

Azimuths to True North
 Magnetic North: 10.60°

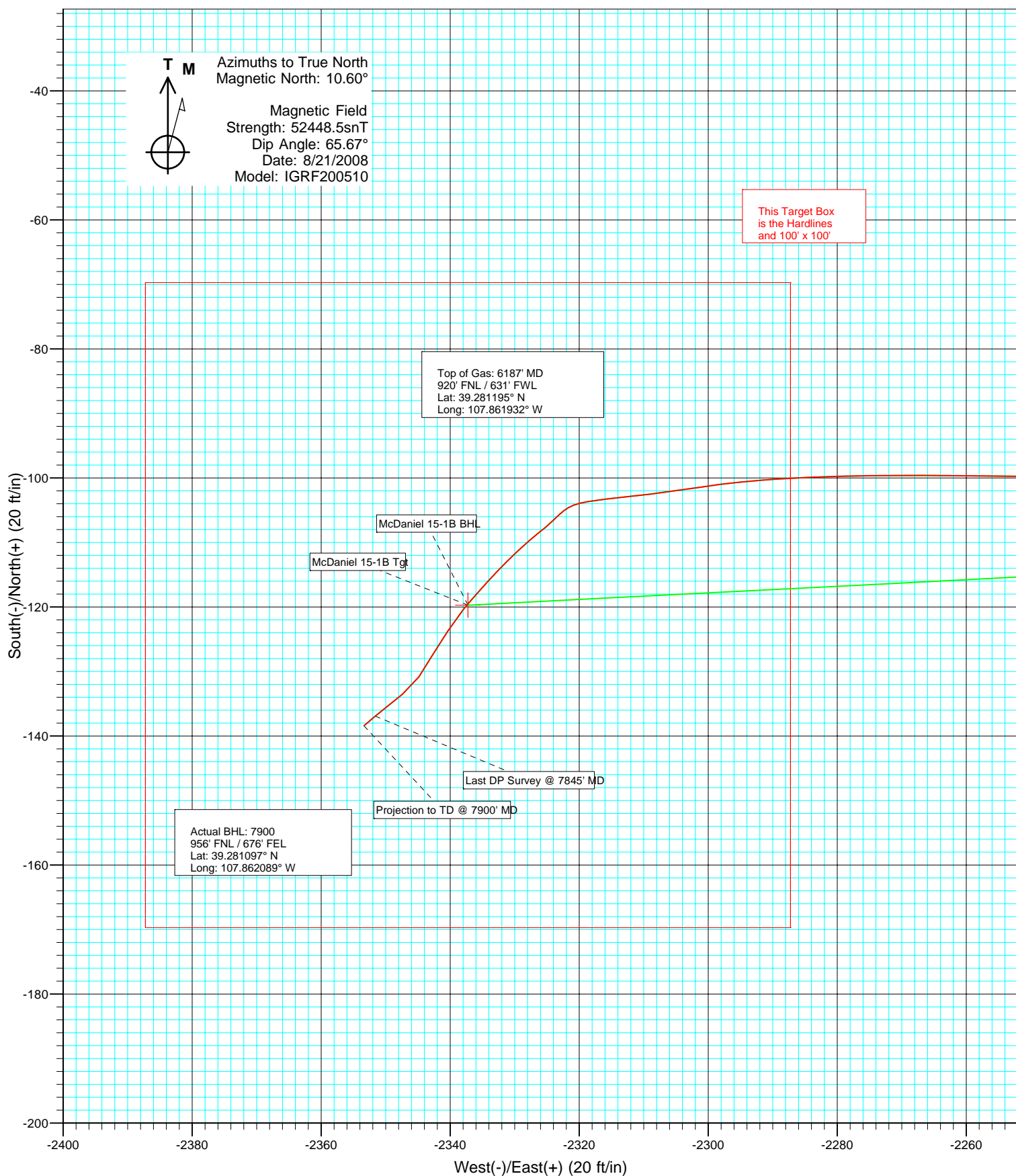
Magnetic Field
 Strength: 52448.5snT
 Dip Angle: 65.67°
 Date: 8/21/2008
 Model: IGRF200510

