

Well Name: **Shelton PC D06-32D**

Surface Location: Shelton PC D06-32D Pad Sec.6-T3N-R64W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone

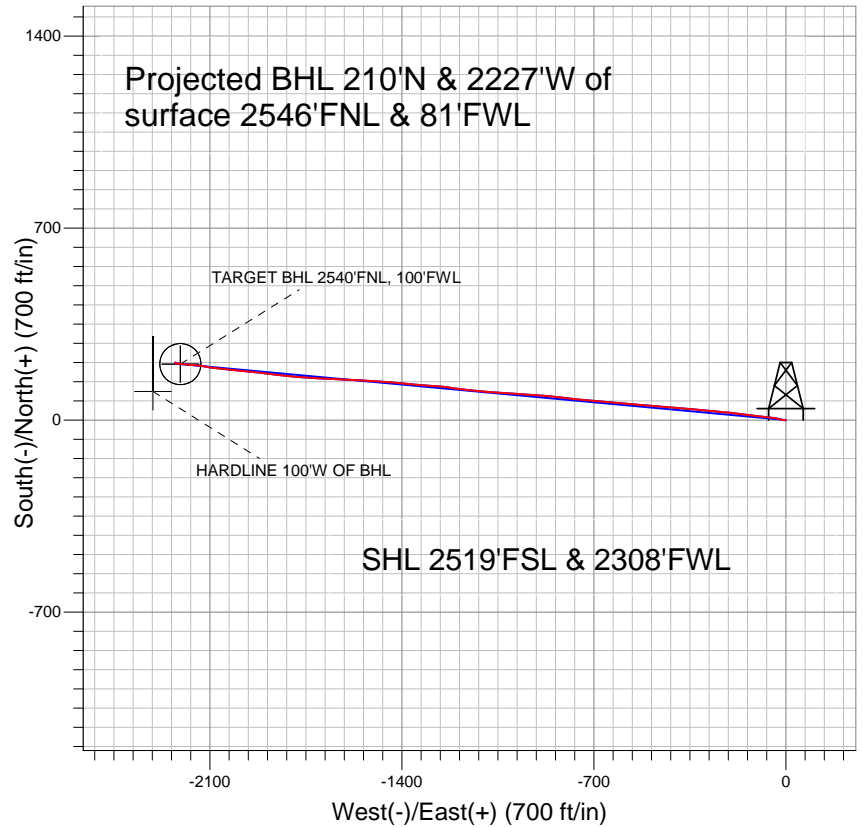
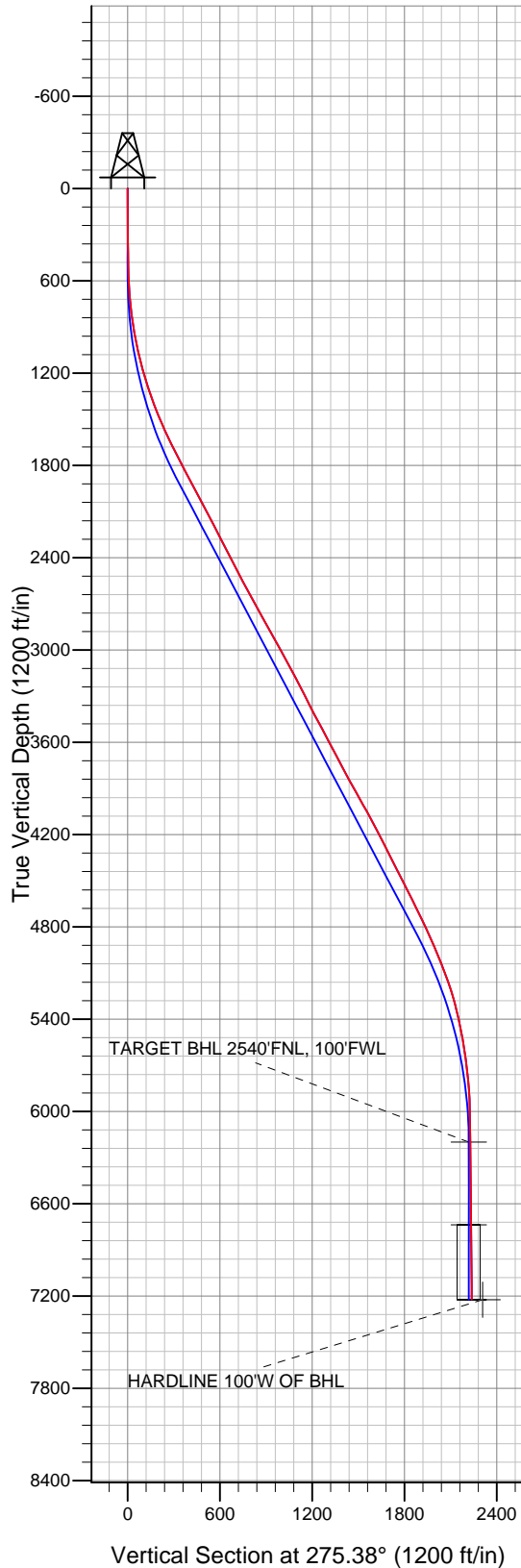
Ground Elevation: 4824.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1336650.47	3252810.93	40° 15' 14.256 N	104° 35' 39.156 W

