



Noble Energy (Rockies)

Garfield County, CO (NAD 83)

Sec. 35-T7S-R95W (BM 35C PAD)

BM 35-32C

BM 35-32C

Plan: BM 35-32C Proposal 2.0

Standard Proposal Report

13 February, 2010



HALLIBURTON
Sperry Drilling Services

Project: Garfield County, CO (NAD 83)
Site: Sec. 35-T7S-R95W (BM 35C PAD)
Well: BM 35-32C
Wellbore: BM 35-32C
Plan: BM 35-32C Proposal 2.0

Noble Energy (Rockies)

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
225.00	0.00	0.00	225.00	0.00	0.00	0.00	0.00	0.00
1043.78	16.38	139.90	1032.68	-88.89	74.86	2.00	139.90	-88.89
6196.21	16.38	139.90	5976.09	-1200.04	1010.55	0.00	0.00	-1200.04
7287.92	0.00	2.43	7053.00	-1318.57	1110.36	1.50	180.00	-1318.57
11387.92	0.00	2.43	11153.00	-1318.57	1110.36	0.00	0.00	-1318.57

BM 35-32C

WELL DETAILS: BM 35-32C

Ground Level:	9233.00
Latitude	39° 23' 55.804 N
Longitude	107° 57' 59.735 W
Northing	1579617.90
Easting	2303051.00

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
7101.00	7335.92	Williams Fork
8083.00	8317.92	Top of Gas
9644.00	9878.92	Cameo
10017.00	10251.92	Rollins
10365.00	10599.92	Cozzette
10662.00	10896.92	Corcoran
10903.00	11137.92	Mancos

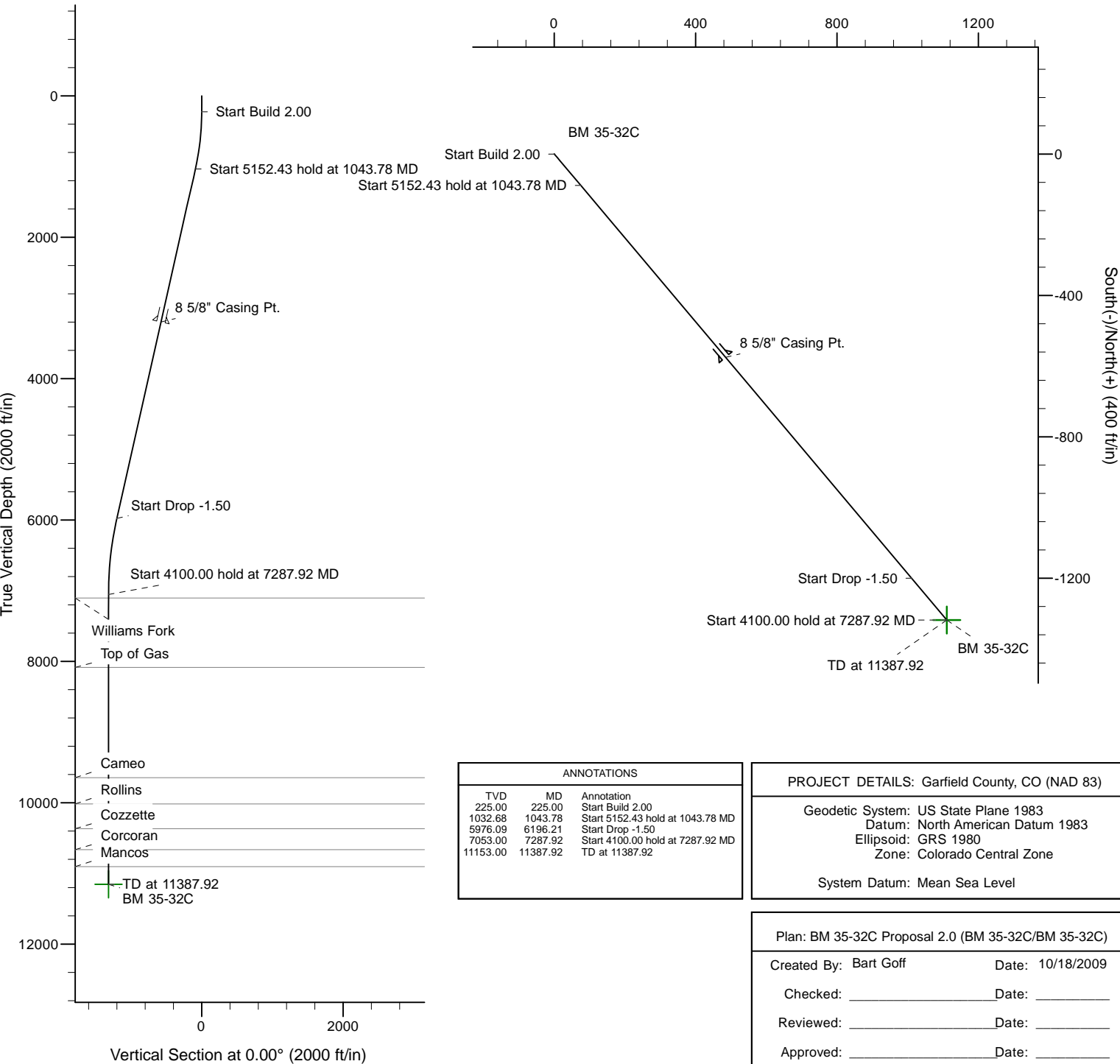


Azimuths to Grid North
True North: 1.56°
Magnetic North: 12.11°
Magnetic Field
Strength: 52369.8nT
Dip Angle: 65.74°
Date: 8/25/2009
Model: BGGM2009

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape Point
BM 35-32C	11153.00	-1318.57	1110.36	

West(-)/East(+) (400 ft/in)



