

Departure Energy Services (US) LP  
Phone: 307.265.2231  
Fax: 307.472.5064  
[www.departureus.com](http://www.departureus.com)



**Departure**  
Energy Services (US) LP

## **Laramie Energy II, LLC**

**MESA CO**

**Sec30-T9S-R93W (Bruton 30-06B)**

**Bruton 30-16B**

**DD**

**Plan: Plan #1**

## **Planning Report**

**14 July, 2010**

# Laramie Energy II, LLC

Site: Sec30-T9S-R93W (Bruton 30-06B)  
Well: Bruton 30-16B  
Wellbore: DD  
Design: Plan #1

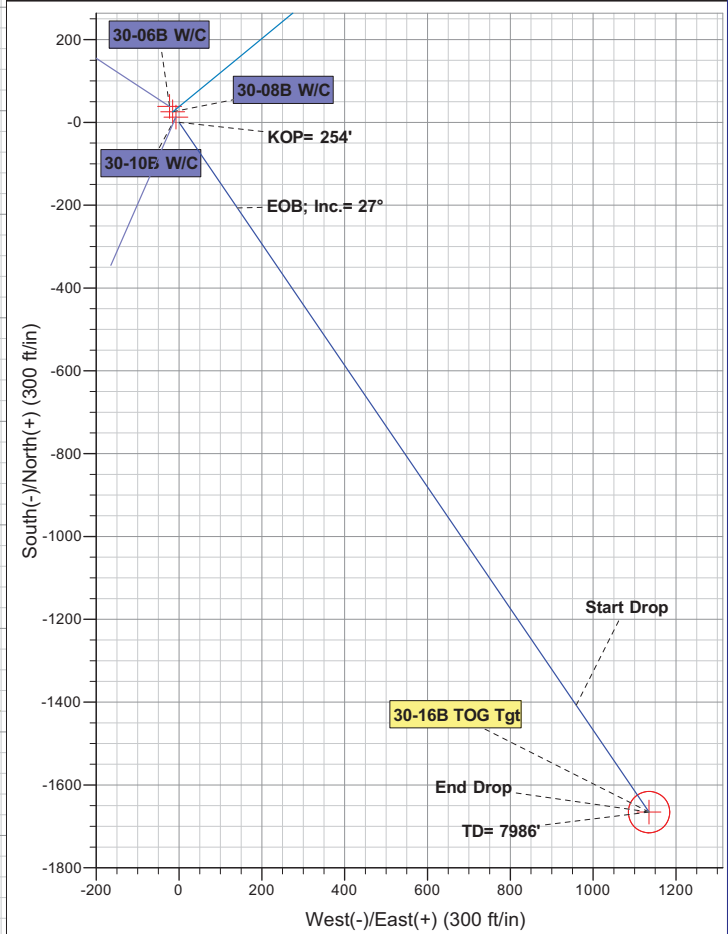
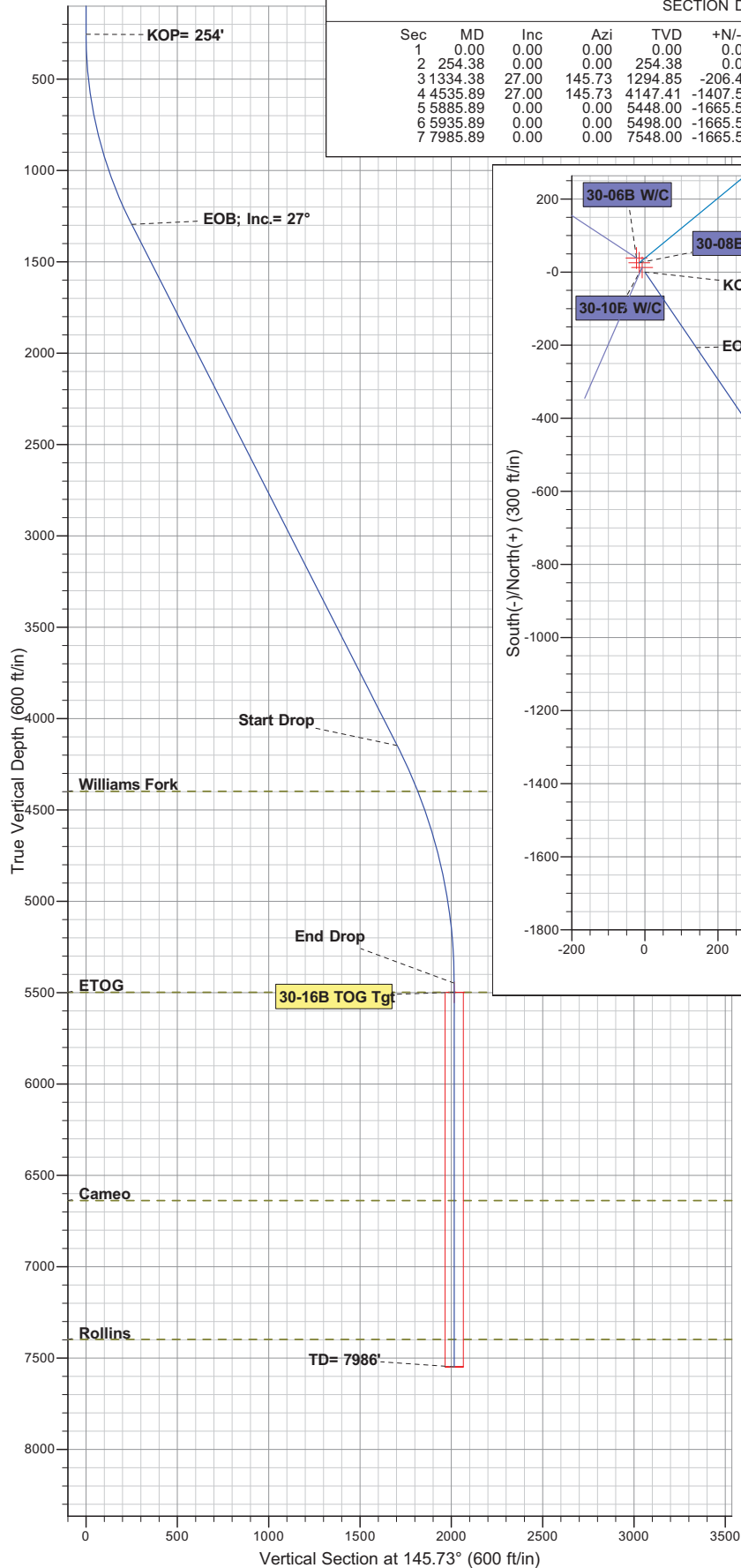
Reference Details - WELL CENTRE  
Geodetic System: Universal Transverse Mercator  
Ellipsoid: GRS 1980  
Zone: Zone 13N (108 W to 102 W)  
Northing: 4348026.49  
Easting: 257629.99  
Latitude: 39° 14' 51.778 N  
Longitude: 107° 48' 30.924 W  
Grid Convergence: 1.78° East  
Ground Elevation: 7650.70  
KB Elevation: Est. KB @ 7668.00ft (Original Well Elev)



