



Project: COLORADO NORTHERN ZONE - 83
Site: SPOTTED 35-23HZ
Well: SPOTTED 30N-23HZ
Wellbore: OH
Design: PLAN #1 PRELIMINARY



WELL DETAILS: SPOTTED 30N-23HZ

GL 4966 & KB 17 @ 4983.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1286160.36	3177715.14	40.1171550	-104.8645540

SECTION DETAILS

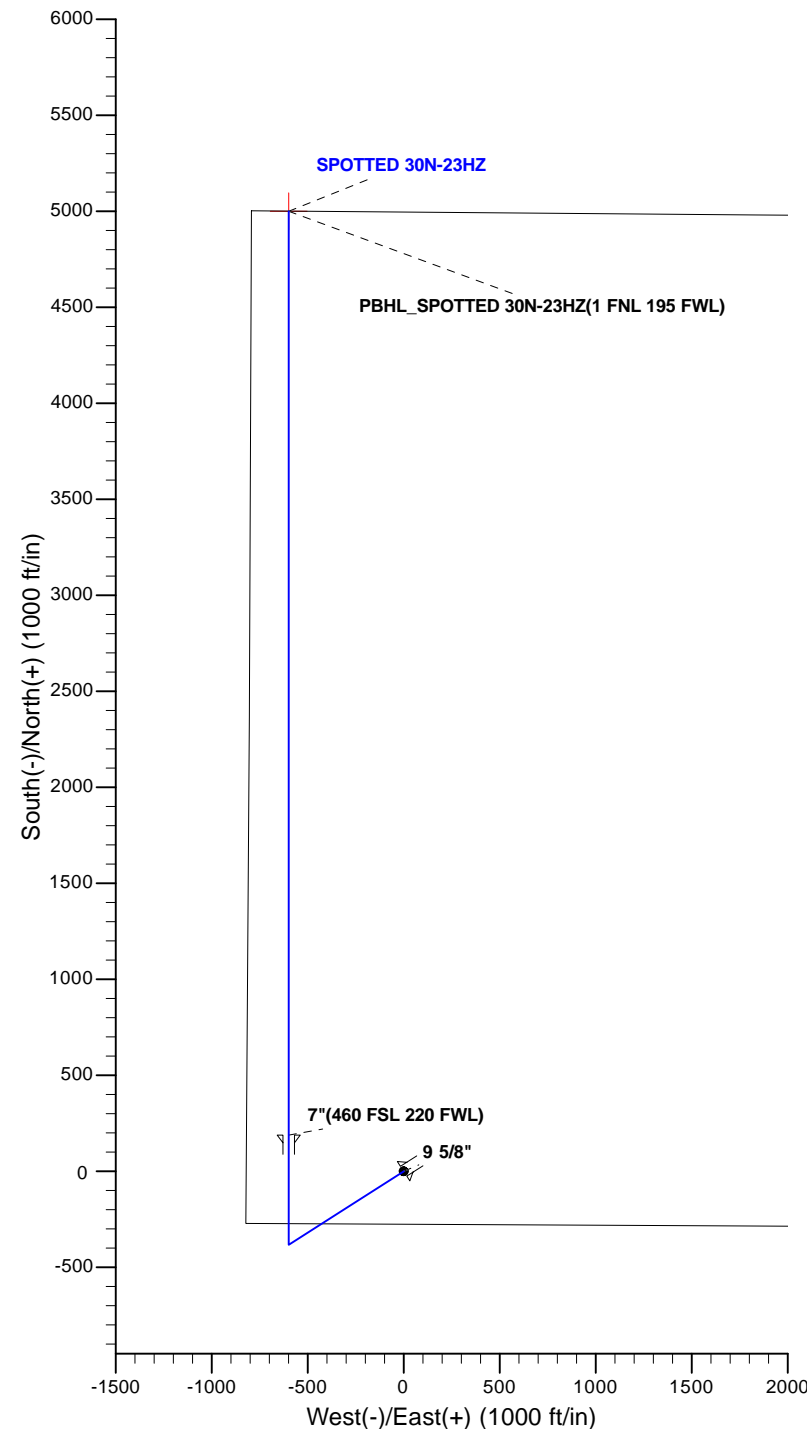
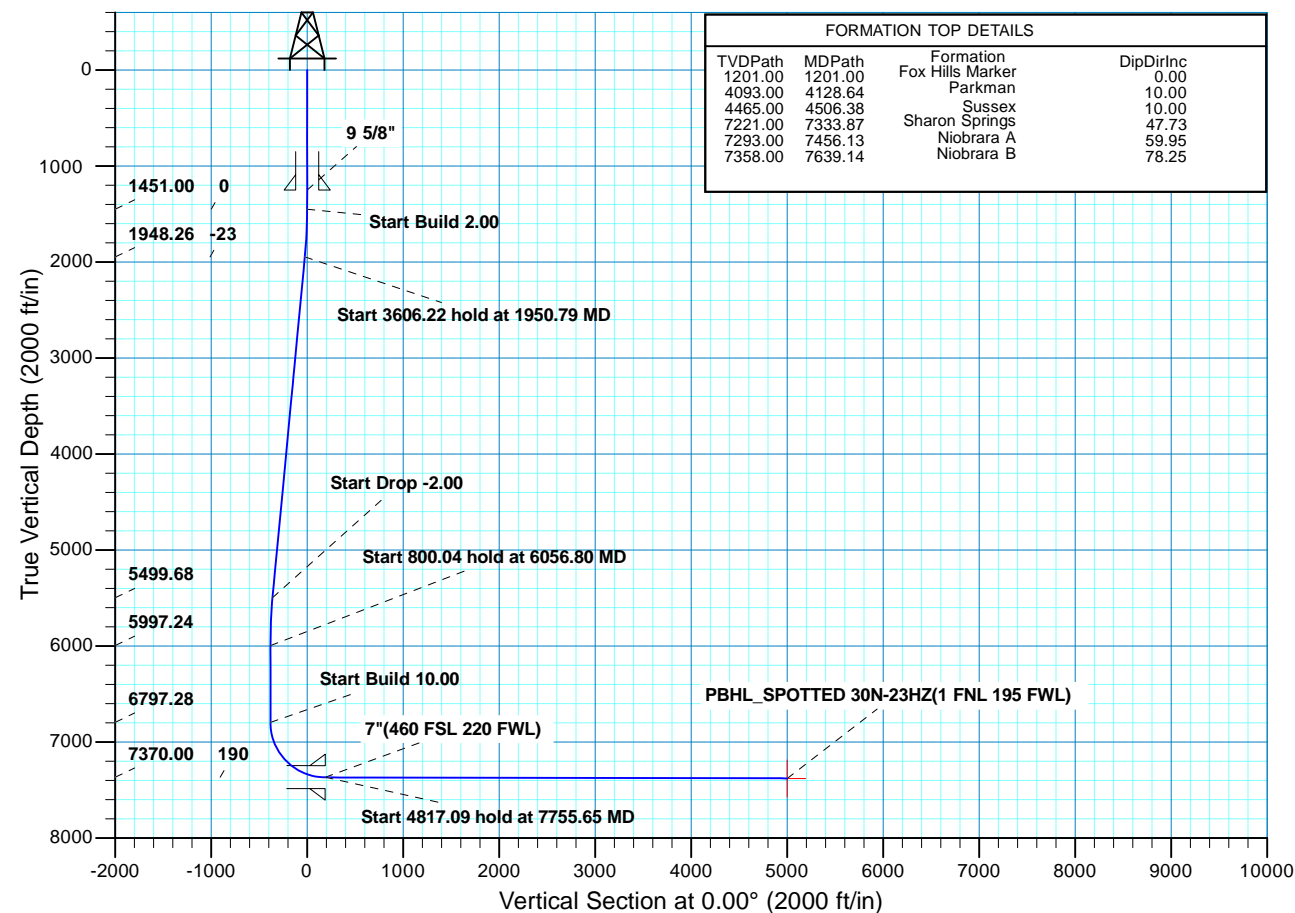
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1451.00	0.00	0.00	1451.00	0.00	0.00	0.00	0.00	0.00	
1951.15	10.00	237.43	1948.61	-23.44	-36.70	2.00	237.43	-23.44	
5535.41	10.00	237.43	5478.39	-358.56	-561.40	0.00	0.00	-358.56	
6035.56	0.00	0.00	5976.00	-382.00	-598.10	2.00	180.00	-382.00	
6856.60	0.00	0.00	6797.04	-382.00	-598.10	0.00	0.00	-382.00	
7755.41	89.88	0.00	7370.00	189.77	-598.10	10.00	0.00	189.77	
12566.50	89.88	0.00	7380.00	5000.85	-598.10	0.00	0.00	5000.85	PBHL_SPOTTED 30N-23HZ(1 FNL 195 FWL)

