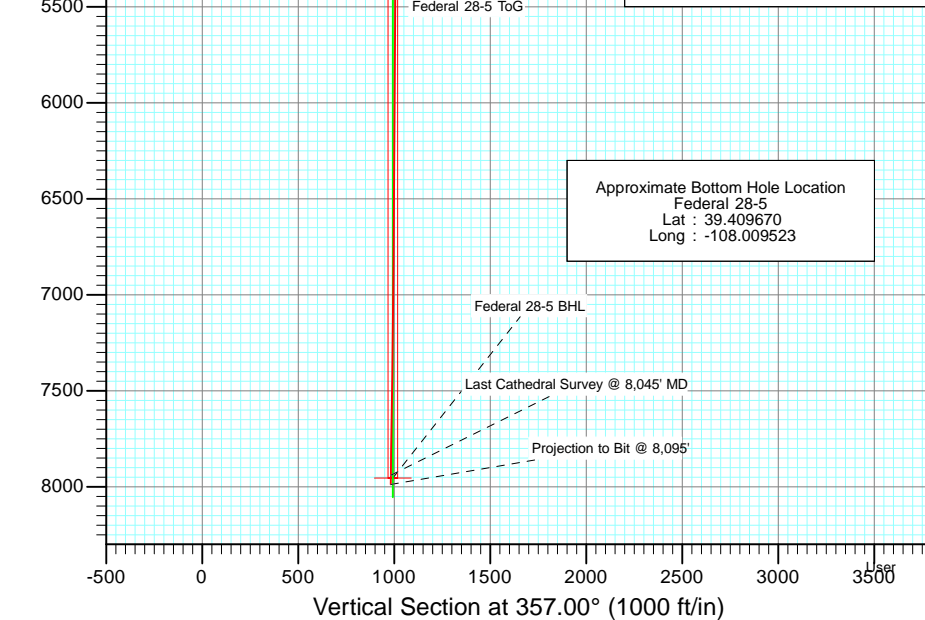
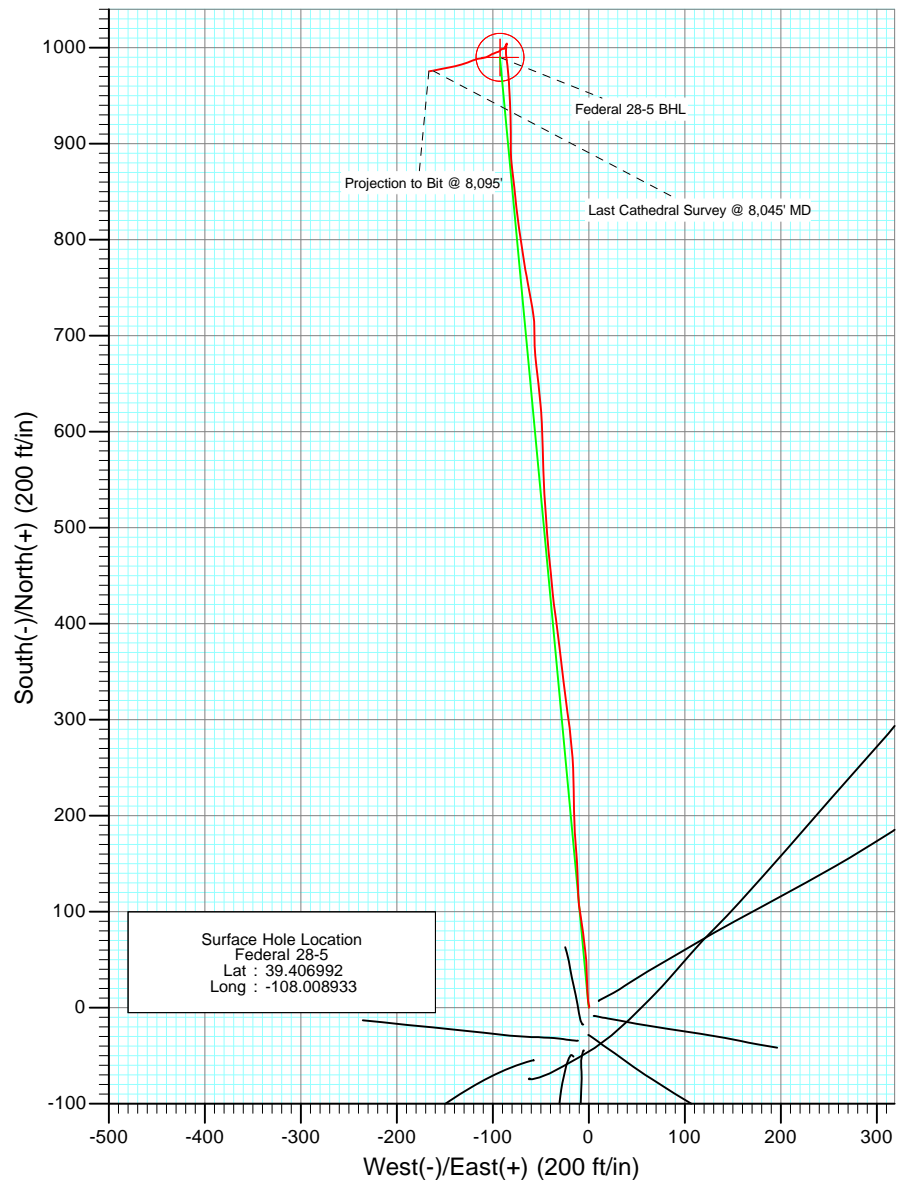
