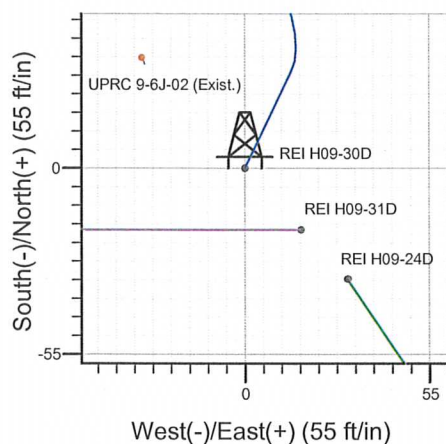
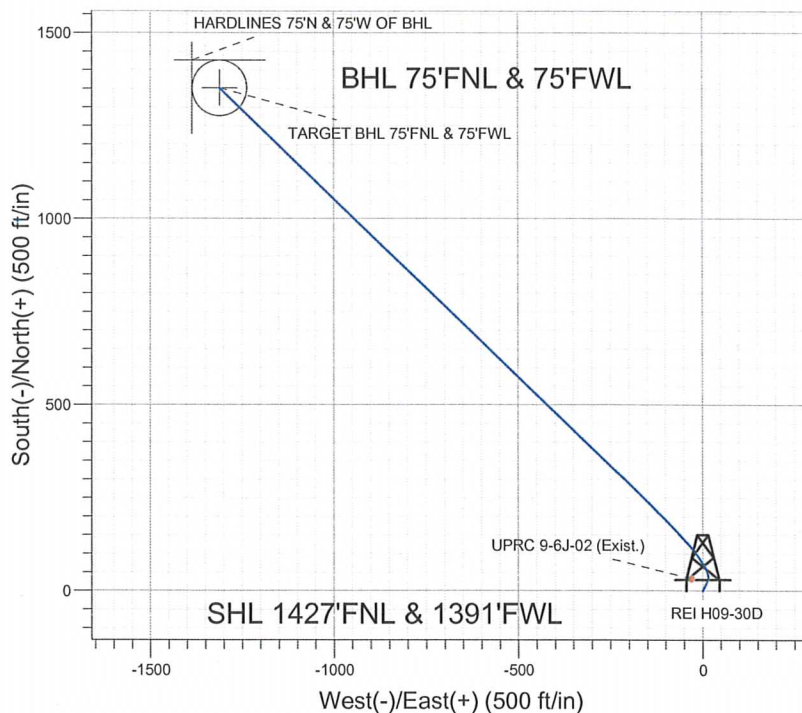
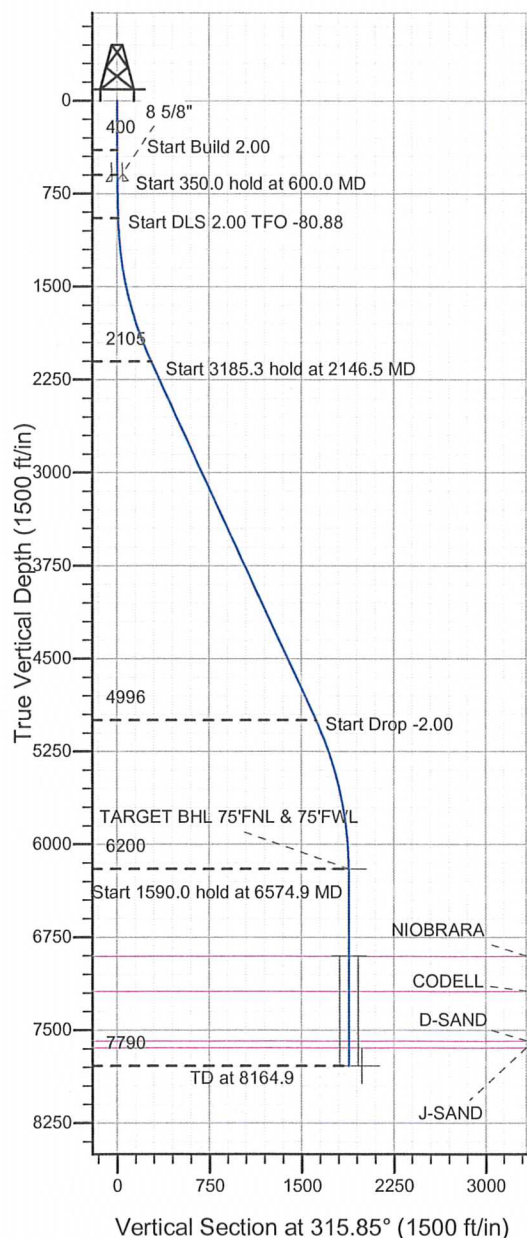


