



**Departure**  
Energy Services (US) LP

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Denver, Colorado  
Phone: 303.542.2000

Casper, Wyoming  
Phone: 307.265.2231  
Fax: 307.472.5064  
[www.departureus.com](http://www.departureus.com)



## **Laramie Energy II, LLC**

Mesa County, Colorado

NWNW Sec 17-T9S-R94W

Hawxhurst 17-05B

S- Well

Well Plan #1

Job Number: TBA

## **Well Plan Report**

February 21, 2011



Site: Sec 17-T9S-R94W (Hawxhurst 17-04B Pad)  
Well: Hawxhurst 17-05B  
Wellbore: S-Well  
Design: Plan #1

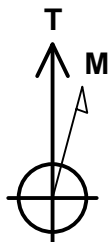
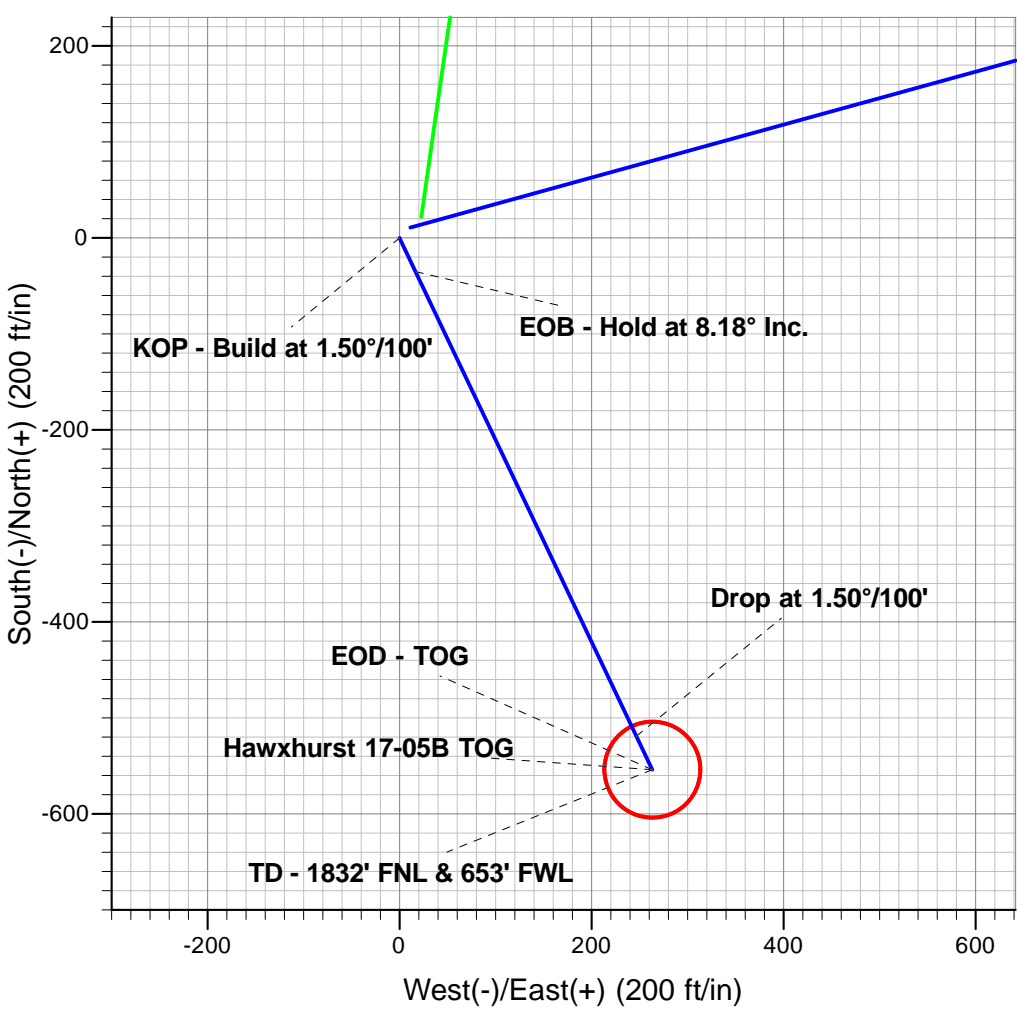
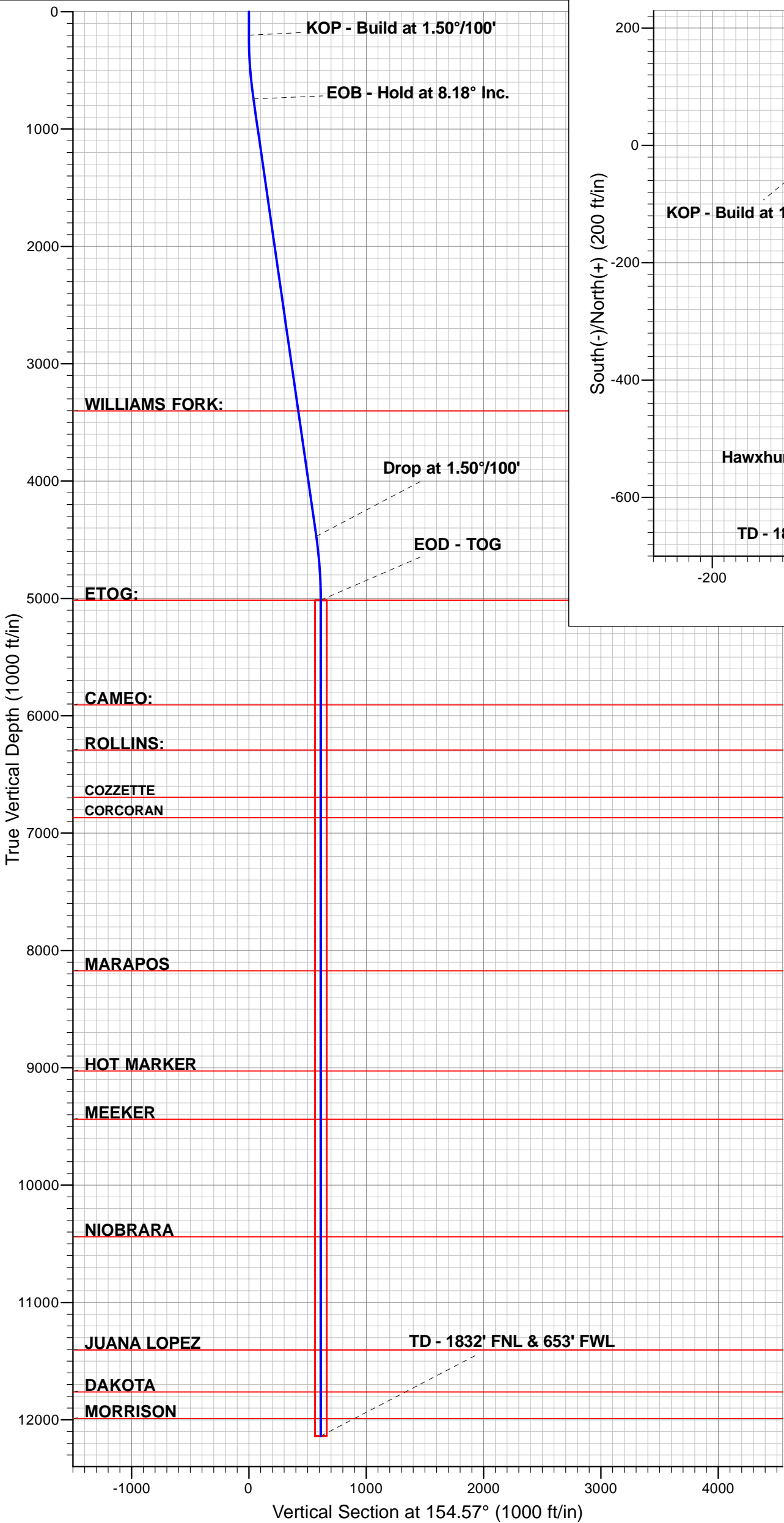
Reference Details - WELL CENTRE  
Geodetic System: Universal Transverse Mercator  
Ellipsoid: GRS 1980  
Zone: Zone 13N (108 W to 102 W)  
Northing: 14278087.32  
Easting: 815903.78  
Latitude: 39° 16' 50.0880 N  
Longitude: 107° 54' 48.8160 W  
Grid Convergence: 1.85° East  
Ground Elevation: 6786.00  
KB Elevation: WELL @ 6807.00ft (Original Well Elev)



