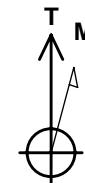
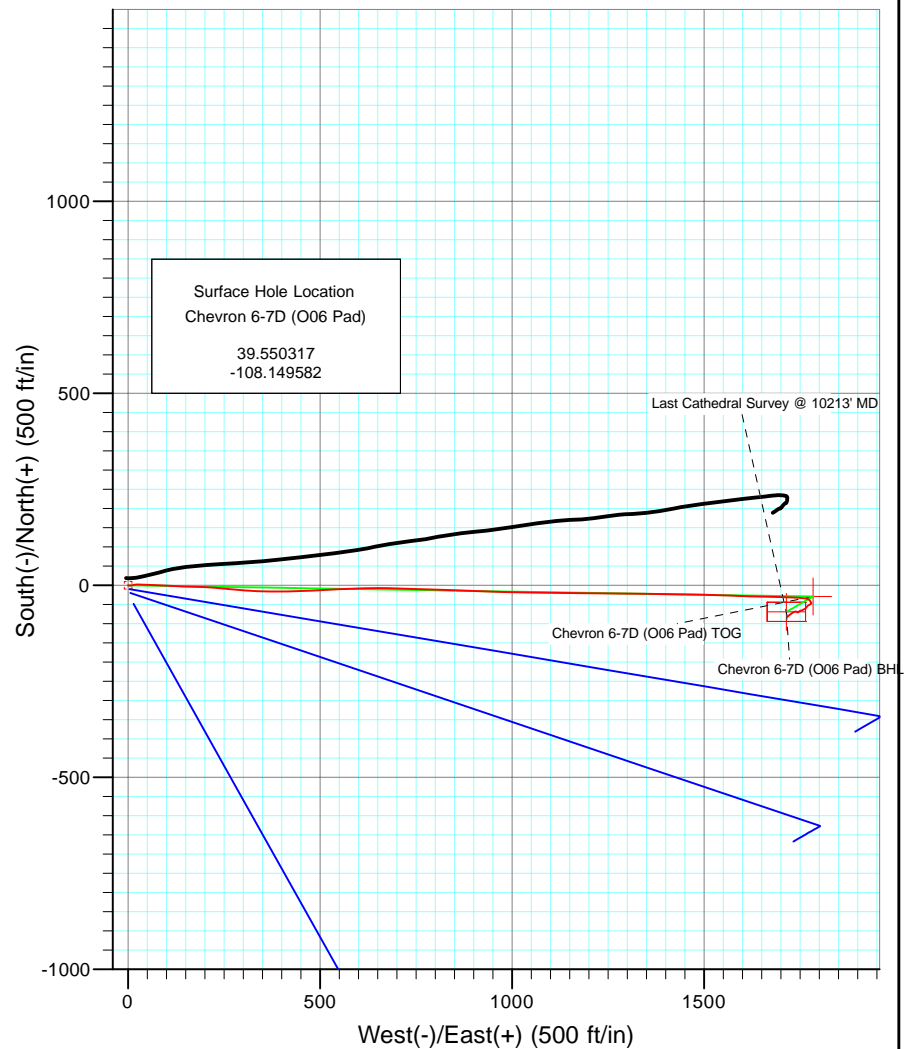
