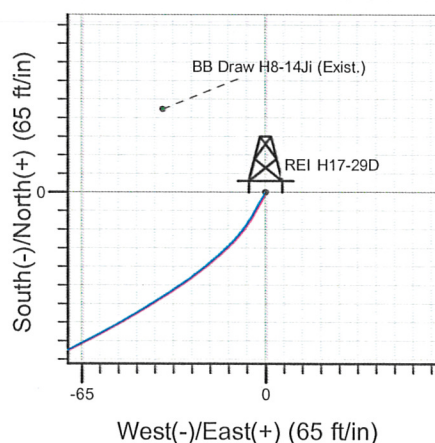
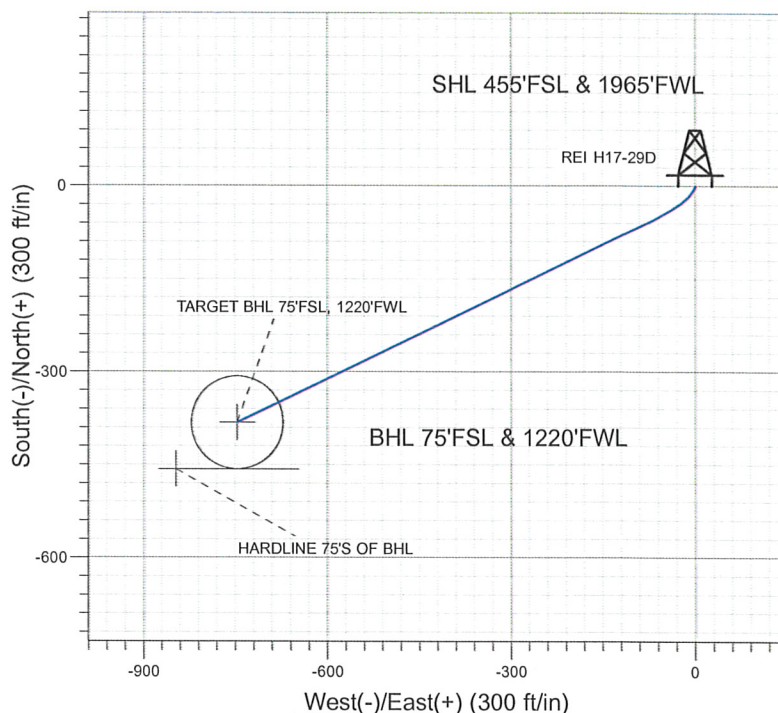
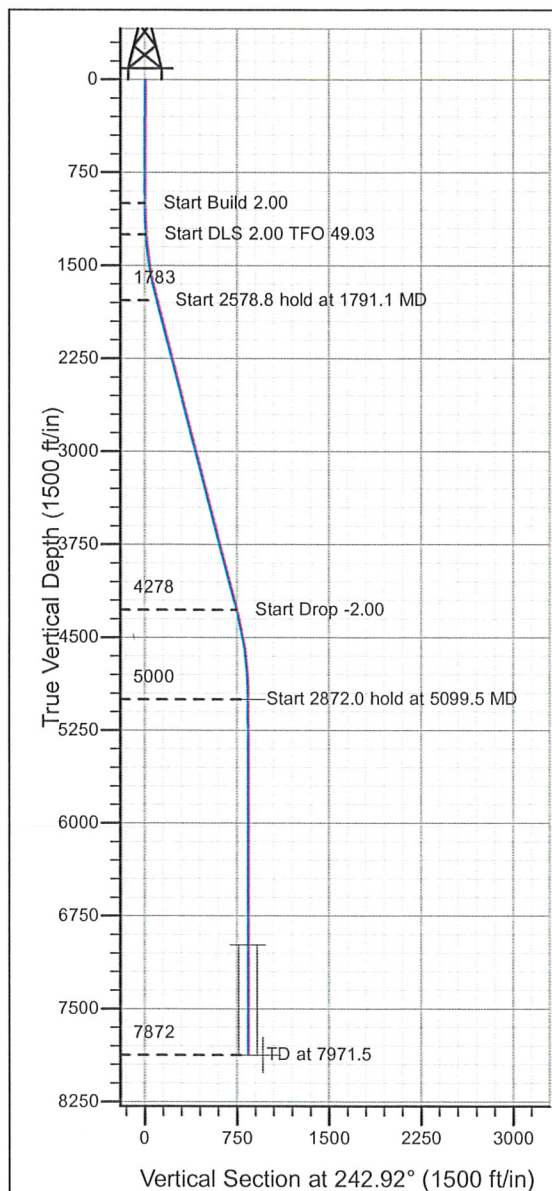


