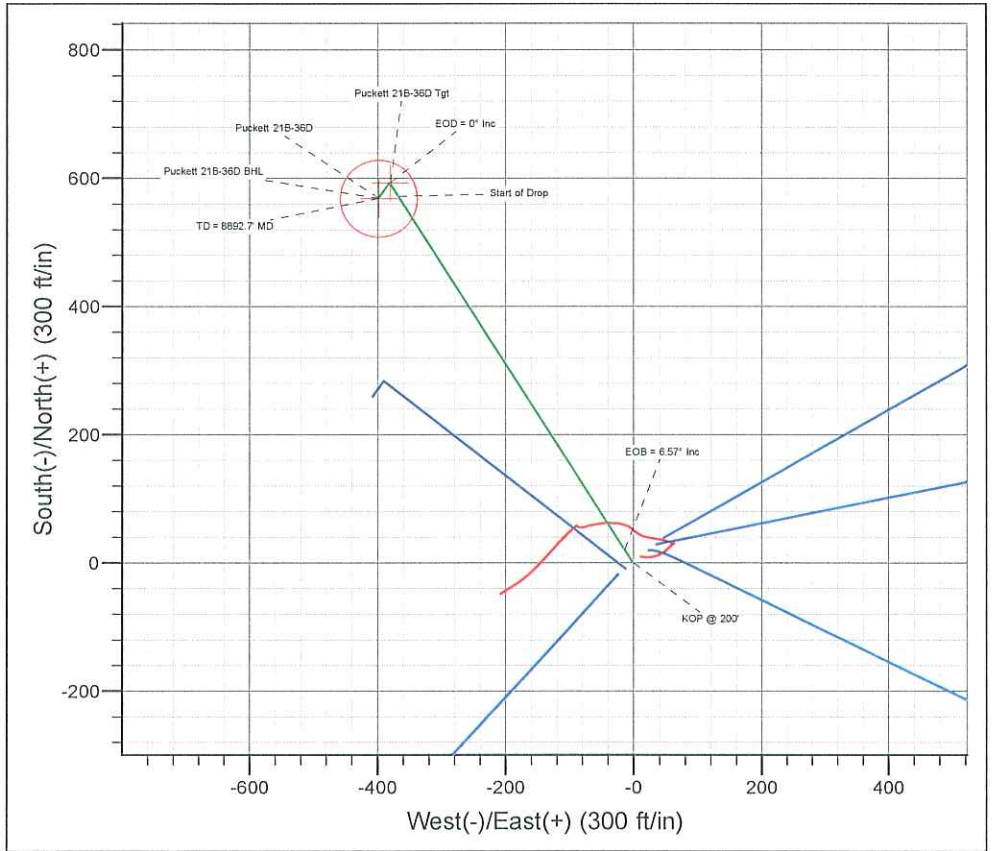
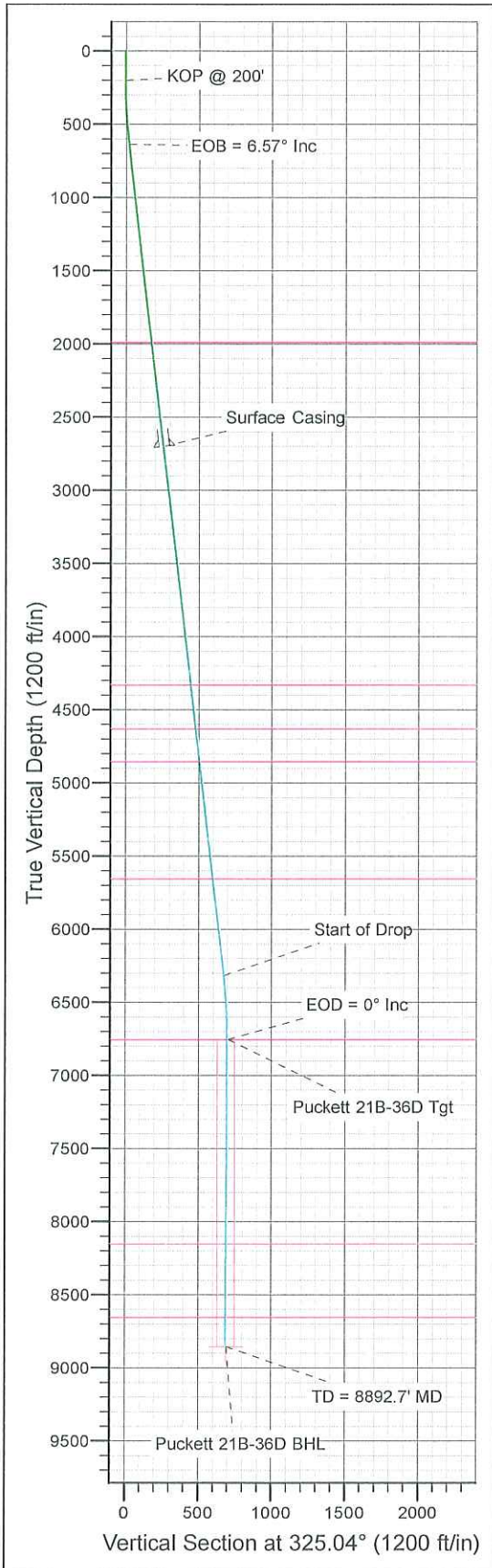




