



SHELL E&P

MOFFAT COUNTY, CO

WOOD GULCH 2-36

WOOD GULCH 2-36

WOOD GULCH 2-36

Plan: PLAN 7

Standard Planning Report

02 August, 2013

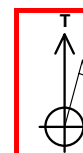




Project: MOFFAT COUNTY, CO
Site: WOOD GULCH 2-36
Well: WOOD GULCH 2-36
Wellbore: WOOD GULCH 2-36
Design: Design #7
Latitude: 40° 16' 51.649 N
Longitude: 107° 39' 40.932 W
GL: 6569.20
KB: KB @ 6584.20ft (Original Well Elev)
RIG: Original Well Elev



Weatherford®



Azimuths to True North
Magnetic North: 10.08°

Magnetic Field
Strength: 52432.3nT
Dip Angle: 66.37°
Date: 8/2/2013
Model: BGGM2013

WELL DETAILS: WOOD GULCH 2-36

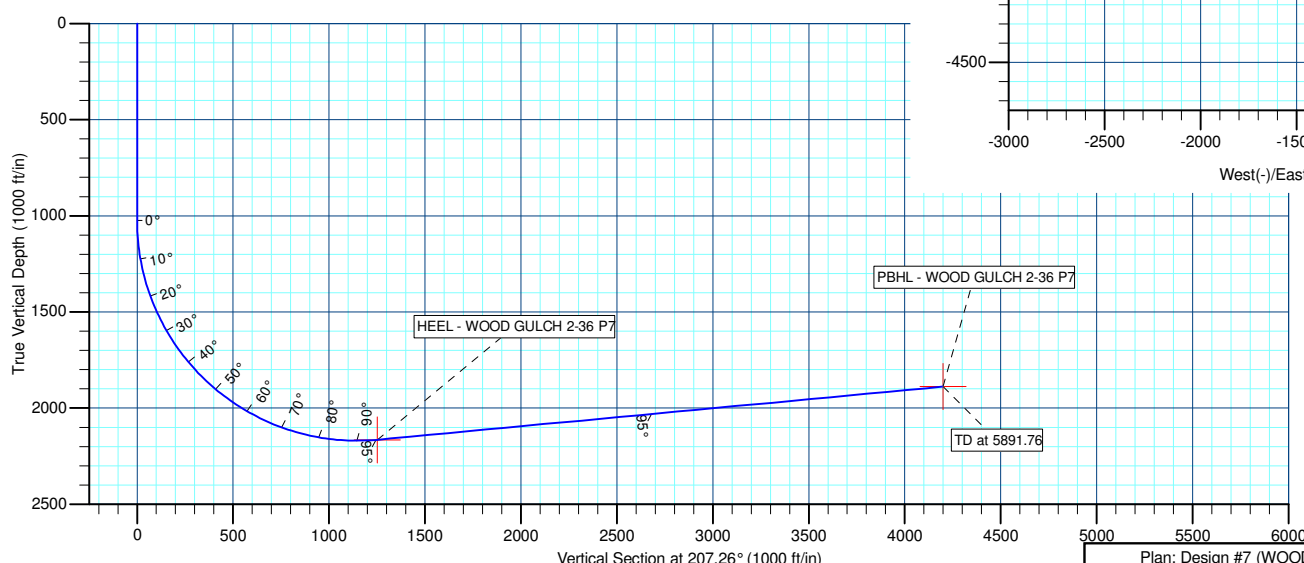
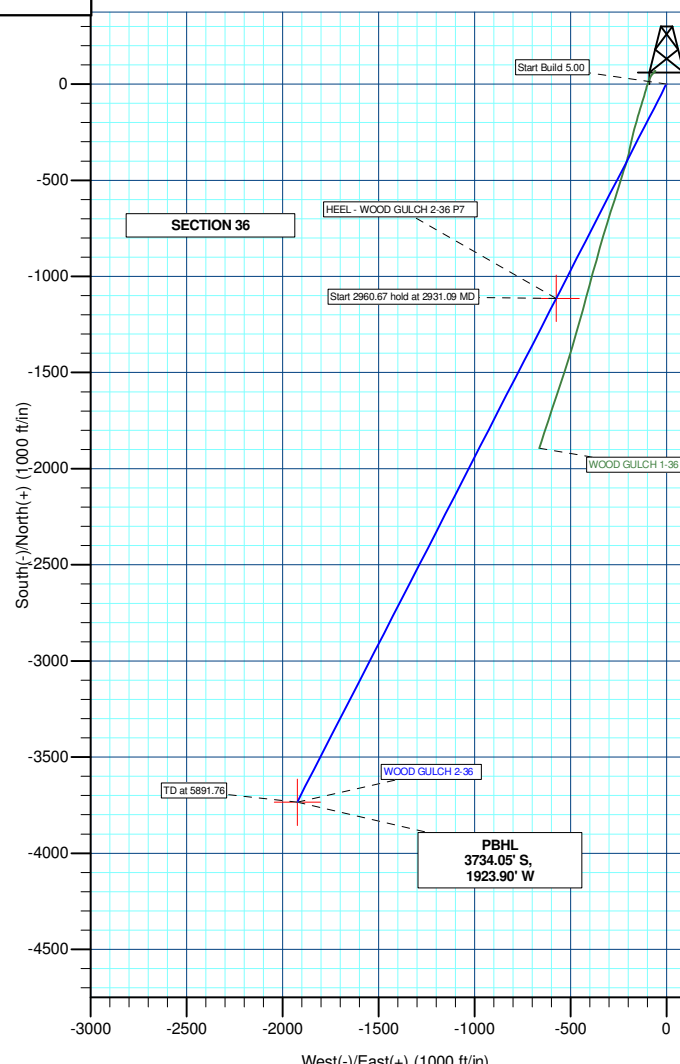
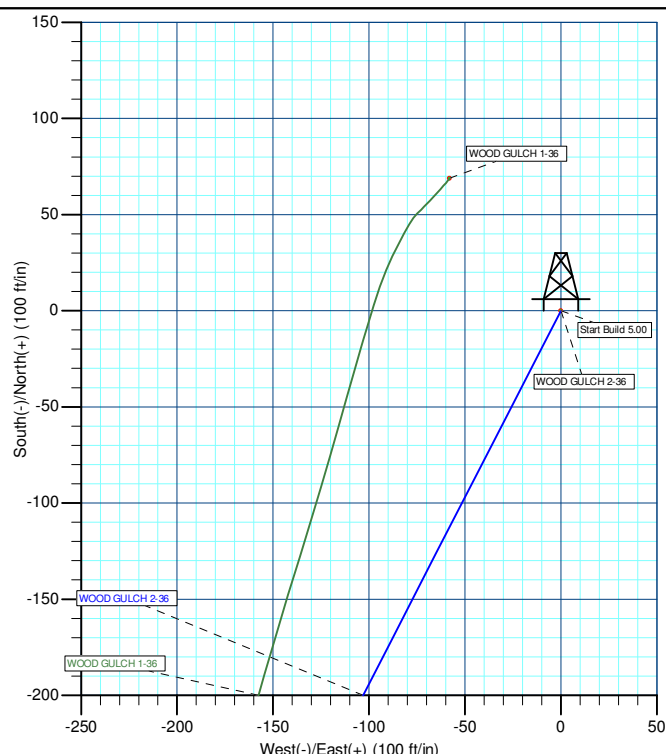
			Ground Level: 6569.20			
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1352563.22	2397039.24	40° 16' 51.649 N	107° 39' 40.932 W	

