

GRMR Oil & Gas, LLC

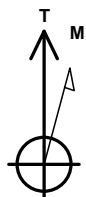
Project: Moffat County, CO

Site: Durham 31 Pad

Well: Peppy

Wellbore: 31-15

Design: Draft #1



Azimuths to True North
Magnetic North: 9.68°

Magnetic Field
Strength: 52043.8snT
Dip Angle: 66.37°
Date: 5/10/2016
Model: HDGM

PROJECT DETAILS: Moffat County, CO

Geodetic System: US State Plane 1983

Datum: North American Datum 1983

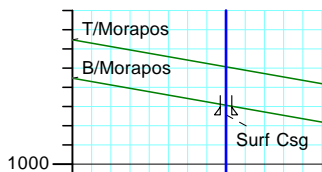
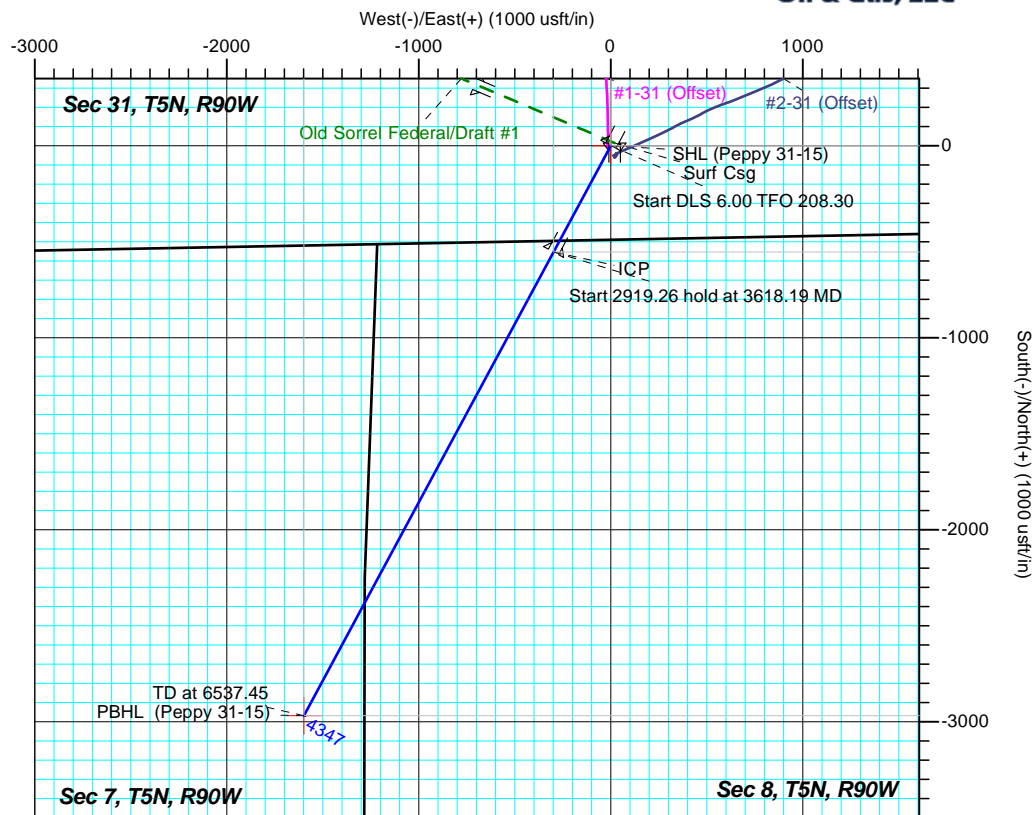
Ellipsoid: GRS 1980

Zone: Colorado Northern Zone

Datum: GE 6704' + KB 19' @ 6723.00usft (Prelim Planning)

