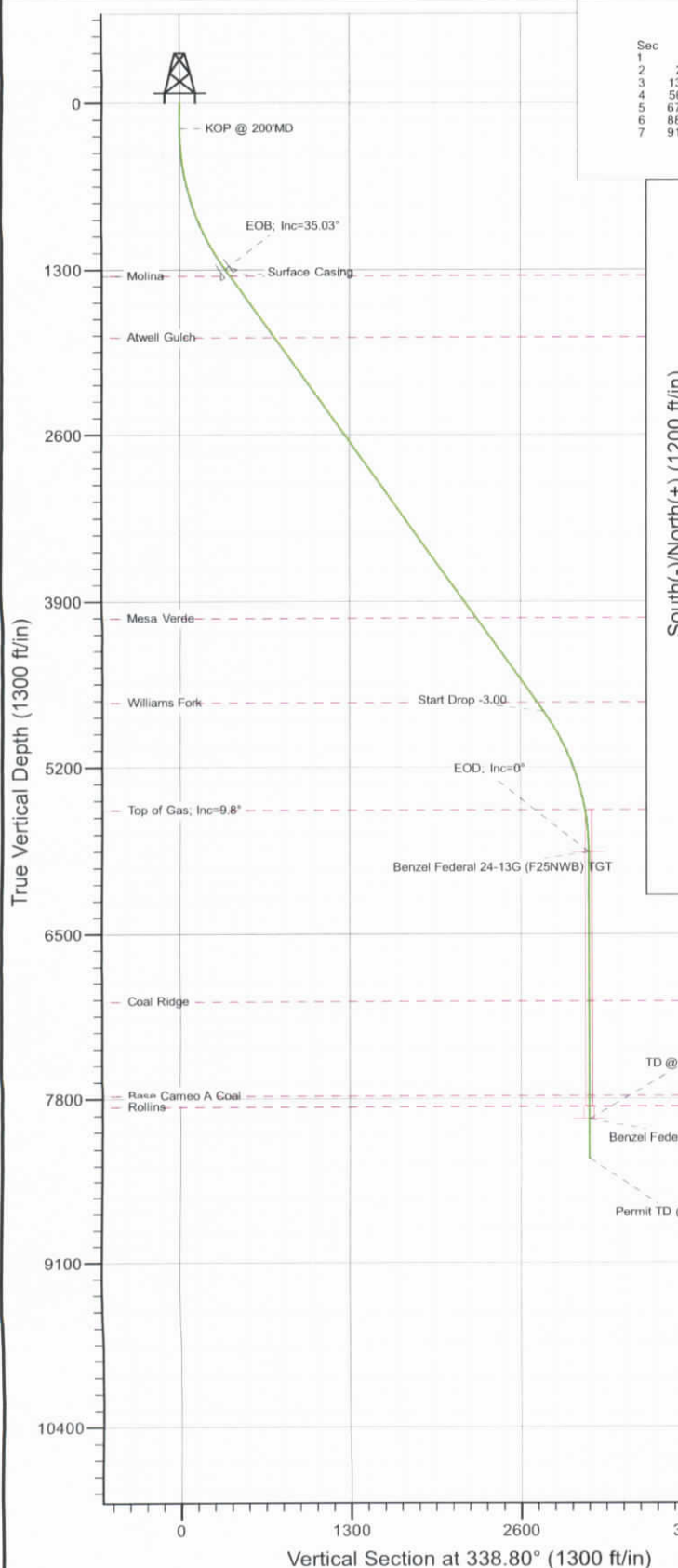
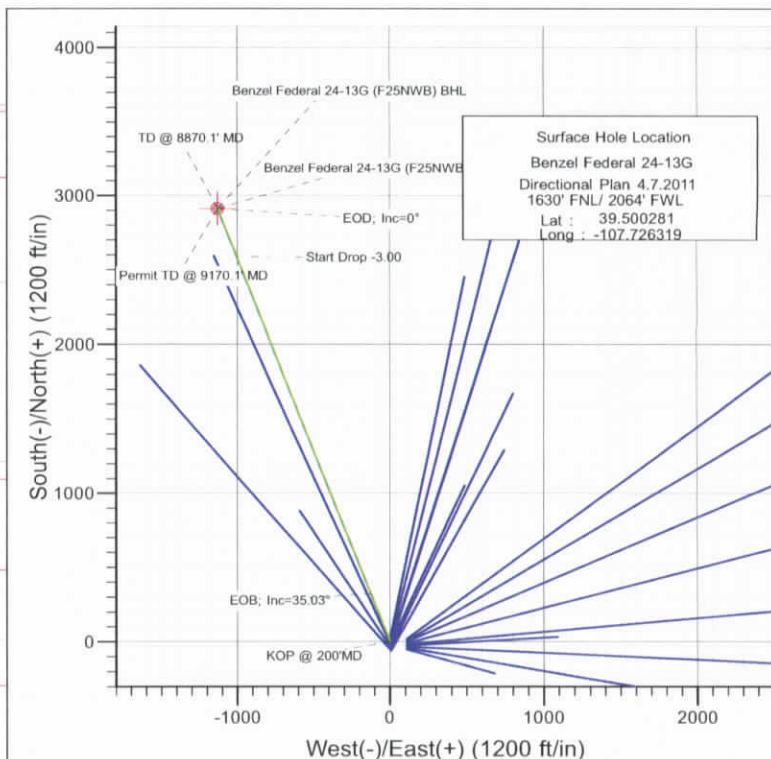