CASING DETAILS

TVD	MD	Name	Size
1251.00	1251.00	9 5/8"	9.625
7370.00	7755.41	7"	7.000

FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION	DIPDIRINC
1201.00	1201.00	Fox Hills Marker	0.00
4093.00	4128.64	Parkman	10.00
4465.00	4506.38	Sussex	10.00
7221.00	7333.87	Sharon Springs	47.73
7293.00	7456.13	Niobrara A	59.95
7358.00	7639.14	Niobrara B	78.25



Plan: PLAN #1 PRELIMINARY (SPOTTED 30N-23HZ/OH)

Created By: RobertScott Date: 8:10, February 18 2014



Scientific Drilling

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

SPOTTED 35-23HZ

SPOTTED 30N-23HZ

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

18 February, 2014

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SPOTTED 30N-23HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4966 & KB 17 @ 4983.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4966 & KB 17 @ 4983.00ft (ASSUMED)
Site:	SPOTTED 35-23HZ	North Reference:	True
Well:	SPOTTED 30N-23HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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	SPOTTED 35-23HZ, SECTION 23 T2N R67W			
Site Position:		Northing:	1,286,160.58 usft	Latitude: 40.1171550
From:	Lat/Long	Easting:	3,177,745.06 usft	Longitude: -104.8644470
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence: 0.41 °

Well	SPOTTED 30N-23HZ, 275 FSL 820 FWL			
Well Position	+N/-S	-0.01 ft	Northing:	1,286,160.36 usft
	+E/-W	-29.92 ft	Easting:	3,177,715.14 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft
			Ground Level:	4,966.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	02/13/14	8.58	66.70	52,611

Design	PLAN #1 PRELIMINARY			
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	0.00

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	
1,451.00	0.00	0.00	1,451.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,951.15	10.00	237.43	1,948.61	-23.44	-36.70	2.00	2.00	0.00	237.43	
5,535.41	10.00	237.43	5,478.39	-358.56	-561.40	0.00	0.00	0.00	0.00	
6,035.56	0.00	0.00	5,976.00	-382.00	-598.10	2.00	-2.00	0.00	180.00	
6,856.60	0.00	0.00	6,797.04	-382.00	-598.10	0.00	0.00	0.00	0.00	
7,755.41	89.88	0.00	7,370.00	189.77	-598.10	10.00	10.00	0.00	0.00	
12,566.50	89.88	0.00	7,380.00	5,000.85	-598.10	0.00	0.00	0.00	0.00	PBHL_SPOTTED 30N

