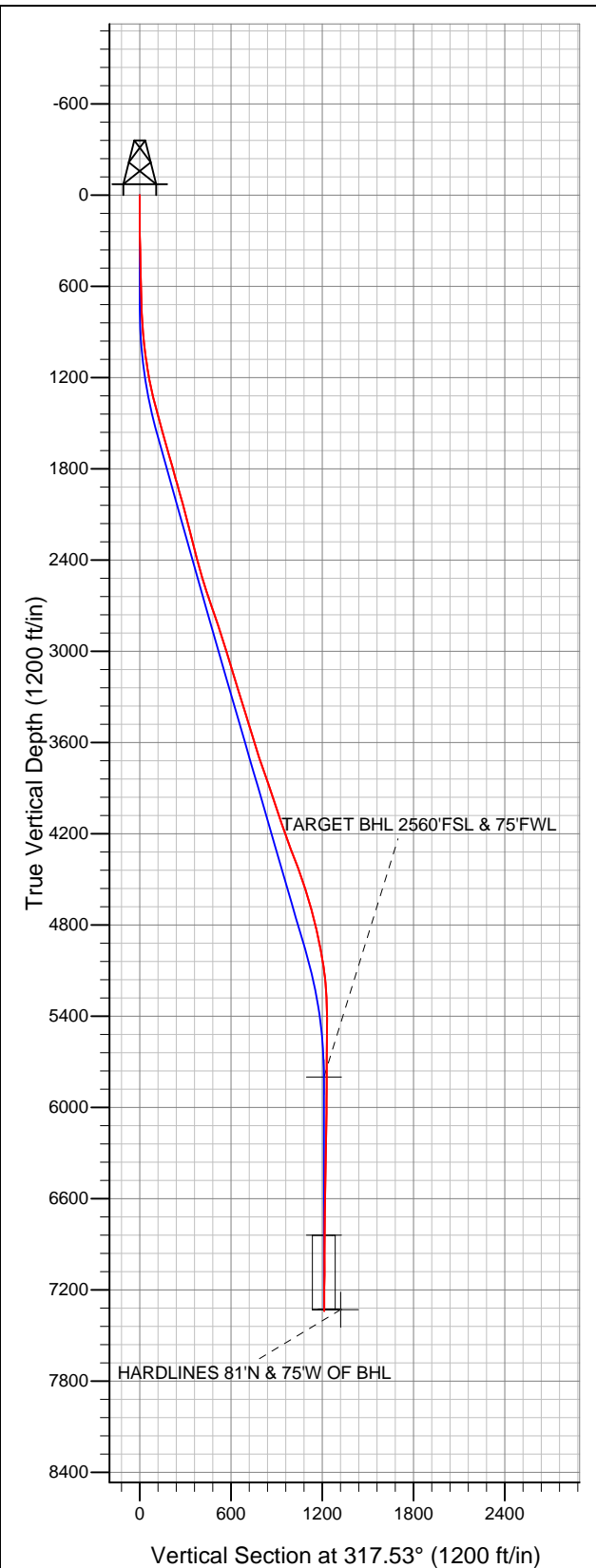


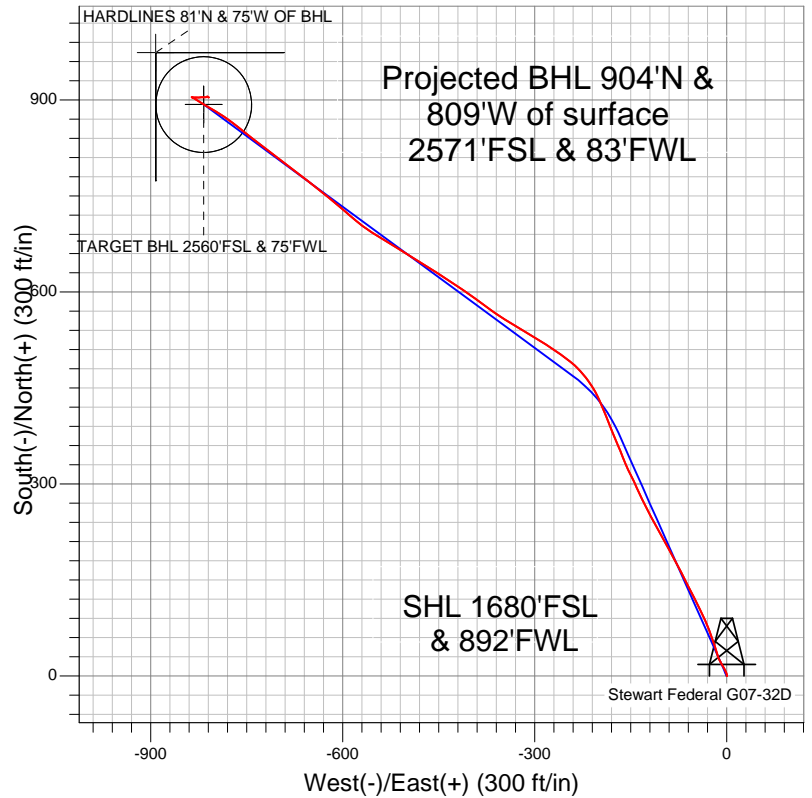
**Well Name: Stewart Federal G07-32D**

Surface Location: Stewart G07-20D Pad Sec.7-T4N-R65W  
North American Datum 1983 US State Plane 1983 Colorado Northern Zone  
Ground Elevation: 4697.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1361998.89	3219627.12	40.324410	-104.712290	
Original Well Elev WELL @ 4710.0ft (Original Well Elev)						



**NOBLE ENERGY INC WELD COUNTY CO**



**LEGEND**

- Survey #1
- × Stewart Federal G07-32D, Wellbore #1, Noble Stewart Federal G07-32D Plan #1 (9-16-11) V0
- Wellbore #1

**Final Survey Plot**

Projected Final Survey -  
7524'MD & 7338'TVD @ 1187'VS  
0.40 deg Inc 102.30 deg AZ

Project: SEC.7-T4N-R65W  
Site: Stewart G07-20D Pad Sec.7-T4N-R65W  
Well: Stewart Federal G07-32D  
Plan: Wellbore #1



# **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.7-T4N-R65W**

**Stewart G07-20D Pad Sec.7-T4N-R65W**

**Stewart Federal G07-32D**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**17 January, 2012**



<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Stewart Federal G07-32D
<b>Project:</b>	SEC.7-T4N-R65W	<b>TVD Reference:</b>	WELL @ 4710.0ft (Original Well Elev)
<b>Site:</b>	Stewart G07-20D Pad Sec.7-T4N-R65W	<b>MD Reference:</b>	WELL @ 4710.0ft (Original Well Elev)
<b>Well:</b>	Stewart Federal G07-32D	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

<b>Project</b>	SEC.7-T4N-R65W		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

<b>Site</b>	Stewart G07-20D Pad Sec.7-T4N-R65W		
<b>Site Position:</b>		<b>Northing:</b>	1,361,995.46ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,219,649.46ft
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40.324400
		<b>Longitude:</b>	-104.712210
		<b>Grid Convergence:</b>	0.51 °

<b>Well</b>	Stewart Federal G07-32D		
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b> 1,361,998.89 ft
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b> 3,219,627.12 ft
<b>Position Uncertainty</b>	0.0 ft	<b>Wellhead Elevation:</b>	ft
		<b>Latitude:</b>	40.324410
		<b>Longitude:</b>	-104.712290
		<b>Ground Level:</b>	4,697.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	12/19/2011	8.76	66.98	53,044

