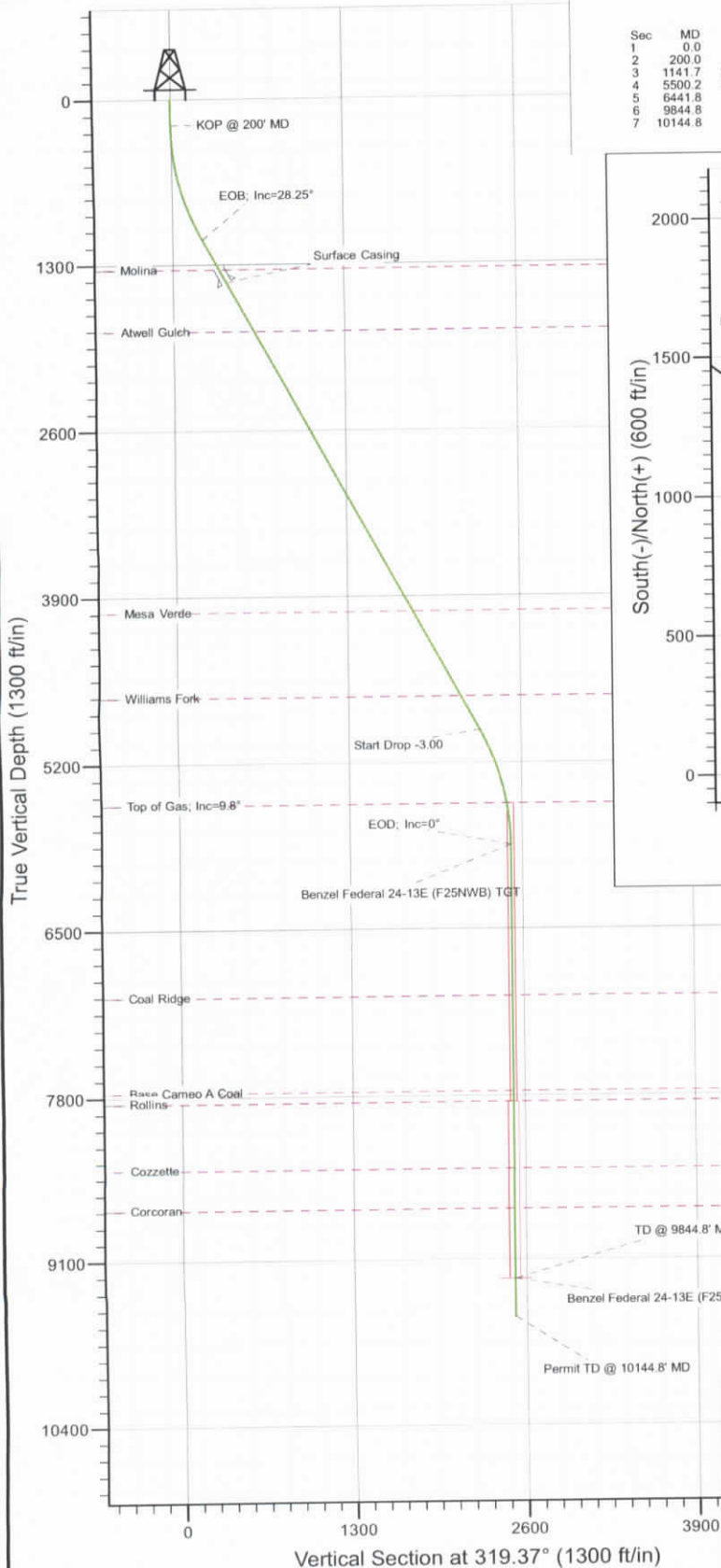
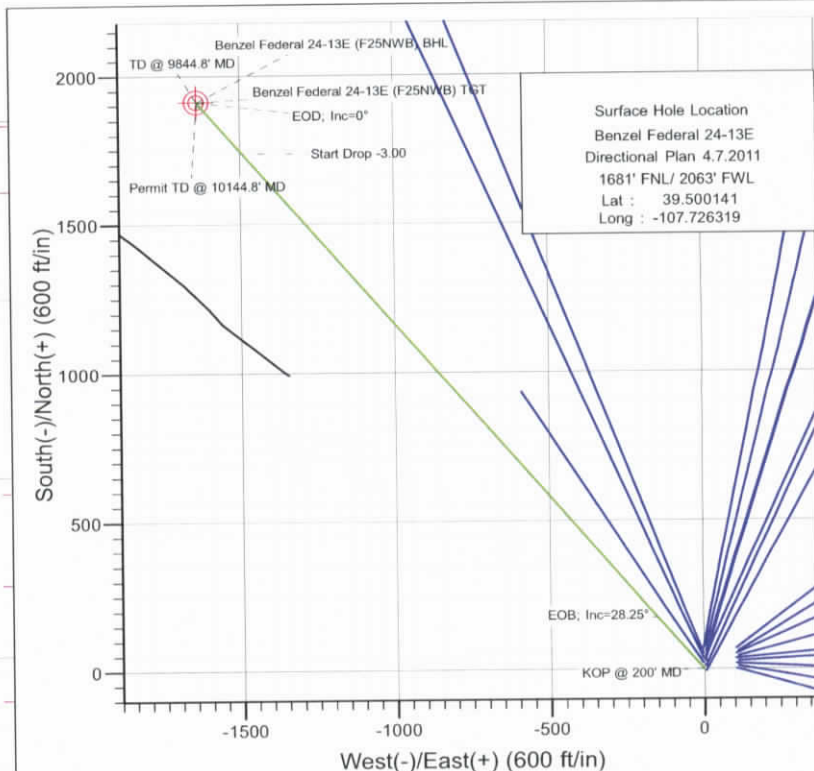




