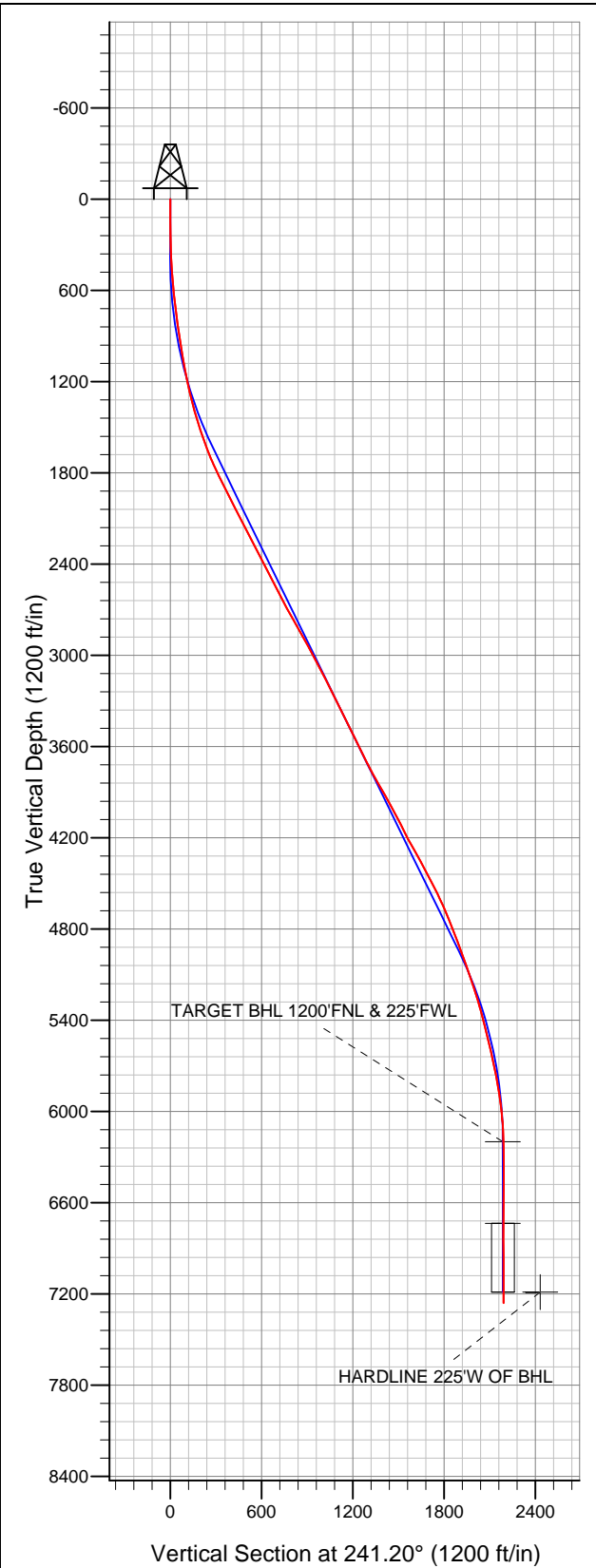


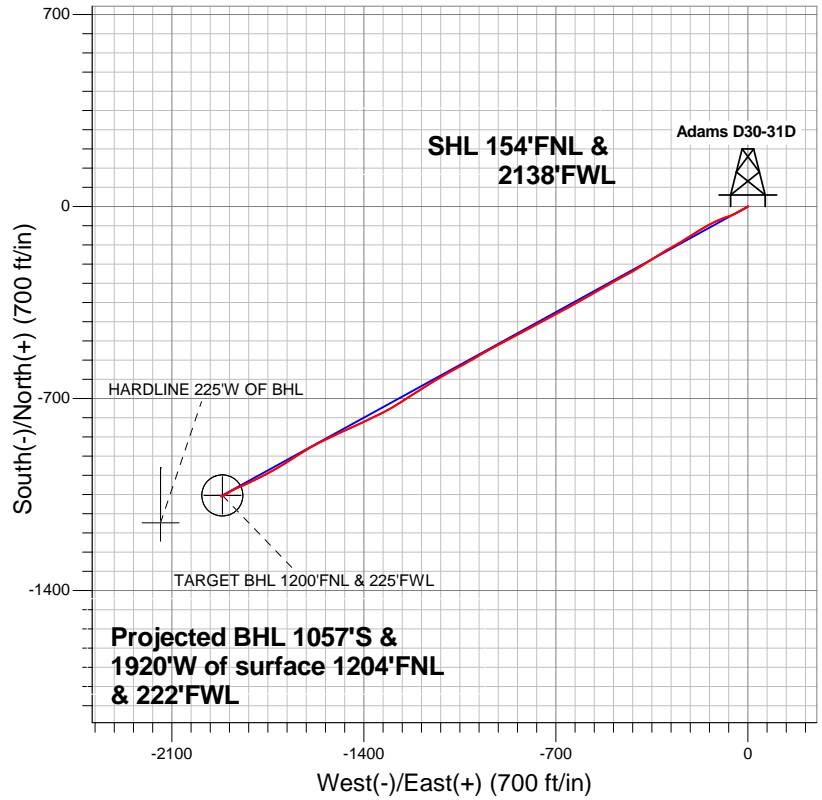
Well Name: Adams D30-31D

Surface Location: Dechant D30-17D Pad Sec.30-T3N-R64W
North American Datum 1983 US State Plane 1983Colorado Northern Zone
Ground Elevation: 4782.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1318082.43	3252755.35	40.202993	-104.595088	
Original Well Elev						
WELL @ 4795.0ft (Original Well Elev)						



NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- Wellbore #1
- Adams D30-31D, Wellbore #1, Noble Adams D30-31D Plan #1 (7-31-12) R V0
- Survey #1

Final Survey Plot

Projected Final Survey -
7725'MD & 7260'TVD @ 2192'VS
0.50 deg Inc 228.10 deg AZ

Project: SEC.30-T3N-R64W
Site: Dechant D30-17D Pad Sec.30-T3N-R64W
Well: Adams D30-31D
Plan: Wellbore #1



NOBLE ENERGY INC WELD COUNTY CO

SEC.30-T3N-R64W

Dechant D30-17D Pad Sec.30-T3N-R64W

Adams D30-31D

Wellbore #1

Survey: Survey #1

Standard Survey Report

07 August, 2012



Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Adams D30-31D
Project:	SEC.30-T3N-R64W	TVD Reference:	WELL @ 4795.0ft (Original Well Elev)
Site:	Dechant D30-17D Pad Sec.30-T3N-R64W	MD Reference:	WELL @ 4795.0ft (Original Well Elev)
Well:	Adams D30-31D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.30-T3N-R64W, Weld County, Colorado		
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	Dechant D30-17D Pad Sec.30-T3N-R64W				
