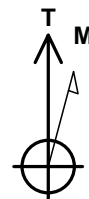
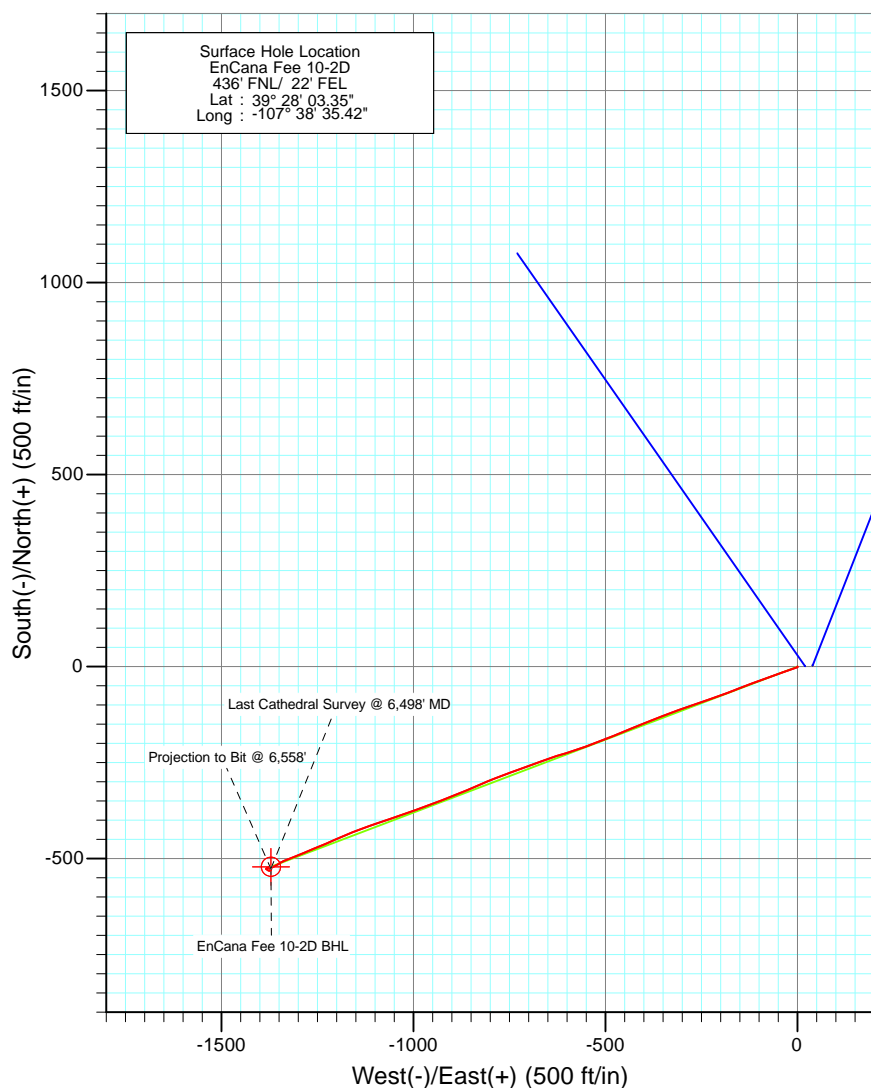