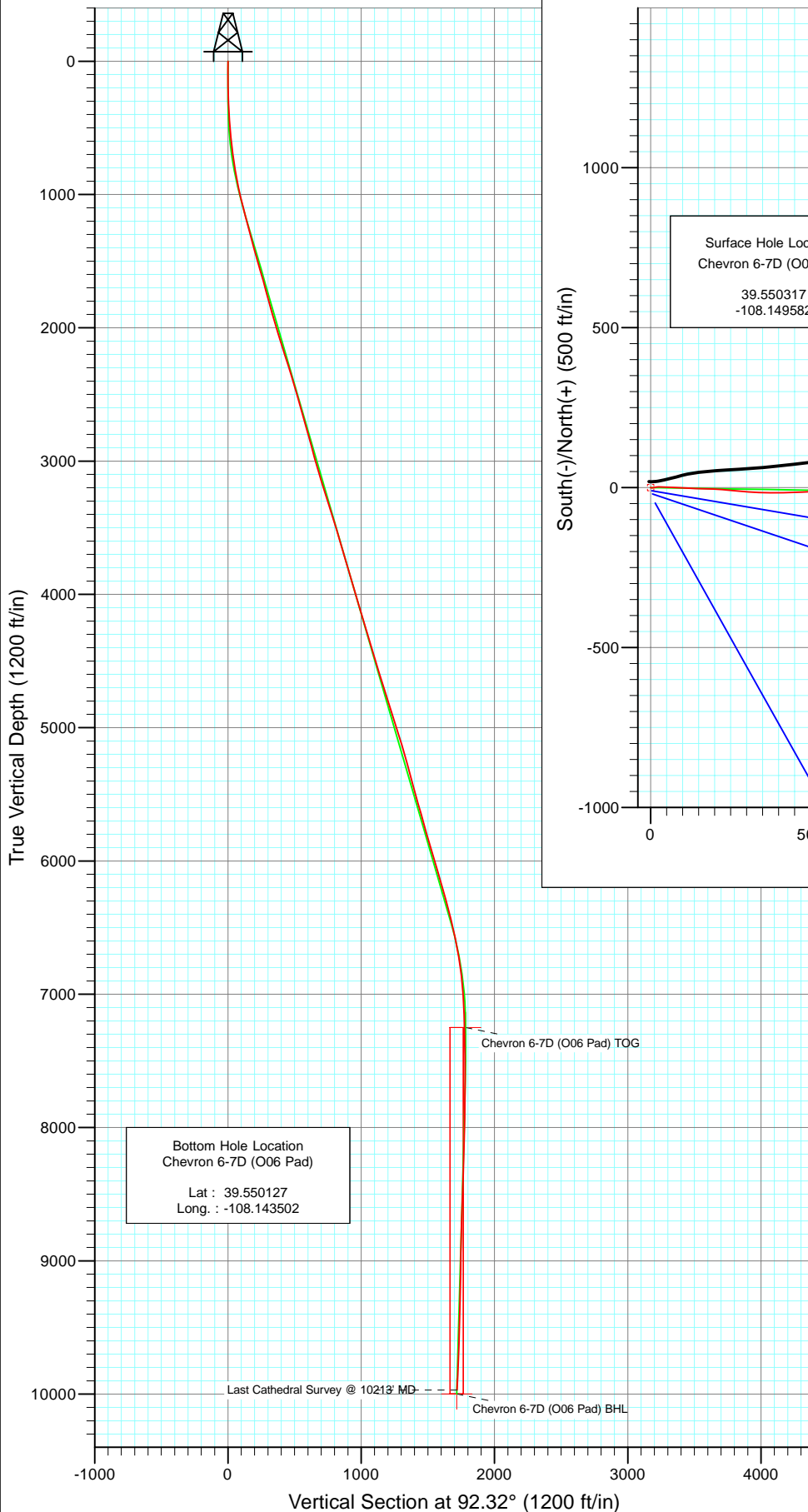