CASING DETAILS

TVD	MD	Name
743.00	743.00	Surf Csg
3348.87	3618.20	ICP



DESIGN TARGET DETAILS

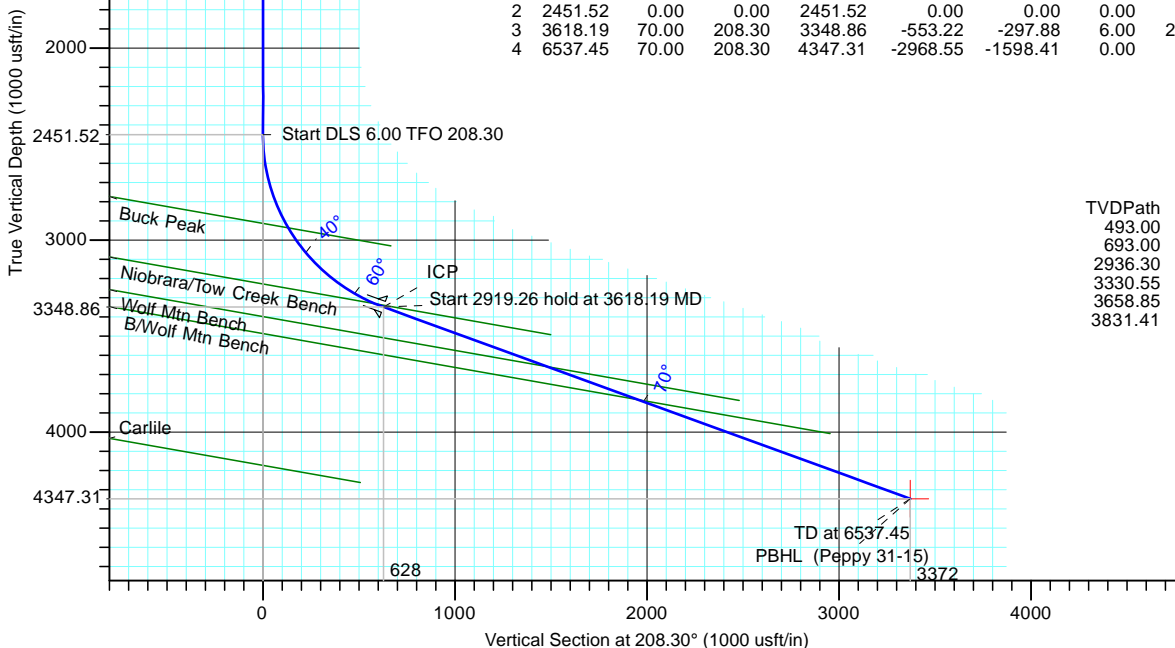
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL (Peppy 31-15)	0.00	0.00	0.00	1371562.44	2432950.33	40° 20' 7.746 N	107° 32' 3.307 W
PBHL (Peppy 31-15)	4347.31	-2968.55	-1598.41	1368631.33	2431284.25	40° 19' 38.410 N	107° 32' 23.946 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2451.52	0.00	0.00	2451.52	0.00	0.00	0.00	0.00	0.00	
3	3618.19	70.00	208.30	3348.86	-553.22	-297.88	6.00	208.30	628.32	
4	6537.45	70.00	208.30	4347.31	-2968.55	-1598.41	0.00	0.00	3371.53	PBHL (Peppy 31-15)

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
493.00	493.00	T/Morapos
693.00	693.00	B/Morapos
2936.30	2959.99	Buck Peak
3330.55	3568.20	Niobrara/Tow Creek Bench
3658.85	4524.53	Wolf Mtn Bench
3831.41	5029.06	B/Wolf Mtn Bench



LEAM DRILLING SYSTEMS LLC
2010 East Davis, Conroe, Texas 77301
Phone: 936/756-7577, Fax: 936/756-7595

Plan: Draft #1 (Peppy/31-15)

Created By: Nora Tucker Date: 17:30, May 10 2016

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Multi_User Db	Local Co-ordinate Reference:	Well Peppy
Company:	GRMR Oil & Gas, LLC	TVD Reference:	GE 6704' + KB 19' @ 6723.00usft (Prelim Planning)
Project:	Moffat County, CO	MD Reference:	GE 6704' + KB 19' @ 6723.00usft (Prelim Planning)
Site:	Durham 31 Pad	North Reference:	True
Well:	Peppy	Survey Calculation Method:	Minimum Curvature
Wellbore:	31-15		
Design:	Draft #1		

Project	Moffat County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Durham 31 Pad			
Site Position:		Northing:	1,371,554.14 usft	Latitude:	40° 20' 7.660 N
From:	Lat/Long	Easting:	2,432,931.46 usft	Longitude:	107° 32' 3.548 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.31 °

Well	Peppy					
Well Position	+N/-S	8.73 usft	Northing:	1,371,562.44 usft	Latitude:	40° 20' 7.746 N
	+E/-W	18.68 usft	Easting:	2,432,950.34 usft	Longitude:	107° 32' 3.307 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,704.00 usft

Wellbore	31-15				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/10/2016	9.68	66.37	52,044