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SPOTTED 30N-23HZ
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Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4966 & KB 17 @ 4983.00ft (ASSUMED)
Site:	SPOTTED 35-23HZ	North Reference:	True
Well:	SPOTTED 30N-23HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,251.00	0.00	0.00	1,251.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,451.00	0.00	0.00	1,451.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,500.00	0.98	237.43	1,500.00	-0.23	-0.35	-0.23	2.00	2.00	0.00
1,600.00	2.98	237.43	1,599.93	-2.09	-3.26	-2.09	2.00	2.00	0.00
1,700.00	4.98	237.43	1,699.69	-5.82	-9.11	-5.82	2.00	2.00	0.00
1,800.00	6.98	237.43	1,799.14	-11.43	-17.89	-11.43	2.00	2.00	0.00
1,900.00	8.98	237.43	1,898.16	-18.90	-29.59	-18.90	2.00	2.00	0.00
1,950.79	10.00	237.43	1,948.26	-23.41	-36.65	-23.41	2.00	2.00	0.00
Start 3606.22 hold at 1950.79 MD									
1,951.15	10.00	237.43	1,948.61	-23.44	-36.70	-23.44	2.00	2.00	0.00
2,000.00	10.00	237.43	1,996.72	-28.01	-43.85	-28.01	0.00	0.00	0.00
2,100.00	10.00	237.43	2,095.20	-37.36	-58.49	-37.36	0.00	0.00	0.00
2,200.00	10.00	237.43	2,193.68	-46.71	-73.13	-46.71	0.00	0.00	0.00
2,300.00	10.00	237.43	2,292.16	-56.06	-87.77	-56.06	0.00	0.00	0.00
2,400.00	10.00	237.43	2,390.64	-65.41	-102.41	-65.41	0.00	0.00	0.00
2,500.00	10.00	237.43	2,489.12	-74.76	-117.05	-74.76	0.00	0.00	0.00
2,600.00	10.00	237.43	2,587.60	-84.11	-131.69	-84.11	0.00	0.00	0.00
2,700.00	10.00	237.43	2,686.08	-93.46	-146.33	-93.46	0.00	0.00	0.00
2,800.00	10.00	237.43	2,784.56	-102.81	-160.96	-102.81	0.00	0.00	0.00
2,900.00	10.00	237.43	2,883.04	-112.16	-175.60	-112.16	0.00	0.00	0.00
3,000.00	10.00	237.43	2,981.52	-121.51	-190.24	-121.51	0.00	0.00	0.00
3,100.00	10.00	237.43	3,080.00	-130.86	-204.88	-130.86	0.00	0.00	0.00
3,200.00	10.00	237.43	3,178.48	-140.20	-219.52	-140.20	0.00	0.00	0.00
3,300.00	10.00	237.43	3,276.96	-149.55	-234.16	-149.55	0.00	0.00	0.00
3,400.00	10.00	237.43	3,375.44	-158.90	-248.80	-158.90	0.00	0.00	0.00
3,500.00	10.00	237.43	3,473.92	-168.25	-263.44	-168.25	0.00	0.00	0.00
3,600.00	10.00	237.43	3,572.40	-177.60	-278.08	-177.60	0.00	0.00	0.00
3,700.00	10.00	237.43	3,670.88	-186.95	-292.71	-186.95	0.00	0.00	0.00
3,800.00	10.00	237.43	3,769.36	-196.30	-307.35	-196.30	0.00	0.00	0.00
3,900.00	10.00	237.43	3,867.84	-205.65	-321.99	-205.65	0.00	0.00	0.00
4,000.00	10.00	237.43	3,966.32	-215.00	-336.63	-215.00	0.00	0.00	0.00
4,100.00	10.00	237.43	4,064.80	-224.35	-351.27	-224.35	0.00	0.00	0.00
4,200.00	10.00	237.43	4,163.28	-233.70	-365.91	-233.70	0.00	0.00	0.00
4,300.00	10.00	237.43	4,261.76	-243.05	-380.55	-243.05	0.00	0.00	0.00
4,400.00	10.00	237.43	4,360.24	-252.40	-395.19	-252.40	0.00	0.00	0.00
4,500.00	10.00	237.43	4,458.72	-261.75	-409.83	-261.75	0.00	0.00	0.00

