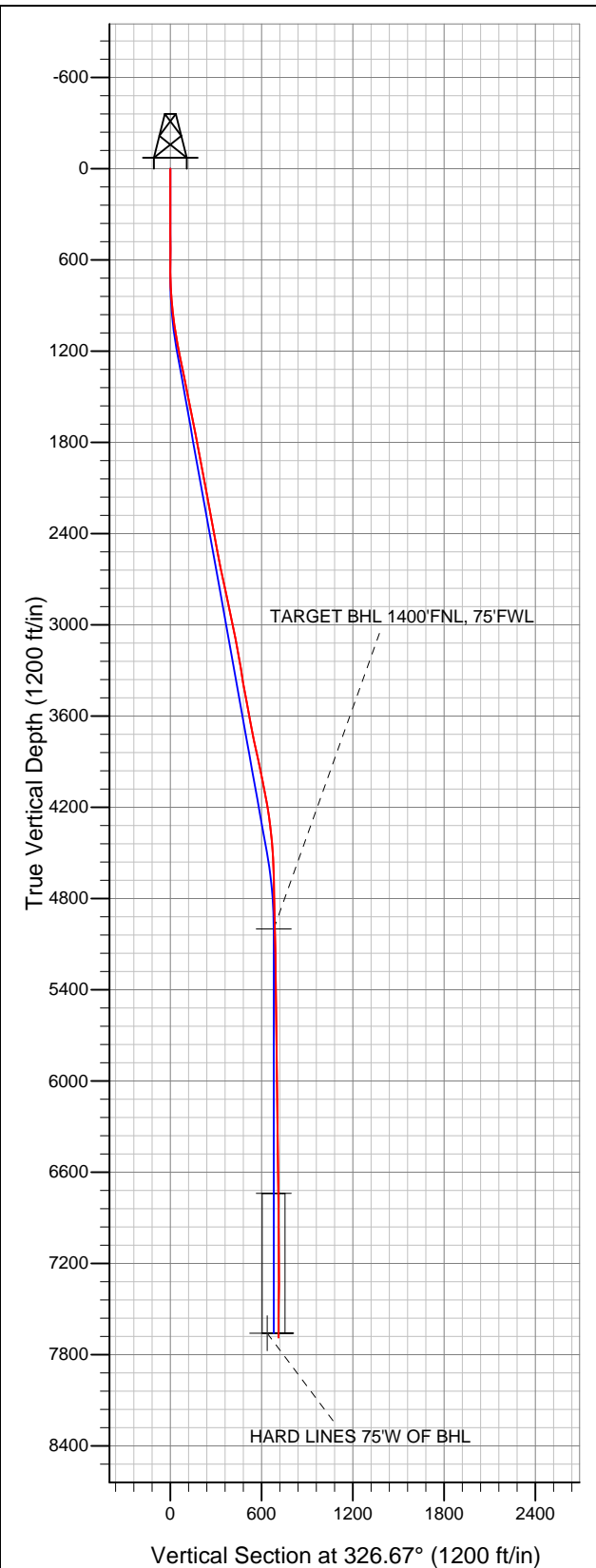




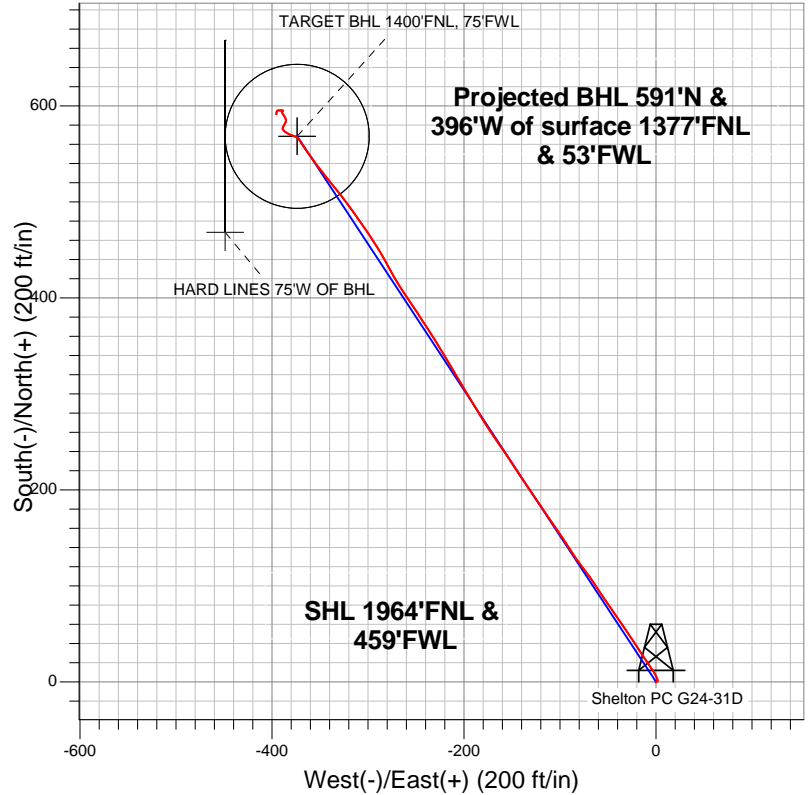
Well Name: Shelton PC G24-31D

Surface Location: Shelton PC G24-30 Pad Sec.24-T4N-R65W
North American Datum 1983 US State Plane 1983Colorado Northern Zone
Ground Elevation: 4746.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1353285.48	3245656.44	40.299820	-104.619250	
Original Well Elev		WELL @ 4759.0ft (Original Well Elev)				



NOBLE ENERGY INC WELD COUNTY CO



- LEGEND
- Wellbore #1
 - Shelton PC G24-31D, Wellbore #1, Noble Shelton PC G24-31D Plan #1 (6-1-12)R V0
 - Survey #1

Final Survey Plot

Projected Final Survey -
7750'MD & 7687'TVD @ 712'VS
0.50 deg Inc 206.80 deg AZ

Project: SEC.24-T4N-R65W
Site: Shelton PC G24-30 Pad Sec.24-T4N-R65W
Well: Shelton PC G24-31D
Plan: Wellbore #1



NOBLE ENERGY INC WELD COUNTY CO

SEC.24-T4N-R65W

Shelton PC G24-30 Pad Sec.24-T4N-R65W

Shelton PC G24-31D

Wellbore #1

Survey: Survey #1

Standard Survey Report

11 June, 2012



Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Shelton PC G24-31D
Project:	SEC.24-T4N-R65W	TVD Reference:	WELL @ 4759.0ft (Original Well Elev)
Site:	Shelton PC G24-30 Pad Sec.24-T4N-R65W	MD Reference:	WELL @ 4759.0ft (Original Well Elev)
Well:	Shelton PC G24-31D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.24-T4N-R65W		
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 G24-30 Pad Sec.24-T4N-R65W		
Site Position:		Northing:	1,353,307.35 ft
From:	Lat/Long	Easting:	3,245,656.22 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40.299880
		Longitude:	-104.619250
		Grid Convergence:	0.57 °

Well	Shelton PC G24-31D		
Well Position	+N/-S	0.0 ft	Northing: 1,353,285.48 ft
	+E/-W	0.0 ft	Easting: 3,245,656.44 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	40.299820
		Longitude:	-104.619250
		Ground Level:	4,746.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/1/2012	8.65	66.96	52,994

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 (°)	
	5,000.0	0.0	0.0	326.67	

