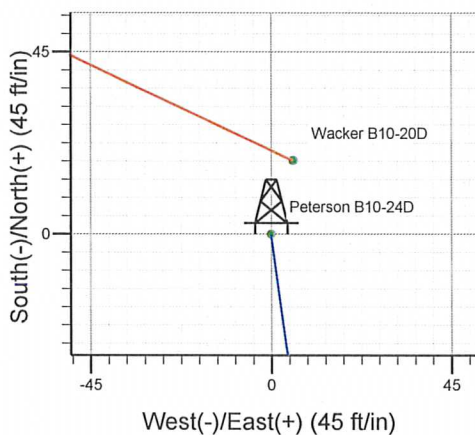
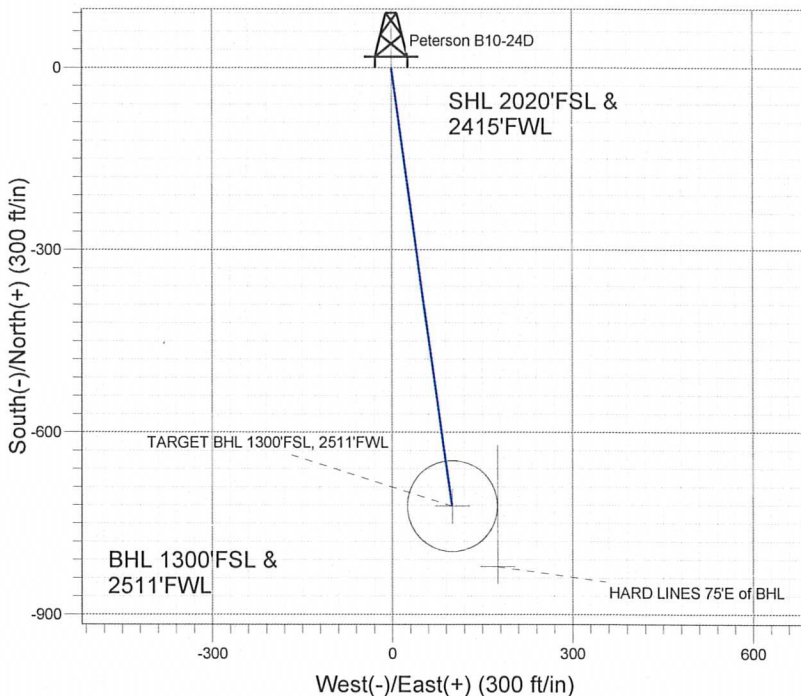
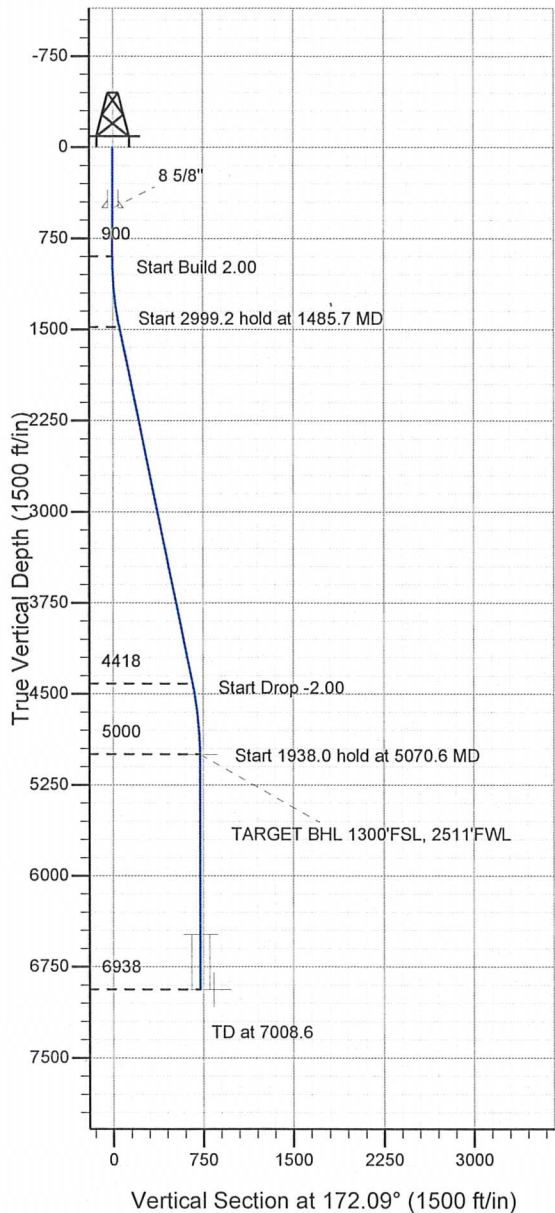


