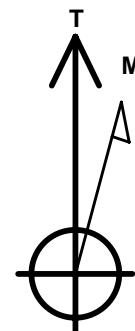
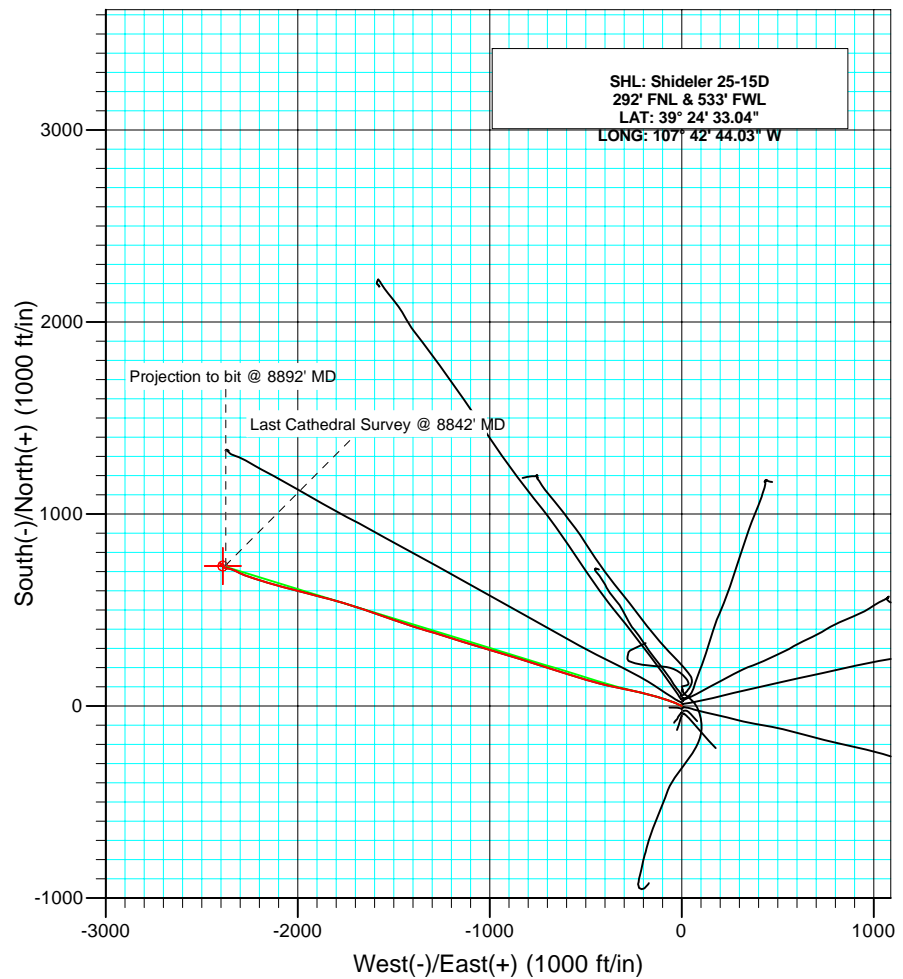