Original Well Elev WELL @ 4837.0ft (Original Well Elev)

Slot

NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- Shelton PC D06-32D, Wellbore #1, Noble Shelton PC D06-32D Plan #3 (1-26-11) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
 7719'MD & 7222'TVD @ 2237' VS
 0.6 deg Inc 315.5 deg AZ

Project: SEC.6-T3N-R64W
 Site: Shelton PC D06-32D Pad Sec.6-T3N-R64W
 Well: Shelton PC D06-32D
 Plan: Wellbore #1



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.6-T3N-R64W

Shelton PC D06-32D Pad Sec.6-T3N-R64W

Shelton PC D06-32D

Wellbore #1

Survey: Survey #1

Standard Survey Report

07 February, 2011



Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Shelton PC D06-32D
Project:	SEC.6-T3N-R64W	TVD Reference:	WELL @ 4837.0ft (Original Well Elev)
Site:	Shelton PC D06-32D Pad Sec.6-T3N-R64W	MD Reference:	WELL @ 4837.0ft (Original Well Elev)
Well:	Shelton PC D06-32D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.6-T3N-R64W, 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	Shelton PC D06-32D Pad Sec.6-T3N-R64W		
Site Position:		Northing:	1,336,650.48ft
From:	Lat/Long	Easting:	3,252,810.93ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40° 15' 14.256 N
		Longitude:	104° 35' 39.156 W
		Grid Convergence:	0.59 °

Well	Shelton PC D06-32D		
Well Position	+N-S	0.0 ft	Northing: 1,336,650.47 ft
	+E-W	0.0 ft	Easting: 3,252,810.93 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	40° 15' 14.256 N
		Longitude:	104° 35' 39.156 W
		Ground Level:	4,824.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/26/2011	8.81	66.97	53,114

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	275.38	

Survey Program	Date	2/7/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
325.0	7,719.0	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	
325.0	0.40	239.00	325.0	-0.6	-1.0	0.9	0.12	0.12	0.00	
416.0	0.60	269.50	416.0	-0.8	-1.7	1.6	0.36	0.22	33.52	
507.0	1.50	278.00	507.0	-0.6	-3.4	3.3	1.00	0.99	9.34	
598.0	2.90	278.50	597.9	-0.1	-6.8	6.8	1.54	1.54	0.55	
663.0	3.90	280.50	662.8	0.6	-10.6	10.6	1.55	1.54	3.08	
717.0	4.50	278.50	716.6	1.2	-14.5	14.6	1.14	1.11	-3.70	
810.0	6.90	287.50	809.2	3.4	-23.5	23.7	2.75	2.58	9.68	
904.0	9.40	282.10	902.2	6.7	-36.4	36.8	2.78	2.66	-5.74	
997.0	11.40	273.10	993.7	8.8	-53.0	53.6	2.76	2.15	-9.68	
1,091.0	13.30	276.70	1,085.5	10.6	-73.0	73.7	2.18	2.02	3.83	
1,185.0	15.60	277.70	1,176.5	13.5	-96.3	97.1	2.46	2.45	1.06	
1,278.0	17.50	276.30	1,265.7	16.8	-122.5	123.6	2.09	2.04	-1.51	