Azimuths to True North
 Magnetic North: 10.57°
 Magnetic Field
 Strength: 52314.0snT
 Dip Angle: 65.73°
 Date: 2010/05/07
 Model: IGRF2010-14

WELL DETAILS: Puckett 21B-36D

+N/-S 0.0 +E/-W 0.0 Northing 1612088.13 Ground Level: 8204.0 Longitude Slot
 Easting 2246587.87 Latitude 39° 29' 0.830 N 108° 10' 10.880 W



ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	KOP @ 200'
637.3	638.3	EOB = 6.57° Inc
6315.7	6354.2	Start of Drop
6753.0	6792.5	EOD = 0° Inc
8853.0	8892.7	TD = 8892.7' MD

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1988.0	1997.9	Wasatch
4328.0	4353.4	Wasatch "G" Sand
4628.0	4655.4	Fort Union
4853.0	4881.9	Base Fort Union
5653.0	5687.2	Mesaverde/Williams Fk
6753.0	6792.5	Top Gas Cell
8153.0	8192.6	Cameo
8653.0	8692.7	Rollins

ON 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	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	638.3	6.57	327.34	637.3	21.1	-13.6	1.50	327.34	25.1	
4	6354.2	6.57	327.34	6315.7	572.1	-366.7	0.00	0.00	679.0	
5	6792.5	0.00	0.00	6753.0	593.2	-380.3	1.50	180.00	704.1	Puckett 21B-36D Tgt
6	7150.2	0.89	214.98	7110.7	590.9	-381.9	0.25	214.98	703.1	
7	8892.7	0.89	214.98	8853.0	568.6	-397.5	0.00	0.00	693.8	Puckett 21B-36D BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Puckett 21B-36D Tgt	6753.0	593.2	-380.3	39° 29' 6.693 N	108° 10' 15.731 W	Point
Puckett 21B-36D BHL	8853.0	568.6	-397.5	39° 29' 6.450 N	108° 10' 15.950 W	Circle (Radius: 60.0)

CASING DETAILS

TVD	MD	Name	Size
2700.0	2714.6	Surface Casing	

Plan: Plan #1 (Puckett 21B-36D/DD)

Created By: Jon Schweigert Date: 9:27, May 11 2010
 Checked: _____ Date: _____
 Reviewed: _____ Date: _____
 Approved: _____ Date: _____



Database:	RMR1 Database	Local Co-ordinate Reference:	Well Puckett 21B-36D
Company:	Petroleum Development Corp.	TVD Reference:	Puckett 21B-36D KBE @ 8228.0ft (H&P 318)
Project:	Mesa	MD Reference:	Puckett 21B-36D KBE @ 8228.0ft (H&P 318)
Site:	NESW Sec 36-T6S-R97W	North Reference:	True
Well:	Puckett 21B-36D	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

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

Site	NESW Sec 36-T6S-R97W				
Site Position:		Northing:	1,612,095.79 ft	Latitude:	39° 29' 0.904 N
From:	Lat/Long	Easting:	2,246,581.45 ft	Longitude:	108° 10' 10.965 W
Position Uncertainty:	0.0 ft	Slot Radius:		Grid Convergence:	-1.68 °

Well	Puckett 21B-36D					
Well Position	+N/-S	-7.5 ft	Northing:	1,612,088.12 ft	Latitude:	39° 29' 0.830 N
	+E/-W	6.7 ft	Easting:	2,246,587.87 ft	Longitude:	108° 10' 10.880 W
Position Uncertainty		0.0 ft	Wellhead Elevation:		Ground Level:	8,204.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010-14	2010/05/07	10.57	65.73	52,314

