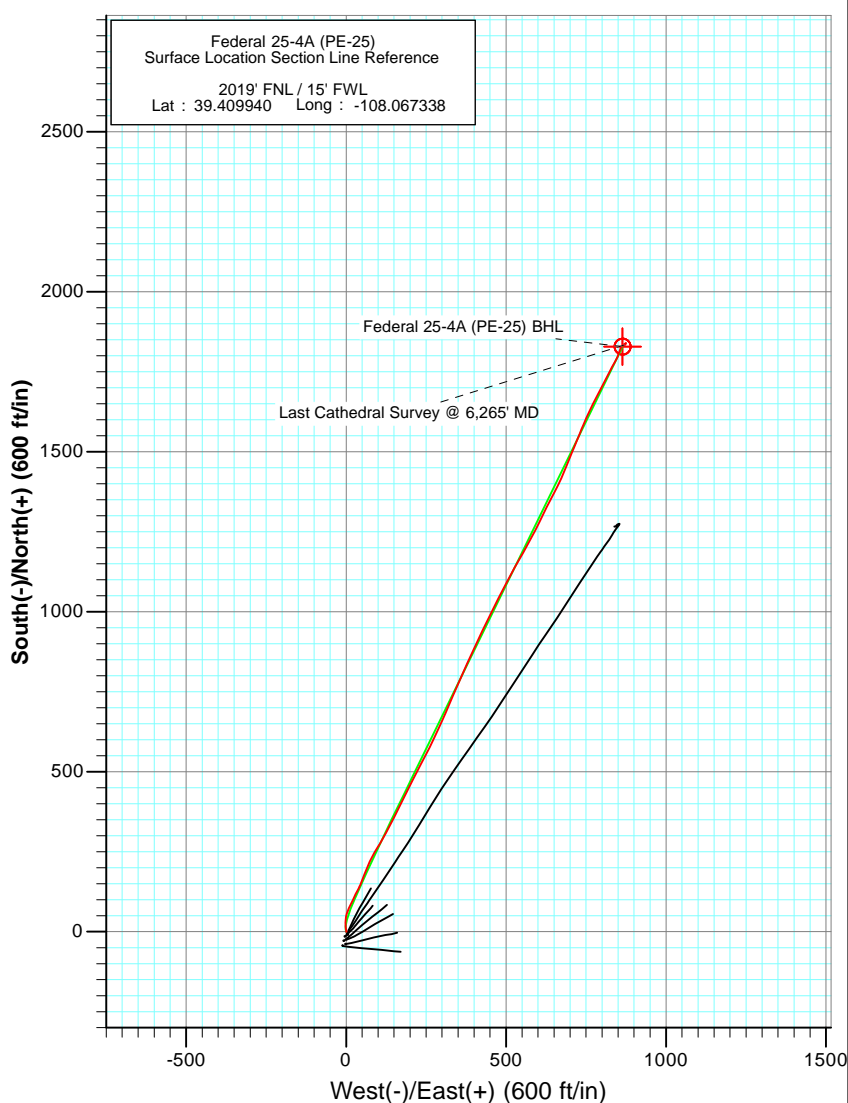
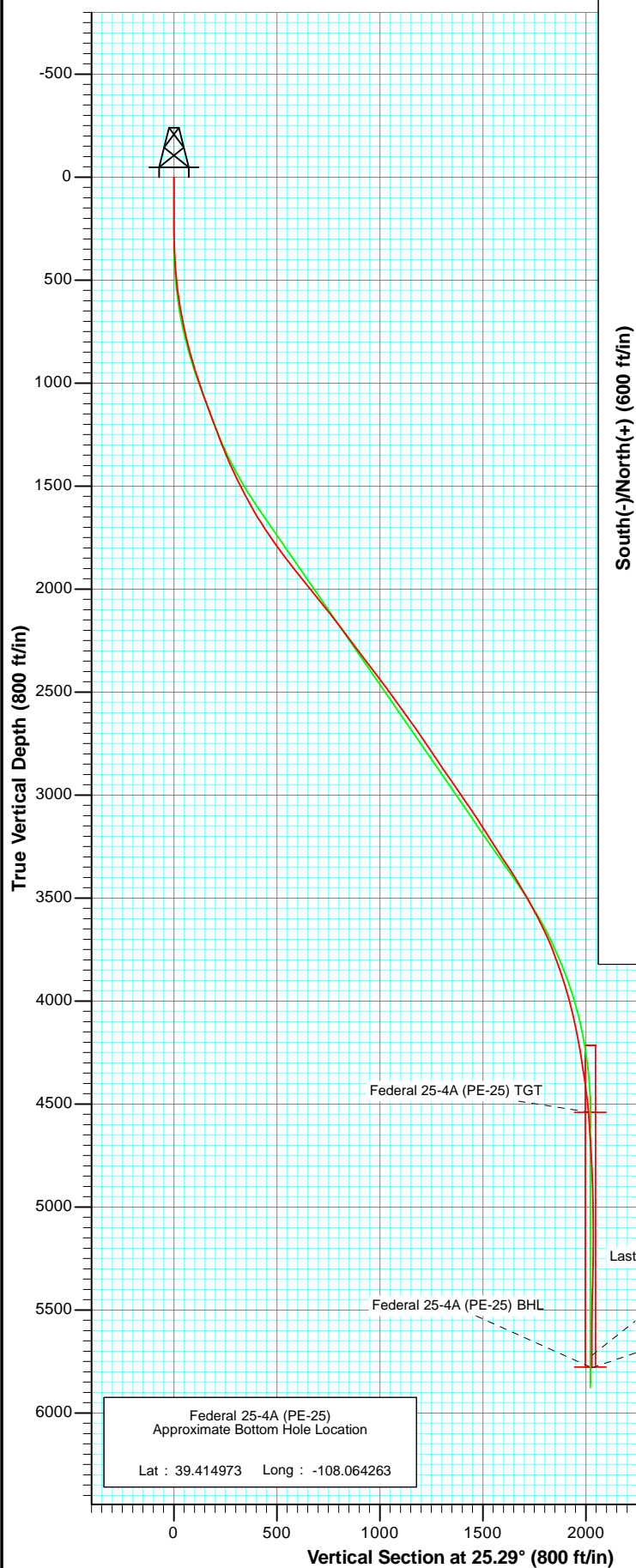