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Shelton PC D06-32D
Project:	SEC.6-T3N-R64W	TVD Reference:	WELL @ 4837.0ft (Original Well Elev)
Site:	Shelton PC D06-32D Pad Sec.6-T3N-R64W	MD Reference:	WELL @ 4837.0ft (Original Well Elev)
Well:	Shelton PC D06-32D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)	
1,371.0	19.30	277.00	1,353.9	20.2	-151.7	152.9	1.95	1.94	0.75	
1,464.0	21.60	276.90	1,441.1	24.1	-184.0	185.4	2.47	2.47	-0.11	
1,557.0	23.60	275.60	1,526.9	28.0	-219.5	221.1	2.22	2.15	-1.40	
1,651.0	25.00	275.60	1,612.6	31.7	-258.0	259.8	1.49	1.49	0.00	
1,745.0	26.20	274.90	1,697.4	35.5	-298.4	300.4	1.32	1.28	-0.74	
1,838.0	28.30	275.60	1,780.0	39.4	-340.8	343.0	2.28	2.26	0.75	
1,931.0	28.60	274.90	1,861.8	43.4	-384.9	387.3	0.48	0.32	-0.75	
2,024.0	27.80	274.90	1,943.8	47.2	-428.7	431.3	0.86	-0.86	0.00	
2,118.0	27.20	274.40	2,027.1	50.7	-472.0	474.7	0.68	-0.64	-0.53	
2,211.0	27.10	274.50	2,109.9	54.0	-514.3	517.1	0.12	-0.11	0.11	
2,305.0	27.20	274.70	2,193.5	57.4	-557.1	560.0	0.14	0.11	0.21	
2,398.0	28.00	275.60	2,276.0	61.3	-600.0	603.1	0.97	0.86	0.97	
2,491.0	27.10	275.30	2,358.4	65.4	-642.8	646.1	0.98	-0.97	-0.32	
2,585.0	27.80	274.40	2,441.8	69.0	-686.0	689.4	0.87	0.74	-0.96	
2,679.0	27.30	274.70	2,525.2	72.5	-729.3	732.9	0.55	-0.53	0.32	
2,773.0	28.70	277.10	2,608.2	77.0	-773.2	777.0	1.91	1.49	2.55	
2,866.0	28.10	275.90	2,690.0	82.1	-817.1	821.2	0.89	-0.65	-1.29	
2,959.0	29.10	275.10	2,771.6	86.3	-861.4	865.7	1.15	1.08	-0.86	
3,053.0	29.30	274.80	2,853.7	90.3	-907.1	911.6	0.26	0.21	-0.32	
3,147.0	29.10	274.00	2,935.7	93.8	-952.9	957.4	0.47	-0.21	-0.85	
3,240.0	29.30	273.50	3,016.9	96.8	-998.1	1,002.8	0.34	0.22	-0.54	
3,334.0	28.50	273.20	3,099.2	99.4	-1,043.5	1,048.2	0.86	-0.85	-0.32	
3,427.0	27.80	274.90	3,181.2	102.5	-1,087.2	1,092.1	1.14	-0.75	1.83	
3,520.0	27.00	276.00	3,263.8	106.6	-1,129.8	1,134.9	1.02	-0.86	1.18	
3,613.0	26.30	277.40	3,346.9	111.4	-1,171.3	1,176.6	1.01	-0.75	1.51	
3,707.0	28.00	277.90	3,430.5	117.1	-1,213.8	1,219.4	1.82	1.81	0.53	
3,802.0	28.20	274.80	3,514.3	122.1	-1,258.2	1,264.1	1.55	0.21	-3.26	
3,896.0	27.80	273.70	3,597.3	125.4	-1,302.2	1,308.3	0.69	-0.43	-1.17	
3,990.0	27.90	275.60	3,680.4	128.9	-1,346.0	1,352.2	0.95	0.11	2.02	
4,083.0	27.90	275.20	3,762.6	133.0	-1,389.3	1,395.7	0.20	0.00	-0.43	
4,177.0	28.70	274.90	3,845.4	136.9	-1,433.7	1,440.2	0.86	0.85	-0.32	
4,270.0	29.10	273.70	3,926.8	140.3	-1,478.5	1,485.2	0.76	0.43	-1.29	
4,363.0	29.50	273.50	4,007.9	143.2	-1,524.0	1,530.7	0.44	0.43	-0.22	
4,456.0	28.30	272.10	4,089.3	145.4	-1,568.8	1,575.6	1.48	-1.29	-1.51	
4,549.0	27.80	273.60	4,171.4	147.5	-1,612.5	1,619.3	0.93	-0.54	1.61	
4,643.0	27.30	273.40	4,254.8	150.2	-1,655.9	1,662.7	0.54	-0.53	-0.21	
4,737.0	26.50	271.80	4,338.6	152.1	-1,698.4	1,705.2	1.15	-0.85	-1.70	
4,830.0	26.60	273.60	4,421.8	154.1	-1,739.9	1,746.7	0.87	0.11	1.94	
4,923.0	27.30	275.70	4,504.7	157.5	-1,781.9	1,788.8	1.27	0.75	2.26	
5,016.0	26.90	275.90	4,587.5	161.8	-1,824.1	1,831.2	0.44	-0.43	0.22	
5,110.0	25.70	276.70	4,671.7	166.4	-1,865.5	1,872.8	1.33	-1.28	0.85	
5,203.0	26.00	276.90	4,755.4	171.2	-1,905.7	1,913.4	0.34	0.32	0.22	
5,296.0	24.90	275.10	4,839.4	175.3	-1,945.5	1,953.3	1.45	-1.18	-1.94	
5,390.0	22.30	277.20	4,925.5	179.3	-1,982.9	1,991.0	2.91	-2.77	2.23	
5,483.0	22.70	275.40	5,011.5	183.2	-2,018.3	2,026.5	0.86	0.43	-1.94	
5,576.0	21.20	275.40	5,097.7	186.5	-2,052.9	2,061.3	1.61	-1.61	0.00	
5,669.0	18.30	277.10	5,185.2	189.9	-2,084.1	2,092.7	3.18	-3.12	1.83	
5,763.0	15.60	281.10	5,275.2	194.2	-2,111.1	2,120.1	3.13	-2.87	4.26	
5,856.0	13.30	277.60	5,365.2	198.0	-2,134.0	2,143.2	2.64	-2.47	-3.76	
5,950.0	11.60	274.90	5,457.0	200.2	-2,154.2	2,163.4	1.91	-1.81	-2.87	
6,043.0	9.70	274.10	5,548.4	201.6	-2,171.3	2,180.6	2.05	-2.04	-0.86	
6,136.0	7.90	274.00	5,640.3	202.6	-2,185.5	2,194.9	1.94	-1.94	-0.11	
6,230.0	6.40	277.40	5,733.6	203.7	-2,197.1	2,206.5	1.66	-1.60	3.62	
6,323.0	5.00	277.80	5,826.1	204.9	-2,206.3	2,215.8	1.51	-1.51	0.43	

