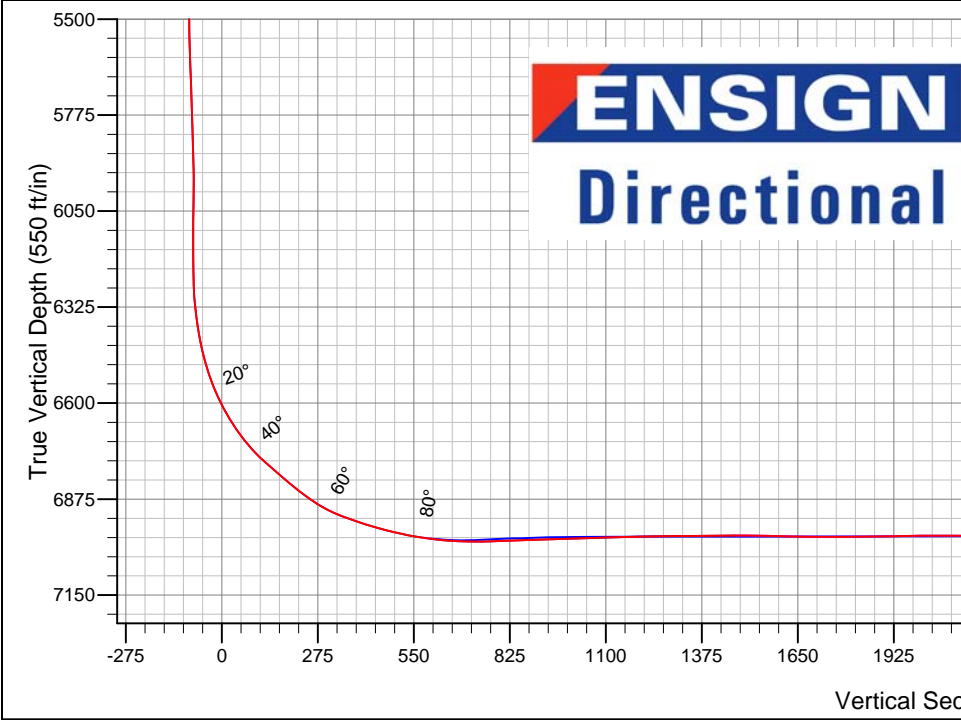
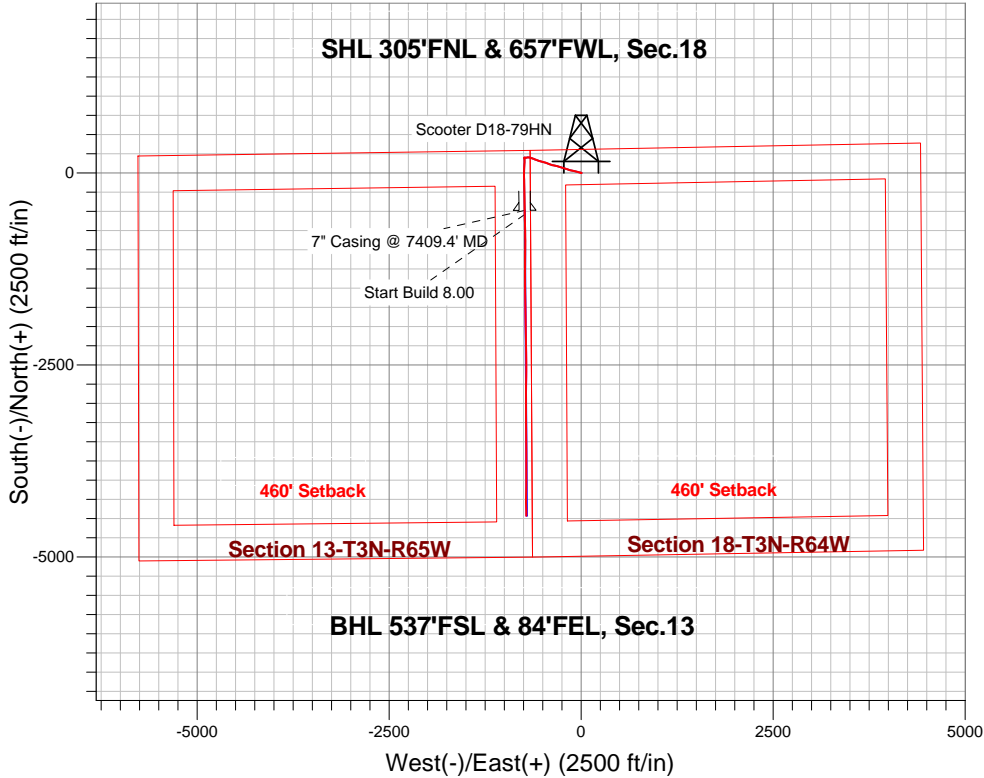


