



Survey Report

Company: Plains Exploration & Production Co.				Local Co-ordinate Reference:			
Project: Brush Creek				TVD Reference: McDaniel 14-4A KBE @ 7310.0ft (Grey Wolf 18)			
Site: NENW Sec 14-T9S-R94W				MID Reference: McDaniel 14-4A KBE @ 7310.0ft (Grey Wolf 18)			
Well: McDaniel 14-4A				North Reference: True			
Wellbore: DD				Survey Calculation Method: Minimum Curvature			
Design: DD				Database: EDM 2003.21 US Multi User DB			
Project: Brush Creek							
Map System: US State Plane 1983				System Datum: Mean Sea Level			
Geo Datum: North American Datum 1983							
Map Zone: Colorado Central Zone							
Site: NENW Sec 14-T9S-R94W							
Site Position:		Northing:		Latitude:		39.281568	
From:		Easting:		Longitude:		-107.853838	
Position Uncertainty:		Slot Radius:		Grid Convergence:		-1.48 °	
		0.0 ft		"			
Well: McDaniel 14-4A							
Well Position		Northing:		Latitude:		39.281431	
		+N/-S 0.0 ft		1,536,024.36 ft			
		+E/-W 0.0 ft		2,333,849.47 ft		Longitude: -107.853647	
Position Uncertainty		Wellhead Elevation:		ft		Ground Level: 7,286.0 ft	
		0.0 ft					
Wellbore: DD							
Magnetics: IGRF200510 9/19/2008 10.59 65.67 52.441							
Design: DD							
Audit Notes:							
Version:		1.0		Phase: ACTUAL		Tie On Depth: 0.0	
Vertical Section:		Depth From (TVD)		+N/-S		+E/-W	
		(ft)		(ft)		(ft)	
		0.0		0.0		0.0	
				Direction		(°)	
						295.67	
Survey Program: 94.0 8,240.0 Survey #1 (DD) Geolink MWD							
Survey: 94.0 8,240.0 Survey #1 (DD) Geolink MWD							
Survey							
Measured Depth		Inclination		Azimuth		Vertical	
(ft)		(°)		(°)		Depth	
						(ft)	
0.0		0.00		0.00		0.0	
94.0		0.30		29.80		94.0	
186.0		0.90		337.50		186.0	
278.0		1.70		308.00		278.0	
370.0		2.70		310.60		369.9	
462.0		3.80		307.30		461.8	
554.0		4.90		301.10		553.5	
646.0		6.20		297.30		645.1	
738.0		7.60		299.40		736.4	
831.0		8.70		295.70		828.4	
923.0		10.40		296.10		919.2	
1,016.0		12.30		296.80		1,010.3	
1,112.0		13.30		295.60		1,104.0	



