

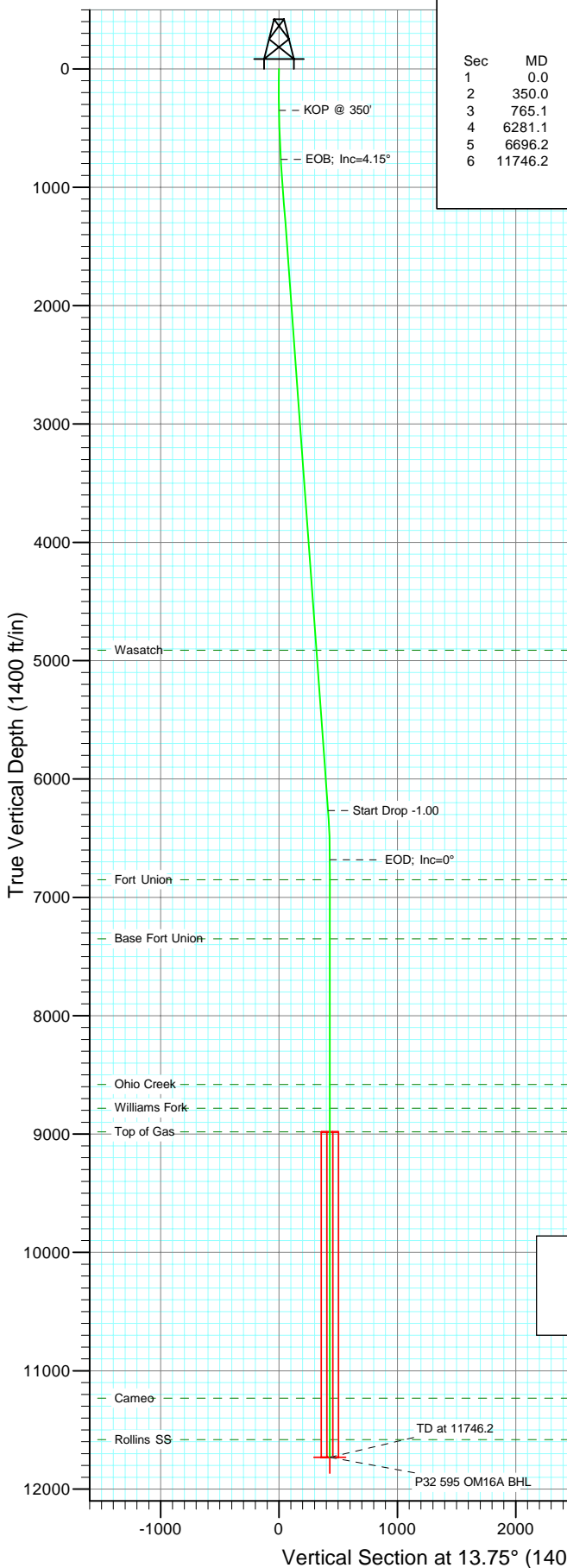


Berry Petroleum Company

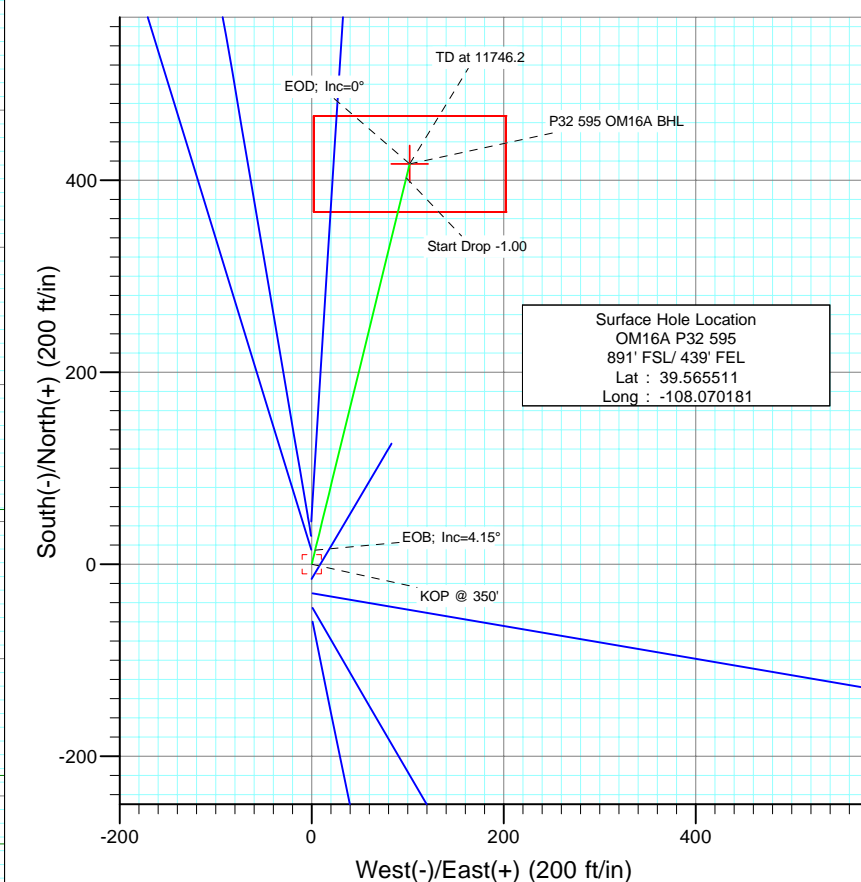
Project: Garfield County
Site: P32 595
Well: OM16A P32 595
Wellbore: DD
Design: Plan #1



Directional Plus
A Division of Cathedral Energy Services Ltd.



