

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1600.0	0.00	0.00	1600.0	0.0	0.0	0.00	0.00	0.0	
3	2398.4	15.97	295.63	2388.1	47.8	-99.7	2.00	295.63	110.5	
4	4503.4	15.97	295.63	4411.9	298.3	-621.8	0.00	0.00	689.6	
5	5301.8	0.00	0.00	5200.0	346.1	-721.4	2.00	180.00	800.1	TARGET BHL 100'FNL, 1350'FWL
6	7413.8	0.00	0.00	7312.0	346.1	-721.4	0.00	0.00	800.1	



## **Directional**

### **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.8-T3N-R67W**

**Berry P08-18D Pad Sec.8-T3N-R67W**

**Berry P08-29D**

**Wellbore #1**

**Plan: Noble Berry P08-29D Plan #2 (12-8-09)**

### **Standard Planning Report**

**08 December, 2009**





Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Berry P08-29D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4832.0ft (Original Well Elev)
Project:	SEC.8-T3N-R67W	MD Reference:	WELL @ 4832.0ft (Original Well Elev)
Site:	Berry P08-18D Pad Sec.8-T3N-R67W	North Reference:	True
Well:	Berry P08-29D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Berry P08-29D Plan #2 (12-8-09)		

Project	SEC.8-T3N-R67W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Berry P08-18D Pad Sec.8-T3N-R67W				
Site Position:		Northing:	1,333,149.59 ft	Latitude:	40° 14' 47.112 N
From:	Lat/Long	Easting:	3,163,053.62 ft	Longitude:	104° 54' 57.132 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.38 °

Well	Berry P08-29D					
Well Position	+N/-S	18.2 ft	Northing:	1,333,167.80 ft	Latitude:	40° 14' 47.292 N
	+E/-W	0.0 ft	Easting:	3,163,053.50 ft	Longitude:	104° 54' 57.132 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,819.0 ft

Wellbore	Wellbore #1
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	9/3/2009	9.14	66.97	53,241

Design	Noble Berry P08-29D Plan #2 (12-8-09)
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Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	295.63

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,398.4	15.97	295.63	2,388.1	47.8	-99.7	2.00	2.00	0.00	295.63	
4,503.4	15.97	295.63	4,411.9	298.3	-621.8	0.00	0.00	0.00	0.00	
5,301.8	0.00	0.00	5,200.0	346.1	-721.4	2.00	-2.00	0.00	180.00	TARGET BHL 100'
7,413.8	0.00	0.00	7,312.0	346.1	-721.4	0.00	0.00	0.00	0.00	

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Berry P08-29D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4832.0ft (Original Well Elev)
Project:	SEC.8-T3N-R67W	MD Reference:	WELL @ 4832.0ft (Original Well Elev)
Site:	Berry P08-18D Pad Sec.8-T3N-R67W	North Reference:	True
Well:	Berry P08-29D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Berry P08-29D Plan #2 (12-8-09)		

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
560.0	0.00	0.00	560.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
640.0	0.00	0.00	640.0	0.0	0.0	0.0	0.00	0.00	0.00
680.0	0.00	0.00	680.0	0.0	0.0	0.0	0.00	0.00	0.00
720.0	0.00	0.00	720.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.00	0.00	760.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
840.0	0.00	0.00	840.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.00	0.00	880.0	0.0	0.0	0.0	0.00	0.00	0.00
920.0	0.00	0.00	920.0	0.0	0.0	0.0	0.00	0.00	0.00
960.0	0.00	0.00	960.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,040.0	0.00	0.00	1,040.0	0.0	0.0	0.0	0.00	0.00	0.00
1,080.0	0.00	0.00	1,080.0	0.0	0.0	0.0	0.00	0.00	0.00
1,120.0	0.00	0.00	1,120.0	0.0	0.0	0.0	0.00	0.00	0.00
1,160.0	0.00	0.00	1,160.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,240.0	0.00	0.00	1,240.0	0.0	0.0	0.0	0.00	0.00	0.00
1,280.0	0.00	0.00	1,280.0	0.0	0.0	0.0	0.00	0.00	0.00
1,320.0	0.00	0.00	1,320.0	0.0	0.0	0.0	0.00	0.00	0.00
1,360.0	0.00	0.00	1,360.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,440.0	0.00	0.00	1,440.0	0.0	0.0	0.0	0.00	0.00	0.00
1,480.0	0.00	0.00	1,480.0	0.0	0.0	0.0	0.00	0.00	0.00
1,520.0	0.00	0.00	1,520.0	0.0	0.0	0.0	0.00	0.00	0.00
1,560.0	0.00	0.00	1,560.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,640.0	0.80	295.63	1,640.0	0.1	-0.3	0.3	2.00	2.00	0.00
1,680.0	1.60	295.63	1,680.0	0.5	-1.0	1.1	2.00	2.00	0.00
1,720.0	2.40	295.63	1,720.0	1.1	-2.3	2.5	2.00	2.00	0.00
1,760.0	3.20	295.63	1,759.9	1.9	-4.0	4.5	2.00	2.00	0.00
1,800.0	4.00	295.63	1,799.8	3.0	-6.3	7.0	2.00	2.00	0.00
1,840.0	4.80	295.63	1,839.7	4.3	-9.1	10.0	2.00	2.00	0.00
1,880.0	5.60	295.63	1,879.6	5.9	-12.3	13.7	2.00	2.00	0.00
1,920.0	6.40	295.63	1,919.3	7.7	-16.1	17.9	2.00	2.00	0.00
1,960.0	7.20	295.63	1,959.1	9.8	-20.4	22.6	2.00	2.00	0.00
2,000.0	8.00	295.63	1,998.7	12.1	-25.1	27.9	2.00	2.00	0.00
2,040.0	8.80	295.63	2,038.3	14.6	-30.4	33.7	2.00	2.00	0.00
2,080.0	9.60	295.63	2,077.8	17.4	-36.2	40.1	2.00	2.00	0.00
2,120.0	10.40	295.63	2,117.1	20.4	-42.4	47.1	2.00	2.00	0.00



Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Berry P08-29D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4832.0ft (Original Well Elev)
Project:	SEC.8-T3N-R67W	MD Reference:	WELL @ 4832.0ft (Original Well Elev)
Site:	Berry P08-18D Pad Sec.8-T3N-R67W	North Reference:	True
Well:	Berry P08-29D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Berry P08-29D Plan #2 (12-8-09)		

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)
2,160.0	11.20	295.63	2,156.4	23.6	-49.2	54.6	2.00	2.00	0.00
2,200.0	12.00	295.63	2,195.6	27.1	-56.4	62.6	2.00	2.00	0.00
2,240.0	12.80	295.63	2,234.7	30.8	-64.2	71.2	2.00	2.00	0.00
2,280.0	13.60	295.63	2,273.6	34.7	-72.4	80.3	2.00	2.00	0.00
2,320.0	14.40	295.63	2,312.4	38.9	-81.1	90.0	2.00	2.00	0.00
2,360.0	15.20	295.63	2,351.1	43.4	-90.4	100.2	2.00	2.00	0.00
2,398.4	15.97	295.63	2,388.1	47.8	-99.7	110.5	2.00	2.00	0.00
2,400.0	15.97	295.63	2,389.6	48.0	-100.1	111.0	0.00	0.00	0.00
2,440.0	15.97	295.63	2,428.1	52.8	-110.0	122.0	0.00	0.00	0.00
2,480.0	15.97	295.63	2,466.6	57.5	-119.9	133.0	0.00	0.00	0.00
2,520.0	15.97	295.63	2,505.0	62.3	-129.8	144.0	0.00	0.00	0.00
2,560.0	15.97	295.63	2,543.5	67.0	-139.7	155.0	0.00	0.00	0.00
2,600.0	15.97	295.63	2,581.9	71.8	-149.7	166.0	0.00	0.00	0.00
2,640.0	15.97	295.63	2,620.4	76.6	-159.6	177.0	0.00	0.00	0.00
2,680.0	15.97	295.63	2,658.8	81.3	-169.5	188.0	0.00	0.00	0.00
2,720.0	15.97	295.63	2,697.3	86.1	-179.4	199.0	0.00	0.00	0.00
2,760.0	15.97	295.63	2,735.8	90.8	-189.3	210.0	0.00	0.00	0.00
2,800.0	15.97	295.63	2,774.2	95.6	-199.3	221.0	0.00	0.00	0.00
2,840.0	15.97	295.63	2,812.7	100.4	-209.2	232.0	0.00	0.00	0.00
2,880.0	15.97	295.63	2,851.1	105.1	-219.1	243.0	0.00	0.00	0.00
2,920.0	15.97	295.63	2,889.6	109.9	-229.0	254.0	0.00	0.00	0.00
2,960.0	15.97	295.63	2,928.0	114.6	-238.9	265.0	0.00	0.00	0.00
3,000.0	15.97	295.63	2,966.5	119.4	-248.9	276.0	0.00	0.00	0.00
3,040.0	15.97	295.63	3,005.0	124.2	-258.8	287.0	0.00	0.00	0.00
3,080.0	15.97	295.63	3,043.4	128.9	-268.7	298.0	0.00	0.00	0.00
3,120.0	15.97	295.63	3,081.9	133.7	-278.6	309.0	0.00	0.00	0.00
