



Site: Sec 19-T9S-R93W (Jensen 19-01 Pad)
Well: Jensen 18-16D
Wellbore: Wellbore #1
Design: Plan #1

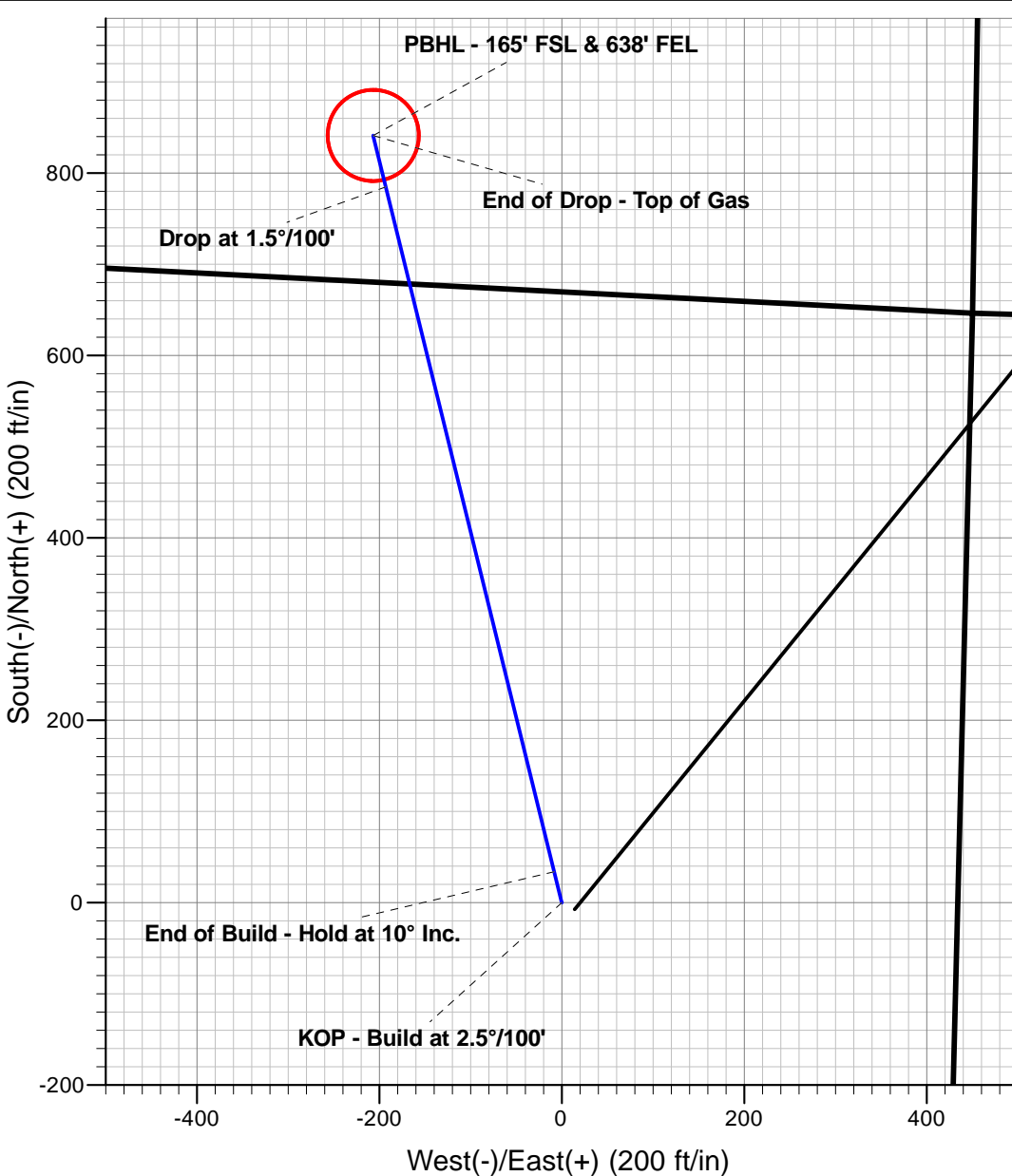
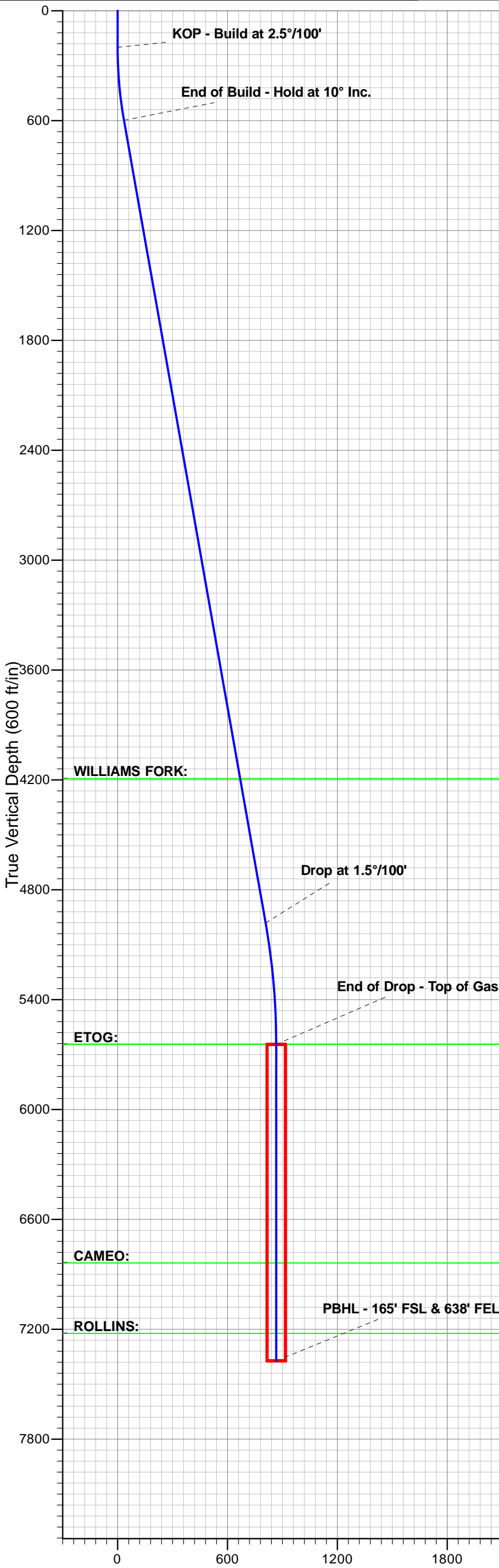
Reference Details - WELL CENTRE
Geodetic System: US State Plane 1983
Ellipsoid: GRS 1980
Zone: Colorado Central Zone
Northing: 1530702.86
Easting: 2347827.71
Latitude: 39° 16' 4.080 N
Longitude: 107° 48' 13.752 W
Grid Convergence: 1.45° East
Ground Elevation: 7087.00
KB Elevation: WELL @ 7108.00ft (Original Well Elev)