Project: Mamm Creek
 Site: F25NWB Pad
 Well: Benzel Federal 24-13G (F25NWB Pad) Directional Plan 4.7.2011
 Wellbore: DD
 Design: Plan #1



SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSecl	Target	
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0		
3	1367.6	35.03	338.80	1296.2	322.5	-125.1	3.00	338.80	345.9		
4	5601.5	35.03	338.80	4763.3	2586.2	-1003.8	0.00	0.00	2776.0		
5	6769.1	0.00	0.00	5859.5	2910.7	-1128.9	3.00	180.00	3121.9	Benzel Federal 24-13G (F25NWB) TGT	
6	8870.1	0.00	0.00	7960.5	2910.7	-1128.9	0.00	0.00	3121.9	Benzel Federal 24-13G (F25NWB) BHL	
7	9170.1	0.00	0.00	8260.5	2910.7	-1128.9	0.00	0.00	3121.9		



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1352.5	1436.3	Molina
1838.5	2029.8	Atwell Gulch
4033.5	4710.3	Mesa Verde
4697.5	5521.2	Williams Fork
5534.5	6442.5	Top of Gas; Inc=9.8°
7037.5	7947.1	Coal Ridge
7778.5	8688.1	Base Cameo A Coal
7860.5	8770.1	Rollins



