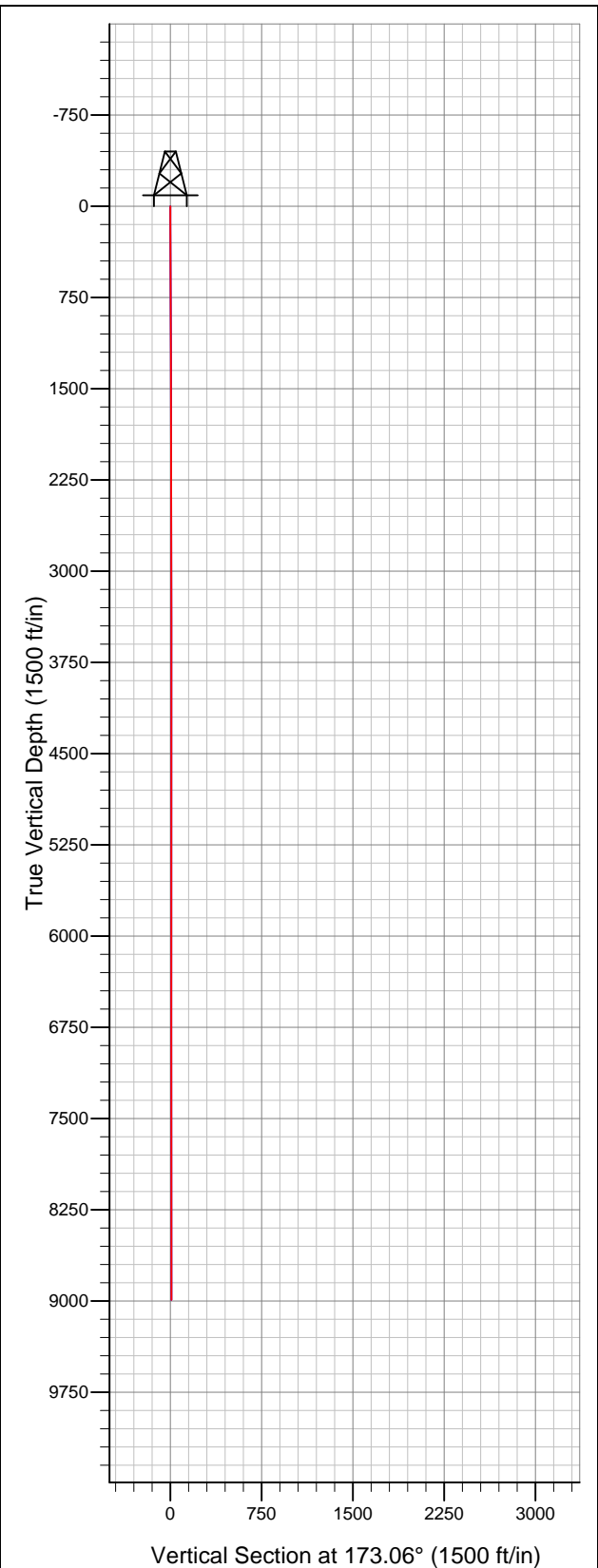
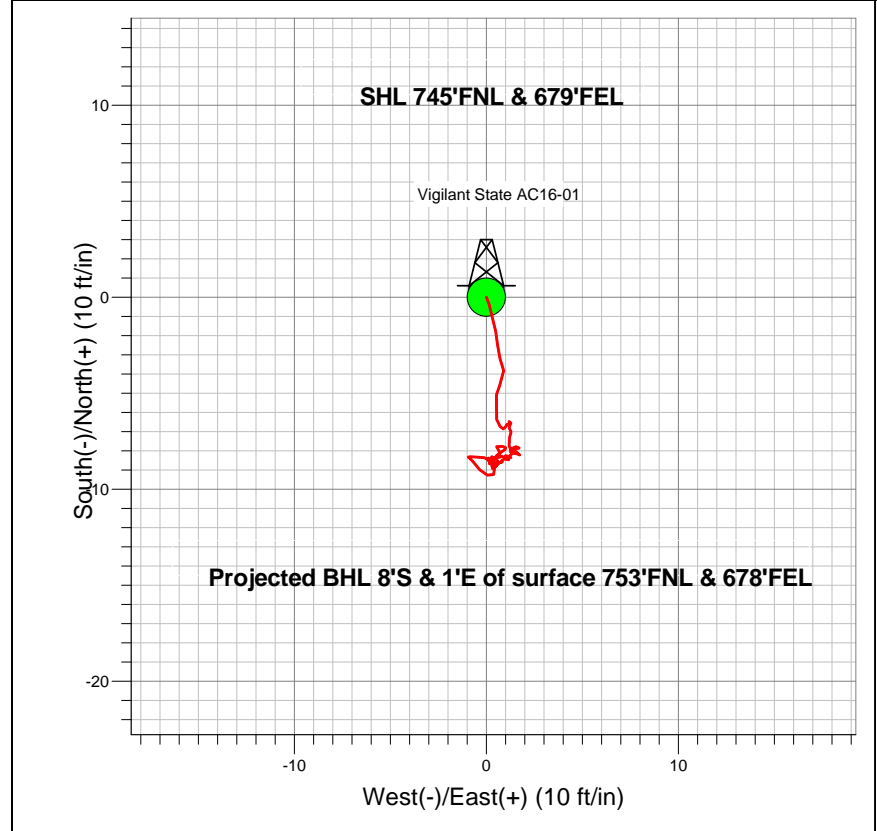