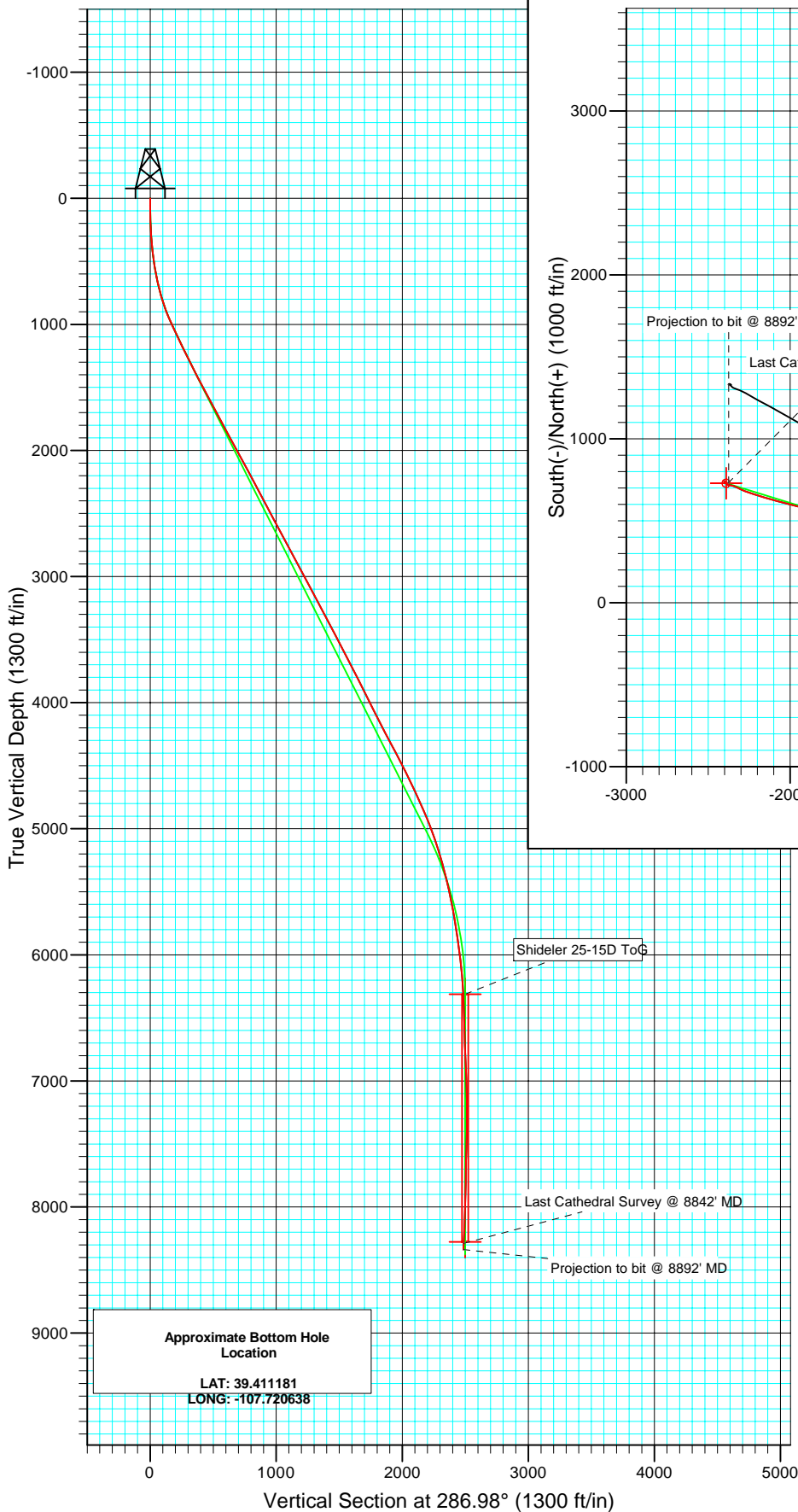