Departure
Energy Services (US) LP

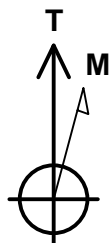
Denver, Colorado
Phone: 303.542.2000

Casper, Wyoming
Phone: 307.265.2231
Fax: 307.472.5064
www.departureus.com



ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation	
200.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP - Build at 2.5°/100'	
598.24	600.27	10.01	346.20	33.86	-8.32	34.87	34.87	End of Build - Hold at 10° Inc.	
4981.26	5051.01	10.01	346.20	784.92	-192.81	808.25	808.25	Drop at 1.5°/100'	
5645.00	5718.13	0.00	0.00	841.35	-206.67	866.36	866.36	End of Drop - Top of Gas	
7373.00	7446.13	0.00	0.00	841.35	-206.67	866.36	866.36	PBHL - 165' FSL & 638' FEL	

FORMATION TOP DETAILS			
TVDPath	MDPath	Formation	
4193.00	4250.56	WILLIAMS FORK:	
5645.00	5718.13	ETOG:	
6838.00	6911.13	CAMEO:	
7223.00	7296.13	ROLLINS:	



Azimuths to True North
Magnetic North: 10.19°

Magnetic Field
Strength: 52108.8snT
Dip Angle: 65.58°
Date: 10/12/2011
Model: IGRF2010