Well Name: Vigilant State AC16-01

Surface Location: Vigilant State AC16-01 Pad Sec.16-T7N-R63W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 0.0
 +N/-S 0.0 +E/-W 0.0 Northing 1455684.30 Easting 3295999.37 Latitude 40.579370 Longitude -104.434360 Slot
 Original Well Elev WELL @ 0.0ft (Original Well Elev)



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



LEGEND

- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
 8990'MD & 8990'TVD @ -8'VS
 0.1 deg Inc 275.0 deg AZ

Project: SEC.16-T7N-R63W
 Site: Vigilant State AC16-01 Pad Sec.16-T7N-R63W
 Well: Vigilant State AC16-01
 Plan: Wellbore #1



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

SEC.16-T7N-R63W

Vigilant State AC16-01 Pad Sec.16-T7N-R63W

Vigilant State AC16-01

Wellbore #1

Survey: Survey #1

Standard Survey Report

03 July, 2013

Survey	Survey Data									
	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
	121.0	0.40	158.70	121.0	-0.4	0.2	0.4	0.33	0.33	0.00
	219.0	0.40	173.70	219.0	-1.1	0.3	1.1	0.11	0.00	15.31
	314.0	0.50	161.00	314.0	-1.8	0.5	1.8	0.15	0.11	-13.37
	409.0	0.40	186.70	409.0	-2.5	0.6	2.5	0.23	-0.11	27.05
	503.0	0.50	156.60	503.0	-3.2	0.7	3.3	0.27	0.11	-32.02
	598.0	0.30	172.60	598.0	-3.8	0.9	3.9	0.24	-0.21	16.84
	693.0	0.70	204.40	693.0	-4.6	0.7	4.6	0.50	0.42	33.47
	738.0	0.60	195.10	738.0	-5.1	0.5	5.1	0.32	-0.22	-20.67
	857.0	0.20	128.10	857.0	-5.8	0.5	5.8	0.47	-0.34	-56.30
	951.0	0.20	225.70	951.0	-6.0	0.5	6.0	0.32	0.00	103.83
	1,046.0	0.30	153.10	1,046.0	-6.4	0.5	6.4	0.32	0.11	-76.42

