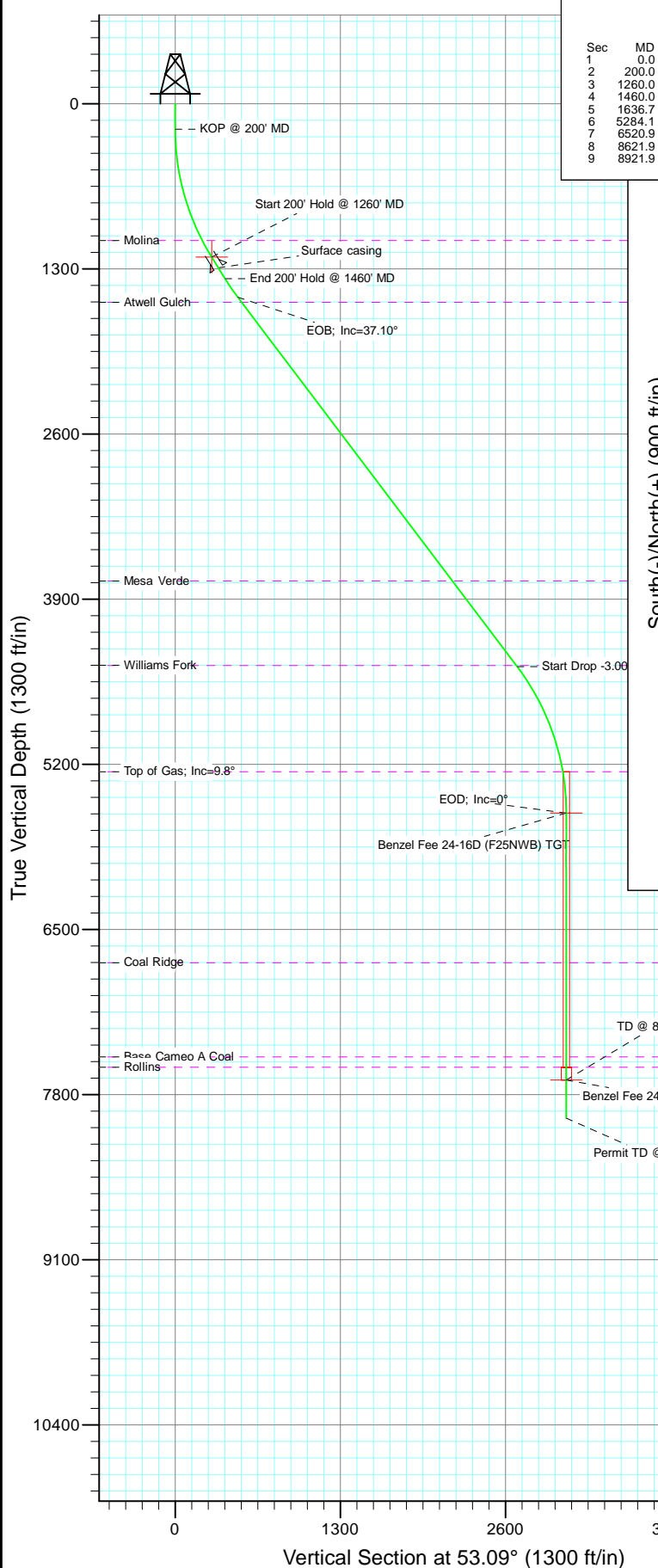
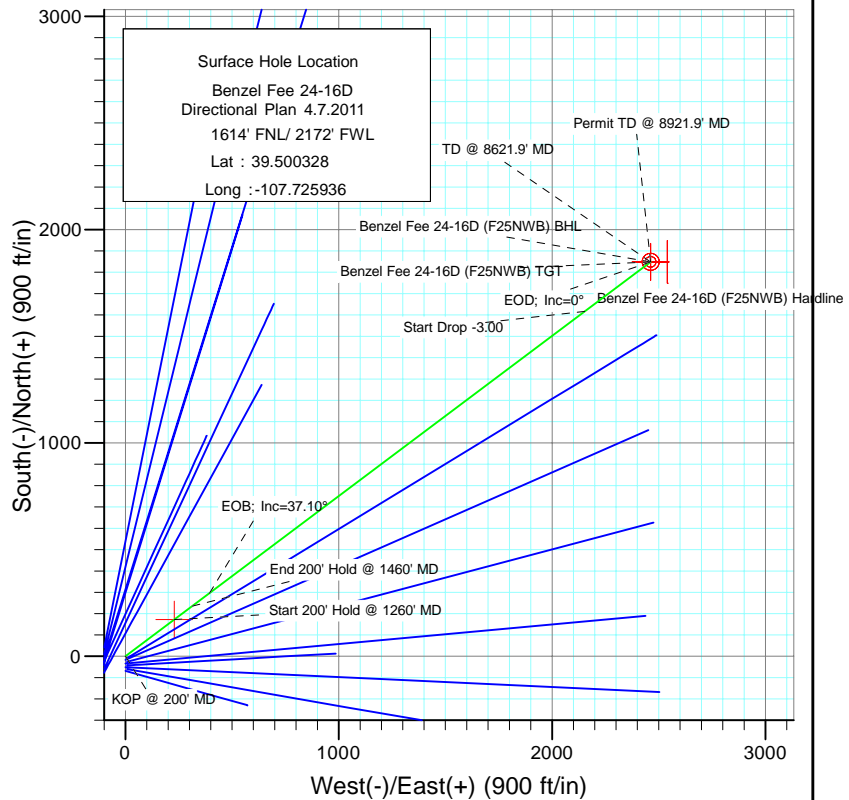