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL - WOOD GULCH 2-36 P7	1888.96	-3734.05	-1923.90	40° 16' 14.747 N	107° 40' 5.753 W	Point
HEEL - WOOD GULCH 2-36 P7	2165.00	-1113.64	-573.78	40° 16' 40.644 N	107° 39' 48.336 W	Point

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1024.09	0.00	0.00	1024.09	0.00	0.00	0.00	0.00	0.00	Start Build 5.00
2931.09	95.35	207.26	2165.01	-1113.64	-573.78	5.00	207.26	1252.76	Start 2960.67 hold at 2931.09 MD
5891.76	95.35	207.26	1888.96	-3734.05	-1923.90	0.00	0.00	4200.54	TD at 5891.76



Plan: Design #7 (WOOD GULCH 2-36/WOOD GULCH 2-36)

Created By: TRACY WILLIAMS Date: 13:49 August 02 2013



SHELL E&P

MOFFAT COUNTY, CO

WOOD GULCH 2-36

WOOD GULCH 2-36

WOOD GULCH 2-36

Plan: Design #7

Standard Planning Report

02 August, 2013



Weatherford®



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WOOD GULCH 2-36
Company:	SHELL E&P	TVD Reference:	KB @ 6584.20ft (Original Well Elev)
Project:	MOFFAT COUNTY, CO	MD Reference:	KB @ 6584.20ft (Original Well Elev)
Site:	WOOD GULCH 2-36	North Reference:	True
Well:	WOOD GULCH 2-36	Survey Calculation Method:	Minimum Curvature
Wellbore:	WOOD GULCH 2-36		
Design:	Design #7		