Departure
Energy Services (US) LP

Departure Energy Services (US) LP

Denver, Colorado
Phone: 303.542.2000

Casper, Wyoming
Phone: 307.265.2231
Fax: 307.472.5064
www.departureus.com



Laramie Energy II, LLC

Mesa County, Colorado

NENE Sec 19-T9S-R93W

JENSEN 18-16D

S- Well

Well Plan #1

Job Number: TBA

Well Plan Report

October 13, 2011

Database:	EDM Depart	Local Co-ordinate Reference:	Well Jensen 18-16D
Company:	Laramie Energy II, LLC	TVD Reference:	WELL @ 7108.00ft (Original Well Elev)
Project:	MESA, CO	MD Reference:	WELL @ 7108.00ft (Original Well Elev)
Site:	Sec 19-T9S-R93W (Jensen 19-01 Pad)	North Reference:	True
Well:	Jensen 18-16D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Project	MESA, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site		Sec 19-T9S-R93W (Jensen 19-01 Pad)			
Site Position:		Northing:	1,530,702.86 ft	Latitude:	39° 16' 4.080 N
From:	Lat/Long	Easting:	2,347,827.71 ft	Longitude:	107° 48' 13.752 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.45 °

Well	Jensen 18-16D					
Well Position	+N/-S	0.00 ft	Northing:	1,530,702.86 ft	Latitude:	39° 16' 4.080 N
	+E/-W	0.00 ft	Easting:	2,347,827.71 ft	Longitude:	107° 48' 13.752 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	7,087.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/12/11	10.19	65.58	52,109

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	346.20

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	
600.27	10.01	346.20	598.24	33.86	-8.32	2.50	2.50	0.00	346.20	
5,051.01	10.01	346.20	4,981.27	784.92	-192.81	0.00	0.00	0.00	0.00	
5,718.13	0.00	0.00	5,645.00	841.35	-206.67	1.50	-1.50	0.00	180.00	Jensen 18-16D TOG
7,446.13	0.00	0.00	7,373.00	841.35	-206.67	0.00	0.00	0.00	0.00	Jensen 18-16D TD