Project: Mamm Creek
Site: F25NWB Pad
Well: Benzel Fee 24-16D (F25NWB Pad) Directional Plan 4.6.2011
Wellbore: DD
Design: Plan #1



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	1260.0	31.80	53.09	1206.4	172.2	229.2	3.00	53.09	286.7	Interp @ 1206.4 (Benzel Fee 24-16D (F25NWB Pad) D
4	1460.0	31.80	53.09	1376.4	235.5	313.5	0.00	0.00	392.1	
5	1636.7	37.10	53.09	1522.1	295.5	393.4	3.00	0.00	492.0	
6	5284.1	37.10	53.09	4431.1	1616.8	2152.7	0.00	0.00	2692.3	
7	6520.9	0.00	0.00	5583.2	1849.0	2461.9	3.00	180.00	3078.9	Benzel Fee 24-16D (F25NWB) TGT
8	8621.9	0.00	0.00	7684.2	1849.0	2461.9	0.00	0.00	3078.9	Benzel Fee 24-16D (F25NWB) BHL
9	8921.9	0.00	0.00	7984.2	1849.0	2461.9	0.00	0.00	3078.9	



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1076.2	1110.3	Molina
1562.2	1687.0	Atwell Gulch
3757.2	4439.2	Mesa Verde
4421.2	5271.7	Williams Fork
5258.2	6194.3	Top of Gas; Inc=9.8°
6761.2	7698.9	Coal Ridge
7502.2	8439.9	Base Cameo A Coal
7584.2	8521.9	Rollins



Azimuths to True North
Magnetic North: 10.26°

Magnetic Field
Strength: 52308.4snT
Dip Angle: 65.80°
Date: 4/6/2011
Model: IGRF2010

