



Noble Energy (Rockies)

Garfield County, CO (NAD 83)

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

BM 35-22A

BM 35-22A

Plan: BM 35-22A 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 35-22A
Wellbore: BM 35-22A
Plan: BM 35-22A 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
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00
503.17	6.06	194.76	502.60	-15.50	-4.08	2.00	194.76	-15.50
6674.62	6.06	194.76	6639.53	-645.87	-170.16	0.00	0.00	-645.87
7078.85	0.00	2.43	7043.00	-666.53	-175.61	1.50	180.00	-666.53
11178.85	0.00	2.43	11143.00	-666.53	-175.61	0.00	2.43	-666.53

BM 35-22A

WELL DETAILS: BM 35-22A

North	Ground Level	9233.00	Longitude
1579591.60	Easting	2303036.60	39° 23' 55.540 N 107° 57' 59.909 W

WELLBORE TARGET DETAILS

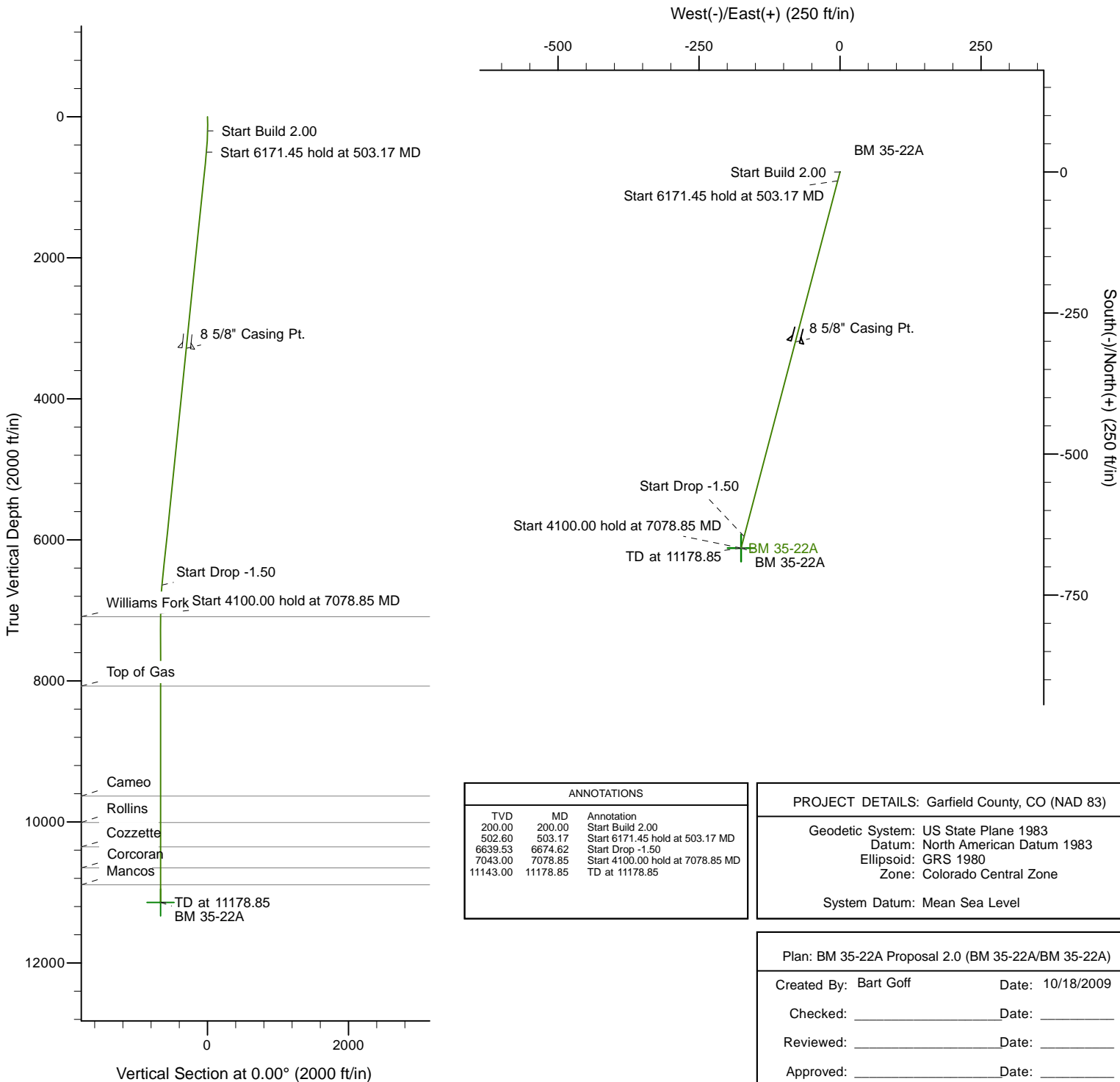
Name	TVD	+N/-S	+E/-W	Shape Point
BM 35-22A	11143.00	-666.53	-175.61	Point



Azimuths to Grid North
True North: 1.56°
Magnetic North: 12.12°
Magnetic Field
Strength: 52444.3snT
Dip Angle: 65.74°
Date: 8/25/2009
Model: BGGM2009

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
7091.00	7126.85	Williams Fork
8073.00	8108.85	Top of Gas
9634.00	9669.85	Cameo
10007.00	10042.85	Rollins
10355.00	10390.85	Cozzette
10652.00	10687.85	Corcoran
10893.00	10928.85	Mancos



