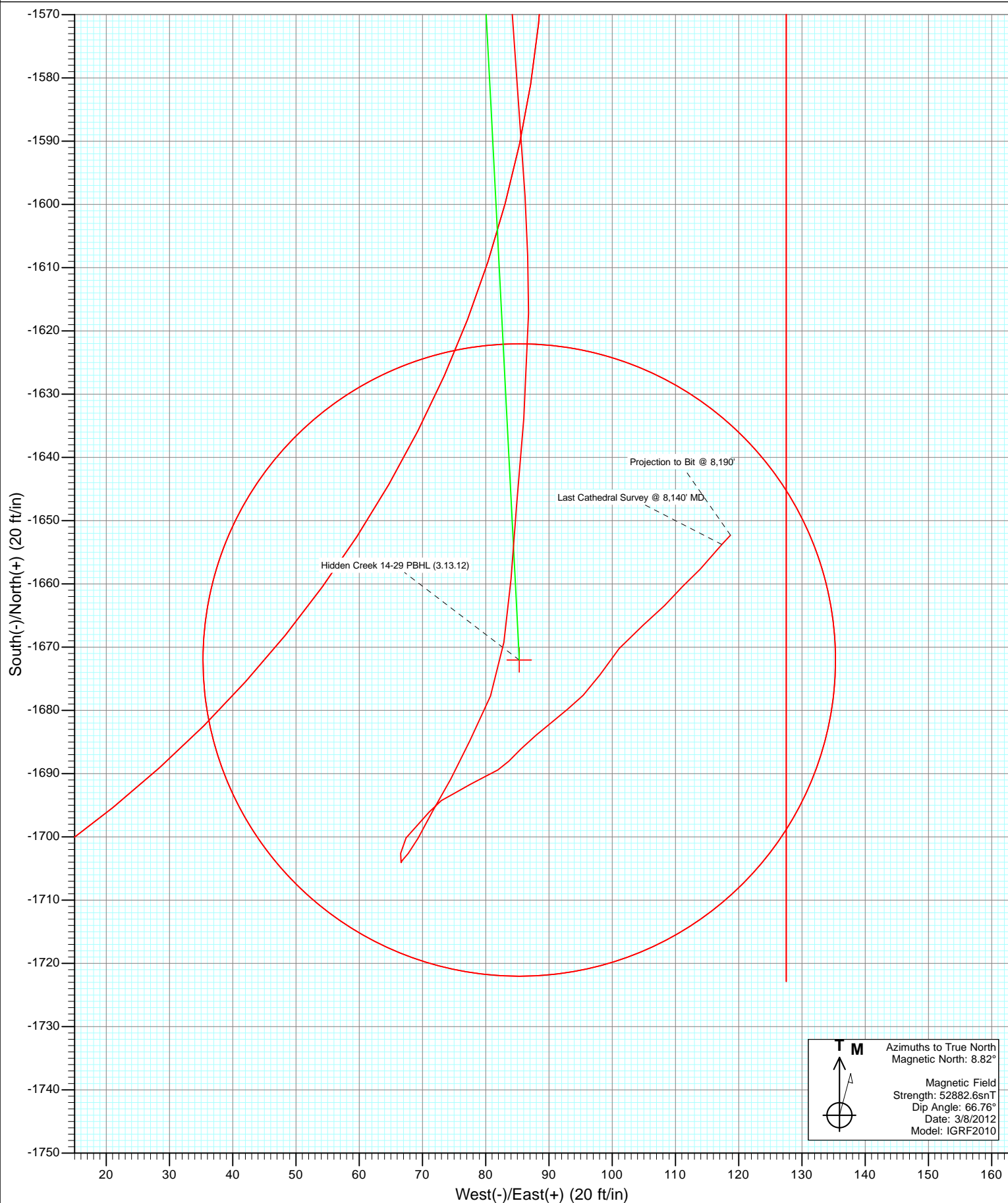


Azimuths to True North  
Magnetic North: 8.82°  
  
Magnetic Field  
Strength: 52882.6nT  
Dip Angle: 66.76°  
Date: 3/8/2012  
Model: IGRF2010

DD Hidden Creek 14-29 12xxx; LR KB=15' @ 5045.0ft (Xtreme 14) North American Datum 1983 Well Hidden Creek 14-29, True North							
Type	Target	Azimuth	Origin	Type	N/S	E/W	From TVD
Target	Hidden Creek 14-29 PBHL (3.13.12)	177.08	Slot		0.0	0.0	0.0
Name	Target	TVD	+N/-S	+E/-W	Latitude	Longitude	
Hidden Creek 14-29 PBHL (3.13.12)		7839.0	-1672.0	85.3	40.103498	-104.916240	



# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Anadarko Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Hidden Creek 14-29
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=15' @ 5045.0ft (Xtreme 14)
<b>Site:</b>	NESW Sec29-T2N-R67W (Hidden Creek)	<b>MD Reference:</b>	KB=15' @ 5045.0ft (Xtreme 14)
<b>Well:</b>	Hidden Creek 14-29	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	USA EDM 5000 Multi Users DB

<b>Project</b>	DJ Wattenberg		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site		NESW Sec29-T2N-R67W (Hidden Creek)			
Site Position:		Northing:	1,282,820.26 ft	Latitude:	40.108253
From:	Lat/Long	Easting:	3,163,202.98 ft	Longitude:	-104.916544
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.38 °

Well	Hidden Creek 14-29					
Well Position	+N/-S	0.0 ft	Northing:	1,282,760.15 ft	Latitude:	40.108088
	+E/-W	0.0 ft	Easting:	3,163,203.09 ft	Longitude:	-104.916545
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,030.0 ft

<b>Wellbore</b>	DD				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	3/8/2012	8.82	66.76	52,883

<b>Design</b>	DD				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	177.08	

<b>Survey Program</b>	<b>Date</b>	4/17/2012			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
94.0	8,190.0	Survey #1 (DD)	MWD	Geolink MWD	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Formations / Comments</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00		
94.0	0.20	240.70	94.0	-0.1	-0.1	0.1	0.21	0.21		
187.0	1.60	189.90	187.0	-1.4	-0.5	1.4	1.59	1.51		
280.0	2.70	183.60	279.9	-4.9	-0.9	4.9	1.21	1.18		
373.0	4.50	180.10	372.7	-10.7	-1.0	10.7	1.95	1.94		
463.0	6.70	174.60	462.3	-19.5	-0.5	19.4	2.51	2.44		
551.0	8.10	174.00	549.6	-30.8	0.6	30.8	1.59	1.59		
640.0	10.10	176.20	637.4	-44.8	1.8	44.8	2.28	2.25		
729.0	11.10	172.10	724.9	-61.1	3.5	61.2	1.41	1.12		
837.0	10.70	172.70	831.0	-81.3	6.2	81.5	0.38	-0.37		
929.0	10.50	171.30	921.4	-98.1	8.5	98.4	0.35	-0.22		
1,019.0	13.20	174.10	1,009.5	-116.4	10.8	116.8	3.07	3.00		
1,108.0	14.80	172.60	1,095.8	-137.8	13.3	138.3	1.84	1.80		