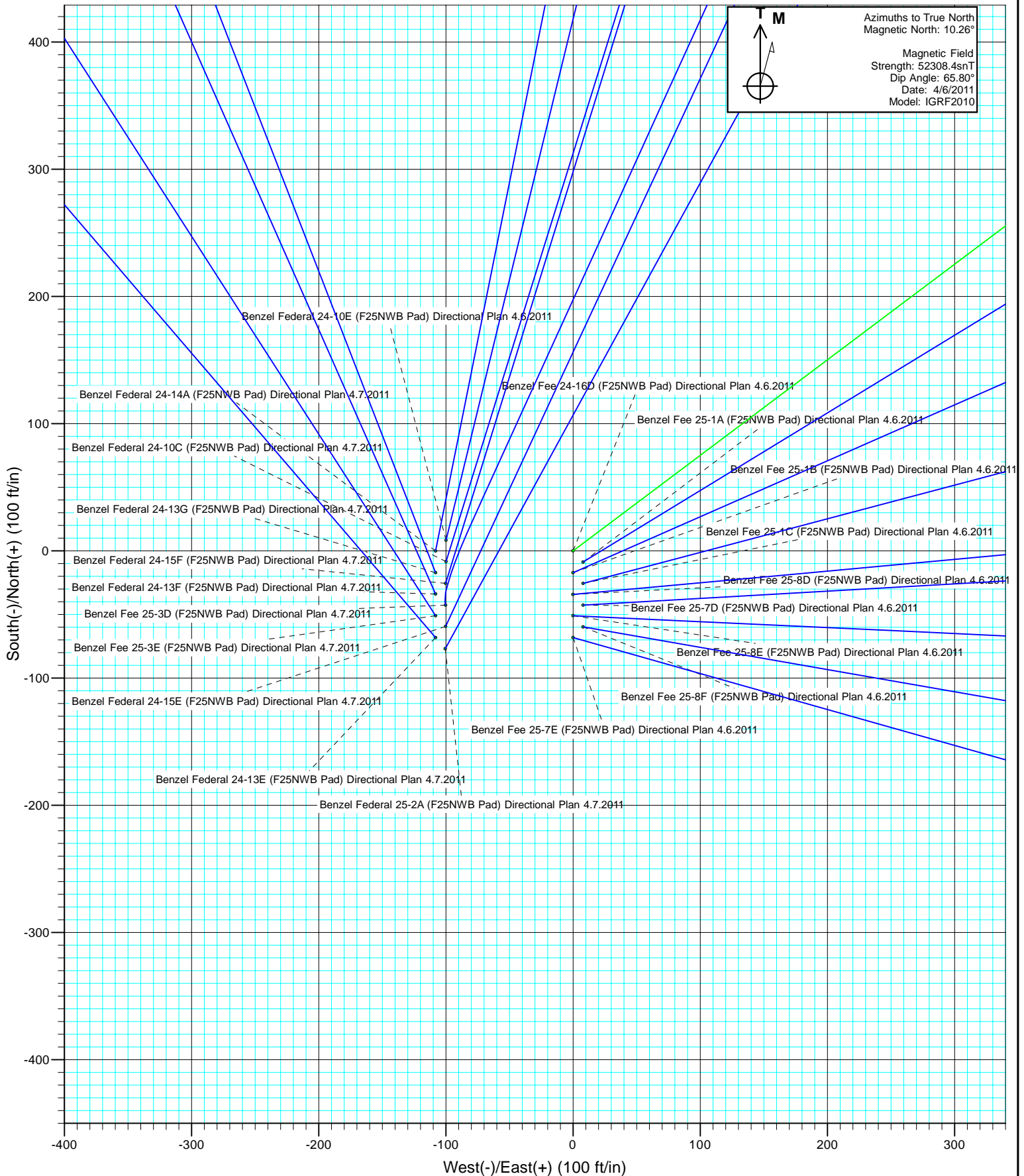
Plan #1
Benzel Fee 24-16D (F25NWB Pad) Directional Plan 4.6.2011
115XXX; BH

KBE @ 5849.2ft (Original Well Elev)
North American Datum 1983
Well Benzel Fee 24-16D (F25NWB Pad) Directional Plan 4.6.2011, True North

Type	Target	Azimuth	Origin	Type	N/S	E/W	From	TVD
Target	Benzel Fee 24-16D (F25NWB) BHL	53.09	0.0	0.0	0.0	0.0	0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude			
Benzel Fee 24-16D (F25NWB) TGT	5583.2	1849.0	2461.9	39.505404	-107.717211			
Benzel Fee 24-16D (F25NWB) BHL	7684.2	1849.0	2461.9	39.505404	-107.717211			