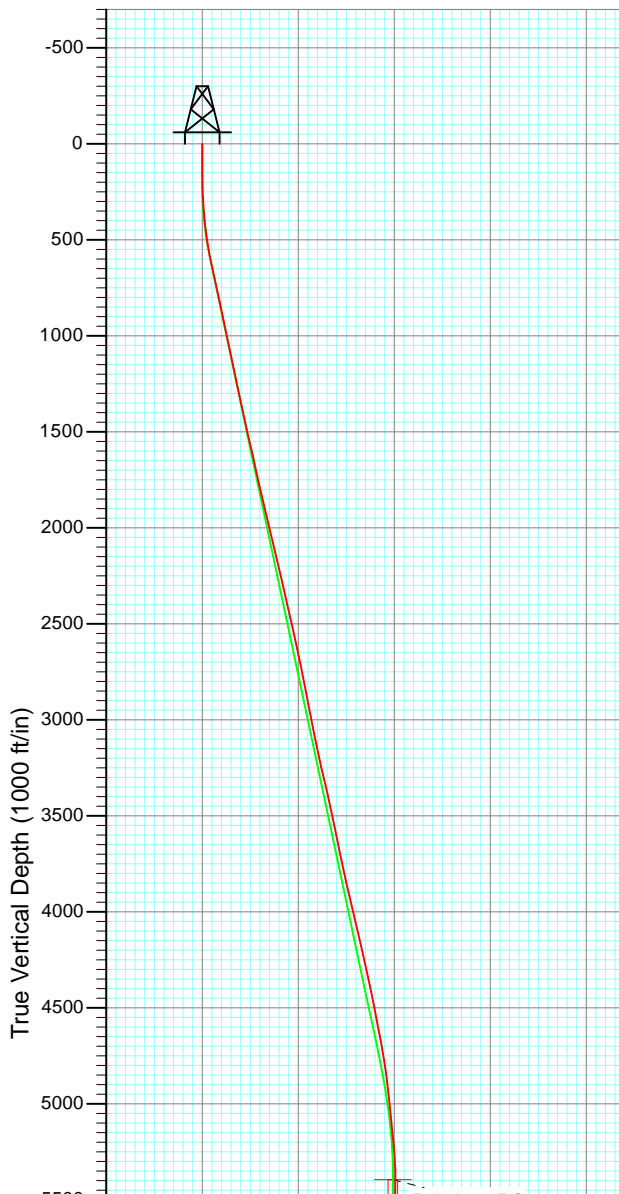