### Well Name: REI H17-29D

Surface Location: REI H17-29D Pad Sec.8-T3N-R65W  
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone  
 Ground Elevation: 4899.0  
 +N/-S+E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1329081.46 3226204.41 40° 14' 2.004 N 104° 41' 23.208 W  
 Original Well Elev WELL @ 4912.0ft (Original Well Elev)

## NOBLE ENERGY INC WELD COUNTY CO



REI H17-29D Pad Sec.8-T3N-R65W  
 REI H17-29D  
 Noble REI H17-29D Plan #1 (02-08-10)  
 14:45, February 08 2010



Azimuths to True North  
 Magnetic North: 8.97°

Magnetic Field  
 Strength: 53224.3snT  
 Dip Angle: 66.99°  
 Date: 12/31/2009  
 Model: IGRF200510

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 75'FSL, 1220'FWL	5000.0	-382.0	-747.2	40° 13' 58.228 N	104° 41' 32.842 W	Point
TARGET CIRCLE 75'FSL, 1220'FWL	6982.0	-382.0	-747.2	40° 13' 58.229 N	104° 41' 32.842 W	Circle (Radius: 75.0)
HARDLINE 75'S OF BHL	7872.0	-457.0	-847.2	40° 13' 57.488 N	104° 41' 34.131 W	Polygon

### SECTION DETAILS

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	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1250.0	5.00	210.00	1249.7	-9.4	-5.5	2.00	210.00	9.2	
4	1791.1	14.59	244.25	1782.6	-59.6	-78.9	2.00	49.03	97.4	
5	4370.0	14.59	244.25	4278.3	-341.9	-664.0	0.00	0.00	746.8	
6	5099.5	0.00	0.00	5000.0	-382.0	-747.2	2.00	180.00	839.2	TARGET BHL 75'FSL, 1220'FWL
7	7971.5	0.00	0.00	7872.0	-382.0	-747.2	0.00	0.00	839.2	



## **Directional**

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

**SEC.8-T3N-R65W**

**REI H17-29D Pad Sec.8-T3N-R65W**

**REI H17-29D**

**Wellbore #1**

**Plan: Noble REI H17-29D Plan #1 (02-08-10)**

### **Standard Planning Report**

**08 February, 2010**





Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well REI H17-29D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4912.0ft (Original Well Elev)
Project:	SEC.8-T3N-R65W	MD Reference:	WELL @ 4912.0ft (Original Well Elev)
Site:	REI H17-29D Pad Sec.8-T3N-R65W	North Reference:	True
Well:	REI H17-29D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble REI H17-29D Plan #1 (02-08-10)		

Project	SEC.8-T3N-R65W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	REI H17-29D Pad Sec.8-T3N-R65W		
Site Position:		Northing:	1,329,081.47 ft
From:	Lat/Long	Easting:	3,226,204.41 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40° 14' 2.004 N
		Longitude:	104° 41' 23.208 W
		Grid Convergence:	0.52 °

Well	REI H17-29D		
Well Position	+N/-S	0.0 ft	Northing:
	+E/-W	0.0 ft	Easting:
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	40° 14' 2.004 N
		Longitude:	104° 41' 23.208 W
		Ground Level:	4,899.0 ft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF200510	12/31/2009	8.97
			Dip Angle
			(°)
			66.99
			Field Strength
			(nT)
			53,224

Design	Noble REI H17-29D Plan #1 (02-08-10)		
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Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.0	0.0	0.0
			Direction
			(°)
			242.92