Project: S. Piceance (Parachute)
 Site: SWNW Sec 25-T7S-R96W (PE-25 Pad)
 Well: Federal 25-4A (PE-25)
 Wellbore: DD
 Plan: FINAL



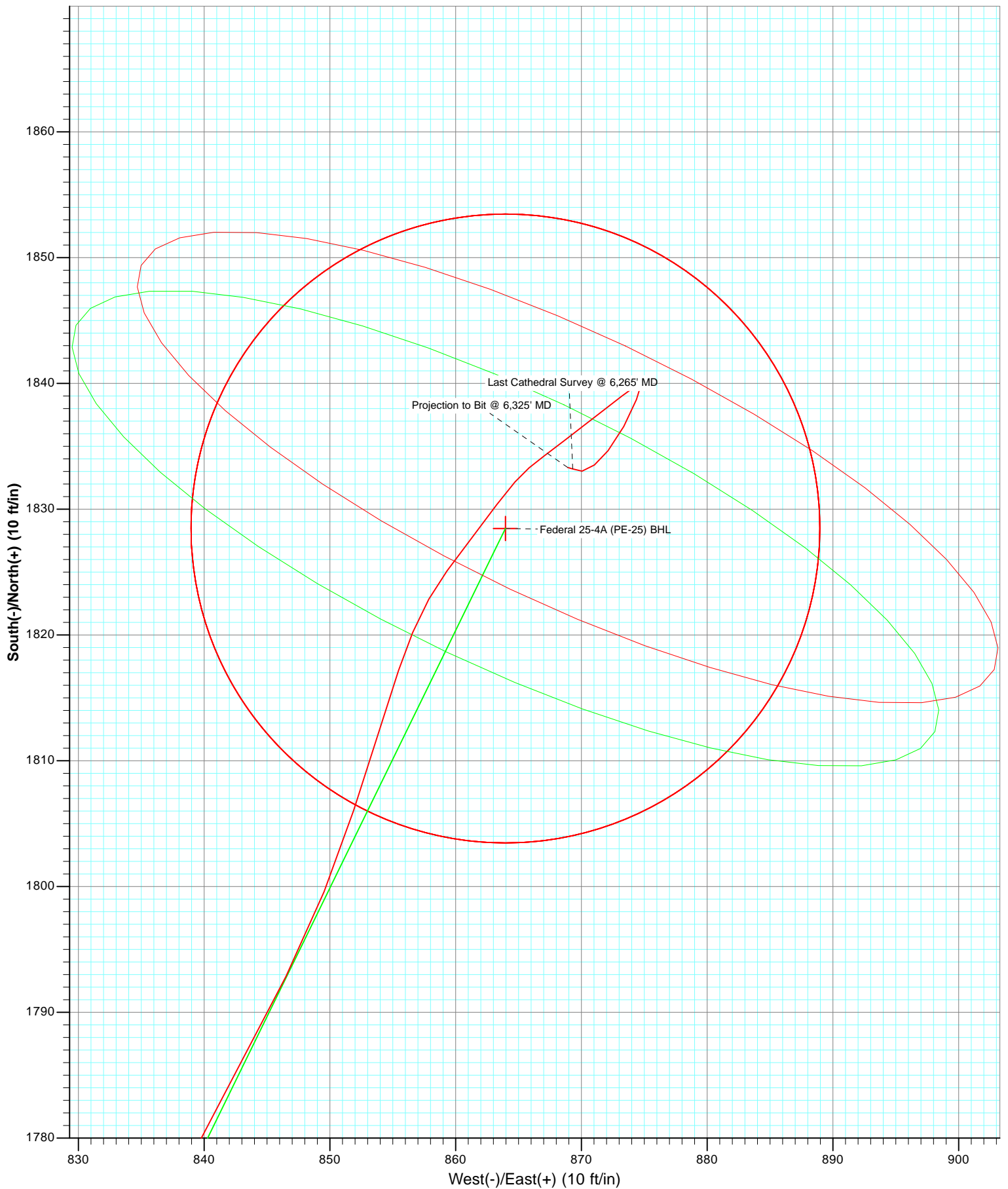
Azimuths to True North
 Magnetic North: 10.34°

