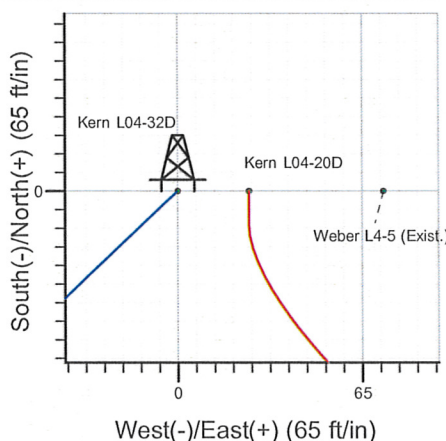
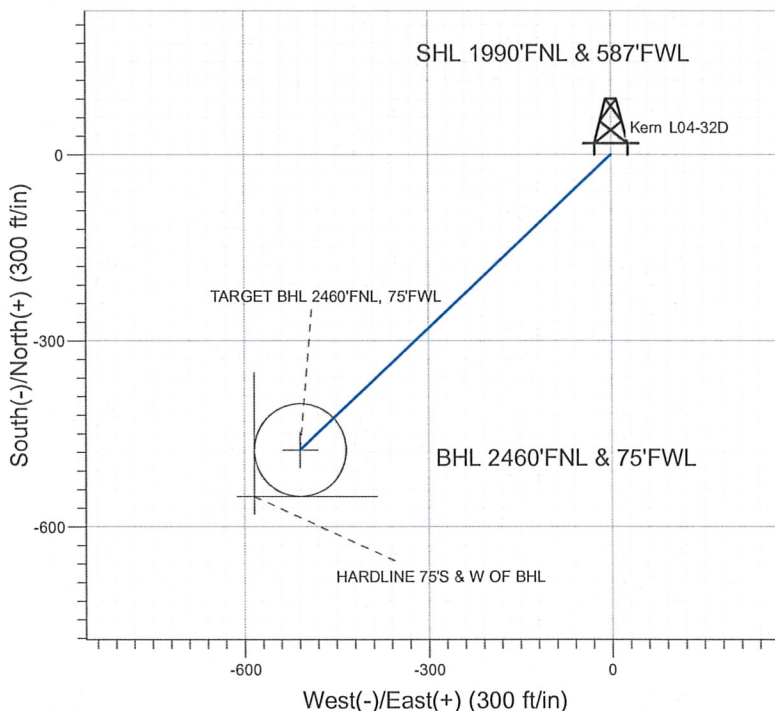
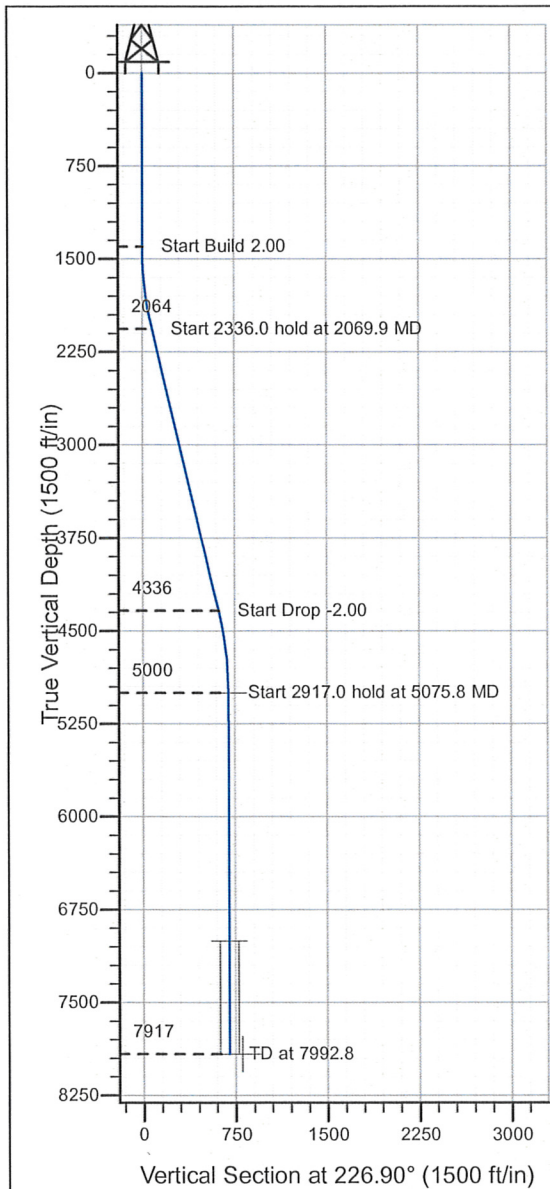