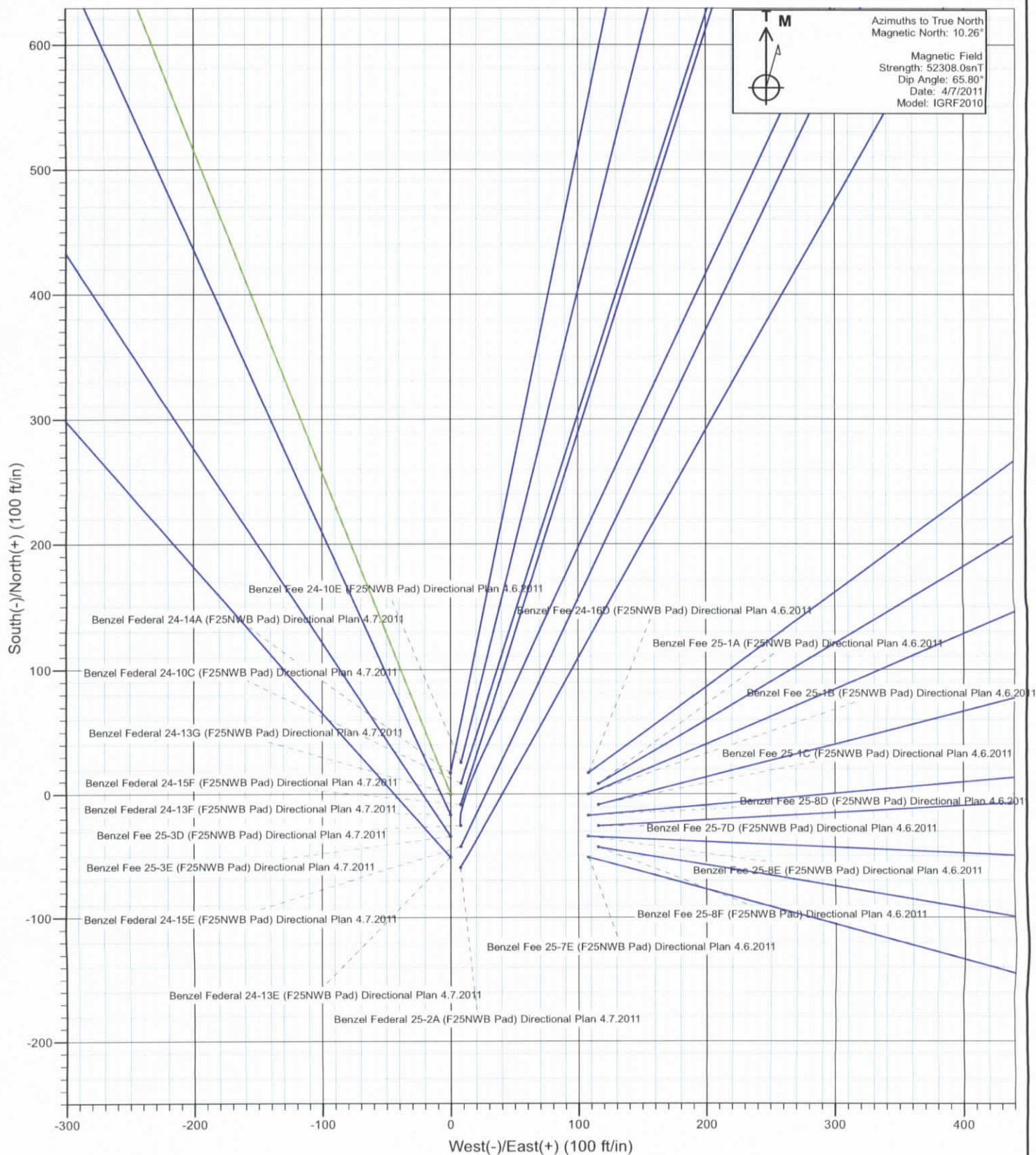
Azimuths to True North
 Magnetic North: 10.26°

Magnetic Field
 Strength: 52308.0nT
 Dip Angle: 65.80°
 Date: 4/7/2011
 Model: IGRF2010

Plan #1 Benzel Federal 24-13G (F25NWB Pad) Directional Plan 4.7.2011 115XXX; BH					
KBE @ 5850.5ft (Original Well Elev) North American Datum 1983 Well Benzel Federal 24-13G (F25NWB Pad) Directional Plan 4.7.2011, True North					
Type	Target	Azimuth	Origin Type	N/S	E/W From TVD
Target	Benzel Federal 24-13G (F25NWB) BHL	338.80	Slot	0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
Benzel Federal 24-13G (F25NWB) TGT	5859.5	2910.7	-1128.9	39.508272	-107.730320
Benzel Federal 24-13G (F25NWB) BHL	7960.5	2910.7	-1128.9	39.508272	-107.730320

