
9,000.00	89.78	180.00	7,325.02	-1,186.71	565.02	1,186.71	0.00	0.00	0.00
9,100.00	89.78	180.00	7,325.41	-1,286.71	565.02	1,286.71	0.00	0.00	0.00
9,200.00	89.78	180.00	7,325.80	-1,386.71	565.02	1,386.71	0.00	0.00	0.00
9,300.00	89.78	180.00	7,326.20	-1,486.70	565.02	1,486.70	0.00	0.00	0.00
9,400.00	89.78	180.00	7,326.59	-1,586.70	565.02	1,586.70	0.00	0.00	0.00
9,500.00	89.78	180.00	7,326.98	-1,686.70	565.02	1,686.70	0.00	0.00	0.00
9,600.00	89.78	180.00	7,327.37	-1,786.70	565.02	1,786.70	0.00	0.00	0.00
9,700.00	89.78	180.00	7,327.76	-1,886.70	565.02	1,886.70	0.00	0.00	0.00
9,800.00	89.78	180.00	7,328.15	-1,986.70	565.02	1,986.70	0.00	0.00	0.00
9,900.00	89.78	180.00	7,328.55	-2,086.70	565.02	2,086.70	0.00	0.00	0.00
10,000.00	89.78	180.00	7,328.94	-2,186.70	565.02	2,186.70	0.00	0.00	0.00
10,100.00	89.78	180.00	7,329.33	-2,286.70	565.02	2,286.70	0.00	0.00	0.00
10,200.00	89.78	180.00	7,329.72	-2,386.70	565.02	2,386.70	0.00	0.00	0.00
10,300.00	89.78	180.00	7,330.11	-2,486.70	565.02	2,486.70	0.00	0.00	0.00
10,400.00	89.78	180.00	7,330.51	-2,586.70	565.02	2,586.70	0.00	0.00	0.00
10,500.00	89.78	180.00	7,330.90	-2,686.70	565.02	2,686.70	0.00	0.00	0.00
10,600.00	89.78	180.00	7,331.29	-2,786.69	565.02	2,786.69	0.00	0.00	0.00
10,700.00	89.78	180.00	7,331.68	-2,886.69	565.02	2,886.69	0.00	0.00	0.00
10,800.00	89.78	180.00	7,332.07	-2,986.69	565.02	2,986.69	0.00	0.00	0.00
10,900.00	89.78	180.00	7,332.46	-3,086.69	565.02	3,086.69	0.00	0.00	0.00
11,000.00	89.78	180.00	7,332.86	-3,186.69	565.02	3,186.69	0.00	0.00	0.00
11,100.00	89.78	180.00	7,333.25	-3,286.69	565.02	3,286.69	0.00	0.00	0.00
11,200.00	89.78	180.00	7,333.64	-3,386.69	565.02	3,386.69	0.00	0.00	0.00
11,300.00	89.78	180.00	7,334.03	-3,486.69	565.02	3,486.69	0.00	0.00	0.00
11,400.00	89.78	180.00	7,334.42	-3,586.69	565.02	3,586.69	0.00	0.00	0.00
11,500.00	89.78	180.00	7,334.82	-3,686.69	565.02	3,686.69	0.00	0.00	0.00
11,600.00	89.78	180.00	7,335.21	-3,786.69	565.02	3,786.69	0.00	0.00	0.00
11,700.00	89.78	180.00	7,335.60	-3,886.69	565.02	3,886.69	0.00	0.00	0.00
11,800.00	89.78	180.00	7,335.99	-3,986.69	565.02	3,986.69	0.00	0.00	0.00
11,900.00	89.78	180.00	7,336.38	-4,086.68	565.02	4,086.68	0.00	0.00	0.00
12,000.00	89.78	180.00	7,336.77	-4,186.68	565.02	4,186.68	0.00	0.00	0.00
12,100.00	89.78	180.00	7,337.17	-4,286.68	565.02	4,286.68	0.00	0.00	0.00
12,200.00	89.78	180.00	7,337.56	-4,386.68	565.02	4,386.68	0.00	0.00	0.00
12,300.00	89.78	180.00	7,337.95	-4,486.68	565.02	4,486.68	0.00	0.00	0.00
12,400.00	89.78	180.00	7,338.34	-4,586.68	565.02	4,586.68	0.00	0.00	0.00
12,500.00	89.78	180.00	7,338.73	-4,686.68	565.02	4,686.68	0.00	0.00	0.00
12,600.00	89.78	180.00	7,339.13	-4,786.68	565.02	4,786.68	0.00	0.00	0.00
12,700.00	89.78	180.00	7,339.52	-4,886.68	565.02	4,886.68	0.00	0.00	0.00
12,800.00	89.78	180.00	7,339.91	-4,986.68	565.02	4,986.68	0.00	0.00	0.00
12,900.00	89.78	180.00	7,340.30	-5,086.68	565.02	5,086.68	0.00	0.00	0.00
13,000.00	89.78	180.00	7,340.69	-5,186.68	565.02	5,186.68	0.00	0.00	0.00
13,100.00	89.78	180.00	7,341.08	-5,286.68	565.02	5,286.68	0.00	0.00	0.00
13,200.00	89.78	180.00	7,341.48	-5,386.67	565.02	5,386.67	0.00	0.00	0.00
13,300.00	89.78	180.00	7,341.87	-5,486.67	565.02	5,486.67	0.00	0.00	0.00
13,400.00	89.78	180.00	7,342.26	-5,586.67	565.02	5,586.67	0.00	0.00	0.00