Noble Energy Inc.- Weld County, CO (Grid North)

Well Name: **Scooter D18-79HN**
Surface Location: Scooter D18-79HN Pad Sec.18-T3N-R64W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 4811.0
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1328510.18 3251210.41 40.231660 -104.600240
Precision 892 RKB - 16' WELL @ 4827.0ft (Precision 892 RKB - 16')

FINAL SURVEY

Projected Bottom Hole Location
11410' MD 6974' TVD 4464' S & 715' W of SHL
92.0 degree Incl @ 178.9 degree AZM



Scooter D18-79HN Pad Sec.18-T3N-R64W Scooter D18-79HN Wellbore #1 8:38, December 30 2013	ANNOTATIONS
	No annotation data is available.
LEGEND	
☐ Scooter D18-79HN, Wellbore #1, Plan A - Rev 2 V0	
— Scooter D18-79HN, Wellbore #1, Surface	
— Scooter D18-79HN, Wellbore #1, Intermediate	
— Scooter D18-79HN, Wellbore #1, Lateral	
☐ Wellbore #1	



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

Sec.18-T3N-R64W

Scooter D18-79HN Pad Sec.18-T3N-R64W

Scooter D18-79HN

Wellbore #1

Design: Wellbore #1

Standard Survey Report

30 December, 2013

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
285.0	0.30	245.30	285.0	-0.3	-0.7	0.4	0.11	0.11	0.00
600.0	0.80	86.30	600.0	-0.5	0.8	0.4	0.34	0.16	-50.48
795.0	0.60	125.50	795.0	-1.0	3.0	0.5	0.26	-0.10	20.10
884.0	0.40	83.10	884.0	-1.3	3.6	0.7	0.46	-0.22	-47.64
973.0	0.30	63.80	973.0	-1.1	4.2	0.4	0.17	-0.11	-21.69
1,063.0	0.40	81.20	1,063.0	-1.0	4.7	0.2	0.16	0.11	19.33
1,142.0	0.20	74.30	1,142.0	-0.9	5.1	0.1	0.26	-0.25	-8.73
1,236.0	0.30	51.60	1,236.0	-0.7	5.4	-0.2	0.15	0.11	-24.15
1,330.0	0.40	54.30	1,330.0	-0.3	5.9	-0.6	0.11	0.11	2.87