Project	MOFFAT COUNTY, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		WOOD GULCH 2-36			
Site Position:		Northing:	1,352,563.22usft	Latitude:	40° 16' 51.649 N
From:	Lat/Long	Easting:	2,397,039.24usft	Longitude:	107° 39' 40.932 W
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16"	Grid Convergence:	-1.40 °

Well		WOOD GULCH 2-36				
Well Position	+N/-S	0.00 ft	Northing:	1,352,563.22 usfl	Latitude:	40° 16' 51.649 N
	+E/-W	0.00 ft	Easting:	2,397,039.24 usfl	Longitude:	107° 39' 40.932 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,569.20ft

Wellbore	WOOD GULCH 2-36				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	8/2/2013	10.08	66.37	52,432

Design	Design #7			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	207.26

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,024.09	0.00	0.00	1,024.09	0.00	0.00	0.00	0.00	0.00	0.00	
2,931.09	95.35	207.26	2,165.01	-1,113.64	-573.78	5.00	5.00	0.00	207.26	
5,891.76	95.35	207.26	1,888.96	-3,734.05	-1,923.90	0.00	0.00	0.00	0.00	PBHL - WOOD GU



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WOOD GULCH 2-36
Company:	SHELL E&P	TVD Reference:	KB @ 6584.20ft (Original Well Elev)
Project:	MOFFAT COUNTY, CO	MD Reference:	KB @ 6584.20ft (Original Well Elev)
Site:	WOOD GULCH 2-36	North Reference:	True
Well:	WOOD GULCH 2-36	Survey Calculation Method:	Minimum Curvature
Wellbore:	WOOD GULCH 2-36		
Design:	Design #7		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 5.00									
1,024.09	0.00	0.00	1,024.09	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	3.80	207.26	1,099.94	-2.23	-1.15	2.51	5.00	5.00	0.00
1,200.00	8.80	207.26	1,199.31	-11.98	-6.17	13.48	5.00	5.00	0.00
1,300.00	13.80	207.26	1,297.34	-29.39	-15.14	33.06	5.00	5.00	0.00
1,400.00	18.80	207.26	1,393.29	-54.32	-27.99	61.11	5.00	5.00	0.00
1,500.00	23.80	207.26	1,486.44	-86.60	-44.62	97.41	5.00	5.00	0.00
1,600.00	28.80	207.26	1,576.06	-125.96	-64.90	141.70	5.00	5.00	0.00
1,700.00	33.80	207.26	1,661.48	-172.13	-88.68	193.63	5.00	5.00	0.00
1,800.00	38.80	207.26	1,742.05	-224.73	-115.79	252.81	5.00	5.00	0.00
1,900.00	43.80	207.26	1,817.16	-283.38	-146.01	318.78	5.00	5.00	0.00
2,000.00	48.80	207.26	1,886.23	-347.62	-179.10	391.05	5.00	5.00	0.00
2,100.00	53.80	207.26	1,948.74	-416.97	-214.84	469.06	5.00	5.00	0.00
2,200.00	58.80	207.26	2,004.22	-490.90	-252.93	552.23	5.00	5.00	0.00
2,300.00	63.80	207.26	2,052.23	-568.84	-293.09	639.91	5.00	5.00	0.00
2,400.00	68.80	207.26	2,092.42	-650.21	-335.01	731.44	5.00	5.00	0.00
2,500.00	73.80	207.26	2,124.48	-734.39	-378.38	826.13	5.00	5.00	0.00
2,600.00	78.80	207.26	2,148.16	-820.72	-422.86	923.25	5.00	5.00	0.00
2,700.00	83.80	207.26	2,163.29	-908.57	-468.12	1,022.07	5.00	5.00	0.00
2,800.00	88.80	207.26	2,169.75	-997.25	-513.81	1,121.83	5.00	5.00	0.00
2,900.00	93.80	207.26	2,167.49	-1,086.09	-559.59	1,221.77	5.00	5.00	0.00
HEEL - WOOD GULCH 2-36									
2,919.63	94.78	207.26	2,166.02	-1,103.49	-568.55	1,241.35	5.00	5.00	0.00
Start 2960.67 hold at 2931.09 MD - HEEL - WOOD GULCH 2-36 P7									
2,931.09	95.35	207.26	2,165.01	-1,113.64	-573.78	1,252.77	5.00	5.00	0.00
3,000.00	95.35	207.26	2,158.59	-1,174.63	-605.21	1,321.37	0.00	0.00	0.00
3,100.00	95.35	207.26	2,149.26	-1,263.14	-650.81	1,420.94	0.00	0.00	0.00
3,200.00	95.35	207.26	2,139.94	-1,351.64	-696.41	1,520.50	0.00	0.00	0.00
3,300.00	95.35	207.26	2,130.61	-1,440.15	-742.01	1,620.07	0.00	0.00	0.00
3,400.00	95.35	207.26	2,121.29	-1,528.66	-787.61	1,719.63	0.00	0.00	0.00
3,500.00	95.35	207.26	2,111.97	-1,617.17	-833.21	1,819.19	0.00	0.00	0.00
3,600.00	95.35	207.26	2,102.64	-1,705.67	-878.82	1,918.76	0.00	0.00	0.00
3,700.00	95.35	207.26	2,093.32	-1,794.18	-924.42	2,018.32	0.00	0.00	0.00
3,800.00	95.35	207.26	2,083.99	-1,882.69	-970.02	2,117.89	0.00	0.00	0.00
3,900.00	95.35	207.26	2,074.67	-1,971.19	-1,015.62	2,217.45	0.00	0.00	0.00
4,000.00	95.35	207.26	2,065.35	-2,059.70	-1,061.22	2,317.02	0.00	0.00	0.00
4,100.00	95.35	207.26	2,056.02	-2,148.21	-1,106.82	2,416.58	0.00	0.00	0.00
4,200.00	95.35	207.26	2,046.70	-2,236.72	-1,152.43	2,516.15	0.00	0.00	0.00
4,300.00	95.35	207.26	2,037.38	-2,325.22	-1,198.03	2,615.71	0.00	0.00	0.00
4,400.00	95.35	207.26	2,028.05	-2,413.73	-1,243.63	2,715.27	0.00	0.00	0.00
4,500.00	95.35	207.26	2,018.73	-2,502.24	-1,289.23	2,814.84	0.00	0.00	0.00
4,600.00	95.35	207.26	2,009.40	-2,590.75	-1,334.83	2,914.40	0.00	0.00	0.00