ANNOTATIONS

TVD	MD	Annotation
225.00	225.00	Start Build 2.00
1032.68	1043.78	Start 5152.43 hold at 1043.78 MD
5976.09	6196.21	Start Drop -1.50
7053.00	7287.92	Start 4100.00 hold at 7287.92 MD
11153.00	11387.92	TD at 11387.92

PROJECT DETAILS: Garfield County, CO (NAD 83)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Central Zone

System Datum: Mean Sea Level

Plan: BM 35-32C Proposal 2.0 (BM 35-32C/BM 35-32C)

Created By: Bart Goff Date: 10/18/2009
Checked: _____ Date: _____
Reviewed: _____ Date: _____
Approved: _____ Date: _____

Database:	.Sperry EDM .16 PRD	Local Co-ordinate Reference:	Well BM 35-32C
Company:	Noble Energy (Rockies)	TVD Reference:	RKB - 24' @ 9257.00ft
Project:	Garfield County, CO (NAD 83)	MD Reference:	RKB - 24' @ 9257.00ft
Site:	Sec. 35-T7S-R95W (BM 35C PAD)	North Reference:	Grid
Well:	BM 35-32C	Survey Calculation Method:	Minimum Curvature
Wellbore:	BM 35-32C		
Design:	BM 35-32C Proposal 2.0		

Project	Garfield County, CO (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		Using geodetic scale factor

Site	Sec. 35-T7S-R95W (BM 35C PAD)				
Site Position:		Northing:	1,579,611.24 ft	Latitude:	39° 23' 55.737 N
From:	Map	Easting:	2,303,047.45 ft	Longitude:	107° 57' 59.778 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	-1.56 °

Well	BM 35-32C					
Well Position	+N/-S	0.00 ft	Northing:	1,579,617.90 ft	Latitude:	39° 23' 55.804 N
	+E/-W	0.00 ft	Easting:	2,303,051.00 ft	Longitude:	107° 57' 59.735 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	9,257.00 ft	Ground Level:	9,233.00 ft

Wellbore	BM 35-32C				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2009	8/25/2009	10.56	65.74	52,370

Design	BM 35-32C Proposal 2.0			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	0.00

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	TVD System ft	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Tool Face (°)
0.00	0.00	0.00	0.00	-9,257.00	0.00	0.00	0.00	0.00	0.00	0.00
225.00	0.00	0.00	225.00	-9,032.00	0.00	0.00	0.00	0.00	0.00	0.00
1,043.78	16.38	139.90	1,032.68	-8,224.32	-88.89	74.86	2.00	2.00	0.00	139.90
6,196.21	16.38	139.90	5,976.09	-3,280.91	-1,200.04	1,010.55	0.00	0.00	0.00	0.00
7,287.92	0.00	2.43	7,053.00	-2,204.00	-1,318.57	1,110.36	1.50	-1.50	0.00	180.00
11,387.92	0.00	2.43	11,153.00	1,896.00	-1,318.57	1,110.36	0.00	0.00	0.00	0.00