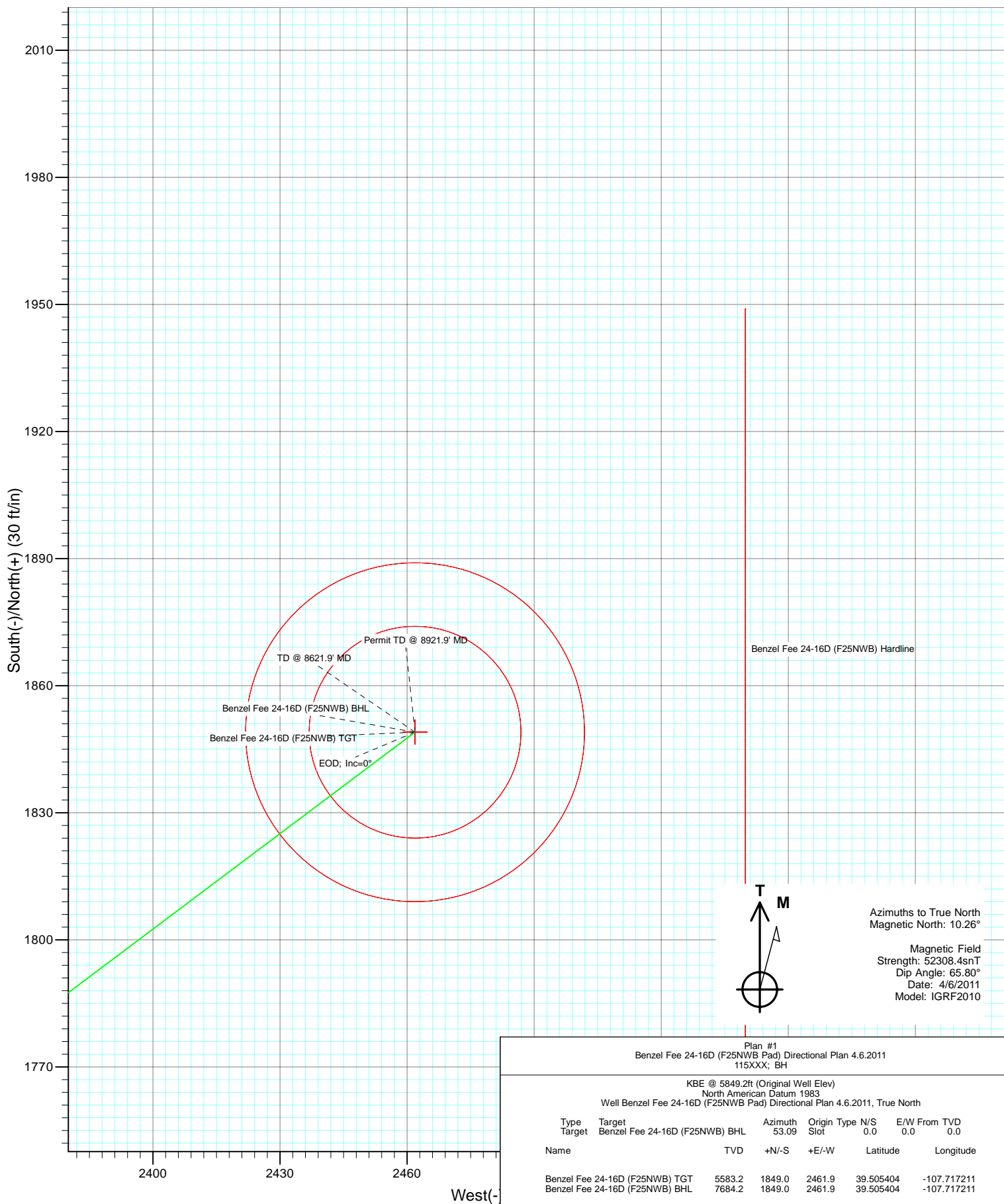


Project: Mamm Creek
Site: F25NWB Pad
Well: Benzel Fee 24-16D (F25NWB Pad) Directional Plan 4.6.2011
Wellbore: DD
Design: Plan #1





Project: Mamm Creek
 Site: F25NWB Pad
 Well: Benzel Fee 24-16D (F25NWB Pad) Directional Plan 4.6.2011
 Wellbore: DD
 Design: Plan #1



Azimuths to True North
 Magnetic North: 10.26°

Magnetic Field
 Strength: 52308.4snT
 Dip Angle: 65.80°
 Date: 4/6/2011
 Model: IGRF2010