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Azimuths to True North  
Magnetic North: 10.33°

Magnetic Field  
Strength: 52169.1snT  
Dip Angle: 65.59°  
Date: 2/18/2011  
Model: IGRF2010

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
200.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP - Build at 1.50°/100'
743.15	745.00	8.18	154.57	-35.05	16.67	38.81	38.81	EOB - Hold at 8.18° Inc.
4471.84	4511.97	8.18	154.57	-518.80	246.70	574.47	574.47	Drop at 1.50°/100'
5015.00	5056.97	0.00	0.00	-553.85	263.37	613.29	613.29	EOD - TOG
12138.00	12179.97	0.00	0.00	-553.85	263.37	613.29	613.29	TD - 1832' FNL & 653' FWL

<b>Database:</b>	EDM Depart	<b>Local Co-ordinate Reference:</b>	Well Hawxhurst 17-05B
<b>Company:</b>	Laramie Energy II, LLC	<b>TVD Reference:</b>	WELL @ 6807.00ft (Original Well Elev)
<b>Project:</b>	MESA CO	<b>MD Reference:</b>	WELL @ 6807.00ft (Original Well Elev)
<b>Site:</b>	Sec 17-T9S-R94W (Hawxhurst 17-04B Pad)	<b>North Reference:</b>	True
<b>Well:</b>	Hawxhurst 17-05B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	S-Well		
<b>Design:</b>	Plan #1		

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

Site		Sec 17-T9S-R94W (Hawxhurst 17-04B Pad)			
Site Position:		Northing:	14,278,087.32 ft	Latitude:	39° 16' 50.0880 N
From:	Lat/Long	Easting:	815,903.77 ft	Longitude:	107° 54' 48.8160 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.85 °

Well	Hawxhurst 17-05B					
Well Position	+N-S	0.00 ft	Northing:	14,278,087.32 ft	Latitude:	39° 16' 50.0880 N
	+E-W	0.00 ft	Easting:	815,903.77 ft	Longitude:	107° 54' 48.8160 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	6,786.00 ft

Wellbore	S-Well				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/18/2011	10.33	65.59	52,169

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	154.57

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
745.00	8.18	154.57	743.16	-35.05	16.67	1.50	1.50	0.00	154.57	
4,511.97	8.18	154.57	4,471.84	-518.80	246.70	0.00	0.00	0.00	0.00	
5,056.97	0.00	0.00	5,015.00	-553.85	263.37	1.50	-1.50	0.00	180.00	Hawxhurst 17-05B TC
12,179.97	0.00	0.00	12,138.00	-553.85	263.37	0.00	0.00	0.00	0.00	Hawxhurst 17-05B TC