Project: Mamm Creek
 Site: C31E Pad (NENW 31-7S-92W)
 Well: Shideler 25-15D
 Wellbore: Final
 Design: DD



Azimuths to True North
 Magnetic North: 10.34°

Magnetic Field
 Strength: 52333.2snT
 Dip Angle: 65.75°
 Date: 6/21/2010
 Model: IGRF2010

DESIGN DETAILS: DD

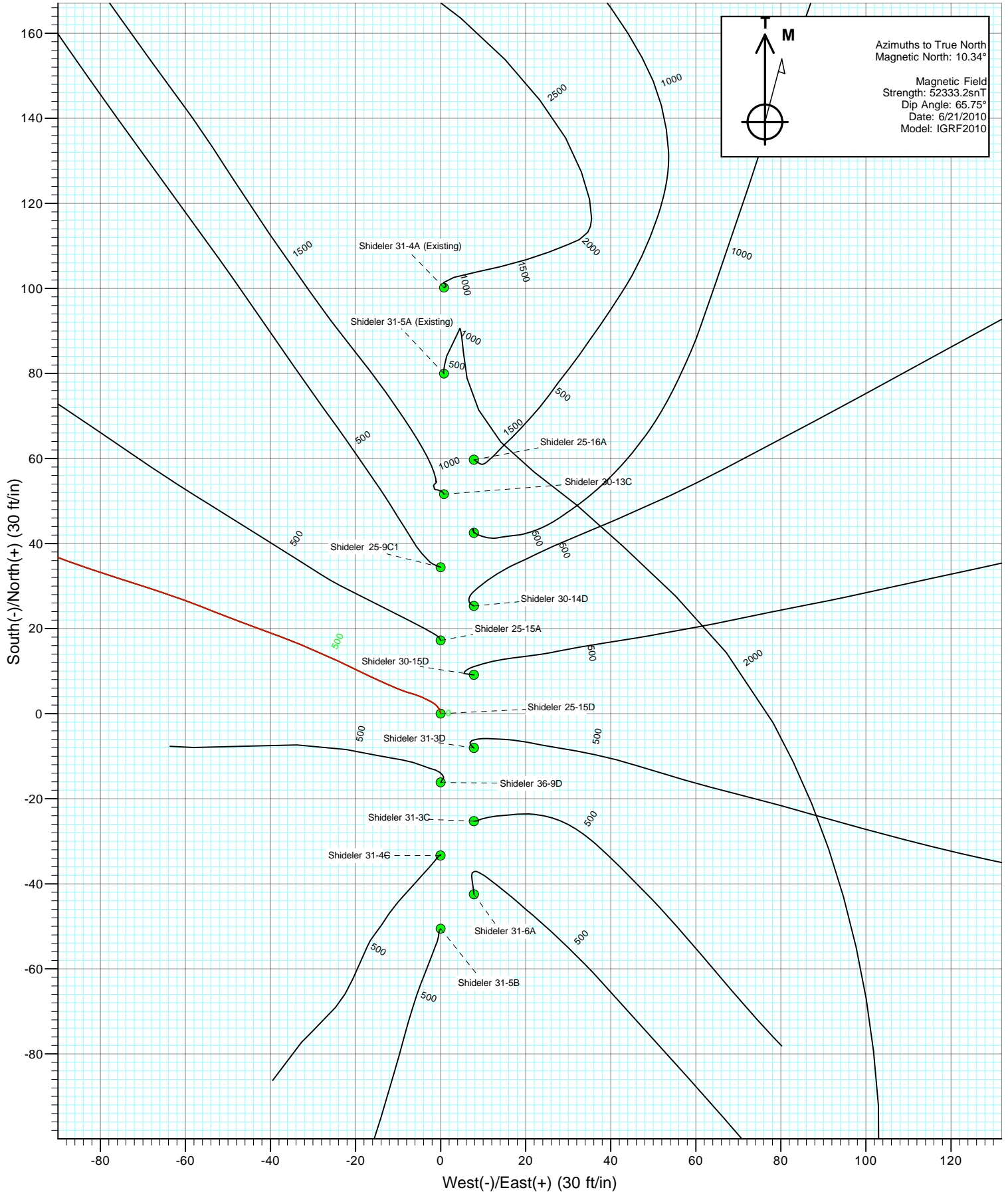
105147 (SH) 105266 (MH): KR

KBE @ 6772.0ft (Nabors M15)

Target	Azimuth Origin Type	N/S	E/W	TVD
Shideler 25-15D BHL	286.98 Slot	0.0	0.0	0.0