Company:	Noble Energy Inc.- Weld County, CO (Grid North)	Local Co-ordinate Reference:	Well Vigilant State AC16-01
Project:	SEC.16-T7N-R63W	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Vigilant State AC16-01 Pad Sec.16-T7N-R63W	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Well:	Vigilant State AC16-01	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)
1,141.0	0.20	153.30	1,141.0	-6.7	0.7	6.8	0.11	-0.11	0.21
1,236.0	0.10	71.20	1,236.0	-6.9	0.9	6.9	0.22	-0.11	-86.42
1,330.0	0.10	30.60	1,330.0	-6.8	1.0	6.8	0.07	0.00	-43.19
1,425.0	0.10	32.30	1,425.0	-6.6	1.1	6.7	0.00	0.00	1.79
1,520.0	0.20	140.40	1,520.0	-6.7	1.2	6.8	0.26	0.11	113.79
1,615.0	0.30	345.60	1,615.0	-6.6	1.3	6.7	0.51	0.11	-162.95
1,710.0	0.20	187.20	1,710.0	-6.5	1.2	6.6	0.52	-0.11	-166.74
1,805.0	0.20	169.60	1,805.0	-6.8	1.2	6.9	0.06	0.00	-18.53
1,900.0	0.10	134.80	1,900.0	-7.0	1.3	7.1	0.14	-0.11	-36.63
1,994.0	0.30	212.00	1,994.0	-7.3	1.2	7.4	0.31	0.21	82.13
2,089.0	0.30	154.50	2,089.0	-7.7	1.2	7.8	0.30	0.00	-60.53
2,184.0	0.10	174.50	2,184.0	-8.0	1.3	8.1	0.22	-0.21	21.05
2,279.0	0.10	324.80	2,279.0	-8.1	1.3	8.1	0.20	0.00	158.21
2,374.0	0.20	47.60	2,374.0	-7.9	1.3	8.0	0.22	0.11	87.16
2,469.0	0.10	104.40	2,469.0	-7.8	1.5	7.9	0.18	-0.11	59.79
2,564.0	0.10	135.20	2,564.0	-7.9	1.7	8.0	0.06	0.00	32.42
2,659.0	0.10	335.20	2,659.0	-7.8	1.7	8.0	0.21	0.00	-168.42
2,753.0	0.10	212.20	2,753.0	-7.8	1.6	8.0	0.19	0.00	-130.85
2,848.0	0.20	244.10	2,848.0	-8.0	1.4	8.1	0.13	0.11	33.58
2,943.0	0.10	58.20	2,943.0	-8.0	1.4	8.1	0.32	-0.11	183.26
3,038.0	0.20	121.80	3,038.0	-8.1	1.6	8.2	0.19	0.11	66.95
3,132.0	0.10	156.40	3,132.0	-8.2	1.7	8.4	0.14	-0.11	36.81
3,227.0	0.20	316.20	3,227.0	-8.2	1.7	8.3	0.31	0.11	168.21
3,322.0	0.20	250.10	3,322.0	-8.1	1.4	8.2	0.23	0.00	-69.58
3,417.0	0.20	206.30	3,417.0	-8.3	1.2	8.4	0.16	0.00	-46.11
3,512.0	0.10	354.70	3,512.0	-8.4	1.1	8.5	0.31	-0.11	156.21
3,607.0	0.20	261.90	3,607.0	-8.3	0.9	8.4	0.24	0.11	-97.68
3,702.0	0.10	45.20	3,702.0	-8.3	0.8	8.3	0.30	-0.11	150.84
3,797.0	0.20	234.70	3,797.0	-8.3	0.7	8.4	0.31	0.11	-179.47
3,891.0	0.20	289.70	3,891.0	-8.4	0.4	8.4	0.20	0.00	58.51
3,986.0	0.00	81.50	3,986.0	-8.3	0.3	8.3	0.21	-0.21	0.00
4,081.0	0.10	183.00	4,081.0	-8.4	0.3	8.4	0.11	0.11	0.00
4,176.0	0.30	165.40	4,176.0	-8.7	0.3	8.7	0.22	0.21	-18.53
4,271.0	0.20	37.40	4,271.0	-8.8	0.5	8.8	0.48	-0.11	-134.74
4,366.0	0.20	0.20	4,366.0	-8.5	0.6	8.5	0.13	0.00	-39.16
4,460.0	0.20	264.90	4,460.0	-8.4	0.4	8.4	0.31	0.00	-101.38
4,555.0	0.20	214.40	4,555.0	-8.5	0.2	8.5	0.18	0.00	-53.16
4,650.0	0.10	98.10	4,650.0	-8.7	0.2	8.6	0.27	-0.11	-122.42
4,745.0	0.20	61.90	4,745.0	-8.6	0.4	8.6	0.14	0.11	-38.11
4,840.0	0.20	132.00	4,840.0	-8.6	0.7	8.7	0.24	0.00	73.79
4,935.0	0.30	269.10	4,935.0	-8.8	0.5	8.8	0.49	0.11	144.32
5,030.0	0.20	150.60	5,030.0	-8.9	0.4	8.9	0.46	-0.11	-124.74
5,124.0	0.20	311.50	5,124.0	-8.9	0.3	8.9	0.42	0.00	171.17
5,219.0	0.20	22.70	5,219.0	-8.7	0.3	8.6	0.25	0.00	74.95
5,314.0	0.20	37.80	5,314.0	-8.4	0.4	8.4	0.06	0.00	15.89
5,409.0	0.20	75.20	5,409.0	-8.2	0.7	8.2	0.13	0.00	39.37
5,504.0	0.30	312.20	5,504.0	-8.0	0.7	8.0	0.47	0.11	-129.47
5,599.0	0.10	41.80	5,599.0	-7.8	0.5	7.8	0.33	-0.21	94.32
5,693.0	0.30	100.20	5,693.0	-7.8	0.8	7.8	0.28	0.21	62.13
5,788.0	0.10	247.80	5,788.0	-7.8	1.0	7.9	0.41	-0.21	155.37
5,883.0	0.10	145.50	5,883.0	-7.9	1.0	8.0	0.16	0.00	-107.68
5,978.0	0.20	269.50	5,978.0	-8.0	0.9	8.1	0.28	0.11	130.53
6,073.0	0.30	209.30	6,073.0	-8.2	0.6	8.2	0.28	0.11	-63.37