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Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4966 & KB 17 @ 4983.00ft (ASSUMED)
Site:	SPOTTED 35-23HZ	North Reference:	True
Well:	SPOTTED 30N-23HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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)
4,600.00	10.00	237.43	4,557.20	-271.10	-424.46	-271.10	0.00	0.00	0.00
4,700.00	10.00	237.43	4,655.68	-280.45	-439.10	-280.45	0.00	0.00	0.00
4,800.00	10.00	237.43	4,754.16	-289.80	-453.74	-289.80	0.00	0.00	0.00
4,900.00	10.00	237.43	4,852.64	-299.15	-468.38	-299.15	0.00	0.00	0.00
5,000.00	10.00	237.43	4,951.12	-308.50	-483.02	-308.50	0.00	0.00	0.00
5,100.00	10.00	237.43	5,049.60	-317.85	-497.66	-317.85	0.00	0.00	0.00
5,200.00	10.00	237.43	5,148.08	-327.20	-512.30	-327.20	0.00	0.00	0.00
5,300.00	10.00	237.43	5,246.56	-336.55	-526.94	-336.55	0.00	0.00	0.00
5,400.00	10.00	237.43	5,345.04	-345.90	-541.58	-345.90	0.00	0.00	0.00
5,500.00	10.00	237.43	5,443.52	-355.25	-556.21	-355.25	0.00	0.00	0.00
5,535.41	10.00	237.43	5,478.39	-358.56	-561.40	-358.56	0.00	0.00	0.00
5,557.01	9.57	237.43	5,499.68	-360.54	-564.49	-360.54	2.00	-2.00	0.00
Start Drop -2.00									
5,600.00	8.71	237.43	5,542.12	-364.21	-570.25	-364.21	2.00	-2.00	0.00
5,700.00	6.71	237.43	5,641.21	-371.43	-581.56	-371.43	2.00	-2.00	0.00
5,800.00	4.71	237.43	5,740.71	-376.79	-589.94	-376.79	2.00	-2.00	0.00
5,900.00	2.71	237.43	5,840.49	-380.27	-595.40	-380.27	2.00	-2.00	0.00
6,000.00	0.71	237.43	5,940.44	-381.88	-597.91	-381.88	2.00	-2.00	0.00
6,035.56	0.00	0.00	5,976.00	-382.00	-598.10	-382.00	2.00	-2.00	0.00
6,056.80	0.00	0.00	5,997.25	-382.00	-598.10	-382.00	0.00	0.00	0.00
Start 800.04 hold at 6056.80 MD									
6,100.00	0.00	0.00	6,040.44	-382.00	-598.10	-382.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,140.44	-382.00	-598.10	-382.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,240.44	-382.00	-598.10	-382.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,340.44	-382.00	-598.10	-382.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,440.44	-382.00	-598.10	-382.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,540.44	-382.00	-598.10	-382.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,640.44	-382.00	-598.10	-382.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,740.44	-382.00	-598.10	-382.00	0.00	0.00	0.00
6,856.60	0.00	0.00	6,797.04	-382.00	-598.10	-382.00	0.00	0.00	0.00
6,856.84	0.00	0.00	6,797.29	-382.00	-598.10	-382.00	0.00	0.00	0.00
Start Build 10.00									
6,900.00	4.34	0.00	6,840.40	-380.36	-598.10	-380.36	10.06	10.06	0.00
7,000.00	14.34	0.00	6,938.95	-364.15	-598.10	-364.15	10.00	10.00	0.00
7,100.00	24.34	0.00	7,033.19	-331.07	-598.10	-331.07	10.00	10.00	0.00
7,200.00	34.34	0.00	7,120.25	-282.14	-598.10	-282.14	10.00	10.00	0.00
7,300.00	44.34	0.00	7,197.49	-218.82	-598.10	-218.82	10.00	10.00	0.00
7,400.00	54.34	0.00	7,262.56	-143.06	-598.10	-143.06	10.00	10.00	0.00
7,500.00	64.34	0.00	7,313.49	-57.15	-598.10	-57.15	10.00	10.00	0.00
7,600.00	74.34	0.00	7,348.73	36.30	-598.10	36.30	10.00	10.00	0.00
7,700.00	84.34	0.00	7,367.20	134.45	-598.10	134.45	10.00	10.00	0.00
7,755.41	89.88	0.00	7,370.00	189.77	-598.10	189.77	10.00	10.00	0.00
7"(460 FSL 220 FWL)									
7,755.65	89.88	0.00	7,370.00	190.01	-598.10	190.01	0.00	0.00	0.00
Start 4817.09 hold at 7755.65 MD									
7,800.00	89.88	0.00	7,370.09	234.36	-598.10	234.36	0.00	0.00	0.00
7,900.00	89.88	0.00	7,370.30	334.36	-598.10	334.36	0.00	0.00	0.00
8,000.00	89.88	0.00	7,370.51	434.36	-598.10	434.36	0.00	0.00	0.00
8,100.00	89.88	0.00	7,370.71	534.36	-598.10	534.36	0.00	0.00	0.00
8,200.00	89.88	0.00	7,370.92	634.36	-598.10	634.36	0.00	0.00	0.00
8,300.00	89.88	0.00	7,371.13	734.36	-598.10	734.36	0.00	0.00	0.00
8,400.00	89.88	0.00	7,371.34	834.36	-598.10	834.36	0.00	0.00	0.00
8,500.00	89.88	0.00	7,371.54	934.36	-598.10	934.36	0.00	0.00	0.00
8,600.00	89.88	0.00	7,371.75	1,034.36	-598.10	1,034.36	0.00	0.00	0.00