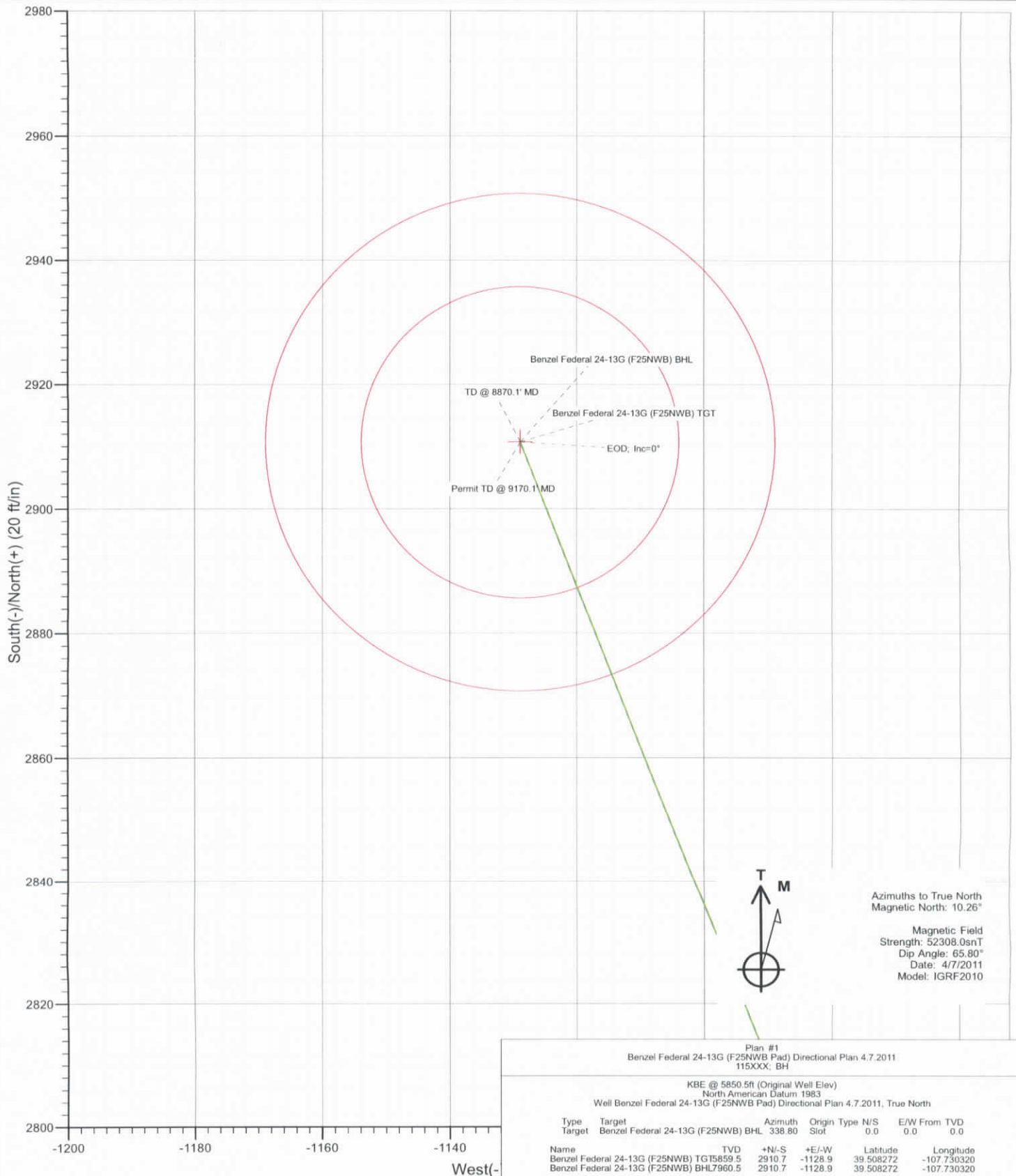


Project: Mamm Creek
Site: F25NWB Pad
Well: Benzel Federal 24-13G (F25NWB Pad) Directional Plan 4.7.2011
Wellbore: DD
Design: Plan #1