ANNOTATIONS

TVD	MD	Annotation
200.00	200.00	Start Build 2.00
502.60	503.17	Start 6171.45 hold at 503.17 MD
6639.53	6674.62	Start Drop -1.50
7043.00	7078.85	Start 4100.00 hold at 7078.85 MD
11143.00	11178.85	TD at 11178.85

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 35-22A Proposal 2.0 (BM 35-22A/BM 35-22A)

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 35-22A
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 35-22A	Survey Calculation Method:	Minimum Curvature
Wellbore:	BM 35-22A		
Design:	BM 35-22A 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 35-22A					
Well Position	+N/-S	0.00 ft	Northing:	1,579,591.60 ft	Latitude:	39° 23' 55.540 N
	+E/-W	0.00 ft	Easting:	2,303,036.60 ft	Longitude:	107° 57' 59.909 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	9,260.00 ft	Ground Level:	9,233.00 ft

Wellbore	BM 35-22A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2009	8/25/2009	10.57	65.74	52,444

Design	BM 35-22A 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
200.00	0.00	0.00	200.00	-9,057.00	0.00	0.00	0.00	0.00	0.00	0.00
503.17	6.06	194.76	502.60	-8,754.40	-15.50	-4.08	2.00	2.00	0.00	194.76
6,674.62	6.06	194.76	6,639.53	-2,617.47	-645.87	-170.16	0.00	0.00	0.00	0.00
7,078.85	0.00	2.43	7,043.00	-2,214.00	-666.53	-175.61	1.50	-1.50	0.00	180.00
11,178.85	0.00	2.43	11,143.00	1,886.00	-666.53	-175.61	0.00	0.00	0.00	2.43

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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 35-22A	Survey Calculation Method:	Minimum Curvature
Wellbore:	BM 35-22A		
Design:	BM 35-22A 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	1,579,591.60	2,303,036.60	0.00	0.00
100.00	0.00	0.00	100.00	-9,157.00	0.00	0.00	1,579,591.60	2,303,036.60	0.00	0.00
200.00	0.00	0.00	200.00	-9,057.00	0.00	0.00	1,579,591.60	2,303,036.60	0.00	0.00
Start Build 2.00										
300.00	2.00	194.76	299.98	-8,957.02	-1.69	-0.44	1,579,589.91	2,303,036.16	2.00	-1.69
400.00	4.00	194.76	399.84	-8,857.16	-6.75	-1.78	1,579,584.85	2,303,034.82	2.00	-6.75
500.00	6.00	194.76	499.45	-8,757.55	-15.18	-4.00	1,579,576.43	2,303,032.60	2.00	-15.18
503.17	6.06	194.76	502.60	-8,754.40	-15.50	-4.08	1,579,576.10	2,303,032.52	2.00	-15.50
Start 6171.45 hold at 503.17 MD										
600.00	6.06	194.76	598.89	-8,658.11	-25.39	-6.69	1,579,566.21	2,303,029.91	0.00	-25.39
700.00	6.06	194.76	698.33	-8,558.67	-35.60	-9.38	1,579,556.00	2,303,027.22	0.00	-35.60
800.00	6.06	194.76	797.77	-8,459.23	-45.82	-12.07	1,579,545.79	2,303,024.53	0.00	-45.82
900.00	6.06	194.76	897.21	-8,359.79	-56.03	-14.76	1,579,535.57	2,303,021.84	0.00	-56.03
1,000.00	6.06	194.76	996.65	-8,260.35	-66.25	-17.45	1,579,525.36	2,303,019.15	0.00	-66.25
1,100.00	6.06	194.76	1,096.10	-8,160.90	-76.46	-20.14	1,579,515.14	2,303,016.46	0.00	-76.46
1,200.00	6.06	194.76	1,195.54	-8,061.46	-86.67	-22.84	1,579,504.93	2,303,013.77	0.00	-86.67
1,300.00	6.06	194.76	1,294.98	-7,962.02	-96.89	-25.53	1,579,494.72	2,303,011.07	0.00	-96.89
1,400.00	6.06	194.76	1,394.42	-7,862.58	-107.10	-28.22	1,579,484.50	2,303,008.38	0.00	-107.10
1,500.00	6.06	194.76	1,493.86	-7,763.14	-117.32	-30.91	1,579,474.29	2,303,005.69	0.00	-117.32
1,600.00	6.06	194.76	1,593.30	-7,663.70	-127.53	-33.60	1,579,464.07	2,303,003.00	0.00	-127.53
1,700.00	6.06	194.76	1,692.74	-7,564.26	-137.75	-36.29	1,579,453.86	2,303,000.31	0.00	-137.75
1,800.00	6.06	194.76	1,792.18	-7,464.82	-147.96	-38.98	1,579,443.65	2,302,997.62	0.00	-147.96
1,900.00	6.06	194.76	1,891.62	-7,365.38	-158.17	-41.67	1,579,433.43	2,302,994.93	0.00	-158.17
2,000.00	6.06	194.76	1,991.06	-7,265.94	-168.39	-44.36	1,579,423.22	2,302,992.24	0.00	-168.39
2,100.00	6.06	194.76	2,090.50	-7,166.50	-178.60	-47.06	1,579,413.01	2,302,989.55	0.00	-178.60
2,200.00	6.06	194.76	2,189.94	-7,067.06	-188.82	-49.75	1,579,402.79	2,302,986.86	0.00	-188.82
2,300.00	6.06	194.76	2,289.38	-6,967.62	-199.03	-52.44	1,579,392.58	2,302,984.16	0.00	-199.03
2,400.00	6.06	194.76	2,388.82	-6,868.18	-209.25	-55.13	1,579,382.36	2,302,981.47	0.00	-209.25
2,500.00	6.06	194.76	2,488.26	-6,768.74	-219.46	-57.82	1,579,372.15	2,302,978.78	0.00	-219.46
2,600.00	6.06	194.76	2,587.70	-6,669.30	-229.67	-60.51	1,579,361.94	2,302,976.09	0.00	-229.67
2,700.00	6.06	194.76	2,687.14	-6,569.86	-239.89	-63.20	1,579,351.72	2,302,973.40	0.00	-239.89
2,800.00	6.06	194.76	2,786.59	-6,470.41	-250.10	-65.89	1,579,341.51	2,302,970.71	0.00	-250.10
2,900.00	6.06	194.76	2,886.03	-6,370.97	-260.32	-68.58	1,579,331.30	2,302,968.02	0.00	-260.32
3,000.00	6.06	194.76	2,985.47	-6,271.53	-270.53	-71.28	1,579,321.08	2,302,965.33	0.00	-270.53
3,100.00	6.06	194.76	3,084.91	-6,172.09	-280.75	-73.97	1,579,310.87	2,302,962.64	0.00	-280.75
3,200.00	6.06	194.76	3,184.35	-6,072.65	-290.96	-76.66	1,579,300.65	2,302,959.95	0.00	-290.96
3,300.00	6.06	194.76	3,283.79	-5,973.21	-301.18	-79.35	1,579,290.44	2,302,957.25	0.00	-301.18
8 5/8" Casing Pt.										
3,400.00	6.06	194.76	3,383.23	-5,873.77	-311.39	-82.04	1,579,280.23	2,302,954.56	0.00	-311.39
3,500.00	6.06	194.76	3,482.67	-5,774.33	-321.60	-84.73	1,579,270.01	2,302,951.87	0.00	-321.60
3,600.00	6.06	194.76	3,582.11	-5,674.89	-331.82	-87.42	1,579,259.80	2,302,949.18	0.00	-331.82
3,700.00	6.06	194.76	3,681.55	-5,575.45	-342.03	-90.11	1,579,249.58	2,302,946.49	0.00	-342.03
3,800.00	6.06	194.76	3,780.99	-5,476.01	-352.25	-92.81	1,579,239.37	2,302,943.80	0.00	-352.25
3,900.00	6.06	194.76	3,880.43	-5,376.57	-362.46	-95.50	1,579,229.16	2,302,941.11	0.00	-362.46
4,000.00	6.06	194.76	3,979.87	-5,277.13	-372.68	-98.19	1,579,218.94	2,302,938.42	0.00	-372.68