Magnetic Field
 Strength: 52169.3snT
 Dip Angle: 65.65°
 Date: 9/28/2011
 Model: IGRF2010

DD Federal 25-4A (PE-25) 115440 112155; LR						
KBE @ 5419.0ft (Patterson 330) North American Datum 1983 Well Federal 25-4A (PE-25), True North						
Type User	Target No Target (Freehand)	Azimuth 25.29	Origin Type Slot	N/S 0.0	E/W 0.0	From TVD 0.0
Name	TV	+N/-S	+E/-W	Latitude	Longitude	
Federal 25-4A (PE-25) TGT	4540.0	1828.5	864.0	39.414960	-108.064280	
Federal 25-4A (PE-25) BHL	5777.0	1828.5	864.0	39.414960	-108.064280	

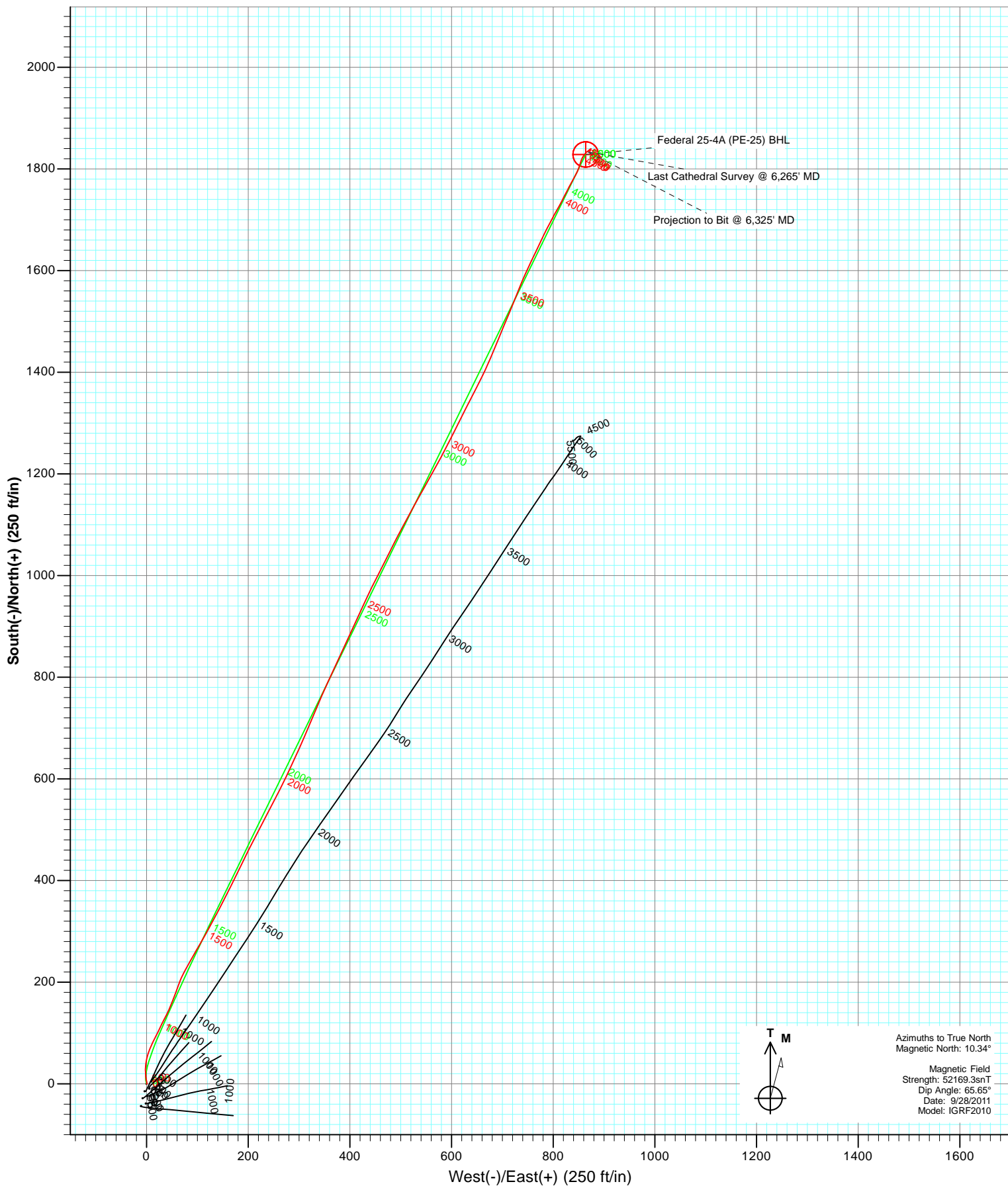


Project: S. Piceance (Parachute)
Site: SWNW Sec 25-T7S-R96W (PE-25 Pad)
Well: Federal 25-4A (PE-25)
Wellbore: DD
Plan: FINAL





Project: S. Piceance (Parachute)
Site: SWNW Sec 25-T7S-R96W (PE-25 Pad)
Well: Federal 25-4A (PE-25)
Wellbore: DD
Plan: FINAL



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 25-4A (PE-25)
Project:	S. Piceance (Parachute)	TVD Reference:	KBE @ 5419.0ft (Patterson 330)
Site:	SWNW Sec 25-T7S-R96W (PE-25 Pad)	MD Reference:	KBE @ 5419.0ft (Patterson 330)
Well:	Federal 25-4A (PE-25)	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 Multi Users DB

Project	S. Piceance (Parachute), Garfield County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	SWNW Sec 25-T7S-R96W (PE-25 Pad)			
Site Position:		Northing:	1,584,438.30 ft	Latitude: 39.409900
From:	Lat/Long	Easting:	2,274,718.76 ft	Longitude: -108.067310
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence: -1.62 °

Well	Federal 25-4A (PE-25)			
Well Position	+N/-S	0.0 ft	Northing:	1,584,453.08 ft
	+E/-W	0.0 ft	Easting:	2,274,711.26 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level: 5,388.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/28/2011	10.34	65.65	52,169