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<b>Company:</b>	Laramie Energy II, LLC	<b>TVD Reference:</b>	WELL @ 6807.00ft (Original Well Elev)
<b>Project:</b>	MESA CO	<b>MD Reference:</b>	WELL @ 6807.00ft (Original Well Elev)
<b>Site:</b>	Sec 17-T9S-R94W (Hawxhurst 17-04B Pad)	<b>North Reference:</b>	True
<b>Well:</b>	Hawxhurst 17-05B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	S-Well		
<b>Design:</b>	Plan #1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (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	0.00	0.00	0.00	0.00	0.00	0.00	
<b>KOP - Build at 1.50°/100'</b>										
300.00	1.50	154.57	299.99	-1.18	0.56	1.31	1.50	1.50	0.00	
400.00	3.00	154.57	399.91	-4.73	2.25	5.23	1.50	1.50	0.00	
500.00	4.50	154.57	499.69	-10.63	5.06	11.77	1.50	1.50	0.00	
600.00	6.00	154.57	599.27	-18.90	8.99	20.92	1.50	1.50	0.00	
700.00	7.50	154.57	698.57	-29.51	14.03	32.68	1.50	1.50	0.00	
745.00	8.18	154.57	743.15	-35.05	16.67	38.81	1.50	1.50	0.00	
<b>EOB - Hold at 8.18° Inc.</b>										
800.00	8.18	154.57	797.59	-42.12	20.03	46.64	0.00	0.00	0.00	
900.00	8.18	154.57	896.58	-54.96	26.13	60.86	0.00	0.00	0.00	
1,000.00	8.18	154.57	995.56	-67.80	32.24	75.08	0.00	0.00	0.00	
1,100.00	8.18	154.57	1,094.55	-80.64	38.35	89.29	0.00	0.00	0.00	
1,200.00	8.18	154.57	1,193.53	-93.48	44.45	103.51	0.00	0.00	0.00	
1,300.00	8.18	154.57	1,292.51	-106.33	50.56	117.73	0.00	0.00	0.00	
1,400.00	8.18	154.57	1,391.50	-119.17	56.67	131.95	0.00	0.00	0.00	
1,500.00	8.18	154.57	1,490.48	-132.01	62.77	146.17	0.00	0.00	0.00	
1,509.62	8.18	154.57	1,500.00	-133.24	63.36	147.54	0.00	0.00	0.00	
<b>Surface Casing</b>										
1,600.00	8.18	154.57	1,589.46	-144.85	68.88	160.39	0.00	0.00	0.00	
1,700.00	8.18	154.57	1,688.45	-157.69	74.99	174.61	0.00	0.00	0.00	
1,800.00	8.18	154.57	1,787.43	-170.53	81.09	188.83	0.00	0.00	0.00	
1,900.00	8.18	154.57	1,886.42	-183.38	87.20	203.05	0.00	0.00	0.00	
2,000.00	8.18	154.57	1,985.40	-196.22	93.31	217.27	0.00	0.00	0.00	
