

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

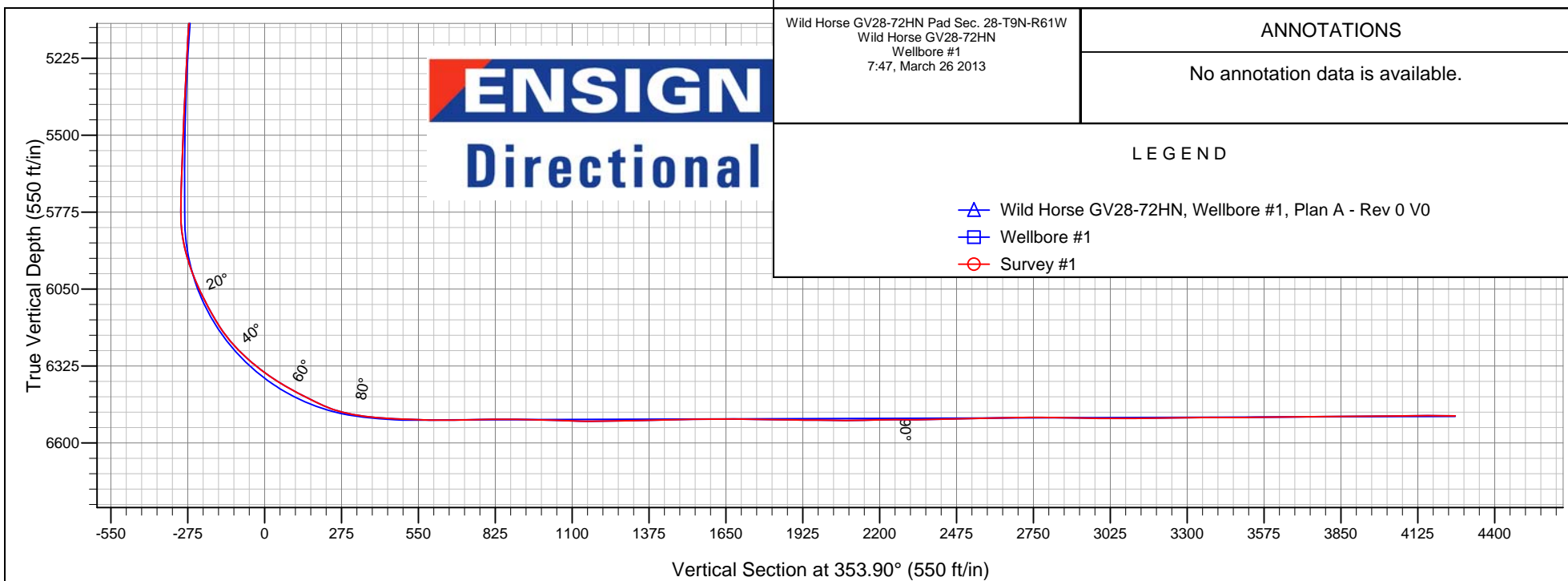
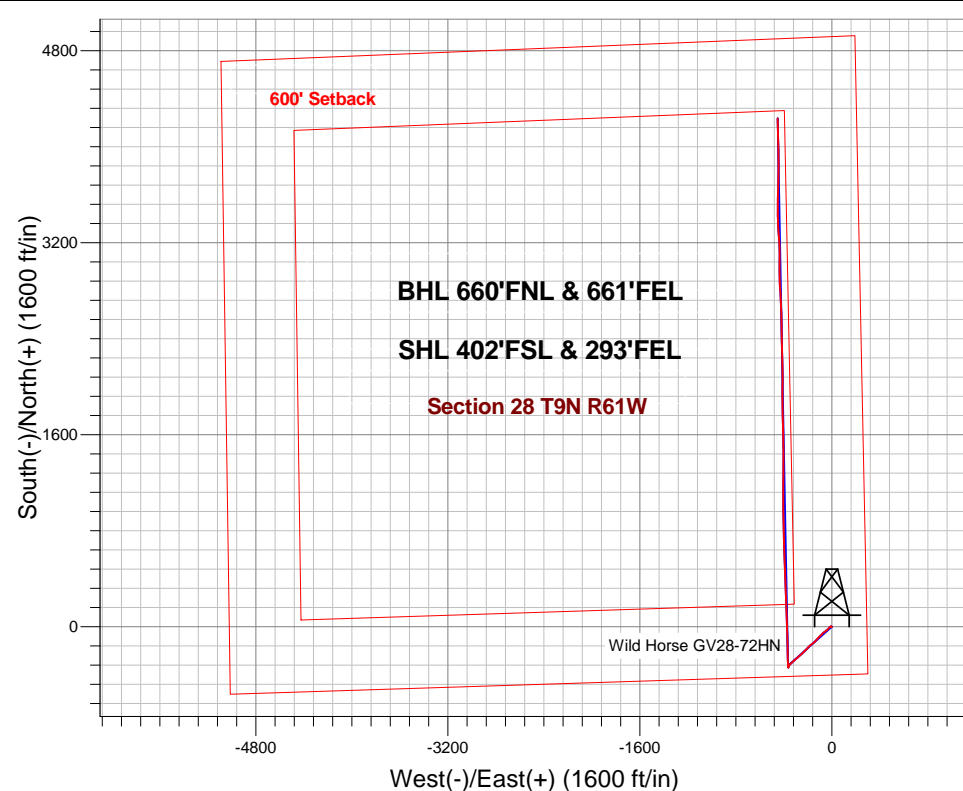
Well Name: **Wild Horse GV28-72HN**

