

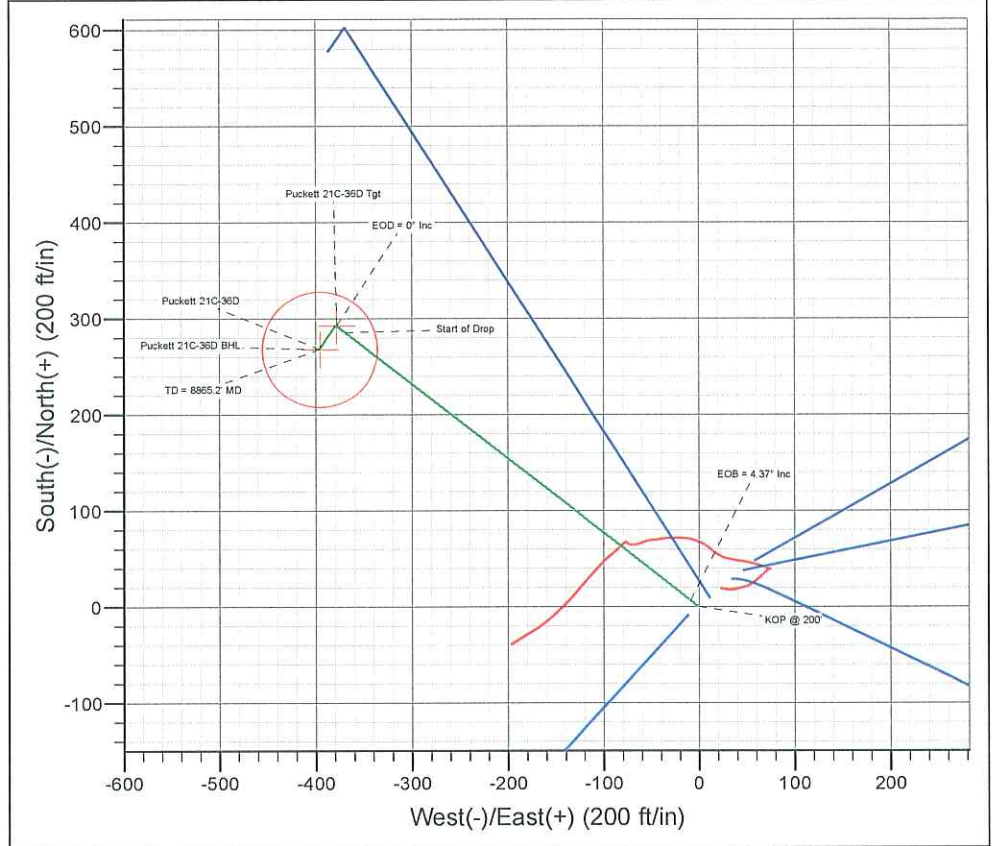
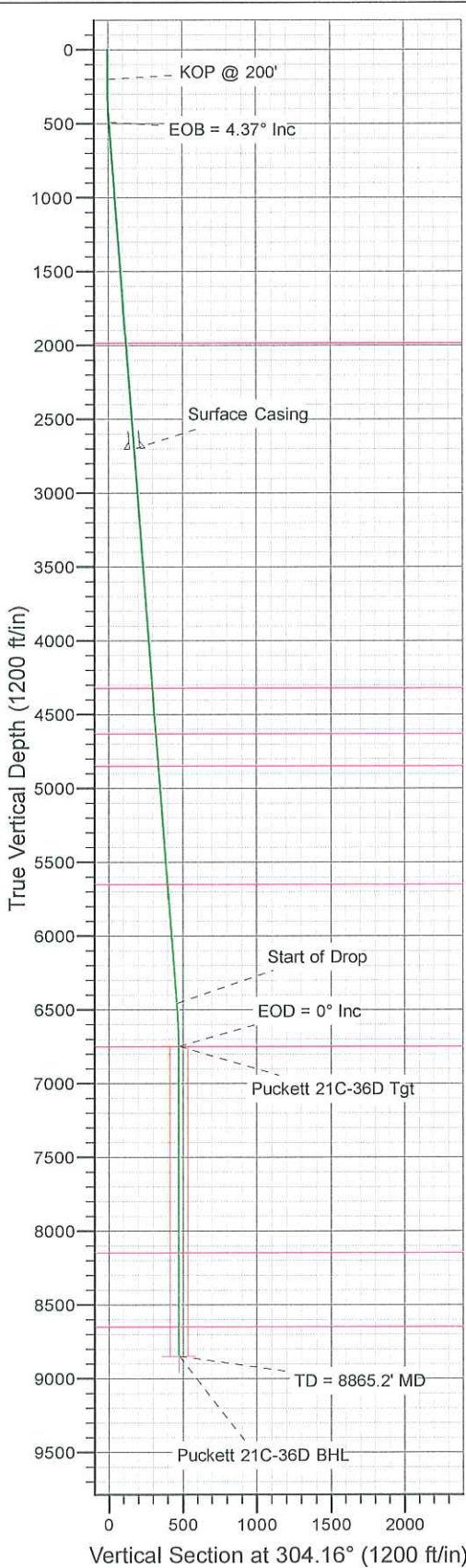