Survey Report

Company: Plains Exploration & Production Co.				Local Co-ordinate Reference:					
Project: Brush Creek				TVD Reference:					
Site: NENW Sec 14-T9S-R94W				MD Reference:					
Well: McDaniel 14-4A				North Reference:					
Wellbore: DD				Survey Calculation Method:					
Design: DD				Database:					
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
1,208.0	13.70	292.30	1,197.3	60.9	-112.8	128.1	0.90	0.42	Well McDaniel 14-4A
1,303.0	14.80	293.70	1,289.4	70.1	-134.3	151.4	1.21	1.16	McDaniel 14-4A KBE @ 7310.0ft (Grey Wolf 18)
1,399.0	15.00	294.80	1,382.2	80.2	-156.9	176.1	0.36	0.21	McDaniel 14-4A KBE @ 7310.0ft (Grey Wolf 18)
1,493.0	15.20	291.80	1,472.9	89.9	-179.3	200.6	0.86	0.21	True
1,592.0	14.50	291.50	1,568.6	99.3	-202.9	225.9	0.71	-0.71	Minimum Curvature
1,687.0	14.80	292.20	1,660.5	108.2	-225.2	249.9	0.37	0.32	EDM 2003.21 US Multi User DB
1,783.0	14.70	292.80	1,753.4	117.5	-247.8	274.3	0.19	-0.10	
1,879.0	14.20	294.50	1,846.3	127.2	-269.7	298.2	0.68	-0.52	
1,975.0	13.40	295.00	1,939.5	136.7	-290.5	321.1	0.84	-0.83	
2,070.0	13.90	294.20	2,031.9	146.1	-310.9	343.5	0.56	0.53	
2,166.0	13.70	294.70	2,125.1	155.5	-331.8	366.4	0.24	-0.21	
2,262.0	14.10	296.70	2,218.3	165.5	-352.5	389.5	0.65	0.42	
2,358.0	13.80	296.90	2,311.4	176.0	-373.2	412.6	0.32	-0.31	
2,453.0	14.10	295.50	2,403.6	186.1	-393.8	435.5	0.48	0.32	
2,549.0	14.50	296.30	2,496.7	196.4	-415.1	459.2	0.46	0.42	
2,645.0	14.40	297.50	2,589.6	207.3	-436.4	483.2	0.33	-0.10	
2,740.0	14.90	297.00	2,681.5	218.3	-457.8	507.2	0.54	0.53	
2,836.0	14.90	296.50	2,774.3	229.4	-479.8	531.9	0.13	0.00	
2,932.0	15.10	298.60	2,867.0	240.9	-501.9	556.7	0.60	0.21	
3,028.0	14.20	300.30	2,959.9	252.8	-523.0	580.9	1.04	-0.94	
3,124.0	14.50	299.80	3,052.9	264.7	-543.6	604.6	0.34	0.31	
3,219.0	14.30	301.30	3,144.9	276.7	-564.0	628.2	0.45	-0.21	
3,315.0	14.10	300.00	3,238.0	288.7	-584.2	651.6	0.39	-0.21	
3,411.0	13.70	298.20	3,331.2	300.0	-604.4	674.7	0.61	-0.42	
3,507.0	14.00	298.30	3,424.4	310.8	-624.6	697.6	0.31	0.31	
3,603.0	13.70	296.20	3,517.6	321.4	-645.0	720.6	0.61	-0.31	
3,698.0	13.50	294.90	3,610.0	331.0	-665.2	742.9	0.38	-0.21	
3,794.0	14.20	295.90	3,703.2	340.9	-685.9	765.9	0.77	0.73	
3,890.0	14.00	294.60	3,796.3	350.8	-707.1	789.3	0.39	-0.21	
3,986.0	14.10	293.90	3,889.4	360.4	-728.3	812.6	0.21	0.10	
4,081.0	13.60	290.70	3,981.6	369.0	-749.4	835.3	0.96	-0.53	
4,177.0	13.50	288.50	4,075.0	376.6	-770.6	857.6	0.55	-0.10	
4,273.0	13.70	290.40	4,168.3	384.1	-791.8	880.1	0.51	0.21	
4,369.0	13.90	289.50	4,261.5	391.9	-813.4	902.9	0.31	0.21	
4,464.0	13.20	294.10	4,353.9	400.2	-834.0	925.0	1.35	-0.74	
4,560.0	13.80	296.00	4,447.2	409.7	-854.3	947.5	0.78	0.62	
4,656.0	12.70	292.80	4,540.7	418.8	-874.3	969.4	1.38	-1.15	
4,751.0	11.70	293.70	4,633.5	426.7	-892.8	989.5	1.07	-1.05	
4,847.0	11.30	295.40	4,727.6	434.6	-910.2	1,008.6	0.55	-0.42	
4,943.0	10.50	296.60	4,821.8	442.6	-926.5	1,026.8	0.87	-0.83	
5,039.0	9.50	297.30	4,916.4	450.1	-941.4	1,043.4	1.05	-1.04	
5,134.0	8.50	295.60	5,010.2	456.8	-954.7	1,058.3	1.09	-1.05	
5,230.0	6.90	295.50	5,105.3	462.3	-966.3	1,071.2	1.67	-1.67	
5,326.0	6.60	296.10	5,200.7	467.2	-976.4	1,082.5	0.32	-0.31	
5,422.0	5.90	294.90	5,296.1	471.7	-985.9	1,092.9	0.74	-0.73	
5,517.0	4.40	292.30	5,390.7	475.2	-993.7	1,101.4	1.60	-1.58	
5,613.0	3.90	303.20	5,486.5	478.3	-999.8	1,108.3	0.97	-0.52	
5,709.0	3.10	293.20	5,582.3	481.2	-1,004.9	1,114.2	1.05	-0.83	
5,805.0	3.30	292.60	5,678.1	483.2	-1,009.9	1,119.5	0.21	0.21	
5,900.0	2.20	294.70	5,773.0	485.1	-1,014.0	1,124.1	1.16	-1.16	
5,996.0	1.80	302.40	5,869.0	486.6	-1,017.0	1,127.4	0.50	-0.42	
6,092.0	1.50	321.70	5,964.9	488.4	-1,019.0	1,130.0	0.65	-0.31	
6,188.0	1.50	318.10	6,060.9	490.3	-1,020.7	1,132.3	0.10	0.00	