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Site:	Sec. 35-T7S-R95W (BM 35C PAD)	North Reference:	Grid
Well:	BM 35-22A	Survey Calculation Method:	Minimum Curvature
Wellbore:	BM 35-22A		
Design:	BM 35-22A 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 -5,177.69	Vert Section
4,100.00	6.06	194.76	4,079.31	-5,177.69	-382.89	-100.88	1,579,208.73	2,302,935.73	0.00	-382.89
4,200.00	6.06	194.76	4,178.75	-5,078.25	-393.10	-103.57	1,579,198.52	2,302,933.04	0.00	-393.10
4,300.00	6.06	194.76	4,278.19	-4,978.81	-403.32	-106.26	1,579,188.30	2,302,930.34	0.00	-403.32
4,400.00	6.06	194.76	4,377.63	-4,879.37	-413.53	-108.95	1,579,178.09	2,302,927.65	0.00	-413.53
4,500.00	6.06	194.76	4,477.07	-4,779.93	-423.75	-111.64	1,579,167.87	2,302,924.96	0.00	-423.75
4,600.00	6.06	194.76	4,576.52	-4,680.48	-433.96	-114.33	1,579,157.66	2,302,922.27	0.00	-433.96
4,700.00	6.06	194.76	4,675.96	-4,581.04	-444.18	-117.03	1,579,147.45	2,302,919.58	0.00	-444.18
4,800.00	6.06	194.76	4,775.40	-4,481.60	-454.39	-119.72	1,579,137.23	2,302,916.89	0.00	-454.39
4,900.00	6.06	194.76	4,874.84	-4,382.16	-464.60	-122.41	1,579,127.02	2,302,914.20	0.00	-464.60
5,000.00	6.06	194.76	4,974.28	-4,282.72	-474.82	-125.10	1,579,116.81	2,302,911.51	0.00	-474.82
5,100.00	6.06	194.76	5,073.72	-4,183.28	-485.03	-127.79	1,579,106.59	2,302,908.82	0.00	-485.03
5,200.00	6.06	194.76	5,173.16	-4,083.84	-495.25	-130.48	1,579,096.38	2,302,906.13	0.00	-495.25
5,300.00	6.06	194.76	5,272.60	-3,984.40	-505.46	-133.17	1,579,086.16	2,302,903.43	0.00	-505.46
5,400.00	6.06	194.76	5,372.04	-3,884.96	-515.68	-135.86	1,579,075.95	2,302,900.74	0.00	-515.68
5,500.00	6.06	194.76	5,471.48	-3,785.52	-525.89	-138.55	1,579,065.74	2,302,898.05	0.00	-525.89
5,600.00	6.06	194.76	5,570.92	-3,686.08	-536.10	-141.25	1,579,055.52	2,302,895.36	0.00	-536.10
5,700.00	6.06	194.76	5,670.36	-3,586.64	-546.32	-143.94	1,579,045.31	2,302,892.67	0.00	-546.32
5,800.00	6.06	194.76	5,769.80	-3,487.20	-556.53	-146.63	1,579,035.09	2,302,889.98	0.00	-556.53
5,900.00	6.06	194.76	5,869.24	-3,387.76	-566.75	-149.32	1,579,024.88	2,302,887.29	0.00	-566.75
6,000.00	6.06	194.76	5,968.68	-3,288.32	-576.96	-152.01	1,579,014.67	2,302,884.60	0.00	-576.96
6,100.00	6.06	194.76	6,068.12	-3,188.88	-587.18	-154.70	1,579,004.45	2,302,881.91	0.00	-587.18
6,200.00	6.06	194.76	6,167.56	-3,089.44	-597.39	-157.39	1,578,994.24	2,302,879.22	0.00	-597.39
6,300.00	6.06	194.76	6,267.00	-2,990.00	-607.61	-160.08	1,578,984.03	2,302,876.52	0.00	-607.61
6,400.00	6.06	194.76	6,366.45	-2,890.55	-617.82	-162.77	1,578,973.81	2,302,873.83	0.00	-617.82
6,500.00	6.06	194.76	6,465.89	-2,791.11	-628.03	-165.47	1,578,963.60	2,302,871.14	0.00	-628.03
6,600.00	6.06	194.76	6,565.33	-2,691.67	-638.25	-168.16	1,578,953.38	2,302,868.45	0.00	-638.25
6,674.62	6.06	194.76	6,639.53	-2,617.47	-645.87	-170.16	1,578,945.76	2,302,866.44	0.00	-645.87
Start Drop -1.50										
6,700.00	5.68	194.76	6,664.78	-2,592.22	-648.38	-170.83	1,578,943.25	2,302,865.78	1.50	-648.38
6,800.00	4.18	194.76	6,764.40	-2,492.60	-656.70	-173.02	1,578,934.94	2,302,863.59	1.50	-656.70
6,900.00	2.68	194.76	6,864.22	-2,392.78	-662.49	-174.54	1,578,929.15	2,302,862.07	1.50	-662.49
7,000.00	1.18	194.76	6,964.16	-2,292.84	-665.75	-175.40	1,578,925.89	2,302,861.21	1.50	-665.75
7,078.85	0.00	2.43	7,043.00	-2,214.00	-666.53	-175.61	1,578,925.10	2,302,861.00	1.50	-666.53
Start 4100.00 hold at 7078.85 MD										
7,100.00	0.00	2.43	7,064.15	-2,192.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
7,126.85	0.00	2.43	7,091.00	-2,166.00	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
Williams Fork										
7,200.00	0.00	2.43	7,164.15	-2,092.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
7,300.00	0.00	2.43	7,264.15	-1,992.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
7,400.00	0.00	2.43	7,364.15	-1,892.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
7,500.00	0.00	2.43	7,464.15	-1,792.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
7,600.00	0.00	2.43	7,564.15	-1,692.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
7,700.00	0.00	2.43	7,664.15	-1,592.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
7,800.00	0.00	2.43	7,764.15	-1,492.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
7,900.00	0.00	2.43	7,864.15	-1,392.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53