Surface Location: Wild Horse GV28-72HN Pad Sec. 28-T9N-R61W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 4958.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1505511.59	3359752.59	40.713794	-104.202244	
Precision #828 KB - 16' WELL @ 4974.0ft (Precision #828 KB - 16')						

FINAL SURVEY

Projected Bottom Hole Location
10796' MD 6503' TVD 4234' N & 453' W of SHL
89.2 degree Incl @ 358.4 degree AZM





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

SEC.28-T9N-R61W

Wild Horse GV28-72HN Pad Sec. 28-T9N-R61W

Wild Horse GV28-72HN

Wellbore #1

Survey: Survey #1

Standard Survey Report

26 March, 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)
Survey 1	0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
	726.0	0.00	0.00	726.0	0.0	0.0	0.0	0.00	0.00	0.00
	749.0	0.60	233.60	749.0	-0.1	-0.1	-0.1	2.61	2.61	0.00
	839.0	0.60	234.30	839.0	-0.6	-0.9	-0.5	0.01	0.00	0.78
	928.0	0.80	255.00	928.0	-1.1	-1.8	-0.9	0.36	0.22	23.26
	1,018.0	0.70	238.30	1,018.0	-1.5	-2.9	-1.2	0.27	-0.11	-18.56
	1,126.0	0.70	257.30	1,126.0	-2.0	-4.1	-1.6	0.21	0.00	17.59
	1,220.0	0.40	284.20	1,220.0	-2.0	-5.0	-1.5	0.41	-0.32	28.62
	1,315.0	0.30	303.30	1,315.0	-1.8	-5.5	-1.2	0.16	-0.11	20.11
	1,410.0	0.70	311.60	1,410.0	-1.3	-6.2	-0.6	0.43	0.42	8.74
	1,504.0	0.70	333.10	1,504.0	-0.4	-6.9	0.3	0.28	0.00	22.87