Database:	EDM Depart	Local Co-ordinate Reference:	Well Jensen 18-16D
Company:	Laramie Energy II, LLC	TVD Reference:	WELL @ 7108.00ft (Original Well Elev)
Project:	MESA, CO	MD Reference:	WELL @ 7108.00ft (Original Well Elev)
Site:	Sec 19-T9S-R93W (Jensen 19-01 Pad)	North Reference:	True
Well:	Jensen 18-16D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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
KOP - Build at 2.5°/100'									
300.00	2.50	346.20	299.97	2.12	-0.52	2.18	2.50	2.50	0.00
400.00	5.00	346.20	399.75	8.47	-2.08	8.72	2.50	2.50	0.00
500.00	7.50	346.20	499.14	19.04	-4.68	19.61	2.50	2.50	0.00
600.00	10.00	346.20	597.97	33.81	-8.31	34.82	2.50	2.50	0.00
600.27	10.01	346.20	598.24	33.86	-8.32	34.87	2.50	2.50	0.00
End of Build - Hold at 10° Inc.									
700.00	10.01	346.20	696.45	50.69	-12.45	52.19	0.00	0.00	0.00
800.00	10.01	346.20	794.93	67.56	-16.60	69.57	0.00	0.00	0.00
900.00	10.01	346.20	893.41	84.44	-20.74	86.95	0.00	0.00	0.00
1,000.00	10.01	346.20	991.89	101.31	-24.89	104.32	0.00	0.00	0.00
1,100.00	10.01	346.20	1,090.37	118.19	-29.03	121.70	0.00	0.00	0.00
1,200.00	10.01	346.20	1,188.84	135.06	-33.18	139.08	0.00	0.00	0.00
1,300.00	10.01	346.20	1,287.32	151.94	-37.32	156.45	0.00	0.00	0.00
1,400.00	10.01	346.20	1,385.80	168.81	-41.47	173.83	0.00	0.00	0.00
1,500.00	10.01	346.20	1,484.28	185.69	-45.61	191.21	0.00	0.00	0.00
1,600.00	10.01	346.20	1,582.76	202.56	-49.76	208.58	0.00	0.00	0.00
1,700.00	10.01	346.20	1,681.24	219.44	-53.90	225.96	0.00	0.00	0.00
1,800.00	10.01	346.20	1,779.72	236.31	-58.05	243.34	0.00	0.00	0.00
1,900.00	10.01	346.20	1,878.20	253.19	-62.19	260.71	0.00	0.00	0.00
2,000.00	10.01	346.20	1,976.67	270.06	-66.34	278.09	0.00	0.00	0.00
2,100.00	10.01	346.20	2,075.15	286.94	-70.48	295.47	0.00	0.00	0.00
2,200.00	10.01	346.20	2,173.63	303.81	-74.63	312.84	0.00	0.00	0.00
2,300.00	10.01	346.20	2,272.11	320.69	-78.77	330.22	0.00	0.00	0.00
2,400.00	10.01	346.20	2,370.59	337.56	-82.92	347.60	0.00	0.00	0.00
2,500.00	10.01	346.20	2,469.07	354.44	-87.06	364.97	0.00	0.00	0.00
2,600.00	10.01	346.20	2,567.55	371.31	-91.21	382.35	0.00	0.00	0.00
2,700.00	10.01	346.20	2,666.03	388.19	-95.35	399.73	0.00	0.00	0.00
2,800.00	10.01	346.20	2,764.50	405.06	-99.50	417.10	0.00	0.00	0.00
2,900.00	10.01	346.20	2,862.98	421.94	-103.64	434.48	0.00	0.00	0.00
3,000.00	10.01	346.20	2,961.46	438.81	-107.79	451.86	0.00	0.00	0.00
3,100.00	10.01	346.20	3,059.94	455.69	-111.93	469.23	0.00	0.00	0.00
3,200.00	10.01	346.20	3,158.42	472.56	-116.08	486.61	0.00	0.00	0.00
3,300.00	10.01	346.20	3,256.90	489.44	-120.22	503.98	0.00	0.00	0.00
3,400.00	10.01	346.20	3,355.38	506.31	-124.37	521.36	0.00	0.00	0.00
3,500.00	10.01	346.20	3,453.85	523.18	-128.51	538.74	0.00	0.00	0.00
3,600.00	10.01	346.20	3,552.33	540.06	-132.66	556.11	0.00	0.00	0.00
3,700.00	10.01	346.20	3,650.81	556.93	-136.81	573.49	0.00	0.00	0.00
3,800.00	10.01	346.20	3,749.29	573.81	-140.95	590.87	0.00	0.00	0.00
3,900.00	10.01	346.20	3,847.77	590.68	-145.10	608.24	0.00	0.00	0.00
4,000.00	10.01	346.20	3,946.25	607.56	-149.24	625.62	0.00	0.00	0.00
4,100.00	10.01	346.20	4,044.73	624.43	-153.39	643.00	0.00	0.00	0.00
4,200.00	10.01	346.20	4,143.21	641.31	-157.53	660.37	0.00	0.00	0.00
4,250.56	10.01	346.20	4,193.00	649.84	-159.63	669.16	0.00	0.00	0.00
WILLIAMS FORK:									
4,300.00	10.01	346.20	4,241.68	658.18	-161.68	677.75	0.00	0.00	0.00
4,400.00	10.01	346.20	4,340.16	675.06	-165.82	695.13	0.00	0.00	0.00
4,500.00	10.01	346.20	4,438.64	691.93	-169.97	712.50	0.00	0.00	0.00
4,600.00	10.01	346.20	4,537.12	708.81	-174.11	729.88	0.00	0.00	0.00
4,700.00	10.01	346.20	4,635.60	725.68	-178.26	747.26	0.00	0.00	0.00
4,800.00	10.01	346.20	4,734.08	742.56	-182.40	764.63	0.00	0.00	0.00
4,900.00	10.01	346.20	4,832.56	759.43	-186.55	782.01	0.00	0.00	0.00