Project: Garfield County
Site: Chevron O06 Pad
Well: Chevron 6-7D (O06 Pad)
Wellbore: DD
Design: Final Survey



Azimuths to True North
Magnetic North: 10.59°

Magnetic Field
Strength: 52416.9snT
Dip Angle: 65.81°
Date: 12/31/2009
Model: IGRF200510

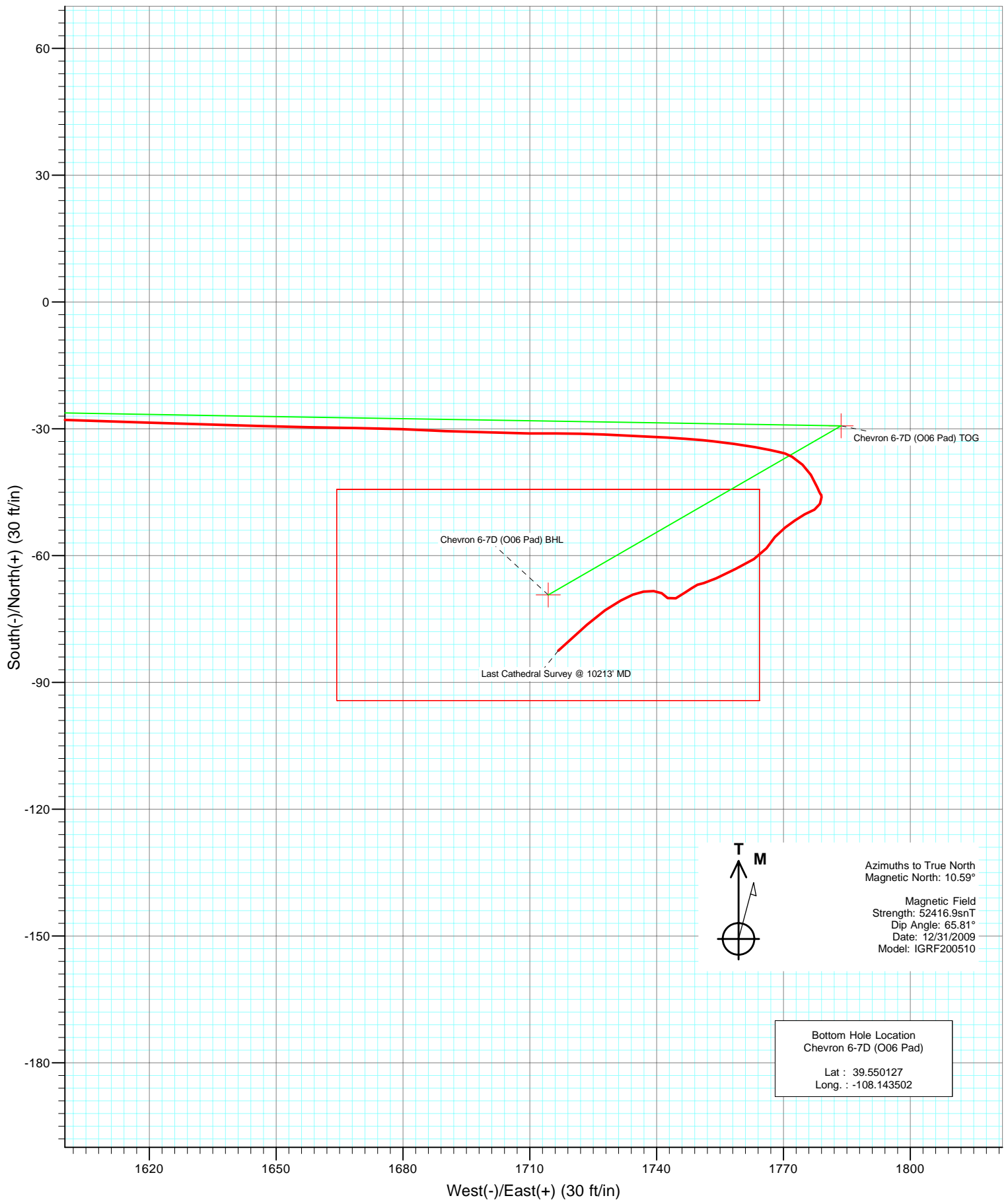
DESIGN DETAILS: DD

105042: BH
KBE @ 8172.0ft (Patterson #302)

Target	Azimuth	Origin	N/S	E/W	From TVD
Chevron 6-7D (O06 Pad) BHL	92.32	Slot	0.0	0.0	0.0