DESIGN DETAILS: DD

85464; JS

McDaniel 15-1B KBE @ 7310.0ft (Grey Wolf 18)

Target	Azimuth	Origin Type	N/S	E/W	TVD
No Target (Freehand)	267.07	Slot	0.0	0.0	0.0



Survey Report

Company:	Plains Exploration & Production Co.	Local Co-ordinate Reference:	Well McDaniel 15-1B
Project:	Brush Creek	TVD Reference:	McDaniel 15-1B KBE @ 7310.0ft (Grey Wolf 18)
Site:	NENW Sec 14-T9S-R94W	MD Reference:	McDaniel 15-1B KBE @ 7310.0ft (Grey Wolf 18)
Well:	McDaniel 15-1B	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:	1,536,075.65 ft	Latitude:	39.281568
From:	Lat/Long	Easting:	2,333,796.71 ft	Longitude:	-107.853838
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	-1.48 °

Well	McDaniel 15-1B					
Well Position	+N/-S	0.0 ft	Northing:	1,536,042.05 ft	Latitude:	39.281477
	+E/-W	0.0 ft	Easting:	2,333,813.68 ft	Longitude:	-107.853775
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	7,286.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	8/21/2008	10.60	65.67	52,449

Design	DD				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	267.07	

Survey Program	Date	9/22/2008			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
94.0	7,900.0	Survey #1 (DD)	Geolink MWD	Geolink MWD	

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	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00		
94.0	0.50	146.00	94.0	-0.3	0.2	-0.2	0.53	0.53		
186.0	0.80	280.60	186.0	-0.6	-0.2	0.2	1.31	0.33		
278.0	2.20	285.50	278.0	0.0	-2.5	2.5	1.53	1.52		
371.0	4.20	271.50	370.8	0.6	-7.6	7.6	2.29	2.15		
463.0	6.20	267.80	462.4	0.5	-16.0	15.9	2.20	2.17		
555.0	8.30	266.50	553.7	-0.1	-27.6	27.5	2.29	2.28		
647.0	11.20	267.20	644.4	-0.9	-43.1	43.1	3.15	3.15		
739.0	13.60	264.10	734.2	-2.5	-62.8	62.8	2.71	2.61		
831.0	16.00	265.90	823.1	-4.5	-86.2	86.3	2.66	2.61		
924.0	18.50	266.70	912.0	-6.3	-113.7	113.9	2.70	2.69		
1,017.0	21.10	267.20	999.4	-7.9	-145.2	145.4	2.80	2.80		
1,113.0	23.90	266.60	1,088.1	-9.9	-181.9	182.1	2.93	2.92		