ENSIGN Directional

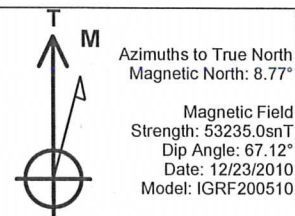
Well Name: Peterson B10-24D

Surface Location: Wacker B10-20D Pad Sec.10-T5N-R64W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4606.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1394413.63 3268163.59 40° 24' 43.452 N 104° 32' 13.056 W
 Original Well Elev WELL @ 4619.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Wacker B10-20D Pad Sec.10-T5N-R64W
 Peterson B10-24D
 Noble Peterson B10-24D Plan #1 (12-23-10)
 12:13, January 06 2011



WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1300'FSL, 2511'FWL	5000.0	-721.3	100.3	40° 24' 36.324 N	104° 32' 11.760 W	Point
TARGET CIRCLE 1300'FSL & 2511'FWL	6485.0	-721.3	100.3	40° 24' 36.324 N	104° 32' 11.760 W	Circle (Radius: 75.0)
HARD LINES 75'E of BHL	6938.0	-821.3	175.3	40° 24' 35.336 N	104° 32' 10.790 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	900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.0	
3	1485.7	11.71	172.09	1481.6	-59.1	8.2	2.00	172.09	59.7	
4	4484.9	11.71	172.09	4418.4	-662.2	92.0	0.00	0.00	668.6	
5	5070.6	0.00	0.00	5000.0	-721.3	100.3	2.00	180.00	728.3	TARGET BHL 1300'FSL, 2511'FWL
6	7008.6	0.00	0.00	6938.0	-721.3	100.3	0.00	0.00	728.3	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.10-T5N-R64W

Wacker B10-20D Pad Sec.10-T5N-R64W

Peterson B10-24D

Wellbore #1

Plan: Noble Peterson B10-24D Plan #1 (12-23-10)

Standard Planning Report

06 January, 2011



Database: Landmark
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.10-T5N-R64W
Site: Wacker B10-20D Pad Sec.10-T5N-R64W
Well: Peterson B10-24D
Wellbore: Wellbore #1
Design: Noble Peterson B10-24D Plan #1 (12-23-10)

Local Co-ordinate Reference: Well Peterson B10-24D
TVD Reference: WELL @ 4619.0ft (Original Well Elev)
MD Reference: WELL @ 4619.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Project	SEC.10-T5N-R64W		
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	Wacker B10-20D Pad Sec.10-T5N-R64W				
Site Position:		Northing:	1,394,431.92 ft	Latitude:	40° 24' 43.632 N
From:	Lat/Long	Easting:	3,268,168.96 ft	Longitude:	104° 32' 12.984 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.62 °

Well	Peterson B10-24D					
Well Position	+N/-S	-18.2 ft	Northing:	1,394,413.63 ft	Latitude:	40° 24' 43.452 N
	+E/-W	-5.6 ft	Easting:	3,268,163.59 ft	Longitude:	104° 32' 13.056 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,606.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/23/2010	8.77	67.12	53,235

Design Noble Peterson B10-24D Plan #1 (12-23-10)

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	172.09

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	
900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,485.7	11.71	172.09	1,481.6	-59.1	8.2	2.00	2.00	0.00	172.09	
4,484.9	11.71	172.09	4,418.4	-662.2	92.0	0.00	0.00	0.00	0.00	
5,070.6	0.00	0.00	5,000.0	-721.3	100.3	2.00	-2.00	0.00	180.00	TARGET BHL 130C
7,008.6	0.00	0.00	6,938.0	-721.3	100.3	0.00	0.00	0.00	0.00	

Database: Landmark
 Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.10-T5N-R64W
 Site: Wacker B10-20D Pad Sec.10-T5N-R64W
 Well: Peterson B10-24D
 Wellbore: Wellbore #1
 Design: Noble Peterson B10-24D Plan #1 (12-23-10)