Survey Program	Date	6/11/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
98.0	7,750.0	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	
98.0	0.40	71.40	98.0	0.1	0.3	-0.1	0.41	0.41	0.00	
176.0	0.20	68.20	176.0	0.2	0.7	-0.2	0.26	-0.26	-4.10	
304.0	0.10	27.10	304.0	0.4	1.0	-0.2	0.11	-0.08	-32.11	
431.0	0.20	69.50	431.0	0.6	1.2	-0.2	0.11	0.08	33.39	
593.0	0.20	72.30	593.0	0.8	1.8	-0.3	0.01	0.00	1.73	
732.0	1.60	344.40	732.0	2.7	1.5	1.5	1.15	1.01	-63.24	
860.0	4.70	329.50	859.8	9.0	-1.7	8.4	2.48	2.42	-11.64	
989.0	7.40	325.40	988.0	20.4	-9.1	22.0	2.12	2.09	-3.18	
1,117.0	10.10	327.00	1,114.5	36.6	-19.9	41.5	2.12	2.11	1.25	
1,245.0	11.20	325.90	1,240.3	56.3	-33.0	65.1	0.87	0.86	-0.86	
1,373.0	11.40	324.90	1,365.9	76.9	-47.2	90.2	0.22	0.16	-0.78	
1,502.0	11.60	327.20	1,492.3	98.3	-61.6	115.9	0.39	0.16	1.78	