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	P32 595 OM16A BHL
2	350.0	0.00	0.00	350.0	0.0	0.0	0.00	0.00	0.0	
3	765.1	4.15	13.75	764.8	14.6	3.6	1.00	13.75	15.0	
4	6281.1	4.15	13.75	6266.2	402.5	98.5	0.00	0.00	414.3	
5	6696.2	0.00	0.00	6681.0	417.1	102.1	1.00	180.00	429.4	
6	11746.2	0.00	0.00	11731.0	417.1	102.1	0.00	0.00	429.4	



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4911.0	4922.3	Wasatch
6851.0	6866.2	Fort Union
7351.0	7366.2	Base Fort Union
8581.0	8596.2	Ohio Creek
8781.0	8796.2	Williams Fork
8981.0	8996.2	Top of Gas
11231.0	11246.2	Cameo
11581.0	11596.2	Rollins SS



Azimuths to True North
Magnetic North: 10.67°

Magnetic Field
Strength: 52516.8snT
Dip Angle: 65.85°
Date: 2/23/2009
Model: IGRF200510

DESIGN DETAILS: Plan #1

95xxx; LR
KB OM16A P32 @ 8386.0ft (Rig Name)

Target	Azimuth	Origin	N/S	E/W	From TVD
P32 595 OM16A BHL	13.75	Slot	0.0	0.0	0.0

Cathedral Energy Services

Planning Report

Database:	EDM 2003.21 US Multi Users DB	Local Co-ordinate Reference:	Well OM16A P32 595
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Project:	Garfield County	MD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Site:	P32 595	North Reference:	True
Well:	OM16A P32 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

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		P32 595			
Site Position:		Northing:	1,641,133.56 ft	Latitude:	39.565553
From:	Lat/Long	Easting:	2,275,511.10 ft	Longitude:	-108.070183
Position Uncertainty:	0.0 ft	Slot Radius:	in	Grid Convergence:	-1.62 °

Well	OM16A P32 595					
Well Position	+N/-S	0.0 ft	Northing:	1,641,118.24 ft	Latitude:	39.565511
	+E/-W	0.0 ft	Easting:	2,275,511.23 ft	Longitude:	-108.070181
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	8,358.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF200510	2/23/2009	10.67	65.85	52,517

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	13.75

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(ft)	(ft)	Rate	Rate	Rate	(°)	
(ft)			(ft)			(°/100ft)	(°/100ft)	(°/100ft)		
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
350.0	0.00	0.00	350.0	0.0	0.0	0.00	0.00	0.00	0.00	
765.1	4.15	13.75	764.8	14.6	3.6	1.00	1.00	0.00	13.75	
6,281.1	4.15	13.75	6,266.2	402.5	98.5	0.00	0.00	0.00	0.00	
6,696.2	0.00	0.00	6,681.0	417.1	102.1	1.00	-1.00	0.00	180.00	
11,746.2	0.00	0.00	11,731.0	417.1	102.1	0.00	0.00	0.00	0.00	P32 595 OM16A BHL