Design	Draft #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	208.30

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,451.52	0.00	0.00	2,451.52	0.00	0.00	0.00	0.00	0.00	0.00	
3,618.19	70.00	208.30	3,348.86	-553.22	-297.88	6.00	6.00	-13.00	208.30	
6,537.45	70.00	208.30	4,347.31	-2,968.55	-1,598.41	0.00	0.00	0.00	0.00	PBHL (Peppy 31-15)

LEAM Drilling Systems LLC

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Project:	Moffat County, CO	MD Reference:	GE 6704' + KB 19' @ 6723.00usft (Prelim Planning)
Site:	Durham 31 Pad	North Reference:	True
Well:	Peppy	Survey Calculation Method:	Minimum Curvature
Wellbore:	31-15		
Design:	Draft #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (Peppy 31-15)									
100.00	0.00	0.00	100.00	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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
493.00	0.00	0.00	493.00	0.00	0.00	0.00	0.00	0.00	0.00
T/Morapos									
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
693.00	0.00	0.00	693.00	0.00	0.00	0.00	0.00	0.00	0.00
B/Morapos									
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
743.00	0.00	0.00	743.00	0.00	0.00	0.00	0.00	0.00	0.00
Surf Csg									
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,451.52	0.00	0.00	2,451.52	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	2.91	208.30	2,499.98	-1.08	-0.58	1.23	6.00	6.00	0.00
2,550.00	5.91	208.30	2,549.83	-4.47	-2.41	5.07	6.00	6.00	0.00
2,600.00	8.91	208.30	2,599.40	-10.14	-5.46	11.52	6.00	6.00	0.00
2,650.00	11.91	208.30	2,648.57	-18.10	-9.74	20.55	6.00	6.00	0.00
2,700.00	14.91	208.30	2,697.21	-28.30	-15.24	32.15	6.00	6.00	0.00
2,750.00	17.91	208.30	2,745.16	-40.74	-21.94	46.27	6.00	6.00	0.00
2,800.00	20.91	208.30	2,792.32	-55.37	-29.81	62.88	6.00	6.00	0.00
2,850.00	23.91	208.30	2,838.54	-72.15	-38.85	81.94	6.00	6.00	0.00
2,900.00	26.91	208.30	2,883.69	-91.03	-49.02	103.39	6.00	6.00	0.00
2,950.00	29.91	208.30	2,927.67	-111.98	-60.29	127.18	6.00	6.00	0.00
2,959.99	30.51	208.30	2,936.30	-116.40	-62.68	132.20	6.00	6.00	0.00
Buck Peak									
3,000.00	32.91	208.30	2,970.34	-134.92	-72.64	153.23	6.00	6.00	0.00
3,050.00	35.91	208.30	3,011.58	-159.79	-86.04	181.48	6.00	6.00	0.00
3,100.00	38.91	208.30	3,051.30	-186.53	-100.44	211.85	6.00	6.00	0.00
3,150.00	41.91	208.30	3,089.36	-215.07	-115.80	244.26	6.00	6.00	0.00
3,200.00	44.91	208.30	3,125.68	-245.32	-132.09	278.62	6.00	6.00	0.00
3,250.00	47.91	208.30	3,160.15	-277.20	-149.26	314.83	6.00	6.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Multi_User Db	Local Co-ordinate Reference:	Well Peppy
Company:	GRMR Oil & Gas, LLC	TVD Reference:	GE 6704' + KB 19' @ 6723.00usft (Prelim Planning)
Project:	Moffat County, CO	MD Reference:	GE 6704' + KB 19' @ 6723.00usft (Prelim Planning)
Site:	Durham 31 Pad	North Reference:	True
Well:	Peppy	Survey Calculation Method:	Minimum Curvature
Wellbore:	31-15		
Design:	Draft #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,300.00	50.91	208.30	3,192.68	-310.62	-167.25	352.79	6.00	6.00	0.00
3,350.00	53.91	208.30	3,223.18	-345.50	-186.04	392.40	6.00	6.00	0.00