Survey Report

Company:	Plains Exploration & Production Co.	Local Co-ordinate Reference:	Well McDaniel 15-1B
Project:	Brush Creek	TVD Reference:	McDaniel 15-1B KBE @ 7310.0ft (Grey Wolf 18)
Site:	NENW Sec 14-T9S-R94W	MD Reference:	McDaniel 15-1B KBE @ 7310.0ft (Grey Wolf 18)
Well:	McDaniel 15-1B	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
1,208.0	26.10	267.90	1,174.2	-11.8	-222.0	222.3	2.39	2.32	
1,304.0	28.50	268.40	1,259.5	-13.3	-266.0	266.3	2.51	2.50	
1,400.0	28.00	268.30	1,344.1	-14.6	-311.4	311.7	0.52	-0.52	
1,491.0	29.10	266.50	1,424.0	-16.6	-354.8	355.2	1.53	1.21	
1,592.0	28.70	267.30	1,512.4	-19.2	-403.6	404.0	0.55	-0.40	
1,688.0	27.90	266.60	1,597.0	-21.6	-449.0	449.5	0.90	-0.83	
1,783.0	27.40	267.30	1,681.1	-24.0	-493.0	493.6	0.63	-0.53	
1,879.0	27.30	267.90	1,766.4	-25.8	-537.1	537.7	0.31	-0.10	
1,975.0	27.70	266.50	1,851.5	-28.0	-581.4	582.0	0.79	0.42	
2,071.0	27.90	266.10	1,936.5	-30.9	-626.1	626.8	0.28	0.21	
2,167.0	28.70	266.90	2,021.0	-33.6	-671.5	672.3	0.92	0.83	
2,262.0	28.00	266.70	2,104.6	-36.2	-716.5	717.4	0.74	-0.74	
2,358.0	28.60	266.70	2,189.1	-38.8	-762.0	762.9	0.62	0.62	
2,454.0	29.30	268.10	2,273.1	-40.9	-808.4	809.4	1.01	0.73	
2,549.0	28.80	267.70	2,356.2	-42.6	-854.5	855.5	0.56	-0.53	
2,645.0	28.70	267.90	2,440.3	-44.3	-900.6	901.7	0.14	-0.10	
2,741.0	29.30	267.80	2,524.3	-46.1	-947.1	948.2	0.63	0.62	
2,837.0	29.60	268.10	2,607.9	-47.8	-994.3	995.4	0.35	0.31	
2,932.0	29.30	268.30	2,690.6	-49.2	-1,041.0	1,042.1	0.33	-0.32	
3,028.0	29.40	267.80	2,774.3	-50.8	-1,088.0	1,089.2	0.28	0.10	
3,124.0	29.40	267.70	2,857.9	-52.7	-1,135.1	1,136.3	0.05	0.00	
3,220.0	29.40	268.20	2,941.6	-54.4	-1,182.2	1,183.4	0.26	0.00	
3,315.0	29.70	267.20	3,024.2	-56.3	-1,229.0	1,230.3	0.61	0.32	
3,411.0	29.80	269.20	3,107.6	-57.8	-1,276.6	1,277.9	1.04	0.10	
3,507.0	29.10	268.50	3,191.2	-58.7	-1,323.8	1,325.1	0.81	-0.73	
3,602.0	29.70	267.40	3,273.9	-60.4	-1,370.4	1,371.7	0.85	0.63	
3,698.0	29.70	267.10	3,357.3	-62.7	-1,417.9	1,419.3	0.15	0.00	
3,794.0	29.70	267.20	3,440.7	-65.0	-1,465.4	1,466.8	0.05	0.00	
3,889.0	29.80	267.20	3,523.2	-67.3	-1,512.5	1,514.0	0.11	0.11	
3,985.0	29.80	266.70	3,606.5	-69.9	-1,560.1	1,561.7	0.26	0.00	
4,081.0	30.30	268.00	3,689.6	-72.1	-1,608.2	1,609.7	0.86	0.52	
4,176.0	29.40	267.40	3,772.0	-74.0	-1,655.4	1,657.0	1.00	-0.95	
4,272.0	29.70	268.40	3,855.5	-75.7	-1,702.7	1,704.4	0.60	0.31	
4,368.0	29.80	265.60	3,938.8	-78.2	-1,750.3	1,752.0	1.45	0.10	
4,464.0	28.90	268.40	4,022.5	-80.7	-1,797.3	1,799.0	1.71	-0.94	
4,559.0	29.40	267.90	4,105.5	-82.2	-1,843.5	1,845.3	0.59	0.53	
4,655.0	28.60	268.30	4,189.5	-83.7	-1,890.0	1,891.8	0.86	-0.83	
4,751.0	26.90	267.40	4,274.4	-85.4	-1,934.7	1,936.5	1.82	-1.77	
4,847.0	25.80	268.60	4,360.4	-86.9	-1,977.3	1,979.1	1.27	-1.15	
4,942.0	24.20	267.90	4,446.5	-88.1	-2,017.4	2,019.3	1.71	-1.68	
5,038.0	21.90	265.90	4,534.9	-90.1	-2,054.9	2,056.8	2.53	-2.40	
5,134.0	20.70	265.90	4,624.3	-92.6	-2,089.7	2,091.7	1.25	-1.25	
5,230.0	19.50	266.40	4,714.5	-94.8	-2,122.6	2,124.7	1.26	-1.25	
5,325.0	18.40	266.90	4,804.3	-96.6	-2,153.4	2,155.5	1.17	-1.16	
5,421.0	17.40	265.10	4,895.7	-98.7	-2,182.9	2,185.0	1.19	-1.04	
5,517.0	14.10	268.00	4,988.0	-100.3	-2,208.8	2,211.1	3.53	-3.44	
5,613.0	11.60	272.40	5,081.6	-100.3	-2,230.2	2,232.4	2.79	-2.60	
5,708.0	11.20	270.80	5,174.8	-99.8	-2,248.9	2,251.1	0.54	-0.42	
5,804.0	8.80	270.20	5,269.3	-99.6	-2,265.6	2,267.7	2.50	-2.50	
5,900.0	7.80	268.70	5,364.3	-99.7	-2,279.5	2,281.6	1.07	-1.04	
5,996.0	6.70	265.50	5,459.5	-100.3	-2,291.6	2,293.7	1.22	-1.15	
6,091.0	4.70	260.60	5,554.0	-101.4	-2,300.9	2,303.1	2.16	-2.11	
6,187.0	4.90	263.70	5,649.7	-102.5	-2,308.9	2,311.1	0.34	0.21	