2,100.00	8.18	154.57	2,084.38	-209.06	99.41	231.49	0.00	0.00	0.00	
2,200.00	8.18	154.57	2,183.37	-221.90	105.52	245.71	0.00	0.00	0.00	
2,300.00	8.18	154.57	2,282.35	-234.74	111.63	259.93	0.00	0.00	0.00	
2,400.00	8.18	154.57	2,381.34	-247.59	117.73	274.15	0.00	0.00	0.00	
2,500.00	8.18	154.57	2,480.32	-260.43	123.84	288.37	0.00	0.00	0.00	
2,600.00	8.18	154.57	2,579.30	-273.27	129.95	302.59	0.00	0.00	0.00	
2,700.00	8.18	154.57	2,678.29	-286.11	136.05	316.81	0.00	0.00	0.00	
2,800.00	8.18	154.57	2,777.27	-298.95	142.16	331.03	0.00	0.00	0.00	
2,900.00	8.18	154.57	2,876.25	-311.79	148.27	345.25	0.00	0.00	0.00	
3,000.00	8.18	154.57	2,975.24	-324.64	154.37	359.47	0.00	0.00	0.00	
3,100.00	8.18	154.57	3,074.22	-337.48	160.48	373.69	0.00	0.00	0.00	
3,200.00	8.18	154.57	3,173.21	-350.32	166.59	387.91	0.00	0.00	0.00	
3,300.00	8.18	154.57	3,272.19	-363.16	172.69	402.13	0.00	0.00	0.00	
3,400.00	8.18	154.57	3,371.17	-376.00	178.80	416.35	0.00	0.00	0.00	
3,431.14	8.18	154.57	3,402.00	-380.00	180.70	420.78	0.00	0.00	0.00	
<b>WILLIAMS FORK:</b>										
3,500.00	8.18	154.57	3,470.16	-388.85	184.91	430.57	0.00	0.00	0.00	
3,600.00	8.18	154.57	3,569.14	-401.69	191.01	444.79	0.00	0.00	0.00	
3,700.00	8.18	154.57	3,668.12	-414.53	197.12	459.01	0.00	0.00	0.00	
3,800.00	8.18	154.57	3,767.11	-427.37	203.23	473.23	0.00	0.00	0.00	
3,900.00	8.18	154.57	3,866.09	-440.21	209.33	487.45	0.00	0.00	0.00	
4,000.00	8.18	154.57	3,965.08	-453.05	215.44	501.67	0.00	0.00	0.00	
4,100.00	8.18	154.57	4,064.06	-465.90	221.55	515.89	0.00	0.00	0.00	
4,200.00	8.18	154.57	4,163.04	-478.74	227.65	530.11	0.00	0.00	0.00	
4,300.00	8.18	154.57	4,262.03	-491.58	233.76	544.33	0.00	0.00	0.00	
4,400.00	8.18	154.57	4,361.01	-504.42	239.87	558.55	0.00	0.00	0.00	
4,500.00	8.18	154.57	4,460.00	-517.26	245.97	572.77	0.00	0.00	0.00	
4,511.97	8.18	154.57	4,471.84	-518.80	246.70	574.47	0.00	0.00	0.00	
<b>Drop at 1.50°/100'</b>										