Azimuths to True North
 Magnetic North: 10.57°

Magnetic Field
 Strength: 52314.0nT
 Dip Angle: 65.73°
 Date: 2010/05/07
 Model: IGRF2010-14

WELL DETAILS: Puckett 21C-36D

+N/-S	+E/-W	Northing	Ground Level:	8203.0	Longitude	Slot
0.0	0.0	1612079.37	Easting	2246575.85	Latitude	
				39° 29' 0.740 N	108° 10' 11.030 W	



ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	KOP @ 200'
491.0	491.3	EOB = 4.37° Inc
6456.0	6473.6	Start of Drop
6747.0	6765.0	EOD = 0° Inc
8847.0	8865.2	TD = 8865.2' MD

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1982.0	1986.6	Wasatch
4317.0	4328.4	Wasatch "G" Sand
4627.0	4639.3	Fort Union
4847.0	4850.0	Base Fort Union
5647.0	5662.3	Mesaverde/Williams Fk *
6747.0	6765.0	Top Gas Cell
8147.0	8165.1	Cameo
8647.0	8665.2	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	491.3	4.37	307.76	491.0	6.8	-8.8	1.50	307.76	11.1	
4	6473.6	4.37	307.76	6456.0	285.9	-369.1	0.00	0.00	466.0	
5	6765.0	0.00	0.00	6747.0	292.7	-377.9	1.50	180.00	477.1	Puckett 21C-36D Tgt
6	7123.1	0.90	215.07	7105.1	290.4	-379.5	0.25	215.07	477.1	
7	8865.2	0.90	215.07	8847.0	268.1	-395.1	0.00	0.00	477.5	Puckett 21C-36D BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Puckett 21C-36D Tgt	6747.0	292.7	-377.9	39° 29' 3.633 N	108° 10' 15.850 W	Point
Puckett 21C-36D BHL	8847.0	268.1	-395.1	39° 29' 3.390 N	108° 10' 16.070 W	Circle (Radius: 60.0)

CASING DETAILS

TVD	MD	Name	Size
2700.0	2706.7	Surface Casing	

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

Created By: Jon Schweigert Date: 9:53, May 11 2010
 Checked: _____ Date: _____
 Reviewed: _____ Date: _____
 Approved: _____ Date: _____





Database:	RMR1 Database	Local Co-ordinate Reference:	Well Puckett 21C-36D
Company:	Petroleum Development Corp.	TVD Reference:	Puckett 21C-36D KBE @ 8227.0ft (H&P 318)
Project:	Mesa	MD Reference:	Puckett 21C-36D KBE @ 8227.0ft (H&P 318)
Site:	NESW Sec 36-T6S-R97W	North Reference:	True
Well:	Puckett 21C-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 21C-36D					
Well Position	+N-S	-16.6 ft	Northing:	1,612,079.37 ft	Latitude:	39° 29' 0.740 N
	+E-W	-5.1 ft	Easting:	2,246,575.85 ft	Longitude:	108° 10' 11.030 W
Position Uncertainty		0.0 ft	Wellhead Elevation:		Ground Level:	8,203.0 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	304.16	