Cathedral Energy Services

Planning Report

Database:	EDM 2003.21 US Multi Users DB	Local Co-ordinate Reference:	Well OM16A P32 595
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Project:	Garfield County	MD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Site:	P32 595	North Reference:	True
Well:	OM16A P32 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
350.0	0.00	0.00	350.0	0.0	0.0	0.0	0.00	0.00	KOP @ 350'
400.0	0.50	13.75	400.0	0.2	0.1	0.2	1.00	1.00	
500.0	1.50	13.75	500.0	1.9	0.5	2.0	1.00	1.00	
600.0	2.50	13.75	599.9	5.3	1.3	5.5	1.00	1.00	
700.0	3.50	13.75	699.8	10.4	2.5	10.7	1.00	1.00	
765.1	4.15	13.75	764.8	14.6	3.6	15.0	1.00	1.00	EOB; Inc=4.15°
800.0	4.15	13.75	799.5	17.1	4.2	17.6	0.00	0.00	
900.0	4.15	13.75	899.3	24.1	5.9	24.8	0.00	0.00	
1,000.0	4.15	13.75	999.0	31.1	7.6	32.0	0.00	0.00	
1,100.0	4.15	13.75	1,098.8	38.1	9.3	39.3	0.00	0.00	
1,200.0	4.15	13.75	1,198.5	45.2	11.1	46.5	0.00	0.00	
1,300.0	4.15	13.75	1,298.2	52.2	12.8	53.8	0.00	0.00	
1,400.0	4.15	13.75	1,398.0	59.2	14.5	61.0	0.00	0.00	
1,500.0	4.15	13.75	1,497.7	66.3	16.2	68.2	0.00	0.00	
1,600.0	4.15	13.75	1,597.4	73.3	17.9	75.5	0.00	0.00	
1,700.0	4.15	13.75	1,697.2	80.3	19.7	82.7	0.00	0.00	
1,800.0	4.15	13.75	1,796.9	87.4	21.4	89.9	0.00	0.00	
1,900.0	4.15	13.75	1,896.7	94.4	23.1	97.2	0.00	0.00	
2,000.0	4.15	13.75	1,996.4	101.4	24.8	104.4	0.00	0.00	
2,100.0	4.15	13.75	2,096.1	108.5	26.5	111.7	0.00	0.00	
2,200.0	4.15	13.75	2,195.9	115.5	28.3	118.9	0.00	0.00	
2,300.0	4.15	13.75	2,295.6	122.5	30.0	126.1	0.00	0.00	
2,400.0	4.15	13.75	2,395.3	129.6	31.7	133.4	0.00	0.00	
2,500.0	4.15	13.75	2,495.1	136.6	33.4	140.6	0.00	0.00	
2,600.0	4.15	13.75	2,594.8	143.6	35.1	147.9	0.00	0.00	
2,700.0	4.15	13.75	2,694.6	150.7	36.9	155.1	0.00	0.00	
2,800.0	4.15	13.75	2,794.3	157.7	38.6	162.3	0.00	0.00	
2,900.0	4.15	13.75	2,894.0	164.7	40.3	169.6	0.00	0.00	
3,000.0	4.15	13.75	2,993.8	171.8	42.0	176.8	0.00	0.00	
3,100.0	4.15	13.75	3,093.5	178.8	43.7	184.1	0.00	0.00	
3,200.0	4.15	13.75	3,193.2	185.8	45.5	191.3	0.00	0.00	
3,300.0	4.15	13.75	3,293.0	192.8	47.2	198.5	0.00	0.00	
3,400.0	4.15	13.75	3,392.7	199.9	48.9	205.8	0.00	0.00	
3,500.0	4.15	13.75	3,492.5	206.9	50.6	213.0	0.00	0.00	
3,600.0	4.15	13.75	3,592.2	213.9	52.4	220.3	0.00	0.00	
3,700.0	4.15	13.75	3,691.9	221.0	54.1	227.5	0.00	0.00	
3,800.0	4.15	13.75	3,791.7	228.0	55.8	234.7	0.00	0.00	
3,900.0	4.15	13.75	3,891.4	235.0	57.5	242.0	0.00	0.00	
4,000.0	4.15	13.75	3,991.1	242.1	59.2	249.2	0.00	0.00	
4,100.0	4.15	13.75	4,090.9	249.1	61.0	256.5	0.00	0.00	
4,200.0	4.15	13.75	4,190.6	256.1	62.7	263.7	0.00	0.00	
4,300.0	4.15	13.75	4,290.4	263.2	64.4	270.9	0.00	0.00	
4,400.0	4.15	13.75	4,390.1	270.2	66.1	278.2	0.00	0.00	
4,500.0	4.15	13.75	4,489.8	277.2	67.8	285.4	0.00	0.00	
4,600.0	4.15	13.75	4,589.6	284.3	69.6	292.6	0.00	0.00	
4,700.0	4.15	13.75	4,689.3	291.3	71.3	299.9	0.00	0.00	
4,800.0	4.15	13.75	4,789.1	298.3	73.0	307.1	0.00	0.00	
4,900.0	4.15	13.75	4,888.8	305.4	74.7	314.4	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 2003.21 US Multi Users DB	Local Co-ordinate Reference:	Well OM16A P32 595
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Project:	Garfield County	MD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Site:	P32 595	North Reference:	True
Well:	OM16A P32 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,922.3	4.15	13.75	4,911.0	306.9	75.1	316.0	0.00	0.00	Wasatch
5,000.0	4.15	13.75	4,988.5	312.4	76.4	321.6	0.00	0.00	
5,100.0	4.15	13.75	5,088.3	319.4	78.2	328.8	0.00	0.00	
5,200.0	4.15	13.75	5,188.0	326.5	79.9	336.1	0.00	0.00	
5,300.0	4.15	13.75	5,287.7	333.5	81.6	343.3	0.00	0.00	
5,400.0	4.15	13.75	5,387.5	340.5	83.3	350.6	0.00	0.00	
5,500.0	4.15	13.75	5,487.2	347.5	85.0	357.8	0.00	0.00	
5,600.0	4.15	13.75	5,587.0	354.6	86.8	365.0	0.00	0.00	
5,700.0	4.15	13.75	5,686.7	361.6	88.5	372.3	0.00	0.00	
5,800.0	4.15	13.75	5,786.4	368.6	90.2	379.5	0.00	0.00	
5,900.0	4.15	13.75	5,886.2	375.7	91.9	386.8	0.00	0.00	Start Drop -1.00
6,000.0	4.15	13.75	5,985.9	382.7	93.6	394.0	0.00	0.00	
6,100.0	4.15	13.75	6,085.6	389.7	95.4	401.2	0.00	0.00	
6,200.0	4.15	13.75	6,185.4	396.8	97.1	408.5	0.00	0.00	
6,281.1	4.15	13.75	6,266.2	402.5	98.5	414.3	0.00	0.00	
6,300.0	3.96	13.75	6,285.1	403.8	98.8	415.7	1.00	-1.00	
6,400.0	2.96	13.75	6,384.9	409.6	100.2	421.7	1.00	-1.00	
6,500.0	1.96	13.75	6,484.8	413.8	101.3	426.0	1.00	-1.00	
6,600.0	0.96	13.75	6,584.8	416.3	101.9	428.6	1.00	-1.00	
6,696.2	0.00	0.00	6,681.0	417.1	102.1	429.4	1.00	-1.00	EOD; Inc=0°
6,700.0	0.00	0.00	6,684.8	417.1	102.1	429.4	0.00	0.00	
6,800.0	0.00	0.00	6,784.8	417.1	102.1	429.4	0.00	0.00	
6,866.2	0.00	0.00	6,851.0	417.1	102.1	429.4	0.00	0.00	
6,900.0	0.00	0.00	6,884.8	417.1	102.1	429.4	0.00	0.00	
7,000.0	0.00	0.00	6,984.8	417.1	102.1	429.4	0.00	0.00	
7,100.0	0.00	0.00	7,084.8	417.1	102.1	429.4	0.00	0.00	
7,200.0	0.00	0.00	7,184.8	417.1	102.1	429.4	0.00	0.00	
7,300.0	0.00	0.00	7,284.8	417.1	102.1	429.4	0.00	0.00	
7,366.2	0.00	0.00	7,351.0	417.1	102.1	429.4	0.00	0.00	Base Fort Union
7,400.0	0.00	0.00	7,384.8	417.1	102.1	429.4	0.00	0.00	
7,500.0	0.00	0.00	7,484.8	417.1	102.1	429.4	0.00	0.00	
7,600.0	0.00	0.00	7,584.8	417.1	102.1	429.4	0.00	0.00	
7,700.0	0.00	0.00	7,684.8	417.1	102.1	429.4	0.00	0.00	
7,800.0	0.00	0.00	7,784.8	417.1	102.1	429.4	0.00	0.00	
7,900.0	0.00	0.00	7,884.8	417.1	102.1	429.4	0.00	0.00	
8,000.0	0.00	0.00	7,984.8	417.1	102.1	429.4	0.00	0.00	
8,100.0	0.00	0.00	8,084.8	417.1	102.1	429.4	0.00	0.00	
8,200.0	0.00	0.00	8,184.8	417.1	102.1	429.4	0.00	0.00	Ohio Creek
8,300.0	0.00	0.00	8,284.8	417.1	102.1	429.4	0.00	0.00	
8,400.0	0.00	0.00	8,384.8	417.1	102.1	429.4	0.00	0.00	
8,500.0	0.00	0.00	8,484.8	417.1	102.1	429.4	0.00	0.00	
8,596.2	0.00	0.00	8,581.0	417.1	102.1	429.4	0.00	0.00	
8,600.0	0.00	0.00	8,584.8	417.1	102.1	429.4	0.00	0.00	
8,700.0	0.00	0.00	8,684.8	417.1	102.1	429.4	0.00	0.00	
8,796.2	0.00	0.00	8,781.0	417.1	102.1	429.4	0.00	0.00	
8,800.0	0.00	0.00	8,784.8	417.1	102.1	429.4	0.00	0.00	
8,900.0	0.00	0.00	8,884.8	417.1	102.1	429.4	0.00	0.00	Williams Fork
8,996.2	0.00	0.00	8,981.0	417.1	102.1	429.4	0.00	0.00	
9,000.0	0.00	0.00	8,984.8	417.1	102.1	429.4	0.00	0.00	
9,100.0	0.00	0.00	9,084.8	417.1	102.1	429.4	0.00	0.00	
9,200.0	0.00	0.00	9,184.8	417.1	102.1	429.4	0.00	0.00	
9,300.0	0.00	0.00	9,284.8	417.1	102.1	429.4	0.00	0.00	