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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 35-22A	Survey Calculation Method:	Minimum Curvature
Wellbore:	BM 35-22A		
Design:	BM 35-22A 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 -1,292.85	Vert Section
8,000.00	0.00	2.43	7,964.15	-1,292.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
8,100.00	0.00	2.43	8,064.15	-1,192.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
8,108.85	0.00	2.43	8,073.00	-1,184.00	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
Top of Gas										
8,200.00	0.00	2.43	8,164.15	-1,092.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
8,300.00	0.00	2.43	8,264.15	-992.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
8,400.00	0.00	2.43	8,364.15	-892.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
8,500.00	0.00	2.43	8,464.15	-792.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
8,600.00	0.00	2.43	8,564.15	-692.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
8,700.00	0.00	2.43	8,664.15	-592.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
8,800.00	0.00	2.43	8,764.15	-492.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
8,900.00	0.00	2.43	8,864.15	-392.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
9,000.00	0.00	2.43	8,964.15	-292.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
9,100.00	0.00	2.43	9,064.15	-192.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
9,200.00	0.00	2.43	9,164.15	-92.85	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
9,300.00	0.00	2.43	9,264.15	7.15	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
9,400.00	0.00	2.43	9,364.15	107.15	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
9,500.00	0.00	2.43	9,464.15	207.15	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
9,600.00	0.00	2.43	9,564.15	307.15	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
9,669.85	0.00	2.43	9,634.00	377.00	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
Cameo										
9,700.00	0.00	2.43	9,664.15	407.15	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
9,800.00	0.00	2.43	9,764.15	507.15	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
9,900.00	0.00	2.43	9,864.15	607.15	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
10,000.00	0.00	2.43	9,964.15	707.15	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
10,042.85	0.00	2.43	10,007.00	750.00	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
Rollins										
10,100.00	0.00	2.43	10,064.15	807.15	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
10,200.00	0.00	2.43	10,164.15	907.15	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
10,300.00	0.00	2.43	10,264.15	1,007.15	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
10,390.85	0.00	2.43	10,355.00	1,098.00	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
Cozzette										
10,400.00	0.00	2.43	10,364.15	1,107.15	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
10,500.00	0.00	2.43	10,464.15	1,207.15	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
10,600.00	0.00	2.43	10,564.15	1,307.15	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
10,687.85	0.00	2.43	10,652.00	1,395.00	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
Corcoran										
10,700.00	0.00	2.43	10,664.15	1,407.15	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
10,800.00	0.00	2.43	10,764.15	1,507.15	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
10,900.00	0.00	2.43	10,864.15	1,607.15	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
10,928.85	0.00	2.43	10,893.00	1,636.00	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
Mancos										
11,000.00	0.00	2.43	10,964.15	1,707.15	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
11,100.00	0.00	2.43	11,064.15	1,807.15	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53