Well Name: Kern L04-32D

Surface Location: Kern L04-20D Pad Sec.4-T3N-R66W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4794.0
 +N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1336695.86 3198223.26 40° 15' 19.620 N 104° 47' 23.208 W
 Original Well Elev WELL @ 4807.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Kern L04-20D Pad Sec.4-T3N-R66W
 Kern L04-32D
 Noble Kern L04-32D Plan #1 (03-04-10)
 11:28, March 04 2010



Azimuths to True North
 Magnetic North: 9.02°
 Magnetic Field
 Strength: 53225.8snT
 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 2460'FNL, 75'FWL	5000.0	-476.4	-509.0	40° 15' 14.912 N	104° 47' 29.773 W	Point
TARGET CIRCLE 2460'FNL, 75'FWL	7002.0	-476.4	-509.0	40° 15' 14.912 N	104° 47' 29.773 W	Circle (Radius: 75.0)
HARDLINE 75'S & W OF BHL	7917.0	-551.4	-584.0	40° 15' 14.171 N	104° 47' 30.740 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	1400.0	0.00	0.00	1400.0	0.0	0.0	0.00	0.00	0.0	
3	2069.9	13.40	226.90	2063.8	-53.3	-56.9	2.00	226.90	78.0	
4	4405.9	13.40	226.90	4336.2	-423.1	-452.1	0.00	0.00	619.2	
5	5075.8	0.00	0.00	5000.0	-476.4	-509.0	2.00	180.00	697.2	TARGET BHL 2460'FNL, 75'FWL
6	7992.8	0.00	0.00	7917.0	-476.4	-509.0	0.00	0.00	697.2	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.4-T3N-R66W

Kern L04-20D Pad Sec.4-T3N-R66W

Kern L04-32D

Wellbore #1

Plan: Noble Kern L04-32D Plan #1 (03-04-10)

Standard Planning Report

04 March, 2010



Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.4-T3N-R66W
Site: Kern L04-20D Pad Sec.4-T3N-R66W
Well: Kern L04-32D
Wellbore: Wellbore #1
Design: Noble Kern L04-32D Plan #1 (03-04-10)

Local Co-ordinate Reference: Well Kern L04-32D
TVD Reference: WELL @ 4807.0ft (Original Well Elev)
MD Reference: WELL @ 4807.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Project	SEC.4-T3N-R66W, Weld County, CO		
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	Kern L04-20D Pad Sec.4-T3N-R66W				
Site Position:		Northing:	1,336,696.07 ft	Latitude:	40° 15' 19.620 N
From:	Lat/Long	Easting:	3,198,248.38ft	Longitude:	104° 47' 22.884 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.46 °

Well	Kern L04-32D					
Well Position	+N/-S	0.0 ft	Northing:	1,336,695.86 ft	Latitude:	40° 15' 19.620 N
	+E/-W	-25.1 ft	Easting:	3,198,223.26 ft	Longitude:	104° 47' 23.208 W
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,794.0 ft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	9.02	66.99	53,226

Design	Noble Kern L04-32D Plan #1 (03-04-10)			
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	226.90

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	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,069.9	13.40	226.90	2,063.8	-53.3	-56.9	2.00	2.00	0.00	226.90	
4,405.9	13.40	226.90	4,336.2	-423.1	-452.1	0.00	0.00	0.00	0.00	
5,075.8	0.00	0.00	5,000.0	-476.4	-509.0	2.00	-2.00	0.00	180.00	TARGET BHL 246C
7,992.8	0.00	0.00	7,917.0	-476.4	-509.0	0.00	0.00	0.00	0.00	

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.4-T3N-R66W
Site: Kern L04-20D Pad Sec.4-T3N-R66W
Well: Kern L04-32D
Wellbore: Wellbore #1
Design: Noble Kern L04-32D Plan #1 (03-04-10)

