





-  Easton G12-32D, Wellbore #1, Noble Easton G12-32D Plan #2 (12-2-10) V0
 Klein 12-1 (Exist.), Wellbore #1, Design #1 V0
 Wellbore #1
 Survey #1

Projected Final Survey -
7560'MD & 7266'TVD @ 1576'VS
3.3 deg Inc 297.5 deg AZ

Project: SEC.12-T4N-R65W
Site: Easton G12-20D Pad Sec.12-T4N-R65W
Well: Easton G12-32D
Plan: Wellbore #1

Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.12-T4N-R65W
Site: Easton G12-20D Pad Sec.12-T4N-R65W
Well: Easton G12-32D
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Site Easton G12-20D Pad Sec.12-T4N-R65W
TVD Reference: WELL @ 4773.0ft (Original Well Elev)
MD Reference: WELL @ 4773.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Landmark

Project	SEC.12-T4N-R65W, 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 Easton G12-20D Pad Sec.12-T4N-R65W

Site Position:		Northing:	1,364,325.58ft	Latitude:	40° 19' 48.396 N
From:	Lat/Long	Easting:	3,246,176.89ft	Longitude:	104° 37' 1.164 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.57 °

Well	Easton G12-32D				
Well Position	+N/-S	25.5 ft	Northing:	1,364,351.01 ft	Latitude: 40° 19' 48.648 N
	+E/-W	-5.6 ft	Easting:	3,246,171.06 ft	Longitude: 104° 37' 1.236 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level: 4,760.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/24/2010	8.85	67.04	53,170

Design Wellbore #1

Audit Notes:

Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
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Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	25.5	-5.6	217.43

Survey Program Date 5/23/2011

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
719.0	7,560.0	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	25.5	-5.6	0.0	0.00	0.00	0.00
719.0	0.30	308.10	719.0	26.7	-7.1	0.0	0.04	0.04	0.00
782.0	0.40	284.30	782.0	26.8	-7.4	0.1	0.28	0.16	-37.78
875.0	0.70	256.40	875.0	26.8	-8.3	0.6	0.42	0.32	-30.00
969.0	2.20	218.20	969.0	25.2	-9.9	2.9	1.81	1.60	-40.64
1,062.0	4.40	215.20	1,061.8	20.9	-13.1	8.2	2.37	2.37	-3.23
1,155.0	5.90	210.90	1,154.4	13.9	-17.6	16.5	1.66	1.61	-4.62
1,249.0	7.70	206.30	1,247.8	4.1	-22.9	27.5	2.00	1.91	-4.89
1,345.0	8.90	206.30	1,342.8	-8.4	-29.0	41.1	1.25	1.25	0.00
1,440.0	10.80	209.60	1,436.3	-22.7	-36.7	57.2	2.09	2.00	3.47
1,533.0	11.90	209.20	1,527.5	-38.6	-45.7	75.3	1.19	1.18	-0.43
1,627.0	12.90	207.80	1,619.3	-56.4	-55.3	95.2	1.11	1.06	-1.49
1,721.0	15.60	203.30	1,710.4	-77.3	-65.2	117.8	3.10	2.87	-4.79

