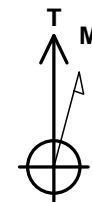
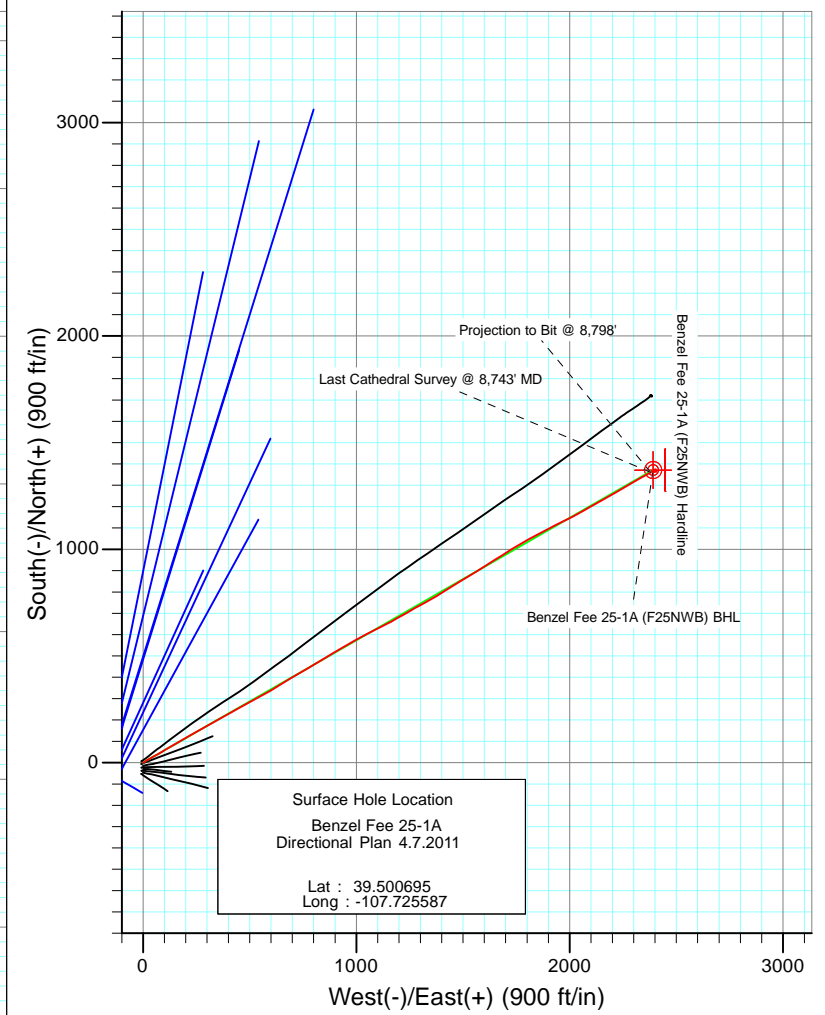
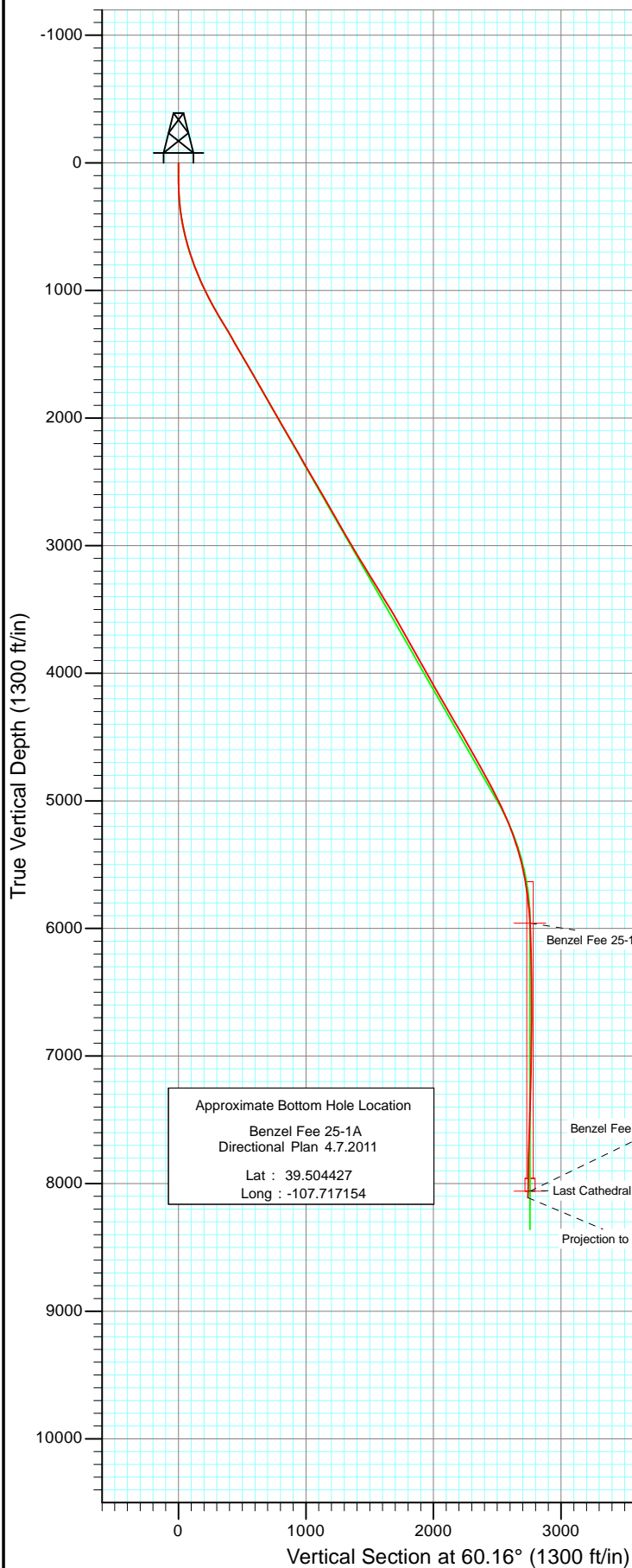