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<b>Company:</b>	Laramie Energy II, LLC	<b>TVD Reference:</b>	WELL @ 6807.00ft (Original Well Elev)
<b>Project:</b>	MESA CO	<b>MD Reference:</b>	WELL @ 6807.00ft (Original Well Elev)
<b>Site:</b>	Sec 17-T9S-R94W (Hawxhurst 17-04B Pad)	<b>North Reference:</b>	True
<b>Well:</b>	Hawxhurst 17-05B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	S-Well		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,600.00	6.85	154.57	4,559.12	-529.20	251.65	585.98	1.50	-1.50	0.00
4,700.00	5.35	154.57	4,658.55	-538.80	256.21	596.62	1.50	-1.50	0.00
4,800.00	3.85	154.57	4,758.22	-546.05	259.66	604.64	1.50	-1.50	0.00
4,900.00	2.35	154.57	4,858.07	-550.94	261.99	610.06	1.50	-1.50	0.00
5,000.00	0.85	154.57	4,958.03	-553.47	263.19	612.86	1.50	-1.50	0.00
5,056.97	0.00	0.00	5,015.00	-553.85	263.37	613.29	1.50	-1.50	0.00
<b>EOD - TOG - ETOG: - Hawxhurst 17-05B TOG</b>									
5,100.00	0.00	0.00	5,058.03	-553.85	263.37	613.29	0.00	0.00	0.00
5,200.00	0.00	0.00	5,158.03	-553.85	263.37	613.29	0.00	0.00	0.00
5,300.00	0.00	0.00	5,258.03	-553.85	263.37	613.29	0.00	0.00	0.00
5,400.00	0.00	0.00	5,358.03	-553.85	263.37	613.29	0.00	0.00	0.00
5,500.00	0.00	0.00	5,458.03	-553.85	263.37	613.29	0.00	0.00	0.00
5,600.00	0.00	0.00	5,558.03	-553.85	263.37	613.29	0.00	0.00	0.00
5,700.00	0.00	0.00	5,658.03	-553.85	263.37	613.29	0.00	0.00	0.00
5,800.00	0.00	0.00	5,758.03	-553.85	263.37	613.29	0.00	0.00	0.00
5,900.00	0.00	0.00	5,858.03	-553.85	263.37	613.29	0.00	0.00	0.00
5,948.97	0.00	0.00	5,907.00	-553.85	263.37	613.29	0.00	0.00	0.00
<b>CAMEO:</b>									
6,000.00	0.00	0.00	5,958.03	-553.85	263.37	613.29	0.00	0.00	0.00
6,100.00	0.00	0.00	6,058.03	-553.85	263.37	613.29	0.00	0.00	0.00
6,200.00	0.00	0.00	6,158.03	-553.85	263.37	613.29	0.00	0.00	0.00
6,300.00	0.00	0.00	6,258.03	-553.85	263.37	613.29	0.00	0.00	0.00
6,333.97	0.00	0.00	6,292.00	-553.85	263.37	613.29	0.00	0.00	0.00
<b>ROLLINS:</b>									
6,400.00	0.00	0.00	6,358.03	-553.85	263.37	613.29	0.00	0.00	0.00
6,500.00	0.00	0.00	6,458.03	-553.85	263.37	613.29	0.00	0.00	0.00
6,600.00	0.00	0.00	6,558.03	-553.85	263.37	613.29	0.00	0.00	0.00
6,700.00	0.00	0.00	6,658.03	-553.85	263.37	613.29	0.00	0.00	0.00
6,736.97	0.00	0.00	6,695.00	-553.85	263.37	613.29	0.00	0.00	0.00
<b>COZZETTE</b>									
6,800.00	0.00	0.00	6,758.03	-553.85	263.37	613.29	0.00	0.00	0.00
6,900.00	0.00	0.00	6,858.03	-553.85	263.37	613.29	0.00	0.00	0.00
6,910.97	0.00	0.00	6,869.00	-553.85	263.37	613.29	0.00	0.00	0.00
<b>CORCORAN</b>									
7,000.00	0.00	0.00	6,958.03	-553.85	263.37	613.29	0.00	0.00	0.00
7,100.00	0.00	0.00	7,058.03	-553.85	263.37	613.29	0.00	0.00	0.00
7,200.00	0.00	0.00	7,158.03	-553.85	263.37	613.29	0.00	0.00	0.00
7,300.00	0.00	0.00	7,258.03	-553.85	263.37	613.29	0.00	0.00	0.00
7,400.00	0.00	0.00	7,358.03	-553.85	263.37	613.29	0.00	0.00	0.00
7,500.00	0.00	0.00	7,458.03	-553.85	263.37	613.29	0.00	0.00	0.00
7,600.00	0.00	0.00	7,558.03	-553.85	263.37	613.29	0.00	0.00	0.00
7,700.00	0.00	0.00	7,658.03	-553.85	263.37	613.29	0.00	0.00	0.00
7,800.00	0.00	0.00	7,758.03	-553.85	263.37	613.29	0.00	0.00	0.00
7,900.00	0.00	0.00	7,858.03	-553.85	263.37	613.29	0.00	0.00	0.00
8,000.00	0.00	0.00	7,958.03	-553.85	263.37	613.29	0.00	0.00	0.00
8,100.00	0.00	0.00	8,058.03	-553.85	263.37	613.29	0.00	0.00	0.00
8,200.00	0.00	0.00	8,158.03	-553.85	263.37	613.29	0.00	0.00	0.00
8,214.97	0.00	0.00	8,173.00	-553.85	263.37	613.29	0.00	0.00	0.00
<b>MARAPOS</b>									
8,300.00	0.00	0.00	8,258.03	-553.85	263.37	613.29	0.00	0.00	0.00
8,400.00	0.00	0.00	8,358.03	-553.85	263.37	613.29	0.00	0.00	0.00
8,500.00	0.00	0.00	8,458.03	-553.85	263.37	613.29	0.00	0.00	0.00
8,600.00	0.00	0.00	8,558.03	-553.85	263.37	613.29	0.00	0.00	0.00

