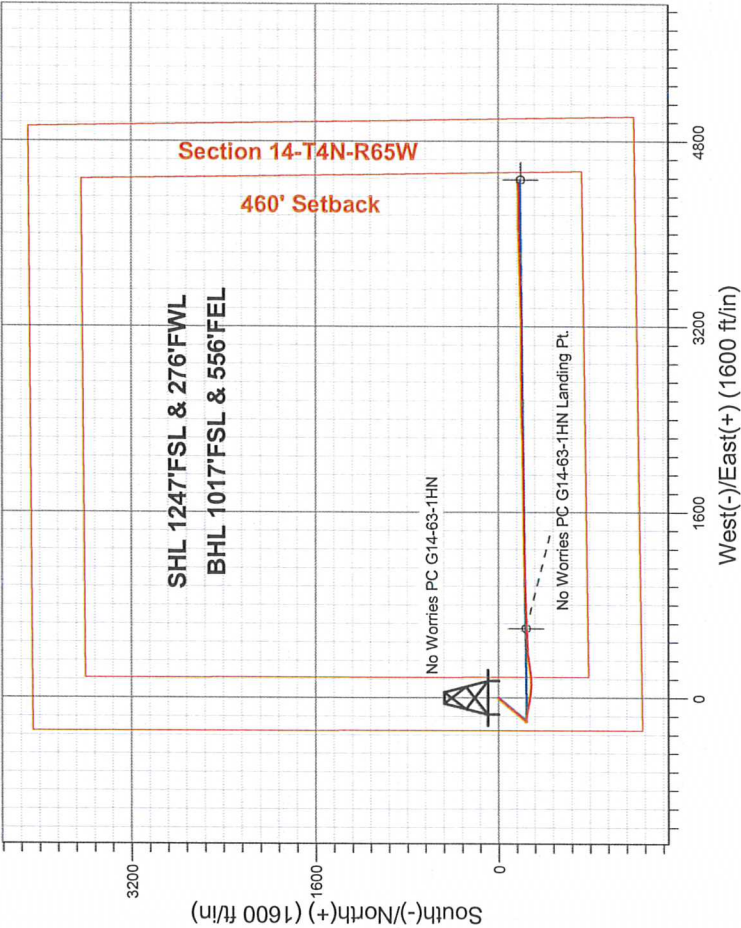


Noble Energy Inc.- Weld County, CO (Grid North)

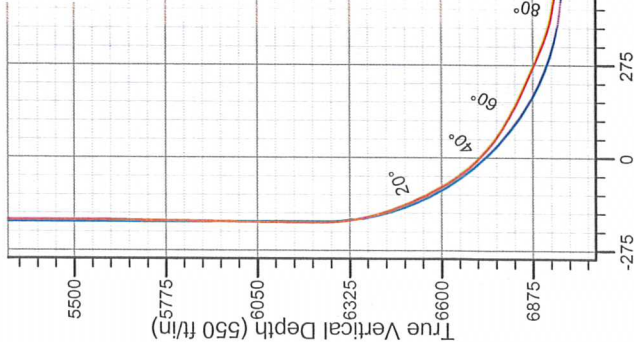
Well Name: No Worries PC G14-63-1HN					
Surface Location: No Worries PC G14-65-1HN Pad Sec.14-T4N-R65W					
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone					
Ground Elevation: 4695.0					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1356430.46	3240195.02	40.308600	-104.638720
H&P 273 RKB - 24' WELL @ 4719.0ft (H&P 273 RKB - 24')					

FINAL SURVEY

Projected Bottom Hole Location  
11310'MD 6910'TVD 173'S & 4447'E of SHL  
92.2 degree Incl @ 89.3 degree AZM



ENSIGN  
Directional

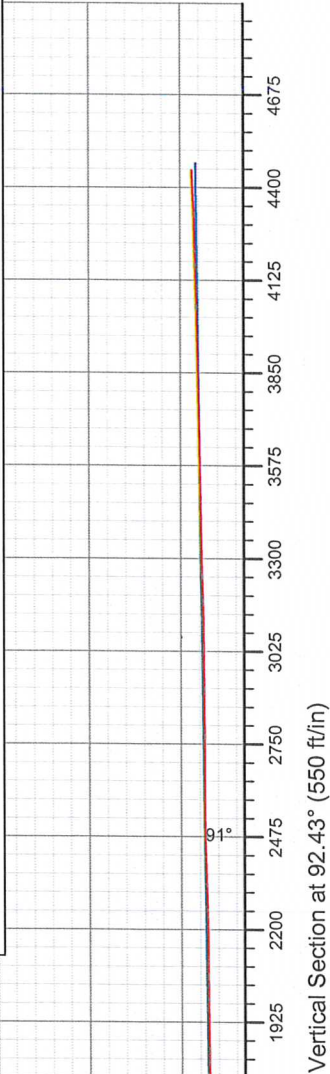


No Worries PC G14-65-1HN Pad Sec.14-T4N-R65W  
No Worries PC G14-63-1HN  
7:52, January 23 2014  
Wellbore #1

ANNOTATIONS

No annotation data is available.