Plan #1
 Benzel Fee 24-16D (F25NWB Pad) Directional Plan 4.6.2011
 115XXX; BH

KBE @ 5849.2ft (Original Well Elev)
 North American Datum 1983
 Well Benzel Fee 24-16D (F25NWB Pad) Directional Plan 4.6.2011, True North

Type	Target		Azimuth	Origin	Type	N/S	E/W	From	TVD
Target	Benzel Fee 24-16D (F25NWB) BHL		53.09	Slot		0.0	0.0		0.0
Name		TVD	+N/-S	+E/-W	Latitude	Longitude			
Benzel Fee 24-16D (F25NWB) TGT		5583.2	1849.0	2461.9	39.505404	-107.717211			
Benzel Fee 24-16D (F25NWB) BHL		7684.2	1849.0	2461.9	39.505404	-107.717211			

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Benzel Fee 24-16D (F25NWB Pad) Directio
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 5849.2ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 5849.2ft (Original Well Elev)
Site:	F25NWB Pad	North Reference:	True
Well:	Benzel Fee 24-16D (F25NWB Pad) Directional Plan 4.6	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 Fee 24-16D (F25NWB Pad) Directional Plan 4.6.2011					
Well Position	+N/-S	0.0 ft	Northing:	1,614,821.30 ft	Latitude:	39.500328
	+E/-W	0.0 ft	Easting:	2,371,946.03 ft	Longitude:	-107.725936
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,827.2 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/6/2011	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	53.09