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 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)
1,814.0	17.40	204.10	1,799.6	-101.4	-75.8	143.5	1.95	1.94	0.86
1,907.0	19.30	204.60	1,887.9	-128.1	-87.9	172.0	2.05	2.04	0.54
2,001.0	21.20	206.70	1,976.1	-157.4	-102.0	203.8	2.16	2.02	2.23
2,094.0	22.20	206.00	2,062.5	-188.2	-117.2	237.6	1.11	1.08	-0.75
2,188.0	22.90	209.30	2,149.3	-220.2	-134.0	273.1	1.54	0.74	3.51
2,281.0	22.30	209.60	2,235.1	-251.3	-151.5	308.5	0.66	-0.65	0.32
2,375.0	21.80	208.60	2,322.3	-282.1	-168.7	343.4	0.67	-0.53	-1.06
2,469.0	22.50	208.40	2,409.3	-313.3	-185.6	378.4	0.75	0.74	-0.21
2,562.0	22.70	208.10	2,495.2	-344.7	-202.5	413.7	0.25	0.22	-0.32
2,656.0	23.20	207.00	2,581.7	-377.2	-219.5	449.8	0.70	0.53	-1.17
2,749.0	24.60	205.20	2,666.8	-411.1	-236.0	486.7	1.70	1.51	-1.94
2,842.0	25.70	206.30	2,751.0	-446.7	-253.2	525.5	1.29	1.18	1.18
2,937.0	25.20	205.30	2,836.7	-483.4	-271.0	565.4	0.69	-0.53	-1.05
3,031.0	25.70	207.70	2,921.6	-519.6	-289.0	605.1	1.22	0.53	2.55
3,126.0	22.90	205.50	3,008.2	-554.5	-306.6	643.5	3.10	-2.95	-2.32
3,219.0	24.60	209.40	3,093.3	-587.7	-323.9	680.4	2.49	1.83	4.19
3,313.0	22.30	210.60	3,179.5	-620.1	-342.5	717.5	2.50	-2.45	1.28
3,406.0	20.60	210.20	3,266.1	-649.4	-359.8	751.2	1.83	-1.83	-0.43
3,499.0	23.20	210.90	3,352.4	-679.3	-377.4	785.6	2.81	2.80	0.75
3,593.0	22.10	213.00	3,439.1	-710.0	-396.5	821.7	1.45	-1.17	2.23
3,687.0	21.50	217.10	3,526.4	-738.6	-416.6	856.5	1.74	-0.64	4.36
3,781.0	20.50	220.60	3,614.2	-764.8	-437.7	890.2	1.71	-1.06	3.72
3,874.0	22.70	230.90	3,700.7	-788.5	-462.2	923.9	4.71	2.37	11.08
3,967.0	23.30	229.80	3,786.3	-811.7	-490.2	959.3	0.79	0.65	-1.18
4,057.0	23.60	229.40	3,868.8	-834.9	-517.4	994.3	0.38	0.33	-0.44
4,152.0	22.80	229.00	3,956.2	-859.4	-545.8	1,031.0	0.86	-0.84	-0.42
4,245.0	22.20	228.40	4,042.1	-882.8	-572.5	1,065.9	0.69	-0.65	-0.65
4,340.0	21.40	227.60	4,130.3	-906.4	-598.7	1,100.6	0.90	-0.84	-0.84
4,433.0	23.70	228.00	4,216.2	-930.4	-625.2	1,135.6	2.48	2.47	0.43
4,527.0	22.20	229.40	4,302.7	-954.6	-652.7	1,171.6	1.70	-1.60	1.49
4,620.0	22.30	229.50	4,388.8	-977.5	-679.4	1,206.0	0.11	0.11	0.11
4,714.0	23.40	228.00	4,475.4	-1,001.6	-706.9	1,241.8	1.32	1.17	-1.60
4,808.0	22.70	226.80	4,561.9	-1,026.5	-734.0	1,278.1	0.90	-0.74	-1.28
4,902.0	21.50	226.70	4,649.0	-1,050.7	-759.7	1,313.0	1.28	-1.28	-0.11
4,996.0	22.90	228.80	4,736.0	-1,074.6	-786.0	1,347.9	1.71	1.49	2.23
5,090.0	21.30	227.90	4,823.1	-1,098.1	-812.5	1,382.6	1.74	-1.70	-0.96
5,183.0	19.40	228.70	4,910.3	-1,119.6	-836.6	1,414.4	2.06	-2.04	0.86
5,276.0	19.20	229.90	4,998.1	-1,139.6	-859.9	1,444.5	0.48	-0.22	1.29
5,370.0	17.70	229.70	5,087.3	-1,158.8	-882.6	1,473.5	1.60	-1.60	-0.21
5,464.0	14.30	230.70	5,177.6	-1,175.4	-902.5	1,498.8	3.63	-3.62	1.06
5,557.0	12.70	231.00	5,268.0	-1,189.1	-919.3	1,519.9	1.72	-1.72	0.32
5,649.0	10.50	229.50	5,358.2	-1,200.9	-933.6	1,537.9	2.41	-2.39	-1.63
5,743.0	8.70	227.60	5,450.8	-1,211.3	-945.3	1,553.3	1.94	-1.91	-2.02
5,837.0	6.30	226.00	5,544.0	-1,219.7	-954.3	1,565.4	2.56	-2.55	-1.70
5,930.0	4.80	230.30	5,636.6	-1,225.7	-961.0	1,574.2	1.67	-1.61	4.62
6,024.0	1.40	245.30	5,730.4	-1,228.7	-965.0	1,579.1	3.69	-3.62	15.96
6,117.0	0.40	264.20	5,823.4	-1,229.2	-966.4	1,580.3	1.11	-1.08	20.32
6,210.0	0.10	345.90	5,916.4	-1,229.2	-966.7	1,580.5	0.43	-0.32	87.85
6,293.5	0.36	18.73	6,000.0	-1,228.8	-966.7	1,580.2	0.34	0.32	39.29
TARGET BHL 2550'FSL, 125'FWL									
6,304.0	0.40	19.70	6,010.4	-1,228.8	-966.6	1,580.1	0.34	0.34	9.30
6,399.0	0.50	51.60	6,105.4	-1,228.2	-966.2	1,579.4	0.28	0.11	33.58
6,492.0	0.80	80.30	6,198.4	-1,227.8	-965.2	1,578.5	0.47	0.32	30.86
6,586.0	0.90	77.80	6,292.4	-1,227.6	-963.9	1,577.5	0.11	0.11	-2.66

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6,680.0	1.10	68.30	6,386.4	-1,227.1	-962.3	1,576.2	0.28	0.21	-10.11
6,774.0	1.40	65.00	6,480.4	-1,226.3	-960.4	1,574.4	0.33	0.32	-3.51
6,867.0	0.70	51.40	6,573.4	-1,225.4	-959.0	1,572.8	0.79	-0.75	-14.62
6,960.0	1.00	76.40	6,666.3	-1,224.9	-957.7	1,571.6	0.51	0.32	26.88
7,054.0	1.50	88.40	6,760.3	-1,224.7	-955.7	1,570.2	0.60	0.53	12.77
7,080.5	1.12	93.82	6,786.8	-1,224.7	-955.1	1,569.9	1.51	-1.43	20.46
TARGET CIRCLE 2550'FSL, 125'FWL									
7,147.0	0.40	156.60	6,853.3	-1,224.9	-954.4	1,569.6	1.51	-1.08	94.40
7,240.0	1.90	250.80	6,946.3	-1,225.7	-955.7	1,571.0	2.12	1.61	101.29
7,334.0	2.60	284.60	7,040.2	-1,225.7	-959.2	1,573.2	1.56	0.74	35.96
7,427.0	2.80	295.20	7,133.1	-1,224.2	-963.3	1,574.5	0.58	0.22	11.40
7,510.0	3.30	297.50	7,216.0	-1,222.2	-967.3	1,575.3	0.62	0.60	2.77
7,555.7	3.30	297.50	7,261.6	-1,221.0	-969.6	1,575.8	0.00	0.00	0.00
HARD LINES 95'N & 125'W of BHL									
7,560.0	3.30	297.50	7,265.9	-1,220.9	-969.8	1,575.8	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____