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## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	254.38	0.00	0.00	254.38	0.00	0.00	0.00	0.00	0.00	
3	1334.38	27.00	145.73	1294.85	-206.43	140.66	2.50	145.73	249.79	
4	4535.89	27.00	145.73	4147.41	-1407.55	959.09	0.00	0.00	1703.25	
5	5885.89	0.00	0.00	5448.00	-1665.59	1134.91	2.00	180.00	2015.49	
6	5935.89	0.00	0.00	5498.00	-1665.59	1134.91	0.00	0.00	2015.49	30-16B TOG Tgt
7	7985.89	0.00	0.00	7548.00	-1665.59	1134.91	0.00	0.00	2015.49	



Azimuths to True North  
Magnetic North: 10.35°

Magnetic Field  
Strength: 52218.6snT  
Dip Angle: 65.59°  
Date: 7/14/2010  
Model: IGRF2010

## ANNOTATIONS

TVD	MD	Annotation
254.38	254.38	KOP= 254'
1294.85	1334.38	EOB; Inc.= 27°
4147.42	4535.89	Start Drop
5448.00	5885.89	End Drop
7547.99	7985.88	TD= 7986'

## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4398.00	4810.83	Williams Fork
5498.00	5935.89	ETOG
6638.00	7075.89	Cameo
7398.00	7835.89	Rollins

<b>Database:</b>	EDM 2003.21 DB	<b>Local Co-ordinate Reference:</b>	Well Bruton 30-16B
<b>Company:</b>	Laramie Energy II, LLC	<b>TVD Reference:</b>	Est. KB @ 7668.00ft (Original Well Elev)
<b>Project:</b>	MESA CO	<b>MD Reference:</b>	Est. KB @ 7668.00ft (Original Well Elev)
<b>Site:</b>	Sec30-T9S-R93W (Bruton 30-06B)	<b>North Reference:</b>	True
<b>Well:</b>	Bruton 30-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