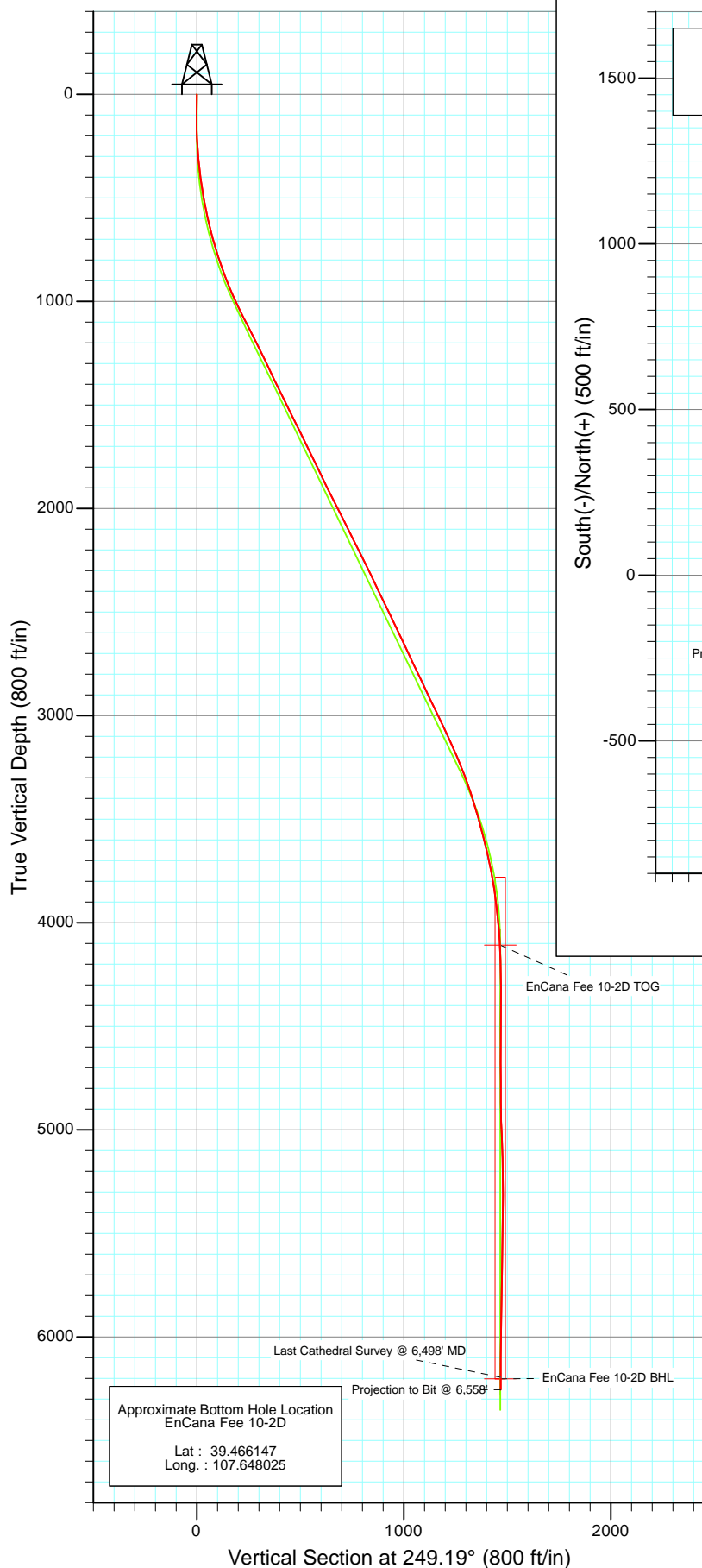