3,400.00	56.91	208.30	3,251.56	-381.74	-205.55	433.56	6.00	6.00	0.00
3,450.00	59.91	208.30	3,277.75	-419.24	-225.74	476.15	6.00	6.00	0.00
3,500.00	62.91	208.30	3,301.68	-457.89	-246.55	520.04	6.00	6.00	0.00
3,550.00	65.91	208.30	3,323.27	-497.59	-267.92	565.13	6.00	6.00	0.00
3,568.20	67.00	208.30	3,330.55	-512.28	-275.84	581.82	6.00	6.00	0.00
Niobrara/Tow Creek Bench									
3,600.00	68.91	208.30	3,342.48	-538.23	-289.81	611.29	6.00	6.00	0.00
3,618.19	70.00	208.30	3,348.86	-553.22	-297.88	628.32	6.00	6.00	0.00
3,618.20	70.00	208.30	3,348.87	-553.23	-297.89	628.33	0.00	0.00	0.00
ICP									
3,700.00	70.00	208.30	3,376.84	-620.91	-334.33	705.20	0.00	0.00	0.00
3,800.00	70.00	208.30	3,411.05	-703.65	-378.88	799.17	0.00	0.00	0.00
3,900.00	70.00	208.30	3,445.25	-786.39	-423.43	893.14	0.00	0.00	0.00
4,000.00	70.00	208.30	3,479.45	-869.13	-467.98	987.11	0.00	0.00	0.00
4,100.00	70.00	208.30	3,513.65	-951.86	-512.53	1,081.08	0.00	0.00	0.00
4,200.00	70.00	208.30	3,547.85	-1,034.60	-557.08	1,175.05	0.00	0.00	0.00
4,300.00	70.00	208.30	3,582.06	-1,117.34	-601.63	1,269.02	0.00	0.00	0.00
4,400.00	70.00	208.30	3,616.26	-1,200.08	-646.18	1,362.99	0.00	0.00	0.00
4,500.00	70.00	208.30	3,650.46	-1,282.81	-690.73	1,456.96	0.00	0.00	0.00
4,524.53	70.00	208.30	3,658.85	-1,303.11	-701.66	1,480.00	0.00	0.00	0.00
Wolf Mtn Bench									
4,600.00	70.00	208.30	3,684.66	-1,365.55	-735.28	1,550.92	0.00	0.00	0.00
4,700.00	70.00	208.30	3,718.86	-1,448.29	-779.83	1,644.89	0.00	0.00	0.00
4,800.00	70.00	208.30	3,753.07	-1,531.03	-824.38	1,738.86	0.00	0.00	0.00
4,900.00	70.00	208.30	3,787.27	-1,613.76	-868.93	1,832.83	0.00	0.00	0.00
5,000.00	70.00	208.30	3,821.47	-1,696.50	-913.48	1,926.80	0.00	0.00	0.00
5,029.06	70.00	208.30	3,831.41	-1,720.55	-926.43	1,954.11	0.00	0.00	0.00
B/Wolf Mtn Bench									
5,100.00	70.00	208.30	3,855.67	-1,779.24	-958.03	2,020.77	0.00	0.00	0.00
5,200.00	70.00	208.30	3,889.87	-1,861.98	-1,002.58	2,114.74	0.00	0.00	0.00
5,300.00	70.00	208.30	3,924.08	-1,944.72	-1,047.13	2,208.71	0.00	0.00	0.00
5,400.00	70.00	208.30	3,958.28	-2,027.45	-1,091.68	2,302.68	0.00	0.00	0.00
5,500.00	70.00	208.30	3,992.48	-2,110.19	-1,136.23	2,396.65	0.00	0.00	0.00
5,600.00	70.00	208.30	4,026.68	-2,192.93	-1,180.78	2,490.62	0.00	0.00	0.00
5,700.00	70.00	208.30	4,060.89	-2,275.67	-1,225.33	2,584.59	0.00	0.00	0.00
5,800.00	70.00	208.30	4,095.09	-2,358.40	-1,269.88	2,678.56	0.00	0.00	0.00
5,900.00	70.00	208.30	4,129.29	-2,441.14	-1,314.43	2,772.52	0.00	0.00	0.00
6,000.00	70.00	208.30	4,163.49	-2,523.88	-1,358.98	2,866.49	0.00	0.00	0.00
6,100.00	70.00	208.30	4,197.69	-2,606.62	-1,403.53	2,960.46	0.00	0.00	0.00
6,200.00	70.00	208.30	4,231.90	-2,689.35	-1,448.08	3,054.43	0.00	0.00	0.00
6,300.00	70.00	208.30	4,266.10	-2,772.09	-1,492.63	3,148.40	0.00	0.00	0.00
6,400.00	70.00	208.30	4,300.30	-2,854.83	-1,537.18	3,242.37	0.00	0.00	0.00
6,500.00	70.00	208.30	4,334.50	-2,937.57	-1,581.73	3,336.34	0.00	0.00	0.00
6,537.45	70.00	208.30	4,347.31	-2,968.55	-1,598.41	3,371.53	0.00	0.00	0.00
PBHL (Peppy 31-15)									