Well Name: REI H09-30D

Surface Location: REI H09-31D Pad Sec.9-T3N-R65W				
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone				
Ground Elevation: 4830.0				
+E/-W	Northing	Easting	Latitude	Longitude
0.0	1332520.36	3230929.98	40.243210	-104.672740
	Original Well Elev	WELL @ 4843.0ft	(Original Well Elev)	

NOBLE ENERGY INC WELD COUNTY CO



REI H09-31D Pad Sec.9-T3N-R65W
REI H09-30D
Noble REI H09-30D Plan #3 (1-4-12)
13:16, January 04 2012



Azimuths to True North
Magnetic North: 8.68°
Magnetic Field
Strength: 53023.7nT
Dip Angle: 66.93°
Date: 1/4/2012
Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 75°FNL & 75°FWL	6200.0	1351.6	-1312.0	40.246920	-104.677440	Point
TARGET CIRCLE 75°FNL & 75°FWL	6903.0	1351.6	-1312.0	40.246920	-104.677440	Circle (Radius: 75.0)
HARDLINES 75°N & 75°W OF BHL	7790.0	1426.6	-1387.1	40.247126	-104.677709	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	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	600.0	4.00	26.00	599.8	6.3	3.1	2.00	26.00	2.4	
4	950.0	4.00	26.00	949.0	28.2	13.8	0.00	0.00	10.7	
5	2146.5	24.86	313.71	2105.5	242.7	-152.2	2.00	-80.88	280.1	
6	5331.8	24.86	313.71	4995.6	1168.1	-1120.1	0.00	0.00	1618.4	
7	6574.9	0.00	0.00	6200.0	1351.6	-1312.0	2.00	180.00	1883.7	TARGET BHL 75'FNL & 75'FWL
8	8164.9	0.00	0.00	7790.0	1351.6	-1312.0	0.00	0.00	1883.7	



NOBLE ENERGY INC WELD COUNTY CO

SEC.9-T3N-R65W

REI H09-31D Pad Sec.9-T3N-R65W

REI H09-30D

Wellbore #1

Plan: Noble REI H09-30D Plan #3 (1-4-12)

Standard Planning Report

04 January, 2012



Database: Landmark
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.9-T3N-R65W
Site: REI H09-31D Pad Sec.9-T3N-R65W
Well: REI H09-30D
Wellbore: Wellbore #1
Design: Noble REI H09-30D Plan #3 (1-4-12)

Local Co-ordinate Reference: Well REI H09-30D
TVD Reference: WELL @ 4843.0ft (Original Well Elev)
MD Reference: WELL @ 4843.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Project	SEC.9-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 H09-31D Pad Sec.9-T3N-R65W			
Site Position:		Northing:	1,332,502.33 ft	Latitude:	40.243160
From:	Lat/Long	Easting:	3,230,946.90 ft	Longitude:	-104.672680
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.53 °

Well	REI H09-30D					
Well Position	+N/-S	18.2 ft	Northing:	1,332,520.36 ft	Latitude:	40.243210
	+E/-W	-16.8 ft	Easting:	3,230,929.98 ft	Longitude:	-104.672740
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,830.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	1/4/2012	8.68	66.93	53,024

Design	Noble REI H09-30D Plan #3 (1-4-12)			
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	315.85

