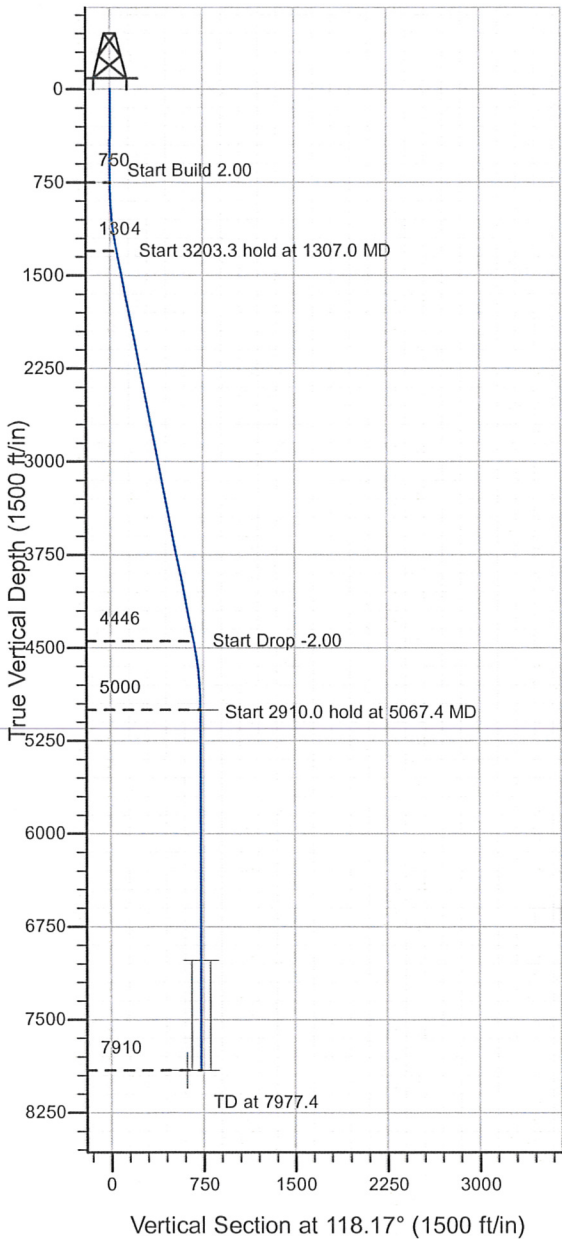
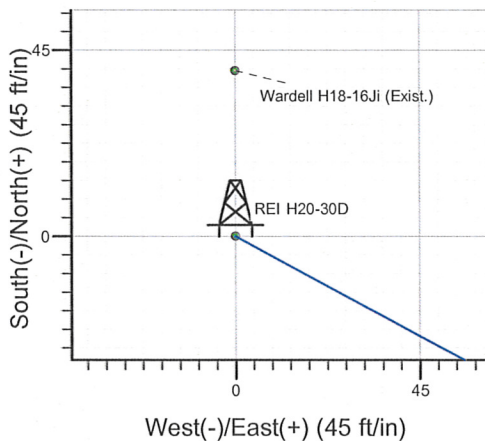
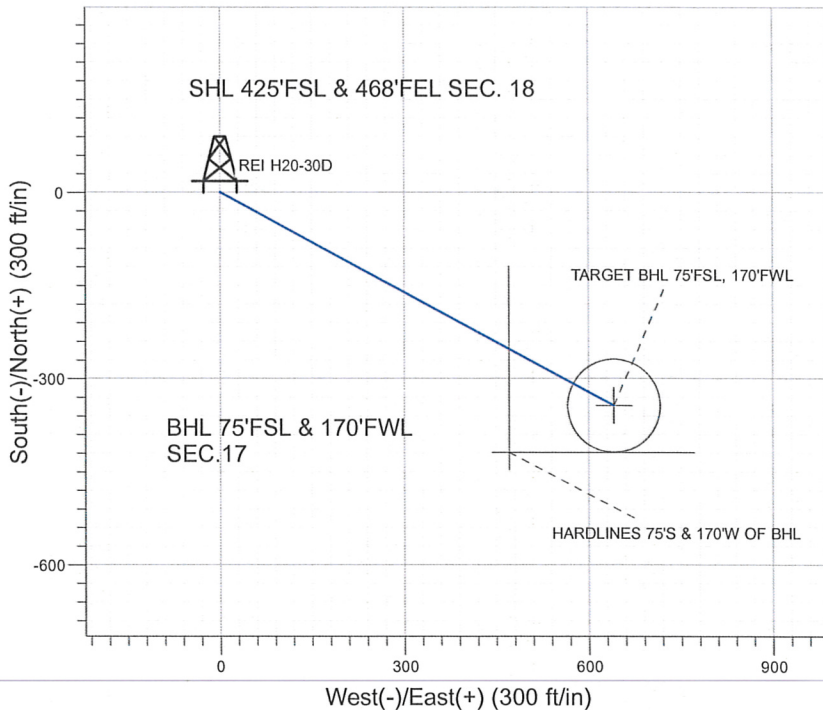