<b>Design</b>	Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	317.53	

<b>Survey Program</b>	<b>Date</b>	1/17/2012			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
74.0	7,524.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
74.0	0.40	149.30	74.0	-0.2	0.1	-0.3	0.54	0.54	0.00	
167.0	0.20	66.50	167.0	-0.4	0.4	-0.6	0.46	-0.22	-89.03	
259.0	1.10	357.50	259.0	0.5	0.6	0.0	1.14	0.98	-75.00	
351.0	1.50	344.70	351.0	2.6	0.2	1.7	0.53	0.43	-13.91	
443.0	1.40	336.80	442.9	4.7	-0.6	3.9	0.24	-0.11	-8.59	
535.0	1.40	334.00	534.9	6.8	-1.5	6.0	0.07	0.00	-3.04	
621.0	1.60	337.30	620.9	8.8	-2.4	8.2	0.25	0.23	3.84	
665.0	1.40	326.30	664.9	9.9	-3.0	9.3	0.79	-0.45	-25.00	
747.0	2.20	333.30	746.8	12.1	-4.2	11.8	1.01	0.98	8.54	
828.0	3.40	332.20	827.7	15.6	-6.0	15.6	1.48	1.48	-1.36	
910.0	5.30	328.40	909.5	21.0	-9.2	21.7	2.34	2.32	-4.63	
992.0	6.90	338.60	991.0	28.8	-12.9	30.0	2.35	1.95	12.44	