Project: Mamm Creek
 Site: F25NWB Pad
 Well: Benzel Federal 24-13E (F25NWB Pad) Directional Plan 4.7.2011
 Wellbore: DD
 Design: Plan #1



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	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	1141.7	28.25	319.37	1104.0	172.6	-148.1	3.00	319.37	227.5	
4	5500.2	28.25	319.37	4943.3	1738.2	-1491.5	0.00	0.00	2290.4	
5	6441.8	0.00	0.00	5847.3	1910.9	-1639.7	3.00	180.00	2517.9	Benzel Federal 24-13E (F25NWB) TGT
6	9844.8	0.00	0.00	9250.3	1910.9	-1639.7	0.00	0.00	2517.9	Benzel Federal 24-13E (F25NWB) BHL
7	10144.8	0.00	0.00	9550.3	1910.9	-1639.7	0.00	0.00	2517.9	



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1340.3	1409.9	Molina
1826.3	1961.7	Atwell Gulch
4021.3	4453.5	Mesa Verde
4685.3	5207.2	Williams Fork
5522.3	6115.2	Top of Gas, Inc=9.8°
7025.3	7619.8	Coal Ridge
7766.3	8360.8	Base Cameo A Coal
7848.3	8442.8	Rollins
8378.3	8972.8	Cozzette
8700.3	9294.8	Corcoran