Project: S. Piceance (Parachute)
 Site: PL 28 Pad (S28-T7S-R95W)
 Well: Federal 28-5
 Wellbore: DD
 Design: FINAL



<p>Surface Hole Location Federal 28-5 Lat : 39.406992 Long : -108.008933</p>					
<p>Approximate Bottom Hole Location Federal 28-5 Lat : 39.409670 Long : -108.009523</p>					
<p>Federal 28-5 BHL Last Cathedral Survey @ 8,045' MD Projection to Bit @ 8,095'</p>					
<p>DD Federal 28-5 115434/114955 (SH) 115479/115155; SC</p>					
<p>KBE @ 7186.0ft (Original Well Elev) North American Datum 1983 Well Federal 28-5, True North</p>					
Target	Azimuth	Origin	Type	N/S	E/W
No Target (Freehand)	357.00	Slot		0.0	0.0
From TVD 0.0					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
Federal 28-5 ToG	5395.0	990.0	-92.4	39.409710	-108.009260
Federal 28-5 BHL	7954.0	990.0	-92.4	39.409710	-108.009260

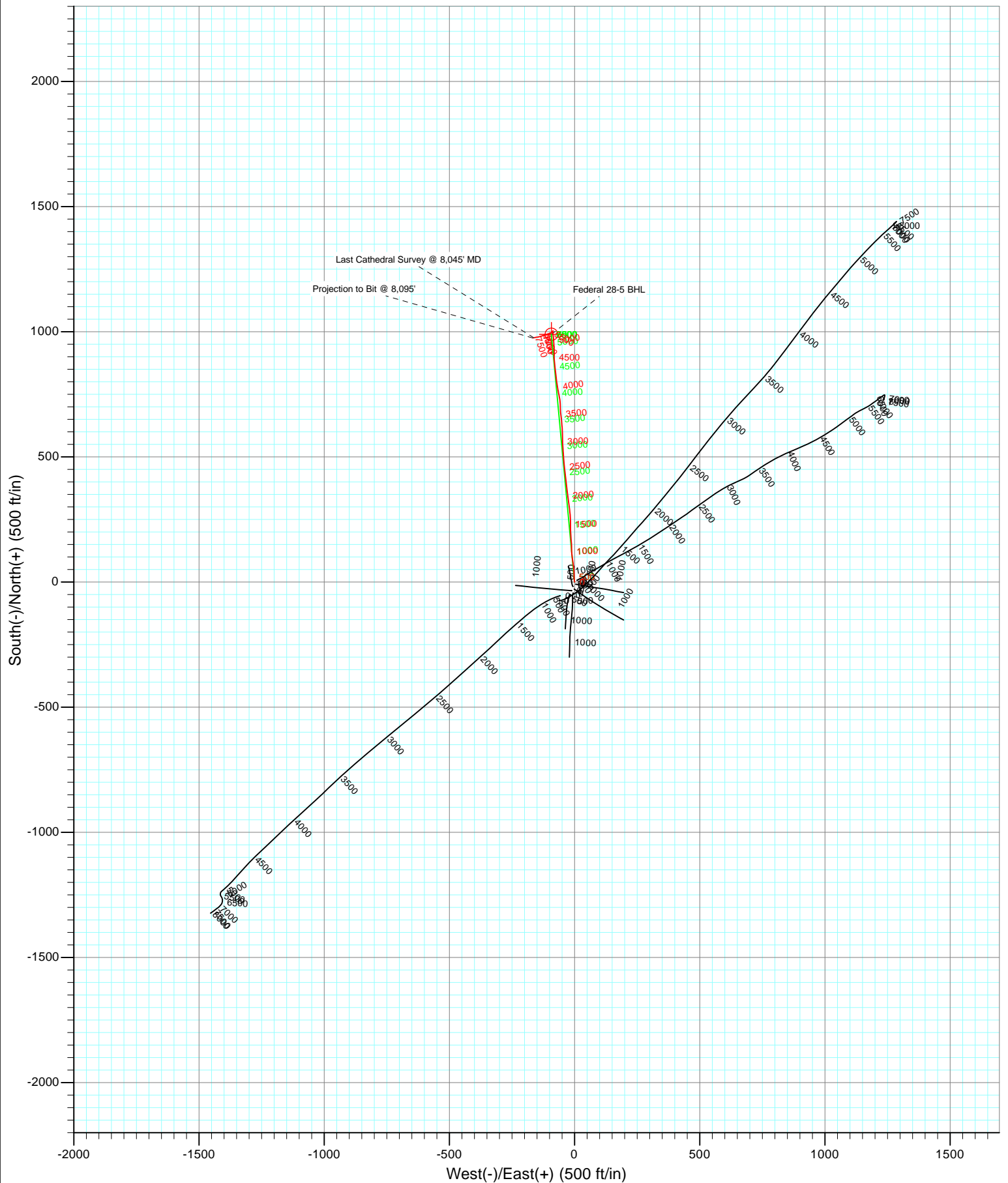


Azimuths to True North
 Magnetic North: 10.45°

Magnetic Field
 Strength: 52322.2snT
 Dip Angle: 65.70°
 Date: 6/10/2010
 Model: IGRF200510