Survey Report

Company:	Plains Exploration & Production Co.	Local Co-ordinate Reference:	Well McDaniel 15-1B
Project:	Brush Creek	TVD Reference:	McDaniel 15-1B KBE @ 7310.0ft (Grey Wolf 18)
Site:	NENW Sec 14-T9S-R94W	MD Reference:	McDaniel 15-1B KBE @ 7310.0ft (Grey Wolf 18)
Well:	McDaniel 15-1B	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	3.20	263.30	5,745.5	-103.3	-2,315.6	2,317.9	1.77	-1.77	
6,378.0	1.70	257.40	5,840.4	-103.9	-2,319.6	2,321.9	1.60	-1.58	
6,474.0	0.70	236.00	5,936.4	-104.5	-2,321.5	2,323.8	1.12	-1.04	
6,570.0	0.80	236.60	6,032.3	-105.2	-2,322.6	2,324.9	0.10	0.10	
6,665.0	1.10	220.60	6,127.3	-106.3	-2,323.7	2,326.1	0.42	0.32	
6,761.0	1.40	232.80	6,223.3	-107.7	-2,325.2	2,327.7	0.42	0.31	
6,857.0	1.30	230.10	6,319.3	-109.1	-2,327.0	2,329.5	0.12	-0.10	
6,953.0	1.60	227.30	6,415.3	-110.7	-2,328.8	2,331.4	0.32	0.31	
7,049.0	1.80	226.10	6,511.2	-112.6	-2,330.9	2,333.6	0.21	0.21	
7,144.0	2.00	222.90	6,606.2	-114.9	-2,333.1	2,335.9	0.24	0.21	
7,240.0	2.20	221.80	6,702.1	-117.5	-2,335.5	2,338.4	0.21	0.21	
7,336.0	2.30	220.00	6,798.0	-120.3	-2,337.9	2,341.0	0.13	0.10	
7,431.0	2.90	212.10	6,892.9	-123.8	-2,340.4	2,343.7	0.73	0.63	
7,527.0	2.50	212.80	6,988.8	-127.7	-2,342.9	2,346.3	0.42	-0.42	
7,623.0	2.00	211.30	7,084.7	-130.8	-2,344.9	2,348.5	0.52	-0.52	
7,718.0	2.50	233.10	7,179.7	-133.5	-2,347.4	2,351.1	1.03	0.53	
7,845.0	2.40	229.30	7,306.6	-136.9	-2,351.6	2,355.5	0.15	-0.08	Last DP Survey @ 7845' MD
7,900.0	2.40	229.30	7,361.5	-138.4	-2,353.4	2,357.4	0.00	0.00	Projection to TD @ 7900' MD

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
McDaniel 15-1B Tgt	0.00	0.00	5,646.0	-119.7	-2,337.2	1,535,982.92	2,331,474.12	39.281148	-107.862032
- hit/miss target									
- Shape									
- survey misses target center by 33.4ft at 6185.8ft MD (5648.6 TVD, -102.5 N, -2308.8 E)									
- Point									
McDaniel 15-1B BHL	0.00	0.00	7,306.0	-119.7	-2,337.2	1,535,982.92	2,331,474.12	39.281148	-107.862032
- survey misses target center by 22.4ft at 7843.5ft MD (7305.1 TVD, -136.9 N, -2351.6 E)									
- Rectangle (sides W100.0 H100.0 D0.0)									