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	
1,260.0	31.80	53.09	1,206.4	172.2	229.2	3.00	3.00	5.01	53.09	Interp @ 1206.4 (Ben
1,460.0	31.80	53.09	1,376.4	235.5	313.5	0.00	0.00	0.00	0.00	
1,636.7	37.10	53.09	1,522.1	295.5	393.4	3.00	3.00	0.00	0.00	
5,284.1	37.10	53.09	4,431.1	1,616.8	2,152.7	0.00	0.00	0.00	0.00	
6,520.9	0.00	0.00	5,583.2	1,849.0	2,461.9	3.00	-3.00	0.00	180.00	Benzel Fee 24-16D (F
8,621.9	0.00	0.00	7,684.2	1,849.0	2,461.9	0.00	0.00	0.00	0.00	Benzel Fee 24-16D (F
8,921.9	0.00	0.00	7,984.2	1,849.0	2,461.9	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 Fee 24-16D (F25NWB Pad) Directio
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 5849.2ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 5849.2ft (Original Well Elev)
Site:	F25NWB Pad	North Reference:	True
Well:	Benzel Fee 24-16D (F25NWB Pad) Directional Plan 4.6	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	Benzel Fee 24-16D (F25NWB) Hardline
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	53.09	300.0	1.6	2.1	2.6	3.00	3.00	
400.0	6.00	53.09	399.6	6.3	8.4	10.5	3.00	3.00	
500.0	9.00	53.09	498.8	14.1	18.8	23.5	3.00	3.00	
600.0	12.00	53.09	597.1	25.1	33.4	41.7	3.00	3.00	
700.0	15.00	53.09	694.3	39.1	52.0	65.1	3.00	3.00	
800.0	18.00	53.09	790.2	56.1	74.7	93.5	3.00	3.00	
900.0	21.00	53.09	884.4	76.2	101.4	126.9	3.00	3.00	
1,000.0	24.00	53.09	976.8	99.2	132.0	165.1	3.00	3.00	
1,100.0	27.00	53.09	1,067.1	125.0	166.4	208.2	3.00	3.00	
1,110.3	27.31	53.09	1,076.2	127.8	170.2	212.9	3.00	3.00	Molina
1,200.0	30.00	53.09	1,154.9	153.7	204.6	255.9	3.00	3.00	
1,260.0	31.80	53.09	1,206.4	172.2	229.2	286.7	3.00	3.00	Start 200' Hold @ 1260' MD - Interp @ 1206.4 (
1,300.0	31.80	53.09	1,240.4	184.8	246.1	307.8	0.00	0.00	
1,360.0	31.80	53.09	1,291.4	203.8	271.4	339.4	0.00	0.00	Surface casing
1,400.0	31.80	53.09	1,325.4	216.5	288.2	360.5	0.00	0.00	
1,460.0	31.80	53.09	1,376.4	235.5	313.5	392.1	0.00	0.00	End 200' Hold @ 1460' MD
1,500.0	33.00	53.09	1,410.2	248.3	330.6	413.5	3.00	3.00	
1,600.0	36.00	53.09	1,492.6	282.3	375.9	470.1	3.00	3.00	
1,636.7	37.10	53.09	1,522.1	295.5	393.4	492.0	3.00	3.00	EOB; Inc=37.10°
1,687.0	37.10	53.09	1,562.2	313.7	417.7	522.4	0.00	0.00	Atwell Gulch
1,700.0	37.10	53.09	1,572.5	318.4	423.9	530.2	0.00	0.00	
1,800.0	37.10	53.09	1,652.3	354.6	472.2	590.5	0.00	0.00	
1,900.0	37.10	53.09	1,732.0	390.9	520.4	650.8	0.00	0.00	
2,000.0	37.10	53.09	1,811.8	427.1	568.6	711.2	0.00	0.00	
2,100.0	37.10	53.09	1,891.6	463.3	616.9	771.5	0.00	0.00	
2,200.0	37.10	53.09	1,971.3	499.5	665.1	831.8	0.00	0.00	
2,300.0	37.10	53.09	2,051.1	535.8	713.3	892.1	0.00	0.00	
2,400.0	37.10	53.09	2,130.8	572.0	761.6	952.5	0.00	0.00	
2,500.0	37.10	53.09	2,210.6	608.2	809.8	1,012.8	0.00	0.00	
2,600.0	37.10	53.09	2,290.3	644.4	858.0	1,073.1	0.00	0.00	
2,700.0	37.10	53.09	2,370.1	680.7	906.3	1,133.4	0.00	0.00	
2,800.0	37.10	53.09	2,449.8	716.9	954.5	1,193.7	0.00	0.00	
2,900.0	37.10	53.09	2,529.6	753.1	1,002.7	1,254.1	0.00	0.00	
3,000.0	37.10	53.09	2,609.4	789.3	1,051.0	1,314.4	0.00	0.00	
3,100.0	37.10	53.09	2,689.1	825.6	1,099.2	1,374.7	0.00	0.00	
3,200.0	37.10	53.09	2,768.9	861.8	1,147.5	1,435.0	0.00	0.00	
3,300.0	37.10	53.09	2,848.6	898.0	1,195.7	1,495.4	0.00	0.00	
3,400.0	37.10	53.09	2,928.4	934.3	1,243.9	1,555.7	0.00	0.00	
3,500.0	37.10	53.09	3,008.1	970.5	1,292.2	1,616.0	0.00	0.00	
3,600.0	37.10	53.09	3,087.9	1,006.7	1,340.4	1,676.3	0.00	0.00	
3,700.0	37.10	53.09	3,167.7	1,042.9	1,388.6	1,736.7	0.00	0.00	
3,800.0	37.10	53.09	3,247.4	1,079.2	1,436.9	1,797.0	0.00	0.00	
3,900.0	37.10	53.09	3,327.2	1,115.4	1,485.1	1,857.3	0.00	0.00	
4,000.0	37.10	53.09	3,406.9	1,151.6	1,533.3	1,917.6	0.00	0.00	
4,100.0	37.10	53.09	3,486.7	1,187.8	1,581.6	1,978.0	0.00	0.00	
4,200.0	37.10	53.09	3,566.4	1,224.1	1,629.8	2,038.3	0.00	0.00	
4,300.0	37.10	53.09	3,646.2	1,260.3	1,678.0	2,098.6	0.00	0.00	
4,400.0	37.10	53.09	3,725.9	1,296.5	1,726.3	2,158.9	0.00	0.00	
4,439.2	37.10	53.09	3,757.2	1,310.7	1,745.2	2,182.6	0.00	0.00	Mesa Verde