Well Name: REI H20-30D

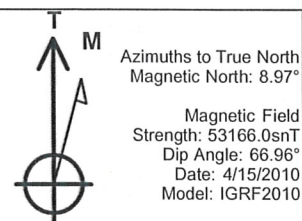
Surface Location: REI H20-30D Pad Sec.18-T3N-R65W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4924.0
 +N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1323762.85 3223817.83 40° 13' 9.660 N104° 41' 54.600 W
 Original Well Elev WELL @ 4937.0ft (Original Well Elev)



NOBLE ENERGY INC WELD COUNTY CO



REI H20-30D Pad Sec.18-T3N-R65W
 REI H20-30D
 Noble REI H20-30D Plan #3 (05-18-10)
 15:50, May 19 2010



WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 75'FSL, 170'FWL	5000.0	-343.1	640.8	40° 13' 6.269 N	104° 41' 46.339 W	Point
TARGET CIRCLE 75'FSL, 170'FWL	7022.0	-343.1	640.8	40° 13' 6.269 N	104° 41' 46.340 W	Circle (Radius: 75.0)
HARDLINES 75'S & 170'W OF BHL	7910.0	-418.1	470.8	40° 13' 5.528 N	104° 41' 48.531 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	750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.0	
3	1307.0	11.14	118.17	1303.5	-25.5	47.6	2.00	118.17	54.0	
4	4510.3	11.14	118.17	4446.5	-317.6	593.2	0.00	0.00	672.9	
5	5067.4	0.00	0.00	5000.0	-343.1	640.8	2.00	180.00	726.9	TARGET BHL 75'FSL, 170'FWL
6	7977.4	0.00	0.00	7910.0	-343.1	640.8	0.00	0.00	726.9	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.18-T3N-R65W

REI H20-30D Pad Sec.18-T3N-R65W

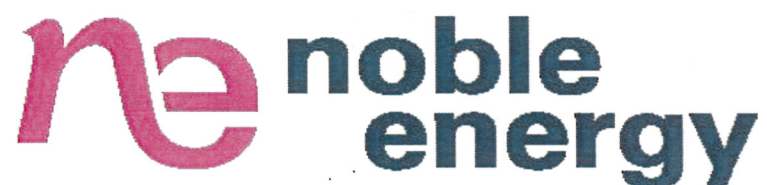
REI H20-30D

Wellbore #1

Plan: Noble REI H20-30D Plan #3 (05-18-10)

Standard Planning Report

19 May, 2010



Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.18-T3N-R65W
Site: REI H20-30D Pad Sec.18-T3N-R65W
Well: REI H20-30D
Wellbore: Wellbore #1
Design: Noble REI H20-30D Plan #3 (05-18-10)

Local Co-ordinate Reference: Well REI H20-30D
TVD Reference: WELL @ 4937.0ft (Original Well Elev)
MD Reference: WELL @ 4937.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Project	SEC.18-T3N-R65W, 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	REI H20-30D Pad Sec.18-T3N-R65W		
Site Position:		Northing:	1,323,762.86 ft
From:	Lat/Long	Easting:	3,223,817.83 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40° 13' 9.660 N
		Longitude:	104° 41' 54.600 W
		Grid Convergence:	0.52 °