LEGEND  
No Worries PC G14-63-1HN, Wellbore #1, Plan A - Rev 2 V0  
Wellbore #1





## **Directional**

### **Noble Energy Inc.- Weld County, CO (Grid North)**

**Sec.14-T4N-R65W**

**No Worries PC G14-65-1HN Pad Sec.14-T4N-R65W**

**No Worries PC G14-63-1HN**

**Wellbore #1**

**Design: Wellbore #1**

### **Standard Survey Report**

**23 January, 2014**



Company:	Noble Energy Inc.- Weld County, CO (Grid North)	Local Co-ordinate Reference:	Well No Worries PC G14-63-1HN
Project:	Sec.14-T4N-R65W	TVD Reference:	WELL @ 4719.0ft (H&P 273 RKB - 24')
Site:	No Worries PC G14-65-1HN Pad Sec.14-T4N-R65W	MD Reference:	WELL @ 4719.0ft (H&P 273 RKB - 24')
Well:	No Worries PC G14-63-1HN	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	Sec.14-T4N-R65W, Weld County, CO		
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	No Worries PC G14-65-1HN Pad Sec.14-T4N-R65W				
Site Position:		Northing:	1,356,474.18ft	Latitude:	40.308720
From:	Lat/Long	Easting:	3,240,194.60ft	Longitude:	-104.638720
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.56 °

Well	No Worries PC G14-63-1HN					
Well Position	+N/-S	0.0 ft	Northing:	1,356,430.46 ft	Latitude:	40.308600
	+E/-W	0.0 ft	Easting:	3,240,195.02 ft	Longitude:	-104.638720
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,695.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/26/2013	8.45	66.91	52,831

Design	Wellbore #1				
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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	92.43	

Survey Program		Date	1/23/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
247.0	591.0	Surface (Wellbore #1)	Flexi-Shot	VES Flexi-Shot Tool	
815.0	7,275.0	Intermediate (Wellbore #1)	MWD	MWD - Standard	
7,384.0	11,310.0	Lateral (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
247.0	0.50	11.81	247.0	1.1	0.2	0.2	0.20	0.20	0.00
591.0	0.10	76.11	591.0	2.6	0.8	0.7	0.14	-0.12	18.69
815.0	0.40	200.70	815.0	1.9	0.7	0.7	0.21	0.13	55.62
1,000.0	0.40	213.40	1,000.0	0.8	0.1	0.1	0.05	0.00	6.86
1,186.0	0.60	210.40	1,186.0	-0.6	-0.7	-0.7	0.11	0.11	-1.61
1,372.0	0.40	233.80	1,372.0	-1.8	-1.7	-1.6	0.15	-0.11	12.58
1,558.0	0.40	337.10	1,558.0	-1.6	-2.5	-2.4	0.34	0.00	55.54
1,744.0	0.50	43.90	1,744.0	-0.4	-2.2	-2.2	0.27	0.05	35.91