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	325.04

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
638.3	6.57	327.34	637.3	21.1	-13.6	1.50	1.50	0.00	327.34	
6,354.2	6.57	327.34	6,315.7	572.1	-366.7	0.00	0.00	0.00	0.00	
6,792.5	0.00	0.00	6,753.0	593.2	-380.3	1.50	-1.50	0.00	180.00	Puckett 21B-36D Tgt
7,150.2	0.89	214.98	7,110.7	590.9	-381.9	0.25	0.25	-40.54	214.98	
8,892.7	0.89	214.98	8,853.0	568.6	-397.5	0.00	0.00	0.00	0.00	Puckett 21B-36D BHL



Database:	RMR1 Database	Local Co-ordinate Reference:	Well Puckett 21B-36D
Company:	Petroleum Development Corp.	TVD Reference:	Puckett 21B-36D KBE @ 8228.0ft (H&P 318)
Project:	Mesa	MD Reference:	Puckett 21B-36D KBE @ 8228.0ft (H&P 318)
Site:	NESW Sec 36-T6S-R97W	North Reference:	True
Well:	Puckett 21B-36D	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey											
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	Subsea Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.0	0.00	0.00	0.0	-8,228.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.00	0.00	100.0	-8,128.0	0.0	0.0	0.0	0.00	0.00	0.00	
KOP @ 200'											
200.0	0.00	0.00	200.0	-8,028.0	0.0	0.0	0.0	0.00	0.00	0.00	
300.0	1.50	327.34	300.0	-7,928.0	1.1	-0.7	1.3	1.50	1.50	0.00	
400.0	3.00	327.34	399.9	-7,828.1	4.4	-2.8	5.2	1.50	1.50	0.00	
500.0	4.50	327.34	499.7	-7,728.3	9.9	-6.4	11.8	1.50	1.50	0.00	
600.0	6.00	327.34	599.3	-7,628.7	17.6	-11.3	20.9	1.50	1.50	0.00	
EOB = 6.57° Inc											
638.3	6.57	327.34	637.3	-7,590.7	21.1	-13.6	25.1	1.50	1.50	0.00	
700.0	6.57	327.34	698.6	-7,529.4	27.1	-17.4	32.2	0.00	0.00	0.00	
800.0	6.57	327.34	798.0	-7,430.0	36.7	-23.5	43.6	0.00	0.00	0.00	
900.0	6.57	327.34	897.3	-7,330.7	46.4	-29.7	55.0	0.00	0.00	0.00	
1,000.0	6.57	327.34	996.7	-7,231.3	56.0	-35.9	66.5	0.00	0.00	0.00	
1,100.0	6.57	327.34	1,096.0	-7,132.0	65.6	-42.1	77.9	0.00	0.00	0.00	
1,200.0	6.57	327.34	1,195.3	-7,032.7	75.3	-48.3	89.4	0.00	0.00	0.00	
1,300.0	6.57	327.34	1,294.7	-6,933.3	84.9	-54.4	100.8	0.00	0.00	0.00	
1,400.0	6.57	327.34	1,394.0	-6,834.0	94.6	-60.6	112.2	0.00	0.00	0.00	
1,500.0	6.57	327.34	1,493.4	-6,734.6	104.2	-66.8	123.7	0.00	0.00	0.00	
1,600.0	6.57	327.34	1,592.7	-6,635.3	113.8	-73.0	135.1	0.00	0.00	0.00	
1,700.0	6.57	327.34	1,692.1	-6,535.9	123.5	-79.2	146.6	0.00	0.00	0.00	
1,800.0	6.57	327.34	1,791.4	-6,436.6	133.1	-85.3	158.0	0.00	0.00	0.00	
1,900.0	6.57	327.34	1,890.7	-6,337.3	142.8	-91.5	169.4	0.00	0.00	0.00	
Wasatch											
1,997.9	6.57	327.34	1,988.0	-6,240.0	152.2	-97.6	180.6	0.00	0.00	0.00	
2,000.0	6.57	327.34	1,990.1	-6,237.9	152.4	-97.7	180.9	0.00	0.00	0.00	
2,100.0	6.57	327.34	2,089.4	-6,138.6	162.0	-103.9	192.3	0.00	0.00	0.00	
2,200.0	6.57	327.34	2,188.8	-6,039.2	171.7	-110.1	203.8	0.00	0.00	0.00	
2,300.0	6.57	327.34	2,288.1	-5,939.9	181.3	-116.2	215.2	0.00	0.00	0.00	
2,400.0	6.57	327.34	2,387.5	-5,840.5	190.9	-122.4	226.6	0.00	0.00	0.00	
2,500.0	6.57	327.34	2,486.8	-5,741.2	200.6	-128.6	238.1	0.00	0.00	0.00	
2,600.0	6.57	327.34	2,586.1	-5,641.9	210.2	-134.8	249.5	0.00	0.00	0.00	
2,700.0	6.57	327.34	2,685.5	-5,542.5	219.9	-140.9	260.9	0.00	0.00	0.00	
Surface Casing											
2,714.6	6.57	327.34	2,700.0	-5,528.0	221.3	-141.9	262.6	0.00	0.00	0.00	
2,800.0	6.57	327.34	2,784.8	-5,443.2	229.5	-147.1	272.4	0.00	0.00	0.00	
2,900.0	6.57	327.34	2,884.2	-5,343.8	239.1	-153.3	283.8	0.00	0.00	0.00	
3,000.0	6.57	327.34	2,983.5	-5,244.5	248.8	-159.5	295.3	0.00	0.00	0.00	
3,100.0	6.57	327.34	3,082.9	-5,145.1	258.4	-165.7	306.7	0.00	0.00	0.00	
3,200.0	6.57	327.34	3,182.2	-5,045.8	268.0	-171.8	318.1	0.00	0.00	0.00	
3,300.0	6.57	327.34	3,281.5	-4,946.5	277.7	-178.0	329.6	0.00	0.00	0.00	
3,400.0	6.57	327.34	3,380.9	-4,847.1	287.3	-184.2	341.0	0.00	0.00	0.00	
3,500.0	6.57	327.34	3,480.2	-4,747.8	297.0	-190.4	352.5	0.00	0.00	0.00	
3,600.0	6.57	327.34	3,579.6	-4,648.4	306.6	-196.6	363.9	0.00	0.00	0.00	
3,700.0	6.57	327.34	3,678.9	-4,549.1	316.2	-202.7	375.3	0.00	0.00	0.00	
3,800.0	6.57	327.34	3,778.2	-4,449.8	325.9	-208.9	386.8	0.00	0.00	0.00	
3,900.0	6.57	327.34	3,877.6	-4,350.4	335.5	-215.1	398.2	0.00	0.00	0.00	
4,000.0	6.57	327.34	3,976.9	-4,251.1	345.2	-221.3	409.7	0.00	0.00	0.00	
4,100.0	6.57	327.34	4,076.3	-4,151.7	354.8	-227.5	421.1	0.00	0.00	0.00	
4,200.0	6.57	327.34	4,175.6	-4,052.4	364.4	-233.6	432.5	0.00	0.00	0.00	
4,300.0	6.57	327.34	4,275.0	-3,953.0	374.1	-239.8	444.0	0.00	0.00	0.00	
Wasatch "G" Sand											
4,353.4	6.57	327.34	4,328.0	-3,900.0	379.2	-243.1	450.1	0.00	0.00	0.00	
4,400.0	6.57	327.34	4,374.3	-3,853.7	383.7	-246.0	455.4	0.00	0.00	0.00	