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	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,250.0	5.00	210.00	1,249.7	-9.4	-5.5	2.00	2.00	0.00	210.00	
1,791.1	14.59	244.25	1,782.6	-59.6	-78.9	2.00	1.77	6.33	49.03	
4,370.0	14.59	244.25	4,278.3	-341.9	-664.0	0.00	0.00	0.00	0.00	
5,099.5	0.00	0.00	5,000.0	-382.0	-747.2	2.00	-2.00	0.00	180.00	TARGET BHL 75°F:
7,971.5	0.00	0.00	7,872.0	-382.0	-747.2	0.00	0.00	0.00	0.00	

Database: EDM den0-adp01 Server Data  
 Company: NOBLE ENERGY INC WELD COUNTY CO  
 Project: SEC.8-T3N-R65W  
 Site: REI H17-29D Pad Sec.8-T3N-R65W  
 Well: REI H17-29D  
 Wellbore: Wellbore #1  
 Design: Noble REI H17-29D Plan #1 (02-08-10)

Local Co-ordinate Reference: Well REI H17-29D  
 TVD Reference: WELL @ 4912.0ft (Original Well Elev)  
 MD Reference: WELL @ 4912.0ft (Original Well Elev)  
 North Reference: True  
 Survey Calculation Method: Minimum Curvature

## 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	0.80	210.00	1,040.0	-0.2	-0.1	0.2	2.00	2.00	0.00
1,080.0	1.60	210.00	1,080.0	-1.0	-0.6	0.9	2.00	2.00	0.00
1,120.0	2.40	210.00	1,120.0	-2.2	-1.3	2.1	2.00	2.00	0.00
1,160.0	3.20	210.00	1,159.9	-3.9	-2.2	3.7	2.00	2.00	0.00
1,200.0	4.00	210.00	1,199.8	-6.0	-3.5	5.9	2.00	2.00	0.00
1,240.0	4.80	210.00	1,239.7	-8.7	-5.0	8.4	2.00	2.00	0.00
1,250.0	5.00	210.00	1,249.7	-9.4	-5.5	9.2	2.00	2.00	0.00
1,280.0	5.41	214.81	1,279.6	-11.7	-6.9	11.5	2.00	1.37	16.03
1,320.0	6.01	220.15	1,319.4	-14.9	-9.3	15.1	2.00	1.50	13.34
1,360.0	6.65	224.49	1,359.1	-18.1	-12.3	19.2	2.00	1.60	10.86
1,400.0	7.33	228.06	1,398.8	-21.5	-15.8	23.9	2.00	1.68	8.92
1,440.0	8.02	231.02	1,438.5	-25.0	-19.9	29.1	2.00	1.74	7.40
1,480.0	8.73	233.50	1,478.0	-28.5	-24.5	34.8	2.00	1.78	6.21
1,520.0	9.46	235.61	1,517.5	-32.2	-29.7	41.1	2.00	1.82	5.27
1,560.0	10.20	237.42	1,556.9	-35.9	-35.4	47.8	2.00	1.85	4.52
1,600.0	10.95	238.99	1,596.3	-39.8	-41.6	55.2	2.00	1.87	3.91
1,640.0	11.70	240.35	1,635.5	-43.8	-48.4	63.0	2.00	1.88	3.42
1,680.0	12.46	241.56	1,674.6	-47.8	-55.7	71.4	2.00	1.90	3.01
1,720.0	13.22	242.62	1,713.6	-52.0	-63.6	80.3	2.00	1.91	2.67
1,760.0	13.99	243.58	1,752.5	-56.2	-72.0	89.7	2.00	1.92	2.38
1,791.1	14.59	244.25	1,782.6	-59.6	-78.9	97.4	2.00	1.93	2.16
1,800.0	14.59	244.25	1,791.2	-60.6	-80.9	99.6	0.00	0.00	0.00
1,840.0	14.59	244.25	1,829.9	-65.0	-89.9	109.7	0.00	0.00	0.00
1,880.0	14.59	244.25	1,868.6	-69.4	-99.0	119.7	0.00	0.00	0.00
1,920.0	14.59	244.25	1,907.4	-73.7	-108.1	129.8	0.00	0.00	0.00
1,960.0	14.59	244.25	1,946.1	-78.1	-117.2	139.9	0.00	0.00	0.00
2,000.0	14.59	244.25	1,984.8	-82.5	-126.2	150.0	0.00	0.00	0.00
2,040.0	14.59	244.25	2,023.5	-86.9	-135.3	160.0	0.00	0.00	0.00



Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well REI H17-29D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4912.0ft (Original Well Elev)
Project:	SEC.8-T3N-R65W	MD Reference:	WELL @ 4912.0ft (Original Well Elev)
Site:	REI H17-29D Pad Sec.8-T3N-R65W	North Reference:	True
Well:	REI H17-29D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble REI H17-29D Plan #1 (02-08-10)		

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)
2,080.0	14.59	244.25	2,062.2	-91.2	-144.4	170.1	0.00	0.00	0.00
2,120.0	14.59	244.25	2,100.9	-95.6	-153.5	180.2	0.00	0.00	0.00
2,160.0	14.59	244.25	2,139.6	-100.0	-162.6	190.3	0.00	0.00	0.00
2,200.0	14.59	244.25	2,178.3	-104.4	-171.6	200.3	0.00	0.00	0.00
2,240.0	14.59	244.25	2,217.0	-108.8	-180.7	210.4	0.00	0.00	0.00
2,280.0	14.59	244.25	2,255.7	-113.1	-189.8	220.5	0.00	0.00	0.00
2,320.0	14.59	244.25	2,294.5	-117.5	-198.9	230.6	0.00	0.00	0.00
2,360.0	14.59	244.25	2,333.2	-121.9	-207.9	240.6	0.00	0.00	0.00
2,400.0	14.59	244.25	2,371.9	-126.3	-217.0	250.7	0.00	0.00	0.00
2,440.0	14.59	244.25	2,410.6	-130.7	-226.1	260.8	0.00	0.00	0.00
2,480.0	14.59	244.25	2,449.3	-135.0	-235.2	270.8	0.00	0.00	0.00
2,520.0	14.59	244.25	2,488.0	-139.4	-244.2	280.9	0.00	0.00	0.00
2,560.0	14.59	244.25	2,526.7	-143.8	-253.3	291.0	0.00	0.00	0.00
2,600.0	14.59	244.25	2,565.4	-148.2	-262.4	301.1	0.00	0.00	0.00
2,640.0	14.59	244.25	2,604.1	-152.5	-271.5	311.1	0.00	0.00	0.00
2,680.0	14.59	244.25	2,642.8	-156.9	-280.5	321.2	0.00	0.00	0.00
2,720.0	14.59	244.25	2,681.6	-161.3	-289.6	331.3	0.00	0.00	0.00
2,760.0	14.59	244.25	2,720.3	-165.7	-298.7	341.4	0.00	0.00	0.00
2,800.0	14.59	244.25	2,759.0	-170.1	-307.8	351.4	0.00	0.00	0.00
2,840.0	14.59	244.25	2,797.7	-174.4	-316.8	361.5	0.00	0.00	0.00
2,880.0	14.59	244.25	2,836.4	-178.8	-325.9	371.6	0.00	0.00	0.00
2,920.0	14.59	244.25	2,875.1	-183.2	-335.0	381.7	0.00	0.00	0.00
2,960.0	14.59	244.25	2,913.8	-187.6	-344.1	391.7	0.00	0.00	0.00
3,000.0	14.59	244.25	2,952.5	-191.9	-353.1	401.8	0.00	0.00	0.00
3,040.0	14.59	244.25	2,991.2	-196.3	-362.2	411.9	0.00	0.00	0.00
3,080.0	14.59	244.25	3,029.9	-200.7	-371.3	422.0	0.00	0.00	0.00