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	
491.3	4.37	307.76	491.0	6.8	-8.8	1.50	1.50	0.00	307.76	
6,473.6	4.37	307.76	6,456.0	285.9	-369.1	0.00	0.00	0.00	0.00	
6,765.0	0.00	0.00	6,747.0	292.7	-377.9	1.50	-1.50	0.00	180.00	Puckett 21C-36D Tgt
7,123.1	0.90	215.07	7,105.1	290.4	-379.5	0.25	0.25	-40.47	215.07	
8,865.2	0.90	215.07	8,847.0	268.1	-395.1	0.00	0.00	0.00	0.00	Puckett 21C-36D BHL



Petroleum Development Corporation

Nevis Energy Services

Planning Report



Database:	RMR1 Database	Local Co-ordinate Reference:	Well Puckett 21C-36D
Company:	Petroleum Development Corp.	TVD Reference:	Puckett 21C-36D KBE @ 8227.0ft (H&P 318)
Project:	Mesa	MD Reference:	Puckett 21C-36D KBE @ 8227.0ft (H&P 318)
Site:	NESW Sec 36-T6S-R97W	North Reference:	True
Well:	Puckett 21C-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	-8,227.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	-8,127.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP @ 200'										
200.0	0.00	0.00	200.0	-8,027.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	1.50	307.76	300.0	-7,927.0	0.8	-1.0	1.3	1.50	1.50	0.00
400.0	3.00	307.76	399.9	-7,827.1	3.2	-4.1	5.2	1.50	1.50	0.00
EOB = 4.37° Inc										
491.3	4.37	307.76	491.0	-7,736.0	6.8	-8.8	11.1	1.50	1.50	0.00
500.0	4.37	307.76	499.7	-7,727.3	7.2	-9.3	11.7	0.00	0.00	0.00
600.0	4.37	307.76	599.4	-7,627.6	11.9	-15.3	19.3	0.00	0.00	0.00
700.0	4.37	307.76	699.1	-7,527.9	16.5	-21.3	26.9	0.00	0.00	0.00
800.0	4.37	307.76	798.8	-7,428.2	21.2	-27.4	34.6	0.00	0.00	0.00
900.0	4.37	307.76	898.5	-7,328.5	25.9	-33.4	42.2	0.00	0.00	0.00
1,000.0	4.37	307.76	998.2	-7,228.8	30.5	-39.4	49.8	0.00	0.00	0.00
1,100.0	4.37	307.76	1,097.9	-7,129.1	35.2	-45.4	57.4	0.00	0.00	0.00
1,200.0	4.37	307.76	1,197.7	-7,029.3	39.9	-51.5	65.0	0.00	0.00	0.00
1,300.0	4.37	307.76	1,297.4	-6,929.6	44.5	-57.5	72.6	0.00	0.00	0.00
1,400.0	4.37	307.76	1,397.1	-6,829.9	49.2	-63.5	80.2	0.00	0.00	0.00
1,500.0	4.37	307.76	1,496.8	-6,730.2	53.9	-69.5	87.8	0.00	0.00	0.00
1,600.0	4.37	307.76	1,596.5	-6,630.5	58.5	-75.6	95.4	0.00	0.00	0.00
1,700.0	4.37	307.76	1,696.2	-6,530.8	63.2	-81.6	103.0	0.00	0.00	0.00