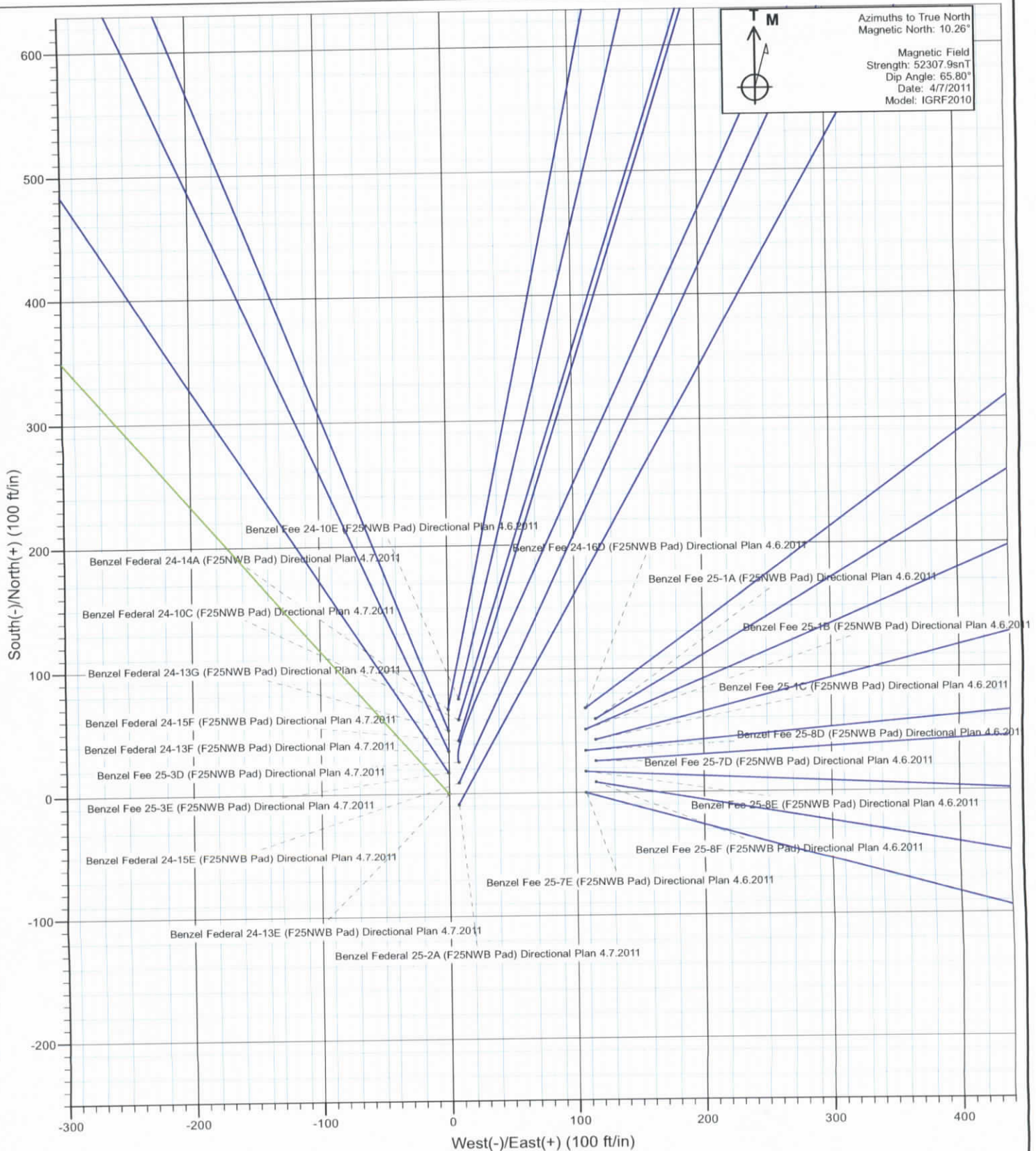


Azimuths to True North
 Magnetic North: 10.26°
 Magnetic Field
 Strength: 52307.9nT
 Dip Angle: 65.80°
 Date: 4/7/2011
 Model: IGRF2010

Plan #1 Benzel Federal 24-13E (F25NWB Pad) Directional Plan 4.7.2011 115XXX; BH					
KBE @ 5848.3ft (Original Well Elev) North American Datum 1983 Well Benzel Federal 24-13E (F25NWB Pad) Directional Plan 4.7.2011, True North					
Type	Target	Azimuth	Origin	Type	TVD
Target	Benzel Federal 24-13E (F25NWB) BHL	319.37	Spot	0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
Benzel Federal 24-13E (F25NWB) TGT	5847.3	1910.9	-1639.7	39.505387	-107.732130
Benzel Federal 24-13E (F25NWB) BHL	9250.3	1910.9	-1639.7	39.505387	-107.732130