3,160.0	15.97	295.63	3,120.3	138.4	-288.6	320.0	0.00	0.00	0.00
3,200.0	15.97	295.63	3,158.8	143.2	-298.5	331.0	0.00	0.00	0.00
3,240.0	15.97	295.63	3,197.2	148.0	-308.4	342.0	0.00	0.00	0.00
3,280.0	15.97	295.63	3,235.7	152.7	-318.3	353.1	0.00	0.00	0.00
3,320.0	15.97	295.63	3,274.1	157.5	-328.2	364.1	0.00	0.00	0.00
3,360.0	15.97	295.63	3,312.6	162.2	-338.2	375.1	0.00	0.00	0.00
3,400.0	15.97	295.63	3,351.1	167.0	-348.1	386.1	0.00	0.00	0.00
3,440.0	15.97	295.63	3,389.5	171.8	-358.0	397.1	0.00	0.00	0.00
3,480.0	15.97	295.63	3,428.0	176.5	-367.9	408.1	0.00	0.00	0.00
3,520.0	15.97	295.63	3,466.4	181.3	-377.8	419.1	0.00	0.00	0.00
3,560.0	15.97	295.63	3,504.9	186.0	-387.8	430.1	0.00	0.00	0.00
3,600.0	15.97	295.63	3,543.3	190.8	-397.7	441.1	0.00	0.00	0.00
3,640.0	15.97	295.63	3,581.8	195.6	-407.6	452.1	0.00	0.00	0.00
3,680.0	15.97	295.63	3,620.3	200.3	-417.5	463.1	0.00	0.00	0.00
3,720.0	15.97	295.63	3,658.7	205.1	-427.4	474.1	0.00	0.00	0.00
3,760.0	15.97	295.63	3,697.2	209.8	-437.4	485.1	0.00	0.00	0.00
3,800.0	15.97	295.63	3,735.6	214.6	-447.3	496.1	0.00	0.00	0.00
3,840.0	15.97	295.63	3,774.1	219.4	-457.2	507.1	0.00	0.00	0.00
3,880.0	15.97	295.63	3,812.5	224.1	-467.1	518.1	0.00	0.00	0.00
3,920.0	15.97	295.63	3,851.0	228.9	-477.0	529.1	0.00	0.00	0.00
3,960.0	15.97	295.63	3,889.5	233.6	-487.0	540.1	0.00	0.00	0.00
4,000.0	15.97	295.63	3,927.9	238.4	-496.9	551.1	0.00	0.00	0.00
4,040.0	15.97	295.63	3,966.4	243.1	-506.8	562.1	0.00	0.00	0.00
4,080.0	15.97	295.63	4,004.8	247.9	-516.7	573.1	0.00	0.00	0.00
4,120.0	15.97	295.63	4,043.3	252.7	-526.7	584.1	0.00	0.00	0.00
4,160.0	15.97	295.63	4,081.7	257.4	-536.6	595.1	0.00	0.00	0.00
4,200.0	15.97	295.63	4,120.2	262.2	-546.5	606.1	0.00	0.00	0.00
4,240.0	15.97	295.63	4,158.7	266.9	-556.4	617.1	0.00	0.00	0.00

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Project:	SEC.8-T3N-R67W	MD Reference:	WELL @ 4832.0ft (Original Well Elev)
Site:	Berry P08-18D Pad Sec.8-T3N-R67W	North Reference:	True
Well:	Berry P08-29D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Berry P08-29D Plan #2 (12-8-09)		