1,800.0	4.37	307.76	1,795.9	-6,431.1	67.9	-87.6	110.6	0.00	0.00	0.00
1,900.0	4.37	307.76	1,895.6	-6,331.4	72.5	-93.6	118.2	0.00	0.00	0.00
Wasatch										
1,986.6	4.37	307.76	1,982.0	-6,245.0	76.6	-98.8	124.8	0.00	0.00	0.00
2,000.0	4.37	307.76	1,995.3	-6,231.7	77.2	-99.7	125.8	0.00	0.00	0.00
2,100.0	4.37	307.76	2,095.0	-6,132.0	81.9	-105.7	133.4	0.00	0.00	0.00
2,200.0	4.37	307.76	2,194.8	-6,032.2	86.5	-111.7	141.0	0.00	0.00	0.00
2,300.0	4.37	307.76	2,294.5	-5,932.5	91.2	-117.7	148.6	0.00	0.00	0.00
2,400.0	4.37	307.76	2,394.2	-5,832.8	95.8	-123.7	156.2	0.00	0.00	0.00
2,500.0	4.37	307.76	2,493.9	-5,733.1	100.5	-129.8	163.8	0.00	0.00	0.00
2,600.0	4.37	307.76	2,593.6	-5,633.4	105.2	-135.8	171.4	0.00	0.00	0.00
2,700.0	4.37	307.76	2,693.3	-5,533.7	109.8	-141.8	179.0	0.00	0.00	0.00
Surface Casing										
2,706.7	4.37	307.76	2,700.0	-5,527.0	110.2	-142.2	179.5	0.00	0.00	0.00
2,800.0	4.37	307.76	2,793.0	-5,434.0	114.5	-147.8	186.6	0.00	0.00	0.00
2,900.0	4.37	307.76	2,892.7	-5,334.3	119.2	-153.9	194.2	0.00	0.00	0.00
3,000.0	4.37	307.76	2,992.4	-5,234.6	123.8	-159.9	201.8	0.00	0.00	0.00
3,100.0	4.37	307.76	3,092.1	-5,134.9	128.5	-165.9	209.4	0.00	0.00	0.00
3,200.0	4.37	307.76	3,191.8	-5,035.2	133.2	-171.9	217.0	0.00	0.00	0.00
3,300.0	4.37	307.76	3,291.6	-4,935.4	137.8	-178.0	224.7	0.00	0.00	0.00
3,400.0	4.37	307.76	3,391.3	-4,835.7	142.5	-184.0	232.3	0.00	0.00	0.00
3,500.0	4.37	307.76	3,491.0	-4,736.0	147.2	-190.0	239.9	0.00	0.00	0.00
3,600.0	4.37	307.76	3,590.7	-4,636.3	151.8	-196.0	247.5	0.00	0.00	0.00
3,700.0	4.37	307.76	3,690.4	-4,536.6	156.5	-202.1	255.1	0.00	0.00	0.00
3,800.0	4.37	307.76	3,790.1	-4,436.9	161.2	-208.1	262.7	0.00	0.00	0.00
3,900.0	4.37	307.76	3,889.8	-4,337.2	165.8	-214.1	270.3	0.00	0.00	0.00
4,000.0	4.37	307.76	3,989.5	-4,237.5	170.5	-220.1	277.9	0.00	0.00	0.00
4,100.0	4.37	307.76	4,089.2	-4,137.8	175.2	-226.1	285.5	0.00	0.00	0.00
4,200.0	4.37	307.76	4,188.9	-4,038.1	179.8	-232.2	293.1	0.00	0.00	0.00
4,300.0	4.37	307.76	4,288.6	-3,938.4	184.5	-238.2	300.7	0.00	0.00	0.00
Wasatch "G" Sand										
4,328.4	4.37	307.76	4,317.0	-3,910.0	185.8	-239.9	302.9	0.00	0.00	0.00
4,400.0	4.37	307.76	4,388.4	-3,838.6	189.2	-244.2	308.3	0.00	0.00	0.00