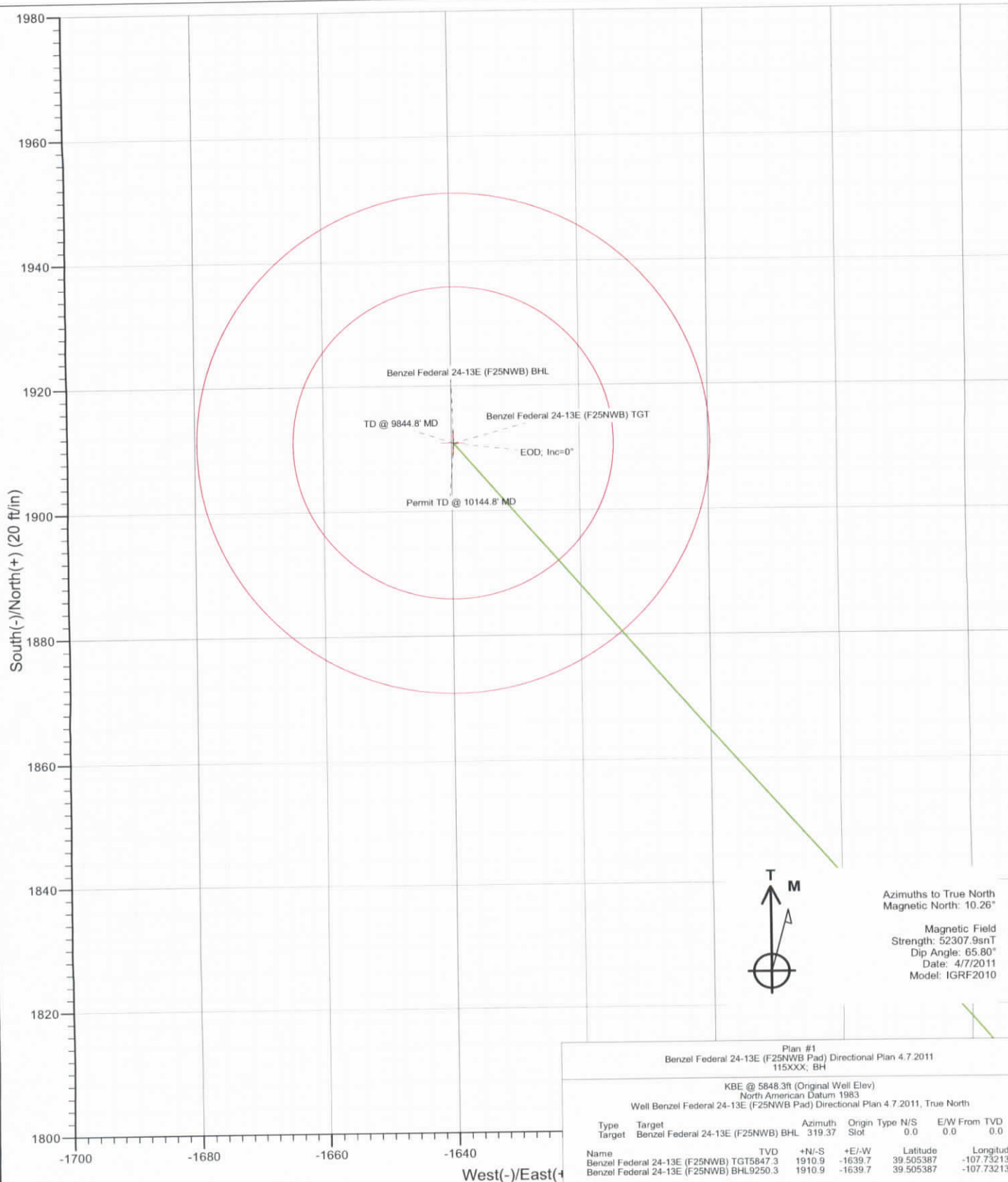


Project: Mamm Creek
Site: F25NWB Pad
Well: Benzel Federal 24-13E (F25NWB Pad) Directional Plan 4.7.2011
Wellbore: DD
Design: Plan #1