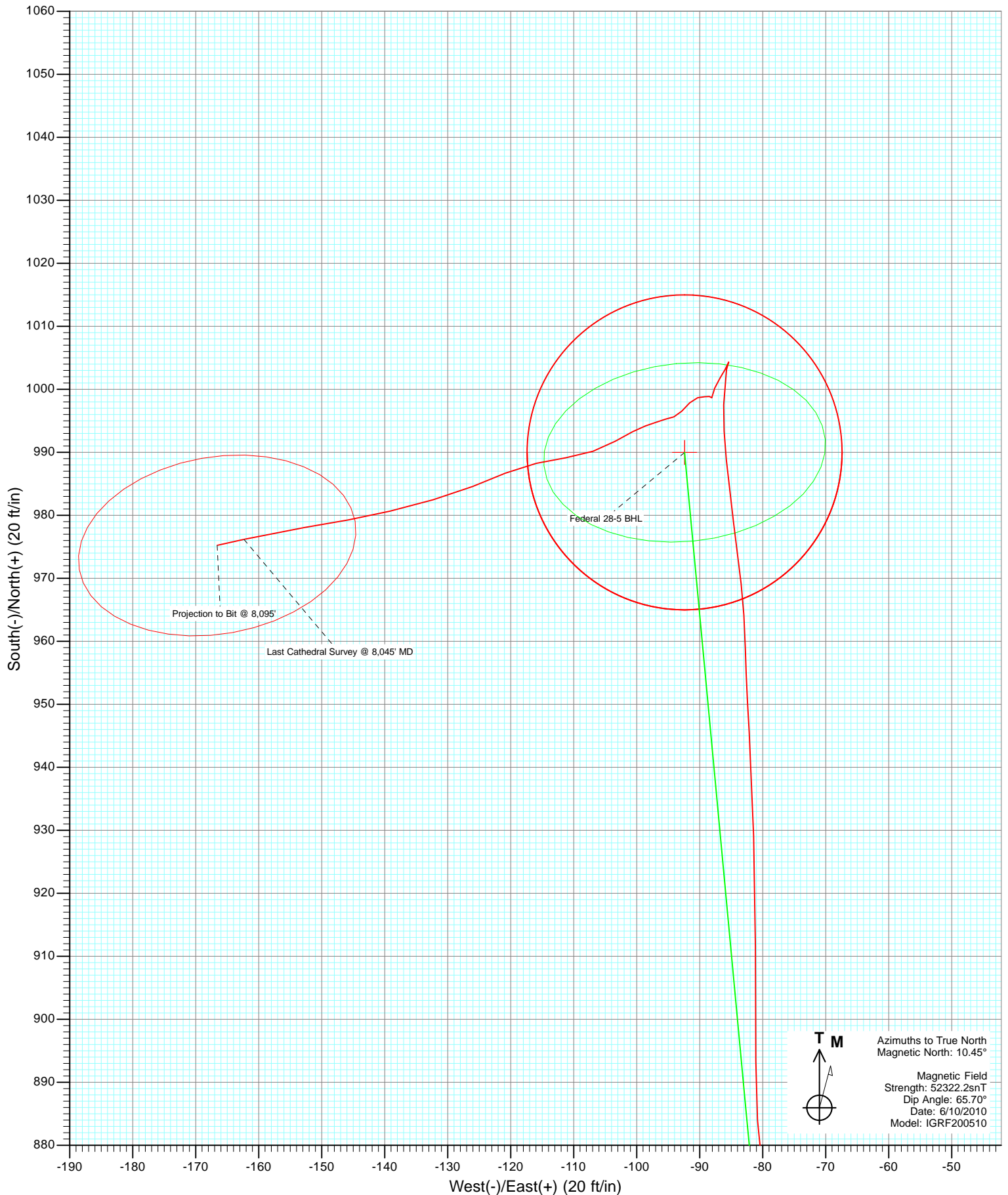


Project: S. Piceance (Parachute)
Site: PL 28 Pad (S28-T7S-R95W)
Well: Federal 28-5
Wellbore: DD
Design: FINAL