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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
600.0	4.00	26.00	599.8	6.3	3.1	2.00	2.00	0.00	26.00	
950.0	4.00	26.00	949.0	28.2	13.8	0.00	0.00	0.00	0.00	
2,146.5	24.86	313.71	2,105.5	242.7	-152.2	2.00	1.74	-6.04	-80.88	
5,331.8	24.86	313.71	4,995.6	1,168.1	-1,120.1	0.00	0.00	0.00	0.00	
6,574.9	0.00	0.00	6,200.0	1,351.6	-1,312.0	2.00	-2.00	0.00	180.00	TARGET BHL 75'FI
8,164.9	0.00	0.00	7,790.0	1,351.6	-1,312.0	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well REI H09-30D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4843.0ft (Original Well Elev)
Project:	SEC.9-T3N-R65W	MD Reference:	WELL @ 4843.0ft (Original Well Elev)
Site:	REI H09-31D Pad Sec.9-T3N-R65W	North Reference:	True
Well:	REI H09-30D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble REI H09-30D Plan #3 (1-4-12)		

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	0.80	26.00	440.0	0.3	0.1	0.1	2.00	2.00	0.00
480.0	1.60	26.00	480.0	1.0	0.5	0.4	2.00	2.00	0.00
520.0	2.40	26.00	520.0	2.3	1.1	0.9	2.00	2.00	0.00
560.0	3.20	26.00	559.9	4.0	2.0	1.5	2.00	2.00	0.00
600.0	4.00	26.00	599.8	6.3	3.1	2.4	2.00	2.00	0.00
640.0	4.00	26.00	639.7	8.8	4.3	3.3	0.00	0.00	0.00
650.3	4.00	26.00	650.0	9.4	4.6	3.6	0.00	0.00	0.00
8 5/8"									
680.0	4.00	26.00	679.6	11.3	5.5	4.3	0.00	0.00	0.00
720.0	4.00	26.00	719.5	13.8	6.7	5.2	0.00	0.00	0.00
760.0	4.00	26.00	759.4	16.3	8.0	6.2	0.00	0.00	0.00
800.0	4.00	26.00	799.4	18.8	9.2	7.1	0.00	0.00	0.00
840.0	4.00	26.00	839.3	21.3	10.4	8.1	0.00	0.00	0.00
880.0	4.00	26.00	879.2	23.8	11.6	9.0	0.00	0.00	0.00
920.0	4.00	26.00	919.1	26.3	12.8	10.0	0.00	0.00	0.00
950.0	4.00	26.00	949.0	28.2	13.8	10.7	0.00	0.00	0.00
960.0	4.04	23.19	959.0	28.9	14.1	10.9	2.00	0.37	-28.06
1,000.0	4.27	12.63	998.9	31.6	14.9	12.3	2.00	0.59	-26.41
1,040.0	4.64	3.45	1,038.7	34.7	15.4	14.2	2.00	0.91	-22.95
1,080.0	5.10	355.77	1,078.6	38.1	15.3	16.6	2.00	1.16	-19.20
1,120.0	5.64	349.46	1,118.4	41.8	14.8	19.6	2.00	1.35	-15.78
1,160.0	6.24	344.30	1,158.2	45.8	13.9	23.2	2.00	1.49	-12.90
1,200.0	6.88	340.06	1,197.9	50.1	12.5	27.3	2.00	1.59	-10.59
1,240.0	7.55	336.56	1,237.6	54.8	10.6	31.9	2.00	1.67	-8.76
1,280.0	8.24	333.63	1,277.2	59.8	8.3	37.1	2.00	1.73	-7.32
1,320.0	8.95	331.15	1,316.8	65.1	5.5	42.8	2.00	1.77	-6.18
1,360.0	9.67	329.04	1,356.3	70.7	2.3	49.1	2.00	1.81	-5.27
1,400.0	10.41	327.23	1,395.7	76.6	-1.4	55.9	2.00	1.84	-4.54
1,440.0	11.15	325.65	1,434.9	82.8	-5.5	63.3	2.00	1.86	-3.94
1,480.0	11.90	324.27	1,474.1	89.4	-10.1	71.2	2.00	1.88	-3.45
1,520.0	12.66	323.05	1,513.2	96.2	-15.2	79.6	2.00	1.89	-3.05
1,560.0	13.42	321.97	1,552.2	103.4	-20.7	88.6	2.00	1.90	-2.71
1,600.0	14.19	321.00	1,591.0	110.8	-26.6	98.1	2.00	1.91	-2.42
1,640.0	14.95	320.13	1,629.8	118.6	-33.0	108.1	2.00	1.92	-2.18
1,680.0	15.73	319.34	1,668.3	126.7	-39.8	118.6	2.00	1.93	-1.97
1,720.0	16.50	318.62	1,706.8	135.1	-47.1	129.7	2.00	1.94	-1.79
1,760.0	17.28	317.97	1,745.0	143.7	-54.9	141.3	2.00	1.94	-1.63
1,800.0	18.06	317.37	1,783.1	152.7	-63.0	153.5	2.00	1.95	-1.50
1,840.0	18.84	316.82	1,821.1	162.0	-71.6	166.1	2.00	1.95	-1.38
1,880.0	19.62	316.31	1,858.9	171.5	-80.7	179.3	2.00	1.96	-1.27
1,920.0	20.41	315.84	1,896.4	181.4	-90.2	193.0	2.00	1.96	-1.18
1,960.0	21.19	315.40	1,933.8	191.6	-100.1	207.2	2.00	1.96	-1.09
2,000.0	21.98	315.00	1,971.0	202.0	-110.5	221.9	2.00	1.96	-1.02