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<b>Project:</b>	MESA CO	<b>MD Reference:</b>	WELL @ 6807.00ft (Original Well Elev)
<b>Site:</b>	Sec 17-T9S-R94W (Hawxhurst 17-04B Pad)	<b>North Reference:</b>	True
<b>Well:</b>	Hawxhurst 17-05B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	S-Well		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,700.00	0.00	0.00	8,658.03	-553.85	263.37	613.29	0.00	0.00	0.00
8,800.00	0.00	0.00	8,758.03	-553.85	263.37	613.29	0.00	0.00	0.00
8,900.00	0.00	0.00	8,858.03	-553.85	263.37	613.29	0.00	0.00	0.00
9,000.00	0.00	0.00	8,958.03	-553.85	263.37	613.29	0.00	0.00	0.00
9,068.97	0.00	0.00	9,027.00	-553.85	263.37	613.29	0.00	0.00	0.00
<b>HOT MARKER</b>									
9,100.00	0.00	0.00	9,058.03	-553.85	263.37	613.29	0.00	0.00	0.00
9,200.00	0.00	0.00	9,158.03	-553.85	263.37	613.29	0.00	0.00	0.00
9,300.00	0.00	0.00	9,258.03	-553.85	263.37	613.29	0.00	0.00	0.00
9,400.00	0.00	0.00	9,358.03	-553.85	263.37	613.29	0.00	0.00	0.00
9,480.97	0.00	0.00	9,439.00	-553.85	263.37	613.29	0.00	0.00	0.00
<b>MEEKER</b>									
9,500.00	0.00	0.00	9,458.03	-553.85	263.37	613.29	0.00	0.00	0.00
9,600.00	0.00	0.00	9,558.03	-553.85	263.37	613.29	0.00	0.00	0.00
9,700.00	0.00	0.00	9,658.03	-553.85	263.37	613.29	0.00	0.00	0.00
9,800.00	0.00	0.00	9,758.03	-553.85	263.37	613.29	0.00	0.00	0.00
9,900.00	0.00	0.00	9,858.03	-553.85	263.37	613.29	0.00	0.00	0.00
10,000.00	0.00	0.00	9,958.03	-553.85	263.37	613.29	0.00	0.00	0.00
10,100.00	0.00	0.00	10,058.03	-553.85	263.37	613.29	0.00	0.00	0.00
10,200.00	0.00	0.00	10,158.03	-553.85	263.37	613.29	0.00	0.00	0.00
10,300.00	0.00	0.00	10,258.03	-553.85	263.37	613.29	0.00	0.00	0.00
10,400.00	0.00	0.00	10,358.03	-553.85	263.37	613.29	0.00	0.00	0.00
10,481.97	0.00	0.00	10,440.00	-553.85	263.37	613.29	0.00	0.00	0.00
<b>NIOBRARA</b>									
10,500.00	0.00	0.00	10,458.03	-553.85	263.37	613.29	0.00	0.00	0.00
10,600.00	0.00	0.00	10,558.03	-553.85	263.37	613.29	0.00	0.00	0.00
10,700.00	0.00	0.00	10,658.03	-553.85	263.37	613.29	0.00	0.00	0.00
10,800.00	0.00	0.00	10,758.03	-553.85	263.37	613.29	0.00	0.00	0.00
10,900.00	0.00	0.00	10,858.03	-553.85	263.37	613.29	0.00	0.00	0.00
11,000.00	0.00	0.00	10,958.03	-553.85	263.37	613.29	0.00	0.00	0.00
11,100.00	0.00	0.00	11,058.03	-553.85	263.37	613.29	0.00	0.00	0.00
11,200.00	0.00	0.00	11,158.03	-553.85	263.37	613.29	0.00	0.00	0.00
11,300.00	0.00	0.00	11,258.03	-553.85	263.37	613.29	0.00	0.00	0.00
11,400.00	0.00	0.00	11,358.03	-553.85	263.37	613.29	0.00	0.00	0.00
11,446.97	0.00	0.00	11,405.00	-553.85	263.37	613.29	0.00	0.00	0.00
<b>JUANA LOPEZ</b>									
11,500.00	0.00	0.00	11,458.03	-553.85	263.37	613.29	0.00	0.00	0.00
11,600.00	0.00	0.00	11,558.03	-553.85	263.37	613.29	0.00	0.00	0.00
11,700.00	0.00	0.00	11,658.03	-553.85	263.37	613.29	0.00	0.00	0.00
11,800.00	0.00	0.00	11,758.03	-553.85	263.37	613.29	0.00	0.00	0.00
11,803.97	0.00	0.00	11,762.00	-553.85	263.37	613.29	0.00	0.00	0.00
<b>DAKOTA</b>									
11,900.00	0.00	0.00	11,858.03	-553.85	263.37	613.29	0.00	0.00	0.00
12,000.00	0.00	0.00	11,958.03	-553.85	263.37	613.29	0.00	0.00	0.00
12,029.97	0.00	0.00	11,988.00	-553.85	263.37	613.29	0.00	0.00	0.00
<b>MORRISON</b>									
12,100.00	0.00	0.00	12,058.03	-553.85	263.37	613.29	0.00	0.00	0.00
12,179.97	0.00	0.00	12,138.00	-553.85	263.37	613.29	0.00	0.00	0.00
<b>TD - 1832' FNL &amp; 653' FWL - Hawxhurst 17-05B TD</b>									