Database:	RMR1 Database	Local Co-ordinate Reference:	Well Puckett 21B-36D
Company:	Petroleum Development Corp.	TVD Reference:	Puckett 21B-36D KBE @ 8228.0ft (H&P 318)
Project:	Mesa	MD Reference:	Puckett 21B-36D KBE @ 8228.0ft (H&P 318)
Site:	NESW Sec 36-T6S-R97W	North Reference:	True
Well:	Puckett 21B-36D	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey											
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	Subsea Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,500.0	6.57	327.34	4,473.6	-3,754.4	393.3	-252.2	466.9	0.00	0.00	0.00	
4,600.0	6.57	327.34	4,573.0	-3,655.0	403.0	-258.4	478.3	0.00	0.00	0.00	
Fort Union											
4,655.4	6.57	327.34	4,628.0	-3,600.0	408.3	-261.8	484.6	0.00	0.00	0.00	
4,700.0	6.57	327.34	4,672.3	-3,555.7	412.6	-264.5	489.7	0.00	0.00	0.00	
4,800.0	6.57	327.34	4,771.7	-3,456.3	422.3	-270.7	501.2	0.00	0.00	0.00	
Base Fort Union											
4,881.9	6.57	327.34	4,853.0	-3,375.0	430.1	-275.8	510.5	0.00	0.00	0.00	
4,900.0	6.57	327.34	4,871.0	-3,357.0	431.9	-276.9	512.6	0.00	0.00	0.00	
5,000.0	6.57	327.34	4,970.4	-3,257.6	441.5	-283.1	524.1	0.00	0.00	0.00	
5,100.0	6.57	327.34	5,069.7	-3,158.3	451.2	-289.2	535.5	0.00	0.00	0.00	
5,200.0	6.57	327.34	5,169.0	-3,059.0	460.8	-295.4	546.9	0.00	0.00	0.00	
5,300.0	6.57	327.34	5,268.4	-2,959.6	470.4	-301.6	558.4	0.00	0.00	0.00	
5,400.0	6.57	327.34	5,367.7	-2,860.3	480.1	-307.8	569.8	0.00	0.00	0.00	
5,500.0	6.57	327.34	5,467.1	-2,760.9	489.7	-314.0	581.3	0.00	0.00	0.00	
5,600.0	6.57	327.34	5,566.4	-2,661.6	499.4	-320.1	592.7	0.00	0.00	0.00	
Mesaverde/Williams Fk *											
5,687.2	6.57	327.34	5,653.0	-2,575.0	507.8	-325.5	602.7	0.00	0.00	0.00	
5,700.0	6.57	327.34	5,665.8	-2,562.2	509.0	-326.3	604.1	0.00	0.00	0.00	
5,800.0	6.57	327.34	5,765.1	-2,462.9	518.6	-332.5	615.6	0.00	0.00	0.00	
5,900.0	6.57	327.34	5,864.4	-2,363.6	528.3	-338.7	627.0	0.00	0.00	0.00	
6,000.0	6.57	327.34	5,963.8	-2,264.2	537.9	-344.9	638.5	0.00	0.00	0.00	
6,100.0	6.57	327.34	6,063.1	-2,164.9	547.6	-351.0	649.9	0.00	0.00	0.00	
6,200.0	6.57	327.34	6,162.5	-2,065.5	557.2	-357.2	661.3	0.00	0.00	0.00	
6,300.0	6.57	327.34	6,261.8	-1,966.2	566.8	-363.4	672.8	0.00	0.00	0.00	
Start of Drop											
6,354.2	6.57	327.34	6,315.7	-1,912.3	572.1	-366.7	679.0	0.00	0.00	0.00	
6,400.0	5.89	327.34	6,361.2	-1,866.8	576.2	-369.4	683.9	1.50	-1.50	0.00	
6,500.0	4.39	327.34	6,460.8	-1,767.2	583.8	-374.3	692.9	1.50	-1.50	0.00	
6,600.0	2.89	327.34	6,560.6	-1,667.4	589.1	-377.7	699.2	1.50	-1.50	0.00	
6,700.0	1.39	327.34	6,660.5	-1,567.5	592.3	-379.7	703.0	1.50	-1.50	0.00	
EOD = 0° Inc - Top Gas Cell - Puckett 21B-36D Tgt											
6,792.5	0.00	0.00	6,753.0	-1,475.0	593.2	-380.3	704.1	1.50	-1.50	0.00	
6,800.0	0.02	214.98	6,760.5	-1,467.5	593.2	-380.3	704.1	0.25	0.25	0.00	
6,900.0	0.27	214.98	6,860.5	-1,367.5	593.0	-380.4	704.0	0.25	0.25	0.00	
7,000.0	0.52	214.98	6,960.5	-1,267.5	592.4	-380.8	703.8	0.25	0.25	0.00	
7,100.0	0.77	214.98	7,060.5	-1,167.5	591.5	-381.5	703.4	0.25	0.25	0.00	
7,150.2	0.89	214.98	7,110.7	-1,117.3	590.9	-381.9	703.1	0.25	0.25	0.00	
7,200.0	0.89	214.98	7,160.5	-1,067.5	590.3	-382.3	702.9	0.00	0.00	0.00	
7,300.0	0.89	214.98	7,260.5	-967.5	589.0	-383.2	702.3	0.00	0.00	0.00	
7,400.0	0.89	214.98	7,360.4	-867.6	587.7	-384.1	701.8	0.00	0.00	0.00	
7,500.0	0.89	214.98	7,460.4	-767.6	586.4	-385.0	701.2	0.00	0.00	0.00	
7,600.0	0.89	214.98	7,560.4	-667.6	585.2	-385.9	700.7	0.00	0.00	0.00	
7,700.0	0.89	214.98	7,660.4	-567.6	583.9	-386.8	700.2	0.00	0.00	0.00	
7,800.0	0.89	214.98	7,760.4	-467.6	582.6	-387.7	699.6	0.00	0.00	0.00	
7,900.0	0.89	214.98	7,860.4	-367.6	581.3	-388.6	699.1	0.00	0.00	0.00	
8,000.0	0.89	214.98	7,960.4	-267.6	580.0	-389.5	698.6	0.00	0.00	0.00	
8,100.0	0.89	214.98	8,060.4	-167.6	578.8	-390.4	698.0	0.00	0.00	0.00	
Cameo											
8,192.6	0.89	214.98	8,153.0	-75.0	577.6	-391.2	697.5	0.00	0.00	0.00	
8,200.0	0.89	214.98	8,160.4	-67.6	577.5	-391.3	697.5	0.00	0.00	0.00	
8,300.0	0.89	214.98	8,260.3	32.3	576.2	-392.2	697.0	0.00	0.00	0.00	
8,400.0	0.89	214.98	8,360.3	132.3	574.9	-393.1	696.4	0.00	0.00	0.00	