Project: Mamm Creek
 Site: F25NWB Pad
 Well: Benzel Fee 25-1A (F25NWB Pad) Directional Plan 4.6.2011
 Wellbore: DD
 Design: FINAL



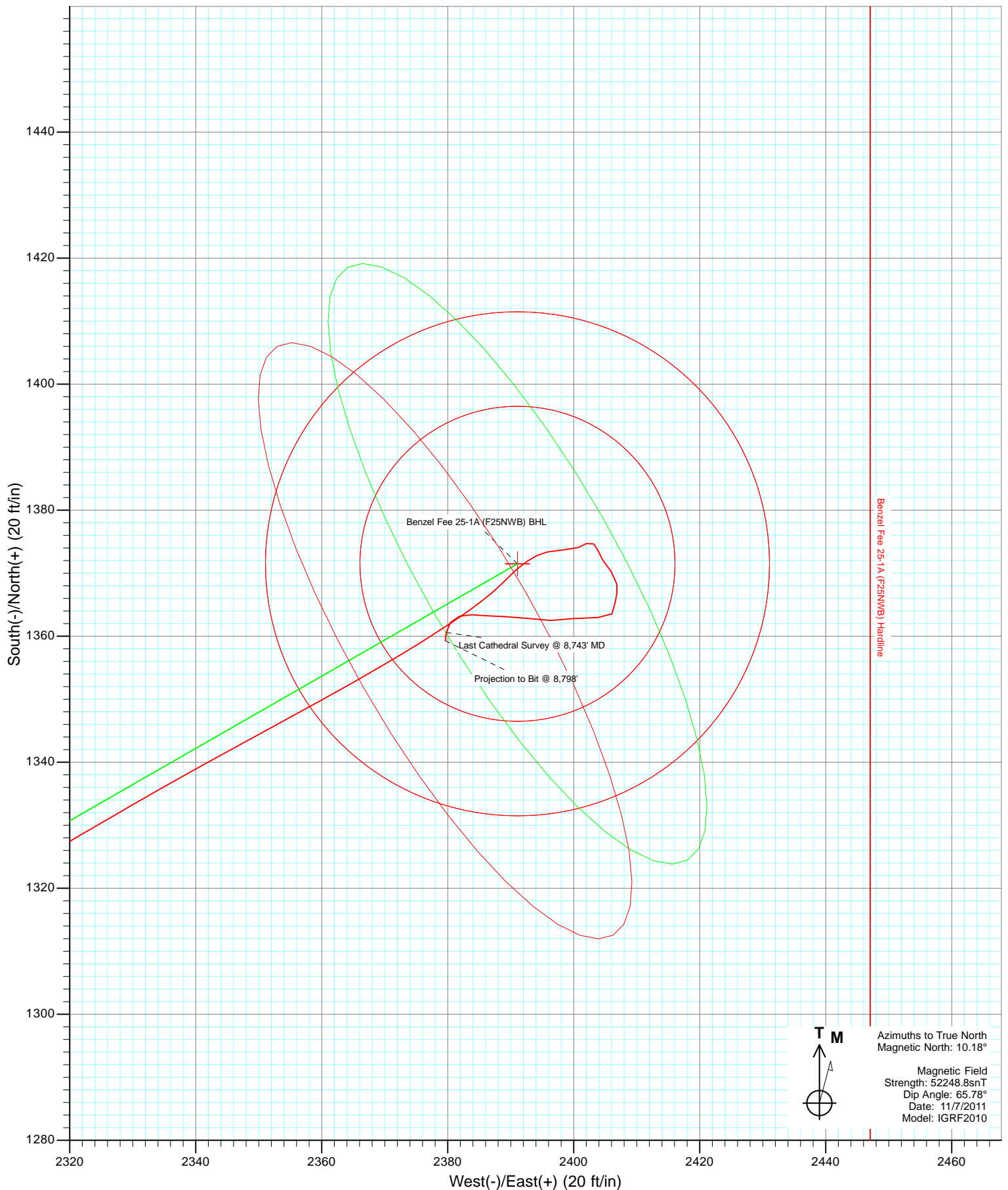
Azimuths to True North
 Magnetic North: 10.18°