Project: Garfield County
Site: Chevron O06 Pad
Well: Chevron 6-7D (O06 Pad)
Wellbore: DD
Design: DD



Cathedral Energy Services

Survey Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Chevron 6-7D (O06 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8172.0ft (Patterson #302)
Site:	Chevron O06 Pad	MD Reference:	KBE @ 8172.0ft (Patterson #302)
Well:	Chevron 6-7D (O06 Pad)	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US Multi Users DB

Project	Garfield County		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site		Chevron O06 Pad			
Site Position:		Northing:	1,636,185.21 ft	Latitude:	39.550201
From:	Lat/Long	Easting:	2,253,031.90 ft	Longitude:	-108.149373
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.67 °

Well	Chevron 6-7D (O06 Pad)					
Well Position	+N/-S	0.0 ft	Northing:	1,636,229.21 ft	Latitude:	39.550317
	+E/-W	0.0 ft	Easting:	2,252,974.16 ft	Longitude:	-108.149582
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	8,147.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	10.59	65.81	52,417

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	92.32	

Survey Program	Date	3/3/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
166.0	2,388.0	Survey #1 (DD)	MWD	Geolink MWD	
2,483.0	10,213.0	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		
166.0	0.40	146.70	166.0	-0.5	0.3	0.3	0.24	0.24		
231.0	1.10	95.90	231.0	-0.7	1.1	1.1	1.39	1.08		
322.0	2.50	86.50	321.9	-0.7	3.9	3.9	1.57	1.54		
413.0	4.00	79.50	412.8	0.0	9.0	9.0	1.70	1.65		
504.0	5.40	79.40	503.5	1.4	16.3	16.3	1.54	1.54		
594.0	5.60	89.80	593.1	2.2	24.9	24.8	1.13	0.22		
685.0	6.80	92.80	683.5	1.9	34.7	34.6	1.37	1.32		
777.0	8.60	92.60	774.7	1.3	47.0	46.9	1.96	1.96		
872.0	10.10	92.80	868.4	0.6	62.4	62.4	1.58	1.58		
966.0	12.50	91.20	960.6	0.0	80.9	80.8	2.57	2.55		
1,061.0	13.60	94.30	1,053.2	-1.1	102.3	102.2	1.37	1.16		