Well	REI H20-30D		
Well Position	+N/-S	0.0 ft	Northing:
	+E/-W	0.0 ft	Easting:
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	40° 13' 9.660 N
		Longitude:	104° 41' 54.600 W
		Ground Level:	4,924.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/15/2010	8.97	66.96	53,166

Design	Noble REI H20-30D Plan #3 (05-18-10)				
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	118.17	

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	
750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,307.0	11.14	118.17	1,303.5	-25.5	47.6	2.00	2.00	0.00	118.17	
4,510.3	11.14	118.17	4,446.5	-317.6	593.2	0.00	0.00	0.00	0.00	
5,067.4	0.00	0.00	5,000.0	-343.1	640.8	2.00	-2.00	0.00	180.00	TARGET BHL 75°F:
7,977.4	0.00	0.00	7,910.0	-343.1	640.8	0.00	0.00	0.00	0.00	

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.18-T3N-R65W
Site: REI H20-30D Pad Sec.18-T3N-R65W
Well: REI H20-30D
Wellbore: Wellbore #1
Design: Noble REI H20-30D Plan #3 (05-18-10)

Local Co-ordinate Reference: Well REI H20-30D
TVD Reference: WELL @ 4937.0ft (Original Well Elev)
MD Reference: WELL @ 4937.0ft (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
750.0	0.00	0.00	750.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.20	118.17	760.0	0.0	0.0	0.0	2.00	2.00	0.00
800.0	1.00	118.17	800.0	-0.2	0.4	0.4	2.00	2.00	0.00
840.0	1.80	118.17	840.0	-0.7	1.2	1.4	2.00	2.00	0.00
880.0	2.60	118.17	880.0	-1.4	2.6	2.9	2.00	2.00	0.00
920.0	3.40	118.17	919.9	-2.4	4.4	5.0	2.00	2.00	0.00
960.0	4.20	118.17	959.8	-3.6	6.8	7.7	2.00	2.00	0.00
1,000.0	5.00	118.17	999.7	-5.1	9.6	10.9	2.00	2.00	0.00
1,040.0	5.80	118.17	1,039.5	-6.9	12.9	14.7	2.00	2.00	0.00
1,080.0	6.60	118.17	1,079.3	-9.0	16.7	19.0	2.00	2.00	0.00
1,120.0	7.40	118.17	1,119.0	-11.3	21.0	23.9	2.00	2.00	0.00
1,160.0	8.20	118.17	1,158.6	-13.8	25.8	29.3	2.00	2.00	0.00
1,200.0	9.00	118.17	1,198.2	-16.6	31.1	35.3	2.00	2.00	0.00
1,240.0	9.80	118.17	1,237.6	-19.7	36.9	41.8	2.00	2.00	0.00
1,280.0	10.60	118.17	1,277.0	-23.1	43.1	48.9	2.00	2.00	0.00
1,307.0	11.14	118.17	1,303.5	-25.5	47.6	54.0	2.00	2.00	0.00
1,320.0	11.14	118.17	1,316.3	-26.7	49.8	56.5	0.00	0.00	0.00
1,360.0	11.14	118.17	1,355.5	-30.3	56.6	64.2	0.00	0.00	0.00
1,400.0	11.14	118.17	1,394.7	-34.0	63.4	71.9	0.00	0.00	0.00
1,440.0	11.14	118.17	1,434.0	-37.6	70.2	79.7	0.00	0.00	0.00
1,480.0	11.14	118.17	1,473.2	-41.3	77.1	87.4	0.00	0.00	0.00
1,520.0	11.14	118.17	1,512.5	-44.9	83.9	95.1	0.00	0.00	0.00
1,560.0	11.14	118.17	1,551.7	-48.6	90.7	102.9	0.00	0.00	0.00
1,600.0	11.14	118.17	1,591.0	-52.2	97.5	110.6	0.00	0.00	0.00
1,640.0	11.14	118.17	1,630.2	-55.8	104.3	118.3	0.00	0.00	0.00
1,680.0	11.14	118.17	1,669.5	-59.5	111.1	126.0	0.00	0.00	0.00
1,720.0	11.14	118.17	1,708.7	-63.1	117.9	133.8	0.00	0.00	0.00
1,760.0	11.14	118.17	1,748.0	-66.8	124.7	141.5	0.00	0.00	0.00
1,800.0	11.14	118.17	1,787.2	-70.4	131.6	149.2	0.00	0.00	0.00
1,840.0	11.14	118.17	1,826.5	-74.1	138.4	157.0	0.00	0.00	0.00
1,880.0	11.14	118.17	1,865.7	-77.7	145.2	164.7	0.00	0.00	0.00
1,920.0	11.14	118.17	1,904.9	-81.4	152.0	172.4	0.00	0.00	0.00
1,960.0	11.14	118.17	1,944.2	-85.0	158.8	180.1	0.00	0.00	0.00
2,000.0	11.14	118.17	1,983.4	-88.7	165.6	187.9	0.00	0.00	0.00
2,040.0	11.14	118.17	2,022.7	-92.3	172.4	195.6	0.00	0.00	0.00