Cathedral Energy Services

Planning Report

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Site:	P32 595	North Reference:	True
Well:	OM16A P32 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
9,400.0	0.00	0.00	9,384.8	417.1	102.1	429.4	0.00	0.00	
9,500.0	0.00	0.00	9,484.8	417.1	102.1	429.4	0.00	0.00	
9,600.0	0.00	0.00	9,584.8	417.1	102.1	429.4	0.00	0.00	
9,700.0	0.00	0.00	9,684.8	417.1	102.1	429.4	0.00	0.00	
9,800.0	0.00	0.00	9,784.8	417.1	102.1	429.4	0.00	0.00	
9,900.0	0.00	0.00	9,884.8	417.1	102.1	429.4	0.00	0.00	
10,000.0	0.00	0.00	9,984.8	417.1	102.1	429.4	0.00	0.00	
10,100.0	0.00	0.00	10,084.8	417.1	102.1	429.4	0.00	0.00	
10,200.0	0.00	0.00	10,184.8	417.1	102.1	429.4	0.00	0.00	
10,300.0	0.00	0.00	10,284.8	417.1	102.1	429.4	0.00	0.00	
10,400.0	0.00	0.00	10,384.8	417.1	102.1	429.4	0.00	0.00	
10,500.0	0.00	0.00	10,484.8	417.1	102.1	429.4	0.00	0.00	
10,600.0	0.00	0.00	10,584.8	417.1	102.1	429.4	0.00	0.00	
10,700.0	0.00	0.00	10,684.8	417.1	102.1	429.4	0.00	0.00	
10,800.0	0.00	0.00	10,784.8	417.1	102.1	429.4	0.00	0.00	
10,900.0	0.00	0.00	10,884.8	417.1	102.1	429.4	0.00	0.00	
11,000.0	0.00	0.00	10,984.8	417.1	102.1	429.4	0.00	0.00	
11,100.0	0.00	0.00	11,084.8	417.1	102.1	429.4	0.00	0.00	
11,200.0	0.00	0.00	11,184.8	417.1	102.1	429.4	0.00	0.00	
11,246.2	0.00	0.00	11,231.0	417.1	102.1	429.4	0.00	0.00	Cameo
11,300.0	0.00	0.00	11,284.8	417.1	102.1	429.4	0.00	0.00	
11,400.0	0.00	0.00	11,384.8	417.1	102.1	429.4	0.00	0.00	
11,500.0	0.00	0.00	11,484.8	417.1	102.1	429.4	0.00	0.00	
11,596.2	0.00	0.00	11,581.0	417.1	102.1	429.4	0.00	0.00	Rollins SS
11,600.0	0.00	0.00	11,584.8	417.1	102.1	429.4	0.00	0.00	
11,700.0	0.00	0.00	11,684.8	417.1	102.1	429.4	0.00	0.00	
11,746.2	0.00	0.00	11,731.0	417.1	102.1	429.4	0.00	0.00	TD at 11746.2 - P32 595 OM16A BHL

Targets

Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
P32 595 OM16A BHL - plan hits target center - Rectangle (sides W100.0 H200.0 D0.0)	0.00	0.00	11,731.0	417.1	102.1	1,641,532.26	2,275,625.04	39.566656	-108.069819

Cathedral Energy Services

Planning Report

Database:	EDM 2003.21 US Multi Users DB	Local Co-ordinate Reference:	Well OM16A P32 595
Company:	Berry Petroleum Company (NAD 83)	TVD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Project:	Garfield County	MD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Site:	P32 595	North Reference:	True
Well:	OM16A P32 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,922.3	4,911.0	Wasatch				
6,866.2	6,851.0	Fort Union				
7,366.2	7,351.0	Base Fort Union				
8,596.2	8,581.0	Ohio Creek				
8,796.2	8,781.0	Williams Fork				
8,996.2	8,981.0	Top of Gas				
11,246.2	11,231.0	Cameo				
11,596.2	11,581.0	Rollins SS				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
350.0	350.0	0.0	0.0	KOP @ 350'	
765.1	764.8	14.6	3.6	EOB; Inc=4.15°	
6,281.1	6,266.2	402.5	98.5	Start Drop -1.00	
6,696.2	6,681.0	417.1	102.1	EOD; Inc=0°	
11,746.2	11,731.0	417.1	102.1	TD at 11746.2	