Cathedral Energy Services

Survey Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Chevron 6-7D (O06 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8172.0ft (Patterson #302)
Site:	Chevron O06 Pad	MD Reference:	KBE @ 8172.0ft (Patterson #302)
Well:	Chevron 6-7D (O06 Pad)	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
1,156.0	14.90	91.40	1,145.2	-2.2	125.6	125.6	1.56	1.37	
1,250.0	15.40	93.00	1,236.0	-3.2	150.2	150.2	0.69	0.53	
1,344.0	14.90	90.30	1,326.7	-3.9	174.7	174.7	0.92	-0.53	
1,439.0	14.70	92.90	1,418.6	-4.5	199.0	199.0	0.73	-0.21	
1,533.0	15.90	94.70	1,509.2	-6.2	223.7	223.8	1.37	1.28	
1,628.0	16.80	95.90	1,600.4	-8.7	250.3	250.5	1.01	0.95	
1,723.0	15.10	95.10	1,691.7	-11.2	276.3	276.6	1.80	-1.79	
1,820.0	15.10	93.30	1,785.4	-13.0	301.5	301.8	0.48	0.00	
1,915.0	16.20	94.30	1,876.8	-14.7	327.1	327.4	1.19	1.16	
2,010.0	16.50	90.30	1,968.0	-15.8	353.8	354.1	1.23	0.32	
2,105.0	16.30	89.30	2,059.1	-15.7	380.6	380.9	0.36	-0.21	
2,199.0	18.10	89.90	2,148.9	-15.5	408.4	408.7	1.92	1.91	
2,293.0	18.10	89.70	2,238.3	-15.4	437.6	437.9	0.07	0.00	
2,388.0	17.10	87.30	2,328.8	-14.7	466.3	466.5	1.30	-1.05	Last Cathedral svy @ 2388'
2,483.0	16.60	86.40	2,419.8	-13.2	493.8	494.0	0.59	-0.53	
2,510.0	16.70	87.10	2,445.6	-12.7	501.5	501.7	0.83	0.37	
2,584.0	15.70	86.30	2,516.7	-11.6	522.2	522.2	1.38	-1.35	
2,677.0	15.40	86.20	2,606.3	-9.9	547.0	547.0	0.32	-0.32	
2,772.0	16.30	88.60	2,697.7	-8.8	572.9	572.8	1.17	0.95	
2,867.0	15.20	89.40	2,789.1	-8.3	598.7	598.6	1.18	-1.16	
2,962.0	15.90	88.60	2,880.6	-7.9	624.2	624.0	0.77	0.74	
3,057.0	15.20	89.40	2,972.1	-7.4	649.7	649.4	0.77	-0.74	
3,152.0	16.20	90.20	3,063.6	-7.3	675.4	675.1	1.08	1.05	
3,247.0	16.60	93.30	3,154.7	-8.2	702.2	701.9	1.01	0.42	
3,341.0	18.20	92.10	3,244.4	-9.5	730.2	730.0	1.74	1.70	
3,435.0	17.40	90.10	3,333.9	-10.0	759.0	758.8	1.07	-0.85	
3,529.0	17.60	91.90	3,423.6	-10.5	787.2	787.0	0.61	0.21	
3,624.0	16.30	92.00	3,514.5	-11.5	814.9	814.7	1.37	-1.37	
3,719.0	17.10	92.20	3,605.4	-12.5	842.2	842.0	0.84	0.84	
3,814.0	15.40	92.70	3,696.7	-13.6	868.7	868.6	1.80	-1.79	
3,908.0	16.50	91.40	3,787.0	-14.5	894.6	894.4	1.23	1.17	
4,003.0	17.30	91.90	3,877.9	-15.3	922.2	922.0	0.86	0.84	
4,097.0	15.80	92.10	3,968.0	-16.2	948.9	948.8	1.60	-1.60	
4,192.0	17.00	91.30	4,059.2	-17.0	975.7	975.6	1.29	1.26	
4,287.0	16.00	92.00	4,150.3	-17.8	1,002.7	1,002.6	1.07	-1.05	
4,381.0	17.40	91.10	4,240.3	-18.5	1,029.7	1,029.6	1.51	1.49	
4,475.0	16.20	91.30	4,330.3	-19.1	1,056.9	1,056.8	1.28	-1.28	
4,570.0	17.30	90.00	4,421.2	-19.4	1,084.2	1,084.1	1.22	1.16	
4,665.0	15.90	90.60	4,512.3	-19.5	1,111.4	1,111.3	1.48	-1.47	
4,760.0	18.00	90.70	4,603.1	-19.9	1,139.1	1,138.9	2.21	2.21	
4,854.0	16.80	91.10	4,692.8	-20.3	1,167.2	1,167.0	1.28	-1.28	
4,949.0	18.20	90.20	4,783.4	-20.6	1,195.7	1,195.6	1.50	1.47	
5,044.0	17.00	91.50	4,874.0	-21.0	1,224.5	1,224.3	1.33	-1.26	
5,138.0	17.50	91.30	4,963.8	-21.7	1,252.3	1,252.2	0.54	0.53	
5,232.0	18.00	89.60	5,053.3	-21.9	1,281.0	1,280.8	0.77	0.53	
5,325.0	16.50	89.30	5,142.1	-21.7	1,308.6	1,308.4	1.62	-1.61	
5,420.0	15.30	90.40	5,233.5	-21.6	1,334.6	1,334.4	1.30	-1.26	
5,516.0	15.20	90.90	5,326.1	-21.9	1,359.8	1,359.6	0.17	-0.10	
5,611.0	14.90	93.10	5,417.8	-22.7	1,384.5	1,384.3	0.68	-0.32	
5,706.0	16.00	90.90	5,509.4	-23.6	1,409.8	1,409.6	1.31	1.16	
5,800.0	16.60	90.40	5,599.6	-23.9	1,436.1	1,435.9	0.66	0.64	
5,894.0	15.10	89.30	5,690.0	-23.8	1,461.8	1,461.6	1.63	-1.60	
5,988.0	15.20	91.60	5,780.8	-24.0	1,486.4	1,486.1	0.65	0.11	