Database: Landmark
 Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.9-T3N-R65W
 Site: REI H09-31D Pad Sec.9-T3N-R65W
 Well: REI H09-30D
 Wellbore: Wellbore #1
 Design: Noble REI H09-30D Plan #3 (1-4-12)

Local Co-ordinate Reference: Well REI H09-30D
 TVD Reference: WELL @ 4843.0ft (Original Well Elev)
 MD Reference: WELL @ 4843.0ft (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)
2,040.0	22.76	314.62	2,008.0	212.7	-121.3	237.1	2.00	1.97	-0.95
2,080.0	23.55	314.26	2,044.8	223.7	-132.5	252.9	2.00	1.97	-0.89
2,120.0	24.34	313.93	2,081.4	235.0	-144.2	269.1	2.00	1.97	-0.84
2,146.5	24.86	313.71	2,105.5	242.7	-152.2	280.1	2.00	1.97	-0.79
2,160.0	24.86	313.71	2,117.7	246.6	-156.3	285.8	0.00	0.00	0.00
2,200.0	24.86	313.71	2,154.0	258.2	-168.4	302.6	0.00	0.00	0.00
2,240.0	24.86	313.71	2,190.3	269.8	-180.6	319.4	0.00	0.00	0.00
2,280.0	24.86	313.71	2,226.6	281.5	-192.7	336.2	0.00	0.00	0.00
2,320.0	24.86	313.71	2,262.9	293.1	-204.9	353.0	0.00	0.00	0.00
2,360.0	24.86	313.71	2,299.2	304.7	-217.0	369.8	0.00	0.00	0.00
2,400.0	24.86	313.71	2,335.5	316.3	-229.2	386.6	0.00	0.00	0.00
2,440.0	24.86	313.71	2,371.7	327.9	-241.3	403.4	0.00	0.00	0.00
2,480.0	24.86	313.71	2,408.0	339.6	-253.5	420.2	0.00	0.00	0.00
2,520.0	24.86	313.71	2,444.3	351.2	-265.7	437.0	0.00	0.00	0.00
2,560.0	24.86	313.71	2,480.6	362.8	-277.8	453.8	0.00	0.00	0.00
2,600.0	24.86	313.71	2,516.9	374.4	-290.0	470.6	0.00	0.00	0.00
2,640.0	24.86	313.71	2,553.2	386.1	-302.1	487.4	0.00	0.00	0.00
2,680.0	24.86	313.71	2,589.5	397.7	-314.3	504.2	0.00	0.00	0.00
2,720.0	24.86	313.71	2,625.8	409.3	-326.4	521.1	0.00	0.00	0.00
2,760.0	24.86	313.71	2,662.1	420.9	-338.6	537.9	0.00	0.00	0.00
2,800.0	24.86	313.71	2,698.4	432.5	-350.7	554.7	0.00	0.00	0.00
2,840.0	24.86	313.71	2,734.7	444.2	-362.9	571.5	0.00	0.00	0.00
2,880.0	24.86	313.71	2,771.0	455.8	-375.1	588.3	0.00	0.00	0.00
2,920.0	24.86	313.71	2,807.3	467.4	-387.2	605.1	0.00	0.00	0.00
2,960.0	24.86	313.71	2,843.6	479.0	-399.4	621.9	0.00	0.00	0.00
3,000.0	24.86	313.71	2,879.8	490.6	-411.5	638.7	0.00	0.00	0.00
3,040.0	24.86	313.71	2,916.1	502.3	-423.7	655.5	0.00	0.00	0.00