Company:	Noble Energy Inc.- Weld County, CO (Grid North)	Local Co-ordinate Reference:	Well Wild Horse GV28-72HN
Project:	SEC.28-T9N-R61W	TVD Reference:	WELL @ 4974.0ft (Precision #828 KB - 16')
Site:	Wild Horse GV28-72HN Pad Sec. 28-T9N-R61W	MD Reference:	WELL @ 4974.0ft (Precision #828 KB - 16')
Well:	Wild Horse GV28-72HN	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)
1,599.0	0.40	342.00	1,599.0	0.4	-7.2	1.2	0.33	-0.32	9.37
1,694.0	0.40	354.50	1,693.9	1.1	-7.4	1.8	0.09	0.00	13.16
1,788.0	0.50	351.50	1,787.9	1.8	-7.4	2.6	0.11	0.11	-3.19
1,883.0	0.40	1.40	1,882.9	2.5	-7.5	3.3	0.13	-0.11	10.42
1,946.0	0.10	133.20	1,945.9	2.7	-7.5	3.5	0.75	-0.48	209.21
2,036.0	2.30	231.80	2,035.9	1.5	-8.8	2.5	2.57	2.44	109.56
2,126.0	4.40	239.70	2,125.8	-1.3	-13.2	0.1	2.38	2.33	8.78
2,216.0	4.60	221.10	2,215.5	-5.8	-18.6	-3.8	1.63	0.22	-20.67
2,305.0	5.50	219.00	2,304.1	-11.8	-23.6	-9.2	1.03	1.01	-2.36
2,395.0	6.90	225.10	2,393.6	-18.9	-30.1	-15.6	1.72	1.56	6.78
2,485.0	7.60	229.90	2,482.9	-26.6	-38.5	-22.3	1.03	0.78	5.33
2,575.0	9.20	235.30	2,571.9	-34.5	-49.0	-29.1	1.98	1.78	6.00
2,665.0	10.20	233.70	2,660.6	-43.3	-61.3	-36.6	1.15	1.11	-1.78
2,755.0	10.20	229.20	2,749.2	-53.3	-73.8	-45.1	0.89	0.00	-5.00
2,845.0	10.10	225.30	2,837.8	-64.0	-85.4	-54.6	0.77	-0.11	-4.33
2,935.0	10.10	221.80	2,926.4	-75.5	-96.3	-64.8	0.68	0.00	-3.89
3,025.0	10.40	222.30	3,015.0	-87.3	-107.0	-75.5	0.35	0.33	0.56
3,114.0	10.30	221.60	3,102.5	-99.2	-117.7	-86.2	0.18	-0.11	-0.79
3,204.0	9.90	225.00	3,191.1	-110.7	-128.5	-96.4	0.80	-0.44	3.78
3,294.0	10.10	225.70	3,279.8	-121.7	-139.6	-106.2	0.26	0.22	0.78
3,384.0	9.30	226.70	3,368.5	-132.2	-150.6	-115.4	0.91	-0.89	1.11
3,474.0	8.90	228.80	3,457.4	-141.8	-161.1	-123.8	0.58	-0.44	2.33
3,564.0	10.20	234.40	3,546.1	-151.0	-172.8	-131.8	1.77	1.44	6.22
3,654.0	12.40	229.00	3,634.4	-162.0	-186.6	-141.2	2.71	2.44	-6.00
3,743.0	11.30	222.00	3,721.5	-174.7	-199.7	-152.5	2.03	-1.24	-7.87
3,833.0	10.40	226.00	3,809.9	-186.9	-211.4	-163.4	1.30	-1.00	4.44
3,923.0	10.30	223.50	3,898.4	-198.4	-222.8	-173.6	0.51	-0.11	-2.78
4,013.0	10.10	225.00	3,987.0	-209.8	-233.9	-183.8	0.37	-0.22	1.67
4,103.0	10.60	226.70	4,075.5	-221.1	-245.5	-193.7	0.65	0.56	1.89
4,193.0	9.10	227.90	4,164.2	-231.5	-256.8	-202.9	1.68	-1.67	1.33
4,283.0	8.40	231.10	4,253.1	-240.4	-267.2	-210.7	0.95	-0.78	3.56
4,372.0	7.50	227.10	4,341.3	-248.5	-276.5	-217.7	1.19	-1.01	-4.49
4,462.0	7.70	228.60	4,430.5	-256.5	-285.4	-224.7	0.31	0.22	1.67
4,552.0	7.60	230.40	4,519.7	-264.2	-294.5	-231.4	0.29	-0.11	2.00
4,642.0	8.20	225.10	4,608.8	-272.6	-303.6	-238.7	1.05	0.67	-5.89
4,732.0	6.70	232.30	4,698.1	-280.3	-312.3	-245.5	1.96	-1.67	8.00
4,822.0	6.10	225.80	4,787.5	-286.8	-319.9	-251.2	1.04	-0.67	-7.22
4,912.0	6.30	228.30	4,877.0	-293.5	-327.0	-257.0	0.37	0.22	2.78
5,001.0	5.70	226.00	4,965.5	-299.8	-333.8	-262.6	0.73	-0.67	-2.58
5,092.0	6.10	222.80	5,056.0	-306.5	-340.4	-268.5	0.57	0.44	-3.52
5,181.0	5.40	224.20	5,144.6	-312.9	-346.5	-274.3	0.80	-0.79	1.57
5,271.0	4.90	228.50	5,234.2	-318.5	-352.3	-279.3	0.70	-0.56	4.78
5,361.0	4.00	219.50	5,323.9	-323.5	-357.2	-283.7	1.26	-1.00	-10.00
5,451.0	3.30	210.90	5,413.7	-328.1	-360.5	-287.9	0.99	-0.78	-9.56
5,541.0	2.60	199.60	5,503.6	-332.3	-362.5	-291.8	1.01	-0.78	-12.56
5,631.0	2.20	183.30	5,593.5	-335.9	-363.3	-295.4	0.87	-0.44	-18.11
5,720.0	1.70	176.80	5,682.5	-339.0	-363.3	-298.4	0.61	-0.56	-7.30
5,810.0	0.40	182.80	5,772.5	-340.6	-363.3	-300.0	1.45	-1.44	6.67
5,855.0	3.60	352.40	5,817.5	-339.4	-363.5	-298.8	8.88	7.11	376.89
5,900.0	8.80	357.30	5,862.2	-334.5	-363.8	-293.9	11.60	11.56	10.89
5,945.0	13.70	357.80	5,906.3	-325.7	-364.2	-285.2	10.89	10.89	1.11
5,990.0	17.10	356.40	5,949.7	-313.8	-364.8	-273.2	7.60	7.56	-3.11
6,035.0	20.70	356.30	5,992.2	-299.3	-365.7	-258.7	8.00	8.00	-0.22