Cathedral Energy Services

Survey Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Chevron 6-7D (O06 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8172.0ft (Patterson #302)
Site:	Chevron O06 Pad	MD Reference:	KBE @ 8172.0ft (Patterson #302)
Well:	Chevron 6-7D (O06 Pad)	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
6,083.0	17.10	93.10	5,872.0	-25.1	1,512.8	1,512.6	2.05	2.00	
6,178.0	16.50	91.60	5,963.0	-26.3	1,540.2	1,540.0	0.78	-0.63	
6,273.0	15.60	91.30	6,054.3	-26.9	1,566.5	1,566.3	0.95	-0.95	
6,369.0	16.90	91.90	6,146.4	-27.7	1,593.3	1,593.1	1.37	1.35	
6,463.0	16.00	91.70	6,236.6	-28.5	1,619.9	1,619.8	0.96	-0.96	
6,559.0	15.00	91.80	6,329.1	-29.3	1,645.6	1,645.4	1.04	-1.04	
6,654.0	13.40	90.70	6,421.2	-29.8	1,668.9	1,668.7	1.71	-1.68	
6,749.0	12.30	93.40	6,513.8	-30.6	1,690.0	1,689.8	1.32	-1.16	
6,844.0	11.80	89.60	6,606.7	-31.1	1,709.8	1,709.6	0.99	-0.53	
6,940.0	9.50	92.30	6,701.1	-31.3	1,727.5	1,727.4	2.45	-2.40	
7,035.0	8.60	93.40	6,794.9	-32.1	1,742.4	1,742.3	0.96	-0.95	
7,130.0	5.90	96.60	6,889.1	-33.1	1,754.4	1,754.3	2.87	-2.84	
7,224.0	4.30	100.60	6,982.7	-34.3	1,762.6	1,762.6	1.74	-1.70	
7,319.0	2.70	100.60	7,077.5	-35.3	1,768.3	1,768.3	1.68	-1.68	
7,415.0	2.00	120.30	7,173.5	-36.6	1,772.0	1,772.0	1.10	-0.73	
7,508.0	1.90	135.50	7,266.4	-38.5	1,774.5	1,774.6	0.56	-0.11	
7,604.0	1.80	145.50	7,362.4	-40.9	1,776.5	1,776.7	0.35	-0.10	
7,698.0	2.30	158.40	7,456.3	-43.9	1,778.0	1,778.3	0.72	0.53	
7,793.0	0.30	83.20	7,551.3	-45.6	1,778.9	1,779.3	2.36	-2.11	
7,887.0	0.80	196.20	7,645.3	-46.2	1,779.0	1,779.4	1.02	0.53	
7,983.0	1.10	191.40	7,741.3	-47.7	1,778.6	1,779.1	0.32	0.31	
8,077.0	1.50	247.00	7,835.2	-49.1	1,777.3	1,777.9	1.34	0.43	
8,171.0	1.60	242.00	7,929.2	-50.2	1,775.0	1,775.6	0.18	0.11	
8,266.0	1.70	233.20	8,024.2	-51.7	1,772.7	1,773.4	0.29	0.11	
8,361.0	1.80	235.50	8,119.1	-53.4	1,770.4	1,771.1	0.13	0.11	
8,456.0	2.20	220.10	8,214.1	-55.6	1,768.0	1,768.8	0.70	0.42	
8,549.0	1.90	213.90	8,307.0	-58.3	1,766.0	1,766.9	0.40	-0.32	
8,645.0	2.90	238.90	8,402.9	-60.8	1,763.0	1,764.0	1.48	1.04	
8,739.0	3.10	244.30	8,496.8	-63.2	1,758.7	1,759.8	0.37	0.21	
8,835.0	3.00	244.10	8,592.7	-65.4	1,754.1	1,755.3	0.10	-0.10	
8,928.0	0.90	266.30	8,685.6	-66.5	1,751.2	1,752.4	2.36	-2.26	
9,023.0	1.00	244.20	8,780.6	-66.9	1,749.7	1,750.9	0.40	0.11	
9,118.0	0.90	234.60	8,875.6	-67.7	1,748.3	1,749.6	0.20	-0.11	
9,213.0	1.30	238.10	8,970.6	-68.7	1,746.8	1,748.1	0.43	0.42	
9,308.0	1.90	239.20	9,065.5	-70.1	1,744.5	1,745.9	0.63	0.63	
9,402.0	1.20	324.70	9,159.5	-70.1	1,742.6	1,744.0	2.30	-0.74	
9,497.0	1.10	293.90	9,254.5	-68.9	1,741.2	1,742.6	0.65	-0.11	
9,592.0	1.30	275.10	9,349.5	-68.4	1,739.3	1,740.6	0.46	0.21	
9,687.0	1.60	261.60	9,444.4	-68.5	1,736.9	1,738.3	0.48	0.32	
9,783.0	1.60	246.50	9,540.4	-69.2	1,734.4	1,735.7	0.44	0.00	
9,878.0	2.20	241.90	9,635.3	-70.6	1,731.5	1,733.0	0.65	0.63	
9,973.0	3.10	235.80	9,730.2	-72.9	1,727.8	1,729.3	0.99	0.95	
10,067.0	3.60	227.60	9,824.1	-76.4	1,723.5	1,725.2	0.74	0.53	
10,163.0	3.60	228.10	9,919.9	-80.4	1,719.0	1,720.9	0.03	0.00	
10,213.0	3.60	228.10	9,969.8	-82.5	1,716.7	1,718.6	0.00	0.00	Last Cathedral Survey @ 10213' MD