Site Position:		Northing:	1,318,082.67 ft	Latitude:	40.202993
From:	Lat/Long	Easting:	3,252,777.98 ft	Longitude:	-104.595007
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.58 °

Well	Adams D30-31D					
Well Position	+N/-S	0.0 ft	Northing:	1,318,082.43 ft	Latitude:	40.202993
	+E/-W	0.0 ft	Easting:	3,252,755.35 ft	Longitude:	-104.595088
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,782.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/31/2012	8.60	66.88	52,928

Design	Wellbore #1				
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	241.20	

Survey Program	Date	8/6/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
144.0	7,725.0	Survey #1 (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	
144.0	0.40	202.20	144.0	-0.5	-0.2	0.4	0.28	0.28	0.00	
236.0	0.80	234.90	236.0	-1.1	-0.8	1.3	0.56	0.43	35.54	
328.0	1.80	243.70	328.0	-2.1	-2.7	3.4	1.11	1.09	9.57	
420.0	3.20	243.00	419.9	-3.9	-6.2	7.4	1.52	1.52	-0.76	
511.0	4.90	238.20	510.6	-7.1	-11.8	13.8	1.90	1.87	-5.27	
613.0	5.90	240.30	612.2	-12.0	-20.1	23.4	1.00	0.98	2.06	
705.0	6.90	244.70	703.6	-16.7	-29.2	33.6	1.21	1.09	4.78	
750.0	7.20	243.20	748.3	-19.2	-34.1	39.1	0.78	0.67	-3.33	
800.0	7.30	239.80	797.9	-22.2	-39.7	45.5	0.88	0.20	-6.80	
881.0	8.70	245.30	878.1	-27.3	-49.7	56.7	1.97	1.73	6.79	
963.0	8.80	247.00	959.1	-32.4	-61.1	69.1	0.34	0.12	2.07	
1,045.0	9.70	251.20	1,040.1	-37.1	-73.4	82.2	1.37	1.10	5.12	