Project: Mamm Creek
 Site: NWNW S10-T7S-R92W (A10E Pad)
 Well: EnCana Fee 10-2D
 Wellbore: DD
 Design: FINAL



Azimuths to True North
 Magnetic North: 10.35°

Magnetic Field
 Strength: 52402.9snT
 Dip Angle: 65.81°
 Date: 3/30/2010
 Model: IGRF2010

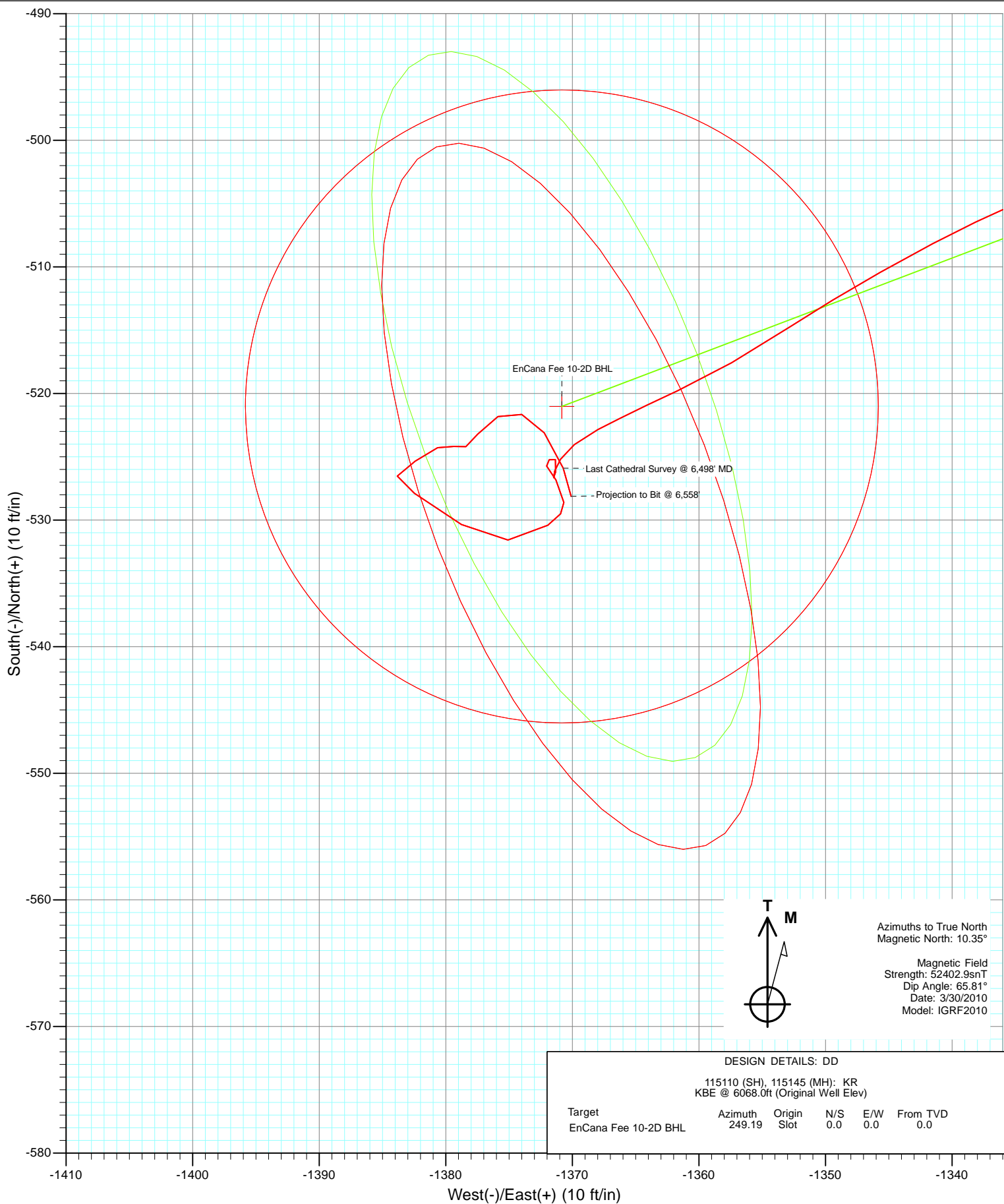
DESIGN DETAILS: DD

115110 (SH), 115145 (MH): KR
 KBE @ 6068.0ft (Original Well Elev)

Target	Azimuth	Origin	N/S	E/W	From TVD
EnCana Fee 10-2D BHL	249.19	Slot	0.0	0.0	0.0