Database:	.Sperry EDM .16 PRD	Local Co-ordinate Reference:	Well BM 35-22A
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 35-22A	Survey Calculation Method:	Minimum Curvature
Wellbore:	BM 35-22A		
Design:	BM 35-22A 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 1,886.00	Vert Section
11,178.85	0.00	2.43	11,143.00	1,886.00	-666.53	-175.61	1,578,925.10	2,302,861.00	0.00	-666.53
TD at 11178.85 - BM 35-22A										

Targets								
Target Name								
- hit/miss target			Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)
- Shape								Easting (ft)
BM 35-22A			0.00	2.43	11,143.00	-666.53	-175.61	1,578,925.10
- plan hits target center								2,302,861.00
- Point								

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
3,300.00	3,283.79	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 (°)	
10,928.85	10,893.00		Mancos				
7,126.85	7,091.00		Williams Fork				
8,108.85	8,073.00		Top of Gas				
10,042.85	10,007.00		Rollins				
10,390.85	10,355.00		Cozzette				
10,687.85	10,652.00		Corcoran				
9,669.85	9,634.00		Cameo				

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.00	200.00	0.00	0.00	Start Build 2.00
503.17	502.60	-15.50	-4.08	Start 6171.45 hold at 503.17 MD
6,674.62	6,639.53	-645.87	-170.16	Start Drop -1.50
7,078.85	7,043.00	-666.53	-175.61	Start 4100.00 hold at 7078.85 MD
11,178.85	11,143.00	-666.53	-175.61	TD at 11178.85

Sperry Drilling

Anticollision Summary Report

Company:	Noble Energy (Rockies)	Local Co-ordinate Reference:	Well BM 35-22A
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 35-22A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	BM 35-22A	Database:	.Sperry EDM .16 PRD
Reference Design:	BM 35-22A Proposal 2.0	Offset TVD Reference:	Offset Datum

Reference	BM 35-22A 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 1,317.88ft	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	11,178.85	BM 35-22A Proposal 2.0 (BM 35-22A)	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	44.94	44.31	71.656 CC, ES	
BM 35-12 (Existing Well) - BM 35-12 - Plan #1 Proposal	10,100.00	10,000.00	736.02	692.04	16.734 SF	
BM 35-21A - BM 35-21A - BM 35-21A Proposal 2.0	200.00	200.00	68.20	67.58	109.943 CC, ES	
BM 35-21A - BM 35-21A - BM 35-21A Proposal 2.0	11,178.85	11,169.22	1,298.08	1,248.92	26.408 SF	
BM 35-21B - BM 35-21B - BM 35-21B Proposal 2.0	200.00	200.00	53.35	52.73	86.000 CC, ES	
BM 35-21B - BM 35-21B - BM 35-21B Proposal 2.0	11,178.85	11,150.75	993.87	944.91	20.298 SF	
BM 35-21C - BM 35-21C - BM 35-21C Proposal 2.0	200.00	200.00	38.64	38.02	62.286 CC, ES	
BM 35-21C - BM 35-21C - BM 35-21C Proposal 2.0	11,178.85	11,146.39	595.66	547.83	12.454 SF	
BM 35-21D (Existing Well) - BM 35-21D - BM 35-21D	287.46	291.17	20.44	19.41	19.877 CC	
BM 35-21D (Existing Well) - BM 35-21D - BM 35-21D	300.00	303.69	20.47	19.39	18.927 ES	
BM 35-21D (Existing Well) - BM 35-21D - BM 35-21D	3,500.00	3,505.95	72.00	54.22	4.050 SF	
BM 35-22B - BM 35-22B - BM 35-22B Proposal 2.0	200.00	200.00	7.52	6.90	12.119 CC	
BM 35-22B - BM 35-22B - BM 35-22B Proposal 2.0	300.00	300.20	7.88	6.85	7.653 ES	
BM 35-22B - BM 35-22B - BM 35-22B Proposal 2.0	1,000.00	1,001.10	17.05	12.17	3.493 SF	
BM 35-22C - BM 35-22C - BM 35-22C Proposal 2.0	200.00	200.00	14.95	14.33	24.098 CC, ES	
BM 35-22C - BM 35-22C - BM 35-22C Proposal 2.0	1,500.00	1,504.02	47.25	39.30	5.943 SF	
BM 35-31A - BM 35-31A - BM 35-31A Proposal 2.0	200.00	200.00	75.56	74.94	121.808 CC, ES	
BM 35-31A - BM 35-31A - BM 35-31A Proposal 2.0	800.00	779.86	159.62	156.29	47.989 SF	
BM 35-31B - BM 35-31B - BM 35-31B Proposal 2.0	200.00	200.00	60.77	59.22	39.313 CC, ES	
BM 35-31B - BM 35-31B - BM 35-31B Proposal 2.0	400.00	397.78	70.63	67.26	20.971 SF	
BM 35-31C - BM 35-31C - BM 35-31C Proposal 2.0	200.00	200.00	75.01	74.39	120.912 CC, ES	
BM 35-31C - BM 35-31C - BM 35-31C Proposal 2.0	1,100.00	1,072.09	202.50	197.46	40.234 SF	
BM 35-31D - BM 35-31D - BM 35-31D Proposal 2.0	200.00	200.00	67.49	66.87	108.792 CC, ES	
BM 35-31D - BM 35-31D - BM 35-31D Proposal 2.0	1,900.00	1,865.41	342.28	332.34	34.409 SF	
BM 35-32A (Existing Well) - BM 35-32A - BM 35-32A	271.40	275.87	59.97	59.04	64.520 CC	
BM 35-32A (Existing Well) - BM 35-32A - BM 35-32A	300.00	304.63	60.07	59.02	57.160 ES	
BM 35-32A (Existing Well) - BM 35-32A - BM 35-32A	10,300.00	10,400.00	1,245.19	1,194.17	24.406 SF	
BM 35-32B - BM 35-32B - BM 35-32B Proposal 2.0	200.00	200.00	37.50	36.88	60.456 CC, ES	
BM 35-32B - BM 35-32B - BM 35-32B Proposal 2.0	1,200.00	1,194.09	120.81	115.16	21.380 SF	
BM 35-32C - BM 35-32C - BM 35-32C Proposal 2.0	200.00	200.00	29.99	29.37	48.336 CC, ES	
BM 35-32C - BM 35-32C - BM 35-32C Proposal 2.0	800.00	797.74	69.45	65.79	18.994 SF	