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.18-T3N-R65W
Site: REI H20-30D Pad Sec.18-T3N-R65W
Well: REI H20-30D
Wellbore: Wellbore #1
Design: Noble REI H20-30D Plan #3 (05-18-10)

Local Co-ordinate Reference: Well REI H20-30D
TVD Reference: WELL @ 4937.0ft (Original Well Elev)
MD Reference: WELL @ 4937.0ft (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)
2,080.0	11.14	118.17	2,061.9	-96.0	179.3	203.3	0.00	0.00	0.00
2,120.0	11.14	118.17	2,101.2	-99.6	186.1	211.1	0.00	0.00	0.00
2,160.0	11.14	118.17	2,140.4	-103.3	192.9	218.8	0.00	0.00	0.00
2,200.0	11.14	118.17	2,179.7	-106.9	199.7	226.5	0.00	0.00	0.00
2,240.0	11.14	118.17	2,218.9	-110.6	206.5	234.2	0.00	0.00	0.00
2,280.0	11.14	118.17	2,258.2	-114.2	213.3	242.0	0.00	0.00	0.00
2,320.0	11.14	118.17	2,297.4	-117.9	220.1	249.7	0.00	0.00	0.00
2,360.0	11.14	118.17	2,336.7	-121.5	227.0	257.4	0.00	0.00	0.00
2,400.0	11.14	118.17	2,375.9	-125.2	233.8	265.2	0.00	0.00	0.00
2,440.0	11.14	118.17	2,415.1	-128.8	240.6	272.9	0.00	0.00	0.00
2,480.0	11.14	118.17	2,454.4	-132.5	247.4	280.6	0.00	0.00	0.00
2,520.0	11.14	118.17	2,493.6	-136.1	254.2	288.3	0.00	0.00	0.00
2,560.0	11.14	118.17	2,532.9	-139.8	261.0	296.1	0.00	0.00	0.00
2,600.0	11.14	118.17	2,572.1	-143.4	267.8	303.8	0.00	0.00	0.00
2,640.0	11.14	118.17	2,611.4	-147.1	274.6	311.5	0.00	0.00	0.00
2,680.0	11.14	118.17	2,650.6	-150.7	281.5	319.3	0.00	0.00	0.00
2,720.0	11.14	118.17	2,689.9	-154.3	288.3	327.0	0.00	0.00	0.00
2,760.0	11.14	118.17	2,729.1	-158.0	295.1	334.7	0.00	0.00	0.00
2,800.0	11.14	118.17	2,768.4	-161.6	301.9	342.5	0.00	0.00	0.00
2,840.0	11.14	118.17	2,807.6	-165.3	308.7	350.2	0.00	0.00	0.00
2,880.0	11.14	118.17	2,846.9	-168.9	315.5	357.9	0.00	0.00	0.00
2,920.0	11.14	118.17	2,886.1	-172.6	322.3	365.6	0.00	0.00	0.00
2,960.0	11.14	118.17	2,925.3	-176.2	329.2	373.4	0.00	0.00	0.00
3,000.0	11.14	118.17	2,964.6	-179.9	336.0	381.1	0.00	0.00	0.00