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
7,845.0	7,306.6	-136.9	-2,351.6	Last DP Survey @ 7845' MD	
7,900.0	7,361.5	-138.4	-2,353.4	Projection to TD @ 7900' MD	

Checked By: _____ Approved By: _____ Date: _____

Survey Report - Geographic

Company:	Plains Exploration & Production Co.	Local Co-ordinate Reference:	Well McDaniel 15-1B
Project:	Brush Creek	TVD Reference:	McDaniel 15-1B KBE @ 7310.0ft (Grey Wolf 18)
Site:	NENW Sec 14-T9S-R94W	MD Reference:	McDaniel 15-1B KBE @ 7310.0ft (Grey Wolf 18)
Well:	McDaniel 15-1B	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:	1,536,075.65 ft	Latitude:	39.281568
From:	Lat/Long	Easting:	2,333,796.71 ft	Longitude:	-107.853838
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	-1.48 °

Well		McDaniel 15-1B				
Well Position	+N/-S	0.0 ft	Northing:	1,536,042.05 ft	Latitude:	39.281477
	+E/-W	0.0 ft	Easting:	2,333,813.68 ft	Longitude:	-107.853775
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	7,286.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	8/21/2008	10.60	65.67	52,449

Design	DD				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	267.07	

Survey Program	Date	9/22/2008			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
94.0	7,900.0	Survey #1 (DD)	Geolink MWD	Geolink MWD	