<b>Database:</b>	EDM Depart	<b>Local Co-ordinate Reference:</b>	Well Hawxhurst 17-05B
<b>Company:</b>	Laramie Energy II, LLC	<b>TVD Reference:</b>	WELL @ 6807.00ft (Original Well Elev)
<b>Project:</b>	MESA CO	<b>MD Reference:</b>	WELL @ 6807.00ft (Original Well Elev)
<b>Site:</b>	Sec 17-T9S-R94W (Hawxhurst 17-04B Pad)	<b>North Reference:</b>	True
<b>Well:</b>	Hawxhurst 17-05B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	S-Well		
<b>Design:</b>	Plan #1		

Design 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)		
Hawxhurst 17-05B TOG	0.00	0.00	5,015.00	-553.85	263.37	14,277,525.27	816,149.17	39° 16' 44.6160 N	107° 54' 45.4680 W
- plan hits target center									
- Circle (radius 50.00)									
Hawxhurst 17-05B TD	0.00	0.00	12,138.00	-553.85	263.37	14,277,525.27	816,149.17	39° 16' 44.6160 N	107° 54' 45.4680 W
- plan hits target center									
- Point									

Casing Points					
Measured Depth	Vertical Depth			Casing Diameter	Hole Diameter
(ft)	(ft)	Name		(in)	(in)
1,509.62	1,500.00	Surface Casing		0.000	0.000

Formations						
Measured Depth	Vertical Depth				Dip	Dip Direction
(ft)	(ft)	Name	Lithology		(°)	(°)
3,431.14	3,402.00	WILLIAMS FORK:				
5,056.97	5,015.00	ETOG:				
5,948.97	5,907.00	CAMEO:				
6,333.97	6,292.00	ROLLINS:				
6,736.97	6,695.00	COZZETTE				
6,910.97	6,869.00	CORCORAN				
8,214.97	8,173.00	MARAPOS				
9,068.97	9,027.00	HOT MARKER				
9,480.97	9,439.00	MEEKER				
10,481.97	10,440.00	NIOBRARA				
11,446.97	11,405.00	JUANA LOPEZ				
11,803.97	11,762.00	DAKOTA				
12,029.97	11,988.00	MORRISON				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
200.00	200.00	0.00	0.00	KOP - Build at 1.50°/100'	
745.00	743.15	-35.05	16.67	EOB - Hold at 8.18° Inc.	
4,511.97	4,471.84	-518.80	246.70	Drop at 1.50°/100'	
5,056.97	5,015.00	-553.85	263.37	EOD - TOG	
12,179.97	12,138.00	-553.85	263.37	TD - 1832' FNL & 653' FWL	