Survey Report

Company: Plains Exploration & Production Co.		Local Co-ordinate Reference: Well McDaniel 14-4A	
Project: Brush Creek		TVD Reference: McDaniel 14-4A KBE @ 7310.0ft (Grey Wolf 18)	
Site: NENW Sec 14-T9S-R94W		MD Reference: McDaniel 14-4A KBE @ 7310.0ft (Grey Wolf 18)	
Well: McDaniel 14-4A		North Reference: True	
Wellbore: DD		Survey Calculation Method: Minimum Curvature	
Design: DD		Database: EDM 2003.21 US Multi User 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
6,283.0	1.70	320.80	6,155.9	492.4	-1,022.4	1,134.8	0.22	0.21	
6,379.0	1.80	316.30	6,251.8	494.6	-1,024.3	1,137.5	0.18	0.10	
6,475.0	1.80	304.10	6,347.8	496.5	-1,026.6	1,140.4	0.40	0.00	
6,570.0	1.70	303.00	6,442.7	498.1	-1,029.0	1,143.2	0.11	-0.11	
6,666.0	1.30	287.20	6,538.7	499.2	-1,031.3	1,145.7	0.60	-0.42	
6,762.0	1.10	244.70	6,634.7	499.1	-1,033.1	1,147.4	0.93	-0.21	
6,857.0	0.80	221.70	6,729.7	498.2	-1,034.4	1,148.1	0.50	-0.32	
6,953.0	0.70	235.80	6,825.7	497.4	-1,035.3	1,148.6	0.22	-0.10	
7,049.0	1.50	217.70	6,921.6	496.1	-1,036.6	1,149.2	0.90	0.83	
7,144.0	2.00	216.20	7,016.6	493.8	-1,038.3	1,149.7	0.53	0.53	
7,240.0	2.00	227.30	7,112.5	491.3	-1,040.5	1,150.7	0.40	0.00	
7,336.0	1.90	234.60	7,208.5	489.2	-1,043.1	1,152.0	0.28	-0.10	
7,431.0	2.00	234.50	7,303.4	487.3	-1,045.7	1,153.6	0.11	0.11	
7,527.0	1.80	240.20	7,399.4	485.6	-1,048.4	1,155.3	0.29	-0.21	
7,623.0	2.00	240.00	7,495.3	484.0	-1,051.1	1,157.1	0.21	0.21	
7,719.0	1.90	242.00	7,591.3	482.4	-1,054.0	1,159.0	0.13	-0.10	
7,814.0	1.80	240.80	7,686.2	481.0	-1,056.7	1,160.7	0.11	-0.11	
7,910.0	1.80	238.60	7,782.2	479.5	-1,059.3	1,162.4	0.07	0.00	
8,006.0	1.80	238.60	7,878.1	477.9	-1,061.9	1,164.1	0.00	0.00	
8,101.0	1.70	240.20	7,973.1	476.4	-1,064.4	1,165.7	0.12	-0.11	
8,185.0	1.90	240.50	8,057.0	475.1	-1,066.6	1,167.2	0.24	0.24	Last DP Survey @ 8185'
8,240.0	1.90	240.50	8,112.0	474.2	-1,068.2	1,168.2	0.00	0.00	Projection to TD @ 8240' MD