Database:	.Sperry EDM .16 PRD	Local Co-ordinate Reference:	Well BM 35-32C
Company:	Noble Energy (Rockies)	TVD Reference:	RKB - 24' @ 9257.00ft
Project:	Garfield County, CO (NAD 83)	MD Reference:	RKB - 24' @ 9257.00ft
Site:	Sec. 35-T7S-R95W (BM 35C PAD)	North Reference:	Grid
Well:	BM 35-32C	Survey Calculation Method:	Minimum Curvature
Wellbore:	BM 35-32C		
Design:	BM 35-32C Proposal 2.0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	TVDss ft	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	DLS -9,257.00	Vert Section
0.00	0.00	0.00	0.00	-9,257.00	0.00	0.00	1,579,617.90	2,303,051.00	0.00	0.00
100.00	0.00	0.00	100.00	-9,157.00	0.00	0.00	1,579,617.90	2,303,051.00	0.00	0.00
200.00	0.00	0.00	200.00	-9,057.00	0.00	0.00	1,579,617.90	2,303,051.00	0.00	0.00
225.00	0.00	0.00	225.00	-9,032.00	0.00	0.00	1,579,617.90	2,303,051.00	0.00	0.00
Start Build 2.00										
300.00	1.50	139.90	299.99	-8,957.01	-0.75	0.63	1,579,617.15	2,303,051.63	2.00	-0.75
400.00	3.50	139.90	399.89	-8,857.11	-4.09	3.44	1,579,613.81	2,303,054.44	2.00	-4.09
500.00	5.50	139.90	499.58	-8,757.42	-10.09	8.50	1,579,607.81	2,303,059.49	2.00	-10.09
600.00	7.50	139.90	598.93	-8,658.07	-18.75	15.79	1,579,599.15	2,303,066.79	2.00	-18.75
700.00	9.50	139.90	697.83	-8,559.17	-30.05	25.31	1,579,587.85	2,303,076.31	2.00	-30.05
800.00	11.50	139.90	796.15	-8,460.85	-43.99	37.04	1,579,573.91	2,303,088.04	2.00	-43.99
900.00	13.50	139.90	893.77	-8,363.23	-60.55	50.99	1,579,557.36	2,303,101.98	2.00	-60.55
1,000.00	15.50	139.90	990.58	-8,266.42	-79.70	67.11	1,579,538.21	2,303,118.11	2.00	-79.70
1,043.78	16.38	139.90	1,032.68	-8,224.32	-88.89	74.86	1,579,529.01	2,303,125.85	2.00	-88.89
Start 5152.43 hold at 1043.78 MD										
1,100.00	16.38	139.90	1,086.62	-8,170.38	-101.02	85.07	1,579,516.89	2,303,136.06	0.00	-101.02
1,200.00	16.38	139.90	1,182.56	-8,074.44	-122.58	103.23	1,579,495.32	2,303,154.22	0.00	-122.58
1,300.00	16.38	139.90	1,278.50	-7,978.50	-144.15	121.39	1,579,473.76	2,303,172.38	0.00	-144.15
1,400.00	16.38	139.90	1,374.45	-7,882.55	-165.71	139.55	1,579,452.19	2,303,190.54	0.00	-165.71
1,500.00	16.38	139.90	1,470.39	-7,786.61	-187.28	157.71	1,579,430.63	2,303,208.70	0.00	-187.28
1,600.00	16.38	139.90	1,566.33	-7,690.67	-208.84	175.87	1,579,409.07	2,303,226.86	0.00	-208.84
1,700.00	16.38	139.90	1,662.28	-7,594.72	-230.41	194.03	1,579,387.50	2,303,245.02	0.00	-230.41
1,800.00	16.38	139.90	1,758.22	-7,498.78	-251.98	212.19	1,579,365.94	2,303,263.18	0.00	-251.98
1,900.00	16.38	139.90	1,854.16	-7,402.84	-273.54	230.35	1,579,344.37	2,303,281.34	0.00	-273.54
2,000.00	16.38	139.90	1,950.11	-7,306.89	-295.11	248.51	1,579,322.81	2,303,299.50	0.00	-295.11
2,100.00	16.38	139.90	2,046.05	-7,210.95	-316.67	266.67	1,579,301.24	2,303,317.65	0.00	-316.67
2,200.00	16.38	139.90	2,141.99	-7,115.01	-338.24	284.83	1,579,279.68	2,303,335.81	0.00	-338.24
2,300.00	16.38	139.90	2,237.94	-7,019.06	-359.80	302.99	1,579,258.11	2,303,353.97	0.00	-359.80
2,400.00	16.38	139.90	2,333.88	-6,923.12	-381.37	321.15	1,579,236.55	2,303,372.13	0.00	-381.37
2,500.00	16.38	139.90	2,429.83	-6,827.17	-402.93	339.31	1,579,214.99	2,303,390.29	0.00	-402.93
2,600.00	16.38	139.90	2,525.77	-6,731.23	-424.50	357.47	1,579,193.42	2,303,408.45	0.00	-424.50
2,700.00	16.38	139.90	2,621.71	-6,635.29	-446.07	375.63	1,579,171.86	2,303,426.61	0.00	-446.07
2,800.00	16.38	139.90	2,717.66	-6,539.34	-467.63	393.79	1,579,150.29	2,303,444.77	0.00	-467.63
2,900.00	16.38	139.90	2,813.60	-6,443.40	-489.20	411.95	1,579,128.73	2,303,462.93	0.00	-489.20
3,000.00	16.38	139.90	2,909.54	-6,347.46	-510.76	430.11	1,579,107.16	2,303,481.09	0.00	-510.76
3,100.00	16.38	139.90	3,005.49	-6,251.51	-532.33	448.27	1,579,085.60	2,303,499.25	0.00	-532.33
3,200.00	16.38	139.90	3,101.43	-6,155.57	-553.89	466.43	1,579,064.03	2,303,517.41	0.00	-553.89
3,300.00	16.38	139.90	3,197.37	-6,059.63	-575.46	484.59	1,579,042.47	2,303,535.57	0.00	-575.46
8 5/8" Casing Pt.										
3,400.00	16.38	139.90	3,293.32	-5,963.68	-597.02	502.75	1,579,020.91	2,303,553.72	0.00	-597.02
3,500.00	16.38	139.90	3,389.26	-5,867.74	-618.59	520.91	1,578,999.34	2,303,571.88	0.00	-618.59
3,600.00	16.38	139.90	3,485.20	-5,771.80	-640.16	539.07	1,578,977.78	2,303,590.04	0.00	-640.16
3,700.00	16.38	139.90	3,581.15	-5,675.85	-661.72	557.23	1,578,956.21	2,303,608.20	0.00	-661.72
3,800.00	16.38	139.90	3,677.09	-5,579.91	-683.29	575.39	1,578,934.65	2,303,626.36	0.00	-683.29
3,900.00	16.38	139.90	3,773.03	-5,483.97	-704.85	593.55	1,578,913.08	2,303,644.52	0.00	-704.85