Magnetic Field
 Strength: 52248.8snT
 Dip Angle: 65.78°
 Date: 11/7/2011
 Model: IGRF2010

DD Benzel Fee 25-1A (F25NWB Pad) Directional Plan 4.6.2011 115485/118455 (SH); SC, 118655 115509; LR						
kbe @ 5860.0ft North American Datum 1983 Well Benzel Fee 25-1A (F25NWB Pad) Directional Plan 4.6.2011, True North						
Type	Target	Azimuth	Origin	Type	N/S	E/W
Target	Benzel Fee 25-1A (F25NWB) BHL	60.16	Slot		0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	From TVD
Benzel Fee 25-1A (F25NWB) Hardline	-8048.0	1371.5	2391.1	39.504460	-107.717113	0.0
Benzel Fee 25-1A (F25NWB) TGT	5958.5	1371.5	2391.1	39.504460	-107.717113	
Benzel Fee 25-1A (F25NWB) BHL	8059.5	1371.5	2391.1	39.504460	-107.717113	

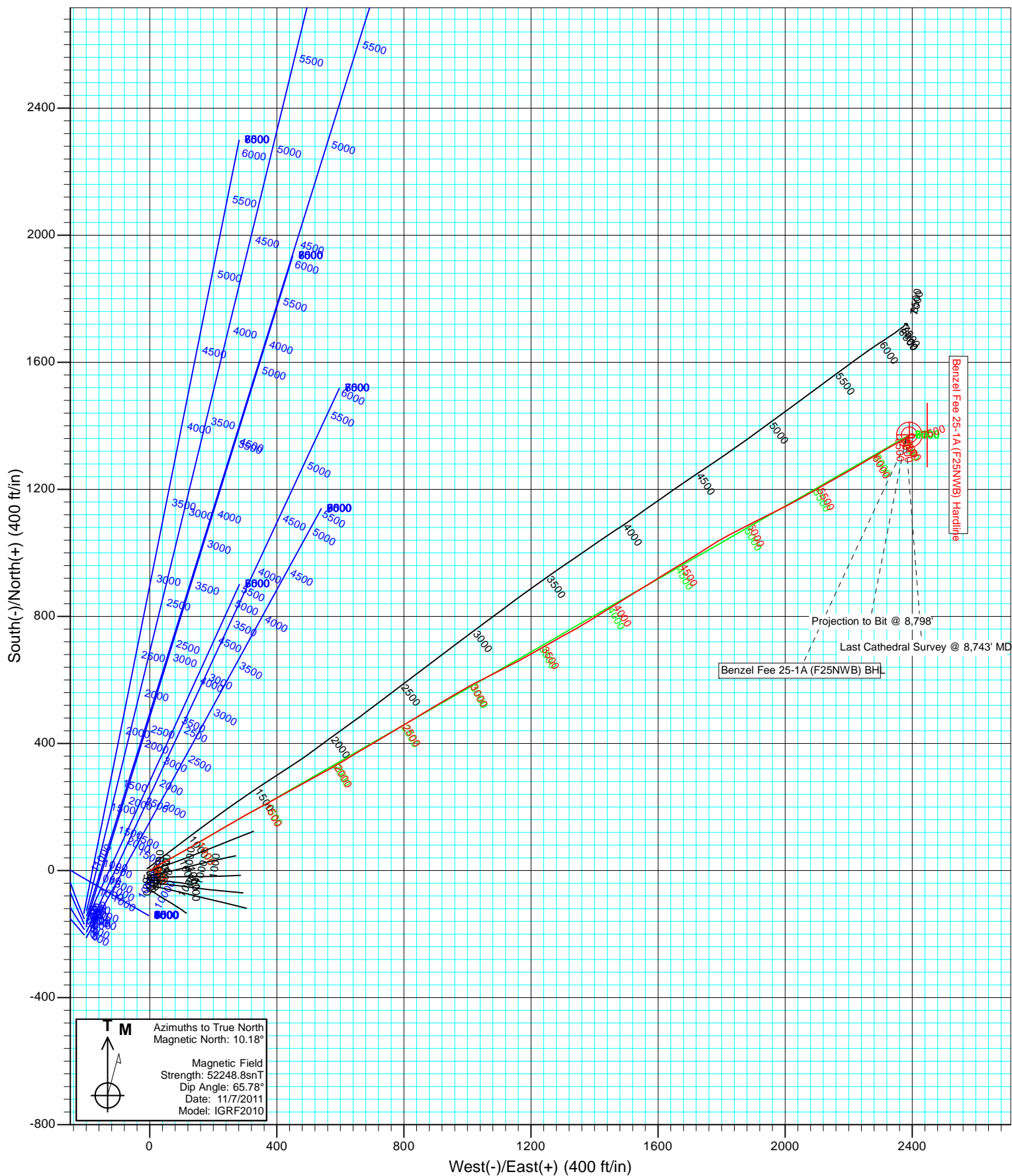


Project: Mamm Creek
Site: F25NWB Pad
Well: Benzel Fee 25-1A (F25NWB Pad) Directional Plan 4.6.2011
Wellbore: DD
Design: FINAL





Project: Mamm Creek
Site: F25NWB Pad
Well: Benzel Fee 25-1A (F25NWB Pad) Directional Plan 4.6.2011
Wellbore: DD
Design: FINAL



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Benzel Fee 25-1A (F25NWB Pad) Directiona
Project:	Mamm Creek	TVD Reference:	kbe @ 5860.0ft
Site:	F25NWB Pad	MD Reference:	kbe @ 5860.0ft
Well:	Benzel Fee 25-1A (F25NWB Pad) Directional	North Reference:	True