Company:	Noble Energy Inc.- Weld County, CO (Grid North)	Local Co-ordinate Reference:	Well Scooter D18-79HN
Project:	Sec.18-T3N-R64W	TVD Reference:	WELL @ 4827.0ft (Precision 892 RKB - 16')
Site:	Scooter D18-79HN Pad Sec.18-T3N-R64W	MD Reference:	WELL @ 4827.0ft (Precision 892 RKB - 16')
Well:	Scooter D18-79HN	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)
1,425.0	2.10	290.00	1,424.9	0.4	4.5	-1.2	2.47	1.79	-130.84
1,518.0	3.50	289.50	1,517.8	2.0	0.3	-2.0	1.51	1.51	-0.54
1,612.0	5.70	273.80	1,611.5	3.2	-7.1	-2.1	2.68	2.34	-16.70
1,706.0	6.90	277.90	1,705.0	4.3	-17.4	-1.6	1.36	1.28	4.36
1,800.0	6.40	291.40	1,798.3	7.0	-27.8	-2.6	1.74	-0.53	14.36
1,894.0	6.80	288.20	1,891.7	10.7	-38.0	-4.6	0.58	0.43	-3.40
1,989.0	7.80	283.10	1,985.9	13.9	-49.6	-6.0	1.25	1.05	-5.37
2,083.0	8.40	280.30	2,079.0	16.6	-62.6	-6.6	0.76	0.64	-2.98
2,177.0	9.00	284.70	2,171.9	19.7	-76.5	-7.5	0.95	0.64	4.68
2,272.0	10.60	285.20	2,265.5	23.8	-92.1	-9.2	1.69	1.68	0.53
2,366.0	11.00	281.40	2,357.9	27.9	-109.2	-10.5	0.87	0.43	-4.04
2,459.0	10.40	281.40	2,449.3	31.3	-126.1	-11.2	0.65	-0.65	0.00
2,566.0	10.10	285.10	2,554.5	35.6	-144.7	-12.6	0.68	-0.28	3.46
2,655.0	11.50	287.90	2,642.0	40.4	-160.6	-14.8	1.68	1.57	3.15
2,745.0	12.70	288.80	2,730.0	46.3	-178.5	-17.9	1.35	1.33	1.00
2,835.0	12.30	287.90	2,817.8	52.5	-197.0	-21.1	0.49	-0.44	-1.00
2,924.0	12.00	287.20	2,904.8	58.1	-214.9	-23.9	0.38	-0.34	-0.79
3,014.0	11.70	286.80	2,992.9	63.5	-232.6	-26.4	0.35	-0.33	-0.44
3,104.0	10.50	285.90	3,081.2	68.4	-249.2	-28.7	1.35	-1.33	-1.00
3,193.0	11.60	289.30	3,168.6	73.6	-265.4	-31.3	1.44	1.24	3.82
3,283.0	10.60	286.10	3,256.9	78.9	-281.9	-33.9	1.30	-1.11	-3.56
3,373.0	10.70	282.80	3,345.4	83.0	-298.0	-35.5	0.69	0.11	-3.67
3,462.0	10.10	286.80	3,432.9	87.1	-313.6	-37.1	1.05	-0.67	4.49
3,552.0	11.70	284.00	3,521.3	91.6	-330.0	-39.0	1.87	1.78	-3.11
3,641.0	11.20	279.30	3,608.5	95.2	-347.2	-39.8	1.19	-0.56	-5.28