Database:	RMR1 Database	Local Co-ordinate Reference:	Well Puckett 21B-36D
Company:	Petroleum Development Corp.	TVD Reference:	Puckett 21B-36D KBE @ 8228.0ft (H&P 318)
Project:	Mesa	MD Reference:	Puckett 21B-36D KBE @ 8228.0ft (H&P 318)
Site:	NESW Sec 36-T6S-R97W	North Reference:	True
Well:	Puckett 21B-36D	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey											
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	Subsea Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
8,500.0	0.89	214.98	8,460.3	232.3	573.7	-394.0	695.9	0.00	0.00	0.00	
8,600.0	0.89	214.98	8,560.3	332.3	572.4	-394.9	695.4	0.00	0.00	0.00	
Rollins											
8,692.7	0.89	214.98	8,653.0	425.0	571.2	-395.7	694.9	0.00	0.00	0.00	
8,700.0	0.89	214.98	8,660.3	432.3	571.1	-395.8	694.8	0.00	0.00	0.00	
8,800.0	0.89	214.98	8,760.3	532.3	569.8	-396.7	694.3	0.00	0.00	0.00	
TD = 8892.7' MD - Puckett 21B-36D BHL											
8,892.7	0.89	214.98	8,853.0	625.0	568.6	-397.5	693.8	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
Puckett 21B-36D Tgt - hit/miss target - Shape - Point	0.00	0.00	6,753.0	593.2	-380.3	1,612,692.24	2,246,225.17	39° 29' 6.693 N	108° 10' 15.731 W	
Puckett 21B-36D BHL - plan hits target center - Circle (radius 60.0)	0.00	0.00	8,853.0	568.6	-397.5	1,612,668.19	2,246,207.26	39° 29' 6.450 N	108° 10' 15.950 W	