Targets				
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	Longitude
- hit/miss target				
- Shape				
McDaniel 14-4A BHL	0.00	0.00	8,063.0	-107.857305
- survey misses target center by 38.9ft at 8185.0ft MD (8057.0 TVD, 475.1 N, -1066.6 E)				
- Rectangle (sides W100.0 H100.0 D0.0)				
McDaniel 14-4A Tgt	0.00	0.00	5,772.0	-107.857305
- survey misses target center by 24.8ft at 5900.0ft MD (5773.0 TVD, 485.1 N, -1014.0 E)				
- Point				

Survey Annotations			
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates	Comment
		+N-S (ft)	+E-W (ft)
8,185.0	8,057.0	475.1	-1,066.6
8,240.0	8,112.0	474.2	-1,068.2
			Last DP Survey @ 8185'
			Projection to TD @ 8240' MD

Checked By: \_\_\_\_\_

Approved By: \_\_\_\_\_

Date: \_\_\_\_\_



Survey Report - Geographic

<b>Company:</b> Plains Exploration & Production Co. <b>Project:</b> Brush Creek <b>Site:</b> NENW Sec 14-T9S-R94W <b>Well:</b> McDaniel 14-4A <b>Wellbore:</b> DD <b>Design:</b> DD	<b>Local Co-ordinate Reference:</b> TVD Reference: MD Reference: North Reference: Survey Calculation Method: Database:	Well McDaniel 14-4A McDaniel 14-4A KBE @ 7310.0ft (Grey Wolf 18) McDaniel 14-4A KBE @ 7310.0ft (Grey Wolf 18) True Minimum Curvature EDM 2003.21 US Multi User DB
<b>Project</b> Brush Creek		
<b>Map System:</b> US State Plane 1983 <b>Geo Datum:</b> North American Datum 1983 <b>Map Zone:</b> Colorado Central Zone	<b>System Datum:</b>  Mean Sea Level	
<b>Site</b> NENW Sec 14-T9S-R94W		
<b>Site Position:</b> From: Position Uncertainty:	<b>Northings:</b> Easting: Slot Radius:	<b>Latitude:</b> Longitude: Grid Convergence:
	1,536,075.65 ft 2,333,796.71 ft "	39,281,568 -107,853,838 -1.48 °
<b>Well</b> McDaniel 14-4A		
<b>Well Position</b> +N-S +E-W Position Uncertainty	<b>Northings:</b> Easting: Wellhead Elevation:	<b>Latitude:</b> Longitude: Ground Level:
	0.0 ft 0.0 ft 0.0 ft	1,536,024.36 ft 2,333,849.47 ft ft
		39,281,431 -107,853,647 7,286.0 ft
<b>Wellbore</b> DD		
<b>Magnetics</b>	<b>Model Name</b> IGRF200510	<b>Sample Date</b> 9/19/2008
		<b>Declination</b> (°) 10.59
		<b>Dip Angle</b> (°) 65.67
		<b>Field Strength</b> (nT) 52,441
<b>Design</b> DD		
<b>Audit Notes:</b>		
<b>Version:</b> 1.0	<b>Phase:</b> Phase: ACTUAL	<b>Tie On Depth:</b> 0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b> (ft) 0.0	<b>+N-S</b> (ft) 0.0
		<b>+E-W</b> (ft) 0.0
		<b>Direction</b> (°) 295.67
<b>Survey Program</b>		
<b>From</b> (ft) 94.0	<b>To</b> (ft) 8,240.0	<b>Date</b> 11/3/2008
<b>Survey (Wellbore)</b> Survey #1 (DD)		<b>Description</b> Geolink MWD
		Geolink MWD