3,040.0	11.14	118.17	3,003.8	-183.5	342.8	388.8	0.00	0.00	0.00
3,080.0	11.14	118.17	3,043.1	-187.2	349.6	396.6	0.00	0.00	0.00
3,120.0	11.14	118.17	3,082.3	-190.8	356.4	404.3	0.00	0.00	0.00
3,160.0	11.14	118.17	3,121.6	-194.5	363.2	412.0	0.00	0.00	0.00
3,200.0	11.14	118.17	3,160.8	-198.1	370.0	419.7	0.00	0.00	0.00
3,240.0	11.14	118.17	3,200.1	-201.8	376.8	427.5	0.00	0.00	0.00
3,280.0	11.14	118.17	3,239.3	-205.4	383.7	435.2	0.00	0.00	0.00
3,320.0	11.14	118.17	3,278.6	-209.1	390.5	442.9	0.00	0.00	0.00
3,360.0	11.14	118.17	3,317.8	-212.7	397.3	450.7	0.00	0.00	0.00
3,400.0	11.14	118.17	3,357.1	-216.4	404.1	458.4	0.00	0.00	0.00
3,440.0	11.14	118.17	3,396.3	-220.0	410.9	466.1	0.00	0.00	0.00
3,480.0	11.14	118.17	3,435.5	-223.7	417.7	473.8	0.00	0.00	0.00
3,520.0	11.14	118.17	3,474.8	-227.3	424.5	481.6	0.00	0.00	0.00
3,560.0	11.14	118.17	3,514.0	-231.0	431.4	489.3	0.00	0.00	0.00
3,600.0	11.14	118.17	3,553.3	-234.6	438.2	497.0	0.00	0.00	0.00
3,640.0	11.14	118.17	3,592.5	-238.3	445.0	504.8	0.00	0.00	0.00
3,680.0	11.14	118.17	3,631.8	-241.9	451.8	512.5	0.00	0.00	0.00
3,720.0	11.14	118.17	3,671.0	-245.6	458.6	520.2	0.00	0.00	0.00
3,760.0	11.14	118.17	3,710.3	-249.2	465.4	527.9	0.00	0.00	0.00
3,800.0	11.14	118.17	3,749.5	-252.8	472.2	535.7	0.00	0.00	0.00
3,840.0	11.14	118.17	3,788.8	-256.5	479.0	543.4	0.00	0.00	0.00
3,880.0	11.14	118.17	3,828.0	-260.1	485.9	551.1	0.00	0.00	0.00
3,920.0	11.14	118.17	3,867.3	-263.8	492.7	558.9	0.00	0.00	0.00
3,960.0	11.14	118.17	3,906.5	-267.4	499.5	566.6	0.00	0.00	0.00
4,000.0	11.14	118.17	3,945.8	-271.1	506.3	574.3	0.00	0.00	0.00
4,040.0	11.14	118.17	3,985.0	-274.7	513.1	582.0	0.00	0.00	0.00
4,080.0	11.14	118.17	4,024.2	-278.4	519.9	589.8	0.00	0.00	0.00
4,120.0	11.14	118.17	4,063.5	-282.0	526.7	597.5	0.00	0.00	0.00
4,160.0	11.14	118.17	4,102.7	-285.7	533.6	605.2	0.00	0.00	0.00
4,200.0	11.14	118.17	4,142.0	-289.3	540.4	613.0	0.00	0.00	0.00