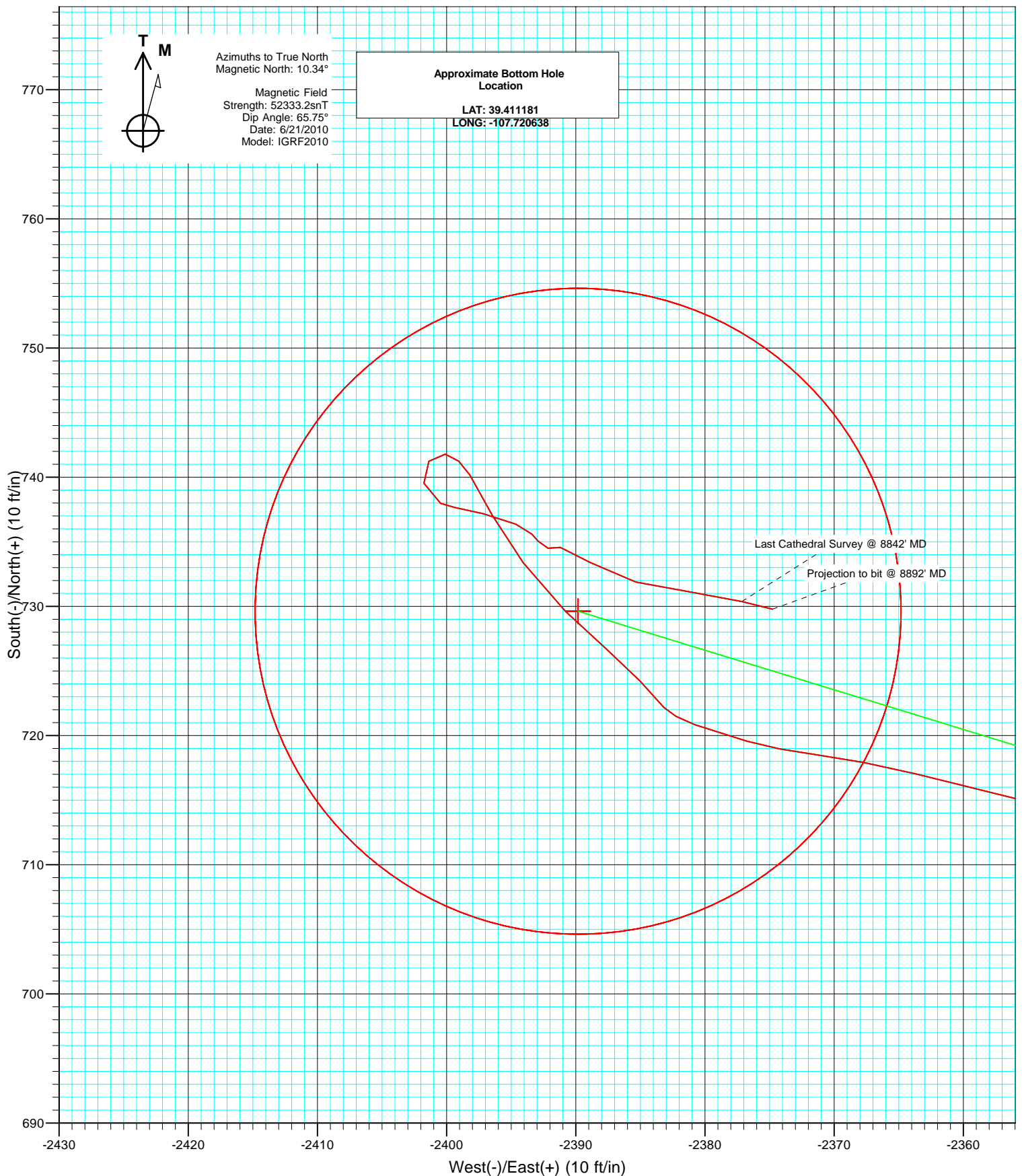


Project: Mamm Creek
Site: C31E Pad (NENW 31-7S-92W)
Well: Shideler 25-15D
Wellbore: Final
Design: DD





Project: Mamm Creek
Site: C31E Pad (NENW 31-7S-92W)
Well: Shideler 25-15D
Wellbore: Final
Design: DD



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 25-15D
Project:	Mamm Creek	TVD Reference:	KBE @ 6772.0ft (Nabors M15)
Site:	C31E Pad (NENW 31-7S-92W)	MD Reference:	KBE @ 6772.0ft (Nabors M15)
Well:	Shideler 25-15D	North Reference:	True
Wellbore:	Final	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		C31E Pad (NENW 31-7S-92W)			
Site Position:		Northing:	1,581,611.55 ft	Latitude:	39.409394
From:	Lat/Long	Easting:	2,375,162.79 ft	Longitude:	-107.711675
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.39 °

Well	Shideler 25-15D					
Well Position	+N/-S	0.0 ft	Northing:	1,581,536.46 ft	Latitude:	39.409178
	+E/-W	0.0 ft	Easting:	2,375,003.15 ft	Longitude:	-107.712233
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,750.0 ft

Wellbore	Final				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/21/2010	10.34	65.75	52,333

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	286.98	

Survey Program	Date	7/7/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
111.0	8,892.0	Survey #1 (Final)	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		
111.0	1.10	342.10	111.0	1.0	-0.3	0.6	0.99	0.99		
142.0	1.20	316.00	142.0	1.5	-0.6	1.1	1.70	0.32		
172.0	1.70	317.10	172.0	2.1	-1.2	1.7	1.67	1.67		
202.0	2.10	297.10	202.0	2.7	-2.0	2.6	2.56	1.33		
233.0	2.30	297.90	232.9	3.2	-3.0	3.8	0.65	0.65		
264.0	3.10	294.80	263.9	3.9	-4.3	5.3	2.62	2.58		
295.0	3.50	286.80	294.9	4.5	-6.0	7.0	1.96	1.29		
326.0	4.10	287.60	325.8	5.1	-8.0	9.1	1.94	1.94		
357.0	5.40	292.60	356.7	6.0	-10.4	11.7	4.40	4.19		
418.0	7.30	295.20	417.3	8.7	-16.5	18.3	3.15	3.11		
480.0	8.30	295.70	478.7	12.4	-24.1	26.7	1.62	1.61		
542.0	9.10	292.20	540.0	16.1	-32.7	36.0	1.55	1.29		