Survey Report - Geographic

Company:	Plains Exploration & Production Co.	Local Co-ordinate Reference:	Well McDaniel 14-4A
Project:	Brush Creek	TVD Reference:	McDaniel 14-4A KBE @ 7310.0ft (Grey Wolf 18)
Site:	NE1/4 Sec 14-T9S-R94W	MD Reference:	McDaniel 14-4A KBE @ 7310.0ft (Grey Wolf 18)
Well:	McDaniel 14-4A	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 2003.21 US Multi User DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+W-S (ft)	+E-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	1,536,024.36	2,333,849.47	39.281431	-107.853647
94.0	0.30	29.80	94.0	0.2	0.1	1,536,024.57	2,333,849.59	39.281432	-107.853647
186.0	0.90	337.50	186.0	1.1	0.0	1,536,025.45	2,333,849.46	39.281434	-107.853647
278.0	1.70	308.00	278.0	2.6	-1.4	1,536,026.99	2,333,848.15	39.281438	-107.853652
370.0	2.70	310.60	369.9	4.8	-4.1	1,536,029.31	2,333,845.49	39.281444	-107.853662
462.0	3.80	307.30	461.8	8.1	-8.2	1,536,032.68	2,333,841.50	39.281453	-107.853676
554.0	4.90	301.10	553.5	12.0	-14.0	1,536,036.70	2,333,835.81	39.281464	-107.853696
646.0	6.20	297.30	645.1	16.3	-21.7	1,536,041.21	2,333,828.15	39.281476	-107.853724
738.0	7.60	299.40	736.4	21.6	-31.5	1,536,046.73	2,333,818.57	39.281490	-107.853758
831.0	8.70	295.70	828.4	27.6	-43.2	1,536,053.10	2,333,807.04	39.281507	-107.853799
923.0	10.40	296.10	919.2	34.3	-56.9	1,536,060.12	2,333,793.49	39.281525	-107.853848
1,016.0	12.30	296.80	1,010.3	42.5	-73.3	1,536,068.70	2,333,777.32	39.281573	-107.853906
1,112.0	13.30	295.60	1,104.0	51.8	-92.4	1,536,078.58	2,333,758.49	39.281573	-107.853906
1,208.0	13.70	292.30	1,197.3	60.9	-112.8	1,536,088.19	2,333,738.25	39.281598	-107.854046
1,303.0	14.80	293.70	1,289.4	70.1	-134.3	1,536,097.89	2,333,716.98	39.281623	-107.854122
1,399.0	15.00	294.80	1,382.2	80.2	-156.9	1,536,108.61	2,333,694.74	39.281651	-107.854201
1,493.0	15.20	291.80	1,472.9	89.9	-179.3	1,536,118.87	2,333,672.51	39.281678	-107.854281
1,592.0	14.50	291.50	1,568.6	99.3	-202.9	1,536,128.84	2,333,649.18	39.281703	-107.854364
1,687.0	14.80	292.20	1,660.5	108.2	-225.2	1,536,138.35	2,333,627.12	39.281728	-107.854443
1,783.0	14.70	292.80	1,753.4	117.5	-247.8	1,536,148.29	2,333,604.79	39.281754	-107.854522
1,879.0	14.20	294.50	1,846.3	127.2	-269.7	1,536,158.46	2,333,583.10	39.281780	-107.854600
1,975.0	13.40	295.00	1,939.5	136.7	-290.5	1,536,168.58	2,333,562.56	39.281806	-107.854673
2,070.0	13.90	294.20	2,031.9	146.1	-310.9	1,536,178.43	2,333,542.43	39.281832	-107.854745
2,166.0	13.70	294.70	2,125.1	155.5	-331.8	1,536,188.45	2,333,521.83	39.281858	-107.854819
2,262.0	14.10	296.70	2,218.3	165.5	-352.5	1,536,198.99	2,333,501.32	39.281885	-107.854892