Wellbore:	Plan 4.6.2011	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 Multi Users DB

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 25-1A (F25NWB Pad) Directional Plan 4.6.2011					
Well Position	+N/-S	0.0 ft	Northing:	1,614,952.51 ft	Latitude:	39.500695
	+E/-W	0.0 ft	Easting:	2,372,047.76 ft	Longitude:	-107.725587
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,829.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/7/2011	10.18	65.78	52,249

Design	DD				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	60.16	

Survey Program	Date	11/21/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
117.0	8,798.0	Survey #1 (DD)	MWD	Geolink MWD	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00		
117.0	0.20	123.60	117.0	-0.1	0.2	0.1	0.17	0.17		
147.0	0.70	72.10	147.0	-0.1	0.4	0.3	1.99	1.67		
178.0	1.30	63.60	178.0	0.1	0.9	0.8	1.99	1.94		
209.0	1.80	61.60	209.0	0.5	1.6	1.7	1.62	1.61		
240.0	2.80	64.10	240.0	1.1	2.7	2.9	3.24	3.23		
270.0	3.70	61.90	269.9	1.9	4.2	4.6	3.03	3.00		
301.0	4.70	53.10	300.8	3.1	6.1	6.9	3.83	3.23		
393.0	8.20	58.60	392.2	8.8	14.8	17.2	3.86	3.80		
485.0	11.30	60.50	482.9	16.6	28.2	32.7	3.39	3.37		
578.0	13.80	60.10	573.7	26.6	45.8	53.0	2.69	2.69		
671.0	16.30	60.50	663.5	38.6	66.7	77.1	2.69	2.69		
766.0	18.90	61.00	754.0	52.6	91.8	105.8	2.74	2.74		