Local Co-ordinate Reference: Well Kern L04-32D
TVD Reference: WELL @ 4807.0ft (Original Well Elev)
MD Reference: WELL @ 4807.0ft (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	0.00	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	0.80	226.90	1,440.0	-0.2	-0.2	0.3	2.00	2.00	0.00
1,480.0	1.60	226.90	1,480.0	-0.8	-0.8	1.1	2.00	2.00	0.00
1,520.0	2.40	226.90	1,520.0	-1.7	-1.8	2.5	2.00	2.00	0.00
1,560.0	3.20	226.90	1,559.9	-3.1	-3.3	4.5	2.00	2.00	0.00
1,600.0	4.00	226.90	1,599.8	-4.8	-5.1	7.0	2.00	2.00	0.00
1,640.0	4.80	226.90	1,639.7	-6.9	-7.3	10.0	2.00	2.00	0.00
1,680.0	5.60	226.90	1,679.6	-9.3	-10.0	13.7	2.00	2.00	0.00
1,720.0	6.40	226.90	1,719.3	-12.2	-13.0	17.9	2.00	2.00	0.00
1,760.0	7.20	226.90	1,759.1	-15.4	-16.5	22.6	2.00	2.00	0.00
1,800.0	8.00	226.90	1,798.7	-19.1	-20.4	27.9	2.00	2.00	0.00
1,840.0	8.80	226.90	1,838.3	-23.0	-24.6	33.7	2.00	2.00	0.00
1,880.0	9.60	226.90	1,877.8	-27.4	-29.3	40.1	2.00	2.00	0.00
1,920.0	10.40	226.90	1,917.1	-32.2	-34.4	47.1	2.00	2.00	0.00
1,960.0	11.20	226.90	1,956.4	-37.3	-39.8	54.6	2.00	2.00	0.00
2,000.0	12.00	226.90	1,995.6	-42.8	-45.7	62.6	2.00	2.00	0.00
2,040.0	12.80	226.90	2,034.7	-48.6	-52.0	71.2	2.00	2.00	0.00
2,069.9	13.40	226.90	2,063.8	-53.3	-56.9	78.0	2.00	2.00	0.00
2,080.0	13.40	226.90	2,073.6	-54.9	-58.6	80.3	0.00	0.00	0.00

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.4-T3N-R66W
Site: Kern L04-20D Pad Sec.4-T3N-R66W
Well: Kern L04-32D
Wellbore: Wellbore #1
Design: Noble Kern L04-32D Plan #1 (03-04-10)