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Project:	Garfield County, CO (NAD 83)	MD Reference:	RKB - 24' @ 9257.00ft
Site:	Sec. 35-T7S-R95W (BM 35C PAD)	North Reference:	Grid
Well:	BM 35-32C	Survey Calculation Method:	Minimum Curvature
Wellbore:	BM 35-32C		
Design:	BM 35-32C Proposal 2.0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	TVDss ft	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	DLS -5,388.02	Vert Section
4,000.00	16.38	139.90	3,868.98	-5,388.02	-726.42	611.71	1,578,891.52	2,303,662.68	0.00	-726.42
4,100.00	16.38	139.90	3,964.92	-5,292.08	-747.98	629.87	1,578,869.95	2,303,680.84	0.00	-747.98
4,200.00	16.38	139.90	4,060.86	-5,196.14	-769.55	648.03	1,578,848.39	2,303,699.00	0.00	-769.55
4,300.00	16.38	139.90	4,156.81	-5,100.19	-791.11	666.19	1,578,826.83	2,303,717.16	0.00	-791.11
4,400.00	16.38	139.90	4,252.75	-5,004.25	-812.68	684.35	1,578,805.26	2,303,735.32	0.00	-812.68
4,500.00	16.38	139.90	4,348.69	-4,908.31	-834.25	702.51	1,578,783.70	2,303,753.48	0.00	-834.25
4,600.00	16.38	139.90	4,444.64	-4,812.36	-855.81	720.67	1,578,762.13	2,303,771.64	0.00	-855.81
4,700.00	16.38	139.90	4,540.58	-4,716.42	-877.38	738.83	1,578,740.57	2,303,789.80	0.00	-877.38
4,800.00	16.38	139.90	4,636.52	-4,620.48	-898.94	756.99	1,578,719.00	2,303,807.95	0.00	-898.94
4,900.00	16.38	139.90	4,732.47	-4,524.53	-920.51	775.15	1,578,697.44	2,303,826.11	0.00	-920.51
5,000.00	16.38	139.90	4,828.41	-4,428.59	-942.07	793.31	1,578,675.87	2,303,844.27	0.00	-942.07
5,100.00	16.38	139.90	4,924.35	-4,332.65	-963.64	811.47	1,578,654.31	2,303,862.43	0.00	-963.64
5,200.00	16.38	139.90	5,020.30	-4,236.70	-985.20	829.63	1,578,632.75	2,303,880.59	0.00	-985.20
5,300.00	16.38	139.90	5,116.24	-4,140.76	-1,006.77	847.79	1,578,611.18	2,303,898.75	0.00	-1,006.77
5,400.00	16.38	139.90	5,212.18	-4,044.82	-1,028.34	865.95	1,578,589.62	2,303,916.91	0.00	-1,028.34
5,500.00	16.38	139.90	5,308.13	-3,948.87	-1,049.90	884.11	1,578,568.05	2,303,935.07	0.00	-1,049.90
5,600.00	16.38	139.90	5,404.07	-3,852.93	-1,071.47	902.27	1,578,546.49	2,303,953.23	0.00	-1,071.47
5,700.00	16.38	139.90	5,500.01	-3,756.99	-1,093.03	920.44	1,578,524.92	2,303,971.39	0.00	-1,093.03
5,800.00	16.38	139.90	5,595.96	-3,661.04	-1,114.60	938.60	1,578,503.36	2,303,989.55	0.00	-1,114.60
5,900.00	16.38	139.90	5,691.90	-3,565.10	-1,136.16	956.76	1,578,481.79	2,304,007.71	0.00	-1,136.16
6,000.00	16.38	139.90	5,787.84	-3,469.16	-1,157.73	974.92	1,578,460.23	2,304,025.87	0.00	-1,157.73
6,100.00	16.38	139.90	5,883.79	-3,373.21	-1,179.29	993.08	1,578,438.67	2,304,044.03	0.00	-1,179.29
6,196.21	16.38	139.90	5,976.09	-3,280.91	-1,200.04	1,010.55	1,578,417.92	2,304,061.50	0.00	-1,200.04
Start Drop -1.50										
6,200.00	16.32	139.90	5,979.73	-3,277.27	-1,200.86	1,011.23	1,578,417.10	2,304,062.18	1.50	-1,200.86
6,300.00	14.82	139.90	6,076.06	-3,180.94	-1,221.39	1,028.52	1,578,396.57	2,304,079.47	1.50	-1,221.39
6,400.00	13.32	139.90	6,173.06	-3,083.94	-1,239.98	1,044.18	1,578,377.98	2,304,095.13	1.50	-1,239.98
6,500.00	11.82	139.90	6,270.66	-2,986.34	-1,256.63	1,058.20	1,578,361.34	2,304,109.14	1.50	-1,256.63
6,600.00	10.32	139.90	6,368.79	-2,888.21	-1,271.31	1,070.56	1,578,346.65	2,304,121.51	1.50	-1,271.31
6,700.00	8.82	139.90	6,467.40	-2,789.60	-1,284.03	1,081.27	1,578,333.94	2,304,132.22	1.50	-1,284.03
6,800.00	7.32	139.90	6,566.41	-2,690.59	-1,294.76	1,090.31	1,578,323.20	2,304,141.26	1.50	-1,294.76
6,900.00	5.82	139.90	6,665.75	-2,591.25	-1,303.51	1,097.68	1,578,314.45	2,304,148.62	1.50	-1,303.51
7,000.00	4.32	139.90	6,765.35	-2,491.65	-1,310.27	1,103.37	1,578,307.70	2,304,154.31	1.50	-1,310.27
7,100.00	2.82	139.90	6,865.16	-2,391.84	-1,315.03	1,107.38	1,578,302.93	2,304,158.32	1.50	-1,315.03
7,200.00	1.32	139.90	6,965.09	-2,291.91	-1,317.79	1,109.70	1,578,300.17	2,304,160.65	1.50	-1,317.79
7,287.92	0.00	2.43	7,053.00	-2,204.00	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	1.50	-1,318.57
Start 4100.00 hold at 7287.92 MD										
7,300.00	0.00	2.43	7,065.08	-2,191.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
7,335.92	0.00	2.43	7,101.00	-2,156.00	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
Williams Fork										
7,400.00	0.00	2.43	7,165.08	-2,091.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
7,500.00	0.00	2.43	7,265.08	-1,991.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
7,600.00	0.00	2.43	7,365.08	-1,891.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
7,700.00	0.00	2.43	7,465.08	-1,791.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
7,800.00	0.00	2.43	7,565.08	-1,691.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57