Cathedral Energy Services

Survey Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well Chevron 6-7D (O06 Pad)
Project:	Garfield County	TVD Reference:	KBE @ 8172.0ft (Patterson #302)
Site:	Chevron O06 Pad	MD Reference:	KBE @ 8172.0ft (Patterson #302)
Well:	Chevron 6-7D (O06 Pad)	North Reference:	True
Wellbore:	DD	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									
Chevron 6-7D (O06 Pad	0.00	0.00	7,249.0	-29.3	1,783.6	1,636,147.91	2,254,756.15	39.550236	-108.143257
- actual wellpath misses target center by 13.0ft at 7490.7ft MD (7249.1 TVD, -38.1 N, 1774.1 E)									
- Point									
Chevron 6-7D (O06 Pad	0.00	0.00	9,999.0	-69.3	1,714.3	1,636,109.94	2,254,685.75	39.550127	-108.143502
- actual wellpath misses target center by 32.1ft at 10213.0ft MD (9969.8 TVD, -82.5 N, 1716.7 E)									
- Rectangle (sides W50.0 H100.0 D0.0)									

Design Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W		
		(ft)	(ft)	Comment	
2,388.0	2,328.8	-14.7	466.3	Last Cathedral svy @ 2388'	
10,213.0	9,969.8	-82.5	1,716.7	Last Cathedral Survey @ 10213' MD	

Checked By: _____ Approved By: _____ Date: _____