Local Co-ordinate Reference: Well Kern L04-32D
TVD Reference: WELL @ 4807.0ft (Original Well Elev)
MD Reference: WELL @ 4807.0ft (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)
2,120.0	13.40	226.90	2,112.5	-61.2	-65.4	89.6	0.00	0.00	0.00
2,160.0	13.40	226.90	2,151.5	-67.5	-72.2	98.8	0.00	0.00	0.00
2,200.0	13.40	226.90	2,190.4	-73.9	-78.9	108.1	0.00	0.00	0.00
2,240.0	13.40	226.90	2,229.3	-80.2	-85.7	117.4	0.00	0.00	0.00
2,280.0	13.40	226.90	2,268.2	-86.5	-92.5	126.7	0.00	0.00	0.00
2,320.0	13.40	226.90	2,307.1	-92.9	-99.2	135.9	0.00	0.00	0.00
2,360.0	13.40	226.90	2,346.0	-99.2	-106.0	145.2	0.00	0.00	0.00
2,400.0	13.40	226.90	2,384.9	-105.5	-112.8	154.5	0.00	0.00	0.00
2,440.0	13.40	226.90	2,423.8	-111.9	-119.5	163.7	0.00	0.00	0.00
2,480.0	13.40	226.90	2,462.8	-118.2	-126.3	173.0	0.00	0.00	0.00
2,520.0	13.40	226.90	2,501.7	-124.5	-133.1	182.3	0.00	0.00	0.00
2,560.0	13.40	226.90	2,540.6	-130.9	-139.8	191.5	0.00	0.00	0.00
2,600.0	13.40	226.90	2,579.5	-137.2	-146.6	200.8	0.00	0.00	0.00
2,640.0	13.40	226.90	2,618.4	-143.5	-153.4	210.1	0.00	0.00	0.00
2,680.0	13.40	226.90	2,657.3	-149.9	-160.1	219.3	0.00	0.00	0.00
2,720.0	13.40	226.90	2,696.2	-156.2	-166.9	228.6	0.00	0.00	0.00
2,760.0	13.40	226.90	2,735.1	-162.5	-173.7	237.9	0.00	0.00	0.00
2,800.0	13.40	226.90	2,774.0	-168.9	-180.4	247.1	0.00	0.00	0.00
2,840.0	13.40	226.90	2,813.0	-175.2	-187.2	256.4	0.00	0.00	0.00
2,880.0	13.40	226.90	2,851.9	-181.5	-194.0	265.7	0.00	0.00	0.00
2,920.0	13.40	226.90	2,890.8	-187.9	-200.7	274.9	0.00	0.00	0.00
2,960.0	13.40	226.90	2,929.7	-194.2	-207.5	284.2	0.00	0.00	0.00
3,000.0	13.40	226.90	2,968.6	-200.5	-214.3	293.5	0.00	0.00	0.00
3,040.0	13.40	226.90	3,007.5	-206.9	-221.0	302.8	0.00	0.00	0.00
3,080.0	13.40	226.90	3,046.4	-213.2	-227.8	312.0	0.00	0.00	0.00
3,120.0	13.40	226.90	3,085.3	-219.5	-234.6	321.3	0.00	0.00	0.00
3,160.0	13.40	226.90	3,124.2	-225.9	-241.3	330.6	0.00	0.00	0.00
3,200.0	13.40	226.90	3,163.2	-232.2	-248.1	339.8	0.00	0.00	0.00
3,240.0	13.40	226.90	3,202.1	-238.5	-254.9	349.1	0.00	0.00	0.00
3,280.0	13.40	226.90	3,241.0	-244.9	-261.6	358.4	0.00	0.00	0.00
3,320.0	13.40	226.90	3,279.9	-251.2	-268.4	367.6	0.00	0.00	0.00
3,360.0	13.40	226.90	3,318.8	-257.5	-275.2	376.9	0.00	0.00	0.00
3,400.0	13.40	226.90	3,357.7	-263.9	-281.9	386.2	0.00	0.00	0.00
3,440.0	13.40	226.90	3,396.6	-270.2	-288.7	395.4	0.00	0.00	0.00
3,480.0	13.40	226.90	3,435.5	-276.5	-295.5	404.7	0.00	0.00	0.00
3,520.0	13.40	226.90	3,474.4	-282.9	-302.3	414.0	0.00	0.00	0.00
3,560.0	13.40	226.90	3,513.4	-289.2	-309.0	423.2	0.00	0.00	0.00
3,600.0	13.40	226.90	3,552.3	-295.5	-315.8	432.5	0.00	0.00	0.00
3,640.0	13.40	226.90	3,591.2	-301.9	-322.6	441.8	0.00	0.00	0.00
3,680.0	13.40	226.90	3,630.1	-308.2	-329.3	451.0	0.00	0.00	0.00
3,720.0	13.40	226.90	3,669.0	-314.5	-336.1	460.3	0.00	0.00	0.00
3,760.0	13.40	226.90	3,707.9	-320.9	-342.9	469.6	0.00	0.00	0.00
3,800.0	13.40	226.90	3,746.8	-327.2	-349.6	478.9	0.00	0.00	0.00
3,840.0	13.40	226.90	3,785.7	-333.5	-356.4	488.1	0.00	0.00	0.00
3,880.0	13.40	226.90	3,824.6	-339.9	-363.2	497.4	0.00	0.00	0.00
3,920.0	13.40	226.90	3,863.6	-346.2	-369.9	506.7	0.00	0.00	0.00
3,960.0	13.40	226.90	3,902.5	-352.5	-376.7	515.9	0.00	0.00	0.00
4,000.0	13.40	226.90	3,941.4	-358.9	-383.5	525.2	0.00	0.00	0.00
4,040.0	13.40	226.90	3,980.3	-365.2	-390.2	534.5	0.00	0.00	0.00
4,080.0	13.40	226.90	4,019.2	-371.5	-397.0	543.7	0.00	0.00	0.00
4,120.0	13.40	226.90	4,058.1	-377.9	-403.8	553.0	0.00	0.00	0.00
4,160.0	13.40	226.90	4,097.0	-384.2	-410.5	562.3	0.00	0.00	0.00
4,200.0	13.40	226.90	4,135.9	-390.5	-417.3	571.5	0.00	0.00	0.00
4,240.0	13.40	226.90	4,174.9	-396.9	-424.1	580.8	0.00	0.00	0.00