Local Co-ordinate Reference: Well Peterson B10-24D
 TVD Reference: WELL @ 4619.0ft (Original Well Elev)
 MD Reference: WELL @ 4619.0ft (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
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
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
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
920.0	0.40	172.09	920.0	-0.1	0.0	0.1	2.00	2.00	0.00
960.0	1.20	172.09	960.0	-0.6	0.1	0.6	2.00	2.00	0.00
1,000.0	2.00	172.09	1,000.0	-1.7	0.2	1.7	2.00	2.00	0.00
1,040.0	2.80	172.09	1,039.9	-3.4	0.5	3.4	2.00	2.00	0.00
1,080.0	3.60	172.09	1,079.9	-5.6	0.8	5.7	2.00	2.00	0.00
1,120.0	4.40	172.09	1,119.8	-8.4	1.2	8.4	2.00	2.00	0.00
1,160.0	5.20	172.09	1,159.6	-11.7	1.6	11.8	2.00	2.00	0.00
1,200.0	6.00	172.09	1,199.5	-15.5	2.2	15.7	2.00	2.00	0.00
1,240.0	6.80	172.09	1,239.2	-20.0	2.8	20.2	2.00	2.00	0.00
1,280.0	7.60	172.09	1,278.9	-24.9	3.5	25.2	2.00	2.00	0.00
1,320.0	8.40	172.09	1,318.5	-30.4	4.2	30.7	2.00	2.00	0.00
1,360.0	9.20	172.09	1,358.0	-36.5	5.1	36.9	2.00	2.00	0.00
1,400.0	10.00	172.09	1,397.5	-43.1	6.0	43.5	2.00	2.00	0.00
1,440.0	10.80	172.09	1,436.8	-50.3	7.0	50.7	2.00	2.00	0.00
1,480.0	11.60	172.09	1,476.0	-58.0	8.1	58.5	2.00	2.00	0.00
1,485.7	11.71	172.09	1,481.6	-59.1	8.2	59.7	2.00	2.00	0.00
1,520.0	11.71	172.09	1,515.2	-66.0	9.2	66.6	0.00	0.00	0.00
1,560.0	11.71	172.09	1,554.4	-74.0	10.3	74.7	0.00	0.00	0.00
1,600.0	11.71	172.09	1,593.5	-82.1	11.4	82.9	0.00	0.00	0.00
1,640.0	11.71	172.09	1,632.7	-90.1	12.5	91.0	0.00	0.00	0.00
1,680.0	11.71	172.09	1,671.9	-98.2	13.6	99.1	0.00	0.00	0.00
1,720.0	11.71	172.09	1,711.0	-106.2	14.8	107.2	0.00	0.00	0.00
1,760.0	11.71	172.09	1,750.2	-114.3	15.9	115.4	0.00	0.00	0.00
1,800.0	11.71	172.09	1,789.4	-122.3	17.0	123.5	0.00	0.00	0.00
1,840.0	11.71	172.09	1,828.5	-130.3	18.1	131.6	0.00	0.00	0.00
1,880.0	11.71	172.09	1,867.7	-138.4	19.2	139.7	0.00	0.00	0.00
1,920.0	11.71	172.09	1,906.9	-146.4	20.4	147.8	0.00	0.00	0.00
1,960.0	11.71	172.09	1,946.0	-154.5	21.5	156.0	0.00	0.00	0.00

Database: Landmark
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.10-T5N-R64W
Site: Wacker B10-20D Pad Sec.10-T5N-R64W
Well: Peterson B10-24D
Wellbore: Wellbore #1
Design: Noble Peterson B10-24D Plan #1 (12-23-10)