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Stewart Federal G07-32D
<b>Project:</b>	SEC.7-T4N-R65W	<b>TVD Reference:</b>	WELL @ 4710.0ft (Original Well Elev)
<b>Site:</b>	Stewart G07-20D Pad Sec.7-T4N-R65W	<b>MD Reference:</b>	WELL @ 4710.0ft (Original Well Elev)
<b>Well:</b>	Stewart Federal G07-32D	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)
1,074.0	8.50	345.20	1,072.3	39.2	-16.3	39.9	2.23	1.95	8.05
1,155.0	10.40	340.10	1,152.2	51.9	-20.3	52.0	2.56	2.35	-6.30
1,237.0	12.00	340.70	1,232.6	66.9	-25.6	66.7	1.96	1.95	0.73
1,319.0	14.10	336.10	1,312.5	84.1	-32.5	84.0	2.86	2.56	-5.61
1,401.0	15.20	334.90	1,391.8	103.0	-41.1	103.7	1.39	1.34	-1.46
1,482.0	15.70	331.70	1,469.9	122.2	-50.8	124.5	1.22	0.62	-3.95
1,564.0	15.90	334.00	1,548.8	142.1	-61.0	146.0	0.80	0.24	2.80
1,646.0	16.50	332.90	1,627.6	162.6	-71.2	168.0	0.82	0.73	-1.34
1,728.0	16.50	331.40	1,706.2	183.1	-82.1	190.5	0.52	0.00	-1.83
1,809.0	16.50	331.50	1,783.8	203.4	-93.1	212.9	0.04	0.00	0.12
1,891.0	16.40	329.60	1,862.5	223.6	-104.5	235.5	0.67	-0.12	-2.32
1,973.0	15.00	332.40	1,941.4	243.0	-115.3	257.1	1.94	-1.71	3.41
2,055.0	15.50	333.60	2,020.5	262.2	-125.1	277.8	0.72	0.61	1.46
2,136.0	16.70	335.00	2,098.4	282.4	-134.8	299.3	1.56	1.48	1.73
2,218.0	15.60	334.30	2,177.1	303.0	-144.6	321.1	1.36	-1.34	-0.85
2,300.0	14.90	334.20	2,256.2	322.5	-153.9	341.8	0.85	-0.85	-0.12
2,382.0	14.80	339.30	2,335.5	341.8	-162.2	361.6	1.60	-0.12	6.22
2,463.0	15.70	336.60	2,413.6	361.5	-170.2	381.6	1.42	1.11	-3.33
2,545.0	16.40	338.40	2,492.4	382.4	-178.9	402.9	1.05	0.85	2.20
2,627.0	19.20	338.00	2,570.5	405.7	-188.2	426.4	3.42	3.41	-0.49
2,709.0	19.60	336.00	2,647.9	430.8	-198.9	452.0	0.95	0.49	-2.44
2,790.0	19.80	326.60	2,724.1	454.6	-211.9	478.5	3.92	0.25	-11.60
2,872.0	18.30	317.80	2,801.7	475.8	-228.2	505.1	3.95	-1.83	-10.73
2,954.0	17.90	308.00	2,879.6	493.1	-246.8	530.4	3.74	-0.49	-11.95
3,035.0	18.10	302.70	2,956.7	507.5	-267.2	554.8	2.04	0.25	-6.54
3,117.0	18.20	303.40	3,034.6	521.5	-288.6	579.5	0.29	0.12	0.85
3,199.0	17.90	300.90	3,112.5	535.0	-310.1	604.0	1.01	-0.37	-3.05
3,281.0	16.90	300.40	3,190.8	547.5	-331.2	627.5	1.23	-1.22	-0.61
3,362.0	17.10	303.10	3,268.3	560.0	-351.4	650.3	1.01	0.25	3.33
3,444.0	18.20	306.70	3,346.4	574.2	-371.7	674.5	1.89	1.34	4.39
3,526.0	18.20	305.20	3,424.3	589.2	-392.5	699.6	0.57	0.00	-1.83
3,608.0	17.10	303.80	3,502.4	603.3	-412.9	723.9	1.44	-1.34	-1.71
3,689.0	17.00	304.50	3,579.9	616.6	-432.6	747.0	0.28	-0.12	0.86
3,771.0	18.40	301.80	3,658.0	630.3	-453.5	771.1	1.98	1.71	-3.29
3,853.0	19.90	302.00	3,735.5	644.5	-476.3	797.0	1.83	1.83	0.24
3,935.0	20.00	302.20	3,812.5	659.3	-500.0	824.0	0.15	0.12	0.24
4,016.0	19.60	301.50	3,888.7	673.8	-523.3	850.4	0.57	-0.49	-0.86
4,098.0	19.30	301.10	3,966.1	688.0	-546.7	876.6	0.40	-0.37	-0.49
4,180.0	19.00	307.50	4,043.5	703.1	-568.8	902.7	2.59	-0.37	7.80
4,262.0	18.10	310.60	4,121.3	719.5	-589.1	928.5	1.63	-1.10	3.78
4,343.0	20.60	311.00	4,197.7	737.1	-609.4	955.2	3.09	3.09	0.49
4,425.0	20.60	308.70	4,274.5	755.6	-631.6	983.8	0.99	0.00	-2.80
4,507.0	21.30	306.90	4,351.0	773.5	-654.7	1,012.7	1.16	0.85	-2.20
4,589.0	20.20	307.30	4,427.7	791.1	-677.9	1,041.2	1.35	-1.34	0.49
4,670.0	19.30	308.00	4,503.9	807.8	-699.6	1,068.2	1.15	-1.11	0.86
4,752.0	17.50	307.50	4,581.8	823.6	-720.0	1,093.7	2.20	-2.20	-0.61
4,834.0	16.10	308.30	4,660.3	838.2	-738.7	1,117.1	1.73	-1.71	0.98
4,915.0	14.80	308.90	4,738.3	851.6	-755.6	1,138.4	1.62	-1.60	0.74
4,997.0	13.30	306.00	4,817.9	863.8	-771.4	1,158.0	2.02	-1.83	-3.54
5,079.0	12.50	302.70	4,897.8	874.1	-786.5	1,175.8	1.33	-0.98	-4.02
5,161.0	11.20	303.40	4,978.0	883.3	-800.6	1,192.1	1.60	-1.59	0.85
5,242.0	9.10	296.60	5,057.8	890.5	-812.9	1,205.7	2.98	-2.59	-8.40
5,324.0	6.60	305.30	5,139.0	896.1	-822.6	1,216.4	3.37	-3.05	10.61
5,406.0	4.70	301.50	5,220.6	900.6	-829.3	1,224.2	2.36	-2.32	-4.63