<b>Project</b>	MESA CO		
<b>Map System:</b>	Universal Transverse Mercator	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD83 Colorado - HARN		
<b>Map Zone:</b>	Zone 13N (108 W to 102 W)		

<b>Site</b>	Sec30-T9S-R93W (Bruton 30-06B)		
<b>Site Position:</b>		<b>Northing:</b>	4,348,038.46 m
<b>From:</b>	Lat/Long	<b>Easting:</b>	257,623.37 m
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	in
		<b>Latitude:</b>	39° 14' 52.159 N
		<b>Longitude:</b>	107° 48' 31.216 W
		<b>Grid Convergence:</b>	-1.78 °

<b>Well</b>	Bruton 30-16B		
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	ft
		<b>Latitude:</b>	39° 14' 51.778 N
		<b>Longitude:</b>	107° 48' 30.924 W
		<b>Ground Level:</b>	7,650.70 ft

<b>Wellbore</b>	DD				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	7/14/2010	10.35	65.59	52,219

<b>Design</b>	Plan #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	145.73

<b>Plan Sections</b>											
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	SS (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	-7,668.00	0.00	0.00	0.00	0.00	0.00	0.00	
254.38	0.00	0.00	254.38	-7,413.62	0.00	0.00	0.00	0.00	0.00	0.00	
1,334.38	27.00	145.73	1,294.85	-6,373.15	-206.43	140.66	2.50	2.50	0.00	145.73	
4,535.89	27.00	145.73	4,147.41	-3,520.59	-1,407.55	959.09	0.00	0.00	0.00	0.00	
5,885.89	0.00	0.00	5,448.00	-2,220.00	-1,665.59	1,134.91	2.00	-2.00	0.00	180.00	
5,935.89	0.00	0.00	5,498.00	-2,170.00	-1,665.59	1,134.91	0.00	0.00	0.00	0.00	30-16B TOG Tgt
7,985.89	0.00	0.00	7,548.00	-120.00	-1,665.59	1,134.91	0.00	0.00	0.00	0.00	

<b>Database:</b>	EDM 2003.21 DB	<b>Local Co-ordinate Reference:</b>	Well Bruton 30-16B
<b>Company:</b>	Laramie Energy II, LLC	<b>TVD Reference:</b>	Est. KB @ 7668.00ft (Original Well Elev)
<b>Project:</b>	MESA CO	<b>MD Reference:</b>	Est. KB @ 7668.00ft (Original Well Elev)
<b>Site:</b>	Sec30-T9S-R93W (Bruton 30-06B)	<b>North Reference:</b>	True
<b>Well:</b>	Bruton 30-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