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	25.29

Survey Program	Date	10/5/2011		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
110.0	1,095.0	Survey #1 (DD)	MWD	Geolink MWD
1,203.0	6,325.0	Survey #2 (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	0.30	100.30	110.0	-0.1	0.3	0.1	0.27	0.27	
233.0	0.30	86.30	233.0	-0.1	0.9	0.3	0.06	0.00	
263.0	0.70	17.70	263.0	0.1	1.1	0.5	2.18	1.33	
294.0	1.30	11.60	294.0	0.6	1.2	1.1	1.96	1.94	
325.0	2.20	342.50	325.0	1.5	1.1	1.8	3.99	2.90	
356.0	2.90	348.00	355.9	2.9	0.7	2.9	2.39	2.26	
386.0	3.70	349.70	385.9	4.6	0.4	4.3	2.69	2.67	
417.0	4.70	345.00	416.8	6.8	-0.1	6.1	3.41	3.23	
448.0	5.40	348.70	447.7	9.4	-0.7	8.2	2.49	2.26	
478.0	6.10	352.80	477.5	12.4	-1.2	10.7	2.70	2.33	
509.0	7.00	359.00	508.3	15.9	-1.4	13.8	3.69	2.90	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 25-4A (PE-25)
Project:	S. Piceance (Parachute)	TVD Reference:	KBE @ 5419.0ft (Patterson 330)
Site:	SWNW Sec 25-T7S-R96W (PE-25 Pad)	MD Reference:	KBE @ 5419.0ft (Patterson 330)
Well:	Federal 25-4A (PE-25)	North Reference:	True
Wellbore:	DD	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
540.0	7.90	355.60	539.1	19.9	-1.6	17.3	3.23	2.90	
571.0	8.70	355.70	569.8	24.4	-2.0	21.2	2.58	2.58	
601.0	9.40	1.10	599.4	29.1	-2.1	25.4	3.67	2.33	
632.0	10.20	6.50	629.9	34.4	-1.7	30.3	3.93	2.58	
663.0	11.10	7.10	660.4	40.0	-1.1	35.8	2.93	2.90	
694.0	11.70	9.70	690.8	46.1	-0.2	41.6	2.55	1.94	
724.0	12.00	15.30	720.1	52.1	1.2	47.6	3.96	1.00	
755.0	12.60	16.00	750.4	58.5	3.0	54.1	1.99	1.94	
786.0	13.30	20.30	780.6	65.1	5.1	61.0	3.84	2.26	
817.0	13.80	23.90	810.8	71.8	7.9	68.3	3.16	1.61	
847.0	14.50	25.00	839.9	78.5	10.9	75.6	2.50	2.33	
878.0	15.20	26.80	869.8	85.6	14.4	83.5	2.70	2.26	
909.0	16.10	27.30	899.7	93.1	18.2	91.9	2.94	2.90	
940.0	16.79	25.52	929.4	100.9	22.1	100.7	2.76	2.23	
971.0	17.80	25.40	959.0	109.2	26.0	109.9	3.26	3.26	
999.0	18.50	26.50	985.6	117.1	29.9	118.6	2.78	2.50	
1,031.0	18.85	26.90	1,015.9	126.2	34.5	128.9	1.16	1.09	
1,065.0	19.50	26.90	1,048.1	136.2	39.5	140.0	1.91	1.91	
1,095.0	20.30	23.90	1,076.3	145.4	43.9	150.2	4.32	2.67	Last Cathedral Survey @ 1095' MD
1,203.0	20.40	19.70	1,177.5	180.3	57.8	187.7	1.36	0.09	
1,234.0	20.50	19.90	1,206.6	190.5	61.5	198.5	0.39	0.32	