Survey Report - Geographic

Company:	Plains Exploration & Production Co.	Local Co-ordinate Reference:	Well McDaniel 15-1B
Project:	Brush Creek	TVD Reference:	McDaniel 15-1B KBE @ 7310.0ft (Grey Wolf 18)
Site:	NENW Sec 14-T9S-R94W	MD Reference:	McDaniel 15-1B KBE @ 7310.0ft (Grey Wolf 18)
Well:	McDaniel 15-1B	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
0.0	0.00	0.00	0.0	0.0	0.0	1,536,042.05	2,333,813.68	39.281477	-107.853775
94.0	0.50	146.00	94.0	-0.3	0.2	1,536,041.70	2,333,813.90	39.281476	-107.853774
186.0	0.80	280.60	186.0	-0.6	-0.2	1,536,041.50	2,333,813.49	39.281475	-107.853776
278.0	2.20	285.50	278.0	0.0	-2.5	1,536,042.15	2,333,811.17	39.281477	-107.853784
371.0	4.20	271.50	370.8	0.6	-7.6	1,536,042.85	2,333,806.06	39.281479	-107.853802
463.0	6.20	267.80	462.4	0.5	-16.0	1,536,042.96	2,333,797.73	39.281478	-107.853831
555.0	8.30	266.50	553.7	-0.1	-27.6	1,536,042.67	2,333,786.12	39.281477	-107.853872
647.0	11.20	267.20	644.4	-0.9	-43.1	1,536,042.23	2,333,770.55	39.281474	-107.853927
739.0	13.60	264.10	734.2	-2.5	-62.8	1,536,041.19	2,333,750.83	39.281470	-107.853997
831.0	16.00	265.90	823.1	-4.5	-86.2	1,536,039.78	2,333,727.38	39.281465	-107.854080
924.0	18.50	266.70	912.0	-6.3	-113.7	1,536,038.73	2,333,699.82	39.281460	-107.854177
1,017.0	21.10	267.20	999.4	-7.9	-145.2	1,536,037.87	2,333,668.34	39.281455	-107.854288
1,113.0	23.90	266.60	1,088.1	-9.9	-181.9	1,536,036.83	2,333,631.62	39.281450	-107.854418
1,208.0	26.10	267.90	1,174.2	-11.8	-222.0	1,536,035.96	2,333,591.48	39.281444	-107.854559
1,304.0	28.50	268.40	1,259.5	-13.3	-266.0	1,536,035.69	2,333,547.46	39.281441	-107.854715
1,400.0	28.00	268.30	1,344.1	-14.6	-311.4	1,536,035.55	2,333,502.02	39.281437	-107.854875
1,491.0	29.10	266.50	1,424.0	-16.6	-354.8	1,536,034.70	2,333,458.54	39.281432	-107.855029
1,592.0	28.70	267.30	1,512.4	-19.2	-403.6	1,536,033.32	2,333,409.75	39.281424	-107.855201
1,688.0	27.90	266.60	1,597.0	-21.6	-449.0	1,536,032.08	2,333,364.26	39.281418	-107.855361
1,783.0	27.40	267.30	1,681.1	-24.0	-493.0	1,536,030.87	2,333,320.19	39.281411	-107.855517
1,879.0	27.30	267.90	1,766.4	-25.8	-537.1	1,536,030.17	2,333,276.09	39.281406	-107.855672
1,975.0	27.70	266.50	1,851.5	-28.0	-581.4	1,536,029.14	2,333,231.77	39.281400	-107.855829
2,071.0	27.90	266.10	1,936.5	-30.9	-626.1	1,536,027.41	2,333,187.03	39.281392	-107.855987
2,167.0	28.70	266.90	2,021.0	-33.6	-671.5	1,536,025.82	2,333,141.55	39.281385	-107.856147
2,262.0	28.00	266.70	2,104.6	-36.2	-716.5	1,536,024.47	2,333,096.46	39.281378	-107.856306
2,358.0	28.60	266.70	2,189.1	-38.8	-762.0	1,536,023.03	2,333,050.97	39.281370	-107.856467