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Adams D30-31D
Project:	SEC.30-T3N-R64W	TVD Reference:	WELL @ 4795.0ft (Original Well Elev)
Site:	Dechant D30-17D Pad Sec.30-T3N-R64W	MD Reference:	WELL @ 4795.0ft (Original Well Elev)
Well:	Adams D30-31D	North Reference:	True
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)
1,126.0	10.80	250.90	1,119.8	-41.7	-87.0	96.4	1.36	1.36	-0.37
1,208.0	12.20	247.20	1,200.1	-47.6	-102.3	112.6	1.93	1.71	-4.51
1,290.0	13.60	244.60	1,280.1	-55.1	-119.0	130.8	1.85	1.71	-3.17
1,371.0	14.90	241.40	1,358.6	-64.2	-136.7	150.7	1.88	1.60	-3.95
1,453.0	16.40	241.20	1,437.5	-74.8	-156.1	172.9	1.83	1.83	-0.24
1,535.0	18.50	239.50	1,515.7	-87.0	-177.5	197.4	2.64	2.56	-2.07
1,616.0	20.00	236.60	1,592.2	-101.1	-200.1	224.1	2.20	1.85	-3.58
1,698.0	21.30	237.00	1,668.9	-117.0	-224.3	252.9	1.59	1.59	0.49
1,780.0	24.00	240.70	1,744.6	-133.2	-251.4	284.5	3.72	3.29	4.51
1,861.0	25.90	240.50	1,818.1	-150.0	-281.1	318.6	2.35	2.35	-0.25
1,943.0	25.80	237.50	1,891.9	-168.4	-311.8	354.3	1.60	-0.12	-3.66
2,025.0	27.20	237.70	1,965.2	-188.0	-342.7	390.9	1.71	1.71	0.24
2,106.0	27.90	238.60	2,037.1	-207.8	-374.5	428.3	1.01	0.86	1.11
2,188.0	27.30	237.70	2,109.7	-227.8	-406.8	466.2	0.89	-0.73	-1.10
2,270.0	28.10	241.40	2,182.3	-247.1	-439.6	504.3	2.31	0.98	4.51
2,351.0	27.70	242.10	2,253.9	-265.1	-473.0	542.2	0.64	-0.49	0.86
2,433.0	26.60	240.30	2,326.9	-283.1	-505.8	579.6	1.67	-1.34	-2.20
2,515.0	26.60	240.30	2,400.2	-301.3	-537.7	616.3	0.00	0.00	0.00
2,597.0	26.90	240.30	2,473.4	-319.6	-569.7	653.2	0.37	0.37	0.00
2,678.0	27.00	240.00	2,545.6	-337.8	-601.6	689.9	0.21	0.12	-0.37
2,760.0	27.90	240.50	2,618.4	-356.6	-634.4	727.7	1.13	1.10	0.61
2,842.0	29.40	241.70	2,690.4	-375.6	-668.8	767.0	1.96	1.83	1.46
2,923.0	29.00	242.60	2,761.1	-394.0	-703.8	806.5	0.73	-0.49	1.11
3,005.0	28.70	241.20	2,832.9	-412.7	-738.7	846.1	0.90	-0.37	-1.71
3,087.0	28.50	241.20	2,904.9	-431.6	-773.1	885.3	0.24	-0.24	0.00