1,264.0	20.50	21.80	1,234.7	200.3	65.2	209.0	2.22	0.00	
1,297.0	21.00	24.90	1,265.5	211.0	69.9	220.6	3.66	1.52	
1,328.0	21.60	27.70	1,294.4	221.1	74.9	231.9	3.81	1.94	
1,359.0	22.25	28.45	1,323.2	231.3	80.3	243.4	2.28	2.10	
1,391.0	22.90	29.50	1,352.7	242.1	86.3	255.7	2.39	2.03	
1,423.0	23.80	29.80	1,382.1	253.1	92.5	268.4	2.84	2.81	
1,453.0	24.30	29.90	1,409.5	263.7	98.6	280.5	1.67	1.67	
1,484.0	25.00	30.20	1,437.7	274.9	105.1	293.4	2.29	2.26	
1,515.0	25.50	29.80	1,465.7	286.3	111.7	306.6	1.70	1.61	
1,545.0	26.45	29.30	1,492.7	297.8	118.2	319.7	3.25	3.17	
1,578.0	27.60	28.50	1,522.1	310.9	125.4	334.7	3.65	3.48	
1,610.0	29.00	27.90	1,550.3	324.3	132.6	349.8	4.46	4.37	
1,640.0	28.80	28.30	1,576.5	337.0	139.4	364.3	0.93	-0.67	
1,671.0	28.80	27.60	1,603.7	350.2	146.4	379.2	1.09	0.00	
1,702.0	29.70	26.40	1,630.7	363.7	153.3	394.4	3.46	2.90	
1,764.0	33.80	26.42	1,683.4	392.9	167.8	427.0	6.61	6.61	
1,798.0	33.88	26.50	1,711.7	409.9	176.2	445.9	0.27	0.24	
1,829.0	33.30	26.20	1,737.5	425.3	183.9	463.1	1.95	-1.87	
1,862.0	34.00	25.80	1,765.0	441.7	191.9	481.3	2.22	2.12	
1,893.0	35.30	26.40	1,790.5	457.5	199.6	499.0	4.34	4.19	
1,923.0	36.60	26.90	1,814.8	473.3	207.5	516.6	4.44	4.33	
2,016.0	38.30	27.90	1,888.6	523.5	233.6	573.1	1.94	1.83	
2,113.0	38.80	26.80	1,964.5	577.2	261.3	633.5	0.87	0.52	
2,217.0	39.10	24.70	2,045.3	636.0	289.7	698.9	1.30	0.29	
2,301.0	38.00	23.40	2,111.0	683.8	311.1	751.2	1.63	-1.31	
2,395.0	37.50	22.50	2,185.4	736.8	333.5	808.7	0.79	-0.53	
2,490.0	36.70	24.80	2,261.1	789.3	356.5	866.0	1.69	-0.84	
2,584.0	37.30	24.40	2,336.2	840.8	380.0	922.5	0.69	0.64	
2,678.0	37.00	25.20	2,411.1	892.3	403.8	979.3	0.60	-0.32	
2,773.0	36.70	24.40	2,487.1	944.0	427.7	1,036.3	0.60	-0.32	
2,867.0	35.70	27.40	2,563.0	993.9	452.0	1,091.8	2.16	-1.06	
2,962.0	36.00	26.20	2,640.0	1,043.6	477.0	1,147.4	0.80	0.32	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 25-4A (PE-25)
Project:	S. Piceance (Parachute)	TVD Reference:	KBE @ 5419.0ft (Patterson 330)
Site:	SWNW Sec 25-T7S-R96W (PE-25 Pad)	MD Reference:	KBE @ 5419.0ft (Patterson 330)
Well:	Federal 25-4A (PE-25)	North Reference:	True
Wellbore:	DD	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
3,056.0	34.50	28.10	2,716.8	1,091.9	501.8	1,201.6	1.98	-1.60	