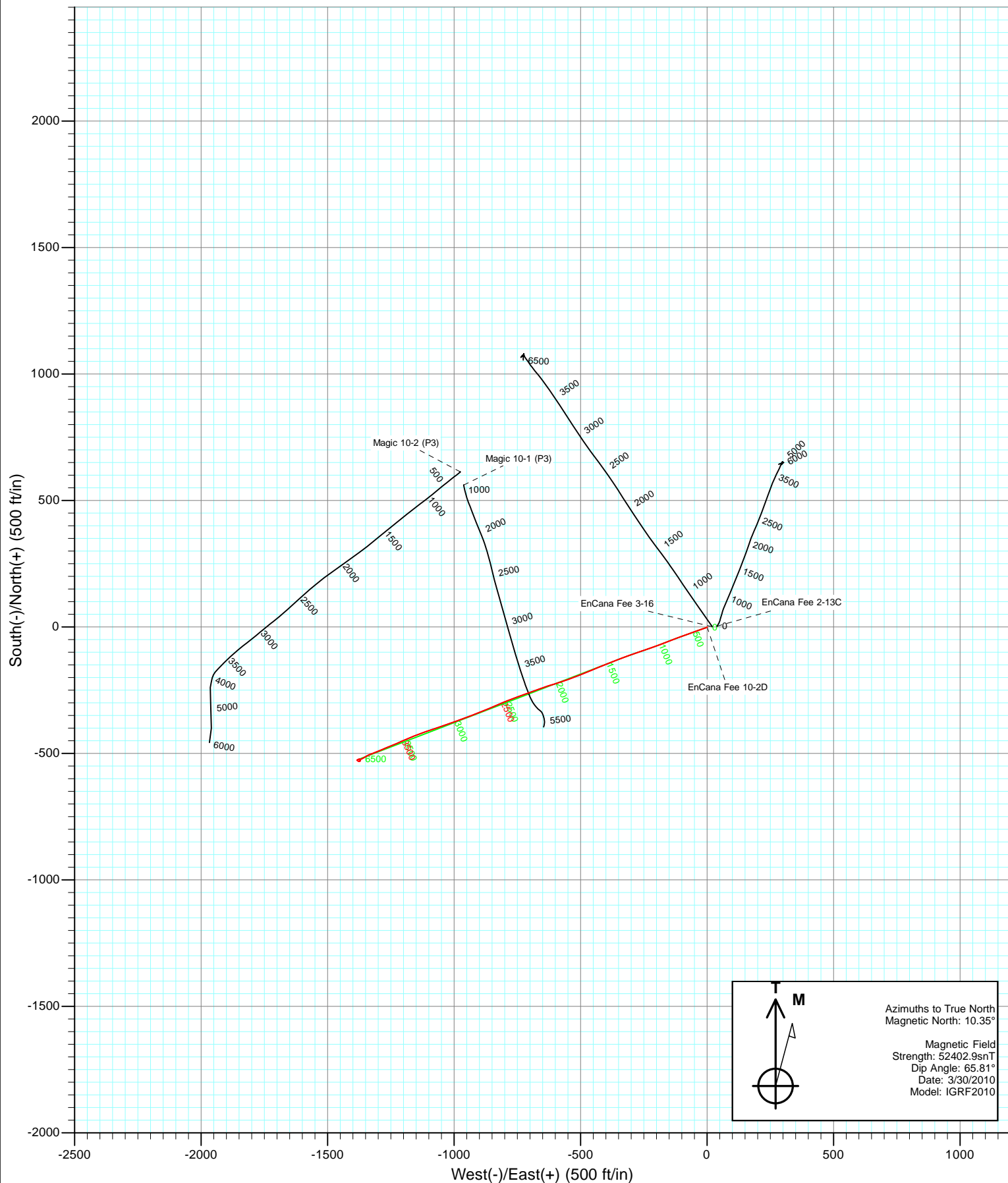


Project: Mamm Creek
Site: NWNW S10-T7S-R92W (A10E Pad)
Well: EnCana Fee 10-2D
Design: FINAL





Project: Mamm Creek
Site: NWNW S10-T7S-R92W (A10E Pad)
Well: EnCana Fee 10-2D
Wellbore: DD
Design: FINAL



Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well EnCana Fee 10-2D
Project:	Mamm Creek	TVD Reference:	KBE @ 6068.0ft (Original Well Elev)
Site:	NWNW S10-T7S-R92W (A10E Pad)	MD Reference:	KBE @ 6068.0ft (Original Well Elev)
Well:	EnCana Fee 10-2D	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US 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		NWNW S10-T7S-R92W (A10E Pad)			
Site Position:		Northing:	1,602,351.99 ft	Latitude:	39.467628
From:	Lat/Long	Easting:	2,395,032.44 ft	Longitude:	-107.643103
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.35 °

Well	EnCana Fee 10-2D					
Well Position	+N/-S	0.0 ft	Northing:	1,602,341.23 ft	Latitude:	39.467597
	+E/-W	0.0 ft	Easting:	2,395,012.64 ft	Longitude:	-107.643172
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,046.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/30/2010	10.35	65.81	52,403

Design	DD				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	249.19	

Survey Program	Date	4/6/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
110.0	6,558.0	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		
110.0	0.70	130.10	110.0	-0.4	0.5	-0.3	0.64	0.64		
141.0	0.40	145.50	141.0	-0.6	0.7	-0.4	1.07	-0.97		
233.0	2.90	248.50	233.0	-1.8	-1.3	1.8	3.28	2.72		
326.0	6.50	251.80	325.6	-4.3	-8.5	9.4	3.88	3.87		
418.0	7.70	251.30	416.9	-7.9	-19.2	20.8	1.31	1.30		
510.0	9.80	249.40	507.8	-12.6	-32.4	34.8	2.30	2.28		
603.0	12.60	249.30	599.1	-19.0	-49.3	52.8	3.01	3.01		
695.0	15.50	250.90	688.3	-26.5	-70.3	75.2	3.18	3.15		
787.0	17.40	250.60	776.5	-35.1	-94.9	101.2	2.07	2.07		
879.0	20.30	250.00	863.6	-45.2	-122.9	130.9	3.16	3.15		
972.0	23.10	247.80	950.0	-57.6	-154.9	165.3	3.13	3.01		
1,067.0	26.20	249.30	1,036.3	-72.0	-191.8	204.9	3.33	3.26		