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

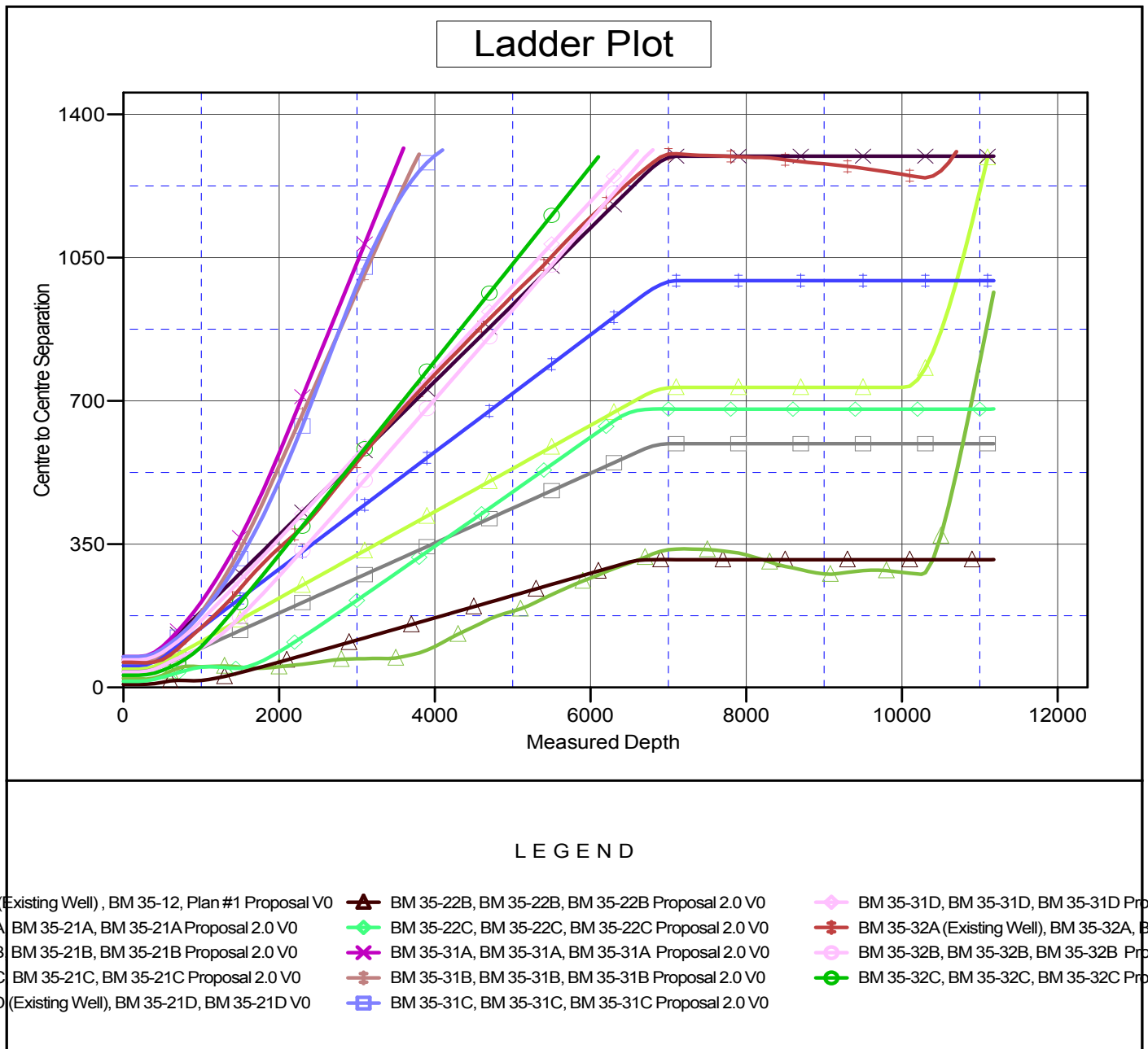
Sperry Drilling

Anticollision Summary Report

Company:	Noble Energy (Rockies)	Local Co-ordinate Reference:	Well BM 35-22A
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 35-22A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	BM 35-22A	Database:	.Sperry EDM .16 PRD