Database:	.Sperry EDM .16 PRD	Local Co-ordinate Reference:	Well BM 35-32C
Company:	Noble Energy (Rockies)	TVD Reference:	RKB - 24' @ 9257.00ft
Project:	Garfield County, CO (NAD 83)	MD Reference:	RKB - 24' @ 9257.00ft
Site:	Sec. 35-T7S-R95W (BM 35C PAD)	North Reference:	Grid
Well:	BM 35-32C	Survey Calculation Method:	Minimum Curvature
Wellbore:	BM 35-32C		
Design:	BM 35-32C Proposal 2.0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	TVDss ft	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	DLS -1,591.92	Vert Section
7,900.00	0.00	2.43	7,665.08	-1,591.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
8,000.00	0.00	2.43	7,765.08	-1,491.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
8,100.00	0.00	2.43	7,865.08	-1,391.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
8,200.00	0.00	2.43	7,965.08	-1,291.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
8,300.00	0.00	2.43	8,065.08	-1,191.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
8,317.92	0.00	2.43	8,083.00	-1,174.00	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
Top of Gas										
8,400.00	0.00	2.43	8,165.08	-1,091.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
8,500.00	0.00	2.43	8,265.08	-991.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
8,600.00	0.00	2.43	8,365.08	-891.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
8,700.00	0.00	2.43	8,465.08	-791.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
8,800.00	0.00	2.43	8,565.08	-691.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
8,900.00	0.00	2.43	8,665.08	-591.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
9,000.00	0.00	2.43	8,765.08	-491.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
9,100.00	0.00	2.43	8,865.08	-391.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
9,200.00	0.00	2.43	8,965.08	-291.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
9,300.00	0.00	2.43	9,065.08	-191.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
9,400.00	0.00	2.43	9,165.08	-91.92	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
9,500.00	0.00	2.43	9,265.08	8.08	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
9,600.00	0.00	2.43	9,365.08	108.08	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
9,700.00	0.00	2.43	9,465.08	208.08	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
9,800.00	0.00	2.43	9,565.08	308.08	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
9,878.92	0.00	2.43	9,644.00	387.00	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
Cameo										
9,900.00	0.00	2.43	9,665.08	408.08	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
10,000.00	0.00	2.43	9,765.08	508.08	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
10,100.00	0.00	2.43	9,865.08	608.08	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
10,200.00	0.00	2.43	9,965.08	708.08	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
10,251.92	0.00	2.43	10,017.00	760.00	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
Rollins										
10,300.00	0.00	2.43	10,065.08	808.08	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
10,400.00	0.00	2.43	10,165.08	908.08	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
10,500.00	0.00	2.43	10,265.08	1,008.08	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
10,599.92	0.00	2.43	10,365.00	1,108.00	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
Cozzette										
10,600.00	0.00	2.43	10,365.08	1,108.08	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
10,700.00	0.00	2.43	10,465.08	1,208.08	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
10,800.00	0.00	2.43	10,565.08	1,308.08	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
10,896.92	0.00	2.43	10,662.00	1,405.00	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
Corcoran										
10,900.00	0.00	2.43	10,665.08	1,408.08	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
11,000.00	0.00	2.43	10,765.08	1,508.08	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
11,100.00	0.00	2.43	10,865.08	1,608.08	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
11,137.92	0.00	2.43	10,903.00	1,646.00	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
Mancos										

Database:	.Sperry EDM .16 PRD	Local Co-ordinate Reference:	Well BM 35-32C
Company:	Noble Energy (Rockies)	TVD Reference:	RKB - 24' @ 9257.00ft
Project:	Garfield County, CO (NAD 83)	MD Reference:	RKB - 24' @ 9257.00ft
Site:	Sec. 35-T7S-R95W (BM 35C PAD)	North Reference:	Grid
Well:	BM 35-32C	Survey Calculation Method:	Minimum Curvature
Wellbore:	BM 35-32C		
Design:	BM 35-32C Proposal 2.0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	TVDss ft	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	DLS 1,708.08	Vert Section
11,200.00	0.00	2.43	10,965.08	1,708.08	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
11,300.00	0.00	2.43	11,065.08	1,808.08	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
11,387.92	0.00	2.43	11,153.00	1,896.00	-1,318.57	1,110.36	1,578,299.40	2,304,161.30	0.00	-1,318.57
TD at 11387.92 - BM 35-32C										

Targets									
Target Name	- hit/miss target	- Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)
BM 35-32C	- plan hits target center	- Point	0.00	2.43	11,153.00	-1,318.57	1,110.36	1,578,299.40	2,304,161.30

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
3,300.00	3,197.37	8 5/8" Casing Pt.	8-5/8	11	

Formations							
Measured Depth (ft)	Vertical Depth (ft)	Vertical Depth SS ft	Name	Lithology	Dip (°)	Dip Direction (°)	
8,317.92	8,083.00		Top of Gas				
10,599.92	10,365.00		Cozzette				
9,878.92	9,644.00		Cameo				
7,335.92	7,101.00		Williams Fork				
10,251.92	10,017.00		Rollins				
10,896.92	10,662.00		Corcoran				
11,137.92	10,903.00		Mancos				

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
225.00	225.00	0.00	0.00	Start Build 2.00
1,043.78	1,032.68	-88.89	74.86	Start 5152.43 hold at 1043.78 MD
6,196.21	5,976.09	-1,200.04	1,010.55	Start Drop -1.50
7,287.92	7,053.00	-1,318.57	1,110.36	Start 4100.00 hold at 7287.92 MD
11,387.92	11,153.00	-1,318.57	1,110.36	TD at 11387.92

Sperry Drilling

Anticollision Summary Report

Company:	Noble Energy (Rockies)	Local Co-ordinate Reference:	Well BM 35-32C
Project:	Garfield County, CO (NAD 83)	TVD Reference:	RKB - 24' @ 9257.00ft
Reference Site:	Sec. 35-T7S-R95W (BM 35C PAD)	MD Reference:	RKB - 24' @ 9257.00ft
Site Error:	0.00ft	North Reference:	Grid
Reference Well:	BM 35-32C	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	BM 35-32C	Database:	.Sperry EDM .16 PRD
Reference Design:	BM 35-32C Proposal 2.0	Offset TVD Reference:	Offset Datum