3,120.0	14.59	244.25	3,068.7	-205.1	-380.4	432.0	0.00	0.00	0.00
3,160.0	14.59	244.25	3,107.4	-209.5	-389.5	442.1	0.00	0.00	0.00
3,200.0	14.59	244.25	3,146.1	-213.8	-398.5	452.2	0.00	0.00	0.00
3,240.0	14.59	244.25	3,184.8	-218.2	-407.6	462.3	0.00	0.00	0.00
3,280.0	14.59	244.25	3,223.5	-222.6	-416.7	472.3	0.00	0.00	0.00
3,320.0	14.59	244.25	3,262.2	-227.0	-425.8	482.4	0.00	0.00	0.00
3,360.0	14.59	244.25	3,300.9	-231.4	-434.8	492.5	0.00	0.00	0.00
3,400.0	14.59	244.25	3,339.6	-235.7	-443.9	502.6	0.00	0.00	0.00
3,440.0	14.59	244.25	3,378.3	-240.1	-453.0	512.6	0.00	0.00	0.00
3,480.0	14.59	244.25	3,417.0	-244.5	-462.1	522.7	0.00	0.00	0.00
3,520.0	14.59	244.25	3,455.8	-248.9	-471.1	532.8	0.00	0.00	0.00
3,560.0	14.59	244.25	3,494.5	-253.2	-480.2	542.9	0.00	0.00	0.00
3,600.0	14.59	244.25	3,533.2	-257.6	-489.3	552.9	0.00	0.00	0.00
3,640.0	14.59	244.25	3,571.9	-262.0	-498.4	563.0	0.00	0.00	0.00
3,680.0	14.59	244.25	3,610.6	-266.4	-507.4	573.1	0.00	0.00	0.00
3,720.0	14.59	244.25	3,649.3	-270.8	-516.5	583.2	0.00	0.00	0.00
3,760.0	14.59	244.25	3,688.0	-275.1	-525.6	593.2	0.00	0.00	0.00
3,800.0	14.59	244.25	3,726.7	-279.5	-534.7	603.3	0.00	0.00	0.00
3,840.0	14.59	244.25	3,765.4	-283.9	-543.7	613.4	0.00	0.00	0.00
3,880.0	14.59	244.25	3,804.1	-288.3	-552.8	623.4	0.00	0.00	0.00
3,920.0	14.59	244.25	3,842.8	-292.6	-561.9	633.5	0.00	0.00	0.00
3,960.0	14.59	244.25	3,881.6	-297.0	-571.0	643.6	0.00	0.00	0.00
4,000.0	14.59	244.25	3,920.3	-301.4	-580.1	653.7	0.00	0.00	0.00
4,040.0	14.59	244.25	3,959.0	-305.8	-589.1	663.7	0.00	0.00	0.00
4,080.0	14.59	244.25	3,997.7	-310.2	-598.2	673.8	0.00	0.00	0.00
4,120.0	14.59	244.25	4,036.4	-314.5	-607.3	683.9	0.00	0.00	0.00
4,160.0	14.59	244.25	4,075.1	-318.9	-616.4	694.0	0.00	0.00	0.00
4,200.0	14.59	244.25	4,113.8	-323.3	-625.4	704.0	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well REI H17-29D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4912.0ft (Original Well Elev)
Project:	SEC.8-T3N-R65W	MD Reference:	WELL @ 4912.0ft (Original Well Elev)
Site:	REI H17-29D Pad Sec.8-T3N-R65W	North Reference:	True
Well:	REI H17-29D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble REI H17-29D Plan #1 (02-08-10)		