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WOOD GULCH 2-36
Company:	SHELL E&P	TVD Reference:	KB @ 6584.20ft (Original Well Elev)
Project:	MOFFAT COUNTY, CO	MD Reference:	KB @ 6584.20ft (Original Well Elev)
Site:	WOOD GULCH 2-36	North Reference:	True
Well:	WOOD GULCH 2-36	Survey Calculation Method:	Minimum Curvature
Wellbore:	WOOD GULCH 2-36		
Design:	Design #7		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,700.00	95.35	207.26	2,000.08	-2,679.25	-1,380.44	3,013.97	0.00	0.00	0.00
4,800.00	95.35	207.26	1,990.76	-2,767.76	-1,426.04	3,113.53	0.00	0.00	0.00
4,900.00	95.35	207.26	1,981.43	-2,856.27	-1,471.64	3,213.10	0.00	0.00	0.00
5,000.00	95.35	207.26	1,972.11	-2,944.77	-1,517.24	3,312.66	0.00	0.00	0.00
5,100.00	95.35	207.26	1,962.78	-3,033.28	-1,562.84	3,412.22	0.00	0.00	0.00
5,200.00	95.35	207.26	1,953.46	-3,121.79	-1,608.44	3,511.79	0.00	0.00	0.00
5,300.00	95.35	207.26	1,944.14	-3,210.30	-1,654.05	3,611.35	0.00	0.00	0.00
5,400.00	95.35	207.26	1,934.81	-3,298.80	-1,699.65	3,710.92	0.00	0.00	0.00
5,500.00	95.35	207.26	1,925.49	-3,387.31	-1,745.25	3,810.48	0.00	0.00	0.00
5,600.00	95.35	207.26	1,916.16	-3,475.82	-1,790.85	3,910.05	0.00	0.00	0.00
5,700.00	95.35	207.26	1,906.84	-3,564.33	-1,836.45	4,009.61	0.00	0.00	0.00
5,800.00	95.35	207.26	1,897.52	-3,652.83	-1,882.05	4,109.18	0.00	0.00	0.00
TD at 5891.76 - PBHL - WOOD GULCH 2-36 P7 - PBHL - WOOD GULCH 2-36									
5,891.76	95.35	207.26	1,888.96	-3,734.05	-1,923.90	4,200.54	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL - WOOD GULC	0.00	0.00	1,888.96	-3,734.05	-1,923.90	1,348,877.18	2,395,024.91	40° 16' 14.747 N	107° 40' 5.753 W
- plan hits target center									
- Point									
HEEL - WOOD GULC	0.00	0.00	2,165.00	-1,113.64	-573.78	1,351,463.90	2,396,438.49	40° 16' 40.644 N	107° 39' 48.336 W
- plan misses target center by 0.01ft at 2931.09ft MD (2165.01 TVD, -1113.64 N, -573.78 E)									
- Point									