Company:	Noble Energy Inc.- Weld County, CO (Grid North)	Local Co-ordinate Reference:	Well Wild Horse GV28-72HN
Project:	SEC.28-T9N-R61W	TVD Reference:	WELL @ 4974.0ft (Precision #828 KB - 16')
Site:	Wild Horse GV28-72HN Pad Sec. 28-T9N-R61W	MD Reference:	WELL @ 4974.0ft (Precision #828 KB - 16')
Well:	Wild Horse GV28-72HN	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)
6,080.0	23.70	357.00	6,033.9	-282.3	-366.7	-241.7	6.69	6.67	1.56
6,125.0	26.30	357.30	6,074.7	-263.3	-367.7	-222.7	5.78	5.78	0.67
6,170.0	28.40	357.70	6,114.6	-242.7	-368.6	-202.1	4.68	4.67	0.89
6,215.0	30.50	359.80	6,153.8	-220.5	-369.0	-180.0	5.20	4.67	4.67
6,259.0	33.90	1.00	6,191.1	-197.1	-368.9	-156.8	7.86	7.73	2.73
6,304.0	38.70	0.00	6,227.3	-170.5	-368.6	-130.3	10.75	10.67	-2.22
6,349.0	44.20	357.30	6,261.0	-140.7	-369.4	-100.6	12.85	12.22	-6.00
6,394.0	47.60	356.80	6,292.3	-108.4	-371.1	-68.4	7.60	7.56	-1.11
6,439.0	50.50	358.00	6,321.8	-74.5	-372.6	-34.4	6.75	6.44	2.67
6,484.0	53.90	358.90	6,349.4	-39.0	-373.5	1.0	7.72	7.56	2.00
6,529.0	57.30	358.20	6,374.8	-1.8	-374.5	38.0	7.66	7.56	-1.56
6,574.0	60.60	358.20	6,398.0	36.7	-375.7	76.4	7.33	7.33	0.00
6,619.0	62.30	358.50	6,419.5	76.2	-376.8	115.8	3.82	3.78	0.67
6,664.0	62.60	358.70	6,440.4	116.1	-377.8	155.6	0.77	0.67	0.44
6,709.0	65.20	357.30	6,460.2	156.5	-379.2	195.9	6.42	5.78	-3.11
6,754.0	69.70	358.00	6,477.4	198.0	-380.9	237.4	10.10	10.00	1.56
6,799.0	75.60	357.70	6,490.8	240.9	-382.5	280.2	13.13	13.11	-0.67
6,855.0	82.20	357.10	6,501.6	295.7	-385.0	335.0	11.83	11.79	-1.07
6,930.0	85.20	357.30	6,509.8	370.2	-388.7	409.4	4.01	4.00	0.27
7,020.0	87.60	357.80	6,515.5	459.9	-392.5	499.1	2.72	2.67	0.56
7,026.0	87.71	357.80	6,515.7	465.9	-392.7	505.1	1.78	1.78	0.00
Wild Horse GV28-72HN Landing Pt.									
7,110.0	89.20	357.80	6,518.0	549.8	-396.0	588.8	1.78	1.78	0.00
7,200.0	90.70	358.90	6,518.1	639.8	-398.6	678.5	2.07	1.67	1.22
7,290.0	91.50	358.50	6,516.3	729.7	-400.6	768.2	0.99	0.89	-0.44
7,380.0	89.50	0.00	6,515.6	819.7	-401.8	857.8	2.78	-2.22	1.67
7,470.0	89.00	359.20	6,516.7	909.7	-402.4	947.4	1.05	-0.56	-0.89
7,560.0	87.90	358.70	6,519.2	999.7	-404.1	1,037.0	1.34	-1.22	-0.56
7,649.0	88.50	359.20	6,522.0	1,088.6	-405.7	1,125.6	0.88	0.67	0.56
7,739.0	91.30	0.80	6,522.1	1,178.6	-405.7	1,215.1	3.58	3.11	1.78
7,829.0	91.10	0.50	6,520.2	1,268.6	-404.7	1,304.4	0.40	-0.22	-0.33
7,919.0	91.30	0.30	6,518.4	1,358.5	-404.0	1,393.8	0.31	0.22	-0.22
8,009.0	91.20	0.10	6,516.4	1,448.5	-403.7	1,483.2	0.25	-0.11	-0.22
8,099.0	90.60	358.40	6,515.0	1,538.5	-404.9	1,572.8	2.00	-0.67	-1.89
8,189.0	89.70	358.20	6,514.7	1,628.5	-407.6	1,662.6	1.02	-1.00	-0.22
8,279.0	89.40	358.50	6,515.4	1,718.4	-410.2	1,752.3	0.47	-0.33	0.33
8,369.0	88.70	359.20	6,516.9	1,808.4	-412.0	1,841.9	1.10	-0.78	0.78
8,458.0	90.00	0.30	6,517.9	1,897.4	-412.4	1,930.5	1.91	1.46	1.24
8,547.0	88.70	0.30	6,519.0	1,986.4	-411.9	2,018.9	1.46	-1.46	0.00
8,637.0	90.70	359.60	6,519.4	2,076.4	-412.0	2,108.4	2.35	2.22	-0.78
8,727.0	91.60	359.80	6,517.6	2,166.3	-412.4	2,197.9	1.02	1.00	0.22
8,817.0	89.30	357.10	6,516.9	2,256.3	-414.9	2,287.6	3.94	-2.56	-3.00
8,907.0	91.50	359.60	6,516.3	2,346.2	-417.5	2,377.3	3.70	2.44	2.78
8,996.0	91.90	359.40	6,513.6	2,435.2	-418.2	2,465.9	0.50	0.45	-0.22
9,086.0	90.30	358.70	6,511.9	2,525.2	-419.7	2,555.5	1.94	-1.78	-0.78
9,176.0	91.80	358.00	6,510.3	2,615.1	-422.3	2,645.2	1.84	1.67	-0.78
9,266.0	90.30	357.30	6,508.6	2,705.0	-426.0	2,735.0	1.84	-1.67	-0.78
9,356.0	89.00	356.60	6,509.2	2,794.9	-430.8	2,824.8	1.64	-1.44	-0.78
9,445.0	89.30	358.20	6,510.5	2,883.8	-434.8	2,913.7	1.83	0.34	1.80
9,535.0	88.60	359.60	6,512.1	2,973.7	-436.6	3,003.3	1.74	-0.78	1.56
9,625.0	91.10	0.30	6,512.4	3,063.7	-436.6	3,092.8	2.88	2.78	0.78
9,715.0	90.80	359.20	6,510.9	3,153.7	-437.0	3,182.3	1.27	-0.33	-1.22