2,358.0	13.80	296.90	2,311.4	176.0	-373.2	1,536,209.95	2,333,480.94	39.281914	-107.854965
2,453.0	14.10	295.50	2,403.6	186.1	-393.8	1,536,220.59	2,333,460.66	39.281942	-107.855038
2,549.0	14.50	296.30	2,496.7	196.4	-415.1	1,536,231.50	2,333,439.61	39.281970	-107.855113
2,645.0	14.40	297.50	2,589.6	207.3	-436.4	1,536,242.88	2,333,418.54	39.282000	-107.855189
2,740.0	14.90	297.00	2,681.5	218.3	-457.8	1,536,254.43	2,333,397.47	39.282030	-107.855264
2,836.0	14.90	296.50	2,774.3	229.4	-479.8	1,536,266.11	2,333,375.72	39.282061	-107.855342
2,932.0	15.10	298.60	2,867.0	240.9	-501.9	1,536,278.17	2,333,354.00	39.282092	-107.855420
3,028.0	14.20	300.30	2,959.9	252.8	-523.0	1,536,290.64	2,333,333.17	39.282125	-107.855495
3,124.0	14.50	299.80	3,052.9	264.7	-543.6	1,536,303.08	2,333,312.89	39.282158	-107.855568
3,219.0	14.30	301.30	3,144.9	276.7	-564.0	1,536,315.61	2,333,292.86	39.282191	-107.855639
3,315.0	14.10	300.00	3,238.0	288.7	-584.2	1,536,328.14	2,333,272.92	39.282224	-107.855711
3,411.0	13.70	298.20	3,331.2	300.0	-604.4	1,536,339.88	2,333,253.08	39.282255	-107.855782
3,507.0	14.00	298.30	3,424.4	310.8	-624.6	1,536,351.27	2,333,233.12	39.282284	-107.855854
3,603.0	13.70	296.20	3,517.6	321.4	-645.0	1,536,362.32	2,333,212.98	39.282313	-107.855926
3,698.0	13.50	294.90	3,610.0	331.0	-665.2	1,536,372.48	2,333,193.08	39.282340	-107.855997
3,794.0	14.00	294.60	3,706.3	340.8	-685.9	1,536,382.87	2,333,172.59	39.282367	-107.856070
3,890.0	14.20	295.90	3,793.2	350.8	-707.1	1,536,393.40	2,333,151.70	39.282394	-107.856145
3,986.0	14.10	293.90	3,889.4	360.4	-728.3	1,536,403.52	2,333,130.71	39.282420	-107.856220
4,081.0	13.60	290.70	3,981.6	369.0	-749.4	1,536,412.69	2,333,109.91	39.282444	-107.856294
4,177.0	13.50	288.50	4,075.0	376.6	-770.6	1,536,420.78	2,333,088.93	39.282465	-107.856369
4,273.0	13.70	290.40	4,168.3	384.1	-791.8	1,536,428.85	2,333,067.85	39.282486	-107.856444
4,369.0	13.90	289.50	4,261.5	391.9	-813.4	1,536,437.22	2,333,046.53	39.282507	-107.856520
4,464.0	13.20	294.10	4,353.9	400.2	-834.0	1,536,445.99	2,333,026.10	39.282530	-107.856593
4,560.0	13.80	296.00	4,447.2	409.7	-854.3	1,536,456.01	2,333,006.05	39.282556	-107.856665
4,656.0	12.70	292.80	4,540.7	418.8	-874.3	1,536,465.63	2,332,986.27	39.282581	-107.856736
4,751.0	11.70	293.70	4,633.5	426.7	-892.8	1,536,474.03	2,332,968.04	39.282602	-107.856801
4,847.0	11.30	295.40	4,727.6	434.6	-910.2	1,536,482.42	2,332,950.84	39.282624	-107.856863
4,943.0	10.50	296.60	4,821.8	442.6	-926.5	1,536,490.79	2,332,934.73	39.282646	-107.856920
5,039.0	9.50	297.30	4,916.4	450.1	-941.4	1,536,498.72	2,332,920.07	39.282667	-107.856973
5,134.0	8.50	295.60	5,010.2	456.8	-954.7	1,536,505.70	2,332,906.95	39.282685	-107.857020