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,024.09	1,024.09	0.00	0.00	Start Build 5.00
2,931.09	2,165.01	-1,113.64	-573.78	Start 2960.67 hold at 2931.09 MD
5,891.76	1,888.96	-3,734.05	-1,923.90	TD at 5891.76



SHELL E&P

MOFFAT COUNTY, CO

WOOD GULCH 2-36

WOOD GULCH 2-36

WOOD GULCH 2-36

Design #7

Anticollision Report

02 August, 2013



Weatherford®



Company:	SHELL E&P	Local Co-ordinate Reference:	Well WOOD GULCH 2-36
Project:	MOFFAT COUNTY, CO	TVD Reference:	KB @ 6584.20ft (Original Well Elev)
Reference Site:	WOOD GULCH 2-36	MD Reference:	KB @ 6584.20ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	True
Reference Well:	WOOD GULCH 2-36	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	WOOD GULCH 2-36	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #7	Offset TVD Reference:	Offset Datum

Reference	Design #7
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	MD Interval 100.00ft
Depth Range:	Unlimited
Results Limited by:	Maximum center-center distance of 2,316.77 ft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Elliptical Conic
Casing Method:	Not applied

Survey Tool Program		Date	8/2/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	5,891.76	Design #7 (WOOD GULCH 2-36)	MWD	MWD - Standard	

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						
WOOD GULCH 1-36						
WOOD GULCH 1-36 - WOOD GULCH 1-36 - WOOD GL	521.77	519.51	88.98	86.92	43.207	CC
WOOD GULCH 1-36 - WOOD GULCH 1-36 - WOOD GL	2,770.85	2,568.00	120.54	79.07	2.907	ES
WOOD GULCH 1-36 - WOOD GULCH 1-36 - WOOD GL	2,800.00	2,588.83	122.17	79.21	2.844	SF

Offset Design	WOOD GULCH 1-36 - WOOD GULCH 1-36 - WOOD GULCH 1-36 - WOOD GULCH 1-36												Offset Site Error:	0.00 ft
Survey Program:	149-MWD												Offset Well Error:	0.00 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)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-40.05	68.92	-57.94	90.08					
100.00	100.00	97.60	97.60	0.10	0.10	-40.24	68.69	-58.13	89.99	89.79	0.20	457.605		
200.00	200.00	197.85	197.84	0.32	0.27	-40.89	67.87	-58.78	89.79	89.20	0.59	153.335		
300.00	300.00	297.80	297.76	0.55	0.49	-42.44	66.00	-60.35	89.44	88.40	1.04	86.017		
400.00	400.00	397.95	397.84	0.77	0.73	-44.77	63.26	-62.75	89.10	87.60	1.50	59.452		
500.00	500.00	497.72	497.51	0.99	0.97	-47.73	59.86	-65.84	88.98	87.02	1.96	45.425		
521.77	521.77	519.51	519.27	1.04	1.02	-48.45	59.02	-66.59	88.98	86.92	2.06	43.207	CC	
600.00	600.00	597.29	596.92	1.22	1.21	-51.34	55.70	-69.64	89.18	86.76	2.42	36.791		
700.00	700.00	696.66	696.02	1.44	1.46	-55.90	50.69	-74.87	90.43	87.55	2.89	31.328		
800.00	800.00	798.23	796.59	1.67	1.77	-64.67	39.01	-82.41	91.18	87.79	3.39	26.896		
900.00	900.00	897.02	892.53	1.89	2.18	-79.08	17.83	-92.39	94.23	90.30	3.93	23.996		
1,000.00	1,000.00	990.92	981.18	2.12	2.68	-96.44	-11.49	-101.88	103.81	99.37	4.44	23.368		
1,100.00	1,099.94	1,077.11	1,059.34	2.33	3.28	40.30	-46.34	-111.87	125.12	119.94	5.18	24.144		
1,200.00	1,199.31	1,158.39	1,129.45	2.52	3.98	28.73	-85.80	-123.24	153.92	148.27	5.65	27.265		
1,300.00	1,297.34	1,234.00	1,190.77	2.74	4.75	20.83	-128.06	-136.07	187.59	181.52	6.07	30.904		
1,400.00	1,393.29	1,307.54	1,245.55	3.07	5.62	14.84	-175.00	-150.20	224.93	218.45	6.48	34.711		
1,500.00	1,486.44	1,401.45	1,312.88	3.55	6.69	9.32	-238.09	-167.70	259.54	252.65	6.90	37.639		
1,600.00	1,576.06	1,500.08	1,384.23	4.19	7.73	4.90	-304.29	-183.58	285.88	278.54	7.34	38.953		
1,700.00	1,661.48	1,590.58	1,449.86	5.00	8.75	1.51	-365.13	-197.05	304.52	296.70	7.81	38.981		
1,800.00	1,742.05	1,674.63	1,508.76	5.99	9.81	-0.63	-422.66	-213.86	319.47	311.14	8.33	38.358		
1,900.00	1,817.16	1,773.31	1,576.37	7.14	11.04	-2.73	-491.21	-235.51	328.62	319.67	8.95	36.722		
2,000.00	1,886.23	1,878.21	1,648.83	8.44	12.27	-5.01	-563.61	-258.13	328.75	319.09	9.66	34.043		
2,100.00	1,948.74	1,984.74	1,724.42	9.87	13.54	-7.45	-634.98	-281.36	318.06	307.58	10.48	30.353		
2,200.00	2,004.22	2,084.57	1,796.37	11.42	14.74	-10.43	-700.93	-302.33	297.86	286.39	11.47	25.963		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Weatherford Anticollision Report