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Benzel Fee 25-1A (F25NWB Pad) Directiona
Project:	Mamm Creek	TVD Reference:	kbe @ 5860.0ft
Site:	F25NWB Pad	MD Reference:	kbe @ 5860.0ft
Well:	Benzel Fee 25-1A (F25NWB Pad) Directional	North Reference:	True
Wellbore:	Open 4.6.2011	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
861.0	21.40	59.90	843.2	68.8	120.3	138.5	2.66	2.63	
956.0	24.10	59.90	930.8	87.2	152.0	175.3	2.84	2.84	
1,051.0	26.80	59.60	1,016.6	107.8	187.3	216.1	2.85	2.84	
1,146.0	28.90	59.70	1,100.6	130.2	225.6	260.5	2.21	2.21	
1,241.0	30.20	59.70	1,183.2	153.8	266.0	307.3	1.37	1.37	
1,335.0	30.70	61.10	1,264.2	177.4	307.5	355.0	0.92	0.53	
1,466.0	29.70	61.50	1,377.4	209.0	365.3	420.8	0.78	-0.76	
1,561.0	30.80	60.90	1,459.5	232.1	407.2	468.7	1.20	1.16	
1,655.0	29.40	61.30	1,540.8	254.9	448.5	515.8	1.50	-1.49	
1,750.0	30.20	61.00	1,623.3	277.6	489.8	563.0	0.86	0.84	
1,845.0	30.80	61.30	1,705.1	300.9	532.1	611.2	0.65	0.63	
1,940.0	29.10	61.20	1,787.4	323.7	573.6	658.7	1.79	-1.79	
2,035.0	30.30	58.30	1,870.0	347.4	614.3	705.7	1.97	1.26	
2,129.0	29.00	58.50	1,951.7	371.8	653.9	752.2	1.39	-1.38	
2,224.0	30.90	59.40	2,034.0	396.3	694.5	799.6	2.06	2.00	
2,319.0	29.70	59.10	2,116.0	420.8	735.7	847.5	1.27	-1.26	
2,414.0	30.40	60.30	2,198.2	444.8	776.8	895.1	0.97	0.74	
2,508.0	29.50	59.00	2,279.7	468.5	817.3	942.0	1.18	-0.96	
2,603.0	30.50	59.00	2,361.9	492.9	858.0	989.5	1.05	1.05	
2,698.0	29.90	58.30	2,444.0	517.8	898.8	1,037.3	0.73	-0.63	
2,793.0	30.70	59.70	2,526.1	542.5	939.9	1,085.2	1.12	0.84	
2,887.0	29.40	60.40	2,607.4	566.0	980.7	1,132.3	1.43	-1.38	
2,982.0	30.50	61.90	2,689.7	588.8	1,022.2	1,179.7	1.40	1.16	
3,077.0	29.50	63.60	2,772.0	610.6	1,064.4	1,227.1	1.38	-1.05	
3,172.0	30.50	62.70	2,854.3	632.1	1,106.8	1,274.6	1.15	1.05	
3,266.0	29.00	62.70	2,935.9	653.4	1,148.3	1,321.2	1.60	-1.60	
3,361.0	31.20	60.60	3,018.1	676.1	1,190.2	1,368.8	2.57	2.32	
3,456.0	30.80	60.20	3,099.5	700.3	1,232.7	1,417.7	0.47	-0.42	
3,551.0	32.10	60.50	3,180.6	724.8	1,275.8	1,467.3	1.38	1.37	
3,645.0	31.10	61.60	3,260.6	748.6	1,318.9	1,516.5	1.23	-1.06	
3,740.0	31.70	59.60	3,341.7	772.9	1,362.0	1,566.0	1.27	0.63	
3,835.0	32.00	57.70	3,422.4	799.0	1,404.8	1,616.1	1.10	0.32	
3,930.0	31.10	58.60	3,503.4	825.2	1,447.0	1,665.8	1.07	-0.95	
4,025.0	29.50	57.80	3,585.4	850.5	1,487.7	1,713.7	1.74	-1.68	
4,119.0	29.90	59.00	3,667.0	874.9	1,527.4	1,760.2	0.76	0.43	
4,214.0	28.50	58.30	3,750.0	899.0	1,567.0	1,806.6	1.52	-1.47	
4,309.0	29.40	57.60	3,833.1	923.4	1,606.0	1,852.5	1.01	0.95	
4,404.0	28.70	58.40	3,916.1	947.8	1,645.1	1,898.6	0.84	-0.74	
4,499.0	30.10	58.80	3,998.9	972.1	1,684.9	1,945.2	1.49	1.47	
4,593.0	29.50	57.70	4,080.5	996.7	1,724.6	1,991.9	0.86	-0.64	
4,687.0	30.80	57.60	4,161.7	1,022.0	1,764.5	2,039.1	1.38	1.38	
4,782.0	29.60	61.00	4,243.9	1,046.4	1,805.6	2,086.8	2.20	-1.26	
4,877.0	30.40	62.70	4,326.1	1,068.8	1,847.4	2,134.3	1.23	0.84	
4,972.0	29.80	62.70	4,408.3	1,090.6	1,889.8	2,181.9	0.63	-0.63	