3,080.0	24.86	313.71	2,952.4	513.9	-435.8	672.3	0.00	0.00	0.00
3,120.0	24.86	313.71	2,988.7	525.5	-448.0	689.1	0.00	0.00	0.00
3,160.0	24.86	313.71	3,025.0	537.1	-460.1	705.9	0.00	0.00	0.00
3,200.0	24.86	313.71	3,061.3	548.8	-472.3	722.7	0.00	0.00	0.00
3,240.0	24.86	313.71	3,097.6	560.4	-484.5	739.5	0.00	0.00	0.00
3,280.0	24.86	313.71	3,133.9	572.0	-496.6	756.3	0.00	0.00	0.00
3,320.0	24.86	313.71	3,170.2	583.6	-508.8	773.1	0.00	0.00	0.00
3,360.0	24.86	313.71	3,206.5	595.2	-520.9	789.9	0.00	0.00	0.00
3,400.0	24.86	313.71	3,242.8	606.9	-533.1	806.7	0.00	0.00	0.00
3,440.0	24.86	313.71	3,279.1	618.5	-545.2	823.6	0.00	0.00	0.00
3,480.0	24.86	313.71	3,315.4	630.1	-557.4	840.4	0.00	0.00	0.00
3,520.0	24.86	313.71	3,351.7	641.7	-569.5	857.2	0.00	0.00	0.00
3,560.0	24.86	313.71	3,388.0	653.4	-581.7	874.0	0.00	0.00	0.00
3,600.0	24.86	313.71	3,424.2	665.0	-593.9	890.8	0.00	0.00	0.00
3,640.0	24.86	313.71	3,460.5	676.6	-606.0	907.6	0.00	0.00	0.00
3,680.0	24.86	313.71	3,496.8	688.2	-618.2	924.4	0.00	0.00	0.00
3,720.0	24.86	313.71	3,533.1	699.8	-630.3	941.2	0.00	0.00	0.00
3,760.0	24.86	313.71	3,569.4	711.5	-642.5	958.0	0.00	0.00	0.00
3,800.0	24.86	313.71	3,605.7	723.1	-654.6	974.8	0.00	0.00	0.00
3,840.0	24.86	313.71	3,642.0	734.7	-666.8	991.6	0.00	0.00	0.00
3,880.0	24.86	313.71	3,678.3	746.3	-678.9	1,008.4	0.00	0.00	0.00
3,920.0	24.86	313.71	3,714.6	758.0	-691.1	1,025.2	0.00	0.00	0.00
3,960.0	24.86	313.71	3,750.9	769.6	-703.2	1,042.0	0.00	0.00	0.00
4,000.0	24.86	313.71	3,787.2	781.2	-715.4	1,058.8	0.00	0.00	0.00
4,040.0	24.86	313.71	3,823.5	792.8	-727.6	1,075.6	0.00	0.00	0.00
4,080.0	24.86	313.71	3,859.8	804.4	-739.7	1,092.4	0.00	0.00	0.00
4,120.0	24.86	313.71	3,896.1	816.1	-751.9	1,109.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well REI H09-30D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4843.0ft (Original Well Elev)
Project:	SEC.9-T3N-R65W	MD Reference:	WELL @ 4843.0ft (Original Well Elev)
Site:	REI H09-31D Pad Sec.9-T3N-R65W	North Reference:	True
Well:	REI H09-30D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble REI H09-30D Plan #3 (1-4-12)		