Company:	SHELL E&P	Local Co-ordinate Reference:	Well WOOD GULCH 2-36
Project:	MOFFAT COUNTY, CO	TVD Reference:	KB @ 6584.20ft (Original Well Elev)
Reference Site:	WOOD GULCH 2-36	MD Reference:	KB @ 6584.20ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	True
Reference Well:	WOOD GULCH 2-36	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	WOOD GULCH 2-36	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #7	Offset TVD Reference:	Offset Datum

Offset Design WOOD GULCH 1-36 - WOOD GULCH 1-36 - WOOD GULCH 1-36 - WOOD GULCH 1-36												Offset Site Error:	0.00 ft
Survey Program: 149-MWD												Offset Well Error:	0.00 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)	Minimum Separation (ft)	Separation Factor	
2,300.00	2,052.23	2,177.97	1,863.98	13.08	15.88	-14.47	-762.65	-320.82	269.87	256.97	12.90	20.919	
2,400.00	2,092.42	2,268.44	1,929.13	14.82	17.00	-20.27	-822.91	-338.40	235.99	220.68	15.30	15.421	
2,500.00	2,124.48	2,353.64	1,990.34	16.63	18.07	-28.80	-879.89	-354.71	197.64	178.15	19.49	10.140	
2,600.00	2,148.16	2,435.30	2,047.84	18.49	19.11	-41.69	-935.64	-370.69	159.68	133.29	26.38	6.052	
2,700.00	2,163.29	2,514.98	2,103.81	20.40	20.13	-61.28	-990.21	-386.10	129.00	93.19	35.81	3.602	
2,770.85	2,168.77	2,568.00	2,141.23	21.76	20.80	-78.00	-1,026.38	-396.19	120.54	79.07	41.47	2.907 ES	
2,800.00	2,169.75	2,588.83	2,155.98	22.33	21.06	-84.81	-1,040.55	-400.13	122.17	79.21	42.96	2.844 SF	
2,900.00	2,167.49	2,655.00	2,203.03	24.26	21.90	-104.37	-1,085.44	-412.39	152.03	107.62	44.42	3.423	
3,000.00	2,158.59	2,716.81	2,247.19	26.20	22.68	-119.47	-1,127.24	-423.46	208.75	166.24	42.51	4.911	
3,100.00	2,149.26	2,781.81	2,293.47	28.15	23.49	-130.92	-1,171.21	-435.70	276.13	236.61	39.51	6.988	
3,200.00	2,139.94	2,839.65	2,334.75	30.09	24.21	-137.94	-1,210.17	-446.85	348.17	310.72	37.45	9.297	
3,300.00	2,130.61	2,897.80	2,376.79	32.05	24.93	-143.04	-1,248.87	-457.62	423.44	387.50	35.95	11.779	
3,400.00	2,121.29	2,968.01	2,427.06	34.00	25.80	-147.43	-1,296.08	-470.81	499.48	464.87	34.61	14.430	
3,500.00	2,111.97	3,033.90	2,473.63	35.96	26.62	-150.44	-1,340.88	-483.66	575.44	541.47	33.98	16.936	
3,600.00	2,102.64	3,098.96	2,519.53	37.92	27.43	-152.77	-1,385.09	-496.76	651.63	617.95	33.68	19.347	
3,700.00	2,093.32	3,163.96	2,565.26	39.88	28.25	-154.63	-1,429.35	-509.98	727.98	694.33	33.65	21.635	
3,800.00	2,083.99	3,229.16	2,611.09	41.84	29.06	-156.17	-1,473.68	-523.58	804.40	770.62	33.78	23.811	
3,900.00	2,074.67	3,297.40	2,659.09	43.81	29.91	-157.57	-1,519.84	-538.50	880.82	846.84	33.98	25.921	
4,000.00	2,065.35	3,368.10	2,708.58	45.77	30.80	-158.82	-1,567.65	-554.72	956.88	922.63	34.26	27.934	
4,100.00	2,056.02	3,432.09	2,753.25	47.74	31.61	-159.80	-1,610.98	-569.58	1,032.89	998.19	34.70	29.768	
4,200.00	2,046.70	3,487.73	2,792.18	49.71	32.31	-160.53	-1,648.63	-582.38	1,109.18	1,073.90	35.27	31.445	
4,300.00	2,037.38	3,538.14	2,827.82	51.68	32.94	-161.14	-1,682.41	-593.77	1,186.22	1,150.30	35.92	33.028	
4,400.00	2,028.05	3,599.18	2,871.28	53.65	33.69	-161.79	-1,723.07	-607.34	1,263.78	1,227.24	36.54	34.590	
4,500.00	2,018.73	3,659.12	2,913.89	55.62	34.44	-162.34	-1,763.12	-620.52	1,341.37	1,304.15	37.21	36.044	
4,600.00	2,009.40	3,709.40	2,949.84	57.59	35.05	-162.76	-1,796.52	-631.45	1,419.40	1,381.45	37.95	37.399	
4,700.00	2,000.08	3,759.26	2,985.79	59.56	35.67	-163.15	-1,829.37	-642.13	1,497.99	1,459.28	38.71	38.701	
4,800.00	1,990.76	3,810.70	3,023.10	61.53	36.31	-163.51	-1,863.13	-652.83	1,577.06	1,537.58	39.48	39.943	
4,900.00	1,981.43	3,856.00	3,056.02	63.50	36.87	-163.80	-1,892.82	-662.16	1,656.39	1,616.10	40.29	41.115	
5,000.00	1,972.11	3,856.00	3,056.02	65.48	36.87	-163.80	-1,892.82	-662.16	1,737.26	1,696.08	41.18	42.190	
5,100.00	1,962.78	3,856.00	3,056.02	67.45	36.87	-163.80	-1,892.82	-662.16	1,820.04	1,777.97	42.07	43.264	
5,200.00	1,953.46	3,856.00	3,056.02	69.42	36.87	-163.80	-1,892.82	-662.16	1,904.47	1,861.51	42.96	44.333	
5,300.00	1,944.14	3,856.00	3,056.02	71.40	36.87	-163.80	-1,892.82	-662.16	1,990.34	1,946.49	43.85	45.390	
5,400.00	1,934.81	3,856.00	3,056.02	73.37	36.87	-163.80	-1,892.82	-662.16	2,077.48	2,032.74	44.74	46.434	
5,500.00	1,925.49	3,856.00	3,056.02	75.34	36.87	-163.80	-1,892.82	-662.16	2,165.73	2,120.09	45.63	47.461	
5,600.00	1,916.16	3,856.00	3,056.02	77.32	36.87	-163.80	-1,892.82	-662.16	2,254.96	2,208.43	46.52	48.469	