3,731.0	11.40	284.40	3,696.8	98.8	-364.5	-40.7	1.13	0.22	5.67
3,820.0	10.90	283.00	3,784.1	102.9	-381.2	-42.1	0.64	-0.56	-1.57
3,909.0	11.40	292.80	3,871.4	108.2	-397.5	-44.8	2.20	0.56	11.01
3,999.0	12.00	293.20	3,959.5	115.3	-414.3	-49.2	0.67	0.67	0.44
4,089.0	11.90	291.40	4,047.6	122.4	-431.6	-53.5	0.43	-0.11	-2.00
4,178.0	11.30	288.10	4,134.8	128.5	-448.4	-56.9	1.00	-0.67	-3.71
4,268.0	10.50	282.40	4,223.1	133.0	-464.8	-58.8	1.49	-0.89	-6.33
4,358.0	11.70	288.60	4,311.5	137.6	-481.4	-60.8	1.88	1.33	6.89
4,447.0	10.60	285.40	4,398.8	142.7	-497.9	-63.2	1.42	-1.24	-3.60
4,537.0	11.20	283.70	4,487.2	146.9	-514.4	-64.8	0.76	0.67	-1.89
4,626.0	11.00	287.20	4,574.5	151.5	-530.9	-66.8	0.79	-0.22	3.93
4,716.0	9.80	286.60	4,663.0	156.2	-546.4	-69.0	1.34	-1.33	-0.67
4,806.0	9.80	287.00	4,751.7	160.7	-561.1	-71.1	0.08	0.00	0.44
4,895.0	10.50	292.10	4,839.3	165.9	-575.8	-74.0	1.28	0.79	5.73
4,984.0	11.30	291.90	4,926.7	172.2	-591.4	-77.8	0.90	0.90	-0.22
5,074.0	10.90	289.10	5,015.0	178.3	-607.7	-81.2	0.75	-0.44	-3.11
5,163.0	12.00	292.40	5,102.2	184.6	-624.2	-84.9	1.44	1.24	3.71
5,253.0	10.60	289.60	5,190.5	190.9	-640.6	-88.6	1.67	-1.56	-3.11
5,343.0	9.20	287.90	5,279.2	195.9	-655.3	-91.2	1.59	-1.56	-1.89
5,432.0	7.30	283.80	5,367.2	199.4	-667.5	-92.8	2.23	-2.13	-4.61
5,522.0	7.50	280.80	5,456.5	201.9	-678.8	-93.5	0.48	0.22	-3.33
5,612.0	6.20	268.20	5,545.8	202.9	-689.5	-92.7	2.20	-1.44	-14.00
5,701.0	6.60	261.20	5,634.3	201.9	-699.3	-90.3	0.98	0.45	-7.87
5,791.0	5.50	256.40	5,723.8	200.1	-708.6	-87.0	1.34	-1.22	-5.33
5,880.0	5.00	257.50	5,812.4	198.3	-716.6	-84.0	0.57	-0.56	1.24
5,970.0	5.20	261.30	5,902.1	196.8	-724.4	-81.3	0.44	0.22	4.22
6,059.0	4.00	291.40	5,990.8	197.3	-731.3	-80.7	2.98	-1.35	33.82
6,149.0	2.50	298.30	6,080.6	199.4	-736.0	-82.1	1.72	-1.67	7.67
6,239.0	2.00	252.40	6,170.6	199.9	-739.2	-82.0	2.02	-0.56	-51.00

