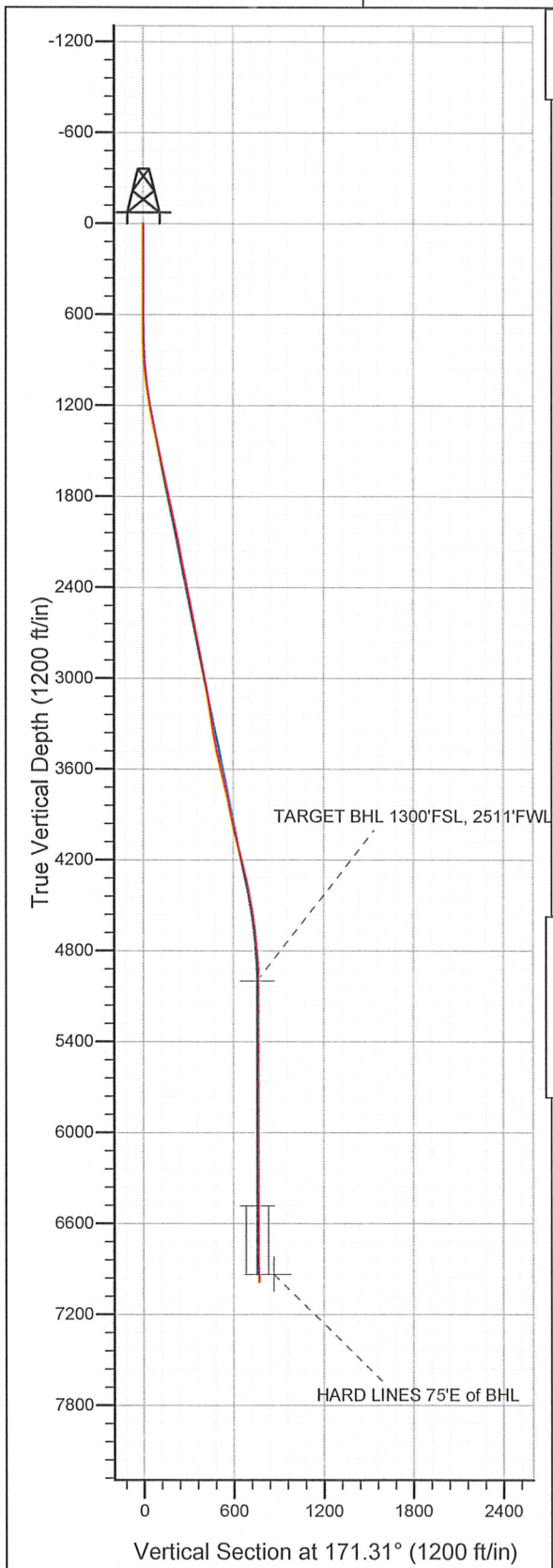
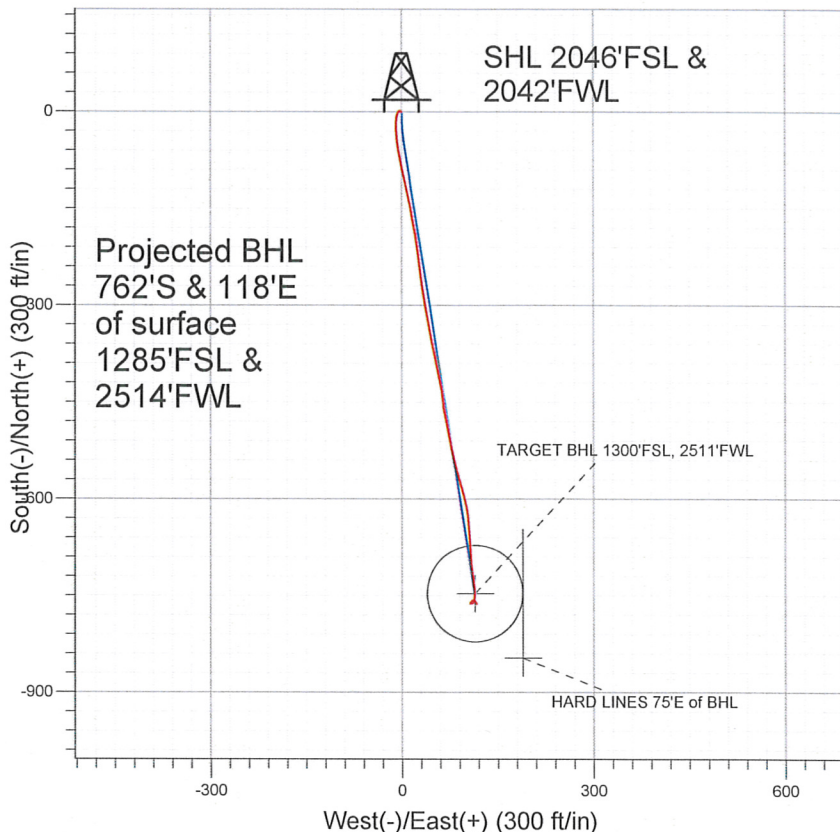