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



Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Benzel Federal 24-13E (F25NWB Pad) Dire
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 5848.3ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 5848.3ft (Original Well Elev)
Site:	F25NWB Pad	North Reference:	True
Well:	Benzel Federal 24-13E (F25NWB Pad) Directional Plan	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Project	Mamm Creek	System Datum:	Mean Sea Level
Map System:	US State Plane 1983		
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 24-13E (F25NWB Pad) Directional Plan 4.7.2011				
Well Position	+N/-S	0.0 ft	Northing:	1,614,755.84 ft	Latitude: 39.500141
	+E/-W	0.0 ft	Easting:	2,371,836.32 ft	Longitude: -107.726319
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level: 5,826.3 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)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	319.37	

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	
1,141.7	28.25	319.37	1,104.0	172.6	-148.1	3.00	3.00	0.00	319.37	
5,500.2	28.25	319.37	4,943.3	1,738.2	-1,491.5	0.00	0.00	0.00	0.00	
6,441.8	0.00	0.00	5,847.3	1,910.9	-1,639.7	3.00	-3.00	0.00	180.00	Benzel Federal 24-13
9,844.8	0.00	0.00	9,250.3	1,910.9	-1,639.7	0.00	0.00	0.00	0.00	Benzel Federal 24-13
10,144.8	0.00	0.00	9,550.3	1,910.9	-1,639.7	0.00	0.00	0.00	0.00	

Cathedral Energy Services

Planning Report

Database: EDM 5000.1 US Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: Mamm Creek
Site: F25NWB Pad
Well: Benzel Federal 24-13E (F25NWB Pad) Directional Plan
Wellbore: DD
Design: Plan #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well Benzel Federal 24-13E (F25NWB Pad) Dire
 KBE @ 5848.3ft (Original Well Elev)
 KBE @ 5848.3ft (Original Well Elev)
 True
 Minimum Curvature