Survey Report - Geographic

Company: Plains Exploration & Production Co.			Local Co-ordinate Reference:				Well McDaniel 14-4A		
Project: Brush Creek			TVD Reference:				McDaniel 14-4A KBE @ 7310.0ft (Grey Wolf 18)		
Site: NENW Sec 14-T9S-R94W			MD Reference:				McDaniel 14-4A KBE @ 7310.0ft (Grey Wolf 18)		
Well: McDaniel 14-4A			North Reference:				True		
Wellbore: DD			Survey Calculation Method:				Minimum Curvature		
Design: DD			Database:				EDM 2003.21 US Multi User DB		
Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
5,230.0	6.90	295.50	5,105.3	462.3	-966.3	1,536,511.54	2,332,895.49	39.282700	-107.857061
5,326.0	6.60	296.10	5,200.7	467.2	-976.4	1,536,516.71	2,332,885.47	39.282714	-107.857097
5,422.0	5.90	294.90	5,296.1	471.7	-985.9	1,536,521.46	2,332,876.16	39.282726	-107.857130
5,517.0	4.40	292.30	5,390.7	475.2	-993.7	1,536,525.10	2,332,868.45	39.282736	-107.857157
5,613.0	3.90	303.20	5,486.5	478.3	-999.8	1,536,528.44	2,332,862.39	39.282744	-107.857179
5,709.0	3.10	293.20	5,582.3	481.2	-1,004.9	1,536,531.39	2,332,857.35	39.282752	-107.857197
5,805.0	3.30	292.60	5,678.1	483.2	-1,009.9	1,536,533.60	2,332,852.47	39.282758	-107.857215
5,900.0	2.20	294.70	5,773.0	485.1	-1,014.0	1,536,535.52	2,332,848.34	39.282763	-107.857229
5,996.0	1.80	302.40	5,869.0	486.6	-1,017.0	1,536,537.17	2,332,845.43	39.282767	-107.857240
6,092.0	1.50	321.70	5,964.9	488.4	-1,019.0	1,536,539.02	2,332,843.43	39.282772	-107.857247
6,188.0	1.50	318.10	6,060.9	490.3	-1,020.7	1,536,540.98	2,332,841.86	39.282777	-107.857253
6,283.0	1.70	320.80	6,155.9	492.4	-1,022.4	1,536,543.04	2,332,840.19	39.282783	-107.857259
6,379.0	1.80	316.30	6,251.8	494.6	-1,024.3	1,536,545.29	2,332,838.31	39.282789	-107.857266
6,475.0	1.80	304.10	6,347.8	496.5	-1,026.6	1,536,547.28	2,332,836.07	39.282794	-107.857274
6,570.0	1.70	303.00	6,442.7	498.1	-1,029.0	1,536,548.95	2,332,833.69	39.282798	-107.857282
6,666.0	1.30	287.20	6,538.7	499.2	-1,031.3	1,536,550.10	2,332,831.49	39.282801	-107.857290
6,762.0	1.10	244.70	6,634.7	499.1	-1,033.1	1,536,550.08	2,332,829.61	39.282801	-107.857297
6,857.0	0.80	221.70	6,729.7	498.2	-1,034.4	1,536,549.23	2,332,828.32	39.282799	-107.857301
6,953.0	0.70	235.80	6,825.7	497.4	-1,035.3	1,536,548.42	2,332,827.37	39.282797	-107.857305
7,049.0	1.50	217.70	6,921.6	496.1	-1,036.6	1,536,547.13	2,332,826.08	39.282793	-107.857309
7,144.0	2.00	216.20	7,016.6	493.8	-1,038.3	1,536,544.85	2,332,824.28	39.282787	-107.857315
7,240.0	2.00	227.30	7,112.5	491.3	-1,040.5	1,536,542.42	2,332,822.00	39.282780	-107.857323
7,336.0	1.90	234.60	7,208.5	489.2	-1,043.1	1,536,540.43	2,332,819.42	39.282774	-107.857332
7,431.0	2.00	234.50	7,303.4	487.3	-1,045.7	1,536,538.63	2,332,816.74	39.282769	-107.857341
7,527.0	1.80	240.20	7,399.4	485.6	-1,048.4	1,536,536.97	2,332,814.02	39.282764	-107.857351
7,623.0	2.00	240.00	7,495.3	484.0	-1,051.1	1,536,535.46	2,332,811.22	39.282760	-107.857361
7,719.0	1.90	242.00	7,591.3	482.4	-1,054.0	1,536,533.95	2,332,808.33	39.282756	-107.857371
7,814.0	1.80	240.80	7,686.2	481.0	-1,056.7	1,536,532.55	2,332,805.60	39.282751	-107.857380
7,910.0	1.80	238.60	7,782.2	479.5	-1,059.3	1,536,531.10	2,332,802.96	39.282747	-107.857389
8,006.0	1.80	238.60	7,878.1	477.9	-1,061.9	1,536,529.60	2,332,800.34	39.282743	-107.857398
8,101.0	1.70	240.20	7,973.1	476.4	-1,064.4	1,536,528.18	2,332,797.81	39.282739	-107.857407
8,185.0	1.90	240.50	8,057.0	475.1	-1,066.6	1,536,526.94	2,332,795.48	39.282735	-107.857415
Last DP Survey @ 8185'									
8,240.0	1.90	240.50	8,112.0	474.2	-1,068.2	1,536,526.08	2,332,793.87	39.282733	-107.857421
Projection to TD @ 8240' MD									