Well Name: **Peterson B10-24D**  
 Surface Location: Wacker B10-20D Pad Sec.10-T5N-R64W  
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone  
 Ground Elevation: 4604.0  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1394438.99 3268149.39 40° 24' 43.704 N 104° 32' 13.236 W  
 Original Well Elev WELL @ 4617.0ft (Original Well Elev)



### NOBLE ENERGY INC WELD COUNTY CO



#### LEGEND

- Peterson B10-24D, Wellbore #1, Noble Peterson B10-24D Plan #3 (3-16-11) VD
- Wellbore #1
- Survey #1

## Final Survey Plot

Projected Final Survey -  
 7062'MD & 6986'TVD @ 771' VS  
 1.6 deg Inc 144.9 deg AZ

Project: SEC.10-T5N-R64W  
 Site: Wacker B10-20D Pad Sec.10-T5N-R64W  
 Well: Peterson B10-24D  
 Plan: Wellbore #1

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: Wellbore #1

Local Co-ordinate Reference: Well Peterson B10-24D  
 TVD Reference: WELL @ 4617.0ft (Original Well Elev)  
 MD Reference: WELL @ 4617.0ft (Original Well Elev)  
 North Reference: True  
 Survey Calculation Method: Minimum Curvature  
 Database: Landmark

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 0.0 ft Northing: 1,394,438.99 ft Latitude: 40° 24' 43.704 N  
 +E/-W 0.0 ft Easting: 3,268,149.39 ft Longitude: 104° 32' 13.236 W  
 Position Uncertainty 0.0 ft Wellhead Elevation: ft Ground Level: 4,604.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/16/2011	8.78	67.11	53,191

Design Wellbore #1

Audit Notes:

Version: 1.0 Phase: ACTUAL Tie On Depth: 0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	171.31

Survey Program Date 3/21/2011

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
683.0	7,062.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard

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
683.0	0.40	308.60	683.0	1.5	-1.9	-1.8	0.06	0.06	0.00
768.0	2.20	229.90	768.0	0.6	-3.3	-1.1	2.54	2.12	-92.59
854.0	4.00	203.70	853.8	-3.2	-5.8	2.3	2.61	2.09	-30.47
939.0	5.50	189.40	938.6	-9.9	-7.7	8.6	2.24	1.76	-16.82
1,025.0	7.10	179.50	1,024.0	-19.3	-8.3	17.8	2.24	1.86	-11.51
1,110.0	7.90	177.70	1,108.3	-30.4	-8.0	28.8	0.98	0.94	-2.12
1,196.0	9.10	173.20	1,193.4	-43.1	-7.0	41.5	1.59	1.40	-5.23
1,281.0	10.50	171.30	1,277.1	-57.4	-5.0	56.0	1.69	1.65	-2.24
1,367.0	12.20	169.60	1,361.4	-74.1	-2.2	72.9	2.01	1.98	-1.98
1,452.0	12.90	167.00	1,444.4	-92.1	1.6	91.3	1.06	0.82	-3.06
1,538.0	12.70	166.70	1,528.3	-110.7	5.9	110.3	0.25	-0.23	-0.35
1,623.0	12.40	165.80	1,611.2	-128.6	10.3	128.7	0.42	-0.35	-1.06