Project: S. Piceance (Parachute)
Site: PL 28 Pad (S28-T7S-R95W)
Well: Federal 28-5
Wellbore: DD
Design: FINAL



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 28-5
Project:	S. Piceance (Parachute)	TVD Reference:	KBE @ 7186.0ft (Original Well Elev)
Site:	PL 28 Pad (S28-T7S-R95W)	MD Reference:	KBE @ 7186.0ft (Original Well Elev)
Well:	Federal 28-5	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		PL 28 Pad (S28-T7S-R95W)			
Site Position:		Northing:	1,582,914.36 ft	Latitude:	39.406980
From:	Lat/Long	Easting:	2,291,178.00 ft	Longitude:	-108.008930
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.58 °

Well	Federal 28-5					
Well Position	+N/-S	0.0 ft	Northing:	1,582,918.74 ft	Latitude:	39.406992
	+E/-W	0.0 ft	Easting:	2,291,177.27 ft	Longitude:	-108.008933
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	7,164.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	6/10/2010	10.45	65.70	52,322

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	357.00	

Survey Program	Date	11/7/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
125.0	1,220.0	Survey #1 (DD)	MWD	Geolink MWD	
1,353.0	8,095.0	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		
125.0	0.50	44.20	125.0	0.4	0.4	0.4	0.40	0.40		
156.0	0.80	20.90	156.0	0.7	0.6	0.7	1.27	0.97		
187.0	1.10	352.00	187.0	1.2	0.6	1.2	1.79	0.97		
217.0	1.50	344.60	217.0	1.9	0.4	1.8	1.44	1.33		
248.0	2.20	345.90	248.0	2.8	0.2	2.8	2.26	2.26		
278.0	2.90	344.20	277.9	4.1	-0.2	4.1	2.35	2.33		
309.0	3.50	351.70	308.9	5.8	-0.5	5.8	2.36	1.94		
340.0	4.30	354.20	339.8	7.9	-0.8	7.9	2.64	2.58		
371.0	5.10	357.30	370.7	10.4	-0.9	10.5	2.71	2.58		
402.0	5.70	354.90	401.6	13.3	-1.1	13.4	2.07	1.94		
433.0	6.50	357.40	432.4	16.6	-1.4	16.7	2.72	2.58		