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)	
6,416.0	2.90	276.30	5,918.9	205.7	-2,212.6	2,222.2	2.26	-2.26	-1.61	
6,510.0	0.60	268.40	6,012.8	206.0	-2,215.5	2,225.0	2.45	-2.45	-8.40	
6,604.0	0.70	270.60	6,106.8	206.0	-2,216.6	2,226.1	0.11	0.11	2.34	
6,697.0	0.50	260.20	6,199.8	205.9	-2,217.5	2,227.1	0.24	-0.22	-11.18	
6,697.1	0.50	260.20	6,199.9	205.9	-2,217.5	2,227.1	0.00	0.00	0.00	
TARGET BHL 2540'FNL, 100'FWL										
6,791.0	0.60	258.00	6,293.8	205.7	-2,218.4	2,227.9	0.11	0.11	-2.34	
6,885.0	0.70	290.40	6,387.8	205.8	-2,219.4	2,229.0	0.40	0.11	34.47	
6,980.0	0.70	289.40	6,482.8	206.2	-2,220.5	2,230.1	0.01	0.00	-1.05	
7,074.0	0.50	290.20	6,576.8	206.6	-2,221.4	2,231.0	0.21	-0.21	0.85	
7,167.0	0.70	293.80	6,669.8	206.9	-2,222.4	2,232.0	0.22	0.22	3.87	
7,234.1	0.55	288.41	6,736.8	207.2	-2,223.0	2,232.7	0.23	-0.22	-8.03	
TARGET CIRCLE 2540'FNL, 100'FWL										
7,260.0	0.50	285.50	6,762.8	207.3	-2,223.3	2,232.9	0.23	-0.21	-11.23	
7,354.0	0.60	300.90	6,856.8	207.6	-2,224.1	2,233.7	0.19	0.11	16.38	
7,447.0	0.50	307.10	6,949.8	208.1	-2,224.8	2,234.5	0.12	-0.11	6.67	
7,541.0	0.40	298.10	7,043.8	208.5	-2,225.4	2,235.2	0.13	-0.11	-9.57	
7,635.0	0.60	308.70	7,137.8	209.0	-2,226.1	2,235.9	0.23	0.21	11.28	
7,672.0	0.60	315.50	7,174.8	209.3	-2,226.4	2,236.2	0.19	0.00	18.38	
7,719.0	0.60	315.50	7,221.8	209.6	-2,226.7	2,236.6	0.00	0.00	0.00	
HARDLINE 100'W OF BHL										

Checked By: _____	Approved By: _____	Date: _____
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