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Well:	SPOTTED 30N-23HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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)
8,700.00	89.88	0.00	7,371.96	1,134.36	-598.10	1,134.36	0.00	0.00	0.00
8,800.00	89.88	0.00	7,372.17	1,234.36	-598.10	1,234.36	0.00	0.00	0.00
8,900.00	89.88	0.00	7,372.38	1,334.36	-598.10	1,334.36	0.00	0.00	0.00
9,000.00	89.88	0.00	7,372.58	1,434.36	-598.10	1,434.36	0.00	0.00	0.00
9,100.00	89.88	0.00	7,372.79	1,534.36	-598.10	1,534.36	0.00	0.00	0.00
9,200.00	89.88	0.00	7,373.00	1,634.36	-598.10	1,634.36	0.00	0.00	0.00
9,300.00	89.88	0.00	7,373.21	1,734.36	-598.10	1,734.36	0.00	0.00	0.00
9,400.00	89.88	0.00	7,373.42	1,834.36	-598.10	1,834.36	0.00	0.00	0.00
9,500.00	89.88	0.00	7,373.62	1,934.35	-598.10	1,934.35	0.00	0.00	0.00
9,600.00	89.88	0.00	7,373.83	2,034.35	-598.10	2,034.35	0.00	0.00	0.00
9,700.00	89.88	0.00	7,374.04	2,134.35	-598.10	2,134.35	0.00	0.00	0.00
9,800.00	89.88	0.00	7,374.25	2,234.35	-598.10	2,234.35	0.00	0.00	0.00
9,900.00	89.88	0.00	7,374.46	2,334.35	-598.10	2,334.35	0.00	0.00	0.00
10,000.00	89.88	0.00	7,374.66	2,434.35	-598.10	2,434.35	0.00	0.00	0.00
10,100.00	89.88	0.00	7,374.87	2,534.35	-598.10	2,534.35	0.00	0.00	0.00
10,200.00	89.88	0.00	7,375.08	2,634.35	-598.10	2,634.35	0.00	0.00	0.00
10,300.00	89.88	0.00	7,375.29	2,734.35	-598.10	2,734.35	0.00	0.00	0.00
10,400.00	89.88	0.00	7,375.50	2,834.35	-598.10	2,834.35	0.00	0.00	0.00
10,500.00	89.88	0.00	7,375.70	2,934.35	-598.10	2,934.35	0.00	0.00	0.00
10,600.00	89.88	0.00	7,375.91	3,034.35	-598.10	3,034.35	0.00	0.00	0.00
10,700.00	89.88	0.00	7,376.12	3,134.35	-598.10	3,134.35	0.00	0.00	0.00
10,800.00	89.88	0.00	7,376.33	3,234.35	-598.10	3,234.35	0.00	0.00	0.00
10,900.00	89.88	0.00	7,376.54	3,334.35	-598.10	3,334.35	0.00	0.00	0.00
11,000.00	89.88	0.00	7,376.74	3,434.35	-598.10	3,434.35	0.00	0.00	0.00
11,100.00	89.88	0.00	7,376.95	3,534.35	-598.10	3,534.35	0.00	0.00	0.00
11,200.00	89.88	0.00	7,377.16	3,634.35	-598.10	3,634.35	0.00	0.00	0.00
11,300.00	89.88	0.00	7,377.37	3,734.35	-598.10	3,734.35	0.00	0.00	0.00