Reference	BM 35-32C Proposal 2.0		
Filter type:	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference		
Interpolation Method:	MD Interval 100.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,338.79ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date	2/13/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	11,387.92	BM 35-32C Proposal 2.0 (BM 35-32C)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Sec. 35-T7S-R95W (BM 35C PAD)						
BM 35-12 (Existing Well) - BM 35-12 - Plan #1 Proposal	200.00	203.00	14.95	14.32	23.839 CC	
BM 35-12 (Existing Well) - BM 35-12 - Plan #1 Proposal	300.00	302.99	15.33	14.27	14.444 ES	
BM 35-12 (Existing Well) - BM 35-12 - Plan #1 Proposal	400.00	402.89	17.58	16.09	11.771 SF	
BM 35-21A - BM 35-21A - BM 35-21A Proposal 2.0	200.00	200.00	38.74	38.12	62.442 CC, ES	
BM 35-21A - BM 35-21A - BM 35-21A Proposal 2.0	500.00	495.47	58.75	56.77	29.776 SF	
BM 35-21B - BM 35-21B - BM 35-21B Proposal 2.0	200.00	200.00	24.43	23.81	39.380 CC, ES	
BM 35-21B - BM 35-21B - BM 35-21B Proposal 2.0	400.00	398.64	31.93	30.43	21.307 SF	
BM 35-21C - BM 35-21C - BM 35-21C Proposal 2.0	200.00	200.00	12.05	11.43	19.432 CC, ES	
BM 35-21C - BM 35-21C - BM 35-21C Proposal 2.0	300.00	299.83	13.58	12.54	12.953 SF	
BM 35-21D (Existing Well) - BM 35-21D - BM 35-21D	104.52	107.52	6.64	6.40	28.062 CC, ES	
BM 35-21D (Existing Well) - BM 35-21D - BM 35-21D	300.00	302.55	12.16	11.08	11.195 SF	
BM 35-22A - BM 35-22A - BM 35-22A Proposal 2.0	200.00	200.00	29.99	29.37	48.336 CC, ES	
BM 35-22A - BM 35-22A - BM 35-22A Proposal 2.0	800.00	793.80	69.21	65.56	18.969 SF	
BM 35-22B - BM 35-22B - BM 35-22B Proposal 2.0	200.00	200.00	22.47	21.85	36.217 CC, ES	
BM 35-22B - BM 35-22B - BM 35-22B Proposal 2.0	700.00	696.00	41.01	37.99	13.564 SF	
BM 35-22C - BM 35-22C - BM 35-22C Proposal 2.0	360.54	360.34	14.74	13.46	11.507 CC	
BM 35-22C - BM 35-22C - BM 35-22C Proposal 2.0	400.00	399.73	14.81	13.38	10.307 ES	
BM 35-22C - BM 35-22C - BM 35-22C Proposal 2.0	600.00	599.29	19.85	17.48	8.353 SF	
BM 35-31A - BM 35-31A - BM 35-31A Proposal 2.0	200.00	200.00	45.97	45.35	74.100 CC, ES	
BM 35-31A - BM 35-31A - BM 35-31A Proposal 2.0	600.00	593.89	76.16	73.71	31.026 SF	
BM 35-31B - BM 35-31B - BM 35-31B Proposal 2.0	200.00	200.00	31.50	29.95	20.378 CC	
BM 35-31B - BM 35-31B - BM 35-31B Proposal 2.0	300.00	299.83	32.25	29.61	12.213 ES	
BM 35-31B - BM 35-31B - BM 35-31B Proposal 2.0	400.00	399.40	36.08	32.70	10.660 SF	
BM 35-31C - BM 35-31C - BM 35-31C Proposal 2.0	200.00	200.00	45.02	44.40	72.575 CC	
BM 35-31C - BM 35-31C - BM 35-31C Proposal 2.0	200.31	200.31	45.02	44.40	72.416 ES	
BM 35-31C - BM 35-31C - BM 35-31C Proposal 2.0	11,387.92	11,249.90	1,315.48	1,250.22	20.157 SF	
BM 35-31D - BM 35-31D - BM 35-31D Proposal 2.0	200.00	200.00	37.50	36.88	60.456 CC, ES	
BM 35-31D - BM 35-31D - BM 35-31D Proposal 2.0	11,387.92	11,254.36	1,028.98	964.16	15.874 SF	
BM 35-32A (Existing Well) - BM 35-32A - BM 35-32A	464.79	468.55	26.56	24.77	14.836 CC, ES	
BM 35-32A (Existing Well) - BM 35-32A - BM 35-32A	10,500.00	10,400.00	607.72	549.26	10.396 SF	
BM 35-32B - BM 35-32B - BM 35-32B Proposal 2.0	200.00	200.00	7.52	6.90	12.119 CC	
BM 35-32B - BM 35-32B - BM 35-32B Proposal 2.0	300.00	299.99	7.93	6.87	7.517 ES	
BM 35-32B - BM 35-32B - BM 35-32B Proposal 2.0	11,387.92	11,334.41	315.62	250.22	4.826 SF	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Sperry Drilling