Company:	Noble Energy Inc.- Weld County, CO (Grid North)	Local Co-ordinate Reference:	Well Scooter D18-79HN
Project:	Sec.18-T3N-R64W	TVD Reference:	WELL @ 4827.0ft (Precision 892 RKB - 16')
Site:	Scooter D18-79HN Pad Sec.18-T3N-R64W	MD Reference:	WELL @ 4827.0ft (Precision 892 RKB - 16')
Well:	Scooter D18-79HN	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)
6,283.0	1.80	253.40	6,214.5	199.4	-740.6	-81.4	0.46	-0.45	2.27
6,328.0	1.30	210.70	6,259.5	198.8	-741.5	-80.6	2.71	-1.11	-94.89
6,373.0	5.10	169.80	6,304.5	196.4	-741.4	-78.2	9.34	8.44	-90.89
6,418.0	8.30	166.90	6,349.1	191.3	-740.3	-73.3	7.15	7.11	-6.44
6,463.0	9.20	169.60	6,393.6	184.6	-738.9	-66.9	2.20	2.00	6.00
6,508.0	13.00	174.30	6,437.8	176.0	-737.8	-58.6	8.67	8.44	10.44
6,553.0	15.60	179.10	6,481.4	164.9	-737.2	-47.8	6.35	5.78	10.67
6,598.0	18.90	182.90	6,524.3	151.6	-737.5	-34.6	7.75	7.33	8.44
6,642.0	23.60	182.20	6,565.3	135.6	-738.2	-18.7	10.70	10.68	-1.59
6,687.0	27.50	182.20	6,605.9	116.2	-738.9	0.5	8.67	8.67	0.00
6,732.0	31.10	182.80	6,645.2	94.2	-739.9	22.4	8.03	8.00	1.33
6,777.0	35.60	182.90	6,682.8	69.5	-741.1	47.0	10.00	10.00	0.22
6,822.0	40.00	182.80	6,718.3	42.0	-742.5	74.4	9.78	9.78	-0.22
6,866.0	45.50	182.10	6,750.6	12.2	-743.7	104.1	12.55	12.50	-1.59
6,911.0	49.50	180.80	6,781.0	-21.0	-744.6	137.0	9.14	8.89	-2.89
6,956.0	51.00	178.00	6,809.8	-55.6	-744.2	171.1	5.83	3.33	-6.22
7,001.0	50.30	178.70	6,838.3	-90.4	-743.2	205.3	1.97	-1.56	1.56
7,046.0	53.40	179.10	6,866.1	-125.7	-742.5	240.1	6.92	6.89	0.89
7,090.0	58.90	179.80	6,890.6	-162.3	-742.2	276.1	12.57	12.50	1.59
7,135.0	65.20	178.50	6,911.7	-202.0	-741.6	315.3	14.23	14.00	-2.89
7,180.0	70.50	178.40	6,928.6	-243.6	-740.4	356.2	11.78	11.78	-0.22
7,225.0	72.20	178.40	6,943.0	-286.3	-739.3	398.2	3.78	3.78	0.00
Mildenerger-Moore H13-1 (Exist.)									
7,242.5	72.90	178.52	6,948.3	-302.9	-738.8	414.5	4.05	4.00	0.67
Mick D18-03 (Exist.)									
7,243.2	72.93	178.52	6,948.5	-303.6	-738.8	415.3	4.05	4.00	0.67
Shianne D18-29D (Exist.)									
7,270.0	74.00	178.70	6,956.1	-329.3	-738.2	440.5	4.05	4.00	0.66
7,315.0	77.10	178.90	6,967.3	-372.9	-737.3	483.4	6.90	6.89	0.44
7,359.0	77.80	178.50	6,976.9	-415.8	-736.3	525.6	1.82	1.59	-0.91
7,383.0	80.40	179.40	6,981.4	-439.4	-735.9	548.9	11.44	10.83	3.75
7,468.0	84.60	179.40	6,992.5	-523.6	-735.0	631.9	4.94	4.94	0.00
LSWD 1 (Exist.)									
7,513.0	87.40	179.10	6,995.7	-568.5	-734.4	676.2	6.26	6.22	-0.67
7,518.0	87.62	179.10	6,995.9	-573.5	-734.3	681.1	4.44	4.44	0.00
Scooter D18-79HN Landing Pt.									
7,558.0	89.40	179.10	6,996.9	-613.5	-733.7	720.5	4.44	4.44	0.00
7,602.0	92.20	178.50	6,996.3	-657.4	-732.8	763.8	6.51	6.36	-1.36
7,692.0	92.20	178.70	6,992.9	-747.4	-730.6	852.2	0.22	0.00	0.22
7,782.0	91.50	178.70	6,989.9	-837.3	-728.5	940.7	0.78	-0.78	0.00
7,850.3	91.73	179.54	6,988.0	-905.6	-727.5	1,008.0	1.27	0.33	1.22
WP 2									
7,872.0	91.80	179.80	6,987.4	-927.2	-727.3	1,029.4	1.27	0.33	1.22
7,961.0	91.90	180.80	6,984.5	-1,016.2	-727.8	1,117.3	1.13	0.11	1.12
8,051.0	91.30	181.00	6,982.0	-1,106.1	-729.2	1,206.4	0.70	-0.67	0.22
8,141.0	90.00	181.00	6,981.0	-1,196.1	-730.8	1,295.5	1.44	-1.44	0.00
8,230.0	91.10	180.80	6,980.1	-1,285.1	-732.2	1,383.7	1.26	1.24	-0.22
8,320.0	90.20	179.90	6,979.1	-1,375.1	-732.7	1,472.6	1.41	-1.00	-1.00
8,410.0	88.10	179.40	6,980.4	-1,465.1	-732.2	1,561.4	2.40	-2.33	-0.56
8,435.5	88.39	179.40	6,981.2	-1,490.5	-731.9	1,586.5	1.12	1.12	0.00
Mick D18-06 (Exist.)									
8,499.0	89.10	179.40	6,982.6	-1,554.0	-731.3	1,649.2	1.12	1.12	0.00
8,589.0	90.30	179.10	6,983.1	-1,644.0	-730.1	1,737.9	1.37	1.33	-0.33