2,454.0	29.30	268.10	2,273.1	-40.9	-808.4	1,536,022.13	2,333,004.51	39.281365	-107.856631
2,549.0	28.80	267.70	2,356.2	-42.6	-854.5	1,536,021.63	2,332,958.39	39.281360	-107.856794
2,645.0	28.70	267.90	2,440.3	-44.3	-900.6	1,536,021.06	2,332,912.22	39.281355	-107.856957
2,741.0	29.30	267.80	2,524.3	-46.1	-947.1	1,536,020.52	2,332,865.68	39.281350	-107.857121
2,837.0	29.60	268.10	2,607.9	-47.8	-994.3	1,536,020.05	2,332,818.48	39.281346	-107.857288
2,932.0	29.30	268.30	2,690.6	-49.2	-1,041.0	1,536,019.79	2,332,771.77	39.281342	-107.857453
3,028.0	29.40	267.80	2,774.3	-50.8	-1,088.0	1,536,019.41	2,332,724.72	39.281337	-107.857619
3,124.0	29.40	267.70	2,857.9	-52.7	-1,135.1	1,536,018.78	2,332,677.60	39.281332	-107.857785
3,220.0	29.40	268.20	2,941.6	-54.4	-1,182.2	1,536,018.32	2,332,630.47	39.281328	-107.857951
3,315.0	29.70	267.20	3,024.2	-56.3	-1,229.0	1,536,017.65	2,332,583.63	39.281322	-107.858117
3,411.0	29.80	269.20	3,107.6	-57.8	-1,276.6	1,536,017.39	2,332,536.00	39.281318	-107.858285
3,507.0	29.10	268.50	3,191.2	-58.7	-1,323.8	1,536,017.66	2,332,488.80	39.281316	-107.858452
3,602.0	29.70	267.40	3,273.9	-60.4	-1,370.4	1,536,017.20	2,332,442.17	39.281311	-107.858616
3,698.0	29.70	267.10	3,357.3	-62.7	-1,417.9	1,536,016.15	2,332,394.62	39.281305	-107.858784
3,794.0	29.70	267.20	3,440.7	-65.0	-1,465.4	1,536,015.02	2,332,347.07	39.281298	-107.858952
3,889.0	29.80	267.20	3,523.2	-67.3	-1,512.5	1,536,013.93	2,332,299.94	39.281292	-107.859118
3,985.0	29.80	266.70	3,606.5	-69.9	-1,560.1	1,536,012.63	2,332,252.25	39.281285	-107.859287
4,081.0	30.30	268.00	3,689.6	-72.1	-1,608.2	1,536,011.66	2,332,204.19	39.281279	-107.859456
4,176.0	29.40	267.40	3,772.0	-74.0	-1,655.4	1,536,010.99	2,332,156.91	39.281274	-107.859623
4,272.0	29.70	268.40	3,855.5	-75.7	-1,702.7	1,536,010.48	2,332,109.57	39.281269	-107.859790
4,368.0	29.80	265.60	3,938.8	-78.2	-1,750.3	1,536,009.22	2,332,061.96	39.281262	-107.859958
4,464.0	28.90	268.40	4,022.5	-80.7	-1,797.3	1,536,007.96	2,332,014.93	39.281255	-107.860124
4,559.0	29.40	267.90	4,105.5	-82.2	-1,843.5	1,536,007.66	2,331,968.66	39.281251	-107.860288
4,655.0	28.60	268.30	4,189.5	-83.7	-1,890.0	1,536,007.32	2,331,922.12	39.281247	-107.860452
4,751.0	26.90	267.40	4,274.4	-85.4	-1,934.7	1,536,006.81	2,331,877.43	39.281242	-107.860610
4,847.0	25.80	268.60	4,360.4	-86.9	-1,977.3	1,536,006.42	2,331,834.82	39.281238	-107.860760
4,942.0	24.20	267.90	4,446.5	-88.1	-2,017.4	1,536,006.24	2,331,794.68	39.281235	-107.860902
5,038.0	21.90	265.90	4,534.9	-90.1	-2,054.9	1,536,005.21	2,331,757.11	39.281229	-107.861035
5,134.0	20.70	265.90	4,624.3	-92.6	-2,089.7	1,536,003.62	2,331,722.28	39.281223	-107.861158