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MD Reference: WELL @ 4937.0ft (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)
4,240.0	11.14	118.17	4,181.2	-293.0	547.2	620.7	0.00	0.00	0.00
4,280.0	11.14	118.17	4,220.5	-296.6	554.0	628.4	0.00	0.00	0.00
4,320.0	11.14	118.17	4,259.7	-300.3	560.8	636.1	0.00	0.00	0.00
4,360.0	11.14	118.17	4,299.0	-303.9	567.6	643.9	0.00	0.00	0.00
4,400.0	11.14	118.17	4,338.2	-307.6	574.4	651.6	0.00	0.00	0.00
4,440.0	11.14	118.17	4,377.5	-311.2	581.3	659.3	0.00	0.00	0.00
4,480.0	11.14	118.17	4,416.7	-314.9	588.1	667.1	0.00	0.00	0.00
4,510.3	11.14	118.17	4,446.5	-317.6	593.2	672.9	0.00	0.00	0.00
4,520.0	10.95	118.17	4,456.0	-318.5	594.9	674.8	2.00	-2.00	0.00
4,560.0	10.15	118.17	4,495.3	-322.0	601.3	682.1	2.00	-2.00	0.00
4,600.0	9.35	118.17	4,534.7	-325.2	607.3	688.9	2.00	-2.00	0.00
4,640.0	8.55	118.17	4,574.2	-328.1	612.8	695.1	2.00	-2.00	0.00
4,680.0	7.75	118.17	4,613.8	-330.8	617.8	700.8	2.00	-2.00	0.00
4,720.0	6.95	118.17	4,653.5	-333.2	622.3	705.9	2.00	-2.00	0.00
4,760.0	6.15	118.17	4,693.2	-335.3	626.3	710.4	2.00	-2.00	0.00
4,800.0	5.35	118.17	4,733.0	-337.2	629.8	714.4	2.00	-2.00	0.00
4,840.0	4.55	118.17	4,772.9	-338.9	632.9	717.9	2.00	-2.00	0.00
4,880.0	3.75	118.17	4,812.8	-340.2	635.4	720.8	2.00	-2.00	0.00
4,920.0	2.95	118.17	4,852.7	-341.3	637.5	723.1	2.00	-2.00	0.00
4,960.0	2.15	118.17	4,892.7	-342.2	639.0	724.9	2.00	-2.00	0.00
5,000.0	1.35	118.17	4,932.6	-342.7	640.1	726.1	2.00	-2.00	0.00
5,040.0	0.55	118.17	4,972.6	-343.1	640.7	726.8	2.00	-2.00	0.00
5,067.4	0.00	0.00	5,000.0	-343.1	640.8	726.9	2.00	-2.00	0.00
TARGET BHL 75'FSL, 170'FWL									
5,080.0	0.00	0.00	5,012.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,120.0	0.00	0.00	5,052.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,160.0	0.00	0.00	5,092.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,200.0	0.00	0.00	5,132.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,240.0	0.00	0.00	5,172.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,280.0	0.00	0.00	5,212.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,320.0	0.00	0.00	5,252.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,360.0	0.00	0.00	5,292.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,400.0	0.00	0.00	5,332.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,440.0	0.00	0.00	5,372.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,480.0	0.00	0.00	5,412.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,520.0	0.00	0.00	5,452.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,560.0	0.00	0.00	5,492.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,600.0	0.00	0.00	5,532.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,640.0	0.00	0.00	5,572.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,680.0	0.00	0.00	5,612.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,720.0	0.00	0.00	5,652.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,760.0	0.00	0.00	5,692.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,800.0	0.00	0.00	5,732.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,840.0	0.00	0.00	5,772.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,880.0	0.00	0.00	5,812.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,920.0	0.00	0.00	5,852.6	-343.1	640.8	726.9	0.00	0.00	0.00
5,960.0	0.00	0.00	5,892.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,000.0	0.00	0.00	5,932.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,040.0	0.00	0.00	5,972.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,080.0	0.00	0.00	6,012.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,120.0	0.00	0.00	6,052.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,160.0	0.00	0.00	6,092.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,200.0	0.00	0.00	6,132.6	-343.1	640.8	726.9	0.00	0.00	0.00

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.18-T3N-R65W
Site: REI H20-30D Pad Sec.18-T3N-R65W
Well: REI H20-30D
Wellbore: Wellbore #1
Design: Noble REI H20-30D Plan #3 (05-18-10)