Company:	Noble Energy Inc.- Weld County, CO (Grid North)	Local Co-ordinate Reference:	Well No Worries PC G14-63-1HN
Project:	Sec.14-T4N-R65W	TVD Reference:	WELL @ 4719.0ft (H&P 273 RKB - 24')
Site:	No Worries PC G14-65-1HN Pad Sec.14-T4N-R65W	MD Reference:	WELL @ 4719.0ft (H&P 273 RKB - 24')
Well:	No Worries PC G14-63-1HN	North Reference:	Grid
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)
1,838.0	1.10	222.20	1,838.0	-0.8	-2.5	-2.5	1.70	0.64	189.68
1,933.0	2.80	222.20	1,932.9	-3.2	-4.7	-4.5	1.79	1.79	0.00
2,028.0	4.20	217.20	2,027.7	-7.7	-8.3	-8.0	1.51	1.47	-5.26
2,123.0	5.50	217.10	2,122.4	-14.1	-13.2	-12.6	1.37	1.37	-0.11
2,218.0	6.30	218.10	2,216.9	-21.8	-19.2	-18.2	0.85	0.84	1.05
2,312.0	6.90	222.30	2,310.3	-30.1	-26.1	-24.8	0.82	0.64	4.47
2,407.0	8.10	224.60	2,404.4	-39.1	-34.7	-33.0	1.30	1.26	2.42
2,502.0	9.30	223.70	2,498.3	-49.4	-44.7	-42.5	1.27	1.26	-0.95
2,597.0	9.80	218.10	2,592.0	-61.3	-55.0	-52.3	1.11	0.53	-5.89
2,692.0	9.80	216.50	2,685.6	-74.1	-64.8	-61.6	0.29	0.00	-1.68
2,786.0	9.70	215.80	2,778.3	-87.0	-74.2	-70.4	0.16	-0.11	-0.74
2,881.0	9.50	221.60	2,872.0	-99.4	-84.0	-79.8	1.04	-0.21	6.11
2,976.0	8.90	219.70	2,965.7	-110.9	-93.9	-89.2	0.71	-0.63	-2.00
3,071.0	8.80	221.60	3,059.6	-122.0	-103.5	-98.2	0.33	-0.11	2.00
3,166.0	7.90	217.60	3,153.6	-132.6	-112.3	-106.6	1.13	-0.95	-4.21
3,260.0	7.70	216.70	3,246.7	-142.7	-120.0	-113.8	0.25	-0.21	-0.96
3,355.0	7.90	221.10	3,340.8	-152.8	-128.1	-121.5	0.66	0.21	4.63
3,450.0	7.70	215.10	3,435.0	-162.9	-136.0	-129.0	0.88	-0.21	-6.32
3,545.0	7.10	218.30	3,529.2	-172.7	-143.3	-135.9	0.77	-0.63	3.37
3,639.0	7.20	218.10	3,622.4	-181.9	-150.6	-142.7	0.11	0.11	-0.21
3,734.0	8.50	225.00	3,716.6	-191.5	-159.2	-150.9	1.69	1.37	7.26
3,829.0	9.00	222.50	3,810.5	-202.0	-169.2	-160.5	0.66	0.53	-2.63
3,923.0	9.10	221.50	3,903.3	-213.0	-179.1	-169.9	0.20	0.11	-1.06
4,019.0	7.80	221.50	3,998.2	-223.5	-188.4	-178.8	1.35	-1.35	0.00
4,114.0	6.70	221.30	4,092.5	-232.5	-196.4	-186.3	1.16	-1.16	-0.21
4,208.0	4.90	217.90	4,186.0	-239.8	-202.4	-192.1	1.95	-1.91	-3.62
4,303.0	3.10	204.20	4,280.8	-245.4	-206.0	-195.4	2.13	-1.89	-14.42
4,398.0	1.10	201.60	4,375.7	-248.6	-207.4	-196.7	2.11	-2.11	-2.74
4,493.0	0.60	68.90	4,470.7	-249.2	-207.2	-196.5	1.65	-0.53	-139.68
4,588.0	1.20	59.60	4,565.7	-248.5	-205.9	-195.2	0.65	0.63	-9.79
4,682.0	1.80	53.80	4,659.6	-247.2	-203.9	-193.2	0.66	0.64	-6.17
4,777.0	1.10	87.70	4,754.6	-246.2	-201.8	-191.2	1.14	-0.74	35.68
4,872.0	2.90	85.40	4,849.6	-246.0	-198.5	-187.9	1.90	1.89	-2.42
4,967.0	0.40	124.10	4,944.5	-246.0	-195.8	-185.2	2.74	-2.63	40.74
5,062.0	0.20	137.40	5,039.5	-246.3	-195.4	-184.8	0.22	-0.21	14.00
5,157.0	0.20	231.80	5,134.5	-246.5	-195.4	-184.8	0.31	0.00	99.37
5,252.0	0.20	228.70	5,229.5	-246.8	-195.7	-185.0	0.01	0.00	-3.26
5,347.0	0.30	45.90	5,324.5	-246.7	-195.6	-185.0	0.53	0.11	186.53
5,442.0	0.50	349.60	5,419.5	-246.1	-195.5	-184.9	0.44	0.21	-59.26
5,536.0	0.80	7.90	5,513.5	-245.1	-195.5	-184.9	0.38	0.32	19.47
5,631.0	1.20	323.80	5,608.5	-243.6	-196.0	-185.5	0.88	0.42	-46.42
5,726.0	1.30	304.30	5,703.5	-242.2	-197.5	-187.0	0.46	0.11	-20.53
5,821.0	0.40	247.00	5,798.4	-241.7	-198.7	-188.3	1.19	-0.95	-60.32
5,916.0	1.00	314.80	5,893.4	-241.3	-199.6	-189.2	0.97	0.63	71.37
6,011.0	0.80	318.00	5,988.4	-240.2	-200.6	-190.2	0.22	-0.21	3.37
6,105.0	1.10	297.20	6,082.4	-239.3	-201.8	-191.5	0.48	0.32	-22.13
6,198.0	1.10	288.10	6,175.4	-238.6	-203.5	-193.2	0.19	0.00	-9.78
6,293.0	2.80	122.10	6,270.4	-239.5	-202.4	-192.1	4.08	1.79	-174.74
6,388.0	12.30	105.10	6,364.4	-243.4	-190.6	-180.1	10.16	10.00	-17.89
6,483.0	20.00	93.70	6,455.7	-247.1	-164.6	-154.0	8.73	8.11	-12.00
6,578.0	25.70	100.50	6,543.2	-251.9	-128.1	-117.3	6.60	6.00	7.16
6,673.0	32.00	101.40	6,626.3	-260.7	-83.1	-72.0	6.65	6.63	0.95