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
2,714.6	2,700.0	Surface Casing			

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,997.9	1,988.0	Wasatch				
4,353.4	4,328.0	Wasatch "G" Sand				
4,655.4	4,628.0	Fort Union				
4,881.9	4,853.0	Base Fort Union				
5,687.2	5,653.0	Mesaverde/Williams Fk *				
6,792.5	6,753.0	Top Gas Cell				
8,192.6	8,153.0	Cameo				
8,692.7	8,653.0	Rollins				



Database:	RMR1 Database	Local Co-ordinate Reference:	Well Puckett 21B-36D
Company:	Petroleum Development Corp.	TVD Reference:	Puckett 21B-36D KBE @ 8228.0ft (H&P 318)
Project:	Mesa	MD Reference:	Puckett 21B-36D KBE @ 8228.0ft (H&P 318)
Site:	NESW Sec 36-T6S-R97W	North Reference:	True
Well:	Puckett 21B-36D	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
200.0	200.0	0.0	0.0	KOP @ 200'	
638.3	637.3	21.1	-13.6	EOB = 6.57° Inc	
6,354.2	6,315.7	572.1	-366.7	Start of Drop	
6,792.5	6,753.0	593.2	-380.3	EOD = 0° Inc	
8,892.7	8,853.0	568.6	-397.5	TD = 8892.7' MD	