Company:	Noble Energy Inc.- Weld County, CO (Grid North)	Local Co-ordinate Reference:	Well Scooter D18-79HN
Project:	Sec.18-T3N-R64W	TVD Reference:	WELL @ 4827.0ft (Precision 892 RKB - 16')
Site:	Scooter D18-79HN Pad Sec.18-T3N-R64W	MD Reference:	WELL @ 4827.0ft (Precision 892 RKB - 16')
Well:	Scooter D18-79HN	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)
8,679.0	90.00	179.10	6,982.8	-1,734.0	-728.7	1,826.5	0.33	-0.33	0.00
8,768.0	91.60	178.90	6,981.6	-1,823.0	-727.1	1,914.2	1.81	1.80	-0.22
8,813.0	91.05	178.55	6,980.5	-1,868.0	-726.1	1,958.4	1.45	-1.22	-0.78
Diller 42-13 (Exist.)									
8,858.0	90.50	178.20	6,979.9	-1,913.0	-724.8	2,002.7	1.45	-1.22	-0.78
8,948.0	89.90	177.80	6,979.6	-2,002.9	-721.7	2,091.0	0.80	-0.67	-0.44
9,037.0	89.50	179.10	6,980.1	-2,091.9	-719.3	2,178.5	1.53	-0.45	1.46
9,127.0	89.40	179.10	6,980.9	-2,181.8	-717.9	2,267.2	0.11	-0.11	0.00
9,216.0	90.10	179.20	6,981.3	-2,270.8	-716.5	2,354.9	0.79	0.79	0.11
9,306.0	90.30	180.30	6,981.0	-2,360.8	-716.2	2,443.7	1.24	0.22	1.22
9,396.0	90.90	179.40	6,980.1	-2,450.8	-715.9	2,532.5	1.20	0.67	-1.00
9,485.0	90.70	179.60	6,978.8	-2,539.8	-715.1	2,620.3	0.32	-0.22	0.22
9,494.6	90.77	179.73	6,978.7	-2,549.4	-715.1	2,629.8	1.54	0.78	1.33
Fridge USX H13-22 (Exist.)									
9,575.0	91.40	180.80	6,977.2	-2,629.8	-715.5	2,709.2	1.54	0.78	1.33
9,665.0	89.90	180.80	6,976.2	-2,719.8	-716.7	2,798.3	1.67	-1.67	0.00
9,754.0	89.60	180.80	6,976.6	-2,808.8	-718.0	2,886.4	0.34	-0.34	0.00
9,844.0	88.90	180.70	6,977.7	-2,898.8	-719.1	2,975.5	0.79	-0.78	-0.11
9,933.0	89.40	180.50	6,979.0	-2,987.7	-720.1	3,063.5	0.61	0.56	-0.22
10,023.0	90.30	179.80	6,979.3	-3,077.7	-720.3	3,152.4	1.27	1.00	-0.78
10,102.0	89.42	180.06	6,979.5	-3,156.7	-720.2	3,230.4	1.16	-1.11	0.33
Mick D18-11 (Exist.)									
10,113.0	89.30	180.10	6,979.6	-3,167.7	-720.2	3,241.3	1.16	-1.11	0.33
10,203.0	89.40	179.60	6,980.6	-3,257.7	-720.0	3,330.2	0.57	0.11	-0.56
10,292.0	90.10	179.10	6,981.0	-3,346.7	-719.0	3,417.9	0.97	0.79	-0.56
10,293.0	90.11	179.10	6,981.0	-3,347.7	-719.0	3,418.9	1.30	1.22	-0.44
UPRC 13-9J5 (Exist.)									
10,382.0	91.20	178.70	6,980.0	-3,436.7	-717.3	3,506.5	1.30	1.22	-0.44
10,472.0	91.50	178.40	6,977.9	-3,526.6	-715.0	3,595.0	0.47	0.33	-0.33
10,561.0	90.00	179.40	6,976.7	-3,615.6	-713.3	3,682.6	2.03	-1.69	1.12
10,651.0	89.60	179.90	6,977.0	-3,705.6	-712.7	3,771.4	0.71	-0.44	0.56
10,741.0	89.70	181.00	6,977.6	-3,795.6	-713.4	3,860.4	1.23	0.11	1.22
Mick D18-25 (Exist.)									
10,830.0	89.50	181.70	6,978.2	-3,884.6	-715.5	3,948.7	0.82	-0.22	0.79
10,920.0	90.00	180.70	6,978.6	-3,974.6	-717.4	4,037.8	1.24	0.56	-1.11
11,009.0	88.50	179.80	6,979.7	-4,063.5	-717.8	4,125.8	1.97	-1.69	-1.01
11,099.0	90.20	180.70	6,980.8	-4,153.5	-718.2	4,214.7	2.14	1.89	1.00
11,189.0	91.30	180.10	6,979.6	-4,243.5	-718.8	4,303.7	1.39	1.22	-0.67
11,208.1	91.24	179.73	6,979.2	-4,262.6	-718.8	4,322.6	1.94	-0.34	-1.91
UPRC 13-16J (Exist.)									
11,278.0	91.00	178.40	6,977.8	-4,332.5	-717.6	4,391.4	1.94	-0.34	-1.91
11,358.0	92.00	178.90	6,975.7	-4,412.4	-715.8	4,470.1	1.40	1.25	0.63
Mick D18-14 (Exist.)									
11,410.0	92.00	178.90	6,973.9	-4,464.4	-714.8	4,521.2	0.00	0.00	0.00
Scooter D18-79HN BHL 535'FSL & 75'FEL									

Company:	Noble Energy Inc.- Weld County, CO (Grid North)	Local Co-ordinate Reference:	Well Scooter D18-79HN
Project:	Sec.18-T3N-R64W	TVD Reference:	WELL @ 4827.0ft (Precision 892 RKB - 16')
Site:	Scooter D18-79HN Pad Sec.18-T3N-R64W	MD Reference:	WELL @ 4827.0ft (Precision 892 RKB - 16')
Well:	Scooter D18-79HN	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Checked By: _____	Approved By: _____	Date: _____
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