Company:	Noble Energy Inc.- Weld County, CO (Grid North)	Local Co-ordinate Reference:	Well No Worries PC G14-63-1HN
Project:	Sec.14-T4N-R65W	TVD Reference:	WELL @ 4719.0ft (H&P 273 RKB - 24')
Site:	No Worries PC G14-65-1HN Pad Sec.14-T4N-R65W	MD Reference:	WELL @ 4719.0ft (H&P 273 RKB - 24')
Well:	No Worries PC G14-63-1HN	North Reference:	Grid
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)
6,768.0	43.00	99.30	6,701.6	-270.9	-26.3	-14.8	11.66	11.58	-2.21
6,862.0	54.40	98.80	6,763.5	-282.0	43.3	55.2	12.13	12.13	-0.53
6,957.0	62.20	89.60	6,813.5	-287.6	123.8	135.8	11.62	8.21	-9.68
7,052.0	66.70	81.70	6,854.5	-281.0	209.1	220.8	8.87	4.74	-8.32
7,147.0	66.70	81.00	6,892.1	-267.9	295.4	306.4	0.68	0.00	-0.74
7,242.0	74.60	84.70	6,923.6	-256.8	384.2	394.8	9.09	8.32	3.89
7,275.0	79.00	87.90	6,931.1	-254.7	416.3	426.7	16.34	13.33	9.70
7,384.0	81.30	87.20	6,949.7	-250.1	523.6	533.7	2.20	2.11	-0.64
7,461.3	83.33	87.28	6,960.1	-246.5	600.1	609.9	2.63	2.63	0.11
No Worries PC G14-63-1HN Landing Pt.									
7,479.0	83.80	87.30	6,962.0	-245.6	617.6	627.5	2.63	2.63	0.10
7,574.0	87.50	87.50	6,969.3	-241.3	712.3	721.8	3.90	3.89	0.21
7,669.0	91.10	88.00	6,970.4	-237.6	807.2	816.5	3.83	3.79	0.53
7,763.0	91.00	88.40	6,968.7	-234.6	901.1	910.2	0.44	-0.11	0.43
7,858.0	90.90	88.70	6,967.1	-232.2	996.1	1,005.0	0.33	-0.11	0.32
7,953.0	90.90	88.70	6,965.6	-230.1	1,091.0	1,099.8	0.00	0.00	0.00
8,048.0	90.80	88.70	6,964.2	-227.9	1,186.0	1,194.6	0.11	-0.11	0.00
8,143.0	90.70	88.60	6,963.0	-225.7	1,280.9	1,289.4	0.15	-0.11	-0.11
8,237.0	90.70	88.90	6,961.8	-223.6	1,374.9	1,383.2	0.32	0.00	0.32
8,332.0	90.70	89.10	6,960.7	-222.0	1,469.9	1,478.0	0.21	0.00	0.21
8,427.0	90.60	89.30	6,959.6	-220.7	1,564.9	1,572.8	0.24	-0.11	0.21
8,522.0	90.60	89.30	6,958.6	-219.5	1,659.9	1,667.7	0.00	0.00	0.00
8,617.0	90.50	88.90	6,957.7	-218.0	1,754.9	1,762.5	0.43	-0.11	-0.42
8,712.0	90.40	89.30	6,956.9	-216.5	1,849.8	1,857.3	0.43	-0.11	0.42
8,806.0	90.50	89.50	6,956.2	-215.5	1,943.8	1,951.2	0.24	0.11	0.21
8,901.0	90.40	89.50	6,955.4	-214.7	2,038.8	2,046.1	0.11	-0.11	0.00
8,996.0	90.10	89.30	6,955.0	-213.7	2,133.8	2,141.0	0.38	-0.32	-0.21
9,091.0	91.60	88.20	6,953.6	-211.6	2,228.8	2,235.7	1.96	1.58	-1.16