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well BADDING 14N-2HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5103 & 17 @ 5120.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 5103 & 17 @ 5120.00ft (ASSUMED)
<b>Site:</b>	BADDING 22-35 PAD	<b>North Reference:</b>	True
<b>Well:</b>	BADDING 14N-2HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

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)	
13,500.00	89.78	180.00	7,342.65	-5,686.67	565.02	5,686.67	0.00	0.00	0.00	
13,600.00	89.78	180.00	7,343.04	-5,786.67	565.02	5,786.67	0.00	0.00	0.00	
13,700.00	89.78	180.00	7,343.44	-5,886.67	565.02	5,886.67	0.00	0.00	0.00	
13,800.00	89.78	180.00	7,343.83	-5,986.67	565.02	5,986.67	0.00	0.00	0.00	
13,900.00	89.78	180.00	7,344.22	-6,086.67	565.02	6,086.67	0.00	0.00	0.00	
14,000.00	89.78	180.00	7,344.61	-6,186.67	565.02	6,186.67	0.00	0.00	0.00	
14,100.00	89.78	180.00	7,345.00	-6,286.67	565.02	6,286.67	0.00	0.00	0.00	
14,200.00	89.78	180.00	7,345.39	-6,386.67	565.02	6,386.67	0.00	0.00	0.00	
14,300.00	89.78	180.00	7,345.79	-6,486.67	565.02	6,486.67	0.00	0.00	0.00	
14,400.00	89.78	180.00	7,346.18	-6,586.67	565.02	6,586.67	0.00	0.00	0.00	
14,500.00	89.78	180.00	7,346.57	-6,686.66	565.02	6,686.66	0.00	0.00	0.00	
14,600.00	89.78	180.00	7,346.96	-6,786.66	565.02	6,786.66	0.00	0.00	0.00	
14,700.00	89.78	180.00	7,347.35	-6,886.66	565.02	6,886.66	0.00	0.00	0.00	
14,800.00	89.78	180.00	7,347.75	-6,986.66	565.02	6,986.66	0.00	0.00	0.00	
14,900.00	89.78	180.00	7,348.14	-7,086.66	565.02	7,086.66	0.00	0.00	0.00	
15,000.00	89.78	180.00	7,348.53	-7,186.66	565.02	7,186.66	0.00	0.00	0.00	
15,100.00	89.78	180.00	7,348.92	-7,286.66	565.02	7,286.66	0.00	0.00	0.00	
15,200.00	89.78	180.00	7,349.31	-7,386.66	565.02	7,386.66	0.00	0.00	0.00	
15,300.00	89.78	180.00	7,349.70	-7,486.66	565.02	7,486.66	0.00	0.00	0.00	
15,375.37	89.78	180.00	7,350.00	-7,562.03	565.02	7,562.03	0.00	0.00	0.00	
TD at 15375.37 - PBHL_BADDING 14N-2HZ(1 FSL 1970 FWL)										

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_BADDING 14N-2	0.00	0.00	7,350.00	-7,562.03	565.02	1,270,395.99	3,210,818.58	40.0731690	-104.7466720
- plan hits target center									
- Circle (radius 0.00)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,161.00	1,161.00	9 5/8"	9.625	12.250	
7,719.83	7,320.00	7"(2500 FSL 1976 FWL)	7.000	7.500	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,111.00	1,111.00	Fox Hills Base				
4,310.13	4,269.00	Parkman				
4,654.56	4,608.00	Sussex				
7,306.81	7,176.00	Sharon Springs				
7,364.49	7,212.00	Niobrara A				
7,614.83	7,310.00	Niobrara B				

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well BADDING 14N-2HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5103 & 17 @ 5120.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 5103 & 17 @ 5120.00ft (ASSUMED)
<b>Site:</b>	BADDING 22-35 PAD	<b>North Reference:</b>	True
<b>Well:</b>	BADDING 14N-2HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,361.00	1,361.00	0.00	0.00	Start Build 2.00
1,870.27	1,867.60	34.39	29.25	Start 4420.47 hold at 1870.27 MD
6,290.75	6,218.40	629.78	535.77	Start Drop -2.00
6,800.02	6,725.00	664.17	565.02	Start 22.05 hold at 6800.02 MD
6,822.07	6,747.05	664.17	565.02	Start DLS 10.00 TFO 180.00
7,719.83	7,320.00	93.46	565.02	Start 7655.54 hold at 7719.83 MD
15,375.37	7,350.00	-7,562.03	565.02	TD at 15375.37