**Planned Survey**

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	SS (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
200.00	0.00	0.00	200.00	7,468.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>KOP= 254'</b>										
254.38	0.00	0.00	254.38	7,413.62	0.00	0.00	0.00	0.00	0.00	0.00
300.00	1.14	145.73	300.00	7,368.00	-0.38	0.26	0.45	2.50	2.50	0.00
400.00	3.64	145.73	399.90	7,268.10	-3.82	2.60	4.62	2.50	2.50	0.00
500.00	6.14	145.73	499.53	7,168.47	-10.87	7.40	13.15	2.50	2.50	0.00
600.00	8.64	145.73	598.69	7,069.31	-21.50	14.65	26.01	2.50	2.50	0.00
700.00	11.14	145.73	697.20	6,970.80	-35.69	24.32	43.19	2.50	2.50	0.00
800.00	13.64	145.73	794.86	6,873.14	-53.42	36.40	64.64	2.50	2.50	0.00
900.00	16.14	145.73	891.49	6,776.51	-74.65	50.87	90.34	2.50	2.50	0.00
1,000.00	18.64	145.73	986.92	6,681.08	-99.35	67.70	120.22	2.50	2.50	0.00
1,100.00	21.14	145.73	1,080.94	6,587.06	-127.46	86.85	154.24	2.50	2.50	0.00
1,200.00	23.64	145.73	1,173.40	6,494.60	-158.94	108.30	192.33	2.50	2.50	0.00
1,300.00	26.14	145.73	1,264.10	6,403.90	-193.72	132.00	234.42	2.50	2.50	0.00
<b>EOB; Inc.= 27°</b>										
1,334.38	27.00	145.73	1,294.85	6,373.15	-206.43	140.66	249.79	2.50	2.50	0.00
1,400.00	27.00	145.73	1,353.32	6,314.68	-231.05	157.43	279.58	0.00	0.00	0.00
1,500.00	27.00	145.73	1,442.42	6,225.58	-268.56	183.00	324.98	0.00	0.00	0.00
1,600.00	27.00	145.73	1,531.52	6,136.48	-306.08	208.56	370.38	0.00	0.00	0.00
1,700.00	27.00	145.73	1,620.62	6,047.38	-343.60	234.12	415.78	0.00	0.00	0.00
1,800.00	27.00	145.73	1,709.72	5,958.28	-381.12	259.69	461.18	0.00	0.00	0.00
1,900.00	27.00	145.73	1,798.82	5,869.18	-418.63	285.25	506.58	0.00	0.00	0.00
2,000.00	27.00	145.73	1,887.92	5,780.08	-456.15	310.82	551.98	0.00	0.00	0.00
2,100.00	27.00	145.73	1,977.02	5,690.98	-493.67	336.38	597.38	0.00	0.00	0.00
2,200.00	27.00	145.73	2,066.12	5,601.88	-531.19	361.94	642.78	0.00	0.00	0.00
2,300.00	27.00	145.73	2,155.22	5,512.78	-568.70	387.51	688.18	0.00	0.00	0.00
2,400.00	27.00	145.73	2,244.32	5,423.68	-606.22	413.07	733.57	0.00	0.00	0.00
2,500.00	27.00	145.73	2,333.42	5,334.58	-643.74	438.64	778.97	0.00	0.00	0.00
2,600.00	27.00	145.73	2,422.53	5,245.47	-681.26	464.20	824.37	0.00	0.00	0.00
2,700.00	27.00	145.73	2,511.63	5,156.37	-718.77	489.76	869.77	0.00	0.00	0.00
2,800.00	27.00	145.73	2,600.73	5,067.27	-756.29	515.33	915.17	0.00	0.00	0.00
2,900.00	27.00	145.73	2,689.83	4,978.17	-793.81	540.89	960.57	0.00	0.00	0.00
3,000.00	27.00	145.73	2,778.93	4,889.07	-831.33	566.45	1,005.97	0.00	0.00	0.00
3,100.00	27.00	145.73	2,868.03	4,799.97	-868.84	592.02	1,051.37	0.00	0.00	0.00
3,200.00	27.00	145.73	2,957.13	4,710.87	-906.36	617.58	1,096.77	0.00	0.00	0.00
3,300.00	27.00	145.73	3,046.23	4,621.77	-943.88	643.15	1,142.17	0.00	0.00	0.00
3,400.00	27.00	145.73	3,135.33	4,532.67	-981.40	668.71	1,187.57	0.00	0.00	0.00
3,500.00	27.00	145.73	3,224.43	4,443.57	-1,018.91	694.27	1,232.96	0.00	0.00	0.00
3,600.00	27.00	145.73	3,313.53	4,354.47	-1,056.43	719.84	1,278.36	0.00	0.00	0.00
3,700.00	27.00	145.73	3,402.63	4,265.37	-1,093.95	745.40	1,323.76	0.00	0.00	0.00
3,800.00	27.00	145.73	3,491.73	4,176.27	-1,131.47	770.97	1,369.16	0.00	0.00	0.00
3,900.00	27.00	145.73	3,580.83	4,087.17	-1,168.98	796.53	1,414.56	0.00	0.00	0.00
4,000.00	27.00	145.73	3,669.93	3,998.07	-1,206.50	822.09	1,459.96	0.00	0.00	0.00
4,100.00	27.00	145.73	3,759.04	3,908.96	-1,244.02	847.66	1,505.36	0.00	0.00	0.00
4,200.00	27.00	145.73	3,848.14	3,819.86	-1,281.54	873.22	1,550.76	0.00	0.00	0.00
4,300.00	27.00	145.73	3,937.24	3,730.76	-1,319.05	898.79	1,596.16	0.00	0.00	0.00
4,400.00	27.00	145.73	4,026.34	3,641.66	-1,356.57	924.35	1,641.56	0.00	0.00	0.00
4,500.00	27.00	145.73	4,115.44	3,552.56	-1,394.09	949.91	1,686.95	0.00	0.00	0.00
<b>Start Drop</b>										
4,535.89	27.00	145.73	4,147.42	3,520.58	-1,407.55	959.09	1,703.25	0.00	0.00	0.00
4,600.00	25.72	145.73	4,204.86	3,463.14	-1,431.08	975.12	1,731.71	2.00	-2.00	0.00
4,700.00	23.72	145.73	4,295.69	3,372.31	-1,465.63	998.66	1,773.53	2.00	-2.00	0.00