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)
4,160.0	24.86	313.71	3,932.3	827.7	-764.0	1,126.1	0.00	0.00	0.00
4,200.0	24.86	313.71	3,968.6	839.3	-776.2	1,142.9	0.00	0.00	0.00
4,240.0	24.86	313.71	4,004.9	850.9	-788.3	1,159.7	0.00	0.00	0.00
4,280.0	24.86	313.71	4,041.2	862.5	-800.5	1,176.5	0.00	0.00	0.00
4,320.0	24.86	313.71	4,077.5	874.2	-812.6	1,193.3	0.00	0.00	0.00
4,360.0	24.86	313.71	4,113.8	885.8	-824.8	1,210.1	0.00	0.00	0.00
4,400.0	24.86	313.71	4,150.1	897.4	-837.0	1,226.9	0.00	0.00	0.00
4,440.0	24.86	313.71	4,186.4	909.0	-849.1	1,243.7	0.00	0.00	0.00
4,480.0	24.86	313.71	4,222.7	920.7	-861.3	1,260.5	0.00	0.00	0.00
4,520.0	24.86	313.71	4,259.0	932.3	-873.4	1,277.3	0.00	0.00	0.00
4,560.0	24.86	313.71	4,295.3	943.9	-885.6	1,294.1	0.00	0.00	0.00
4,600.0	24.86	313.71	4,331.6	955.5	-897.7	1,310.9	0.00	0.00	0.00
4,640.0	24.86	313.71	4,367.9	967.1	-909.9	1,327.7	0.00	0.00	0.00
4,680.0	24.86	313.71	4,404.2	978.8	-922.0	1,344.5	0.00	0.00	0.00
4,720.0	24.86	313.71	4,440.4	990.4	-934.2	1,361.3	0.00	0.00	0.00
4,760.0	24.86	313.71	4,476.7	1,002.0	-946.4	1,378.1	0.00	0.00	0.00
4,800.0	24.86	313.71	4,513.0	1,013.6	-958.5	1,394.9	0.00	0.00	0.00
4,840.0	24.86	313.71	4,549.3	1,025.3	-970.7	1,411.7	0.00	0.00	0.00
4,880.0	24.86	313.71	4,585.6	1,036.9	-982.8	1,428.6	0.00	0.00	0.00
4,920.0	24.86	313.71	4,621.9	1,048.5	-995.0	1,445.4	0.00	0.00	0.00
4,960.0	24.86	313.71	4,658.2	1,060.1	-1,007.1	1,462.2	0.00	0.00	0.00
5,000.0	24.86	313.71	4,694.5	1,071.7	-1,019.3	1,479.0	0.00	0.00	0.00
5,040.0	24.86	313.71	4,730.8	1,083.4	-1,031.4	1,495.8	0.00	0.00	0.00
5,080.0	24.86	313.71	4,767.1	1,095.0	-1,043.6	1,512.6	0.00	0.00	0.00
5,120.0	24.86	313.71	4,803.4	1,106.6	-1,055.8	1,529.4	0.00	0.00	0.00
5,160.0	24.86	313.71	4,839.7	1,118.2	-1,067.9	1,546.2	0.00	0.00	0.00
5,200.0	24.86	313.71	4,876.0	1,129.9	-1,080.1	1,563.0	0.00	0.00	0.00