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.4-T3N-R66W
Site: Kern L04-20D Pad Sec.4-T3N-R66W
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Local Co-ordinate Reference: Well Kern L04-32D
TVD Reference: WELL @ 4807.0ft (Original Well Elev)
MD Reference: WELL @ 4807.0ft (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)
4,280.0	13.40	226.90	4,213.8	-403.2	-430.8	590.1	0.00	0.00	0.00
4,320.0	13.40	226.90	4,252.7	-409.5	-437.6	599.3	0.00	0.00	0.00
4,360.0	13.40	226.90	4,291.6	-415.9	-444.4	608.6	0.00	0.00	0.00
4,400.0	13.40	226.90	4,330.5	-422.2	-451.1	617.9	0.00	0.00	0.00
4,405.9	13.40	226.90	4,336.2	-423.1	-452.1	619.2	0.00	0.00	0.00
4,440.0	12.71	226.90	4,369.5	-428.4	-457.7	626.9	2.00	-2.00	0.00
4,480.0	11.91	226.90	4,408.5	-434.2	-464.0	635.5	2.00	-2.00	0.00
4,520.0	11.11	226.90	4,447.7	-439.7	-469.8	643.5	2.00	-2.00	0.00
4,560.0	10.31	226.90	4,487.0	-444.8	-475.2	650.9	2.00	-2.00	0.00
4,600.0	9.51	226.90	4,526.4	-449.5	-480.3	657.8	2.00	-2.00	0.00
4,640.0	8.71	226.90	4,565.9	-453.8	-484.9	664.1	2.00	-2.00	0.00
4,680.0	7.91	226.90	4,605.5	-457.8	-489.1	669.9	2.00	-2.00	0.00
4,720.0	7.11	226.90	4,645.2	-461.3	-492.9	675.1	2.00	-2.00	0.00
4,760.0	6.31	226.90	4,684.9	-464.5	-496.4	679.8	2.00	-2.00	0.00
4,800.0	5.51	226.90	4,724.7	-467.3	-499.4	683.9	2.00	-2.00	0.00
4,840.0	4.71	226.90	4,764.5	-469.8	-502.0	687.5	2.00	-2.00	0.00
4,880.0	3.91	226.90	4,804.4	-471.8	-504.2	690.5	2.00	-2.00	0.00
4,920.0	3.11	226.90	4,844.3	-473.5	-506.0	693.0	2.00	-2.00	0.00
4,960.0	2.31	226.90	4,884.3	-474.8	-507.3	694.9	2.00	-2.00	0.00
5,000.0	1.51	226.90	4,924.3	-475.7	-508.3	696.2	2.00	-2.00	0.00
5,040.0	0.72	226.90	4,964.3	-476.3	-508.9	697.0	2.00	-2.00	0.00
5,075.8	0.00	0.00	5,000.0	-476.4	-509.0	697.2	2.00	-2.00	372.32
TARGET BHL 2460'FNL, 75'FWL									
5,080.0	0.00	0.00	5,004.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,120.0	0.00	0.00	5,044.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,160.0	0.00	0.00	5,084.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,200.0	0.00	0.00	5,124.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,240.0	0.00	0.00	5,164.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,280.0	0.00	0.00	5,204.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,320.0	0.00	0.00	5,244.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,360.0	0.00	0.00	5,284.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,400.0	0.00	0.00	5,324.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,440.0	0.00	0.00	5,364.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,480.0	0.00	0.00	5,404.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,520.0	0.00	0.00	5,444.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,560.0	0.00	0.00	5,484.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,600.0	0.00	0.00	5,524.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,640.0	0.00	0.00	5,564.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,680.0	0.00	0.00	5,604.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,720.0	0.00	0.00	5,644.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,760.0	0.00	0.00	5,684.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,800.0	0.00	0.00	5,724.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,840.0	0.00	0.00	5,764.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,880.0	0.00	0.00	5,804.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,920.0	0.00	0.00	5,844.2	-476.4	-509.0	697.2	0.00	0.00	0.00
5,960.0	0.00	0.00	5,884.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,000.0	0.00	0.00	5,924.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,040.0	0.00	0.00	5,964.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,080.0	0.00	0.00	6,004.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,120.0	0.00	0.00	6,044.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,160.0	0.00	0.00	6,084.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,200.0	0.00	0.00	6,124.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,240.0	0.00	0.00	6,164.2	-476.4	-509.0	697.2	0.00	0.00	0.00

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.4-T3N-R66W
Site: Kern L04-20D Pad Sec.4-T3N-R66W
Well: Kern L04-32D
Wellbore: Wellbore #1
Design: Noble Kern L04-32D Plan #1 (03-04-10)