Petroleum Development Corporation

Nevis Energy Services

Planning Report



Database:	RMR1 Database	Local Co-ordinate Reference:	Well Puckett 21C-36D
Company:	Petroleum Development Corp.	TVD Reference:	Puckett 21C-36D KBE @ 8227.0ft (H&P 318)
Project:	Mesa	MD Reference:	Puckett 21C-36D KBE @ 8227.0ft (H&P 318)
Site:	NESW Sec 36-T6S-R97W	North Reference:	True
Well:	Puckett 21C-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	4.37	307.76	4,488.1	-3,738.9	193.8	-250.2	315.9	0.00	0.00	0.00
4,600.0	4.37	307.76	4,587.8	-3,639.2	198.5	-256.3	323.5	0.00	0.00	0.00
Fort Union										
4,639.3	4.37	307.76	4,627.0	-3,600.0	200.3	-258.6	326.5	0.00	0.00	0.00
4,700.0	4.37	307.76	4,687.5	-3,539.5	203.2	-262.3	331.1	0.00	0.00	0.00
4,800.0	4.37	307.76	4,787.2	-3,439.8	207.8	-268.3	338.7	0.00	0.00	0.00
Base Fort Union										
4,860.0	4.37	307.76	4,847.0	-3,380.0	210.6	-271.9	343.3	0.00	0.00	0.00
4,900.0	4.37	307.76	4,886.9	-3,340.1	212.5	-274.3	346.3	0.00	0.00	0.00
5,000.0	4.37	307.76	4,986.6	-3,240.4	217.1	-280.4	353.9	0.00	0.00	0.00
5,100.0	4.37	307.76	5,086.3	-3,140.7	221.8	-286.4	361.5	0.00	0.00	0.00
5,200.0	4.37	307.76	5,186.0	-3,041.0	226.5	-292.4	369.1	0.00	0.00	0.00
5,300.0	4.37	307.76	5,285.7	-2,941.3	231.1	-298.4	376.7	0.00	0.00	0.00
5,400.0	4.37	307.76	5,385.4	-2,841.6	235.8	-304.5	384.3	0.00	0.00	0.00
5,500.0	4.37	307.76	5,485.2	-2,741.8	240.5	-310.5	391.9	0.00	0.00	0.00
5,600.0	4.37	307.76	5,584.9	-2,642.1	245.1	-316.5	399.5	0.00	0.00	0.00
Mesaverde/Williams Fk *										
5,662.3	4.37	307.76	5,647.0	-2,580.0	248.0	-320.3	404.3	0.00	0.00	0.00
5,700.0	4.37	307.76	5,684.6	-2,542.4	249.8	-322.5	407.1	0.00	0.00	0.00
5,800.0	4.37	307.76	5,784.3	-2,442.7	254.5	-328.5	414.8	0.00	0.00	0.00
5,900.0	4.37	307.76	5,884.0	-2,343.0	259.1	-334.6	422.4	0.00	0.00	0.00
6,000.0	4.37	307.76	5,983.7	-2,243.3	263.8	-340.6	430.0	0.00	0.00	0.00
6,100.0	4.37	307.76	6,083.4	-2,143.6	268.5	-346.6	437.6	0.00	0.00	0.00
6,200.0	4.37	307.76	6,183.1	-2,043.9	273.1	-352.6	445.2	0.00	0.00	0.00
6,300.0	4.37	307.76	6,282.8	-1,944.2	277.8	-358.7	452.8	0.00	0.00	0.00
6,400.0	4.37	307.76	6,382.5	-1,844.5	282.5	-364.7	460.4	0.00	0.00	0.00
Start of Drop										
6,473.6	4.37	307.76	6,456.0	-1,771.0	285.9	-369.1	466.0	0.00	0.00	0.00
6,500.0	3.97	307.76	6,482.3	-1,744.7	287.1	-370.6	467.9	1.50	-1.50	0.00
6,600.0	2.47	307.76	6,582.1	-1,644.9	290.5	-375.1	473.5	1.50	-1.50	0.00
6,700.0	0.97	307.76	6,682.0	-1,545.0	292.4	-377.5	476.5	1.50	-1.50	0.00
EOD = 0° Inc - Top Gas Cell - Puckett 21C-36D Tgt										
6,765.0	0.00	0.00	6,747.0	-1,480.0	292.7	-377.9	477.1	1.50	-1.50	0.00
6,800.0	0.09	215.07	6,782.0	-1,445.0	292.7	-377.9	477.1	0.25	0.25	0.00
6,900.0	0.34	215.07	6,882.0	-1,345.0	292.4	-378.1	477.1	0.25	0.25	0.00
7,000.0	0.59	215.07	6,982.0	-1,245.0	291.7	-378.6	477.1	0.25	0.25	0.00
7,100.0	0.84	215.07	7,082.0	-1,145.0	290.7	-379.3	477.1	0.25	0.25	0.00
7,123.1	0.90	215.07	7,105.1	-1,121.9	290.4	-379.5	477.1	0.25	0.25	0.00
7,200.0	0.90	215.07	7,182.0	-1,045.0	289.4	-380.2	477.1	0.00	0.00	0.00
7,300.0	0.90	215.07	7,282.0	-945.0	288.1	-381.1	477.1	0.00	0.00	0.00
7,400.0	0.90	215.07	7,382.0	-845.0	286.9	-382.0	477.2	0.00	0.00	0.00
7,500.0	0.90	215.07	7,482.0	-745.0	285.6	-382.9	477.2	0.00	0.00	0.00
7,600.0	0.90	215.07	7,582.0	-645.0	284.3	-383.8	477.2	0.00	0.00	0.00
7,700.0	0.90	215.07	7,682.0	-545.0	283.0	-384.7	477.2	0.00	0.00	0.00
7,800.0	0.90	215.07	7,781.9	-445.1	281.8	-385.6	477.3	0.00	0.00	0.00
7,900.0	0.90	215.07	7,881.9	-345.1	280.5	-386.5	477.3	0.00	0.00	0.00
8,000.0	0.90	215.07	7,981.9	-245.1	279.2	-387.4	477.3	0.00	0.00	0.00
8,100.0	0.90	215.07	8,081.9	-145.1	277.9	-388.3	477.3	0.00	0.00	0.00
Cameo										
8,165.1	0.90	215.07	8,147.0	-80.0	277.1	-388.9	477.4	0.00	0.00	0.00
8,200.0	0.90	215.07	8,181.9	-45.1	276.6	-389.2	477.4	0.00	0.00	0.00
8,300.0	0.90	215.07	8,281.9	54.9	275.4	-390.1	477.4	0.00	0.00	0.00
8,400.0	0.90	215.07	8,381.9	154.9	274.1	-391.0	477.4	0.00	0.00	0.00