9,186.0	91.70	88.40	6,950.9	-208.8	2,323.7	2,330.5	0.24	0.11	0.21
9,281.0	92.20	88.00	6,947.7	-205.8	2,418.6	2,425.1	0.67	0.53	-0.42
9,375.0	90.60	89.50	6,945.4	-203.8	2,512.5	2,518.9	2.33	-1.70	1.60
9,470.0	90.40	89.10	6,944.5	-202.6	2,607.5	2,613.8	0.47	-0.21	-0.42
9,565.0	90.00	89.60	6,944.2	-201.5	2,702.5	2,708.6	0.67	-0.42	0.53
9,660.0	89.90	90.20	6,944.3	-201.4	2,797.5	2,803.5	0.64	-0.11	0.63
9,755.0	90.70	89.50	6,943.8	-201.1	2,892.5	2,898.4	1.12	0.84	-0.74
9,850.0	90.10	89.30	6,943.1	-200.1	2,987.5	2,993.3	0.67	-0.63	-0.21
9,945.0	90.80	89.30	6,942.4	-199.0	3,082.5	3,088.2	0.74	0.74	0.00
10,039.0	92.40	89.30	6,939.7	-197.8	3,176.5	3,182.0	1.70	1.70	0.00
10,134.0	91.40	89.50	6,936.6	-196.8	3,271.4	3,276.8	1.07	-1.05	0.21
10,229.0	90.80	89.10	6,934.8	-195.7	3,366.4	3,371.6	0.76	-0.63	-0.42
10,324.0	90.80	88.60	6,933.4	-193.8	3,461.3	3,466.4	0.53	0.00	-0.53
10,419.0	90.90	88.70	6,932.0	-191.5	3,556.3	3,561.2	0.15	0.11	0.11
10,514.0	90.90	88.40	6,930.5	-189.1	3,651.3	3,656.0	0.32	0.00	-0.32
10,608.0	91.30	88.70	6,928.7	-186.7	3,745.2	3,749.8	0.53	0.43	0.32
10,703.0	91.40	87.90	6,926.5	-183.9	3,840.1	3,844.5	0.85	0.11	-0.84
10,798.0	91.00	86.60	6,924.5	-179.4	3,935.0	3,939.1	1.43	-0.42	-1.37
10,893.0	91.80	89.50	6,922.2	-176.1	4,029.9	4,033.8	3.17	0.84	3.05
10,988.0	91.60	89.80	6,919.4	-175.6	4,124.9	4,128.6	0.38	-0.21	0.32
11,082.0	91.40	89.50	6,916.9	-175.0	4,218.8	4,222.5	0.38	-0.21	-0.32
11,177.0	91.60	89.50	6,914.4	-174.2	4,313.8	4,317.3	0.21	0.21	0.00
11,240.0	92.20	89.30	6,912.3	-173.5	4,376.8	4,380.2	1.00	0.95	-0.32
11,310.0	92.20	89.30	6,909.7	-172.6	4,446.7	4,450.0	0.00	0.00	0.00

Company:	Noble Energy Inc.- Weld County, CO (Grid North)	Local Co-ordinate Reference:	Well No Worries PC G14-63-1HN
Project:	Sec.14-T4N-R65W	TVD Reference:	WELL @ 4719.0ft (H&P 273 RKB - 24')
Site:	No Worries PC G14-65-1HN Pad Sec.14-T4N-R65W	MD Reference:	WELL @ 4719.0ft (H&P 273 RKB - 24')
Well:	No Worries PC G14-63-1HN	North Reference:	Grid
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)
No Worries PC G14-63-1HN BHL 1000'FSL & 535'FEL									

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