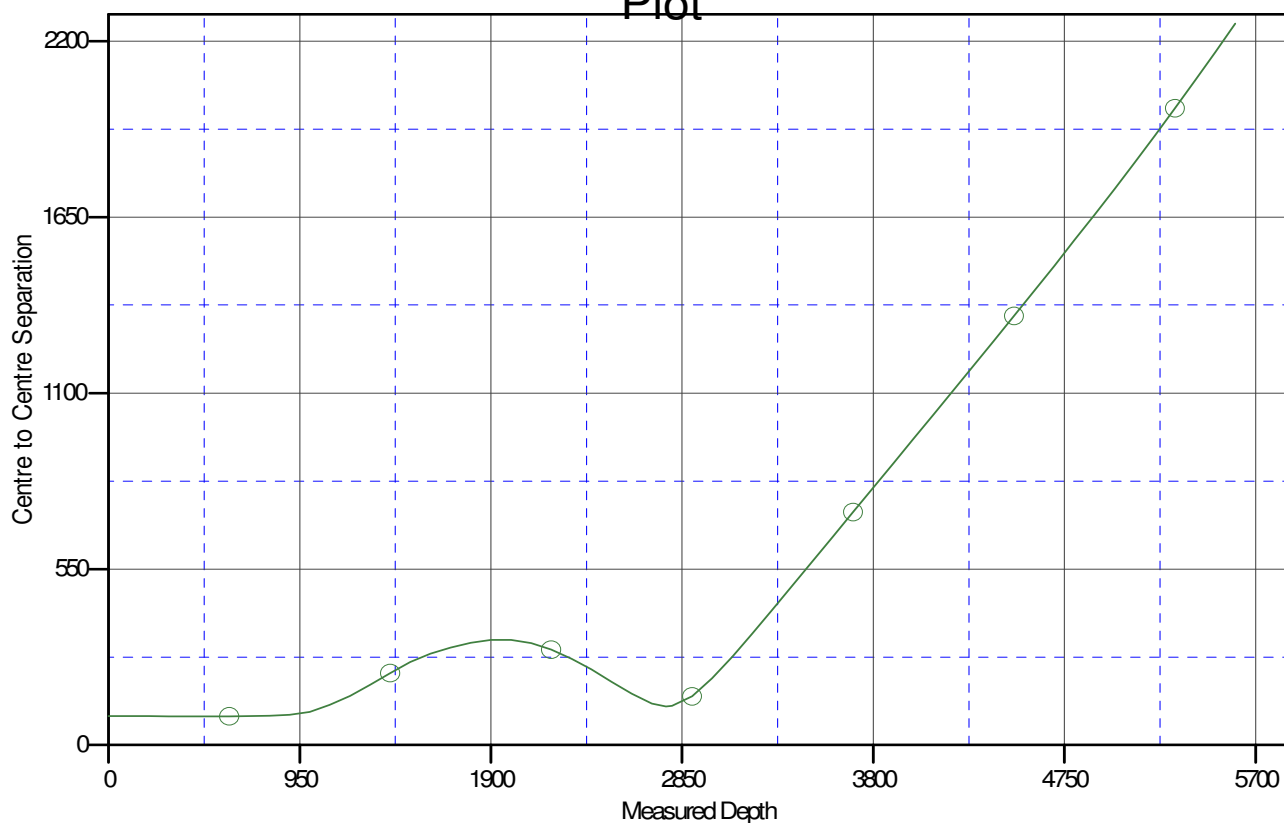
CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Company:	SHELL E&P	Local Co-ordinate Reference:	Well WOOD GULCH 2-36
Project:	MOFFAT COUNTY, CO	TVD Reference:	KB @ 6584.20ft (Original Well Elev)
Reference Site:	WOOD GULCH 2-36	MD Reference:	KB @ 6584.20ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	True
Reference Well:	WOOD GULCH 2-36	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	WOOD GULCH 2-36	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #7	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 6584.20ft (Original Well Elev) Coordinates are relative to: WOOD GULCH 2-36
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W Grid Convergence at Surface is: -1.40°

Ladder Plot



LEGEND

i, WOOD GULCH 1-36, WOOD GULCH 1-36 V0



Company:	SHELL E&P	Local Co-ordinate Reference:	Well WOOD GULCH 2-36
Project:	MOFFAT COUNTY, CO	TVD Reference:	KB @ 6584.20ft (Original Well Elev)
Reference Site:	WOOD GULCH 2-36	MD Reference:	KB @ 6584.20ft (Original Well Elev)
Site Error:	0.00 ft	North Reference:	True
Reference Well:	WOOD GULCH 2-36	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	WOOD GULCH 2-36	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #7	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 6584.20ft (Original Well Elev) Coordinates are relative to: WOOD GULCH 2-36
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W Grid Convergence at Surface is: -1.40°