Local Co-ordinate Reference: Well Peterson B10-24D
TVD Reference: WELL @ 4619.0ft (Original Well Elev)
MD Reference: WELL @ 4619.0ft (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)
2,000.0	11.71	172.09	1,985.2	-162.5	22.6	164.1	0.00	0.00	0.00
2,040.0	11.71	172.09	2,024.4	-170.6	23.7	172.2	0.00	0.00	0.00
2,080.0	11.71	172.09	2,063.6	-178.6	24.8	180.3	0.00	0.00	0.00
2,120.0	11.71	172.09	2,102.7	-186.7	25.9	188.4	0.00	0.00	0.00
2,160.0	11.71	172.09	2,141.9	-194.7	27.1	196.6	0.00	0.00	0.00
2,200.0	11.71	172.09	2,181.1	-202.7	28.2	204.7	0.00	0.00	0.00
2,240.0	11.71	172.09	2,220.2	-210.8	29.3	212.8	0.00	0.00	0.00
2,280.0	11.71	172.09	2,259.4	-218.8	30.4	220.9	0.00	0.00	0.00
2,320.0	11.71	172.09	2,298.6	-226.9	31.5	229.1	0.00	0.00	0.00
2,360.0	11.71	172.09	2,337.7	-234.9	32.6	237.2	0.00	0.00	0.00
2,400.0	11.71	172.09	2,376.9	-243.0	33.8	245.3	0.00	0.00	0.00
2,440.0	11.71	172.09	2,416.1	-251.0	34.9	253.4	0.00	0.00	0.00
2,480.0	11.71	172.09	2,455.2	-259.0	36.0	261.5	0.00	0.00	0.00
2,520.0	11.71	172.09	2,494.4	-267.1	37.1	269.7	0.00	0.00	0.00
2,560.0	11.71	172.09	2,533.6	-275.1	38.2	277.8	0.00	0.00	0.00
2,600.0	11.71	172.09	2,572.7	-283.2	39.4	285.9	0.00	0.00	0.00
2,640.0	11.71	172.09	2,611.9	-291.2	40.5	294.0	0.00	0.00	0.00
2,680.0	11.71	172.09	2,651.1	-299.3	41.6	302.1	0.00	0.00	0.00
2,720.0	11.71	172.09	2,690.2	-307.3	42.7	310.3	0.00	0.00	0.00
2,760.0	11.71	172.09	2,729.4	-315.4	43.8	318.4	0.00	0.00	0.00
2,800.0	11.71	172.09	2,768.6	-323.4	44.9	326.5	0.00	0.00	0.00
2,840.0	11.71	172.09	2,807.7	-331.4	46.1	334.6	0.00	0.00	0.00
2,880.0	11.71	172.09	2,846.9	-339.5	47.2	342.7	0.00	0.00	0.00
2,920.0	11.71	172.09	2,886.1	-347.5	48.3	350.9	0.00	0.00	0.00
2,960.0	11.71	172.09	2,925.2	-355.6	49.4	359.0	0.00	0.00	0.00
3,000.0	11.71	172.09	2,964.4	-363.6	50.5	367.1	0.00	0.00	0.00
3,040.0	11.71	172.09	3,003.6	-371.7	51.7	375.2	0.00	0.00	0.00
3,080.0	11.71	172.09	3,042.7	-379.7	52.8	383.4	0.00	0.00	0.00
3,120.0	11.71	172.09	3,081.9	-387.7	53.9	391.5	0.00	0.00	0.00
3,160.0	11.71	172.09	3,121.1	-395.8	55.0	399.6	0.00	0.00	0.00
3,200.0	11.71	172.09	3,160.2	-403.8	56.1	407.7	0.00	0.00	0.00
3,240.0	11.71	172.09	3,199.4	-411.9	57.2	415.8	0.00	0.00	0.00
3,280.0	11.71	172.09	3,238.6	-419.9	58.4	424.0	0.00	0.00	0.00
3,320.0	11.71	172.09	3,277.7	-428.0	59.5	432.1	0.00	0.00	0.00
3,360.0	11.71	172.09	3,316.9	-436.0	60.6	440.2	0.00	0.00	0.00
3,400.0	11.71	172.09	3,356.1	-444.1	61.7	448.3	0.00	0.00	0.00
3,440.0	11.71	172.09	3,395.2	-452.1	62.8	456.4	0.00	0.00	0.00
3,480.0	11.71	172.09	3,434.4	-460.1	64.0	464.6	0.00	0.00	0.00
3,520.0	11.71	172.09	3,473.6	-468.2	65.1	472.7	0.00	0.00	0.00
3,560.0	11.71	172.09	3,512.7	-476.2	66.2	480.8	0.00	0.00	0.00
3,600.0	11.71	172.09	3,551.9	-484.3	67.3	488.9	0.00	0.00	0.00
3,640.0	11.71	172.09	3,591.1	-492.3	68.4	497.1	0.00	0.00	0.00
3,680.0	11.71	172.09	3,630.2	-500.4	69.5	505.2	0.00	0.00	0.00
3,720.0	11.71	172.09	3,669.4	-508.4	70.7	513.3	0.00	0.00	0.00
3,760.0	11.71	172.09	3,708.6	-516.4	71.8	521.4	0.00	0.00	0.00
3,800.0	11.71	172.09	3,747.7	-524.5	72.9	529.5	0.00	0.00	0.00
3,840.0	11.71	172.09	3,786.9	-532.5	74.0	537.7	0.00	0.00	0.00
3,880.0	11.71	172.09	3,826.1	-540.6	75.1	545.8	0.00	0.00	0.00
3,920.0	11.71	172.09	3,865.2	-548.6	76.3	553.9	0.00	0.00	0.00
3,960.0	11.71	172.09	3,904.4	-556.7	77.4	562.0	0.00	0.00	0.00
4,000.0	11.71	172.09	3,943.6	-564.7	78.5	570.1	0.00	0.00	0.00
4,040.0	11.71	172.09	3,982.7	-572.8	79.6	578.3	0.00	0.00	0.00
4,080.0	11.71	172.09	4,021.9	-580.8	80.7	586.4	0.00	0.00	0.00
4,120.0	11.71	172.09	4,061.1	-588.8	81.8	594.5	0.00	0.00	0.00