Project: Mamm Creek
 Site: F25NWB Pad
 Well: Benzel Federal 24-13G (F25NWB Pad) Directional Plan 4.7.2011
 Wellbore: DD
 Design: Plan #1



Azimuths to True North
 Magnetic North: 10.26°

Magnetic Field
 Strength: 52308.0snT
 Dip Angle: 65.80°
 Date: 4/7/2011
 Model: IGRF2010

Plan #1
 Benzel Federal 24-13G (F25NWB Pad) Directional Plan 4.7.2011
 115XXX; BH

KBE @ 5850.5ft (Original Well Elev)
 North American Datum 1983
 Well Benzel Federal 24-13G (F25NWB Pad) Directional Plan 4.7.2011, True North

Type	Target	Azimuth	Origin	Type	N/S	E/W From TVD
Target	Benzel Federal 24-13G (F25NWB) BHL	338.80	Spot		0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
Benzel Federal 24-13G (F25NWB) TGT	5859.5	2910.7	-1128.9	39.508272	-107.730320	
Benzel Federal 24-13G (F25NWB) BHL	7960.5	2910.7	-1128.9	39.508272	-107.730320	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Benzel Federal 24-13G (F25NWB Pad) Dire
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 5850.5ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 5850.5ft (Original Well Elev)
Site:	F25NWB Pad	North Reference:	True
Well:	Benzel Federal 24-13G (F25NWB Pad) Directional Plan	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Project	Mamm Creek		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	F25NWB Pad				
Site Position:		Northing:	1,614,821.30 ft	Latitude:	39.500328
From:	Lat/Long	Easting:	2,371,946.03 ft	Longitude:	-107.725936
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.40 °

Well	Benzel Federal 24-13G (F25NWB Pad) Directional Plan 4.7.2011					
Well Position	+N/-S	0.0 ft	Northing:	1,614,806.83 ft	Latitude:	39.500281
	+E/-W	0.0 ft	Easting:	2,371,837.57 ft	Longitude:	-107.726319
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,828.5 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/7/2011	10.26	65.80	52,308