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Shelton PC G24-31D
Project:	SEC.24-T4N-R65W	TVD Reference:	WELL @ 4759.0ft (Original Well Elev)
Site:	Shelton PC G24-30 Pad Sec.24-T4N-R65W	MD Reference:	WELL @ 4759.0ft (Original Well Elev)
Well:	Shelton PC G24-31D	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)
1,630.0	10.80	321.50	1,617.8	118.5	-76.0	140.7	1.07	-0.63	-4.45
1,758.0	11.30	328.60	1,743.5	138.5	-90.0	165.2	1.13	0.39	5.55
1,886.0	10.60	324.50	1,869.1	158.8	-103.4	189.5	0.82	-0.55	-3.20
2,015.0	10.50	325.80	1,996.0	178.2	-116.9	213.1	0.20	-0.08	1.01
2,143.0	10.60	325.40	2,121.8	197.6	-130.1	236.5	0.10	0.08	-0.31
2,271.0	10.70	327.70	2,247.6	217.3	-143.1	260.2	0.34	0.08	1.80
2,399.0	9.80	325.80	2,373.5	236.3	-155.6	283.0	0.75	-0.70	-1.48
2,528.0	10.60	325.10	2,500.5	255.2	-168.6	305.8	0.63	0.62	-0.54
2,656.0	11.90	328.60	2,626.0	276.1	-182.2	330.8	1.15	1.02	2.73
2,784.0	12.20	328.90	2,751.2	298.9	-196.0	357.5	0.24	0.23	0.23
2,912.0	12.40	328.90	2,876.3	322.3	-210.1	384.7	0.16	0.16	0.00
3,041.0	11.50	330.20	3,002.5	345.3	-223.7	411.4	0.73	-0.70	1.01
3,169.0	10.60	325.90	3,128.1	366.1	-236.6	435.9	0.95	-0.70	-3.36
3,297.0	9.40	327.50	3,254.2	384.7	-248.8	458.1	0.96	-0.94	1.25
3,425.0	9.90	324.90	3,380.4	402.5	-260.8	479.6	0.52	0.39	-2.03
3,554.0	10.60	330.30	3,507.3	421.9	-273.0	502.5	0.92	0.54	4.19
3,682.0	10.40	332.30	3,633.2	442.3	-284.2	525.7	0.32	-0.16	1.56
3,810.0	11.70	324.50	3,758.8	463.1	-297.1	550.2	1.55	1.02	-6.09
3,938.0	12.50	325.90	3,883.9	485.2	-312.4	577.0	0.67	0.63	1.09
4,067.0	11.40	321.50	4,010.1	506.7	-328.2	603.7	1.11	-0.85	-3.41
4,195.0	11.00	321.20	4,135.7	526.1	-343.7	628.4	0.32	-0.31	-0.23
4,323.0	7.70	324.20	4,262.0	542.6	-356.4	649.2	2.61	-2.58	2.34
4,451.0	6.20	325.20	4,389.0	555.2	-365.4	664.7	1.18	-1.17	0.78
4,580.0	3.30	328.90	4,517.6	564.1	-371.3	675.3	2.26	-2.25	2.87
4,708.0	2.00	284.80	4,645.5	567.9	-375.3	680.7	1.82	-1.02	-34.45
4,836.0	1.20	295.70	4,773.4	569.0	-378.7	683.5	0.67	-0.63	8.52
4,964.0	1.40	292.90	4,901.4	570.2	-381.3	685.9	0.16	0.16	-2.19
5,062.4	1.48	296.16	4,999.7	571.2	-383.6	688.0	0.11	0.08	3.31
TARGET BHL 1400'FNL, 75'FWL									
5,093.0	1.50	297.10	5,030.3	571.6	-384.3	688.7	0.11	0.08	3.09
5,221.0	1.20	319.40	5,158.3	573.4	-386.7	691.5	0.47	-0.23	17.42
5,349.0	0.70	304.70	5,286.3	574.8	-388.2	693.6	0.43	-0.39	-11.48
5,477.0	0.70	353.50	5,414.3	576.0	-388.9	695.0	0.45	0.00	38.13
5,606.0	1.10	20.80	5,543.3	578.0	-388.6	696.4	0.45	0.31	21.16
5,734.0	1.10	38.50	5,671.2	580.1	-387.4	697.5	0.26	0.00	13.83
5,862.0	1.10	25.70	5,799.2	582.2	-386.1	698.5	0.19	0.00	-10.00
5,990.0	1.10	0.40	5,927.2	584.5	-385.5	700.2	0.38	0.00	-19.77
6,119.0	1.10	341.90	6,056.2	586.9	-385.9	702.4	0.27	0.00	-14.34
6,247.0	1.00	324.70	6,184.1	589.0	-386.9	704.7	0.26	-0.08	-13.44
6,375.0	0.90	320.80	6,312.1	590.7	-388.2	706.8	0.09	-0.08	-3.05
6,503.0	0.80	333.10	6,440.1	592.3	-389.2	708.7	0.16	-0.08	9.61
6,632.0	0.50	336.80	6,569.1	593.6	-389.9	710.2	0.23	-0.23	2.87
6,760.0	0.40	54.90	6,697.1	594.3	-389.7	710.7	0.45	-0.08	61.02
6,801.9	0.49	63.96	6,739.0	594.5	-389.4	710.7	0.27	0.22	21.60
TARGET CIRCLE 1400'FNL & 75'FWL									
6,888.0	0.70	74.60	6,825.1	594.8	-388.6	710.5	0.27	0.24	12.36
7,016.0	1.10	281.30	6,953.1	595.3	-389.1	711.1	1.37	0.31	-119.77
7,145.0	1.10	266.90	7,082.1	595.4	-391.5	712.6	0.21	0.00	-11.16
7,273.0	0.60	268.10	7,210.1	595.3	-393.4	713.6	0.39	-0.39	0.94
7,401.0	0.60	227.10	7,338.0	594.9	-394.6	713.8	0.33	0.00	-32.03
7,529.0	0.80	191.10	7,466.0	593.5	-395.2	713.1	0.37	0.16	-28.13
7,658.0	0.50	186.10	7,595.0	592.1	-395.5	712.0	0.24	-0.23	-3.88
7,723.1	0.49	200.79	7,660.1	591.5	-395.6	711.6	0.20	-0.01	22.56
HARD LINES 75'W OF BHL									

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Site:	Shelton PC G24-30 Pad Sec.24-T4N-R65W	MD Reference:	WELL @ 4759.0ft (Original Well Elev)
Well:	Shelton PC G24-31D	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)	
7,750.0	0.50	206.80	7,687.0	591.3	-395.7	711.5	0.20	0.02	22.35	

Checked By: _____	Approved By: _____	Date: _____
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