Company:	Noble Energy Inc.- Weld County, CO (Grid North)	Local Co-ordinate Reference:	Well Wild Horse GV28-72HN
Project:	SEC.28-T9N-R61W	TVD Reference:	WELL @ 4974.0ft (Precision #828 KB - 16')
Site:	Wild Horse GV28-72HN Pad Sec. 28-T9N-R61W	MD Reference:	WELL @ 4974.0ft (Precision #828 KB - 16')
Well:	Wild Horse GV28-72HN	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)
9,805.0	90.70	355.90	6,509.7	3,243.6	-440.9	3,272.1	3.67	-0.11	-3.67
9,895.0	89.90	355.90	6,509.2	3,333.4	-447.3	3,362.1	0.89	-0.89	0.00
9,985.0	90.00	359.80	6,509.3	3,423.3	-450.7	3,451.8	4.33	0.11	4.33
10,075.0	91.00	1.00	6,508.5	3,513.3	-450.1	3,541.2	1.74	1.11	1.33
10,165.0	90.40	0.30	6,507.4	3,603.3	-449.0	3,630.6	1.02	-0.67	-0.78
10,254.0	90.90	1.20	6,506.4	3,692.3	-447.9	3,719.0	1.16	0.56	1.01
10,344.0	90.50	1.00	6,505.3	3,782.2	-446.1	3,808.2	0.50	-0.44	-0.22
10,434.0	90.60	359.80	6,504.5	3,872.2	-445.5	3,897.7	1.34	0.11	-1.33
10,524.0	89.60	358.50	6,504.3	3,962.2	-446.9	3,987.3	1.82	-1.11	-1.44
10,614.0	91.50	359.20	6,503.4	4,052.2	-448.7	4,076.9	2.25	2.11	0.78
10,740.0	89.20	358.40	6,502.7	4,178.2	-451.3	4,202.5	1.93	-1.83	-0.63
10,796.0	89.20	358.40	6,503.4	4,234.1	-452.9	4,258.3	0.00	0.00	0.00
Wild Horse GV28-72HN BHL 660'FNL & 660'FEL									

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------