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	338.80

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,367.6	35.03	338.80	1,296.2	322.5	-125.1	3.00	3.00	0.00	338.80	
5,601.5	35.03	338.80	4,763.3	2,588.2	-1,003.8	0.00	0.00	0.00	0.00	
6,769.1	0.00	0.00	5,859.5	2,910.7	-1,128.9	3.00	-3.00	0.00	180.00	Benzel Federal 24-13
8,870.1	0.00	0.00	7,960.5	2,910.7	-1,128.9	0.00	0.00	0.00	0.00	Benzel Federal 24-13
9,170.1	0.00	0.00	8,260.5	2,910.7	-1,128.9	0.00	0.00	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Benzel Federal 24-13G (F25NWB Pad) Dire
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 5850.5ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 5850.5ft (Original Well Elev)
Site:	F25NWB Pad	North Reference:	True
Well:	Benzel Federal 24-13G (F25NWB Pad) Directional Plai	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	KOP @ 200'MD
300.0	3.00	338.80	300.0	2.4	-0.9	2.6	3.00	3.00	
400.0	6.00	338.80	399.6	9.8	-3.8	10.5	3.00	3.00	
500.0	9.00	338.80	498.8	21.9	-8.5	23.5	3.00	3.00	
600.0	12.00	338.80	597.1	38.9	-15.1	41.7	3.00	3.00	
700.0	15.00	338.80	694.3	60.7	-23.5	65.1	3.00	3.00	
800.0	18.00	338.80	790.2	87.2	-33.8	93.5	3.00	3.00	
900.0	21.00	338.80	884.4	118.3	-45.9	126.9	3.00	3.00	
1,000.0	24.00	338.80	976.8	153.9	-59.7	165.1	3.00	3.00	
1,100.0	27.00	338.80	1,067.1	194.1	-75.3	208.2	3.00	3.00	
1,200.0	30.00	338.80	1,154.9	238.6	-92.5	255.9	3.00	3.00	
1,300.0	33.00	338.80	1,240.2	287.3	-111.4	308.1	3.00	3.00	
1,367.6	35.03	338.80	1,296.2	322.5	-125.1	345.9	3.00	3.00	EOB; Inc=35.03°
1,400.0	35.03	338.80	1,322.7	339.9	-131.8	364.5	0.00	0.00	
1,425.0	35.03	338.80	1,343.2	353.2	-137.0	378.9	0.00	0.00	Surface Casing
1,436.3	35.03	338.80	1,352.5	359.3	-139.4	385.4	0.00	0.00	Molina
1,500.0	35.03	338.80	1,404.6	393.4	-152.6	421.9	0.00	0.00	
1,600.0	35.03	338.80	1,486.5	446.9	-173.3	479.3	0.00	0.00	
1,700.0	35.03	338.80	1,568.4	500.4	-194.1	536.7	0.00	0.00	
1,800.0	35.03	338.80	1,650.3	553.9	-214.8	594.1	0.00	0.00	
1,900.0	35.03	338.80	1,732.2	607.4	-235.6	651.5	0.00	0.00	
2,000.0	35.03	338.80	1,814.1	660.9	-256.3	708.9	0.00	0.00	
2,029.8	35.03	338.80	1,838.5	676.9	-262.5	726.0	0.00	0.00	Atwell Gulch
2,100.0	35.03	338.80	1,896.0	714.4	-277.1	766.3	0.00	0.00	
2,200.0	35.03	338.80	1,977.9	768.0	-297.8	823.7	0.00	0.00	
2,300.0	35.03	338.80	2,059.7	821.5	-318.6	881.1	0.00	0.00	
2,400.0	35.03	338.80	2,141.6	875.0	-339.4	938.5	0.00	0.00	
2,500.0	35.03	338.80	2,223.5	928.5	-360.1	995.9	0.00	0.00	
2,600.0	35.03	338.80	2,305.4	982.0	-380.9	1,053.3	0.00	0.00	
2,700.0	35.03	338.80	2,387.3	1,035.5	-401.6	1,110.7	0.00	0.00	
2,800.0	35.03	338.80	2,469.2	1,089.0	-422.4	1,168.1	0.00	0.00	
2,900.0	35.03	338.80	2,551.1	1,142.5	-443.1	1,225.5	0.00	0.00	
3,000.0	35.03	338.80	2,633.0	1,196.1	-463.9	1,282.9	0.00	0.00	
3,100.0	35.03	338.80	2,714.9	1,249.6	-484.6	1,340.3	0.00	0.00	
3,200.0	35.03	338.80	2,796.7	1,303.1	-505.4	1,397.7	0.00	0.00	
3,300.0	35.03	338.80	2,878.6	1,356.6	-526.1	1,455.0	0.00	0.00	
3,400.0	35.03	338.80	2,960.5	1,410.1	-546.9	1,512.4	0.00	0.00	
3,500.0	35.03	338.80	3,042.4	1,463.6	-567.7	1,569.8	0.00	0.00	
3,600.0	35.03	338.80	3,124.3	1,517.1	-588.4	1,627.2	0.00	0.00	
3,700.0	35.03	338.80	3,206.2	1,570.6	-609.2	1,684.6	0.00	0.00	
3,800.0	35.03	338.80	3,288.1	1,624.1	-629.9	1,742.0	0.00	0.00	
3,900.0	35.03	338.80	3,370.0	1,677.7	-650.7	1,799.4	0.00	0.00	
4,000.0	35.03	338.80	3,451.8	1,731.2	-671.4	1,856.8	0.00	0.00	
4,100.0	35.03	338.80	3,533.7	1,784.7	-692.2	1,914.2	0.00	0.00	
4,200.0	35.03	338.80	3,615.6	1,838.2	-712.9	1,971.6	0.00	0.00	
4,300.0	35.03	338.80	3,697.5	1,891.7	-733.7	2,029.0	0.00	0.00	
4,400.0	35.03	338.80	3,779.4	1,945.2	-754.4	2,086.4	0.00	0.00	
4,500.0	35.03	338.80	3,861.3	1,998.7	-775.2	2,143.8	0.00	0.00	
4,600.0	35.03	338.80	3,943.2	2,052.2	-795.9	2,201.2	0.00	0.00	
4,700.0	35.03	338.80	4,025.1	2,105.8	-816.7	2,258.6	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Benzel Federal 24-13G (F25NWB Pad) Dire
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 5850.5ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 5850.5ft (Original Well Elev)
Site:	F25NWB Pad	North Reference:	True
Well:	Benzel Federal 24-13G (F25NWB Pad) Directional Plai	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,710.3	35.03	338.80	4,033.5	2,111.3	-818.8	2,264.5	0.00	0.00	Mesa Verde