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 Wellbore: Wellbore #1  
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Local Co-ordinate Reference: Well Peterson B10-24D  
 TVD Reference: WELL @ 4617.0ft (Original Well Elev)  
 MD Reference: WELL @ 4617.0ft (Original Well Elev)  
 North Reference: True  
 Survey Calculation Method: Minimum Curvature  
 Database: Landmark

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)
1,709.0	12.40	169.20	1,695.2	-146.7	14.3	147.1	0.85	0.00	3.95
1,794.0	12.70	171.10	1,778.2	-164.9	17.4	165.6	0.60	0.35	2.24
1,880.0	12.10	169.60	1,862.2	-183.1	20.5	184.1	0.79	-0.70	-1.74
1,965.0	11.80	170.50	1,945.4	-200.4	23.6	201.7	0.42	-0.35	1.06
2,051.0	11.70	173.60	2,029.6	-217.7	26.0	219.2	0.74	-0.12	3.60
2,136.0	11.80	173.30	2,112.8	-234.9	28.0	236.5	0.14	0.12	-0.35
2,222.0	11.10	172.10	2,197.1	-251.9	30.1	253.5	0.86	-0.81	-1.40
2,308.0	11.10	171.50	2,281.4	-268.3	32.5	270.1	0.13	0.00	-0.70
2,393.0	10.50	171.40	2,364.9	-284.0	34.9	286.0	0.71	-0.71	-0.12
2,479.0	10.90	169.50	2,449.4	-299.7	37.5	302.0	0.62	0.47	-2.21
2,564.0	11.50	171.30	2,532.8	-316.0	40.3	318.5	0.82	0.71	2.12
2,650.0	11.50	168.80	2,617.1	-332.9	43.2	335.6	0.58	0.00	-2.91
2,735.0	11.70	168.90	2,700.4	-349.7	46.5	352.7	0.24	0.24	0.12
2,821.0	9.90	169.60	2,784.8	-365.5	49.6	368.8	2.10	-2.09	0.81
2,906.0	11.40	169.50	2,868.4	-381.0	52.4	384.5	1.76	1.76	-0.12
2,992.0	11.10	168.10	2,952.7	-397.4	55.7	401.3	0.47	-0.35	-1.63
3,077.0	10.20	165.90	3,036.3	-412.7	59.2	416.9	1.16	-1.06	-2.59
3,163.0	9.00	167.70	3,121.1	-426.7	62.5	431.2	1.44	-1.40	2.09
3,248.0	8.10	175.40	3,205.1	-439.1	64.4	443.8	1.71	-1.06	9.06
3,334.0	8.40	173.40	3,290.2	-451.4	65.6	456.1	0.48	0.35	-2.33
3,419.0	10.80	169.70	3,374.0	-465.4	67.7	470.3	2.91	2.82	-4.35
3,505.0	11.40	168.40	3,458.4	-481.7	70.9	486.9	0.76	0.70	-1.51
3,590.0	12.80	169.50	3,541.5	-499.2	74.3	504.7	1.67	1.65	1.29
3,676.0	13.10	168.10	3,625.3	-518.1	78.0	523.9	0.50	0.35	-1.63
3,761.0	13.00	168.10	3,708.1	-536.9	82.0	543.1	0.12	-0.12	0.00
3,847.0	12.60	166.80	3,792.0	-555.5	86.1	562.1	0.57	-0.47	-1.51
3,932.0	11.30	161.30	3,875.2	-572.4	90.9	579.5	2.03	-1.53	-6.47
4,018.0	12.50	164.50	3,959.3	-589.3	96.1	597.1	1.59	1.40	3.72
4,103.0	13.60	166.80	4,042.1	-607.9	100.8	616.2	1.43	1.29	2.71
4,189.0	14.00	175.30	4,125.6	-628.1	104.0	636.6	2.40	0.47	9.88
4,274.0	13.60	174.20	4,208.2	-648.3	105.8	656.9	0.56	-0.47	-1.29
4,360.0	14.00	177.50	4,291.7	-668.8	107.3	677.3	1.03	0.47	3.84
4,446.0	12.30	177.20	4,375.5	-688.3	108.2	696.8	1.98	-1.98	-0.35
4,531.0	10.60	173.10	4,458.8	-705.1	109.6	713.6	2.22	-2.00	-4.82
4,617.0	9.20	172.20	4,543.5	-719.8	111.5	728.4	1.64	-1.63	-1.05
4,702.0	7.90	169.60	4,627.5	-732.3	113.5	741.0	1.60	-1.53	-3.06
4,788.0	5.70	179.00	4,712.9	-742.3	114.6	751.1	2.86	-2.56	10.93
4,873.0	4.50	182.50	4,797.6	-749.9	114.5	758.6	1.46	-1.41	4.12
4,959.0	3.90	192.10	4,883.4	-756.1	113.8	764.6	1.07	-0.70	11.16
5,044.0	2.20	219.20	4,968.2	-760.2	112.1	768.4	2.57	-2.00	31.88
5,075.5	1.46	226.00	4,999.8	-761.0	111.5	769.1	2.43	-2.34	21.57
TARGET BHL 1300'FSL, 2511'FWL									
5,130.0	0.50	290.10	5,054.2	-761.4	110.7	769.4	2.43	-1.77	117.71
5,215.0	0.60	278.60	5,139.2	-761.2	109.9	769.0	0.17	0.12	-13.53
5,301.0	0.70	254.20	5,225.2	-761.2	109.0	769.0	0.34	0.12	-28.37
5,386.0	0.10	200.60	5,310.2	-761.5	108.5	769.1	0.76	-0.71	-63.06
5,472.0	0.20	132.70	5,396.2	-761.6	108.6	769.3	0.22	0.12	-78.95
5,557.0	0.10	226.80	5,481.2	-761.8	108.6	769.4	0.27	-0.12	110.71
5,643.0	0.30	219.80	5,567.2	-762.0	108.4	769.6	0.23	0.23	-8.14
5,728.0	0.30	311.60	5,652.2	-762.0	108.1	769.6	0.51	0.00	108.00
5,814.0	0.40	330.40	5,738.2	-761.6	107.8	769.2	0.18	0.12	21.86
5,899.0	0.30	355.30	5,823.2	-761.1	107.6	768.7	0.21	-0.12	29.29
5,985.0	0.10	91.60	5,909.2	-760.9	107.7	768.5	0.38	-0.23	111.98
6,070.0	0.20	66.80	5,994.2	-760.9	107.9	768.4	0.14	0.12	-29.18