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well EnCana Fee 10-2D
Project:	Mamm Creek	TVD Reference:	KBE @ 6068.0ft (Original Well Elev)
Site:	NWNW S10-T7S-R92W (A10E Pad)	MD Reference:	KBE @ 6068.0ft (Original Well Elev)
Well:	EnCana Fee 10-2D	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US 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
1,163.0	27.50	252.00	1,122.0	-86.4	-232.7	248.2	1.86	1.35	
1,258.0	26.50	249.90	1,206.6	-100.4	-273.5	291.3	1.45	-1.05	
1,353.0	25.60	250.40	1,292.0	-114.6	-312.7	333.1	0.98	-0.95	
1,451.0	25.90	248.80	1,380.2	-129.5	-352.6	375.6	0.77	0.31	
1,546.0	26.20	248.60	1,465.6	-144.6	-391.5	417.3	0.33	0.32	
1,640.0	26.50	247.50	1,549.8	-160.2	-430.2	459.1	0.61	0.32	
1,735.0	26.60	247.50	1,634.8	-176.5	-469.4	501.5	0.11	0.11	
1,831.0	25.70	248.90	1,721.0	-192.2	-508.7	543.8	1.14	-0.94	
1,926.0	25.60	249.60	1,806.6	-206.7	-547.2	584.9	0.34	-0.11	
2,022.0	26.60	253.30	1,892.8	-220.2	-587.2	627.1	1.99	1.04	
2,116.0	26.70	251.30	1,976.9	-233.0	-627.4	669.2	0.96	0.11	
2,212.0	26.90	250.70	2,062.5	-247.1	-668.3	712.5	0.35	0.21	
2,307.0	26.50	249.70	2,147.4	-261.5	-708.4	755.1	0.63	-0.42	
2,403.0	26.40	250.20	2,233.4	-276.2	-748.6	797.9	0.25	-0.10	
2,499.0	26.00	248.40	2,319.5	-291.2	-788.3	840.3	0.93	-0.42	
2,594.0	25.60	246.10	2,405.0	-307.1	-826.4	881.6	1.13	-0.42	
2,690.0	26.00	248.20	2,491.5	-323.4	-864.9	923.3	1.04	0.42	
2,785.0	25.40	248.00	2,577.1	-338.7	-903.1	964.5	0.64	-0.63	
2,880.0	25.10	248.60	2,663.0	-353.7	-940.8	1,005.0	0.42	-0.32	
2,976.0	25.70	249.80	2,749.7	-368.3	-979.3	1,046.2	0.82	0.62	
3,071.0	25.50	251.70	2,835.4	-381.9	-1,018.0	1,087.3	0.89	-0.21	
3,166.0	25.10	250.90	2,921.3	-394.9	-1,056.5	1,127.8	0.55	-0.42	
3,262.0	26.10	251.10	3,007.8	-408.4	-1,095.7	1,169.3	1.05	1.04	
3,357.0	24.70	249.20	3,093.7	-422.2	-1,134.0	1,210.0	1.71	-1.47	
3,452.0	24.00	248.30	3,180.2	-436.4	-1,170.5	1,249.2	0.83	-0.74	
3,548.0	21.40	245.80	3,268.8	-450.8	-1,204.6	1,286.2	2.89	-2.71	
3,643.0	18.20	247.10	3,358.1	-463.7	-1,234.1	1,318.3	3.40	-3.37	
3,739.0	16.60	248.00	3,449.7	-474.6	-1,260.6	1,347.0	1.69	-1.67	
3,834.0	14.90	246.90	3,541.2	-484.5	-1,284.5	1,372.8	1.82	-1.79	
3,929.0	13.80	247.80	3,633.2	-493.6	-1,306.2	1,396.3	1.18	-1.16	
4,025.0	11.80	249.50	3,726.8	-501.3	-1,326.0	1,417.6	2.12	-2.08	
4,120.0	8.80	242.10	3,820.3	-508.2	-1,341.5	1,434.5	3.45	-3.16	
4,216.0	6.90	236.80	3,915.4	-514.7	-1,352.8	1,447.4	2.12	-1.98	
4,311.0	5.40	245.00	4,009.8	-519.8	-1,361.7	1,457.5	1.83	-1.58	
4,406.0	3.10	242.20	4,104.6	-522.8	-1,368.0	1,464.5	2.43	-2.42	
4,501.0	1.60	210.50	4,199.5	-525.2	-1,370.9	1,468.1	2.03	-1.58	