Survey Report - Geographic

Company:	Plains Exploration & Production Co.	Local Co-ordinate Reference:	Well McDaniel 15-1B
Project:	Brush Creek	TVD Reference:	McDaniel 15-1B KBE @ 7310.0ft (Grey Wolf 18)
Site:	NENW Sec 14-T9S-R94W	MD Reference:	McDaniel 15-1B KBE @ 7310.0ft (Grey Wolf 18)
Well:	McDaniel 15-1B	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	19.50	266.40	4,714.5	-94.8	-2,122.6	1,536,002.26	2,331,689.31	39.281216	-107.861274
5,325.0	18.40	266.90	4,804.3	-96.6	-2,153.4	1,536,001.25	2,331,658.48	39.281211	-107.861383
5,421.0	17.40	265.10	4,895.7	-98.7	-2,182.9	1,535,999.97	2,331,629.01	39.281206	-107.861487
5,517.0	14.10	268.00	4,988.0	-100.3	-2,208.8	1,535,999.01	2,331,602.98	39.281201	-107.861578
5,613.0	11.60	272.40	5,081.6	-100.3	-2,230.2	1,535,999.55	2,331,581.65	39.281201	-107.861654
5,708.0	11.20	270.80	5,174.8	-99.8	-2,248.9	1,536,000.57	2,331,562.90	39.281203	-107.861720
5,804.0	8.80	270.20	5,269.3	-99.6	-2,265.6	1,536,001.16	2,331,546.24	39.281203	-107.861779
5,900.0	7.80	268.70	5,364.3	-99.7	-2,279.5	1,536,001.39	2,331,532.39	39.281203	-107.861828
5,996.0	6.70	265.50	5,459.5	-100.3	-2,291.6	1,536,001.12	2,331,520.28	39.281201	-107.861871
6,091.0	4.70	260.60	5,554.0	-101.4	-2,300.9	1,536,000.29	2,331,510.89	39.281198	-107.861904
6,187.0	4.90	263.70	5,649.7	-102.5	-2,308.9	1,535,999.41	2,331,502.91	39.281195	-107.861932
6,283.0	3.20	263.30	5,745.5	-103.3	-2,315.6	1,535,998.82	2,331,496.16	39.281193	-107.861956
6,378.0	1.70	257.40	5,840.4	-103.9	-2,319.6	1,535,998.31	2,331,492.13	39.281191	-107.861970
6,474.0	0.70	236.00	5,936.4	-104.5	-2,321.5	1,535,997.72	2,331,490.24	39.281190	-107.861976
6,570.0	0.80	236.60	6,032.3	-105.2	-2,322.6	1,535,997.05	2,331,489.18	39.281188	-107.861980
6,665.0	1.10	220.60	6,127.3	-106.3	-2,323.7	1,535,996.02	2,331,488.00	39.281185	-107.861984
6,761.0	1.40	232.80	6,223.3	-107.7	-2,325.2	1,535,994.65	2,331,486.43	39.281181	-107.861990
6,857.0	1.30	230.10	6,319.3	-109.1	-2,327.0	1,535,993.29	2,331,484.63	39.281177	-107.861996
6,953.0	1.60	227.30	6,415.3	-110.7	-2,328.8	1,535,991.73	2,331,482.77	39.281173	-107.862002
7,049.0	1.80	226.10	6,511.2	-112.6	-2,330.9	1,535,989.83	2,331,480.65	39.281167	-107.862010
7,144.0	2.00	222.90	6,606.2	-114.9	-2,333.1	1,535,987.64	2,331,478.38	39.281161	-107.862017
7,240.0	2.20	221.80	6,702.1	-117.5	-2,335.5	1,535,985.10	2,331,475.95	39.281154	-107.862026
7,336.0	2.30	220.00	6,798.0	-120.3	-2,337.9	1,535,982.32	2,331,473.41	39.281146	-107.862034
7,431.0	2.90	212.10	6,892.9	-123.8	-2,340.4	1,535,978.89	2,331,470.82	39.281137	-107.862043
7,527.0	2.50	212.80	6,988.8	-127.7	-2,342.9	1,535,975.13	2,331,468.29	39.281126	-107.862052
7,623.0	2.00	211.30	7,084.7	-130.8	-2,344.9	1,535,971.99	2,331,466.21	39.281117	-107.862059
7,718.0	2.50	233.10	7,179.7	-133.5	-2,347.4	1,535,969.40	2,331,463.62	39.281110	-107.862068
7,845.0	2.40	229.30	7,306.6	-136.9	-2,351.6	1,535,966.11	2,331,459.30	39.281101	-107.862083
Last DP Survey @ 7845' MD									
7,900.0	2.40	229.30	7,361.5	-138.4	-2,353.4	1,535,964.66	2,331,457.52	39.281097	-107.862089
Projection to TD @ 7900' MD									

Survey Report - Geographic

Company:	Plains Exploration & Production Co.	Local Co-ordinate Reference:	Well McDaniel 15-1B
Project:	Brush Creek	TVD Reference:	McDaniel 15-1B KBE @ 7310.0ft (Grey Wolf 18)
Site:	NENW Sec 14-T9S-R94W	MD Reference:	McDaniel 15-1B KBE @ 7310.0ft (Grey Wolf 18)
Well:	McDaniel 15-1B	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 2003.21 US Multi User DB

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
McDaniel 15-1B Tgt	0.00	0.00	5,646.0	-119.7	-2,337.2	1,535,982.92	2,331,474.12	39.281148	-107.862032
- survey misses target center by 33.4ft at 6185.8ft MD (5648.6 TVD, -102.5 N, -2308.8 E)									
- Point									
McDaniel 15-1B BHL	0.00	0.00	7,306.0	-119.7	-2,337.2	1,535,982.92	2,331,474.12	39.281148	-107.862032
- survey misses target center by 22.4ft at 7843.5ft MD (7305.1 TVD, -136.9 N, -2351.6 E)									
- Rectangle (sides W100.0 H100.0 D0.0)									

Survey Annotations					
	Measured Depth	Vertical Depth	Local Coordinates		
	(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	Comment
	7,845.0	7,306.6	-136.9	-2,351.6	Last DP Survey @ 7845' MD
	7,900.0	7,361.5	-138.4	-2,353.4	Projection to TD @ 7900' MD

Checked By: _____	Approved By: _____	Date: _____
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