3,150.0	33.40	28.80	2,794.7	1,138.0	526.8	1,254.0	1.24	-1.17	
3,245.0	34.40	29.50	2,873.6	1,184.3	552.6	1,306.9	1.13	1.05	
3,339.0	35.00	28.40	2,950.9	1,231.1	578.5	1,360.3	0.92	0.64	
3,434.0	34.50	26.40	3,028.9	1,279.2	603.4	1,414.4	1.31	-0.53	
3,528.0	33.40	26.70	3,106.9	1,326.2	626.9	1,466.9	1.18	-1.17	
3,622.0	32.30	27.50	3,185.9	1,371.5	650.1	1,517.8	1.26	-1.17	
3,716.0	32.70	24.10	3,265.2	1,417.0	672.1	1,568.3	1.99	0.43	
3,811.0	34.00	21.80	3,344.5	1,465.1	692.4	1,620.5	1.91	1.37	
3,906.0	30.90	23.10	3,424.7	1,512.2	711.9	1,671.4	3.34	-3.26	
4,001.0	29.40	21.15	3,506.8	1,556.4	729.8	1,719.0	1.89	-1.58	
4,094.0	27.30	24.80	3,588.7	1,597.1	747.0	1,763.1	2.93	-2.26	
4,187.0	25.70	25.80	3,671.9	1,634.6	764.8	1,804.6	1.79	-1.72	
4,283.0	20.30	25.10	3,760.2	1,668.4	780.9	1,842.1	5.63	-5.62	
4,377.0	18.90	29.15	3,848.8	1,696.5	795.2	1,873.6	2.07	-1.49	
4,470.0	17.30	28.70	3,937.2	1,721.8	809.2	1,902.4	1.73	-1.72	
4,565.0	14.30	26.50	4,028.6	1,744.7	821.2	1,928.3	3.22	-3.16	
4,660.0	11.60	28.00	4,121.2	1,763.6	830.9	1,949.6	2.86	-2.84	
4,754.0	9.80	28.90	4,213.5	1,779.0	839.2	1,967.0	1.92	-1.91	
4,848.0	9.40	26.20	4,306.2	1,792.8	846.5	1,982.6	0.64	-0.43	
4,942.0	8.10	17.60	4,399.1	1,806.0	851.9	1,996.9	1.96	-1.38	
5,036.0	6.20	18.00	4,492.4	1,817.2	855.5	2,008.5	2.02	-2.02	
5,130.0	4.70	36.60	4,586.0	1,825.1	859.3	2,017.3	2.45	-1.60	
5,224.0	3.30	37.20	4,679.7	1,830.4	863.3	2,023.7	1.49	-1.49	
5,318.0	1.50	50.70	4,773.7	1,833.3	865.8	2,027.5	1.99	-1.91	
5,413.0	2.80	53.20	4,868.6	1,835.5	868.7	2,030.6	1.37	1.37	
5,507.0	2.30	51.20	4,962.5	1,838.0	872.0	2,034.4	0.54	-0.53	
5,600.0	1.00	56.50	5,055.4	1,839.6	874.1	2,036.7	1.41	-1.40	
5,695.0	0.40	197.30	5,150.4	1,839.8	874.7	2,037.1	1.40	-0.63	
5,788.0	0.97	196.20	5,243.4	1,838.7	874.4	2,036.0	0.61	0.61	
5,883.0	1.90	210.00	5,338.4	1,836.6	873.4	2,033.7	1.04	0.98	
5,977.0	0.90	219.70	5,432.4	1,834.7	872.1	2,031.4	1.09	-1.06	
6,072.0	1.00	226.90	5,527.4	1,833.5	871.0	2,029.9	0.16	0.11	
6,166.0	0.48	280.30	5,621.4	1,833.0	870.1	2,029.0	0.86	-0.55	
6,265.0	0.40	286.30	5,720.3	1,833.2	869.3	2,028.9	0.09	-0.08	Last Cathedral Survey @ 6,265' MD
6,325.0	0.40	286.30	5,780.3	1,833.3	868.9	2,028.8	0.00	0.00	Projection to Bit @ 6,325' MD