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM16A P32 595
Project:	Garfield County	TVD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Reference Site:	P32 595	MD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM16A P32 595	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 100.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	2/24/2009		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,746.2	Plan #1 (DD)	MWD	Geolink MWD	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
(Sec 8-6S-R96 SWNW original)						
Chevron #22-8D - ST 100' N - Plan #1						Out of range
Chevron #22-8D - ST 300' N - Plan #1						Out of range
(Sec 8-6S-R96 SWNW)						
Chevron #22-8D - ST 100' N - Plan #1						Out of range
P32 595						
OM01A P32 595 - DD - Plan #1	200.0	200.0	59.7	59.1	99.513	CC, ES
OM01A P32 595 - DD - Plan #1	600.0	588.8	91.8	89.8	46.385	SF
OM09B P32 595 - DD - Plan #1	200.0	200.0	44.4	43.8	74.021	CC, ES
OM09B P32 595 - DD - Plan #1	900.0	889.8	93.2	90.2	30.698	SF
OM09C P32 595 - DD - Plan #1	233.3	233.3	29.5	28.8	41.170	CC, ES
OM09C P32 595 - DD - Plan #1	1,500.0	1,493.5	98.4	93.1	18.603	SF
OM09D P32 595 - DD - Plan #1	300.0	300.0	15.3	14.4	16.119	CC, ES
OM09D P32 595 - DD - Plan #1	2,500.0	2,496.4	99.2	89.4	10.156	SF
OM13B P32 595 - DD - Plan #1	200.0	200.0	30.2	29.6	50.374	CC, ES
OM13B P32 595 - DD - Plan #1	600.0	598.7	44.2	42.1	21.497	SF
OM16B P32 595 - DD - Plan #1	300.0	300.0	15.3	14.3	16.113	CC
OM16B P32 595 - DD - Plan #1	400.0	400.0	15.5	14.2	11.945	ES
OM16B P32 595 - DD - Plan #1	2,500.0	2,500.7	48.4	38.4	4.849	SF
OM16D P32 595 - DD - Plan #1	300.0	300.0	45.5	44.6	47.963	CC
OM16D P32 595 - DD - Plan #1	400.0	400.0	45.7	44.5	35.233	ES
OM16D P32 595 - DD - Plan #1	700.0	699.0	56.7	54.3	24.188	SF
Sec29 T5S R96W						
Latham 29-18D - DD - Plan #1						Out of range
Latham 29-19D - DD - Plan #1						Out of range
Latham 29-30D - DD - Plan #1						Out of range

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM16A P32 595
Project:	Garfield County	TVD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Reference Site:	P32 595	MD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM16A P32 595	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													P32 595 - OM01A P32 595 - DD - Plan #1		Offset Site Error:		0.0 ft
Survey Program: 0-MWD															Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance										
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning				
0.0	0.0	0.0	0.0	0.0	0.0	179.19	-59.7	0.8	59.7								
100.0	100.0	100.0	100.0	0.1	0.1	179.19	-59.7	0.8	59.7	59.5	0.25	237.726					
200.0	200.0	200.0	200.0	0.3	0.3	179.19	-59.7	0.8	59.7	59.1	0.60	99.513 CC, ES					
300.0	300.0	298.0	297.9	0.5	0.5	178.90	-61.4	1.2	61.4	60.5	0.95	64.940					
400.0	400.0	395.7	395.5	0.6	0.7	164.41	-66.3	2.2	66.7	65.4	1.29	51.628					
500.0	500.0	492.8	492.2	0.8	0.9	163.68	-74.4	3.8	76.8	75.1	1.64	46.910					
600.0	599.9	588.8	587.6	1.0	1.1	163.11	-85.6	6.1	91.8	89.8	1.98	46.385 SF					

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM16A P32 595
Project:	Garfield County	TVD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Reference Site:	P32 595	MD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM16A P32 595	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design P32 595 - OM09B P32 595 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-0.73	44.4	-0.6	44.4					
100.0	100.0	100.0	100.0	0.1	0.1	-0.73	44.4	-0.6	44.4	44.2	0.25	176.828		
200.0	200.0	200.0	200.0	0.3	0.3	-0.73	44.4	-0.6	44.4	43.8	0.60	74.021 CC, ES		
300.0	300.0	298.4	298.4	0.5	0.5	-0.57	46.1	-0.5	46.2	45.2	0.95	48.733		
400.0	400.0	396.7	396.5	0.6	0.7	-13.96	51.2	-0.1	51.1	49.8	1.29	39.510		
500.0	500.0	494.6	494.0	0.8	0.9	-13.80	59.5	0.4	57.9	56.3	1.64	35.358		
600.0	599.9	592.1	590.9	1.0	1.1	-13.84	71.2	1.1	66.5	64.5	1.98	33.515		
700.0	699.8	690.5	688.2	1.2	1.4	-14.03	85.8	2.0	76.3	74.0	2.33	32.721		
800.0	799.5	790.1	786.6	1.4	1.7	-14.44	101.0	3.0	84.9	82.2	2.68	31.651		
900.0	899.3	889.8	885.1	1.6	2.0	-14.84	116.2	3.9	93.2	90.2	3.04	30.698 SF		

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM16A P32 595
Project:	Garfield County	TVD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Reference Site:	P32 595	MD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM16A P32 595	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design P32 595 - OM09C P32 595 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-1.09	29.5	-0.6	29.5					
100.0	100.0	100.0	100.0	0.1	0.1	-1.09	29.5	-0.6	29.5	29.3	0.25	117.414		
200.0	200.0	200.0	200.0	0.3	0.3	-1.09	29.5	-0.6	29.5	28.9	0.60	49.150		
233.3	233.3	233.3	233.3	0.4	0.4	-1.09	29.5	-0.6	29.5	28.8	0.72	41.170 CC, ES		
300.0	300.0	299.5	299.5	0.5	0.5	-1.22	29.9	-0.6	29.9	29.0	0.95	31.560		
400.0	400.0	398.4	398.3	0.6	0.7	-15.92	33.3	-1.2	33.1	31.9	1.30	25.579		
500.0	500.0	497.0	496.7	0.8	0.9	-17.94	40.0	-2.3	38.3	36.7	1.64	23.333		
600.0	599.9	595.3	594.5	1.0	1.1	-20.48	50.0	-4.0	45.3	43.4	1.99	22.790		
700.0	699.8	695.0	693.5	1.2	1.3	-23.11	61.8	-6.1	52.5	50.2	2.34	22.430		
800.0	799.5	794.8	792.6	1.4	1.6	-25.80	73.6	-8.1	58.3	55.6	2.70	21.615		
900.0	899.3	894.7	891.7	1.6	1.9	-28.17	85.4	-10.1	63.8	60.7	3.05	20.884		
1,000.0	999.0	994.5	990.8	1.8	2.1	-30.16	97.2	-12.1	69.4	66.0	3.42	20.309		
1,100.0	1,098.8	1,094.3	1,089.8	2.0	2.4	-31.85	109.0	-14.1	75.1	71.4	3.79	19.842		
1,200.0	1,198.5	1,194.1	1,188.9	2.2	2.7	-33.30	120.8	-16.1	80.9	76.7	4.16	19.455		
1,300.0	1,298.2	1,293.9	1,288.0	2.4	2.9	-34.55	132.6	-18.1	86.7	82.2	4.53	19.127		
1,400.0	1,398.0	1,393.7	1,387.1	2.6	3.2	-35.65	144.4	-20.1	92.5	87.6	4.91	18.846		
1,500.0	1,497.7	1,493.5	1,486.2	2.9	3.5	-36.62	156.2	-22.1	98.4	93.1	5.29	18.603 SF		