4,800.0	35.03	338.80	4,107.0	2,159.3	-837.5	2,316.0	0.00	0.00	
4,900.0	35.03	338.80	4,188.8	2,212.8	-858.2	2,373.4	0.00	0.00	
5,000.0	35.03	338.80	4,270.7	2,266.3	-879.0	2,430.8	0.00	0.00	
5,100.0	35.03	338.80	4,352.6	2,319.8	-899.7	2,488.2	0.00	0.00	
5,200.0	35.03	338.80	4,434.5	2,373.3	-920.5	2,545.6	0.00	0.00	
5,300.0	35.03	338.80	4,516.4	2,426.8	-941.2	2,603.0	0.00	0.00	
5,400.0	35.03	338.80	4,598.3	2,480.3	-962.0	2,660.4	0.00	0.00	
5,500.0	35.03	338.80	4,680.2	2,533.9	-982.7	2,717.8	0.00	0.00	
5,521.2	35.03	338.80	4,697.5	2,545.2	-987.1	2,729.9	0.00	0.00	Williams Fork
5,600.0	35.03	338.80	4,762.1	2,587.4	-1,003.5	2,775.1	0.00	0.00	
5,601.5	35.03	338.80	4,763.3	2,588.2	-1,003.8	2,776.0	0.00	0.00	Start Drop -3.00
5,700.0	32.07	338.80	4,845.4	2,638.9	-1,023.5	2,830.4	3.00	-3.00	
5,800.0	29.07	338.80	4,931.5	2,686.3	-1,041.9	2,881.3	3.00	-3.00	
5,900.0	26.07	338.80	5,020.1	2,729.5	-1,058.6	2,927.6	3.00	-3.00	
6,000.0	23.07	338.80	5,111.0	2,768.2	-1,073.6	2,969.2	3.00	-3.00	
6,100.0	20.07	338.80	5,204.0	2,802.5	-1,086.9	3,005.9	3.00	-3.00	
6,200.0	17.07	338.80	5,298.8	2,832.2	-1,098.5	3,037.8	3.00	-3.00	
6,300.0	14.07	338.80	5,395.1	2,857.2	-1,108.2	3,064.6	3.00	-3.00	
6,400.0	11.07	338.80	5,492.7	2,877.5	-1,116.0	3,086.4	3.00	-3.00	
6,442.5	9.80	338.80	5,534.5	2,884.7	-1,118.8	3,094.1	3.00	-3.00	Top of Gas; Inc=9.8°
6,500.0	8.07	338.80	5,591.3	2,893.0	-1,122.0	3,103.0	3.00	-3.00	
6,600.0	5.07	338.80	5,690.6	2,903.7	-1,126.2	3,114.5	3.00	-3.00	
6,700.0	2.07	338.80	5,790.4	2,909.5	-1,128.4	3,120.7	3.00	-3.00	
6,769.1	0.00	0.00	5,859.5	2,910.7	-1,128.9	3,121.9	3.00	-3.00	EOD; Inc=0° - Benzel Federal 24-13G (F25NWI
6,800.0	0.00	0.00	5,890.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
6,900.0	0.00	0.00	5,990.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
7,000.0	0.00	0.00	6,090.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
7,100.0	0.00	0.00	6,190.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
7,200.0	0.00	0.00	6,290.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
7,300.0	0.00	0.00	6,390.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
7,400.0	0.00	0.00	6,490.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
7,500.0	0.00	0.00	6,590.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
7,600.0	0.00	0.00	6,690.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
7,700.0	0.00	0.00	6,790.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
7,800.0	0.00	0.00	6,890.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
7,900.0	0.00	0.00	6,990.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
7,947.1	0.00	0.00	7,037.5	2,910.7	-1,128.9	3,121.9	0.00	0.00	Coal Ridge
8,000.0	0.00	0.00	7,090.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
8,100.0	0.00	0.00	7,190.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
8,200.0	0.00	0.00	7,290.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
8,300.0	0.00	0.00	7,390.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
8,400.0	0.00	0.00	7,490.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
8,500.0	0.00	0.00	7,590.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
8,600.0	0.00	0.00	7,690.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
8,688.1	0.00	0.00	7,778.5	2,910.7	-1,128.9	3,121.9	0.00	0.00	Base Cameo A Coal
8,700.0	0.00	0.00	7,790.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
8,770.1	0.00	0.00	7,860.5	2,910.7	-1,128.9	3,121.9	0.00	0.00	Rollins
8,800.0	0.00	0.00	7,890.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
8,870.1	0.00	0.00	7,960.5	2,910.7	-1,128.9	3,121.9	0.00	0.00	TD @ 8870.1' MD - Benzel Federal 24-13G (F2
8,900.0	0.00	0.00	7,990.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
9,000.0	0.00	0.00	8,090.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Benzel Federal 24-13G (F25NWB Pad) Dire
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 5850.5ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 5850.5ft (Original Well Elev)
Site:	F25NWB Pad	North Reference:	True
Well:	Benzel Federal 24-13G (F25NWB Pad) Directional Plan	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
9,100.0	0.00	0.00	8,190.4	2,910.7	-1,128.9	3,121.9	0.00	0.00	
9,170.1	0.00	0.00	8,260.5	2,910.7	-1,128.9	3,121.9	0.00	0.00	Permit TD @ 9170.1' MD