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	319.37	300.0	2.0	-1.7	2.6	3.00	3.00	
400.0	6.00	319.37	399.6	7.9	-6.8	10.5	3.00	3.00	
500.0	9.00	319.37	498.8	17.8	-15.3	23.5	3.00	3.00	
600.0	12.00	319.37	597.1	31.7	-27.2	41.7	3.00	3.00	
700.0	15.00	319.37	694.3	49.4	-42.4	65.1	3.00	3.00	
800.0	18.00	319.37	790.2	70.9	-60.9	93.5	3.00	3.00	
900.0	21.00	319.37	884.4	96.3	-82.6	126.9	3.00	3.00	
1,000.0	24.00	319.37	976.8	125.3	-107.5	165.1	3.00	3.00	
1,100.0	27.00	319.37	1,067.1	158.0	-135.6	208.2	3.00	3.00	
1,141.7	28.25	319.37	1,104.0	172.6	-148.1	227.5	3.00	3.00	EOB; Inc=28.25°
1,200.0	28.25	319.37	1,155.4	193.6	-166.1	255.1	0.00	0.00	
1,300.0	28.25	319.37	1,243.4	229.5	-196.9	302.4	0.00	0.00	
1,400.0	28.25	319.37	1,331.5	265.4	-227.8	349.8	0.00	0.00	
1,409.9	28.25	319.37	1,340.3	269.0	-230.8	354.5	0.00	0.00	Molina
1,500.0	28.25	319.37	1,419.6	301.4	-258.6	397.1	0.00	0.00	
1,525.0	28.25	319.37	1,441.6	310.3	-266.3	408.9	0.00	0.00	Surface Casing
1,600.0	28.25	319.37	1,507.7	337.3	-289.4	444.4	0.00	0.00	
1,700.0	28.25	319.37	1,595.8	373.2	-320.2	491.8	0.00	0.00	
1,800.0	28.25	319.37	1,683.9	409.1	-351.0	539.1	0.00	0.00	
1,900.0	28.25	319.37	1,772.0	445.0	-381.9	586.4	0.00	0.00	
1,961.7	28.25	319.37	1,826.3	467.2	-400.9	615.6	0.00	0.00	Atwell Gulch
2,000.0	28.25	319.37	1,860.1	481.0	-412.7	633.7	0.00	0.00	
2,100.0	28.25	319.37	1,948.2	516.9	-443.5	681.1	0.00	0.00	
2,200.0	28.25	319.37	2,036.3	552.8	-474.3	728.4	0.00	0.00	
2,300.0	28.25	319.37	2,124.3	588.7	-505.2	775.7	0.00	0.00	
2,400.0	28.25	319.37	2,212.4	624.6	-536.0	823.1	0.00	0.00	
2,500.0	28.25	319.37	2,300.5	660.6	-566.8	870.4	0.00	0.00	
2,600.0	28.25	319.37	2,388.6	696.5	-597.6	917.7	0.00	0.00	
2,700.0	28.25	319.37	2,476.7	732.4	-628.4	965.1	0.00	0.00	
2,800.0	28.25	319.37	2,564.8	768.3	-659.3	1,012.4	0.00	0.00	
2,900.0	28.25	319.37	2,652.9	804.2	-690.1	1,059.7	0.00	0.00	
3,000.0	28.25	319.37	2,741.0	840.2	-720.9	1,107.1	0.00	0.00	
3,100.0	28.25	319.37	2,829.1	876.1	-751.7	1,154.4	0.00	0.00	
3,200.0	28.25	319.37	2,917.1	912.0	-782.6	1,201.7	0.00	0.00	
3,300.0	28.25	319.37	3,005.2	947.9	-813.4	1,249.1	0.00	0.00	
3,400.0	28.25	319.37	3,093.3	983.8	-844.2	1,296.4	0.00	0.00	
3,500.0	28.25	319.37	3,181.4	1,019.8	-875.0	1,343.7	0.00	0.00	
3,600.0	28.25	319.37	3,269.5	1,055.7	-905.8	1,391.1	0.00	0.00	
3,700.0	28.25	319.37	3,357.6	1,091.6	-936.7	1,438.4	0.00	0.00	
3,800.0	28.25	319.37	3,445.7	1,127.5	-967.5	1,485.7	0.00	0.00	
3,900.0	28.25	319.37	3,533.8	1,163.5	-998.3	1,533.1	0.00	0.00	
4,000.0	28.25	319.37	3,621.9	1,199.4	-1,029.1	1,580.4	0.00	0.00	
4,100.0	28.25	319.37	3,709.9	1,235.3	-1,060.0	1,627.7	0.00	0.00	
4,200.0	28.25	319.37	3,798.0	1,271.2	-1,090.8	1,675.0	0.00	0.00	
4,300.0	28.25	319.37	3,886.1	1,307.1	-1,121.6	1,722.4	0.00	0.00	
4,400.0	28.25	319.37	3,974.2	1,343.1	-1,152.4	1,769.7	0.00	0.00	
4,453.5	28.25	319.37	4,021.3	1,362.3	-1,168.9	1,795.0	0.00	0.00	Mesa Verde
4,500.0	28.25	319.37	4,062.3	1,379.0	-1,183.2	1,817.0	0.00	0.00	
4,600.0	28.25	319.37	4,150.4	1,414.9	-1,214.1	1,864.4	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Benzel Federal 24-13E (F25NWB Pad) Dire
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 5848.3ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 5848.3ft (Original Well Elev)
Site:	F25NWB Pad	North Reference:	True
Well:	Benzel Federal 24-13E (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
4,700.0	28.25	319.37	4,238.5	1,450.8	-1,244.9	1,911.7	0.00	0.00	
4,800.0	28.25	319.37	4,326.6	1,486.7	-1,275.7	1,959.0	0.00	0.00	
4,900.0	28.25	319.37	4,414.7	1,522.7	-1,306.5	2,006.4	0.00	0.00	
5,000.0	28.25	319.37	4,502.7	1,558.6	-1,337.4	2,053.7	0.00	0.00	
5,100.0	28.25	319.37	4,590.8	1,594.5	-1,368.2	2,101.0	0.00	0.00	
5,200.0	28.25	319.37	4,678.9	1,630.4	-1,399.0	2,148.4	0.00	0.00	
5,207.2	28.25	319.37	4,685.3	1,633.0	-1,401.2	2,151.8	0.00	0.00	Williams Fork
5,300.0	28.25	319.37	4,767.0	1,666.3	-1,429.8	2,195.7	0.00	0.00	
5,400.0	28.25	319.37	4,855.1	1,702.3	-1,460.6	2,243.0	0.00	0.00	
5,500.0	28.25	319.37	4,943.2	1,738.2	-1,491.5	2,290.4	0.00	0.00	
5,500.2	28.25	319.37	4,943.3	1,738.2	-1,491.5	2,290.4	0.00	0.00	Start Drop -3.00
5,600.0	25.25	319.37	5,032.5	1,772.3	-1,520.8	2,335.4	3.00	-3.00	
5,700.0	22.25	319.37	5,124.0	1,802.9	-1,547.0	2,375.7	3.00	-3.00	
5,800.0	19.25	319.37	5,217.5	1,829.8	-1,570.1	2,411.1	3.00	-3.00	