Reference Design:	BM 35-22A Proposal 2.0	Offset TVD Reference:	Offset Datum

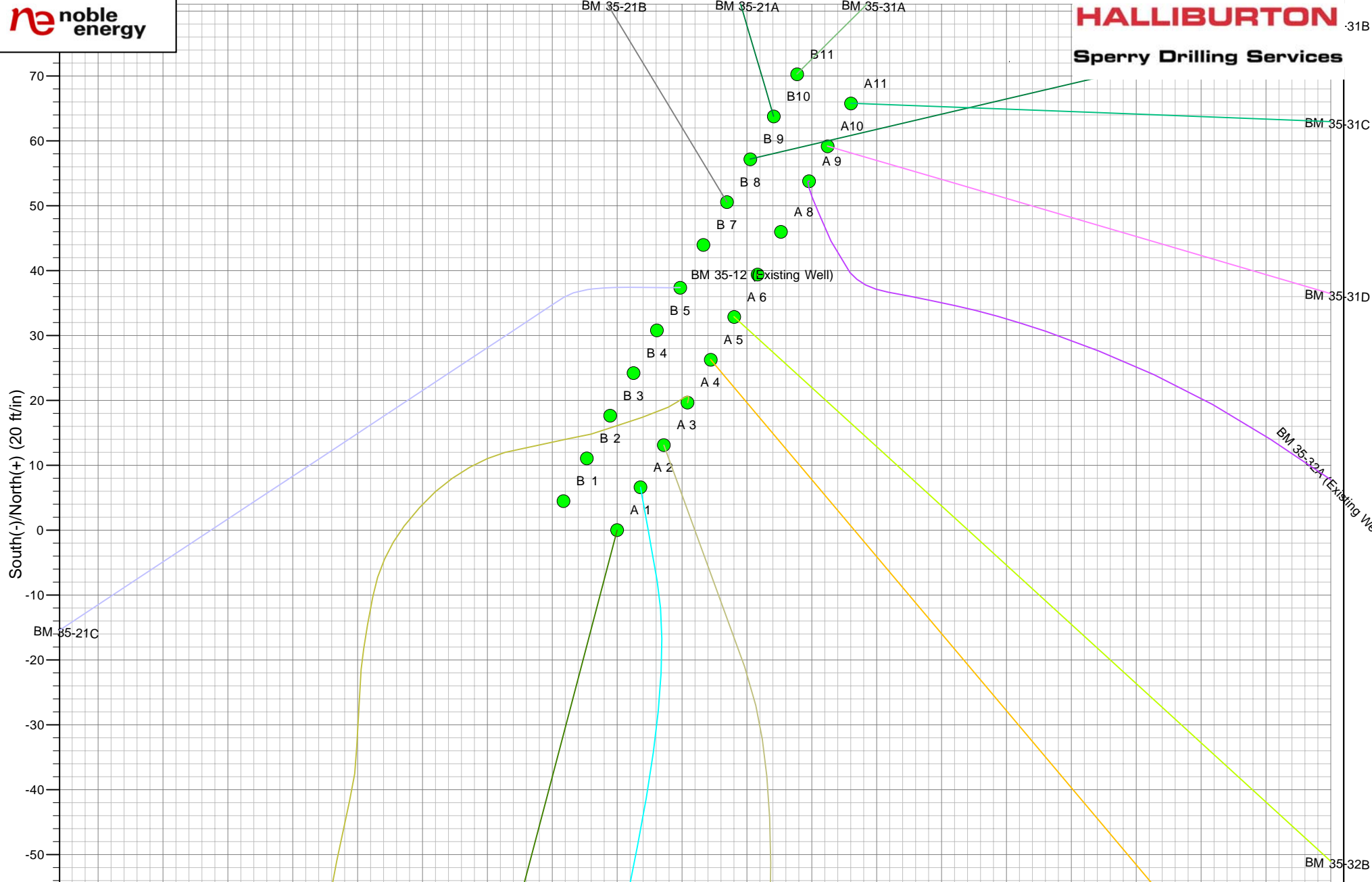
Reference Depths are relative to RKB - 24' @ 9257.00ft
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W °

Coordinates are relative to: BM 35-22A
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

South(-)/North(+) (20 ft/in)