<b>Company:</b> <b>Project:</b> <b>Site:</b> <b>Well:</b> <b>Wellbore:</b> <b>Design:</b>	Plains Exploration & Production Co. Brush Creek NENW Sec 14-T9S-R94W McDaniel 14-4A DD DD	<b>Local Co-ordinate Reference:</b> TVD Reference: MD Reference: North Reference: Survey Calculation Method: Database:	Well McDaniel 14-4A McDaniel 14-4A KBE @ 7310.0ft (Grey Wolf 18) McDaniel 14-4A KBE @ 7310.0ft (Grey Wolf 18) True Minimum Curvature EDM 2003.21 US Multi User DB
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Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
McDaniel 14-4A BHL	0.00	0.00	8,063.0	497.5	-1,035.4	1,536,548.57	2,332,827.29	39.282797	-107.857305
- survey misses target center by 38.9ft at 8185.0ft MD (8057.0 TVD, 475.1 N, -1066.6 E)									
- Rectangle (sides W100.0 H100.0 D0.0)									
McDaniel 14-4A Tgt	0.00	0.00	5,772.0	497.5	-1,035.4	1,536,548.57	2,332,827.29	39.282797	-107.857305
- survey misses target center by 24.8ft at 5900.0ft MD (5773.0 TVD, 485.1 N, -1014.0 E)									
- Point									

Survey Annotations				
Measured Depth	Vertical Depth	Local Coordinates		
(ft)	(ft)	+N/-S	+E/-W	
8,185.0	8,057.0	475.1	-1,066.6	Last DP Survey @ 8185' Projection to TD @ 8240' MD
8,240.0	8,112.0	474.2	-1,068.2	

Checked By: \_\_\_\_\_

Approved By: \_\_\_\_\_

Date: \_\_\_\_\_