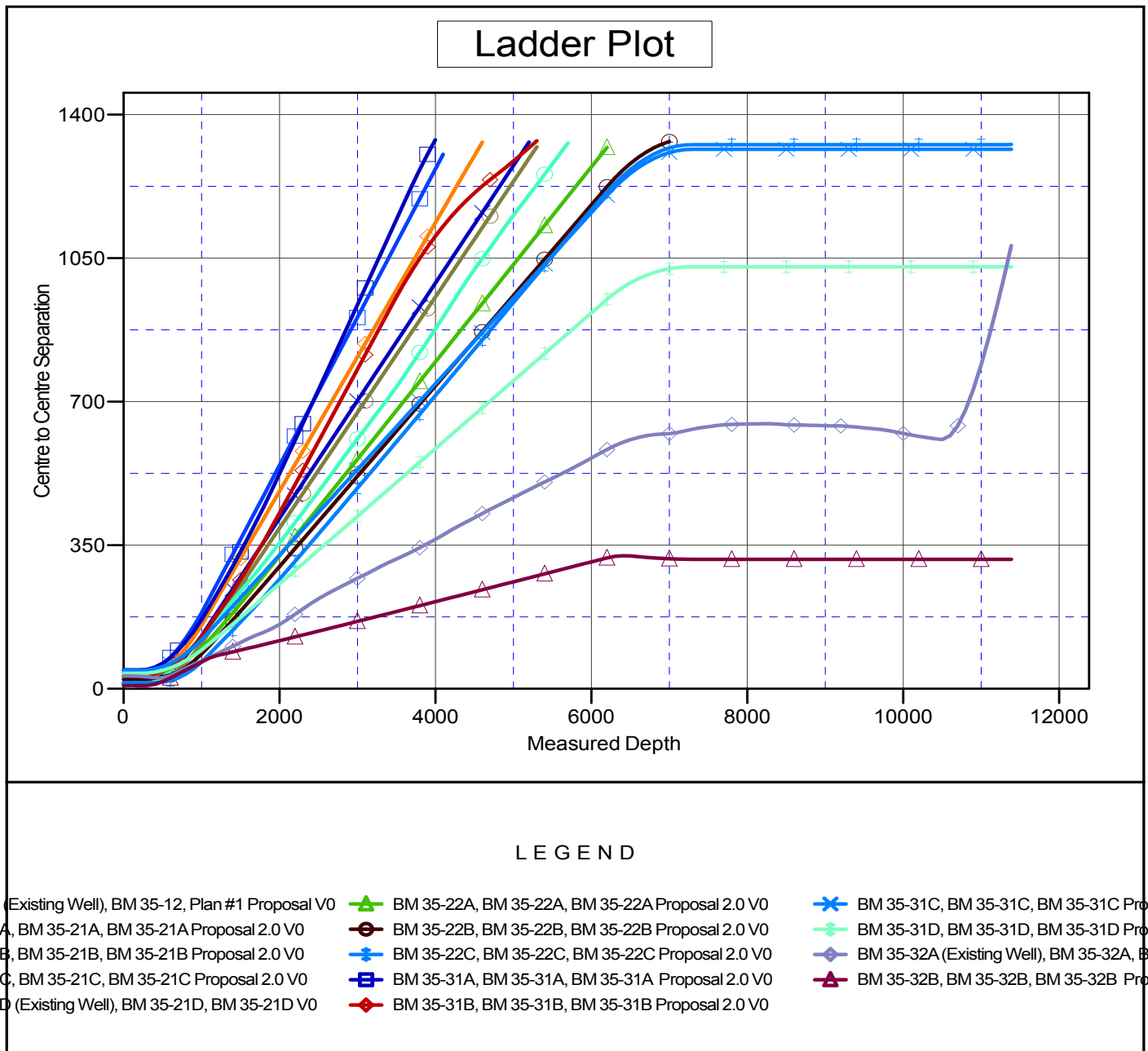
Anticollision Summary Report

Company: Noble Energy (Rockies)
Project: Garfield County, CO (NAD 83)
Reference Site: Sec. 35-T7S-R95W (BM 35C PAD)
Site Error: 0.00ft
Reference Well: BM 35-32C
Well Error: 0.00ft
Reference Wellbore: BM 35-32C
Reference Design: BM 35-32C Proposal 2.0

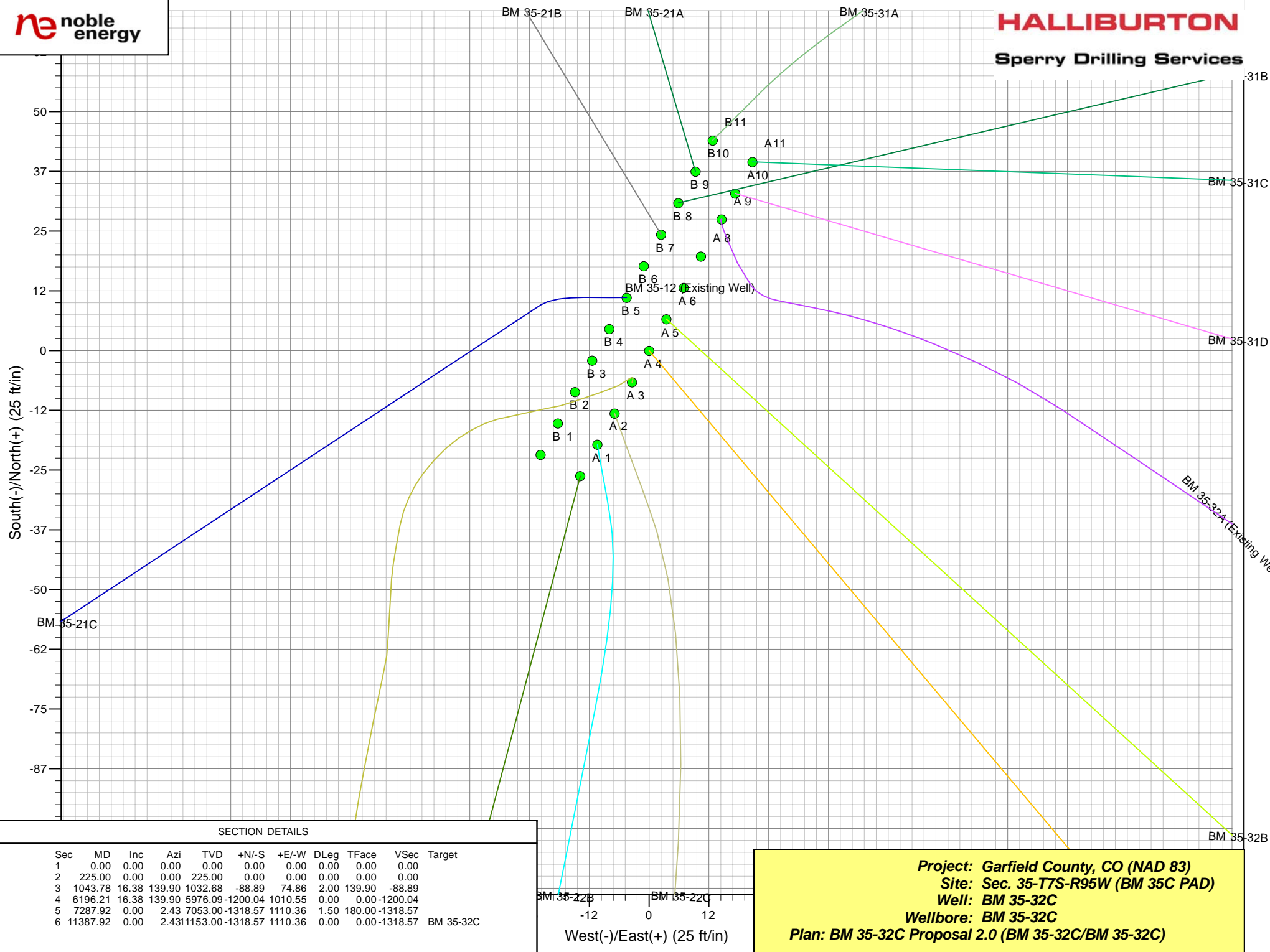
Local Co-ordinate Reference: Well BM 35-32C
TVD Reference: RKB - 24' @ 9257.00ft
MD Reference: RKB - 24' @ 9257.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: .Sperry EDM .16 PRD
Offset TVD Reference: Offset Datum