LEAM Drilling Systems LLC

Planning Report

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Company:	GRMR Oil & Gas, LLC	TVD Reference:	GE 6704' + KB 19' @ 6723.00usft (Prelim Planning)
Project:	Moffat County, CO	MD Reference:	GE 6704' + KB 19' @ 6723.00usft (Prelim Planning)
Site:	Durham 31 Pad	North Reference:	True
Well:	Peppy	Survey Calculation Method:	Minimum Curvature
Wellbore:	31-15		
Design:	Draft #1		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (Peppy 31-15) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
PBHL (Peppy 31-15) - plan hits target center - Point	0.00	0.00	4,347.31	-2,968.55	-1,598.41	1,368,631.33	2,431,284.25	40° 19' 38.410 N	107° 32' 23.946 W

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
743.00	743.00	Surf Csg			
3,618.20	3,348.87	ICP			

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
493.00	493.00	T/Morapos		10.00	210.00	
693.00	693.00	B/Morapos		10.00	210.00	
2,959.99	2,936.30	Buck Peak		10.00	210.00	
3,568.20	3,330.55	Niobrara/Tow Creek Bench		10.00	210.00	
4,524.53	3,658.85	Wolf Mtn Bench		10.00	210.00	
5,029.06	3,831.41	B/Wolf Mtn Bench		10.00	210.00	

GRMR Oil & Gas, LLC

Moffat County, CO

Durham 31 Pad

Peppy

31-15

Plan: Draft #1

Standard Planning Report - Geographic

10 May, 2016

LEAM Drilling Systems LLC

Planning Report - Geographic

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Well:	Peppy	Survey Calculation Method:	Minimum Curvature
Wellbore:	31-15		
Design:	Draft #1		

Project	Moffat County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Durham 31 Pad			
Site Position:		Northing:	1,371,554.14 usft	Latitude:	40° 20' 7.660 N
From:	Lat/Long	Easting:	2,432,931.46 usft	Longitude:	107° 32' 3.548 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.31 °

Well	Peppy					
Well Position	+N/-S	0.00 usft	Northing:	1,371,562.44 usft	Latitude:	40° 20' 7.746 N
	+E/-W	0.00 usft	Easting:	2,432,950.34 usft	Longitude:	107° 32' 3.307 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,704.00 usft

Wellbore	31-15				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/10/2016	9.68	66.37	52,044

Design	Draft #1				
Audit Notes:					
Version:	Phase:	PLAN		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	208.30	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,451.52	0.00	0.00	2,451.52	0.00	0.00	0.00	0.00	0.00	0.00	
3,618.19	70.00	208.30	3,348.86	-553.22	-297.88	6.00	6.00	-13.00	208.30	
6,537.45	70.00	208.30	4,347.31	-2,968.55	-1,598.41	0.00	0.00	0.00	0.00	PBHL (Peppy 31-15)