<b>Database:</b>	EDM 2003.21 DB	<b>Local Co-ordinate Reference:</b>	Well Bruton 30-16B
<b>Company:</b>	Laramie Energy II, LLC	<b>TVD Reference:</b>	Est. KB @ 7668.00ft (Original Well Elev)
<b>Project:</b>	MESA CO	<b>MD Reference:</b>	Est. KB @ 7668.00ft (Original Well Elev)
<b>Site:</b>	Sec30-T9S-R93W (Bruton 30-06B)	<b>North Reference:</b>	True
<b>Well:</b>	Bruton 30-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

**Planned Survey**

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	SS (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,800.00	21.72	145.73	4,387.93	3,280.07	-1,497.54	1,020.41	1,812.14	2.00	-2.00	0.00
<b>Williams Fork</b>										
4,810.83	21.50	145.73	4,398.00	3,270.00	-1,500.84	1,022.65	1,816.13	2.00	-2.00	0.00
4,900.00	19.72	145.73	4,481.46	3,186.54	-1,526.78	1,040.33	1,847.52	2.00	-2.00	0.00
5,000.00	17.72	145.73	4,576.16	3,091.84	-1,553.29	1,058.39	1,879.61	2.00	-2.00	0.00
5,100.00	15.72	145.73	4,671.93	2,996.07	-1,577.06	1,074.59	1,908.37	2.00	-2.00	0.00
5,200.00	13.72	145.73	4,768.65	2,899.35	-1,598.06	1,088.90	1,933.77	2.00	-2.00	0.00
5,300.00	11.72	145.73	4,866.19	2,801.81	-1,616.25	1,101.29	1,955.79	2.00	-2.00	0.00
5,400.00	9.72	145.73	4,964.44	2,703.56	-1,631.62	1,111.76	1,974.38	2.00	-2.00	0.00
5,500.00	7.72	145.73	5,063.28	2,604.72	-1,644.14	1,120.30	1,989.54	2.00	-2.00	0.00
5,600.00	5.72	145.73	5,162.59	2,505.41	-1,653.81	1,126.88	2,001.24	2.00	-2.00	0.00
5,700.00	3.72	145.73	5,262.24	2,405.76	-1,660.61	1,131.52	2,009.46	2.00	-2.00	0.00
5,800.00	1.72	145.73	5,362.13	2,305.87	-1,664.52	1,134.18	2,014.20	2.00	-2.00	0.00
<b>End Drop</b>										
5,885.89	0.00	0.00	5,448.00	2,220.00	-1,665.59	1,134.91	2,015.49	2.00	-2.00	0.00
5,900.00	0.00	0.00	5,462.11	2,205.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
<b>ETOG - 30-16B TOG Tgt</b>										
5,935.89	0.00	0.00	5,498.00	2,170.00	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
6,000.00	0.00	0.00	5,562.11	2,105.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
6,100.00	0.00	0.00	5,662.11	2,005.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
6,200.00	0.00	0.00	5,762.11	1,905.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
6,300.00	0.00	0.00	5,862.11	1,805.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
6,400.00	0.00	0.00	5,962.11	1,705.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
6,500.00	0.00	0.00	6,062.11	1,605.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
6,600.00	0.00	0.00	6,162.11	1,505.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
6,700.00	0.00	0.00	6,262.11	1,405.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
6,800.00	0.00	0.00	6,362.11	1,305.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
6,900.00	0.00	0.00	6,462.11	1,205.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
7,000.00	0.00	0.00	6,562.11	1,105.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
<b>Cameo</b>										
7,075.89	0.00	0.00	6,638.00	1,030.00	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
7,100.00	0.00	0.00	6,662.11	1,005.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
7,200.00	0.00	0.00	6,762.11	905.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
7,300.00	0.00	0.00	6,862.11	805.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
7,400.00	0.00	0.00	6,962.11	705.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
7,500.00	0.00	0.00	7,062.11	605.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
7,600.00	0.00	0.00	7,162.11	505.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
7,700.00	0.00	0.00	7,262.11	405.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
7,800.00	0.00	0.00	7,362.11	305.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
<b>Rollins</b>										
7,835.89	0.00	0.00	7,398.00	270.00	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
7,900.00	0.00	0.00	7,462.11	205.89	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
<b>TD= 7986'</b>										
7,985.88	0.00	0.00	7,547.99	120.01	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00
7,985.89	0.00	0.00	7,548.00	120.00	-1,665.59	1,134.91	2,015.49	0.00	0.00	0.00