5,900.0	16.25	319.37	5,312.7	1,852.9	-1,589.9	2,441.6	3.00	-3.00	
6,000.0	13.25	319.37	5,409.4	1,872.3	-1,606.5	2,467.0	3.00	-3.00	
6,100.0	10.25	319.37	5,507.3	1,887.7	-1,619.8	2,487.4	3.00	-3.00	
6,115.2	9.80	319.37	5,522.3	1,889.7	-1,621.5	2,490.1	3.00	-3.00	Top of Gas; Inc=9.8°
6,200.0	7.25	319.37	5,606.1	1,899.3	-1,629.7	2,502.6	3.00	-3.00	
6,300.0	4.25	319.37	5,705.6	1,906.9	-1,636.2	2,512.7	3.00	-3.00	
6,400.0	1.25	319.37	5,805.5	1,910.5	-1,639.4	2,517.5	3.00	-3.00	
6,441.8	0.00	0.00	5,847.3	1,910.9	-1,639.7	2,517.9	3.00	-3.00	EOD; Inc=0° - Benzel Federal 24-13E (F25NWB)
6,500.0	0.00	0.00	5,905.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
6,600.0	0.00	0.00	6,005.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
6,700.0	0.00	0.00	6,105.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
6,800.0	0.00	0.00	6,205.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
6,900.0	0.00	0.00	6,305.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
7,000.0	0.00	0.00	6,405.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
7,100.0	0.00	0.00	6,505.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
7,200.0	0.00	0.00	6,605.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
7,300.0	0.00	0.00	6,705.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
7,400.0	0.00	0.00	6,805.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
7,500.0	0.00	0.00	6,905.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
7,600.0	0.00	0.00	7,005.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
7,619.8	0.00	0.00	7,025.3	1,910.9	-1,639.7	2,517.9	0.00	0.00	Coal Ridge
7,700.0	0.00	0.00	7,105.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
7,800.0	0.00	0.00	7,205.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
7,900.0	0.00	0.00	7,305.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
8,000.0	0.00	0.00	7,405.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
8,100.0	0.00	0.00	7,505.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
8,200.0	0.00	0.00	7,605.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
8,300.0	0.00	0.00	7,705.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
8,360.8	0.00	0.00	7,766.3	1,910.9	-1,639.7	2,517.9	0.00	0.00	Base Cameo A Coal
8,400.0	0.00	0.00	7,805.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
8,442.8	0.00	0.00	7,848.3	1,910.9	-1,639.7	2,517.9	0.00	0.00	Rollins
8,500.0	0.00	0.00	7,905.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
8,600.0	0.00	0.00	8,005.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
8,700.0	0.00	0.00	8,105.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
8,800.0	0.00	0.00	8,205.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
8,900.0	0.00	0.00	8,305.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
8,972.8	0.00	0.00	8,378.3	1,910.9	-1,639.7	2,517.9	0.00	0.00	Cozzette
9,000.0	0.00	0.00	8,405.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Benzel Federal 24-13E (F25NWB Pad) Dire
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 5848.3ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 5848.3ft (Original Well Elev)
Site:	F25NWB Pad	North Reference:	True
Well:	Benzel Federal 24-13E (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	8,505.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
9,200.0	0.00	0.00	8,605.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
9,294.8	0.00	0.00	8,700.3	1,910.9	-1,639.7	2,517.9	0.00	0.00	Corcoran
9,300.0	0.00	0.00	8,705.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
9,400.0	0.00	0.00	8,805.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
9,500.0	0.00	0.00	8,905.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
9,600.0	0.00	0.00	9,005.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
9,700.0	0.00	0.00	9,105.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
9,800.0	0.00	0.00	9,205.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
9,844.8	0.00	0.00	9,250.3	1,910.9	-1,639.7	2,517.9	0.00	0.00	TD @ 9844.8' MD - Benzel Federal 24-13E (F2
9,900.0	0.00	0.00	9,305.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
10,000.0	0.00	0.00	9,405.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
10,100.0	0.00	0.00	9,505.5	1,910.9	-1,639.7	2,517.9	0.00	0.00	
10,144.8	0.00	0.00	9,550.3	1,910.9	-1,639.7	2,517.9	0.00	0.00	