Local Co-ordinate Reference: Well REI H20-30D
TVD Reference: WELL @ 4937.0ft (Original Well Elev)
MD Reference: WELL @ 4937.0ft (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)
6,240.0	0.00	0.00	6,172.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,280.0	0.00	0.00	6,212.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,320.0	0.00	0.00	6,252.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,360.0	0.00	0.00	6,292.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,400.0	0.00	0.00	6,332.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,440.0	0.00	0.00	6,372.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,480.0	0.00	0.00	6,412.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,520.0	0.00	0.00	6,452.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,560.0	0.00	0.00	6,492.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,600.0	0.00	0.00	6,532.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,640.0	0.00	0.00	6,572.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,680.0	0.00	0.00	6,612.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,720.0	0.00	0.00	6,652.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,760.0	0.00	0.00	6,692.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,800.0	0.00	0.00	6,732.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,840.0	0.00	0.00	6,772.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,880.0	0.00	0.00	6,812.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,920.0	0.00	0.00	6,852.6	-343.1	640.8	726.9	0.00	0.00	0.00
6,960.0	0.00	0.00	6,892.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,000.0	0.00	0.00	6,932.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,040.0	0.00	0.00	6,972.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,080.0	0.00	0.00	7,012.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,089.4	0.00	0.00	7,022.0	-343.1	640.8	726.9	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 75'FSL, 170'FWL									
7,120.0	0.00	0.00	7,052.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,160.0	0.00	0.00	7,092.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,200.0	0.00	0.00	7,132.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,240.0	0.00	0.00	7,172.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,280.0	0.00	0.00	7,212.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,320.0	0.00	0.00	7,252.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,360.0	0.00	0.00	7,292.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,384.4	0.00	0.00	7,317.0	-343.1	640.8	726.9	0.00	0.00	0.00
CODELL									
7,400.0	0.00	0.00	7,332.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,440.0	0.00	0.00	7,372.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,480.0	0.00	0.00	7,412.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,520.0	0.00	0.00	7,452.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,560.0	0.00	0.00	7,492.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,600.0	0.00	0.00	7,532.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,640.0	0.00	0.00	7,572.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,680.0	0.00	0.00	7,612.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,720.0	0.00	0.00	7,652.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,760.0	0.00	0.00	7,692.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,800.0	0.00	0.00	7,732.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,827.4	0.00	0.00	7,760.0	-343.1	640.8	726.9	0.00	0.00	0.00
JSAND									
7,840.0	0.00	0.00	7,772.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,880.0	0.00	0.00	7,812.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,920.0	0.00	0.00	7,852.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,960.0	0.00	0.00	7,892.6	-343.1	640.8	726.9	0.00	0.00	0.00
7,977.4	0.00	0.00	7,910.0	-343.1	640.8	726.9	0.00	0.00	0.00
HARDLINES 75'S & 170'W OF BHL									

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.18-T3N-R65W
Site: REI H20-30D Pad Sec.18-T3N-R65W
Well: REI H20-30D
Wellbore: Wellbore #1
Design: Noble REI H20-30D Plan #3 (05-18-10)

Local Co-ordinate Reference: Well REI H20-30D
TVD Reference: WELL @ 4937.0ft (Original Well Elev)
MD Reference: WELL @ 4937.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
TARGET BHL 75'FSL	0.00	0.00	5,000.0	-343.1	640.8	1,323,425.56	3,224,461.70	40° 13' 6.269 N	104° 41' 46.339 W
- plan hits target center									
- Point									
HARDLINES 75'S & 1	0.00	0.00	7,910.0	-418.1	470.8	1,323,349.04	3,224,292.37	40° 13' 5.528 N	104° 41' 48.531 W
- plan misses target center by 185.8ft at 7977.4ft MD (7910.0 TVD, -343.1 N, 640.8 E)									
- Polygon									
Point 1			7,910.0	0.0	0.0	1,323,349.04	3,224,292.37		
Point 2			7,910.0	0.0	300.0	1,323,351.76	3,224,592.34		
Point 3			7,910.0	0.0	0.0	1,323,349.04	3,224,292.37		
Point 4			7,910.0	300.0	0.0	1,323,649.02	3,224,289.65		
TARGET CIRCLE 75'	0.00	0.00	7,022.0	-343.1	640.8	1,323,425.57	3,224,461.67	40° 13' 6.269 N	104° 41' 46.340 W
- plan hits target center									
- Circle (radius 75.0)									

Formations

Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(ft)	(ft)			(°)	(°)
7,089.4	7,022.0	NIOBRARA		0.00	
7,384.4	7,317.0	CODELL		0.00	
7,827.4	7,760.0	JSAND		0.00	