<b>Database:</b>	EDM 2003.21 DB	<b>Local Co-ordinate Reference:</b>	Well Bruton 30-16B
<b>Company:</b>	Laramie Energy II, LLC	<b>TVD Reference:</b>	Est. KB @ 7668.00ft (Original Well Elev)
<b>Project:</b>	MESA CO	<b>MD Reference:</b>	Est. KB @ 7668.00ft (Original Well Elev)
<b>Site:</b>	Sec30-T9S-R93W (Bruton 30-06B)	<b>North Reference:</b>	True
<b>Well:</b>	Bruton 30-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

Targets										
Target Name - hit/miss target - Shape	Dip Angle	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (m)	Easting (m)	Latitude	Longitude	
30-08B W/C - plan misses target center by 202.20ft at 200.00ft MD (200.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	25.50	-15.27	4,348,034.41	257,625.58	39° 14' 52.030 N	107° 48' 31.118 W	
30-16B TOG Tat - plan hits target center - Circle (radius 50.00)	0.00	0.00	5,498.00	-1,665.59	1,134.91	4,347,508.33	257,960.00	39° 14' 35.321 N	107° 48' 16.504 W	
30-10B W/C - plan misses target center by 200.55ft at 200.00ft MD (200.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	12.75	-7.63	4,348,030.45	257,627.79	39° 14' 51.904 N	107° 48' 31.021 W	
30-06B W/C - plan misses target center by 204.98ft at 200.00ft MD (200.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	38.58	-22.95	4,348,038.46	257,623.37	39° 14' 52.159 N	107° 48' 31.216 W	

Formations						
MD (ft)	TVD (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,810.83	4,398.00	Williams Fork		0.00		
5,935.89	5,498.00	ETOG		0.00		
7,075.89	6,638.00	Cameo		0.00		
7,835.89	7,398.00	Rollins		0.00		

Plan Annotations				
MD (ft)	TVD (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
254.38	254.38	0.00	0.00	KOP= 254'
1,334.38	1,294.85	-206.43	140.66	EOB; Inc.= 27°
4,535.89	4,147.42	-1,407.55	959.09	Start Drop
5,885.89	5,448.00	-1,665.59	1,134.91	End Drop
7,985.88	7,547.99	-1,665.59	1,134.91	TD= 7986'

<b>Company:</b>	Laramie Energy II, LLC	<b>Local Co-ordinate Reference:</b>	Well Bruton 30-16B
<b>Project:</b>	MESA CO	<b>TVD Reference:</b>	Est. KB @ 7668.00ft (Original Well Elev)
<b>Reference Site:</b>	Sec30-T9S-R93W (Bruton 30-06B)	<b>MD Reference:</b>	Est. KB @ 7668.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Bruton 30-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 2003.21 DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Reference Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 50.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 150.00ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Risk Settings		
Vertical Depth for Analysis:	ft	(Below TVD Reference Datum)
Level of Acceptable Risk (1 in):		
Minimum Separation:	0 ft	

Survey Tool Program		Date	7/14/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	7,985.89	Plan #1 (DD)	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						
Sec30-T9S-R93W (Bruton 30-06B)						
Bruton 30-06B - DD - Plan #1	250.00	250.00	44.89	44.03	52.268 CC, ES	
Bruton 30-06B - DD - Plan #1	500.00	497.24	59.94	57.98	30.617 SF	
Bruton 30-08B - DD - Plan #1	250.00	250.00	29.73	28.87	34.584 CC, ES	
Bruton 30-08B - DD - Plan #1	450.00	449.70	38.08	36.35	21.989 SF	
Bruton 30-10B - DD - Plan #1	250.00	250.00	14.86	14.01	17.371 CC, ES	
Bruton 30-10B - DD - Plan #1	400.00	399.90	19.48	17.98	12.956 SF	