Database: Landmark
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.10-T5N-R64W
Site: Wacker B10-20D Pad Sec.10-T5N-R64W
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Wellbore: Wellbore #1
Design: Noble Peterson B10-24D Plan #1 (12-23-10)

Local Co-ordinate Reference: Well Peterson B10-24D
TVD Reference: WELL @ 4619.0ft (Original Well Elev)
MD Reference: WELL @ 4619.0ft (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)
4,160.0	11.71	172.09	4,100.2	-596.9	83.0	602.6	0.00	0.00	0.00
4,200.0	11.71	172.09	4,139.4	-604.9	84.1	610.7	0.00	0.00	0.00
4,240.0	11.71	172.09	4,178.6	-613.0	85.2	618.9	0.00	0.00	0.00
4,280.0	11.71	172.09	4,217.7	-621.0	86.3	627.0	0.00	0.00	0.00
4,320.0	11.71	172.09	4,256.9	-629.1	87.4	635.1	0.00	0.00	0.00
4,360.0	11.71	172.09	4,296.1	-637.1	88.5	643.2	0.00	0.00	0.00
4,400.0	11.71	172.09	4,335.2	-645.2	89.7	651.4	0.00	0.00	0.00
4,440.0	11.71	172.09	4,374.4	-653.2	90.8	659.5	0.00	0.00	0.00
4,480.0	11.71	172.09	4,413.6	-661.2	91.9	667.6	0.00	0.00	0.00
4,484.9	11.71	172.09	4,418.4	-662.2	92.0	668.6	0.00	0.00	0.00
4,520.0	11.01	172.09	4,452.8	-669.1	93.0	675.5	2.00	-2.00	0.00
4,560.0	10.21	172.09	4,492.1	-676.4	94.0	682.9	2.00	-2.00	0.00
4,600.0	9.41	172.09	4,531.5	-683.1	94.9	689.7	2.00	-2.00	0.00
4,640.0	8.61	172.09	4,571.0	-689.3	95.8	696.0	2.00	-2.00	0.00
4,680.0	7.81	172.09	4,610.6	-695.0	96.6	701.7	2.00	-2.00	0.00
4,720.0	7.01	172.09	4,650.3	-700.1	97.3	706.8	2.00	-2.00	0.00
4,760.0	6.21	172.09	4,690.0	-704.7	97.9	711.4	2.00	-2.00	0.00
4,800.0	5.41	172.09	4,729.8	-708.7	98.5	715.5	2.00	-2.00	0.00
4,840.0	4.61	172.09	4,769.6	-712.1	99.0	719.0	2.00	-2.00	0.00
4,880.0	3.81	172.09	4,809.5	-715.0	99.4	721.9	2.00	-2.00	0.00
4,920.0	3.01	172.09	4,849.5	-717.4	99.7	724.3	2.00	-2.00	0.00
4,960.0	2.21	172.09	4,889.4	-719.2	100.0	726.1	2.00	-2.00	0.00
5,000.0	1.41	172.09	4,929.4	-720.5	100.1	727.4	2.00	-2.00	0.00
5,040.0	0.61	172.09	4,969.4	-721.2	100.2	728.1	2.00	-2.00	0.00
5,070.6	0.00	0.00	5,000.0	-721.3	100.3	728.3	2.00	-2.00	0.00
TARGET BHL 1300'FSL, 2511'FWL									
5,080.0	0.00	0.00	5,009.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,120.0	0.00	0.00	5,049.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,160.0	0.00	0.00	5,089.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,200.0	0.00	0.00	5,129.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,240.0	0.00	0.00	5,169.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,280.0	0.00	0.00	5,209.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,320.0	0.00	0.00	5,249.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,360.0	0.00	0.00	5,289.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,400.0	0.00	0.00	5,329.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,440.0	0.00	0.00	5,369.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,480.0	0.00	0.00	5,409.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,520.0	0.00	0.00	5,449.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,560.0	0.00	0.00	5,489.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,600.0	0.00	0.00	5,529.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,640.0	0.00	0.00	5,569.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,680.0	0.00	0.00	5,609.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,720.0	0.00	0.00	5,649.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,760.0	0.00	0.00	5,689.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,800.0	0.00	0.00	5,729.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,840.0	0.00	0.00	5,769.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,880.0	0.00	0.00	5,809.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,920.0	0.00	0.00	5,849.4	-721.3	100.3	728.3	0.00	0.00	0.00
5,960.0	0.00	0.00	5,889.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,000.0	0.00	0.00	5,929.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,040.0	0.00	0.00	5,969.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,080.0	0.00	0.00	6,009.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,120.0	0.00	0.00	6,049.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,160.0	0.00	0.00	6,089.4	-721.3	100.3	728.3	0.00	0.00	0.00