11,400.00	89.88	0.00	7,377.57	3,834.35	-598.10	3,834.35	0.00	0.00	0.00
11,500.00	89.88	0.00	7,377.78	3,934.35	-598.10	3,934.35	0.00	0.00	0.00
11,600.00	89.88	0.00	7,377.99	4,034.35	-598.10	4,034.35	0.00	0.00	0.00
11,700.00	89.88	0.00	7,378.20	4,134.35	-598.10	4,134.35	0.00	0.00	0.00
11,800.00	89.88	0.00	7,378.41	4,234.35	-598.10	4,234.35	0.00	0.00	0.00
11,900.00	89.88	0.00	7,378.61	4,334.35	-598.10	4,334.35	0.00	0.00	0.00
12,000.00	89.88	0.00	7,378.82	4,434.35	-598.10	4,434.35	0.00	0.00	0.00
12,100.00	89.88	0.00	7,379.03	4,534.35	-598.10	4,534.35	0.00	0.00	0.00
12,200.00	89.88	0.00	7,379.24	4,634.35	-598.10	4,634.35	0.00	0.00	0.00
12,300.00	89.88	0.00	7,379.45	4,734.35	-598.10	4,734.35	0.00	0.00	0.00
12,400.00	89.88	0.00	7,379.65	4,834.35	-598.10	4,834.35	0.00	0.00	0.00
12,500.00	89.88	0.00	7,379.86	4,934.35	-598.10	4,934.35	0.00	0.00	0.00
12,566.50	89.88	0.00	7,380.00	5,000.85	-598.10	5,000.85	0.00	0.00	0.00
PBHL_SPOTTED 30N-23HZ(1 FNL 195 FWL)									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_SPOTTED 30N-2	0.00	0.00	7,380.00	5,000.85	-598.10	1,291,156.78	3,177,081.22	40.1308830	-104.8666930
- hit/miss target									
- Shape									
- plan hits target center									
- Point									

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SPOTTED 30N-23HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4966 & KB 17 @ 4983.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4966 & KB 17 @ 4983.00ft (ASSUMED)
Site:	SPOTTED 35-23HZ	North Reference:	True
Well:	SPOTTED 30N-23HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,251.00	1,251.00	9 5/8"	9.625	12.250	
7,755.41	7,370.00	7"(460 FSL 220 FWL)	7.000	7.500	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,451.00	1,451.00	0.00	0.00	Start Build 2.00	
1,950.79	1,948.26	-23.41	-36.65	Start 3606.22 hold at 1950.79 MD	
5,557.01	5,499.68	-360.54	-564.49	Start Drop -2.00	
6,056.80	5,997.25	-382.00	-598.10	Start 800.04 hold at 6056.80 MD	
6,856.84	6,797.29	-382.00	-598.10	Start Build 10.00	
7,755.65	7,370.00	190.01	-598.10	Start 4817.09 hold at 7755.65 MD	
12,572.75				TD at 12572.75	