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 25-4A (PE-25)
Project:	S. Piceance (Parachute)	TVD Reference:	KBE @ 5419.0ft (Patterson 330)
Site:	SWNW Sec 25-T7S-R96W (PE-25 Pad)	MD Reference:	KBE @ 5419.0ft (Patterson 330)
Well:	Federal 25-4A (PE-25)	North Reference:	True
Wellbore:	DD	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									
Federal 25-4A (PE-25) 1	0.00	0.00	1,005.0	120.0	34.7	1,584,572.05	2,274,749.34	39.410269	-108.067215
- actual wellpath misses target center by 3.4ft at 1018.9ft MD (1004.5 TVD, 122.8 N, 32.7 E)									
- Point									
Federal 25-4A (PE-25) E	0.00	0.00	5,777.0	1,828.5	864.0	1,586,256.41	2,275,626.54	39.414960	-108.064280
- actual wellpath misses target center by 6.9ft at 6321.7ft MD (5777.0 TVD, 1833.3 N, 868.9 E)									
- Circle (radius 25.0)									
Federal 25-4A (PE-25) T	0.00	0.00	4,540.0	1,828.5	864.0	1,586,256.41	2,275,626.54	39.414960	-108.064280
- actual wellpath misses target center by 9.5ft at 5084.7ft MD (4540.8 TVD, 1821.7 N, 857.3 E)									
- Circle (radius 25.0)									

Design Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
1,095.0	1,076.3	145.4	43.9	Last Cathedral Survey @ 1095' MD
6,265.0	5,720.3	1,833.2	869.3	Last Cathedral Survey @ 6,265' MD
6,325.0	5,780.3	1,833.3	868.9	Projection to Bit @ 6,325' MD

Checked By: _____ Approved By: _____ Date: _____