5,066.0	30.40	63.60	4,489.6	1,111.9	1,931.8	2,229.0	0.80	0.64	
5,161.0	29.50	64.10	4,572.0	1,132.8	1,974.4	2,276.3	0.98	-0.95	
5,256.0	29.70	61.70	4,654.6	1,154.2	2,016.2	2,323.2	1.27	0.21	
5,351.0	29.40	60.80	4,737.2	1,176.7	2,057.3	2,370.0	0.56	-0.32	
5,446.0	27.80	60.30	4,820.6	1,199.1	2,096.9	2,415.5	1.70	-1.68	
5,540.0	28.40	60.10	4,903.5	1,221.1	2,135.3	2,459.8	0.65	0.64	
5,635.0	26.30	60.70	4,987.9	1,242.7	2,173.2	2,503.4	2.23	-2.21	
5,730.0	24.50	61.20	5,073.7	1,262.5	2,208.8	2,544.2	1.91	-1.89	
5,825.0	22.90	58.20	5,160.7	1,281.7	2,241.8	2,582.3	2.11	-1.68	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Benzel Fee 25-1A (F25NWB Pad) Directiona
Project:	Mamm Creek	TVD Reference:	kbe @ 5860.0ft
Site:	F25NWB Pad	MD Reference:	kbe @ 5860.0ft
Well:	Benzel Fee 25-1A (F25NWB Pad) Directional	North Reference:	True
Wellbore:	Ben 4.6.2011	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
5,919.0	19.60	60.10	5,248.3	1,299.2	2,271.0	2,616.4	3.59	-3.51	
6,014.0	18.30	60.20	5,338.2	1,314.5	2,297.8	2,647.2	1.37	-1.37	
6,109.0	15.80	59.50	5,429.0	1,328.5	2,321.9	2,675.1	2.64	-2.63	
6,204.0	12.30	61.20	5,521.1	1,340.0	2,341.9	2,698.1	3.71	-3.68	
6,299.0	10.20	61.50	5,614.3	1,348.9	2,358.2	2,716.7	2.21	-2.21	
6,393.0	8.70	59.20	5,707.0	1,356.5	2,371.6	2,732.1	1.65	-1.60	
6,488.0	6.70	55.20	5,801.1	1,363.3	2,382.3	2,744.8	2.18	-2.11	
6,582.0	3.60	43.80	5,894.8	1,368.6	2,388.8	2,753.1	3.46	-3.30	
6,675.0	2.50	55.00	5,987.6	1,371.8	2,392.5	2,757.9	1.34	-1.18	
6,769.0	2.00	77.70	6,081.6	1,373.4	2,395.8	2,761.5	1.08	-0.53	
6,864.0	1.60	88.50	6,176.5	1,373.8	2,398.8	2,764.3	0.55	-0.42	
6,959.0	0.90	65.20	6,271.5	1,374.1	2,400.8	2,766.2	0.90	-0.74	
7,054.0	0.80	63.50	6,366.5	1,374.7	2,402.0	2,767.6	0.11	-0.11	
7,149.0	0.80	122.60	6,461.5	1,374.6	2,403.2	2,768.6	0.83	0.00	
7,243.0	0.80	172.20	6,555.5	1,373.6	2,403.8	2,768.6	0.71	0.00	
7,338.0	1.20	140.80	6,650.4	1,372.2	2,404.5	2,768.5	0.70	0.42	
7,433.0	1.70	146.00	6,745.4	1,370.3	2,406.0	2,768.8	0.54	0.53	
7,527.0	1.10	171.80	6,839.4	1,368.2	2,406.9	2,768.6	0.91	-0.64	
7,622.0	0.80	192.60	6,934.4	1,366.7	2,406.9	2,767.8	0.48	-0.32	
7,717.0	1.10	191.50	7,029.4	1,365.1	2,406.5	2,766.7	0.32	0.32	
7,812.0	0.90	199.50	7,124.3	1,363.5	2,406.1	2,765.6	0.26	-0.21	
7,907.0	2.40	274.00	7,219.3	1,363.0	2,403.9	2,763.3	2.45	1.58	
8,001.0	2.30	260.60	7,313.2	1,362.8	2,400.0	2,759.9	0.59	-0.11	
8,096.0	2.20	270.60	7,408.2	1,362.5	2,396.3	2,756.6	0.43	-0.11	
8,191.0	2.30	279.30	7,503.1	1,362.8	2,392.6	2,753.5	0.37	0.11	
8,287.0	1.80	268.50	7,599.0	1,363.1	2,389.2	2,750.7	0.66	-0.52	
8,378.0	1.80	276.40	7,690.0	1,363.2	2,386.4	2,748.3	0.27	0.00	
8,474.0	1.30	270.40	7,785.9	1,363.4	2,383.8	2,746.1	0.55	-0.52	
8,570.0	1.00	253.50	7,881.9	1,363.2	2,381.9	2,744.4	0.47	-0.31	
8,665.0	1.20	220.00	7,976.9	1,362.2	2,380.5	2,742.6	0.70	0.21	
8,743.0	1.40	188.30	8,054.9	1,360.6	2,379.8	2,741.3	0.94	0.26	Last Cathedral Survey @ 8,743' MD
8,798.0	1.40	188.30	8,109.9	1,359.3	2,379.6	2,740.5	0.00	0.00	Projection to Bit @ 8,798'