<b>Company:</b>	NOBLE ENERGY INC WELD COUNTY CO	<b>Local Co-ordinate Reference:</b>	Well Stewart Federal G07-32D
<b>Project:</b>	SEC.7-T4N-R65W	<b>TVD Reference:</b>	WELL @ 4710.0ft (Original Well Elev)
<b>Site:</b>	Stewart G07-20D Pad Sec.7-T4N-R65W	<b>MD Reference:</b>	WELL @ 4710.0ft (Original Well Elev)
<b>Well:</b>	Stewart Federal G07-32D	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)
5,488.0	2.20	301.70	5,302.5	903.2	-833.5	1,229.0	3.05	-3.05	0.24
5,569.0	0.90	299.00	5,383.4	904.3	-835.3	1,231.1	1.61	-1.60	-3.33
5,651.0	0.40	153.50	5,465.4	904.3	-835.8	1,231.4	1.52	-0.61	-177.44
5,733.0	0.60	127.50	5,547.4	903.8	-835.3	1,230.7	0.36	0.24	-31.71
5,815.0	0.50	84.20	5,629.4	903.6	-834.6	1,230.1	0.51	-0.12	-52.80
5,896.0	0.30	109.20	5,710.4	903.6	-834.1	1,229.7	0.32	-0.25	30.86
5,978.0	0.80	100.00	5,792.4	903.4	-833.3	1,229.0	0.62	0.61	-11.22
5,985.8	0.78	97.65	5,800.2	903.4	-833.2	1,228.9	0.47	-0.22	-30.11
<b>TARGET BHL 2560'FSL &amp; 75'FWL</b>									
6,060.0	0.70	71.20	5,874.4	903.5	-832.3	1,228.4	0.47	-0.11	-35.65
6,142.0	0.80	82.10	5,956.4	903.7	-831.2	1,227.8	0.21	0.12	13.29
6,223.0	1.10	90.70	6,037.4	903.8	-829.9	1,227.0	0.41	0.37	10.62
6,305.0	1.10	110.40	6,119.4	903.5	-828.4	1,225.7	0.46	0.00	24.02
6,387.0	1.20	83.20	6,201.3	903.3	-826.8	1,224.5	0.67	0.12	-33.17
6,469.0	1.30	87.30	6,283.3	903.5	-825.0	1,223.4	0.16	0.12	5.00
6,550.0	1.80	83.30	6,364.3	903.6	-822.8	1,222.1	0.63	0.62	-4.94
6,632.0	1.90	83.30	6,446.3	904.0	-820.2	1,220.6	0.12	0.12	0.00
6,714.0	2.00	89.30	6,528.2	904.1	-817.4	1,218.8	0.28	0.12	7.32
6,795.0	1.50	93.70	6,609.2	904.1	-814.9	1,217.1	0.64	-0.62	5.43
6,877.0	1.10	76.30	6,691.2	904.2	-813.1	1,216.0	0.68	-0.49	-21.22
6,959.0	0.40	63.60	6,773.1	904.5	-812.1	1,215.5	0.87	-0.85	-15.49
7,025.8	0.40	48.42	6,839.9	904.8	-811.7	1,215.4	0.16	0.00	-22.73
<b>TARGET CIRCLE 2560'FSL &amp; 75'FWL</b>									
7,041.0	0.40	45.00	6,855.1	904.8	-811.6	1,215.4	0.16	0.02	-22.48
7,122.0	0.40	86.80	6,936.1	905.1	-811.1	1,215.3	0.35	0.00	51.61
7,204.0	0.60	136.10	7,018.1	904.8	-810.5	1,214.7	0.55	0.24	60.12
7,286.0	0.40	127.10	7,100.1	904.3	-810.0	1,214.0	0.26	-0.24	-10.98
7,368.0	0.60	140.60	7,182.1	903.8	-809.5	1,213.2	0.28	0.24	16.46
7,449.0	0.40	4.10	7,263.1	903.7	-809.2	1,213.0	1.15	-0.25	-168.52
7,473.0	0.50	95.60	7,287.1	903.8	-809.1	1,213.0	2.70	0.42	381.25
7,515.1	0.42	100.91	7,329.3	903.8	-808.8	1,212.7	0.22	-0.20	12.59
<b>HARDLINES 81'N &amp; 75'W OF BHL</b>									
7,524.0	0.40	102.30	7,338.1	903.7	-808.7	1,212.7	0.22	-0.19	15.72

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