<b>Offset Design</b>	Sec30-T9S-R93W (Bruton 30-06B) - Bruton 30-06B - DD - Plan #1												<b>Offset Site Error:</b>	0.00 ft
<b>Survey Program:</b>	0-MWD												<b>Offset Well Error:</b>	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risk Separation Factor	Probability of Collision	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	-30.74	44.89							
50.00	50.00	50.00	50.00	0.04	0.05	-30.74	44.89	44.81	0.08	543.815				
100.00	100.00	100.00	100.00	0.09	0.09	-30.74	44.89	44.70	0.18	243.259				
150.00	150.00	150.00	150.00	0.21	0.20	-30.74	44.89	44.48	0.41	109.674				
200.00	200.00	200.00	200.00	0.32	0.32	-30.74	44.89	44.26	0.63	70.796				
250.00	250.00	250.00	250.00	0.43	0.43	-30.74	44.89	44.03	0.86	52.268			CC, ES	
300.00	300.00	300.00	300.00	0.53	0.54	-176.51	45.34	44.27	1.08	42.178				
350.00	349.97	349.97	349.97	0.63	0.65	-176.62	46.88	45.59	1.29	36.289				
400.00	399.90	399.90	399.90	0.73	0.77	-176.79	49.51	48.00	1.51	32.855				
450.00	449.76	448.73	448.73	0.85	0.87	-177.25	53.70	51.97	1.73	31.021				
500.00	499.53	497.24	497.21	0.96	0.98	-178.09	59.94	57.98	1.96	30.617			SF	
550.00	549.18	545.31	545.21	1.10	1.09	-179.14	68.22	66.02	2.20	31.040				
600.00	598.69	592.81	592.58	1.25	1.20	179.75	78.54	76.11	2.43	32.287				
650.00	648.04	639.62	639.19	1.42	1.32	178.68	90.88	88.21	2.68	33.922				
700.00	697.20	685.65	684.92	1.59	1.43	177.69	105.22	102.30	2.92	36.054				
750.00	746.15	730.80	729.65	1.80	1.56	176.81	121.50	118.33	3.17	38.354				

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



<b>Company:</b>	Laramie Energy II, LLC	<b>Local Co-ordinate Reference:</b>	Well Bruton 30-16B
<b>Project:</b>	MESA CO	<b>TVD Reference:</b>	Est. KB @ 7668.00ft (Original Well Elev)
<b>Reference Site:</b>	Sec30-T9S-R93W (Bruton 30-06B)	<b>MD Reference:</b>	Est. KB @ 7668.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Bruton 30-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 2003.21 DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Reference Datum

<b>Offset Design</b> Sec30-T9S-R93W (Bruton 30-06B) - Bruton 30-06B - DD - Plan #1													<b>Offset Site Error:</b>	0.00 ft
Survey Program: 0-MWD													<b>Offset Well Error:</b>	0.00 ft
Reference		Offset		Semi Major Axis		Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risked Separation Factor	Probability of Collision	Warning	
800.00	794.86	774.96	773.29	2.01	1.69	176.03	139.69	136.28	3.41	40.994				



<b>Company:</b>	Laramie Energy II, LLC	<b>Local Co-ordinate Reference:</b>	Well Bruton 30-16B
<b>Project:</b>	MESA CO	<b>TVD Reference:</b>	Est. KB @ 7668.00ft (Original Well Elev)
<b>Reference Site:</b>	Sec30-T9S-R93W (Bruton 30-06B)	<b>MD Reference:</b>	Est. KB @ 7668.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Bruton 30-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 2003.21 DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design												Offset Site Error:		0.00 ft	
Survey Program: 0-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 (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Riskd Separation Factor			Probability of Collision	
0.00	0.00	0.00	0.00	0.00	0.00	-30.90	29.73								
50.00	50.00	50.00	50.00	0.04	0.05	-30.90	29.73	29.64	0.08	358.642					
100.00	100.00	100.00	100.00	0.09	0.09	-30.90	29.73	29.54	0.19	160.497					
150.00	150.00	150.00	150.00	0.21	0.20	-30.90	29.73	29.32	0.41	72.505					
200.00	200.00	200.00	200.00	0.32	0.32	-30.90	29.73	29.09	0.63	46.831					
250.00	250.00	250.00	250.00	0.43	0.43	-30.90	29.73	28.87	0.86	34.584			CC, ES		
300.00	300.00	300.00	300.00	0.53	0.54	-176.68	30.18	29.10	1.08	28.055					
350.00	349.97	349.97	349.97	0.63	0.65	-176.84	31.72	30.42	1.29	24.538					
400.00	399.90	399.90	399.90	0.73	0.77	-177.08	34.34	32.84	1.51	22.782					
450.00	449.76	449.70	449.70	0.85	0.88	-177.06	38.08	36.35	1.73	21.989			SF		
500.00	499.53	499.34	499.33	0.96	0.99	-176.04	43.03	41.08	1.95	22.029					
550.00	549.18	548.80	548.76	1.10	1.10	-174.33	49.23	47.04	2.19	22.526					
600.00	598.69	598.02	597.90	1.25	1.21	-172.29	56.71	54.30	2.41	23.521					
650.00	648.04	646.94	646.69	1.42	1.32	-170.14	65.51	62.86	2.65	24.680					
700.00	697.20	695.50	695.06	1.59	1.44	-168.03	75.67	72.78	2.89	26.158					
750.00	746.15	743.66	742.94	1.80	1.56	-166.04	87.21	84.05	3.15	27.668					
800.00	794.86	791.36	790.28	2.01	1.69	-164.21	100.11	96.70	3.41	29.361					
850.00	843.32	838.55	837.02	2.26	1.82	-162.54	114.38	110.69	3.69	30.992					
900.00	891.49	885.19	883.10	2.50	1.96	-161.03	130.01	126.04	3.97	32.742					
950.00	939.37	931.24	928.47	2.79	2.11	-159.67	146.97	142.70	4.28	34.371					