5,240.0	24.86	313.71	4,912.3	1,141.5	-1,092.2	1,579.8	0.00	0.00	0.00
5,280.0	24.86	313.71	4,948.5	1,153.1	-1,104.4	1,596.6	0.00	0.00	0.00
5,320.0	24.86	313.71	4,984.8	1,164.7	-1,116.5	1,613.4	0.00	0.00	0.00
5,331.8	24.86	313.71	4,995.6	1,168.1	-1,120.1	1,618.4	0.00	0.00	0.00
5,360.0	24.30	313.71	5,021.2	1,176.3	-1,128.6	1,630.1	2.00	-2.00	0.00
5,400.0	23.50	313.71	5,057.8	1,187.4	-1,140.3	1,646.3	2.00	-2.00	0.00
5,440.0	22.70	313.71	5,094.6	1,198.3	-1,151.6	1,662.0	2.00	-2.00	0.00
5,480.0	21.90	313.71	5,131.6	1,208.8	-1,162.6	1,677.1	2.00	-2.00	0.00
5,520.0	21.10	313.71	5,168.8	1,218.9	-1,173.2	1,691.8	2.00	-2.00	0.00
5,560.0	20.30	313.71	5,206.2	1,228.7	-1,183.4	1,705.9	2.00	-2.00	0.00
5,600.0	19.50	313.71	5,243.8	1,238.1	-1,193.3	1,719.5	2.00	-2.00	0.00
5,640.0	18.70	313.71	5,281.6	1,247.1	-1,202.7	1,732.6	2.00	-2.00	0.00
5,680.0	17.90	313.71	5,319.6	1,255.8	-1,211.8	1,745.1	2.00	-2.00	0.00
5,720.0	17.10	313.71	5,357.7	1,264.1	-1,220.5	1,757.2	2.00	-2.00	0.00
5,760.0	16.30	313.71	5,396.0	1,272.1	-1,228.8	1,768.6	2.00	-2.00	0.00
5,800.0	15.50	313.71	5,434.5	1,279.6	-1,236.7	1,779.6	2.00	-2.00	0.00
5,840.0	14.70	313.71	5,473.1	1,286.8	-1,244.3	1,790.0	2.00	-2.00	0.00
5,880.0	13.90	313.71	5,511.9	1,293.7	-1,251.4	1,799.9	2.00	-2.00	0.00
5,920.0	13.10	313.71	5,550.8	1,300.1	-1,258.1	1,809.2	2.00	-2.00	0.00
5,960.0	12.30	313.71	5,589.8	1,306.2	-1,264.5	1,818.0	2.00	-2.00	0.00
6,000.0	11.50	313.71	5,629.0	1,311.9	-1,270.5	1,826.2	2.00	-2.00	0.00
6,040.0	10.70	313.71	5,668.2	1,317.2	-1,276.0	1,833.9	2.00	-2.00	0.00
6,080.0	9.90	313.71	5,707.6	1,322.2	-1,281.2	1,841.1	2.00	-2.00	0.00
6,120.0	9.10	313.71	5,747.0	1,326.7	-1,286.0	1,847.7	2.00	-2.00	0.00
6,160.0	8.30	313.71	5,786.6	1,330.9	-1,290.3	1,853.7	2.00	-2.00	0.00
6,200.0	7.50	313.71	5,826.2	1,334.7	-1,294.3	1,859.2	2.00	-2.00	0.00
6,240.0	6.70	313.71	5,865.9	1,338.1	-1,297.9	1,864.1	2.00	-2.00	0.00