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 25-15D
Project:	Mamm Creek	TVD Reference:	KBE @ 6772.0ft (Nabors M15)
Site:	C31E Pad (NENW 31-7S-92W)	MD Reference:	KBE @ 6772.0ft (Nabors M15)
Well:	Shideler 25-15D	North Reference:	True
Wellbore:	Final	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
604.0	10.70	289.90	601.1	20.0	-42.6	46.6	2.66	2.58	
665.0	11.70	291.60	660.9	24.2	-53.7	58.4	1.73	1.64	
696.0	12.50	290.40	691.2	26.5	-59.8	64.9	2.71	2.58	
727.0	13.90	288.30	721.4	28.8	-66.5	72.0	4.77	4.52	
758.0	15.20	287.80	751.4	31.2	-73.9	79.8	4.21	4.19	
789.0	16.30	288.40	781.3	33.9	-81.9	88.2	3.59	3.55	
819.0	17.40	290.00	810.0	36.7	-90.1	96.9	3.98	3.67	
850.0	18.10	287.70	839.5	39.8	-99.0	106.3	3.20	2.26	
912.0	20.50	285.80	898.0	45.7	-118.6	126.8	4.00	3.87	
974.0	24.30	285.60	955.3	52.0	-141.4	150.4	6.13	6.13	
1,066.0	25.40	283.30	1,038.8	61.7	-178.8	189.0	1.59	1.20	
1,159.0	26.30	284.30	1,122.5	71.3	-218.2	229.5	1.08	0.97	
1,195.0	26.00	283.70	1,154.8	75.2	-233.6	245.4	1.11	-0.83	
1,352.0	26.10	281.00	1,295.9	89.9	-300.9	314.1	0.76	0.06	
1,448.0	26.80	282.00	1,381.8	98.5	-342.8	356.6	0.86	0.73	
1,543.0	27.50	283.30	1,466.3	108.0	-385.1	399.9	0.97	0.74	
1,637.0	27.80	283.50	1,549.6	118.1	-427.5	443.4	0.33	0.32	
1,733.0	28.30	284.80	1,634.3	129.1	-471.3	488.5	0.82	0.52	
1,828.0	28.60	287.20	1,717.9	141.6	-514.8	533.7	1.24	0.32	
1,923.0	29.10	287.00	1,801.1	155.1	-558.6	579.6	0.54	0.53	
2,018.0	28.80	288.40	1,884.2	169.0	-602.4	625.5	0.78	-0.32	
2,114.0	29.20	288.20	1,968.2	183.6	-646.6	672.1	0.43	0.42	
2,209.0	28.40	287.40	2,051.4	197.6	-690.2	717.8	0.93	-0.84	
2,304.0	28.50	286.90	2,134.9	211.0	-733.4	763.1	0.27	0.11	
2,399.0	27.30	287.50	2,218.9	224.1	-775.9	807.5	1.30	-1.26	
2,494.0	27.50	287.20	2,303.2	237.2	-817.6	851.3	0.26	0.21	
2,589.0	27.80	287.20	2,387.4	250.2	-859.7	895.3	0.32	0.32	
2,684.0	28.20	287.10	2,471.3	263.4	-902.4	939.9	0.42	0.42	
2,779.0	28.10	287.30	2,555.0	276.6	-945.2	984.8	0.14	-0.11	
2,875.0	27.90	286.40	2,639.8	289.7	-988.3	1,029.8	0.49	-0.21	
2,969.0	28.30	286.10	2,722.7	302.1	-1,030.8	1,074.1	0.45	0.43	
3,064.0	28.30	286.20	2,806.4	314.6	-1,074.1	1,119.1	0.05	0.00	
3,159.0	28.30	288.40	2,890.0	328.0	-1,117.1	1,164.2	1.10	0.00	
3,255.0	28.00	287.50	2,974.7	341.9	-1,160.2	1,209.4	0.54	-0.31	
3,350.0	28.00	287.50	3,058.5	355.3	-1,202.7	1,254.0	0.00	0.00	
3,445.0	27.90	286.90	3,142.5	368.5	-1,245.2	1,298.6	0.31	-0.11	
3,540.0	27.90	286.80	3,226.4	381.4	-1,287.8	1,343.0	0.05	0.00	
3,635.0	28.10	287.50	3,310.3	394.6	-1,330.4	1,387.6	0.40	0.21	