<b>Company:</b>	Laramie Energy II, LLC	<b>Local Co-ordinate Reference:</b>	Well Bruton 30-16B
<b>Project:</b>	MESA CO	<b>TVD Reference:</b>	Est. KB @ 7668.00ft (Original Well Elev)
<b>Reference Site:</b>	Sec30-T9S-R93W (Bruton 30-06B)	<b>MD Reference:</b>	Est. KB @ 7668.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Bruton 30-16B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	DD	<b>Database:</b>	EDM 2003.21 DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Reference Datum

Offset Design													Offset Site Error:		0.00 ft
Survey Program: 0-MWD													Offset Well Error:		0.00 ft
Reference		Offset		Semi Major Axis		Distance						Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Risked Separation Factor		Probability of Collision		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)						
0.00	0.00	0.00	0.00	0.00	0.00	-30.90	14.86								
50.00	50.00	50.00	50.00	0.04	0.04	-30.90	14.86	14.78	0.08	183.675					
100.00	100.00	100.00	100.00	0.09	0.09	-30.90	14.86	14.68	0.18	81.988					
150.00	150.00	150.00	150.00	0.21	0.20	-30.90	14.86	14.46	0.41	36.603					
200.00	200.00	200.00	200.00	0.32	0.31	-30.90	14.86	14.23	0.63	23.561					
250.00	250.00	250.00	250.00	0.43	0.43	-30.90	14.86	14.01	0.86	17.371			CC, ES		
300.00	300.00	300.00	300.00	0.53	0.54	-176.73	15.32	14.24	1.07	14.290					
350.00	349.97	349.97	349.97	0.63	0.65	-177.03	16.85	15.56	1.29	13.079					
400.00	399.90	399.90	399.90	0.73	0.76	-177.43	19.48	17.98	1.50	12.956			SF		
450.00	449.76	449.76	449.76	0.85	0.87	-177.83	23.20	21.47	1.73	13.412					
500.00	499.53	499.53	499.53	0.96	0.99	-178.20	28.00	26.05	1.95	14.340					
550.00	549.18	549.18	549.18	1.10	1.10	-178.51	33.89	31.70	2.18	15.514					
600.00	598.69	598.69	598.69	1.25	1.21	-178.76	40.86	38.45	2.41	16.968					
650.00	648.04	648.04	648.04	1.42	1.32	-178.96	48.91	46.26	2.64	18.515					
700.00	697.20	697.20	697.20	1.59	1.43	-179.12	58.03	55.16	2.87	20.236					
750.00	746.15	746.15	746.15	1.80	1.54	-179.25	68.22	65.12	3.10	21.986					
800.00	794.86	794.86	794.86	2.01	1.65	-179.35	79.48	76.15	3.33	23.863					
850.00	843.32	843.32	843.32	2.26	1.76	-179.44	91.80	88.23	3.57	25.728					
900.00	891.49	891.49	891.49	2.50	1.87	-179.50	105.18	101.38	3.80	27.698					
950.00	939.37	939.37	939.37	2.79	1.97	-179.56	119.60	115.56	4.04	29.628					
1,000.00	986.92	986.92	986.92	3.08	2.08	-179.61	135.06	130.79	4.27	31.652					