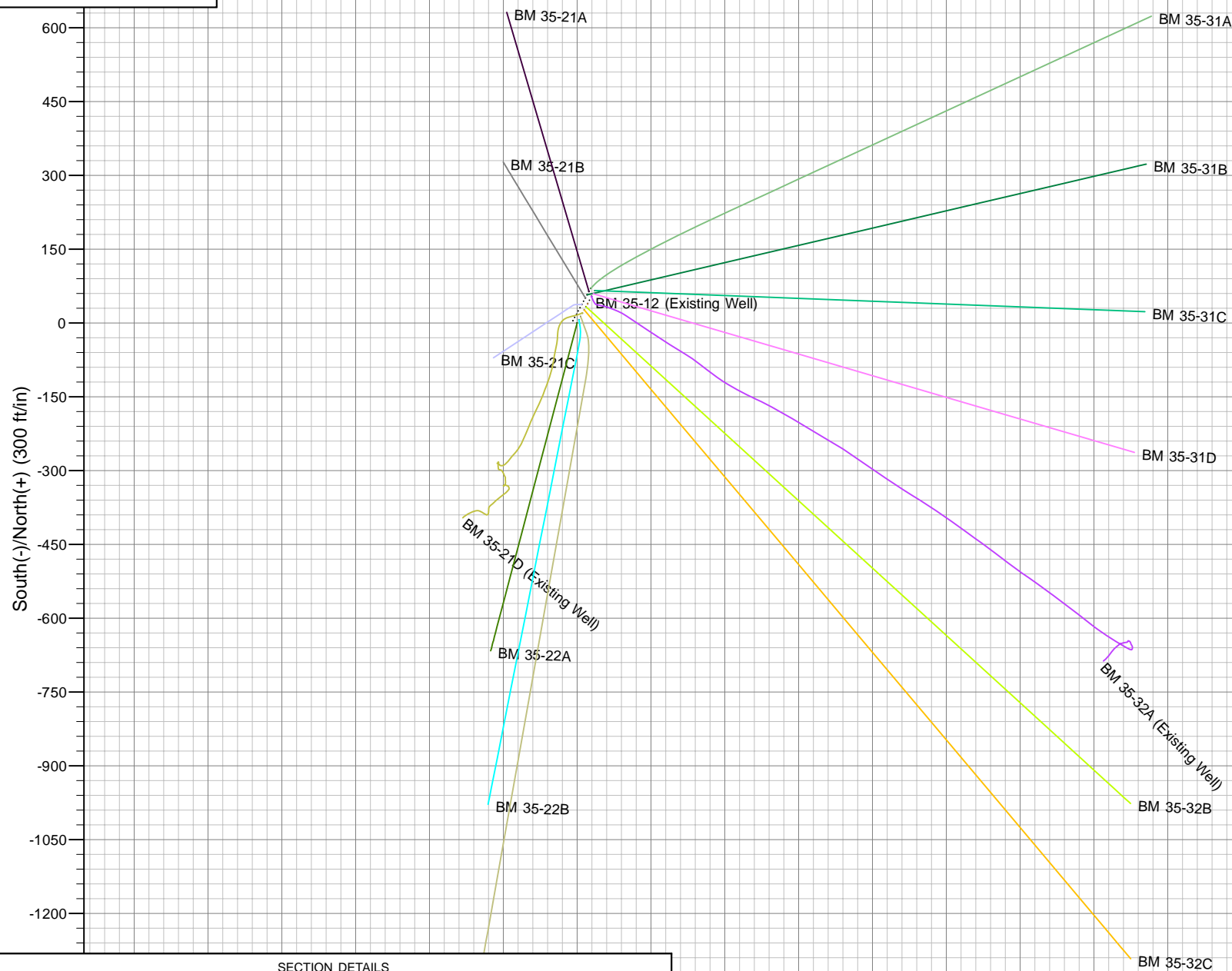


SECTION DETAILS

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	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	503.17	6.06	194.76	502.60	-15.50	-4.08	2.00	194.76	-15.50	
4	6674.62	6.06	194.76	6639.53	-645.87	-170.16	0.00	0.00	-645.87	
5	7078.85	0.00	2.43	7043.00	-666.53	-175.61	1.50	180.00	-666.53	
6	11178.85	0.00	2.43	11143.00	-666.53	-175.61	0.00	2.43	-666.53	BM 35-22A

West(-)/East(+) (20 ft/in)

Project: Garfield County, CO (NAD 83)
Site: Sec. 35-T7S-R95W (BM 35C PAD)
Well: BM 35-22A
Wellbore: BM 35-22A
Plan: BM 35-22A Proposal 2.0 (BM 35-22A/BM 35-22A)



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	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	503.17	6.06	194.76	502.60	-15.50	-4.08	2.00	194.76	-15.50	
4	6674.62	6.06	194.76	6639.53	-645.87	-170.16	0.00	0.00	-645.87	
5	7078.85	0.00	2.43	7043.00	-666.53	-175.61	1.50	180.00	-666.53	
6	11178.85	0.00	2.43	11143.00	-666.53	-175.61	0.00	2.43	-666.53	BM 35-22A

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

Project: Garfield County, CO (NAD 83)
Site: Sec. 35-T7S-R95W (BM 35C PAD)
Well: BM 35-22A
Wellbore: BM 35-22A
Plan: BM 35-22A Proposal 2.0 (BM 35-22A/BM 35-22A)