3,731.0	27.60	286.80	3,395.2	407.8	-1,373.2	1,432.5	0.62	-0.52	
3,826.0	27.00	286.80	3,479.6	420.4	-1,415.0	1,476.0	0.63	-0.63	
3,921.0	27.90	288.90	3,563.9	433.8	-1,456.6	1,519.8	1.39	0.95	
4,015.0	27.60	289.30	3,647.1	448.1	-1,498.0	1,563.6	0.38	-0.32	
4,111.0	26.90	288.40	3,732.4	462.3	-1,539.6	1,607.5	0.85	-0.73	
4,206.0	26.80	290.30	3,817.2	476.5	-1,580.1	1,650.4	0.91	-0.11	
4,301.0	26.50	289.90	3,902.1	491.2	-1,620.1	1,692.9	0.37	-0.32	
4,396.0	26.50	288.20	3,987.1	505.0	-1,660.1	1,735.3	0.80	0.00	
4,491.0	26.90	287.40	4,072.0	518.1	-1,700.8	1,777.9	0.57	0.42	
4,586.0	27.50	287.40	4,156.5	531.1	-1,742.2	1,821.4	0.63	0.63	
4,682.0	27.70	285.50	4,241.6	543.6	-1,784.9	1,865.8	0.94	0.21	
4,776.0	27.80	285.10	4,324.8	555.2	-1,827.1	1,909.6	0.22	0.11	
4,872.0	27.50	285.40	4,409.8	566.9	-1,870.1	1,954.1	0.34	-0.31	
4,967.0	27.30	282.40	4,494.1	577.4	-1,912.5	1,997.7	1.47	-0.21	
5,062.0	26.40	286.50	4,578.9	588.1	-1,954.0	2,040.6	2.17	-0.95	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 25-15D
Project:	Mamm Creek	TVD Reference:	KBE @ 6772.0ft (Nabors M15)
Site:	C31E Pad (NENW 31-7S-92W)	MD Reference:	KBE @ 6772.0ft (Nabors M15)
Well:	Shideler 25-15D	North Reference:	True
Wellbore:	Final	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
5,157.0	25.20	284.90	4,664.4	599.3	-1,993.8	2,081.9	1.46	-1.26	
5,252.0	24.50	284.30	4,750.6	609.4	-2,032.5	2,121.8	0.78	-0.74	
5,347.0	23.70	283.90	4,837.4	618.8	-2,070.1	2,160.6	0.86	-0.84	
5,443.0	22.40	286.10	4,925.7	628.5	-2,106.4	2,198.1	1.62	-1.35	
5,538.0	20.70	286.00	5,014.0	638.2	-2,139.9	2,233.0	1.79	-1.79	
5,632.0	18.80	287.50	5,102.5	647.3	-2,170.3	2,264.8	2.09	-2.02	
5,727.0	16.30	287.00	5,193.1	655.8	-2,197.7	2,293.4	2.64	-2.63	
5,822.0	15.20	287.30	5,284.5	663.4	-2,222.3	2,319.2	1.16	-1.16	
5,917.0	14.70	289.60	5,376.3	671.2	-2,245.6	2,343.7	0.82	-0.53	
6,011.0	12.50	288.70	5,467.7	678.4	-2,266.4	2,365.8	2.35	-2.34	
6,106.0	11.10	292.60	5,560.6	685.2	-2,284.6	2,385.1	1.70	-1.47	
6,202.0	10.10	294.80	5,655.0	692.3	-2,300.8	2,402.7	1.12	-1.04	
6,297.0	9.50	297.10	5,748.6	699.4	-2,315.3	2,418.7	0.75	-0.63	
6,392.0	9.00	295.80	5,842.4	706.2	-2,329.0	2,433.7	0.57	-0.53	
6,487.0	8.00	286.80	5,936.3	711.3	-2,342.0	2,447.7	1.75	-1.05	
6,582.0	6.80	284.00	6,030.6	714.6	-2,353.8	2,459.9	1.32	-1.26	
6,677.0	5.40	283.60	6,125.0	717.0	-2,363.6	2,470.0	1.47	-1.47	
6,773.0	3.90	277.40	6,220.7	718.5	-2,371.2	2,477.7	1.65	-1.56	
6,868.0	2.90	285.80	6,315.5	719.6	-2,376.8	2,483.3	1.17	-1.05	
6,963.0	2.20	290.00	6,410.4	720.8	-2,380.8	2,487.5	0.76	-0.74	