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 28-5
Project:	S. Piceance (Parachute)	TVD Reference:	KBE @ 7186.0ft (Original Well Elev)
Site:	PL 28 Pad (S28-T7S-R95W)	MD Reference:	KBE @ 7186.0ft (Original Well Elev)
Well:	Federal 28-5	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
464.0	7.30	357.90	463.2	20.3	-1.5	20.4	2.59	2.58	
495.0	7.90	358.30	493.9	24.4	-1.6	24.5	1.94	1.94	
586.0	10.90	358.50	583.7	39.3	-2.1	39.3	3.30	3.30	
678.0	12.60	353.40	673.7	58.0	-3.4	58.1	2.16	1.85	
770.0	12.50	352.70	763.5	77.8	-5.9	78.0	0.20	-0.11	
862.0	12.30	350.70	853.4	97.3	-8.7	97.7	0.51	-0.22	
953.0	11.80	356.50	942.4	116.2	-10.8	116.6	1.44	-0.55	
1,045.0	11.50	359.20	1,032.5	134.8	-11.5	135.2	0.68	-0.33	
1,136.0	12.30	356.00	1,121.5	153.5	-12.3	153.9	1.14	0.88	
1,220.0	12.30	355.50	1,203.6	171.3	-13.7	171.8	0.13	0.00	Last Cathedral Survey @ 1220' MD
1,353.0	11.50	358.90	1,333.8	198.7	-15.0	199.2	0.80	-0.60	
1,448.0	12.10	358.10	1,426.8	218.1	-15.6	218.7	0.65	0.63	
1,543.0	13.10	359.80	1,519.5	238.9	-15.9	239.4	1.12	1.05	
1,639.0	13.00	354.70	1,613.0	260.5	-17.0	261.0	1.20	-0.10	
1,734.0	12.00	354.90	1,705.7	281.0	-18.8	281.6	1.05	-1.05	
1,830.0	13.58	351.84	1,799.4	302.1	-21.3	302.8	1.79	1.65	
1,925.0	12.48	351.84	1,891.9	323.3	-24.3	324.1	1.16	-1.16	
2,020.0	14.24	355.27	1,984.3	345.1	-26.8	346.0	2.03	1.85	
2,116.0	13.71	352.11	2,077.5	368.1	-29.3	369.1	0.97	-0.55	
2,211.0	13.05	352.02	2,169.9	389.9	-32.3	391.0	0.70	-0.69	
2,306.0	12.22	352.37	2,262.6	410.5	-35.2	411.8	0.88	-0.87	
2,401.0	13.62	355.15	2,355.2	431.6	-37.4	433.0	1.61	1.47	
2,496.0	12.79	353.78	2,447.7	453.2	-39.5	454.6	0.93	-0.87	
2,592.0	11.91	354.56	2,541.5	473.6	-41.6	475.1	0.93	-0.92	
2,687.0	12.57	356.15	2,634.3	493.7	-43.2	495.3	0.78	0.69	
2,782.0	11.65	355.71	2,727.2	513.6	-44.7	515.2	0.97	-0.97	
2,877.0	10.68	357.03	2,820.4	531.9	-45.8	533.6	1.06	-1.02	
2,973.0	11.69	356.41	2,914.6	550.5	-46.9	552.2	1.06	1.05	
3,068.0	11.60	359.14	3,007.6	569.7	-47.6	571.4	0.59	-0.09	
3,163.0	10.85	358.00	3,100.8	588.2	-48.1	589.9	0.82	-0.79	
3,258.0	11.51	358.35	3,194.0	606.6	-48.7	608.3	0.70	0.69	
3,354.0	14.15	354.48	3,287.6	627.8	-50.1	629.6	2.89	2.75	
3,449.0	12.66	353.69	3,380.0	649.7	-52.3	651.6	1.58	-1.57	
3,544.0	11.60	353.16	3,472.9	669.6	-54.6	671.5	1.12	-1.12	
3,640.0	12.17	357.20	3,566.8	689.3	-56.3	691.3	1.05	0.59	
3,735.0	11.34	359.93	3,659.8	708.6	-56.8	710.6	1.05	-0.87	
3,830.0	13.01	350.09	3,752.7	728.5	-58.6	730.5	2.80	1.76	
3,926.0	11.69	349.03	3,846.5	748.7	-62.3	750.9	1.40	-1.37	
4,021.0	13.71	350.52	3,939.1	769.2	-66.0	771.6	2.15	2.13	
4,116.0	13.45	351.23	4,031.5	791.2	-69.6	793.8	0.33	-0.27	
4,211.0	12.61	351.67	4,124.0	812.4	-72.7	815.1	0.89	-0.88	
4,306.0	13.14	354.83	4,216.7	833.4	-75.2	836.2	0.93	0.56	
4,402.0	12.44	353.34	4,310.3	854.6	-77.4	857.5	0.81	-0.73	
4,497.0	11.82	352.56	4,403.2	874.4	-79.9	877.4	0.68	-0.65	
4,593.0	11.12	0.19	4,497.2	893.4	-81.1	896.4	1.74	-0.73	
4,688.0	10.99	359.49	4,590.5	911.6	-81.1	914.6	0.20	-0.14	
4,783.0	10.28	358.61	4,683.8	929.1	-81.4	932.1	0.77	-0.75	
4,879.0	9.49	356.50	4,778.4	945.6	-82.1	948.6	0.91	-0.82	
4,974.0	6.64	358.52	4,872.5	958.9	-82.7	961.9	3.01	-3.00	
5,069.0	5.76	353.69	4,966.9	969.1	-83.4	972.2	1.08	-0.93	
5,165.0	6.11	352.28	5,062.4	979.0	-84.6	982.1	0.39	0.36	