3,168.0	28.50	241.70	2,976.1	-450.0	-807.0	924.0	0.29	0.00	0.62
3,250.0	28.20	243.90	3,048.2	-467.8	-841.6	962.9	1.33	-0.37	2.68
3,332.0	28.50	242.30	3,120.4	-485.5	-876.4	1,001.8	1.00	0.37	-1.95
3,413.0	27.40	240.70	3,191.9	-503.6	-909.7	1,039.8	1.64	-1.36	-1.98
3,495.0	26.00	241.40	3,265.2	-521.4	-942.0	1,076.6	1.75	-1.71	0.85
3,577.0	25.80	239.80	3,339.0	-539.0	-973.2	1,112.4	0.89	-0.24	-1.95
3,658.0	25.40	239.10	3,412.0	-556.8	-1,003.3	1,147.4	0.62	-0.49	-0.86
3,740.0	26.60	242.40	3,485.7	-574.3	-1,034.7	1,183.4	2.29	1.46	4.02
3,822.0	27.00	240.70	3,558.9	-591.9	-1,067.2	1,220.3	1.05	0.49	-2.07
3,903.0	26.20	238.90	3,631.3	-610.2	-1,098.5	1,256.6	1.40	-0.99	-2.22
3,985.0	26.60	241.90	3,704.8	-628.2	-1,130.2	1,293.0	1.70	0.49	3.66
4,067.0	28.70	237.00	3,777.4	-647.5	-1,162.9	1,331.0	3.77	2.56	-5.98
4,148.0	29.90	237.40	3,848.1	-669.0	-1,196.2	1,370.6	1.50	1.48	0.49
4,230.0	29.60	236.80	3,919.3	-691.1	-1,230.4	1,411.2	0.52	-0.37	-0.73
4,312.0	28.80	238.20	3,990.8	-712.6	-1,264.1	1,451.1	1.28	-0.98	1.71
4,393.0	27.50	239.50	4,062.3	-732.4	-1,296.8	1,489.2	1.77	-1.60	1.60
4,475.0	26.60	243.20	4,135.3	-750.3	-1,329.5	1,526.5	2.33	-1.10	4.51
4,557.0	28.30	243.50	4,208.1	-767.2	-1,363.3	1,564.3	2.08	2.07	0.37
4,639.0	29.10	245.10	4,280.0	-784.3	-1,398.8	1,603.6	1.35	0.98	1.95
4,720.0	29.00	245.60	4,350.8	-800.7	-1,434.5	1,642.8	0.32	-0.12	0.62
4,802.0	27.80	245.60	4,422.9	-816.8	-1,470.1	1,681.7	1.46	-1.46	0.00
4,884.0	27.70	244.70	4,495.5	-832.8	-1,504.7	1,719.8	0.53	-0.12	-1.10
4,965.0	26.20	244.20	4,567.7	-848.7	-1,537.8	1,756.5	1.87	-1.85	-0.62
5,047.0	24.30	243.30	4,641.9	-864.1	-1,569.2	1,791.4	2.36	-2.32	-1.10
5,129.0	22.80	239.10	4,717.0	-879.9	-1,597.9	1,824.1	2.74	-1.83	-5.12
5,210.0	21.10	237.50	4,792.2	-895.8	-1,623.7	1,854.4	2.22	-2.10	-1.98
5,292.0	20.40	237.40	4,868.8	-911.4	-1,648.2	1,883.4	0.85	-0.85	-0.12
5,374.0	19.40	237.00	4,945.9	-926.5	-1,671.6	1,911.2	1.23	-1.22	-0.49
5,455.0	20.70	239.60	5,022.0	-941.1	-1,695.3	1,938.9	1.95	1.60	3.21