LEAM Drilling Systems LLC

Planning Report - Geographic

Database:	EDM 5000.1 Multi_User Db	Local Co-ordinate Reference:	Well Peppy
Company:	GRMR Oil & Gas, LLC	TVD Reference:	GE 6704' + KB 19' @ 6723.00usft (Prelim Planning)
Project:	Moffat County, CO	MD Reference:	GE 6704' + KB 19' @ 6723.00usft (Prelim Planning)
Site:	Durham 31 Pad	North Reference:	True
Well:	Peppy	Survey Calculation Method:	Minimum Curvature
Wellbore:	31-15		
Design:	Draft #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
SHL (Peppy 31-15)									
100.00	0.00	0.00	100.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
200.00	0.00	0.00	200.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
300.00	0.00	0.00	300.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
400.00	0.00	0.00	400.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
493.00	0.00	0.00	493.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
T/Morapos									
500.00	0.00	0.00	500.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
600.00	0.00	0.00	600.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
693.00	0.00	0.00	693.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
B/Morapos									
700.00	0.00	0.00	700.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
743.00	0.00	0.00	743.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
Surf Csg									
800.00	0.00	0.00	800.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
900.00	0.00	0.00	900.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
1,000.00	0.00	0.00	1,000.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
1,100.00	0.00	0.00	1,100.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
1,200.00	0.00	0.00	1,200.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
1,300.00	0.00	0.00	1,300.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
1,400.00	0.00	0.00	1,400.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
1,500.00	0.00	0.00	1,500.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
1,600.00	0.00	0.00	1,600.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
1,700.00	0.00	0.00	1,700.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
1,800.00	0.00	0.00	1,800.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
1,900.00	0.00	0.00	1,900.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
2,000.00	0.00	0.00	2,000.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
2,100.00	0.00	0.00	2,100.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
2,200.00	0.00	0.00	2,200.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
2,300.00	0.00	0.00	2,300.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
2,400.00	0.00	0.00	2,400.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
2,451.52	0.00	0.00	2,451.52	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
2,500.00	2.91	208.30	2,499.98	-1.08	-0.58	1,371,561.37	2,432,949.73	40° 20' 7.735 N	107° 32' 3.315 W
2,550.00	5.91	208.30	2,549.83	-4.47	-2.41	1,371,558.03	2,432,947.83	40° 20' 7.702 N	107° 32' 3.338 W
2,600.00	8.91	208.30	2,599.40	-10.14	-5.46	1,371,552.43	2,432,944.64	40° 20' 7.646 N	107° 32' 3.378 W
2,650.00	11.91	208.30	2,648.57	-18.10	-9.74	1,371,544.57	2,432,940.18	40° 20' 7.567 N	107° 32' 3.433 W
2,700.00	14.91	208.30	2,697.21	-28.30	-15.24	1,371,534.49	2,432,934.45	40° 20' 7.466 N	107° 32' 3.504 W
2,750.00	17.91	208.30	2,745.16	-40.74	-21.94	1,371,522.22	2,432,927.47	40° 20' 7.343 N	107° 32' 3.590 W
2,800.00	20.91	208.30	2,792.32	-55.37	-29.81	1,371,507.77	2,432,919.26	40° 20' 7.199 N	107° 32' 3.692 W
2,850.00	23.91	208.30	2,838.54	-72.15	-38.85	1,371,491.20	2,432,909.84	40° 20' 7.033 N	107° 32' 3.809 W
2,900.00	26.91	208.30	2,883.69	-91.03	-49.02	1,371,472.56	2,432,899.24	40° 20' 6.846 N	107° 32' 3.940 W
2,950.00	29.91	208.30	2,927.67	-111.98	-60.29	1,371,451.88	2,432,887.49	40° 20' 6.639 N	107° 32' 4.086 W
2,959.99	30.51	208.30	2,936.30	-116.40	-62.68	1,371,447.51	2,432,885.01	40° 20' 6.596 N	107° 32' 4.117 W
Buck Peak									
3,000.00	32.91	208.30	2,970.34	-134.92	-72.64	1,371,429.23	2,432,874.62	40° 20' 6.413 N	107° 32' 4.245 W
3,050.00	35.91	208.30	3,011.58	-159.79	-86.04	1,371,404.67	2,432,860.66	40° 20' 6.167 N	107° 32' 4.418 W
3,100.00	38.91	208.30	3,051.30	-186.53	-100.44	1,371,378.26	2,432,845.65	40° 20' 5.903 N	107° 32' 4.604 W
3,150.00	41.91	208.30	3,089.36	-215.07	-115.80	1,371,350.09	2,432,829.63	40° 20' 5.621 N	107° 32' 4.803 W
3,200.00	44.91	208.30	3,125.68	-245.32	-132.09	1,371,320.22	2,432,812.65	40° 20' 5.322 N	107° 32' 5.013 W
3,250.00	47.91	208.30	3,160.15	-277.20	-149.26	1,371,288.74	2,432,794.76	40° 20' 5.007 N	107° 32' 5.235 W
3,300.00	50.91	208.30	3,192.68	-310.62	-167.25	1,371,255.74	2,432,776.00	40° 20' 4.676 N	107° 32' 5.467 W