Local Co-ordinate Reference: Well Kern L04-32D
TVD Reference: WELL @ 4807.0ft (Original Well Elev)
MD Reference: WELL @ 4807.0ft (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	0.00	0.00	6,204.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,320.0	0.00	0.00	6,244.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,360.0	0.00	0.00	6,284.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,400.0	0.00	0.00	6,324.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,440.0	0.00	0.00	6,364.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,480.0	0.00	0.00	6,404.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,520.0	0.00	0.00	6,444.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,560.0	0.00	0.00	6,484.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,600.0	0.00	0.00	6,524.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,640.0	0.00	0.00	6,564.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,680.0	0.00	0.00	6,604.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,720.0	0.00	0.00	6,644.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,760.0	0.00	0.00	6,684.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,800.0	0.00	0.00	6,724.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,840.0	0.00	0.00	6,764.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,880.0	0.00	0.00	6,804.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,920.0	0.00	0.00	6,844.2	-476.4	-509.0	697.2	0.00	0.00	0.00
6,960.0	0.00	0.00	6,884.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,000.0	0.00	0.00	6,924.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,040.0	0.00	0.00	6,964.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,077.8	0.00	0.00	7,002.0	-476.4	-509.0	697.2	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 2460'FNL, 75'FWL									
7,080.0	0.00	0.00	7,004.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,120.0	0.00	0.00	7,044.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,160.0	0.00	0.00	7,084.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,200.0	0.00	0.00	7,124.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,240.0	0.00	0.00	7,164.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,280.0	0.00	0.00	7,204.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,320.0	0.00	0.00	7,244.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,360.0	0.00	0.00	7,284.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,382.8	0.00	0.00	7,307.0	-476.4	-509.0	697.2	0.00	0.00	0.00
CODELL									
7,400.0	0.00	0.00	7,324.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,440.0	0.00	0.00	7,364.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,480.0	0.00	0.00	7,404.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,520.0	0.00	0.00	7,444.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,560.0	0.00	0.00	7,484.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,600.0	0.00	0.00	7,524.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,640.0	0.00	0.00	7,564.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,680.0	0.00	0.00	7,604.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,720.0	0.00	0.00	7,644.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,760.0	0.00	0.00	7,684.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,776.8	0.00	0.00	7,701.0	-476.4	-509.0	697.2	0.00	0.00	0.00
D-SAND									
7,800.0	0.00	0.00	7,724.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,840.0	0.00	0.00	7,764.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,842.8	0.00	0.00	7,767.0	-476.4	-509.0	697.2	0.00	0.00	0.00
J-SAND									
7,880.0	0.00	0.00	7,804.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,920.0	0.00	0.00	7,844.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,960.0	0.00	0.00	7,884.2	-476.4	-509.0	697.2	0.00	0.00	0.00
7,992.8	0.00	0.00	7,917.0	-476.4	-509.0	697.2	0.00	0.00	0.00
HARDLINE 75'S & W OF BHL									

Database: EDM den0-adp01 Server Data
 Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.4-T3N-R66W
 Site: Kern L04-20D Pad Sec.4-T3N-R66W
 Well: Kern L04-32D
 Wellbore: Wellbore #1
 Design: Noble Kern L04-32D Plan #1 (03-04-10)

Local Co-ordinate Reference: Well Kern L04-32D
 TVD Reference: WELL @ 4807.0ft (Original Well Elev)
 MD Reference: WELL @ 4807.0ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature

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 CIRCLE 24ft - plan hits target center - Circle (radius 75.0)	0.00	0.00	7,002.0	-476.4	-509.0	1,336,215.42	3,197,718.12	40° 15' 14.912 N	104° 47' 29.773 W
TARGET BHL 2460'F - plan hits target center - Point	0.00	0.00	5,000.0	-476.4	-509.0	1,336,215.41	3,197,718.07	40° 15' 14.912 N	104° 47' 29.773 W
HARDLINE 75'S & W - plan misses target center by 106.0ft at 7992.8ft MD (7917.0 TVD, -476.4 N, -509.0 E) - Polygon	0.00	0.00	7,917.0	-551.4	-584.0	1,336,139.83	3,197,643.72	40° 15' 14.171 N	104° 47' 30.740 W
Point 1			7,917.0	0.0	0.0	1,336,139.83	3,197,643.72		
Point 2			7,917.0	0.0	200.0	1,336,141.43	3,197,843.71		
Point 3			7,917.0	0.0	0.0	1,336,139.83	3,197,643.72		
Point 4			7,917.0	200.0	0.0	1,336,339.81	3,197,642.12		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,077.8	7,002.0	NIOBRARA		0.00	
7,382.8	7,307.0	CODELL		0.00	
7,776.8	7,701.0	D-SAND		0.00	
7,842.8	7,767.0	J-SAND		0.00	