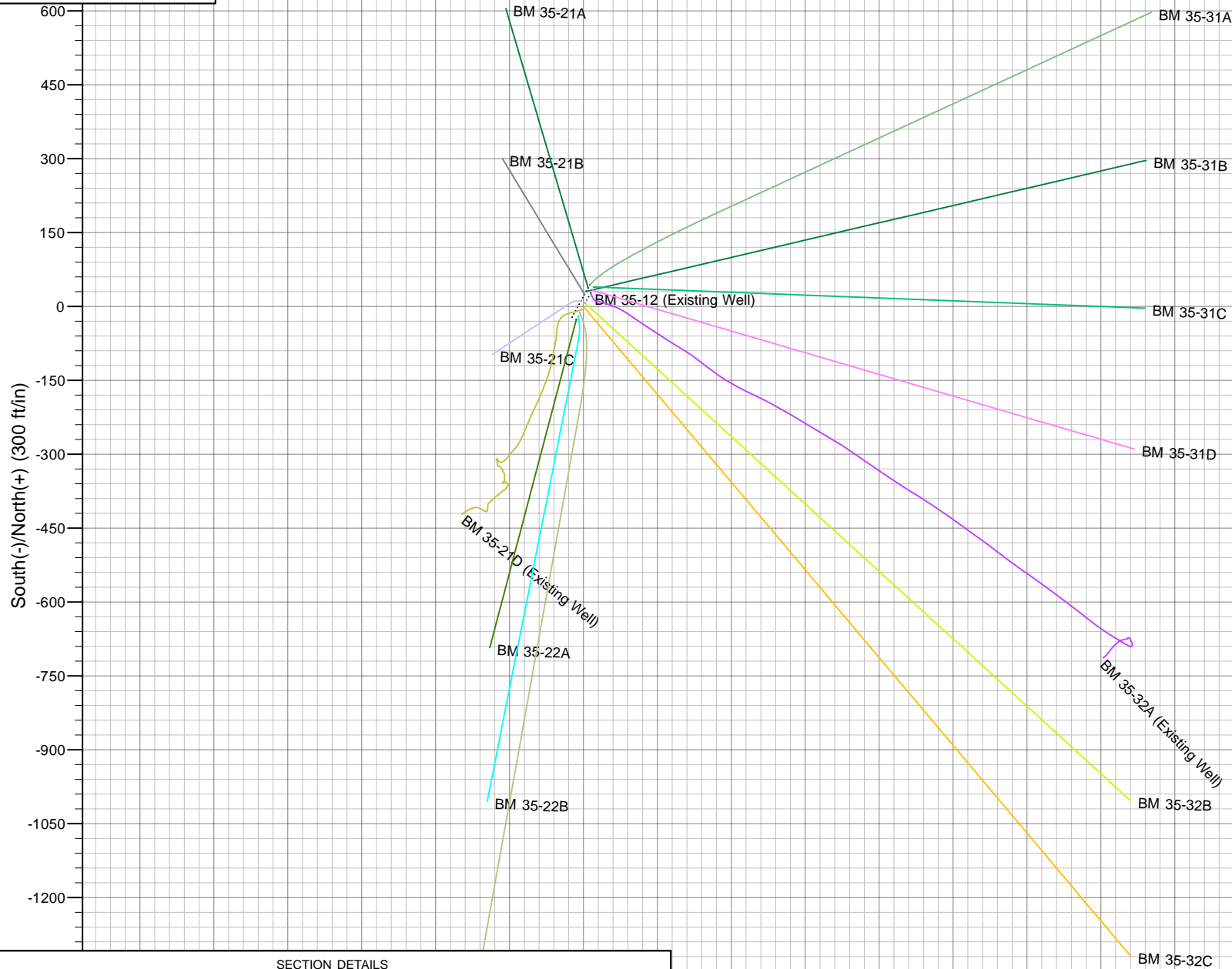
Reference Depths are relative to RKB - 24' @ 9257.00ft
 Offset Depths are relative to Offset Datum
 Central Meridian is 105° 30' 0.000 W °

Coordinates are relative to: BM 35-32C
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: -1.56°



CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation





SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	225.00	0.00	0.00	225.00	0.00	0.00	0.00	0.00	0.00	
3	1043.78	16.38	139.90	1032.68	-88.89	74.86	2.00	139.90	-88.89	
4	6196.21	16.38	139.90	5976.09	-1200.04	1010.55	0.00	0.00	-1200.04	
5	7287.92	0.00	2.43	7053.00	-1318.57	1110.36	1.50	180.00	-1318.57	
6	11387.92	0.00	2.43	11153.00	-1318.57	1110.36	0.00	0.00	-1318.57	BM 35-32C

300 450 600
West(-)/East(+) (300 ft/in)

Project: Garfield County, CO (NAD 83)
Site: Sec. 35-T7S-R95W (BM 35C PAD)
Well: BM 35-32C
Wellbore: BM 35-32C
Plan: BM 35-32C Proposal 2.0 (BM 35-32C/BM 35-32C)