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Anadarko Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Hidden Creek 14-29
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=15' @ 5045.0ft (Xtreme 14)
<b>Site:</b>	NESW Sec29-T2N-R67W (Hidden Creek)	<b>MD Reference:</b>	KB=15' @ 5045.0ft (Xtreme 14)
<b>Well:</b>	Hidden Creek 14-29	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	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
1,198.0	17.90	172.00	1,182.2	-162.9	16.7	163.5	3.45	3.44	
1,288.0	19.80	173.10	1,267.3	-191.7	20.5	192.5	2.15	2.11	
1,376.0	22.50	173.20	1,349.4	-223.2	24.3	224.2	3.07	3.07	
1,464.0	24.70	178.10	1,430.1	-258.3	26.9	259.4	3.35	2.50	
1,552.0	25.10	175.50	1,509.9	-295.3	29.0	296.4	1.32	0.45	
1,641.0	25.20	177.70	1,590.4	-333.1	31.2	334.2	1.06	0.11	
1,729.0	25.50	175.80	1,670.0	-370.7	33.3	371.9	0.99	0.34	
1,817.0	26.20	180.20	1,749.2	-409.0	34.7	410.2	2.32	0.80	
1,907.0	25.80	178.50	1,830.1	-448.5	35.1	449.7	0.94	-0.44	
1,996.0	25.20	179.10	1,910.4	-486.8	35.9	488.0	0.73	-0.67	
2,086.0	25.10	178.80	1,991.9	-525.0	36.6	526.2	0.18	-0.11	
2,174.0	25.00	176.70	2,071.6	-562.2	38.1	563.4	1.02	-0.11	
2,262.0	25.60	179.10	2,151.1	-599.8	39.4	601.0	1.35	0.68	
2,348.0	24.70	178.50	2,229.0	-636.4	40.2	637.6	1.09	-1.05	
2,438.0	24.20	178.90	2,310.9	-673.6	41.0	674.8	0.59	-0.56	
2,526.0	23.70	178.10	2,391.3	-709.3	42.0	710.5	0.68	-0.57	
2,615.0	22.20	179.20	2,473.3	-744.0	42.8	745.2	1.75	-1.69	
2,703.0	22.40	177.60	2,554.7	-777.4	43.7	778.6	0.73	0.23	
2,792.0	24.00	176.50	2,636.5	-812.4	45.6	813.6	1.86	1.80	
2,880.0	22.60	177.60	2,717.3	-847.1	47.4	848.5	1.67	-1.59	
2,970.0	23.80	178.80	2,800.1	-882.6	48.5	883.9	1.43	1.33	
3,058.0	22.90	179.80	2,880.9	-917.4	48.9	918.7	1.12	-1.02	
3,145.0	23.20	178.90	2,960.9	-951.5	49.3	952.8	0.53	0.34	
3,235.0	21.90	178.40	3,044.0	-986.0	50.1	987.3	1.46	-1.44	
3,324.0	22.40	176.90	3,126.5	-1,019.5	51.5	1,020.8	0.85	0.56	
3,412.0	22.40	173.50	3,207.8	-1,052.9	54.3	1,054.3	1.47	0.00	
3,499.0	23.40	174.30	3,288.0	-1,086.6	57.9	1,088.1	1.20	1.15	
3,586.0	21.70	174.40	3,368.3	-1,119.8	61.2	1,121.5	1.95	-1.95	
3,674.0	23.60	178.30	3,449.5	-1,153.6	63.3	1,155.3	2.75	2.16	
3,762.0	21.40	180.50	3,530.8	-1,187.3	63.7	1,189.0	2.68	-2.50	
3,851.0	22.20	179.60	3,613.5	-1,220.3	63.6	1,222.0	0.97	0.90	
3,940.0	21.10	179.10	3,696.2	-1,253.2	64.0	1,254.8	1.25	-1.24	
4,029.0	21.70	174.80	3,779.0	-1,285.6	65.7	1,287.2	1.89	0.67	
4,118.0	23.00	175.90	3,861.4	-1,319.3	68.5	1,321.1	1.53	1.46	
4,208.0	20.60	175.20	3,944.9	-1,352.6	71.1	1,354.5	2.68	-2.67	
4,296.0	21.60	172.90	4,027.0	-1,384.1	74.4	1,386.1	1.48	1.14	
4,385.0	20.30	174.50	4,110.1	-1,415.7	77.9	1,417.9	1.60	-1.46	
4,473.0	20.60	176.50	4,192.6	-1,446.4	80.3	1,448.6	0.86	0.34	
4,564.0	20.40	179.30	4,277.8	-1,478.2	81.4	1,480.5	1.10	-0.22	
4,652.0	18.90	177.80	4,360.7	-1,507.8	82.2	1,510.0	1.80	-1.70	
4,740.0	16.60	178.70	4,444.5	-1,534.6	83.0	1,536.9	2.63	-2.61	
4,830.0	14.30	178.00	4,531.2	-1,558.6	83.7	1,560.8	2.56	-2.56	
4,918.0	13.00	175.30	4,616.8	-1,579.3	84.9	1,581.6	1.64	-1.48	
5,006.0	12.60	176.70	4,702.6	-1,598.8	86.2	1,601.1	0.58	-0.45	
5,094.0	11.60	180.00	4,788.6	-1,617.2	86.8	1,619.5	1.38	-1.14	
5,182.0	10.30	185.60	4,875.0	-1,633.9	86.0	1,636.1	1.91	-1.48	