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM16A P32 595
Project:	Garfield County	TVD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Reference Site:	P32 595	MD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM16A P32 595	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design P32 595 - OM09D P32 595 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-2.11	15.3	-0.6	15.3					
100.0	100.0	100.0	100.0	0.1	0.1	-2.11	15.3	-0.6	15.3	15.1	0.25	60.894		
200.0	200.0	200.0	200.0	0.3	0.3	-2.11	15.3	-0.6	15.3	14.7	0.60	25.491		
300.0	300.0	300.0	300.0	0.5	0.5	-2.11	15.3	-0.6	15.3	14.4	0.95	16.119 CC, ES		
400.0	400.0	399.5	399.4	0.6	0.7	-17.58	16.9	-1.1	16.8	15.5	1.30	12.930		
500.0	500.0	498.8	498.6	0.8	0.8	-22.40	21.9	-2.6	20.3	18.6	1.65	12.306		
600.0	599.9	598.3	597.8	1.0	1.0	-28.09	29.7	-5.0	25.3	23.3	2.00	12.660		
700.0	699.8	698.1	697.3	1.2	1.3	-33.67	37.9	-7.5	29.4	27.0	2.35	12.499		
800.0	799.5	798.0	796.8	1.4	1.5	-39.64	46.1	-10.0	32.4	29.7	2.71	11.939		
900.0	899.3	897.9	896.3	1.6	1.7	-44.96	54.3	-12.5	35.5	32.4	3.09	11.475		
1,000.0	999.0	997.8	995.9	1.8	1.9	-49.41	62.5	-15.0	38.8	35.3	3.48	11.152		
1,100.0	1,098.8	1,097.7	1,095.4	2.0	2.2	-53.14	70.7	-17.5	42.3	38.4	3.87	10.919		
1,200.0	1,198.5	1,197.6	1,194.9	2.2	2.4	-56.29	78.8	-20.1	46.0	41.7	4.28	10.746		
1,300.0	1,298.2	1,297.5	1,294.5	2.4	2.6	-58.96	87.0	-22.6	49.8	45.1	4.69	10.616		
1,400.0	1,398.0	1,397.5	1,394.0	2.6	2.8	-61.25	95.2	-25.1	53.6	48.5	5.10	10.516		
1,500.0	1,497.7	1,497.4	1,493.5	2.9	3.1	-63.23	103.4	-27.6	57.6	52.1	5.52	10.438		
1,600.0	1,597.4	1,597.3	1,593.1	3.1	3.3	-64.96	111.6	-30.1	61.6	55.7	5.94	10.376		
1,700.0	1,697.2	1,697.2	1,692.6	3.3	3.5	-66.47	119.8	-32.6	65.7	59.3	6.36	10.327		
1,800.0	1,796.9	1,797.1	1,792.1	3.5	3.7	-67.81	128.0	-35.1	69.8	63.0	6.78	10.288		
1,900.0	1,896.7	1,897.0	1,891.7	3.7	4.0	-68.99	136.2	-37.6	73.9	66.7	7.21	10.256		
2,000.0	1,996.4	1,996.9	1,991.2	3.9	4.2	-70.05	144.4	-40.2	78.1	70.5	7.63	10.230		
2,100.0	2,096.1	2,096.8	2,090.8	4.1	4.4	-71.01	152.6	-42.7	82.3	74.2	8.06	10.209		
2,200.0	2,195.9	2,196.7	2,190.3	4.3	4.7	-71.87	160.8	-45.2	86.5	78.0	8.49	10.192		
2,300.0	2,295.6	2,296.6	2,289.8	4.6	4.9	-72.65	169.0	-47.7	90.7	81.8	8.91	10.177		
2,400.0	2,395.3	2,396.5	2,389.4	4.8	5.1	-73.36	177.2	-50.2	95.0	85.6	9.34	10.165		
2,500.0	2,495.1	2,496.4	2,488.9	5.0	5.4	-74.01	185.4	-52.7	99.2	89.4	9.77	10.156 SF		

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM16A P32 595
Project:	Garfield County	TVD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Reference Site:	P32 595	MD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM16A P32 595	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design P32 595 - OM13B P32 595 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	178.40	-30.2	0.8	30.2					
100.0	100.0	100.0	100.0	0.1	0.1	178.40	-30.2	0.8	30.2	30.0	0.25	120.339		
200.0	200.0	200.0	200.0	0.3	0.3	178.40	-30.2	0.8	30.2	29.6	0.60	50.374 CC, ES		
300.0	300.0	299.8	299.7	0.5	0.5	175.21	-30.5	2.6	30.6	29.7	0.95	32.176		
400.0	400.0	399.3	399.1	0.6	0.7	152.69	-31.4	7.7	32.5	31.2	1.32	24.651		
500.0	500.0	499.0	498.6	0.8	0.9	143.77	-32.6	14.7	37.4	35.7	1.69	22.148		
600.0	599.9	598.7	598.0	1.0	1.1	138.51	-33.8	21.8	44.2	42.1	2.06	21.497 SF		
700.0	699.8	698.3	697.4	1.2	1.3	136.02	-35.0	28.8	52.5	50.1	2.43	21.622		
800.0	799.5	797.8	796.7	1.4	1.5	135.29	-36.2	35.9	62.0	59.2	2.81	22.092		
900.0	899.3	897.4	895.9	1.6	1.7	135.00	-37.4	42.9	71.9	68.7	3.19	22.505		
1,000.0	999.0	996.9	995.2	1.8	1.9	134.78	-38.6	49.9	81.7	78.1	3.58	22.817		
1,100.0	1,098.8	1,096.4	1,094.4	2.0	2.1	134.61	-39.8	57.0	91.5	87.5	3.97	23.061		