LEAM Drilling Systems LLC

Planning Report - Geographic

Database:	EDM 5000.1 Multi_User Db	Local Co-ordinate Reference:	Well Peppy
Company:	GRMR Oil & Gas, LLC	TVD Reference:	GE 6704' + KB 19' @ 6723.00usft (Prelim Planning)
Project:	Moffat County, CO	MD Reference:	GE 6704' + KB 19' @ 6723.00usft (Prelim Planning)
Site:	Durham 31 Pad	North Reference:	True
Well:	Peppy	Survey Calculation Method:	Minimum Curvature
Wellbore:	31-15		
Design:	Draft #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
3,350.00	53.91	208.30	3,223.18	-345.50	-186.04	1,371,221.30	2,432,756.42	40° 20' 4.332 N	107° 32' 5.710 W
3,400.00	56.91	208.30	3,251.56	-381.74	-205.55	1,371,185.52	2,432,736.09	40° 20' 3.973 N	107° 32' 5.962 W
3,450.00	59.91	208.30	3,277.75	-419.24	-225.74	1,371,148.49	2,432,715.04	40° 20' 3.603 N	107° 32' 6.222 W
3,500.00	62.91	208.30	3,301.68	-457.89	-246.55	1,371,110.33	2,432,693.35	40° 20' 3.221 N	107° 32' 6.491 W
3,550.00	65.91	208.30	3,323.27	-497.59	-267.92	1,371,071.13	2,432,671.07	40° 20' 2.829 N	107° 32' 6.767 W
3,568.20	67.00	208.30	3,330.55	-512.28	-275.84	1,371,056.62	2,432,662.82	40° 20' 2.683 N	107° 32' 6.869 W
Niobrara/Tow Creek Bench									
3,600.00	68.91	208.30	3,342.48	-538.23	-289.81	1,371,031.00	2,432,648.26	40° 20' 2.427 N	107° 32' 7.050 W
3,618.19	70.00	208.30	3,348.86	-553.22	-297.88	1,371,016.19	2,432,639.84	40° 20' 2.279 N	107° 32' 7.154 W
3,618.20	70.00	208.30	3,348.87	-553.23	-297.89	1,371,016.19	2,432,639.84	40° 20' 2.279 N	107° 32' 7.154 W
ICP									
3,700.00	70.00	208.30	3,376.84	-620.91	-334.33	1,370,949.36	2,432,601.85	40° 20' 1.610 N	107° 32' 7.624 W
3,800.00	70.00	208.30	3,411.05	-703.65	-378.88	1,370,867.67	2,432,555.42	40° 20' 0.792 N	107° 32' 8.200 W
3,900.00	70.00	208.30	3,445.25	-786.39	-423.43	1,370,785.97	2,432,508.98	40° 19' 59.975 N	107° 32' 8.775 W
4,000.00	70.00	208.30	3,479.45	-869.13	-467.98	1,370,704.28	2,432,462.54	40° 19' 59.157 N	107° 32' 9.350 W
4,100.00	70.00	208.30	3,513.65	-951.86	-512.53	1,370,622.58	2,432,416.11	40° 19' 58.339 N	107° 32' 9.926 W
4,200.00	70.00	208.30	3,547.85	-1,034.60	-557.08	1,370,540.89	2,432,369.67	40° 19' 57.522 N	107° 32' 10.501 W
4,300.00	70.00	208.30	3,582.06	-1,117.34	-601.63	1,370,459.20	2,432,323.24	40° 19' 56.704 N	107° 32' 11.076 W
4,400.00	70.00	208.30	3,616.26	-1,200.08	-646.18	1,370,377.50	2,432,276.80	40° 19' 55.886 N	107° 32' 11.651 W
4,500.00	70.00	208.30	3,650.46	-1,282.81	-690.73	1,370,295.81	2,432,230.36	40° 19' 55.069 N	107° 32' 12.227 W
4,524.53	70.00	208.30	3,658.85	-1,303.11	-701.66	1,370,275.77	2,432,218.97	40° 19' 54.868 N	107° 32' 12.368 W
Wolf Mtn Bench									
4,600.00	70.00	208.30	3,684.66	-1,365.55	-735.28	1,370,214.11	2,432,183.93	40° 19' 54.251 N	107° 32' 12.802 W
4,700.00	70.00	208.30	3,718.86	-1,448.29	-779.83	1,370,132.42	2,432,137.49	40° 19' 53.433 N	107° 32' 13.377 W
4,800.00	70.00	208.30	3,753.07	-1,531.03	-824.38	1,370,050.73	2,432,091.06	40° 19' 52.616 N	107° 32' 13.952 W
4,900.00	70.00	208.30	3,787.27	-1,613.76	-868.93	1,369,969.03	2,432,044.62	40° 19' 51.798 N	107° 32' 14.527 W
5,000.00	70.00	208.30	3,821.47	-1,696.50	-913.48	1,369,887.34	2,431,998.18	40° 19' 50.981 N	107° 32' 15.103 W
5,029.06	70.00	208.30	3,831.41	-1,720.55	-926.43	1,369,863.59	2,431,984.69	40° 19' 50.743 N	107° 32' 15.270 W
B/Wolf Mtn Bench									
5,100.00	70.00	208.30	3,855.67	-1,779.24	-958.03	1,369,805.64	2,431,951.75	40° 19' 50.163 N	107° 32' 15.678 W
5,200.00	70.00	208.30	3,889.87	-1,861.98	-1,002.58	1,369,723.95	2,431,905.31	40° 19' 49.345 N	107° 32' 16.253 W
5,300.00	70.00	208.30	3,924.08	-1,944.72	-1,047.13	1,369,642.26	2,431,858.87	40° 19' 48.528 N	107° 32' 16.828 W
5,400.00	70.00	208.30	3,958.28	-2,027.45	-1,091.68	1,369,560.56	2,431,812.44	40° 19' 47.710 N	107° 32' 17.404 W
5,500.00	70.00	208.30	3,992.48	-2,110.19	-1,136.23	1,369,478.87	2,431,766.00	40° 19' 46.892 N	107° 32' 17.979 W
5,600.00	70.00	208.30	4,026.68	-2,192.93	-1,180.78	1,369,397.17	2,431,719.57	40° 19' 46.075 N	107° 32' 18.554 W
5,700.00	70.00	208.30	4,060.89	-2,275.67	-1,225.33	1,369,315.48	2,431,673.13	40° 19' 45.257 N	107° 32' 19.129 W
5,800.00	70.00	208.30	4,095.09	-2,358.40	-1,269.88	1,369,233.79	2,431,626.69	40° 19' 44.439 N	107° 32' 19.704 W
5,900.00	70.00	208.30	4,129.29	-2,441.14	-1,314.43	1,369,152.09	2,431,580.26	40° 19' 43.622 N	107° 32' 20.280 W
6,000.00	70.00	208.30	4,163.49	-2,523.88	-1,358.98	1,369,070.40	2,431,533.82	40° 19' 42.804 N	107° 32' 20.855 W
6,100.00	70.00	208.30	4,197.69	-2,606.62	-1,403.53	1,368,988.70	2,431,487.39	40° 19' 41.986 N	107° 32' 21.430 W
6,200.00	70.00	208.30	4,231.90	-2,689.35	-1,448.08	1,368,907.01	2,431,440.95	40° 19' 41.169 N	107° 32' 22.005 W
6,300.00	70.00	208.30	4,266.10	-2,772.09	-1,492.63	1,368,825.32	2,431,394.51	40° 19' 40.351 N	107° 32' 22.580 W
6,400.00	70.00	208.30	4,300.30	-2,854.83	-1,537.18	1,368,743.62	2,431,348.08	40° 19' 39.533 N	107° 32' 23.155 W
6,500.00	70.00	208.30	4,334.50	-2,937.57	-1,581.73	1,368,661.93	2,431,301.64	40° 19' 38.716 N	107° 32' 23.731 W
6,537.45	70.00	208.30	4,347.31	-2,968.55	-1,598.41	1,368,631.33	2,431,284.25	40° 19' 38.410 N	107° 32' 23.946 W
PBHL (Peppy 31-15)									