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Benzel Fee 24-16D (F25NWB Pad) Directio
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 5849.2ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 5849.2ft (Original Well Elev)
Site:	F25NWB Pad	North Reference:	True
Well:	Benzel Fee 24-16D (F25NWB Pad) Directional Plan 4.6	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
4,500.0	37.10	53.09	3,805.7	1,332.8	1,774.5	2,219.3	0.00	0.00	
4,600.0	37.10	53.09	3,885.5	1,369.0	1,822.7	2,279.6	0.00	0.00	
4,700.0	37.10	53.09	3,965.2	1,405.2	1,871.0	2,339.9	0.00	0.00	
4,800.0	37.10	53.09	4,045.0	1,441.4	1,919.2	2,400.2	0.00	0.00	
4,900.0	37.10	53.09	4,124.7	1,477.7	1,967.4	2,460.5	0.00	0.00	
5,000.0	37.10	53.09	4,204.5	1,513.9	2,015.7	2,520.9	0.00	0.00	
5,100.0	37.10	53.09	4,284.2	1,550.1	2,063.9	2,581.2	0.00	0.00	
5,200.0	37.10	53.09	4,364.0	1,586.3	2,112.1	2,641.5	0.00	0.00	
5,271.7	37.10	53.09	4,421.2	1,612.3	2,146.7	2,684.8	0.00	0.00	Williams Fork
5,284.1	37.10	53.09	4,431.1	1,616.8	2,152.7	2,692.3	0.00	0.00	Start Drop -3.00
5,300.0	36.63	53.09	4,443.8	1,622.5	2,160.3	2,701.8	3.00	-3.00	
5,400.0	33.63	53.09	4,525.6	1,657.1	2,206.3	2,759.3	3.00	-3.00	
5,500.0	30.63	53.09	4,610.2	1,689.0	2,248.9	2,812.5	3.00	-3.00	
5,600.0	27.63	53.09	4,697.6	1,718.2	2,287.8	2,861.2	3.00	-3.00	
5,700.0	24.63	53.09	4,787.4	1,744.7	2,323.0	2,905.2	3.00	-3.00	
5,800.0	21.63	53.09	4,879.3	1,768.3	2,354.4	2,944.5	3.00	-3.00	
5,900.0	18.63	53.09	4,973.2	1,788.9	2,381.9	2,978.9	3.00	-3.00	
6,000.0	15.63	53.09	5,068.8	1,806.6	2,405.4	3,008.3	3.00	-3.00	
6,100.0	12.63	53.09	5,165.7	1,821.3	2,424.9	3,032.7	3.00	-3.00	
6,194.3	9.80	53.09	5,258.2	1,832.3	2,439.6	3,051.1	3.00	-3.00	Top of Gas; Inc=9.8°
6,200.0	9.63	53.09	5,263.8	1,832.9	2,440.4	3,052.0	3.00	-3.00	
6,300.0	6.63	53.09	5,362.8	1,841.3	2,451.7	3,066.1	3.00	-3.00	
6,400.0	3.63	53.09	5,462.4	1,846.7	2,458.8	3,075.1	3.00	-3.00	
6,500.0	0.63	53.09	5,562.3	1,848.9	2,461.8	3,078.8	3.00	-3.00	
6,520.9	0.00	0.00	5,583.2	1,849.0	2,461.9	3,078.9	3.00	-3.00	EOD; Inc=0° - Benzel Fee 24-16D (F25NWB) T
6,600.0	0.00	0.00	5,662.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
6,700.0	0.00	0.00	5,762.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
6,800.0	0.00	0.00	5,862.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
6,900.0	0.00	0.00	5,962.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
7,000.0	0.00	0.00	6,062.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
7,100.0	0.00	0.00	6,162.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
7,200.0	0.00	0.00	6,262.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
7,300.0	0.00	0.00	6,362.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
7,400.0	0.00	0.00	6,462.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
7,500.0	0.00	0.00	6,562.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
7,600.0	0.00	0.00	6,662.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
7,698.9	0.00	0.00	6,761.2	1,849.0	2,461.9	3,078.9	0.00	0.00	Coal Ridge
7,700.0	0.00	0.00	6,762.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
7,800.0	0.00	0.00	6,862.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
7,900.0	0.00	0.00	6,962.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
8,000.0	0.00	0.00	7,062.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
8,100.0	0.00	0.00	7,162.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
8,200.0	0.00	0.00	7,262.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
8,300.0	0.00	0.00	7,362.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
8,400.0	0.00	0.00	7,462.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
8,439.9	0.00	0.00	7,502.2	1,849.0	2,461.9	3,078.9	0.00	0.00	Base Cameo A Coal
8,500.0	0.00	0.00	7,562.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
8,521.9	0.00	0.00	7,584.2	1,849.0	2,461.9	3,078.9	0.00	0.00	Rollins
8,600.0	0.00	0.00	7,662.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
8,621.9	0.00	0.00	7,684.2	1,849.0	2,461.9	3,078.9	0.00	0.00	TD @ 8621.9' MD - Benzel Fee 24-16D (F25NV
8,700.0	0.00	0.00	7,762.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
8,800.0	0.00	0.00	7,862.3	1,849.0	2,461.9	3,078.9	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Benzel Fee 24-16D (F25NWB Pad) Directio
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 5849.2ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 5849.2ft (Original Well Elev)
Site:	F25NWB Pad	North Reference:	True
Well:	Benzel Fee 24-16D (F25NWB Pad) Directional Plan 4.6	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
8,900.0	0.00	0.00	7,962.3	1,849.0	2,461.9	3,078.9	0.00	0.00	
8,921.9	0.00	0.00	7,984.2	1,849.0	2,461.9	3,078.9	0.00	0.00	Permit TD @ 8921.9' 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
Interp @ 1206.4 (Benzel - plan hits target center - Point	0.00	0.00	1,206.4	172.2	229.2	1,614,987.80	2,372,179.41	39.500801	-107.725124
Benzel Fee 24-16D (F25NWB Pad) - plan misses target center by 8278.1ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E) - Polygon	0.00	0.00	-7,684.2	1,849.0	2,461.9	1,616,609.44	2,374,452.47	39.505404	-107.717211
Point 1			-7,684.2	100.0	78.0	1,616,707.50	2,374,532.89		
Point 2			-7,684.2	-100.0	78.0	1,616,507.56	2,374,527.99		
Benzel Fee 24-16D (F25NWB Pad) - plan hits target center - Circle (radius 40.0)	0.00	0.00	7,684.2	1,849.0	2,461.9	1,616,609.44	2,374,452.47	39.505404	-107.717211
Benzel Fee 24-16D (F25NWB Pad) - plan hits target center - Circle (radius 25.0)	0.00	0.00	5,583.2	1,849.0	2,461.9	1,616,609.44	2,374,452.47	39.505404	-107.717211