Company:	Noble Energy Inc.- Weld County, CO (Grid North)	Local Co-ordinate Reference:	Well Vigilant State AC16-01
Project:	SEC.16-T7N-R63W	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	Vigilant State AC16-01 Pad Sec.16-T7N-R63W	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Well:	Vigilant State AC16-01	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)
6,168.0	0.20	237.30	6,168.0	-8.5	0.3	8.5	0.16	-0.11	29.47
6,262.0	0.10	335.90	6,262.0	-8.5	0.1	8.5	0.25	-0.11	104.89
6,357.0	0.00	193.70	6,357.0	-8.5	0.1	8.4	0.11	-0.11	0.00
6,452.0	0.10	22.10	6,452.0	-8.4	0.1	8.4	0.11	0.11	0.00
6,547.0	0.10	224.80	6,547.0	-8.4	0.1	8.3	0.21	0.00	-165.58
6,642.0	0.30	133.00	6,642.0	-8.6	0.2	8.6	0.34	0.21	-96.63
6,736.0	0.30	326.40	6,736.0	-8.6	0.3	8.5	0.63	0.00	-177.23
6,830.0	0.30	271.40	6,830.0	-8.4	-0.1	8.3	0.29	0.00	-58.51
6,925.0	0.20	278.80	6,925.0	-8.3	-0.5	8.2	0.11	-0.11	7.79
7,019.0	0.20	268.90	7,019.0	-8.3	-0.9	8.1	0.04	0.00	-10.53
7,114.0	0.10	102.30	7,114.0	-8.3	-0.9	8.2	0.31	-0.11	-175.37
7,209.0	0.30	143.40	7,209.0	-8.5	-0.7	8.4	0.25	0.21	43.26
7,304.0	0.10	132.30	7,304.0	-8.8	-0.5	8.7	0.21	-0.21	-11.68
7,398.0	0.20	146.20	7,397.9	-9.0	-0.3	8.9	0.11	0.11	14.79
7,493.0	0.40	114.10	7,492.9	-9.3	0.0	9.2	0.27	0.21	-33.79
7,588.0	0.20	5.40	7,587.9	-9.2	0.4	9.2	0.53	-0.21	-114.42
7,683.0	0.20	12.60	7,682.9	-8.9	0.4	8.9	0.03	0.00	7.58
7,778.0	0.10	322.20	7,777.9	-8.7	0.4	8.7	0.16	-0.11	-53.05
7,873.0	0.30	95.80	7,872.9	-8.6	0.6	8.6	0.40	0.21	140.63
7,967.0	0.10	341.50	7,966.9	-8.6	0.8	8.6	0.38	-0.21	-121.60
8,062.0	0.10	215.50	8,061.9	-8.6	0.7	8.6	0.19	0.00	-132.63
8,156.0	0.20	40.40	8,155.9	-8.5	0.8	8.6	0.32	0.11	-186.28
8,251.0	0.20	71.50	8,250.9	-8.3	1.1	8.4	0.11	0.00	32.74
8,346.0	0.10	142.70	8,345.9	-8.4	1.3	8.4	0.20	-0.11	74.95
8,441.0	0.20	284.60	8,440.9	-8.4	1.2	8.5	0.30	0.11	149.37
8,535.0	0.10	340.30	8,534.9	-8.3	1.0	8.3	0.18	-0.11	59.26
8,630.0	0.20	125.00	8,629.9	-8.3	1.1	8.3	0.30	0.11	152.32
8,724.0	0.10	237.10	8,723.9	-8.4	1.2	8.5	0.27	-0.11	119.26
8,819.0	0.10	94.20	8,818.9	-8.5	1.2	8.5	0.20	0.00	-150.42
8,910.0	0.10	275.30	8,909.9	-8.5	1.2	8.5	0.22	0.00	-196.59
8,990.0	0.10	275.00	8,989.9	-8.4	1.0	8.5	0.00	0.00	-0.38

Checked By: _____ Approved By: _____ Date: _____