4,596.0	0.40	158.90	4,294.5	-526.6	-1,371.5	1,469.1	1.46	-1.26	
4,692.0	0.90	2.80	4,390.5	-526.2	-1,371.3	1,468.8	1.33	0.52	
4,787.0	0.30	346.70	4,485.5	-525.2	-1,371.3	1,468.5	0.65	-0.63	
4,882.0	0.60	239.40	4,580.5	-525.2	-1,371.8	1,468.9	0.79	0.32	
4,977.0	0.40	137.40	4,675.5	-525.7	-1,372.0	1,469.3	0.83	-0.21	
5,072.0	1.20	149.30	4,770.4	-526.8	-1,371.3	1,469.0	0.86	0.84	
5,168.0	1.10	172.50	4,866.4	-528.6	-1,370.7	1,469.0	0.49	-0.10	
5,263.0	2.00	237.10	4,961.4	-530.4	-1,371.9	1,470.9	1.92	0.95	
5,359.0	2.10	261.80	5,057.3	-531.6	-1,375.1	1,474.2	0.92	0.10	
5,455.0	2.90	307.40	5,153.3	-530.3	-1,378.8	1,477.2	2.16	0.83	
5,550.0	2.50	299.00	5,248.2	-527.9	-1,382.5	1,479.8	0.59	-0.42	
5,640.0	0.70	42.30	5,338.1	-526.5	-1,383.8	1,480.6	3.05	-2.00	
5,736.0	1.50	54.00	5,434.1	-525.3	-1,382.4	1,478.9	0.86	0.83	
5,831.0	1.00	65.70	5,529.1	-524.3	-1,380.6	1,476.8	0.59	-0.53	
5,926.0	0.70	115.10	5,624.1	-524.2	-1,379.4	1,475.6	0.80	-0.32	
6,021.0	0.60	62.50	5,719.1	-524.2	-1,378.4	1,474.7	0.61	-0.11	
6,117.0	1.10	32.90	5,815.1	-523.2	-1,377.5	1,473.5	0.68	0.52	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well EnCana Fee 10-2D
Project:	Mamm Creek	TVD Reference:	KBE @ 6068.0ft (Original Well Elev)
Site:	NWNW S10-T7S-R92W (A10E Pad)	MD Reference:	KBE @ 6068.0ft (Original Well Elev)
Well:	EnCana Fee 10-2D	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US 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
6,212.0	1.50	60.70	5,910.0	-521.8	-1,375.9	1,471.5	0.77	0.42	
6,307.0	1.10	119.20	6,005.0	-521.7	-1,374.0	1,469.7	1.39	-0.42	
6,402.0	1.70	135.60	6,100.0	-523.1	-1,372.2	1,468.5	0.75	0.63	
6,498.0	2.20	164.30	6,195.9	-525.9	-1,370.7	1,468.1	1.13	0.52	Last Cathedral Survey @ 6,498' MD
6,558.0	2.20	164.30	6,255.9	-528.1	-1,370.1	1,468.3	0.00	0.00	Projection to Bit @ 6,558'

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									
EnCana Fee 10-2D TOC	0.00	0.00	4,108.0	-521.0	-1,370.8	1,601,852.70	2,393,629.91	39.466167	-107.648028
- survey misses target center by 3.3ft at 4409.5ft MD (4108.0 TVD, -522.9 N, -1368.1 E)									
- Point									
EnCana Fee 10-2D BHL	0.00	0.00	6,203.0	-521.0	-1,370.8	1,601,852.70	2,393,629.91	39.466167	-107.648028
- survey misses target center by 8.6ft at 6498.0ft MD (6195.9 TVD, -525.9 N, -1370.7 E)									
- Circle (radius 25.0)									

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
6,498.0	6,195.9	-525.9	-1,370.7	Last Cathedral Survey @ 6,498' MD	
6,558.0	6,255.9	-528.1	-1,370.1	Projection to Bit @ 6,558'	

Checked By: _____	Approved By: _____	Date: _____
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