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Benzel Federal 24-13E (0.00	0.00	9,250.3	1,910.9	-1,639.7	1,616,706.32	2,370,243.98	39.505387	-107.732130
- plan hits target center									
- Circle (radius 40.0)									
Benzel Federal 24-13E (0.00	0.00	5,847.3	1,910.9	-1,639.7	1,616,706.32	2,370,243.98	39.505387	-107.732130
- plan hits target center									
- Circle (radius 25.0)									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,525.0	1,441.6	Surface Casing	0.000	0.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,409.9	1,340.3	Molina		0.00	
1,961.7	1,826.3	Atwell Gulch		0.00	
4,453.5	4,021.3	Mesa Verde		0.00	
5,207.2	4,685.3	Williams Fork		0.00	
6,115.2	5,522.3	Top of Gas; Inc=9.8°		0.00	
7,619.8	7,025.3	Coal Ridge		0.00	
8,360.8	7,766.3	Base Cameo A Coal		0.00	
8,442.8	7,848.3	Rollins		0.00	
8,972.8	8,378.3	Cozzette		0.00	
9,294.8	8,700.3	Corcoran		0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Benzel Federal 24-13E (F25NWB Pad) Dire
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 5848.3ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 5848.3ft (Original Well Elev)
Site:	F25NWB Pad	North Reference:	True
Well:	Benzel Federal 24-13E (F25NWB Pad) Directional Plar	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

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
1,141.7	1,104.0	172.6	-148.1	EOB; Inc=28.25°
5,500.2	4,943.3	1,738.2	-1,491.5	Start Drop -3.00
6,441.8	5,847.3	1,910.9	-1,639.7	EOD; Inc=0°
9,844.8	9,250.3	1,910.9	-1,639.7	TD @ 9844.8' MD
10,144.8	9,550.3	1,910.9	-1,639.7	Permit TD @ 10144.8' MD