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6,156.0	0.30	70.30	6,080.2	-760.7	108.2	768.3	0.12	0.12	4.07
6,241.0	0.50	45.50	6,165.2	-760.4	108.7	768.1	0.31	0.24	-29.18
6,327.0	0.60	27.80	6,251.2	-759.7	109.2	767.5	0.23	0.12	-20.58
6,412.0	0.40	51.40	6,336.2	-759.2	109.6	767.0	0.33	-0.24	27.76
6,498.0	0.70	26.80	6,422.2	-758.5	110.1	766.4	0.44	0.35	-28.60
6,559.0	0.84	39.33	6,483.2	-757.8	110.5	765.8	0.35	0.22	20.55
TARGET CIRCLE 1300'FSL & 2511'FWL									
6,584.0	0.90	43.30	6,508.2	-757.5	110.8	765.6	0.35	0.26	15.87
6,669.0	0.70	78.70	6,593.2	-756.9	111.8	765.1	0.61	-0.24	41.65
6,755.0	1.10	120.90	6,679.2	-757.3	113.0	765.6	0.87	0.47	49.07
6,840.0	1.30	128.90	6,764.1	-758.3	114.4	766.9	0.31	0.24	9.41
6,926.0	1.10	135.00	6,850.1	-759.5	115.8	768.3	0.28	-0.23	7.09
7,011.0	1.60	144.90	6,935.1	-761.0	117.0	770.0	0.65	0.59	11.65
HARD LINES 75'E of BHL									
7,062.0	1.60	144.90	6,986.1	-762.2	117.9	771.3	0.00	0.00	0.00

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_