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Benzel Federal 24-13G i - plan hits target center - Circle (radius 40.0)	0.00	0.00	7,960.5	2,910.7	-1,128.9	1,617,744.30	2,370,780.34	39.508272	-107.730320
Benzel Federal 24-13G i - plan hits target center - Circle (radius 25.0)	0.00	0.00	5,859.5	2,910.7	-1,128.9	1,617,744.30	2,370,780.34	39.508272	-107.730320

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,425.0	1,343.2	Surface Casing	0.000	0.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,436.3	1,352.5	Molina		0.00	
2,029.8	1,838.5	Atwell Gulch		0.00	
4,710.3	4,033.5	Mesa Verde		0.00	
5,521.2	4,697.5	Williams Fork		0.00	
6,442.5	5,534.5	Top of Gas; Inc=9.8°		0.00	
7,947.1	7,037.5	Coal Ridge		0.00	
8,688.1	7,778.5	Base Cameo A Coal		0.00	
8,770.1	7,860.5	Rollins		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP @ 200'MD
1,367.6	1,296.2	322.5	-125.1	EOB; Inc=35.03°
5,601.5	4,763.3	2,588.2	-1,003.8	Start Drop -3.00
6,769.1	5,859.5	2,910.7	-1,128.9	EOD; Inc=0°
8,870.1	7,960.5	2,910.7	-1,128.9	TD @ 8870.1' MD
9,170.1	8,260.5	2,910.7	-1,128.9	Permit TD @ 9170.1' MD