Database:	EDM Depart	Local Co-ordinate Reference:	Well Jensen 18-16D
Company:	Laramie Energy II, LLC	TVD Reference:	WELL @ 7108.00ft (Original Well Elev)
Project:	MESA, CO	MD Reference:	WELL @ 7108.00ft (Original Well Elev)
Site:	Sec 19-T9S-R93W (Jensen 19-01 Pad)	North Reference:	True
Well:	Jensen 18-16D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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)
5,000.00	10.01	346.20	4,931.04	776.31	-190.69	799.39	0.00	0.00	0.00
5,051.01	10.01	346.20	4,981.27	784.92	-192.81	808.25	0.00	0.00	0.00
Drop at 1.5°/100'									
5,100.00	9.27	346.20	5,029.57	792.88	-194.76	816.45	1.50	-1.50	0.00
5,200.00	7.77	346.20	5,128.46	807.27	-198.30	831.27	1.50	-1.50	0.00
5,300.00	6.27	346.20	5,227.71	819.14	-201.21	843.50	1.50	-1.50	0.00
5,400.00	4.77	346.20	5,327.24	828.49	-203.51	853.12	1.50	-1.50	0.00
5,500.00	3.27	346.20	5,426.99	835.30	-205.18	860.13	1.50	-1.50	0.00
5,600.00	1.77	346.20	5,526.89	839.57	-206.23	864.53	1.50	-1.50	0.00
5,700.00	0.27	346.20	5,626.87	841.31	-206.66	866.32	1.50	-1.50	0.00
5,718.13	0.00	0.00	5,645.00	841.35	-206.67	866.36	1.50	-1.50	0.00
End of Drop - Top of Gas - ETOG:									
5,800.00	0.00	0.00	5,726.87	841.35	-206.67	866.36	0.00	0.00	0.00
5,900.00	0.00	0.00	5,826.87	841.35	-206.67	866.36	0.00	0.00	0.00
6,000.00	0.00	0.00	5,926.87	841.35	-206.67	866.36	0.00	0.00	0.00
6,100.00	0.00	0.00	6,026.87	841.35	-206.67	866.36	0.00	0.00	0.00
6,200.00	0.00	0.00	6,126.87	841.35	-206.67	866.36	0.00	0.00	0.00
6,300.00	0.00	0.00	6,226.87	841.35	-206.67	866.36	0.00	0.00	0.00
6,400.00	0.00	0.00	6,326.87	841.35	-206.67	866.36	0.00	0.00	0.00
6,500.00	0.00	0.00	6,426.87	841.35	-206.67	866.36	0.00	0.00	0.00
6,600.00	0.00	0.00	6,526.87	841.35	-206.67	866.36	0.00	0.00	0.00
6,700.00	0.00	0.00	6,626.87	841.35	-206.67	866.36	0.00	0.00	0.00
6,800.00	0.00	0.00	6,726.87	841.35	-206.67	866.36	0.00	0.00	0.00
6,900.00	0.00	0.00	6,826.87	841.35	-206.67	866.36	0.00	0.00	0.00
6,911.13	0.00	0.00	6,838.00	841.35	-206.67	866.36	0.00	0.00	0.00
CAMEO:									
7,000.00	0.00	0.00	6,926.87	841.35	-206.67	866.36	0.00	0.00	0.00
7,100.00	0.00	0.00	7,026.87	841.35	-206.67	866.36	0.00	0.00	0.00
7,200.00	0.00	0.00	7,126.87	841.35	-206.67	866.36	0.00	0.00	0.00
7,296.13	0.00	0.00	7,223.00	841.35	-206.67	866.36	0.00	0.00	0.00
ROLLINS:									
7,300.00	0.00	0.00	7,226.87	841.35	-206.67	866.36	0.00	0.00	0.00
7,400.00	0.00	0.00	7,326.87	841.35	-206.67	866.36	0.00	0.00	0.00
7,446.13	0.00	0.00	7,373.00	841.35	-206.67	866.36	0.00	0.00	0.00
PBHL - 165' FSL & 638' FEL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Jensen 18-16D TOG	0.00	0.00	5,645.00	841.35	-206.67	1,531,549.18	2,347,642.44	39° 16' 12.396 N	107° 48' 16.380 W
- plan hits target center									
- Circle (radius 50.00)									
Jensen 18-16D TD	0.00	0.00	7,373.00	841.35	-206.67	1,531,549.18	2,347,642.44	39° 16' 12.396 N	107° 48' 16.380 W
- plan hits target center									
- Point									

Database:	EDM Depart	Local Co-ordinate Reference:	Well Jensen 18-16D
Company:	Laramie Energy II, LLC	TVD Reference:	WELL @ 7108.00ft (Original Well Elev)
Project:	MESA, CO	MD Reference:	WELL @ 7108.00ft (Original Well Elev)
Site:	Sec 19-T9S-R93W (Jensen 19-01 Pad)	North Reference:	True
Well:	Jensen 18-16D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,250.56	4,193.00	WILLIAMS FORK:			
5,718.13	5,645.00	ETOG:			
6,911.13	6,838.00	CAMEO:			
7,296.13	7,223.00	ROLLINS:			

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.00	200.00	0.00	0.00	KOP - Build at 2.5°/100'
600.27	598.24	33.86	-8.32	End of Build - Hold at 10° Inc.
5,051.01	4,981.27	784.92	-192.81	Drop at 1.5°/100'
5,718.13	5,645.00	841.35	-206.67	End of Drop - Top of Gas
7,446.13	7,373.00	841.35	-206.67	PBHL - 165' FSL & 638' FEL