7,058.0	1.20	316.70	6,505.4	722.2	-2,383.2	2,490.2	1.32	-1.05	
7,153.0	2.10	318.40	6,600.4	724.2	-2,385.0	2,492.6	0.95	0.95	
7,248.0	2.20	308.90	6,695.3	726.7	-2,387.6	2,495.7	0.39	0.11	
7,343.0	3.10	315.50	6,790.2	729.6	-2,390.8	2,499.7	1.00	0.95	
7,438.0	2.90	322.80	6,885.1	733.4	-2,394.1	2,503.9	0.45	-0.21	
7,533.0	2.40	331.80	6,980.0	737.1	-2,396.5	2,507.2	0.68	-0.53	
7,628.0	1.90	329.70	7,074.9	740.2	-2,398.2	2,509.8	0.53	-0.53	
7,722.0	1.40	283.60	7,168.8	741.8	-2,400.1	2,512.1	1.46	-0.53	
7,817.0	1.00	190.40	7,263.8	741.2	-2,401.4	2,513.2	1.86	-0.42	
7,912.0	1.10	194.10	7,358.8	739.5	-2,401.8	2,513.0	0.13	0.11	
8,007.0	2.00	114.20	7,453.8	738.0	-2,400.5	2,511.3	2.22	0.95	
8,039.0	2.20	98.10	7,485.8	737.7	-2,399.3	2,510.2	1.94	0.62	
8,103.0	1.80	107.90	7,549.7	737.2	-2,397.2	2,508.0	0.82	-0.62	
8,198.0	1.40	107.70	7,644.7	736.4	-2,394.6	2,505.3	0.42	-0.42	
8,260.0	1.40	136.00	7,706.7	735.6	-2,393.4	2,503.9	1.10	0.00	
8,292.0	1.20	140.10	7,738.7	735.1	-2,392.9	2,503.3	0.69	-0.62	
8,387.0	0.30	31.30	7,833.7	734.5	-2,392.1	2,502.4	1.40	-0.95	
8,482.0	1.00	100.30	7,928.7	734.6	-2,391.2	2,501.5	0.98	0.74	
8,577.0	2.20	124.00	8,023.6	733.4	-2,388.9	2,498.9	1.42	1.26	
8,672.0	2.50	103.80	8,118.5	731.9	-2,385.3	2,495.1	0.92	0.32	
8,767.0	3.00	97.40	8,213.4	731.1	-2,380.9	2,490.6	0.62	0.53	
8,842.0	2.80	104.00	8,288.3	730.4	-2,377.1	2,486.8	0.52	-0.27	
8,892.0	2.80	104.00	8,338.3	729.8	-2,374.8	2,484.4	0.00	0.00	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Shideler 25-15D
Project:	Mamm Creek	TVD Reference:	KBE @ 6772.0ft (Nabors M15)
Site:	C31E Pad (NENW 31-7S-92W)	MD Reference:	KBE @ 6772.0ft (Nabors M15)
Well:	Shideler 25-15D	North Reference:	True
Wellbore:	Final	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US 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									
Shideler 25-15D BHL	0.00	0.00	8,277.0	729.6	-2,389.8	1,582,324.06	2,372,631.80	39.411181	-107.720692
- survey misses target center by 12.2ft at 8830.1ft MD (8276.4 TVD, 730.5 N, -2377.7 E)									
- Circle (radius 25.0)									
Shideler 25-15D ToG	0.00	0.00	6,312.0	729.6	-2,389.8	1,582,324.06	2,372,631.80	39.411181	-107.720692
- survey misses target center by 16.6ft at 6865.3ft MD (6312.9 TVD, 719.5 N, -2376.6 E)									
- Point									

Survey Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W		
(ft)	(ft)	(ft)	(ft)	Comment	
8,842.0	8,288.3	730.4	-2,377.1	Last Cathedral Survey @ 8842' MD	
8,892.0	8,338.3	729.8	-2,374.8	Projection to bit @ 8892' MD	

Checked By: _____ Approved By: _____ Date: _____