Database: Landmark
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.10-T5N-R64W
Site: Wacker B10-20D Pad Sec.10-T5N-R64W
Well: Peterson B10-24D
Wellbore: Wellbore #1
Design: Noble Peterson B10-24D Plan #1 (12-23-10)

Local Co-ordinate Reference: Well Peterson B10-24D
TVD Reference: WELL @ 4619.0ft (Original Well Elev)
MD Reference: WELL @ 4619.0ft (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)
6,200.0	0.00	0.00	6,129.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,240.0	0.00	0.00	6,169.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,280.0	0.00	0.00	6,209.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,320.0	0.00	0.00	6,249.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,360.0	0.00	0.00	6,289.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,400.0	0.00	0.00	6,329.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,440.0	0.00	0.00	6,369.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,480.0	0.00	0.00	6,409.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,520.0	0.00	0.00	6,449.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,555.6	0.00	0.00	6,485.0	-721.3	100.3	728.3	0.00	0.00	0.00
NIORARA - TARGET CIRCLE 1300'FSL & 2511'FWL									
6,560.0	0.00	0.00	6,489.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,600.0	0.00	0.00	6,529.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,640.0	0.00	0.00	6,569.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,680.0	0.00	0.00	6,609.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,720.0	0.00	0.00	6,649.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,760.0	0.00	0.00	6,689.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,800.0	0.00	0.00	6,729.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,840.0	0.00	0.00	6,769.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,858.6	0.00	0.00	6,788.0	-721.3	100.3	728.3	0.00	0.00	0.00
CODELL									
6,880.0	0.00	0.00	6,809.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,920.0	0.00	0.00	6,849.4	-721.3	100.3	728.3	0.00	0.00	0.00
6,960.0	0.00	0.00	6,889.4	-721.3	100.3	728.3	0.00	0.00	0.00
7,000.0	0.00	0.00	6,929.4	-721.3	100.3	728.3	0.00	0.00	0.00
7,008.6	0.00	0.00	6,938.0	-721.3	100.3	728.3	0.00	0.00	0.00
HARD LINES 75'E of BHL									

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 1300'F: - plan hits target center - Point	0.00	0.00	5,000.0	-721.3	100.3	1,393,693.47	3,268,271.66	40° 24' 36.324 N	104° 32' 11.760 W
HARD LINES 75'E of - plan misses target center by 125.0ft at 7008.6ft MD (6938.0 TVD, -721.3 N, 100.3 E) - Polygon	0.00	0.00	6,938.0	-821.3	175.3	1,393,594.32	3,268,347.76	40° 24' 35.336 N	104° 32' 10.790 W
Point 1			6,938.0	0.0	0.0	1,393,594.32	3,268,347.76		
Point 2			6,938.0	200.0	0.0	1,393,794.30	3,268,345.59		
TARGET CIRCLE 1300'F: - plan hits target center - Circle (radius 75.0)	0.00	0.00	6,485.0	-721.3	100.3	1,393,693.47	3,268,271.66	40° 24' 36.324 N	104° 32' 11.760 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
500.0	500.0	8 5/8"	8-5/8	12-1/4

Database: Landmark
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Local Co-ordinate Reference: Well Peterson B10-24D
TVD Reference: WELL @ 4619.0ft (Original Well Elev)
MD Reference: WELL @ 4619.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,555.6	6,485.0	NIOBRARA		0.00	
6,858.6	6,788.0	CODELL		0.00	