5,269.0	8.10	183.50	4,960.9	-1,647.7	84.9	1,649.9	2.56	-2.53	
5,358.0	6.80	185.50	5,049.1	-1,659.2	84.0	1,661.4	1.49	-1.46	
5,445.0	6.50	187.20	5,135.6	-1,669.2	82.9	1,671.3	0.41	-0.34	
5,534.0	4.90	203.00	5,224.1	-1,677.7	80.8	1,679.7	2.50	-1.80	
5,624.0	5.10	206.40	5,313.8	-1,684.9	77.5	1,686.6	0.40	0.22	
5,710.0	3.90	206.90	5,399.5	-1,690.9	74.5	1,692.5	1.40	-1.40	
5,797.0	3.90	212.00	5,486.3	-1,696.0	71.6	1,697.5	0.40	0.00	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Anadarko Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Hidden Creek 14-29
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=15' @ 5045.0ft (Xtreme 14)
<b>Site:</b>	NESW Sec29-T2N-R67W (Hidden Creek)	<b>MD Reference:</b>	KB=15' @ 5045.0ft (Xtreme 14)
<b>Well:</b>	Hidden Creek 14-29	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	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
5,885.0	2.30	202.20	5,574.2	-1,700.2	69.3	1,701.5	1.91	-1.82	
5,973.0	1.50	228.50	5,662.1	-1,702.6	67.8	1,703.9	1.32	-0.91	
6,061.0	0.50	197.70	5,750.1	-1,703.7	66.8	1,704.9	1.25	-1.14	
6,151.0	0.10	311.40	5,840.1	-1,704.1	66.6	1,705.2	0.61	-0.44	
6,241.0	1.80	0.60	5,930.1	-1,702.6	66.6	1,703.8	1.93	1.89	
6,327.0	1.80	37.70	6,016.1	-1,700.2	67.4	1,701.4	1.33	0.00	
6,415.0	1.80	45.60	6,104.0	-1,698.1	69.3	1,699.4	0.28	0.00	
6,504.0	1.70	37.40	6,193.0	-1,696.1	71.1	1,697.5	0.30	-0.11	
6,592.0	1.80	55.70	6,280.9	-1,694.3	73.0	1,695.8	0.64	0.11	
6,682.0	1.60	66.40	6,370.9	-1,693.0	75.3	1,694.6	0.42	-0.22	
6,770.0	1.80	55.20	6,458.9	-1,691.7	77.6	1,693.4	0.44	0.23	
6,858.0	1.60	70.20	6,546.8	-1,690.5	79.9	1,692.4	0.55	-0.23	
6,948.0	1.40	54.00	6,636.8	-1,689.4	81.9	1,691.4	0.52	-0.22	
7,036.0	1.50	49.30	6,724.8	-1,688.0	83.7	1,690.1	0.18	0.11	
7,125.0	2.00	41.30	6,813.7	-1,686.1	85.6	1,688.3	0.62	0.56	
7,214.0	2.20	53.40	6,902.7	-1,683.9	88.0	1,686.2	0.55	0.22	
7,304.0	2.00	47.00	6,992.6	-1,681.8	90.5	1,684.2	0.34	-0.22	
7,394.0	2.00	54.00	7,082.5	-1,679.8	92.9	1,682.4	0.27	0.00	
7,483.0	2.30	43.40	7,171.5	-1,677.6	95.4	1,680.3	0.56	0.34	
7,571.0	3.20	36.70	7,259.4	-1,674.4	98.1	1,677.2	1.08	1.02	
7,659.0	3.50	35.30	7,347.2	-1,670.2	101.1	1,673.2	0.35	0.34	
7,749.0	3.40	56.30	7,437.1	-1,666.5	104.9	1,669.7	1.40	-0.11	
7,835.0	2.70	36.90	7,522.9	-1,663.4	108.3	1,666.8	1.44	-0.81	
7,924.0	2.80	50.00	7,611.8	-1,660.4	111.2	1,663.9	0.71	0.11	
8,011.0	2.30	39.80	7,698.8	-1,657.7	113.9	1,661.3	0.77	-0.57	
8,140.0	2.30	42.70	7,827.7	-1,653.8	117.3	1,657.6	0.09	0.00	Last Cathedral Survey @ 8,140' MD
8,190.0	2.30	42.70	7,877.6	-1,652.3	118.7	1,656.2	0.00	0.00	Projection to Bit @ 8,190'

### 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									
Hidden Creek 14-29 PBI	0.00	0.00	7,839.0	-1,672.0	85.3	1,281,088.71	3,163,299.41	40.103498	-104.916240
- actual wellpath misses target center by 38.6ft at 8140.0ft MD (7827.7 TVD, -1653.8 N, 117.3 E)									
- Circle (radius 50.0)									

### Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates	Comment
		+N/-S (ft)	+E/-W (ft)
8,140.0	7,827.7	-1,653.8	117.3
8,190.0	7,877.6	-1,652.3	118.7
Last Cathedral Survey @ 8,140' MD			
Projection to Bit @ 8,190'			

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_