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM16A P32 595
Project:	Garfield County	TVD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Reference Site:	P32 595	MD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM16A P32 595	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design P32 595 - OM16B P32 595 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-180.00	-15.3	0.0	15.3					
100.0	100.0	100.0	100.0	0.1	0.1	-180.00	-15.3	0.0	15.3	15.0	0.25	60.870		
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-15.3	0.0	15.3	14.7	0.60	25.481		
300.0	300.0	300.0	300.0	0.5	0.5	-180.00	-15.3	0.0	15.3	14.3	0.95	16.113 CC		
327.8	327.8	327.8	327.8	0.5	0.5	166.28	-15.3	0.0	15.3	14.3	1.05	14.649		
400.0	400.0	400.0	400.0	0.6	0.6	166.44	-15.3	0.0	15.5	14.2	1.30	11.945 ES		
500.0	500.0	500.2	500.2	0.8	0.8	166.32	-14.5	0.4	16.5	14.8	1.65	9.984		
600.0	599.9	600.5	600.4	1.0	1.0	164.67	-12.3	1.8	17.6	15.6	2.00	8.802		
700.0	699.8	700.7	700.6	1.2	1.2	161.82	-8.5	4.0	19.0	16.6	2.35	8.059		
800.0	799.5	801.0	800.7	1.4	1.4	157.99	-3.2	7.1	20.5	17.8	2.71	7.557		
900.0	899.3	901.1	900.5	1.6	1.6	152.45	3.4	11.0	21.4	18.3	3.09	6.917		
1,000.0	999.0	1,001.1	1,000.1	1.8	1.8	147.01	10.1	15.0	22.3	18.8	3.48	6.406		
1,100.0	1,098.8	1,101.0	1,099.8	2.0	2.0	142.04	16.8	18.9	23.4	19.5	3.89	6.026		
1,200.0	1,198.5	1,201.0	1,199.5	2.2	2.2	137.55	23.5	22.9	24.7	20.4	4.30	5.741		
1,300.0	1,298.2	1,301.0	1,299.2	2.4	2.4	133.53	30.3	26.9	26.1	21.4	4.72	5.524		
1,400.0	1,398.0	1,401.0	1,398.8	2.6	2.6	129.93	37.0	30.9	27.6	22.5	5.15	5.359		
1,500.0	1,497.7	1,500.9	1,498.5	2.9	2.9	126.71	43.7	34.8	29.2	23.7	5.59	5.233		
1,600.0	1,597.4	1,600.9	1,598.2	3.1	3.1	123.85	50.5	38.8	30.9	24.9	6.02	5.136		
1,700.0	1,697.2	1,700.9	1,697.8	3.3	3.3	121.28	57.2	42.8	32.7	26.2	6.46	5.061		
1,800.0	1,796.9	1,800.9	1,797.5	3.5	3.5	118.99	63.9	46.7	34.5	27.6	6.90	5.004		
1,900.0	1,896.7	1,900.8	1,897.2	3.7	3.7	116.93	70.7	50.7	36.4	29.1	7.34	4.960		
2,000.0	1,996.4	2,000.8	1,996.8	3.9	4.0	115.07	77.4	54.7	38.3	30.6	7.78	4.926		
2,100.0	2,096.1	2,100.8	2,096.5	4.1	4.2	113.39	84.1	58.7	40.3	32.1	8.22	4.900		
2,200.0	2,195.9	2,200.8	2,196.2	4.3	4.4	111.87	90.9	62.6	42.3	33.6	8.66	4.881		
2,300.0	2,295.6	2,300.7	2,295.8	4.6	4.6	110.48	97.6	66.6	44.3	35.2	9.10	4.867		
2,400.0	2,395.3	2,400.7	2,395.5	4.8	4.8	109.22	104.3	70.6	46.3	36.8	9.54	4.856		
2,500.0	2,495.1	2,500.7	2,495.2	5.0	5.1	108.07	111.0	74.5	48.4	38.4	9.98	4.849 SF		
2,600.0	2,594.8	2,600.6	2,594.9	5.2	5.3	108.14	116.9	78.0	50.5	40.1	10.39	4.858		
2,700.0	2,694.6	2,700.6	2,694.7	5.4	5.4	110.10	121.3	80.6	52.7	41.9	10.78	4.887		
2,800.0	2,794.3	2,800.4	2,794.5	5.6	5.6	113.70	124.2	82.3	55.1	44.0	11.12	4.954		
2,900.0	2,894.0	2,900.1	2,894.1	5.9	5.8	118.67	125.5	83.1	58.0	46.6	11.41	5.085		
3,000.0	2,993.8	2,999.7	2,993.8	6.1	5.9	124.42	125.7	83.2	61.8	50.1	11.66	5.299		
3,100.0	3,093.5	3,099.5	3,093.5	6.3	6.1	129.59	125.7	83.2	66.1	54.2	11.90	5.559		
3,200.0	3,193.2	3,199.2	3,193.2	6.5	6.2	134.09	125.7	83.2	71.0	58.8	12.14	5.847		
3,300.0	3,293.0	3,298.9	3,293.0	6.7	6.4	138.00	125.7	83.2	76.2	63.8	12.39	6.151		
3,400.0	3,392.7	3,398.7	3,392.7	6.9	6.5	141.40	125.7	83.2	81.7	69.1	12.65	6.463		
3,500.0	3,492.5	3,498.4	3,492.5	7.1	6.7	144.35	125.7	83.2	87.5	74.6	12.91	6.777		
3,600.0	3,592.2	3,598.1	3,592.2	7.4	6.9	146.94	125.7	83.2	93.5	80.3	13.19	7.088		
3,700.0	3,691.9	3,697.9	3,691.9	7.6	7.0	149.21	125.7	83.2	99.6	86.2	13.48	7.394		

Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM16A P32 595
Project:	Garfield County	TVD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Reference Site:	P32 595	MD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM16A P32 595	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													P32 595 - OM16D P32 595 - DD - Plan #1		Offset Site Error:		0.0 ft
Survey Program: 0-MWD													Offset Well Error:		0.0 ft		
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty	Separation					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor					
0.0	0.0	0.0	0.0	0.0	0.0	178.94	-45.5	0.8	45.5								
100.0	100.0	100.0	100.0	0.1	0.1	178.94	-45.5	0.8	45.5	45.3	0.25	181.193					
200.0	200.0	200.0	200.0	0.3	0.3	178.94	-45.5	0.8	45.5	44.9	0.60	75.848					
300.0	300.0	300.0	300.0	0.5	0.5	178.94	-45.5	0.8	45.5	44.6	0.95	47.963	CC				
327.8	327.8	327.8	327.8	0.5	0.5	165.20	-45.5	0.8	45.6	44.5	1.05	43.547					
400.0	400.0	400.0	400.0	0.6	0.6	165.26	-45.5	0.8	45.7	44.5	1.30	35.233	ES				
500.0	500.0	500.0	500.0	0.8	0.8	165.79	-45.5	0.8	47.4	45.8	1.65	28.798					
600.0	599.9	599.9	599.9	1.0	1.0	166.75	-45.5	0.8	50.8	48.8	2.00	25.466					
700.0	699.8	699.0	698.9	1.2	1.2	167.50	-46.3	1.3	56.7	54.3	2.34	24.188	SF				
800.0	799.5	797.7	797.6	1.4	1.3	167.60	-48.5	2.6	65.6	62.9	2.69	24.377					
900.0	899.3	896.0	895.9	1.6	1.5	167.08	-52.1	4.7	76.3	73.3	3.04	25.104					
1,000.0	999.0	994.1	993.8	1.8	1.7	166.13	-57.2	7.6	88.5	85.1	3.39	26.101					

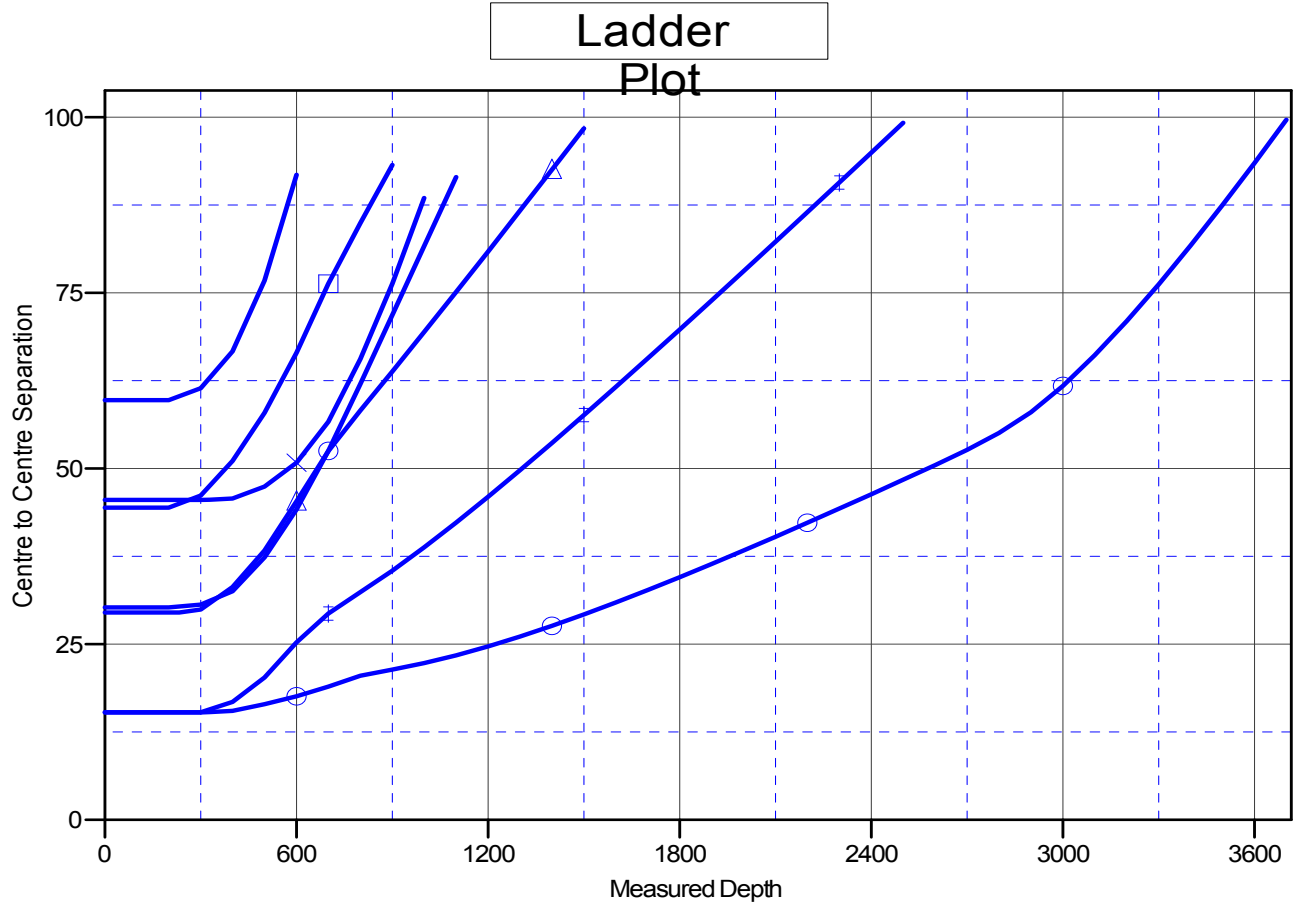
Cathedral Energy Services

Anticollision Report

Company:	Berry Petroleum Company (NAD 83)	Local Co-ordinate Reference:	Well OM16A P32 595
Project:	Garfield County	TVD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Reference Site:	P32 595	MD Reference:	KB OM16A P32 @ 8386.0ft (Rig Name)
Site Error:	0.0ft	North Reference:	True
Reference Well:	OM16A P32 595	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	EDM 2003.21 US Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB OM16A P32 @ 8386.0ft (Rig Nam
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: OM16A P32 595
Coordinate System is US State Plane 1983, Colorado Central Zone
Grid Convergence at Surface is: -1.62°



LEGEND

- OM13B P32 595, DD, Plan#1 V0
- ✕ OM16D P32 595, DD, Plan#1 V0
- ✚ OM09D P32 595, DD, Plan#1 V0
- OM09B P32 595, DD, Plan#1 V0
- △ OM09C P32 595, DD, Plan#1 V0
- OM16B P32 595, DD, Plan#1 V0
- ◇ OM01A P32 595, DD, Plan#1 V0