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Adams D30-31D
Project:	SEC.30-T3N-R64W	TVD Reference:	WELL @ 4795.0ft (Original Well Elev)
Site:	Dechant D30-17D Pad Sec.30-T3N-R64W	MD Reference:	WELL @ 4795.0ft (Original Well Elev)
Well:	Adams D30-31D	North Reference:	True
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)
5,537.0	19.50	240.30	5,099.0	-955.2	-1,719.6	1,967.1	1.49	-1.46	0.85
5,619.0	17.20	240.90	5,176.9	-967.9	-1,742.1	1,992.9	2.81	-2.80	0.73
5,700.0	17.90	243.20	5,254.1	-979.3	-1,763.7	2,017.3	1.22	0.86	2.84
5,782.0	15.30	240.90	5,332.7	-990.3	-1,784.4	2,040.8	3.27	-3.17	-2.80
5,864.0	13.70	246.30	5,412.1	-999.4	-1,802.8	2,061.3	2.55	-1.95	6.59
5,945.0	13.50	244.40	5,490.8	-1,007.4	-1,820.1	2,080.2	0.60	-0.25	-2.35
6,027.0	14.30	246.80	5,570.4	-1,015.5	-1,838.0	2,099.9	1.20	0.98	2.93
6,109.0	12.10	246.50	5,650.2	-1,022.9	-1,855.2	2,118.5	2.68	-2.68	-0.37
6,190.0	11.30	243.70	5,729.5	-1,029.8	-1,870.1	2,134.9	1.21	-0.99	-3.46
6,272.0	10.50	240.50	5,810.1	-1,037.1	-1,883.8	2,150.4	1.22	-0.98	-3.90
6,354.0	8.50	237.40	5,890.9	-1,044.0	-1,895.4	2,163.9	2.52	-2.44	-3.78
6,435.0	6.90	235.20	5,971.2	-1,050.0	-1,904.5	2,174.7	2.01	-1.98	-2.72
6,517.0	5.40	240.30	6,052.7	-1,054.7	-1,911.9	2,183.5	1.95	-1.83	6.22
6,599.0	3.20	275.30	6,134.5	-1,056.4	-1,917.5	2,189.2	4.06	-2.68	42.68
6,664.5	1.43	284.76	6,199.9	-1,056.1	-1,920.1	2,191.3	2.76	-2.71	14.45
TARGET BHL 1200'FNL & 225'FWL									
6,681.0	1.00	292.40	6,216.4	-1,055.9	-1,920.4	2,191.6	2.76	-2.59	46.16
6,762.0	0.90	290.10	6,297.4	-1,055.5	-1,921.7	2,192.5	0.13	-0.12	-2.84
6,844.0	0.40	75.30	6,379.4	-1,055.2	-1,922.0	2,192.6	1.52	-0.61	177.07
6,926.0	0.30	72.30	6,461.4	-1,055.0	-1,921.5	2,192.1	0.12	-0.12	-3.66
7,007.0	0.30	58.60	6,542.4	-1,054.9	-1,921.1	2,191.7	0.09	0.00	-16.91
7,089.0	0.30	100.90	6,624.4	-1,054.8	-1,920.7	2,191.3	0.26	0.00	51.59
7,171.0	0.30	79.30	6,706.4	-1,054.8	-1,920.3	2,190.9	0.14	0.00	-26.34
7,200.6	0.27	96.87	6,736.0	-1,054.8	-1,920.2	2,190.8	0.31	-0.09	59.38
TARGET CIRCLE 1200'FNL & 225'FWL									
7,252.0	0.30	128.50	6,787.4	-1,054.9	-1,920.0	2,190.7	0.31	0.05	61.53
7,334.0	0.20	195.40	6,869.4	-1,055.1	-1,919.8	2,190.7	0.35	-0.12	81.59
7,416.0	0.30	239.50	6,951.4	-1,055.4	-1,920.0	2,191.0	0.26	0.12	53.78
7,497.0	0.30	135.70	7,032.4	-1,055.7	-1,920.1	2,191.1	0.58	0.00	-128.15
7,579.0	0.30	171.10	7,114.4	-1,056.0	-1,919.9	2,191.2	0.22	0.00	43.17
7,653.5	0.44	194.69	7,188.9	-1,056.5	-1,919.9	2,191.4	0.27	0.19	31.68
HARDLINE 225'W OF BHL									
7,680.0	0.50	199.60	7,215.4	-1,056.7	-1,920.0	2,191.6	0.27	0.23	18.50
7,725.0	0.50	228.10	7,260.4	-1,057.0	-1,920.2	2,191.9	0.55	0.00	63.33

Checked By: _____	Approved By: _____	Date: _____
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