LEAM Drilling Systems LLC

Planning Report - Geographic

Database:	EDM 5000.1 Multi_User Db	Local Co-ordinate Reference:	Well Peppy
Company:	GRMR Oil & Gas, LLC	TVD Reference:	GE 6704' + KB 19' @ 6723.00usft (Prelim Planning)
Project:	Moffat County, CO	MD Reference:	GE 6704' + KB 19' @ 6723.00usft (Prelim Planning)
Site:	Durham 31 Pad	North Reference:	True
Well:	Peppy	Survey Calculation Method:	Minimum Curvature
Wellbore:	31-15		
Design:	Draft #1		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (Peppy 31-15) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,371,562.44	2,432,950.34	40° 20' 7.746 N	107° 32' 3.307 W
PBHL (Peppy 31-15) - plan hits target center - Point	0.00	0.00	4,347.31	-2,968.55	-1,598.41	1,368,631.33	2,431,284.25	40° 19' 38.410 N	107° 32' 23.946 W

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
743.00	743.00	Surf Csg			
3,618.20	3,348.87	ICP			

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
493.00	493.00	T/Morapos		10.00	210.00	
693.00	693.00	B/Morapos		10.00	210.00	
2,959.99	2,936.30	Buck Peak		10.00	210.00	
3,568.20	3,330.55	Niobrara/Tow Creek Bench		10.00	210.00	
4,524.53	3,658.85	Wolf Mtn Bench		10.00	210.00	
5,029.06	3,831.41	B/Wolf Mtn Bench		10.00	210.00	