5,261.0	5.76	354.48	5,157.9	988.9	-85.8	992.0	0.43	-0.36	
5,356.0	4.75	0.54	5,252.5	997.5	-86.2	1,000.7	1.21	-1.06	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 28-5
Project:	S. Piceance (Parachute)	TVD Reference:	KBE @ 7186.0ft (Original Well Elev)
Site:	PL 28 Pad (S28-T7S-R95W)	MD Reference:	KBE @ 7186.0ft (Original Well Elev)
Well:	Federal 28-5	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
5,451.0	2.07	14.52	5,347.3	1,003.1	-85.7	1,006.2	2.93	-2.82	
5,547.0	0.57	191.71	5,443.3	1,004.3	-85.4	1,007.4	2.75	-1.56	
5,642.0	1.01	214.03	5,538.3	1,003.2	-86.0	1,006.3	0.56	0.46	
5,738.0	0.92	205.68	5,634.3	1,001.8	-86.8	1,005.0	0.17	-0.09	
5,833.0	1.27	209.28	5,729.3	1,000.2	-87.6	1,003.4	0.38	0.37	
5,927.0	0.57	170.00	5,823.2	998.8	-88.0	1,002.0	0.96	-0.74	
6,021.0	0.40	340.24	5,917.2	998.7	-88.1	1,001.9	1.03	-0.18	
6,116.0	0.35	248.84	6,012.2	998.9	-88.4	1,002.1	0.57	-0.05	
6,211.0	0.53	280.30	6,107.2	998.8	-89.2	1,002.1	0.31	0.19	
6,306.0	0.92	250.68	6,202.2	998.7	-90.3	1,002.0	0.56	0.41	
6,401.0	0.97	225.63	6,297.2	997.8	-91.6	1,001.3	0.43	0.05	
6,497.0	1.19	220.80	6,393.2	996.5	-92.8	1,000.0	0.25	0.23	
6,592.0	0.75	256.92	6,488.2	995.6	-94.1	999.2	0.77	-0.46	
6,687.0	1.05	252.00	6,583.2	995.2	-95.5	998.9	0.33	0.32	
6,782.0	0.97	252.44	6,678.1	994.7	-97.1	998.4	0.08	-0.08	
6,878.0	0.92	248.31	6,774.1	994.2	-98.6	998.0	0.09	-0.05	
6,974.0	1.71	244.97	6,870.1	993.3	-100.6	997.2	0.83	0.82	
7,070.0	2.11	237.85	6,966.1	991.8	-103.4	995.8	0.48	0.42	
7,165.0	2.59	252.26	7,061.0	990.2	-106.9	994.4	0.80	0.51	
7,260.0	2.77	260.44	7,155.9	989.1	-111.2	993.6	0.44	0.19	
7,355.0	2.99	258.42	7,250.8	988.3	-115.9	993.0	0.25	0.23	
7,450.0	3.20	246.99	7,345.6	986.7	-120.8	991.7	0.68	0.22	
7,545.0	3.60	248.66	7,440.5	984.6	-126.0	989.8	0.43	0.42	
7,641.0	4.35	253.49	7,536.2	982.5	-132.3	988.0	0.85	0.78	
7,736.0	4.17	257.01	7,631.0	980.7	-139.1	986.6	0.33	-0.19	
7,831.0	4.04	259.38	7,725.7	979.3	-145.8	985.6	0.22	-0.14	
7,926.0	4.44	260.89	7,820.5	978.1	-152.7	984.7	0.44	0.42	
8,045.0	5.01	257.18	7,939.1	976.2	-162.3	983.3	0.54	0.48	Last Cathedral Survey @ 8,045' MD Projection to Bit @ 8,095'
8,095.0	5.01	257.18	7,988.9	975.2	-166.6	982.6	0.00	0.00	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Federal 28-5
Project:	S. Piceance (Parachute)	TVD Reference:	KBE @ 7186.0ft (Original Well Elev)
Site:	PL 28 Pad (S28-T7S-R95W)	MD Reference:	KBE @ 7186.0ft (Original Well Elev)
Well:	Federal 28-5	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 Multi Users DB

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
Federal 28-5 ToG	0.00	0.00	5,395.0	990.0	-92.4	1,583,910.91	2,291,112.25	39.409710	-108.009260
- actual wellpath misses target center by 15.9ft at 5498.5ft MD (5394.8 TVD, 1004.3 N, -85.4 E)									
- Point									
Federal 28-5 BHL	0.00	0.00	7,954.0	990.0	-92.4	1,583,910.91	2,291,112.25	39.409710	-108.009260
- actual wellpath misses target center by 72.8ft at 8045.0ft MD (7939.1 TVD, 976.2 N, -162.3 E)									
- Circle (radius 25.0)									

Design Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
1,220.0	1,203.6	171.3	-13.7	Last Cathedral Survey @ 1220' MD
8,045.0	7,939.1	976.2	-162.3	Last Cathedral Survey @ 8,045' MD
8,095.0	7,988.9	975.2	-166.6	Projection to Bit @ 8,095'

Checked By: _____ Approved By: _____ Date: _____