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)
4,240.0	14.59	244.25	4,152.5	-327.7	-634.5	714.1	0.00	0.00	0.00
4,280.0	14.59	244.25	4,191.2	-332.1	-643.6	724.2	0.00	0.00	0.00
4,320.0	14.59	244.25	4,229.9	-336.4	-652.7	734.3	0.00	0.00	0.00
4,360.0	14.59	244.25	4,268.7	-340.8	-661.7	744.3	0.00	0.00	0.00
4,370.0	14.59	244.25	4,278.3	-341.9	-664.0	746.8	0.00	0.00	0.00
4,400.0	13.99	244.25	4,307.4	-345.1	-670.7	754.3	2.00	-2.00	0.00
4,440.0	13.19	244.25	4,346.3	-349.2	-679.1	763.7	2.00	-2.00	0.00
4,480.0	12.39	244.25	4,385.3	-353.1	-687.1	772.5	2.00	-2.00	0.00
4,520.0	11.59	244.25	4,424.4	-356.7	-694.6	780.8	2.00	-2.00	0.00
4,560.0	10.79	244.25	4,463.7	-360.0	-701.6	788.6	2.00	-2.00	0.00
4,600.0	9.99	244.25	4,503.0	-363.2	-708.1	795.8	2.00	-2.00	0.00
4,640.0	9.19	244.25	4,542.4	-366.1	-714.1	802.5	2.00	-2.00	0.00
4,680.0	8.39	244.25	4,582.0	-368.7	-719.6	808.6	2.00	-2.00	0.00
4,720.0	7.59	244.25	4,621.6	-371.1	-724.6	814.1	2.00	-2.00	0.00
4,760.0	6.79	244.25	4,661.3	-373.3	-729.1	819.1	2.00	-2.00	0.00
4,800.0	5.99	244.25	4,701.0	-375.2	-733.1	823.6	2.00	-2.00	0.00
4,840.0	5.19	244.25	4,740.8	-376.9	-736.6	827.5	2.00	-2.00	0.00
4,880.0	4.39	244.25	4,780.7	-378.4	-739.6	830.8	2.00	-2.00	0.00
4,920.0	3.59	244.25	4,820.6	-379.6	-742.2	833.6	2.00	-2.00	0.00
4,960.0	2.79	244.25	4,860.5	-380.6	-744.2	835.8	2.00	-2.00	0.00
5,000.0	1.99	244.25	4,900.5	-381.3	-745.7	837.5	2.00	-2.00	0.00
5,040.0	1.19	244.25	4,940.5	-381.8	-746.7	838.6	2.00	-2.00	0.00
5,080.0	0.39	244.25	4,980.5	-382.0	-747.2	839.2	2.00	-2.00	0.00
5,099.5	0.00	0.00	5,000.0	-382.0	-747.2	839.2	2.00	-2.00	0.00
TARGET BHL 75'FSL, 1220'FWL									
5,120.0	0.00	0.00	5,020.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,160.0	0.00	0.00	5,060.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,200.0	0.00	0.00	5,100.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,240.0	0.00	0.00	5,140.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,280.0	0.00	0.00	5,180.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,320.0	0.00	0.00	5,220.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,360.0	0.00	0.00	5,260.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,400.0	0.00	0.00	5,300.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,440.0	0.00	0.00	5,340.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,480.0	0.00	0.00	5,380.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,520.0	0.00	0.00	5,420.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,560.0	0.00	0.00	5,460.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,600.0	0.00	0.00	5,500.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,640.0	0.00	0.00	5,540.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,680.0	0.00	0.00	5,580.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,720.0	0.00	0.00	5,620.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,760.0	0.00	0.00	5,660.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,800.0	0.00	0.00	5,700.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,840.0	0.00	0.00	5,740.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,880.0	0.00	0.00	5,780.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,920.0	0.00	0.00	5,820.5	-382.0	-747.2	839.2	0.00	0.00	0.00
5,960.0	0.00	0.00	5,860.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,000.0	0.00	0.00	5,900.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,040.0	0.00	0.00	5,940.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,080.0	0.00	0.00	5,980.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,120.0	0.00	0.00	6,020.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,160.0	0.00	0.00	6,060.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,200.0	0.00	0.00	6,100.5	-382.0	-747.2	839.2	0.00	0.00	0.00



Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well REI H17-29D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4912.0ft (Original Well Elev)
Project:	SEC.8-T3N-R65W	MD Reference:	WELL @ 4912.0ft (Original Well Elev)
Site:	REI H17-29D Pad Sec.8-T3N-R65W	North Reference:	True
Well:	REI H17-29D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble REI H17-29D Plan #1 (02-08-10)		

## 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)
6,240.0	0.00	0.00	6,140.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,280.0	0.00	0.00	6,180.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,320.0	0.00	0.00	6,220.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,360.0	0.00	0.00	6,260.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,400.0	0.00	0.00	6,300.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,440.0	0.00	0.00	6,340.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,480.0	0.00	0.00	6,380.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,520.0	0.00	0.00	6,420.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,560.0	0.00	0.00	6,460.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,600.0	0.00	0.00	6,500.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,640.0	0.00	0.00	6,540.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,680.0	0.00	0.00	6,580.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,720.0	0.00	0.00	6,620.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,760.0	0.00	0.00	6,660.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,800.0	0.00	0.00	6,700.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,840.0	0.00	0.00	6,740.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,880.0	0.00	0.00	6,780.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,920.0	0.00	0.00	6,820.5	-382.0	-747.2	839.2	0.00	0.00	0.00
6,960.0	0.00	0.00	6,860.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,000.0	0.00	0.00	6,900.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,040.0	0.00	0.00	6,940.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,080.0	0.00	0.00	6,980.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,081.5	0.00	0.00	6,982.0	-382.0	-747.2	839.2	0.00	0.00	0.00
<b>NIOBARRA - TARGET CIRCLE 75'FSL, 1220'FWL</b>									
7,120.0	0.00	0.00	7,020.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,160.0	0.00	0.00	7,060.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,200.0	0.00	0.00	7,100.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,240.0	0.00	0.00	7,140.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,280.0	0.00	0.00	7,180.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,320.0	0.00	0.00	7,220.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,360.0	0.00	0.00	7,260.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,381.5	0.00	0.00	7,282.0	-382.0	-747.2	839.2	0.00	0.00	0.00
<b>CODELL</b>									
7,400.0	0.00	0.00	7,300.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,440.0	0.00	0.00	7,340.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,480.0	0.00	0.00	7,380.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,520.0	0.00	0.00	7,420.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,560.0	0.00	0.00	7,460.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,600.0	0.00	0.00	7,500.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,640.0	0.00	0.00	7,540.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,680.0	0.00	0.00	7,580.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,720.0	0.00	0.00	7,620.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,756.5	0.00	0.00	7,657.0	-382.0	-747.2	839.2	0.00	0.00	0.00
<b>D-SAND</b>									
7,760.0	0.00	0.00	7,660.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,800.0	0.00	0.00	7,700.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,821.5	0.00	0.00	7,722.0	-382.0	-747.2	839.2	0.00	0.00	0.00
<b>J-SAND</b>									
7,840.0	0.00	0.00	7,740.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,880.0	0.00	0.00	7,780.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,920.0	0.00	0.00	7,820.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,960.0	0.00	0.00	7,860.5	-382.0	-747.2	839.2	0.00	0.00	0.00
7,971.5	0.00	0.00	7,872.0	-382.0	-747.2	839.2	0.00	0.00	0.00
<b>HARDLINE 75'S OF BHL</b>									

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well REI H17-29D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4912.0ft (Original Well Elev)
Project:	SEC.8-T3N-R65W	MD Reference:	WELL @ 4912.0ft (Original Well Elev)
Site:	REI H17-29D Pad Sec.8-T3N-R65W	North Reference:	True
Well:	REI H17-29D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble REI H17-29D Plan #1 (02-08-10)		

## 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)
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## Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
TARGET BHL 75'FSL - plan hits target center - Point	0.00	0.00	5,000.0	-382.0	-747.2	1,328,692.63	3,225,460.75	40° 13' 58.228 N	104° 41' 32.842 W
HARDLINE 75'S OF E - plan misses target center by 125.0ft at 7971.5ft MD (7872.0 TVD, -382.0 N, -747.2 E) - Polygon	0.00	0.00	7,872.0	-457.0	-847.2	1,328,616.76	3,225,361.46	40° 13' 57.488 N	104° 41' 34.131 W
Point 1			7,872.0	0.0	0.0	1,328,616.76	3,225,361.46		
Point 2			7,872.0	0.0	200.0	1,328,618.59	3,225,561.45		
TARGET CIRCLE 75' - plan hits target center - Circle (radius 75.0)	0.00	0.00	6,982.0	-382.0	-747.2	1,328,692.67	3,225,460.77	40° 13' 58.229 N	104° 41' 32.842 W

## Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,081.5	6,982.0	NIOBRARA		0.00	
7,381.5	7,282.0	CODELL		0.00	
7,756.5	7,657.0	D-SAND		0.00	
7,821.5	7,722.0	J-SAND		0.00	