Database: Landmark
 Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.9-T3N-R65W
 Site: REI H09-31D Pad Sec.9-T3N-R65W
 Well: REI H09-30D
 Wellbore: Wellbore #1
 Design: Noble REI H09-30D Plan #3 (1-4-12)

Local Co-ordinate Reference: Well REI H09-30D
 TVD Reference: WELL @ 4843.0ft (Original Well Elev)
 MD Reference: WELL @ 4843.0ft (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)
6,280.0	5.90	313.71	5,905.6	1,341.1	-1,301.1	1,868.5	2.00	-2.00	0.00
6,320.0	5.10	313.71	5,945.4	1,343.8	-1,303.8	1,872.4	2.00	-2.00	0.00
6,360.0	4.30	313.71	5,985.3	1,346.1	-1,306.2	1,875.6	2.00	-2.00	0.00
6,400.0	3.50	313.71	6,025.2	1,347.9	-1,308.2	1,878.3	2.00	-2.00	0.00
6,440.0	2.70	313.71	6,065.2	1,349.4	-1,309.7	1,880.5	2.00	-2.00	0.00
6,480.0	1.90	313.71	6,105.1	1,350.5	-1,310.9	1,882.1	2.00	-2.00	0.00
6,520.0	1.10	313.71	6,145.1	1,351.3	-1,311.6	1,883.2	2.00	-2.00	0.00
6,560.0	0.30	313.71	6,185.1	1,351.6	-1,312.0	1,883.6	2.00	-2.00	0.00
6,574.9	0.00	0.00	6,200.0	1,351.6	-1,312.0	1,883.7	2.00	-2.00	0.00
TARGET BHL 75'FNL & 75'FWL									
6,600.0	0.00	0.00	6,225.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
6,640.0	0.00	0.00	6,265.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
6,680.0	0.00	0.00	6,305.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
6,720.0	0.00	0.00	6,345.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
6,760.0	0.00	0.00	6,385.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
6,800.0	0.00	0.00	6,425.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
6,840.0	0.00	0.00	6,465.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
6,880.0	0.00	0.00	6,505.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
6,920.0	0.00	0.00	6,545.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
6,960.0	0.00	0.00	6,585.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,000.0	0.00	0.00	6,625.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,040.0	0.00	0.00	6,665.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,080.0	0.00	0.00	6,705.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,120.0	0.00	0.00	6,745.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,160.0	0.00	0.00	6,785.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,200.0	0.00	0.00	6,825.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,240.0	0.00	0.00	6,865.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,277.9	0.00	0.00	6,903.0	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 75'FNL & 75'FWL									
7,280.0	0.00	0.00	6,905.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,320.0	0.00	0.00	6,945.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,360.0	0.00	0.00	6,985.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,400.0	0.00	0.00	7,025.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,440.0	0.00	0.00	7,065.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,480.0	0.00	0.00	7,105.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,520.0	0.00	0.00	7,145.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,558.9	0.00	0.00	7,184.0	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
CODELL									
7,560.0	0.00	0.00	7,185.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,600.0	0.00	0.00	7,225.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,640.0	0.00	0.00	7,265.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,680.0	0.00	0.00	7,305.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,720.0	0.00	0.00	7,345.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,760.0	0.00	0.00	7,385.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,800.0	0.00	0.00	7,425.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,840.0	0.00	0.00	7,465.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,880.0	0.00	0.00	7,505.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,920.0	0.00	0.00	7,545.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
7,959.9	0.00	0.00	7,585.0	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
D-SAND									
7,960.0	0.00	0.00	7,585.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
8,000.0	0.00	0.00	7,625.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
8,014.9	0.00	0.00	7,640.0	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
J-SAND									

Database: Landmark
 Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.9-T3N-R65W
 Site: REI H09-31D Pad Sec.9-T3N-R65W
 Well: REI H09-30D
 Wellbore: Wellbore #1
 Design: Noble REI H09-30D Plan #3 (1-4-12)

Local Co-ordinate Reference: Well REI H09-30D
 TVD Reference: WELL @ 4843.0ft (Original Well Elev)
 MD Reference: WELL @ 4843.0ft (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)
8,040.0	0.00	0.00	7,665.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
8,080.0	0.00	0.00	7,705.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
8,120.0	0.00	0.00	7,745.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
8,160.0	0.00	0.00	7,785.1	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
8,164.9	0.00	0.00	7,790.0	1,351.6	-1,312.0	1,883.7	0.00	0.00	0.00
HARDLINES 75°N & 75°W OF BHL									

Targets

Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
HARDLINES 75°N & 7	- plan misses target center by 106.1ft at 8164.9ft MD (7790.0 TVD, 1351.6 N, -1312.0 E)	0.00	0.00	7,790.0	1,426.6	-1,387.1	1,333,933.91	3,229,529.75	40.247126	-104.677709
- Polygon										
Point 1				7,790.0	0.0	0.0	1,333,933.91	3,229,529.75		
Point 2				7,790.0	-200.0	0.0	1,333,733.92	3,229,531.61		
Point 3				7,790.0	0.0	0.0	1,333,933.91	3,229,529.75		
Point 4				7,790.0	0.0	200.0	1,333,935.77	3,229,729.73		
TARGET BHL 75°FNL	- plan hits target center	0.00	0.00	6,200.0	1,351.6	-1,312.0	1,333,859.63	3,229,605.48	40.246920	-104.677440
- Point										
TARGET CIRCLE 75'	- plan hits target center	0.00	0.00	6,903.0	1,351.6	-1,312.0	1,333,859.63	3,229,605.48	40.246920	-104.677440
- Circle (radius 75.0)										

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
650.3	650.0	8 5/8"	8-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,277.9	6,903.0	NIOBRARA		0.00	
7,558.9	7,184.0	CODELL		0.00	
7,959.9	7,585.0	D-SAND		0.00	
8,014.9	7,640.0	J-SAND		0.00	