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Benzel Fee 25-1A (F25NWB Pad) Directiona
Project:	Mamm Creek	TVD Reference:	kbe @ 5860.0ft
Site:	F25NWB Pad	MD Reference:	kbe @ 5860.0ft
Well:	Benzel Fee 25-1A (F25NWB Pad) Directional	North Reference:	True
Wellbore:	Ben 4.6.2011	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 Multi Users DB

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
Benzel Fee 25-1A (F25NWB Pad) Directional	0.00	0.00	8,059.5	1,371.5	2,391.1	1,616,265.02	2,374,471.72	39.504460	-107.717113
- actual wellpath misses target center by 16.3ft at 8743.0ft MD (8054.9 TVD, 1360.6 N, 2379.8 E)									
- Circle (radius 40.0)									
Benzel Fee 25-1A (F25NWB Pad) Directional	0.00	0.00	5,958.5	1,371.5	2,391.1	1,616,265.02	2,374,471.72	39.504460	-107.717113
- actual wellpath misses target center by 0.6ft at 6645.8ft MD (5958.5 TVD, 1371.0 N, 2391.4 E)									
- Circle (radius 25.0)									
Benzel Fee 25-1A (F25NWB Pad) Directional	0.00	0.00	-8,048.0	1,371.5	2,391.1	1,616,265.02	2,374,471.72	39.504460	-107.717113
- actual wellpath misses target center by 8507.0ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			-8,048.0	100.0	56.0	1,616,363.62	2,374,530.15		
Point 2			-8,048.0	-100.0	56.0	1,616,163.68	2,374,525.25		

Design Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
8,743.0	8,054.9	1,360.6	2,379.8	Last Cathedral Survey @ 8,743' MD
8,798.0	8,109.9	1,359.3	2,379.6	Projection to Bit @ 8,798'

Checked By: _____ Approved By: _____ Date: _____