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,360.0	1,291.4	Surface casing	0.000	0.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,110.3	1,076.2	Molina		0.00	
1,687.0	1,562.2	Atwell Gulch		0.00	
4,439.2	3,757.2	Mesa Verde		0.00	
5,271.7	4,421.2	Williams Fork		0.00	
6,194.3	5,258.2	Top of Gas; Inc=9.8°		0.00	
7,698.9	6,761.2	Coal Ridge		0.00	
8,439.9	7,502.2	Base Cameo A Coal		0.00	
8,521.9	7,584.2	Rollins		0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well Benzel Fee 24-16D (F25NWB Pad) Directio
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 5849.2ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 5849.2ft (Original Well Elev)
Site:	F25NWB Pad	North Reference:	True
Well:	Benzel Fee 24-16D (F25NWB Pad) Directional Plan 4.6	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
1,260.0	1,206.4	172.2	229.2	Start 200' Hold @ 1260' MD
1,460.0	1,376.4	235.5	313.5	End 200' Hold @ 1460' MD
1,636.7	1,522.1	295.5	393.4	EOB; Inc=37.10°
5,284.1	4,431.1	1,616.8	2,152.7	Start Drop -3.00
6,520.9	5,583.2	1,849.0	2,461.9	EOD; Inc=0°
8,621.9	7,684.2	1,849.0	2,461.9	TD @ 8621.9' MD
8,921.9	7,984.2	1,849.0	2,461.9	Permit TD @ 8921.9' MD