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)
4,280.0	15.97	295.63	4,197.1	271.7	-566.3	628.1	0.00	0.00	0.00
4,320.0	15.97	295.63	4,235.6	276.5	-576.3	639.1	0.00	0.00	0.00
4,360.0	15.97	295.63	4,274.0	281.2	-586.2	650.1	0.00	0.00	0.00
4,400.0	15.97	295.63	4,312.5	286.0	-596.1	661.1	0.00	0.00	0.00
4,440.0	15.97	295.63	4,350.9	290.7	-606.0	672.2	0.00	0.00	0.00
4,480.0	15.97	295.63	4,389.4	295.5	-615.9	683.2	0.00	0.00	0.00
4,503.4	15.97	295.63	4,411.9	298.3	-621.8	689.6	0.00	0.00	0.00
4,520.0	15.64	295.63	4,427.9	300.2	-625.8	694.1	2.00	-2.00	0.00
4,560.0	14.84	295.63	4,466.5	304.8	-635.3	704.6	2.00	-2.00	0.00
4,600.0	14.04	295.63	4,505.2	309.1	-644.3	714.6	2.00	-2.00	0.00
4,640.0	13.24	295.63	4,544.1	313.2	-652.8	724.0	2.00	-2.00	0.00
4,680.0	12.44	295.63	4,583.1	317.0	-660.8	732.9	2.00	-2.00	0.00
4,720.0	11.64	295.63	4,622.2	320.6	-668.3	741.3	2.00	-2.00	0.00
4,760.0	10.84	295.63	4,661.4	324.0	-675.3	749.0	2.00	-2.00	0.00
4,800.0	10.04	295.63	4,700.8	327.1	-681.9	756.3	2.00	-2.00	0.00
4,840.0	9.24	295.63	4,740.2	330.0	-687.9	763.0	2.00	-2.00	0.00
4,880.0	8.44	295.63	4,779.7	332.7	-693.5	769.1	2.00	-2.00	0.00
4,920.0	7.64	295.63	4,819.3	335.1	-698.5	774.7	2.00	-2.00	0.00
4,960.0	6.84	295.63	4,859.0	337.3	-703.0	779.8	2.00	-2.00	0.00
5,000.0	6.04	295.63	4,898.8	339.2	-707.1	784.2	2.00	-2.00	0.00
5,040.0	5.24	295.63	4,938.6	340.9	-710.6	788.2	2.00	-2.00	0.00
5,080.0	4.44	295.63	4,978.4	342.4	-713.7	791.5	2.00	-2.00	0.00
5,120.0	3.64	295.63	5,018.3	343.6	-716.2	794.4	2.00	-2.00	0.00
5,160.0	2.84	295.63	5,058.3	344.6	-718.2	796.6	2.00	-2.00	0.00
5,200.0	2.04	295.63	5,098.2	345.3	-719.8	798.3	2.00	-2.00	0.00
5,240.0	1.24	295.63	5,138.2	345.8	-720.8	799.5	2.00	-2.00	0.00
5,280.0	0.44	295.63	5,178.2	346.1	-721.3	800.0	2.00	-2.00	0.00
5,301.8	0.00	0.00	5,200.0	346.1	-721.4	800.1	2.00	-2.00	0.00
TARGET BHL 100'FNL, 1350'FWL									
5,320.0	0.00	0.00	5,218.2	346.1	-721.4	800.1	0.00	0.00	0.00
5,360.0	0.00	0.00	5,258.2	346.1	-721.4	800.1	0.00	0.00	0.00
5,400.0	0.00	0.00	5,298.2	346.1	-721.4	800.1	0.00	0.00	0.00
5,440.0	0.00	0.00	5,338.2	346.1	-721.4	800.1	0.00	0.00	0.00
5,480.0	0.00	0.00	5,378.2	346.1	-721.4	800.1	0.00	0.00	0.00
5,520.0	0.00	0.00	5,418.2	346.1	-721.4	800.1	0.00	0.00	0.00
5,560.0	0.00	0.00	5,458.2	346.1	-721.4	800.1	0.00	0.00	0.00
5,600.0	0.00	0.00	5,498.2	346.1	-721.4	800.1	0.00	0.00	0.00
5,640.0	0.00	0.00	5,538.2	346.1	-721.4	800.1	0.00	0.00	0.00
5,680.0	0.00	0.00	5,578.2	346.1	-721.4	800.1	0.00	0.00	0.00
5,720.0	0.00	0.00	5,618.2	346.1	-721.4	800.1	0.00	0.00	0.00
5,760.0	0.00	0.00	5,658.2	346.1	-721.4	800.1	0.00	0.00	0.00
5,800.0	0.00	0.00	5,698.2	346.1	-721.4	800.1	0.00	0.00	0.00
5,840.0	0.00	0.00	5,738.2	346.1	-721.4	800.1	0.00	0.00	0.00
5,880.0	0.00	0.00	5,778.2	346.1	-721.4	800.1	0.00	0.00	0.00
5,920.0	0.00	0.00	5,818.2	346.1	-721.4	800.1	0.00	0.00	0.00
5,960.0	0.00	0.00	5,858.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,000.0	0.00	0.00	5,898.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,040.0	0.00	0.00	5,938.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,080.0	0.00	0.00	5,978.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,120.0	0.00	0.00	6,018.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,160.0	0.00	0.00	6,058.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,200.0	0.00	0.00	6,098.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,240.0	0.00	0.00	6,138.2	346.1	-721.4	800.1	0.00	0.00	0.00



Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Berry P08-29D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4832.0ft (Original Well Elev)
Project:	SEC.8-T3N-R67W	MD Reference:	WELL @ 4832.0ft (Original Well Elev)
Site:	Berry P08-18D Pad Sec.8-T3N-R67W	North Reference:	True
Well:	Berry P08-29D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Berry P08-29D Plan #2 (12-8-09)		

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)
6,280.0	0.00	0.00	6,178.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,320.0	0.00	0.00	6,218.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,360.0	0.00	0.00	6,258.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,400.0	0.00	0.00	6,298.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,440.0	0.00	0.00	6,338.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,480.0	0.00	0.00	6,378.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,520.0	0.00	0.00	6,418.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,560.0	0.00	0.00	6,458.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,600.0	0.00	0.00	6,498.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,640.0	0.00	0.00	6,538.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,680.0	0.00	0.00	6,578.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,720.0	0.00	0.00	6,618.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,760.0	0.00	0.00	6,658.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,800.0	0.00	0.00	6,698.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,840.0	0.00	0.00	6,738.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,880.0	0.00	0.00	6,778.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,920.0	0.00	0.00	6,818.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,960.0	0.00	0.00	6,858.2	346.1	-721.4	800.1	0.00	0.00	0.00
6,963.8	0.00	0.00	6,862.0	346.1	-721.4	800.1	0.00	0.00	0.00
NIOBRARA									
7,000.0	0.00	0.00	6,898.2	346.1	-721.4	800.1	0.00	0.00	0.00
7,040.0	0.00	0.00	6,938.2	346.1	-721.4	800.1	0.00	0.00	0.00
7,080.0	0.00	0.00	6,978.2	346.1	-721.4	800.1	0.00	0.00	0.00
7,120.0	0.00	0.00	7,018.2	346.1	-721.4	800.1	0.00	0.00	0.00
7,160.0	0.00	0.00	7,058.2	346.1	-721.4	800.1	0.00	0.00	0.00
7,200.0	0.00	0.00	7,098.2	346.1	-721.4	800.1	0.00	0.00	0.00
7,240.0	0.00	0.00	7,138.2	346.1	-721.4	800.1	0.00	0.00	0.00
7,263.8	0.00	0.00	7,162.0	346.1	-721.4	800.1	0.00	0.00	0.00
CODELL									
7,280.0	0.00	0.00	7,178.2	346.1	-721.4	800.1	0.00	0.00	0.00
7,320.0	0.00	0.00	7,218.2	346.1	-721.4	800.1	0.00	0.00	0.00
7,360.0	0.00	0.00	7,258.2	346.1	-721.4	800.1	0.00	0.00	0.00
7,400.0	0.00	0.00	7,298.2	346.1	-721.4	800.1	0.00	0.00	0.00
7,413.8	0.00	0.00	7,312.0	346.1	-721.4	800.1	0.00	0.00	0.00
HARDLINE 100'N OF BHL									

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
TARGET BHL 100'FN	0.00	0.00	5,200.0	346.1	-721.4	1,333,509.13	3,162,329.87	40° 14' 50.712 N	104° 55' 6.435 W
- plan hits target center									
- Point									
HARDLINE 100'N OF	0.00	0.00	7,312.0	446.1	-621.4	1,333,609.78	3,162,429.21	40° 14' 51.700 N	104° 55' 5.146 W
- plan misses target center by 141.4ft at 7413.8ft MD (7312.0 TVD, 346.1 N, -721.4 E)									
- Polygon									
Point 1			7,312.0	0.0	0.0	1,333,609.78	3,162,429.21		
Point 2			7,312.0	0.0	-200.0	1,333,608.46	3,162,229.22		

Database: EDM den0-adp01 Server Data  
Company: NOBLE ENERGY INC WELD COUNTY CO  
Project: SEC.8-T3N-R67W  
Site: Berry P08-18D Pad Sec.8-T3N-R67W  
Well: Berry P08-29D  
Wellbore: Wellbore #1  
Design: Noble Berry P08-29D Plan #2 (12-8-09)

Local Co-ordinate Reference: Well Berry P08-29D  
TVD Reference: WELL @ 4832.0ft (Original Well Elev)  
MD Reference: WELL @ 4832.0ft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: Minimum Curvature

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,963.8	6,862.0	NIOBRARA		0.00	
7,263.8	7,162.0	CODELL		0.00	