Database:	RMR1 Database	Local Co-ordinate Reference:	Well Puckett 21C-36D
Company:	Petroleum Development Corp.	TVD Reference:	Puckett 21C-36D KBE @ 8227.0ft (H&P 318)
Project:	Mesa	MD Reference:	Puckett 21C-36D KBE @ 8227.0ft (H&P 318)
Site:	NESW Sec 36-T6S-R97W	North Reference:	True
Well:	Puckett 21C-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	0.90	215.07	8,481.9	254.9	272.8	-391.9	477.4	0.00	0.00	0.00	
8,600.0	0.90	215.07	8,581.9	354.9	271.5	-392.8	477.5	0.00	0.00	0.00	
Rollins											
8,665.2	0.90	215.07	8,647.0	420.0	270.7	-393.4	477.5	0.00	0.00	0.00	
8,700.0	0.90	215.07	8,681.8	454.8	270.2	-393.7	477.5	0.00	0.00	0.00	
8,800.0	0.90	215.07	8,781.8	554.8	269.0	-394.6	477.5	0.00	0.00	0.00	
Puckett 21C-36D BHL											
8,865.2	0.90	215.07	8,847.0	620.0	268.1	-395.1	477.5	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 21C-36D Tgt - hit/miss target - Shape - Point	0.00	0.00	6,747.0	292.7	-377.9	1,612,383.04	2,246,206.72	39° 29' 3.633 N	108° 10' 15.850 W	
Puckett 21C-36D BHL - plan hits target center - Circle (radius 60.0)	0.00	0.00	8,847.0	268.1	-395.1	1,612,358.99	2,246,188.75	39° 29' 3.390 N	108° 10' 16.070 W	

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")		
2,706.7	2,700.0	Surface Casing				

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,986.6	1,982.0	Wasatch				
4,328.4	4,317.0	Wasatch "G" Sand				
4,639.3	4,627.0	Fort Union				
4,860.0	4,847.0	Base Fort Union				
5,662.3	5,647.0	Mesaverde/Williams Fk *				
6,765.0	6,747.0	Top Gas Cell				
8,165.1	8,147.0	Cameo				
8,665.2	8,647.0	Rollins				

Database:	RMR1 Database	Local Co-ordinate Reference:	Well Puckett 21C-36D
Company:	Petroleum Development Corp.	TVD Reference:	Puckett 21C-36D KBE @ 8227.0ft (H&P 318)
Project:	Mesa	MD Reference:	Puckett 21C-36D KBE @ 8227.0ft (H&P 318)
Site:	NESW Sec 36-T6S-R97W	North Reference:	True
Well:	Puckett 21C-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'
491.3	491.0	6.8	-8.8	EOB = 4.37° Inc
6,473.6	6,456.0	285.9	-369.1	Start of Drop
6,765.0	6,747.0	292.7	-377.9	EOD = 0° Inc
8,865.2	8,847.0	268.1	-395.1	TD = 8865.2' MD