

RECEIVED

FEB 12 2020

Form C-102

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Revised August 1, 2011
This form may be used by appropriate
District Office

☒ AMENDED REPORT

AS DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-005-64339	² Pool Code 52770	³ Pool Name Round Tank; San Andres
⁴ Property Code 318386	⁵ Property Name MONTREAL FEDERAL COM	⁶ Well Number 1H
⁷ OGRID No. 13837	⁸ Operator Name MACK ENERGY CORPORATION	⁹ Elevation 3774.8

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	29	15 S	29 E		565	NORTH	418	EAST	CHAVES

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	20	15 S	29 E		1	NORTH	988	EAST	CHAVES

¹² Dedicated Acres 160	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

NW CORNER SEC. 20 LAT. = 33.0086773°N LONG. = 104.0592070°W NWSP EAST (FT) N = 730802.99 E = 625370.10 W/4 CORNER SEC. 20 LAT. = 33.0014276°N LONG. = 104.0592265°W NWSP EAST (FT) N = 728165.36 E = 625371.02 SW CORNER SEC. 20 LAT. = 32.9941778°N LONG. = 104.0592205°W NWSP EAST (FT) N = 725527.69 E = 625379.72 W/4 CORNER SEC. 29 LAT. = 32.9869244°N LONG. = 104.0592279°W NWSP EAST (FT) N = 722888.70 E = 625384.34 SW CORNER SEC. 29 LAT. = 32.9797416°N LONG. = 104.0594521°W NWSP EAST (FT) N = 720275.20 E = 625322.37		N89°53'47"E 2637.31 FT N89°52'35"E 2634.03 FT N/4 CORNER SEC. 20 LAT. = 33.0086712°N LONG. = 104.0506060°W NWSP EAST (FT) N = 730807.76 E = 628006.72 BOTTOM OF HOLE LAT. = 33.0086646°N LONG. = 104.0452376°W NWSP EAST (FT) N = 730809.83 E = 629652.42 LAST TAKE POINT 100' FNL, 988' FEL LAT. = 33.0083938°N LONG. = 104.0452443°W NWSP EAST (FT) N = 730711.32 E = 629650.64 FIRST TAKE POINT 101' FSL, 1011' FEL LAT. = 32.9944532°N LONG. = 104.0452977°W NWSP EAST (FT) N = 725639.28 E = 629648.14 N/4 CORNER SEC. 29 LAT. = 32.9941805°N LONG. = 104.0506126°W NWSP EAST (FT) N = 725535.63 E = 628018.88 MONTREAL FEDERAL COM TH & KOP ELEV. = 3774.8' LAT. = 32.9926224°N (NAD83) LONG. = 104.0433832°W NWSP EAST (FT) N = 724974.78 E = 630236.96 NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83) LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE. VERTICAL DATUM NAVD83. S/4 CORNER SEC. 29 LAT. = 32.9797446°N LONG. = 104.0508471°W NWSP EAST (FT) N = 720283.29 E = 627961.08		NE CORNER SEC. 20 LAT. = 33.0086670°N LONG. = 104.0420158°W NWSP EAST (FT) N = 730813.44 E = 630640.06 E/4 CORNER SEC. 20 LAT. = 33.0014288°N LONG. = 104.0422246°W NWSP EAST (FT) N = 728179.05 E = 630583.33 SE CORNER SEC. 20 LAT. = 32.9941741°N LONG. = 104.0419921°W NWSP EAST (FT) N = 725540.51 E = 630661.92 E/4 CORNER SEC. 29 LAT. = 32.9869756°N LONG. = 104.0422325°W NWSP EAST (FT) N = 722921.40 E = 630629.19 SE CORNER SEC. 29 LAT. = 32.9797762°N LONG. = 104.0422325°W NWSP EAST (FT) N = 720301.96 E = 630602.71		¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Deana Weaver 2/11/20 Signature Date Deana Weaver Printed Name dweaver@mec.com E-mail Address ¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. APRIL 30, 2019 Date of Survey Signature and Seal of Professional Surveyor Certificate Number: 12797 PLS 12797 SURVEY NO. 2869D
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Intent ☐ As Drilled ☒ XXXXXXXX

API #

Operator Name: MACK ENERGY CORPORATION	Property Name: MONTREAL FEDERAL COM	Well Number 1H
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Kick Off Point (KOP)

UL A	Section 29	Township 15S	Range 29E	Lot	Feet 565	From N/S NORTH	Feet 418	From E/W EAST	County CHAVES
Latitude 32.9926224					Longitude 104.0433832			NAD 83	

First Take Point (FTP)

UL P	Section 20	Township 15S	Range 29E	Lot	Feet 101	From N/S SOUTH	Feet 1011	From E/W EAST	County CHAVES
Latitude 32.9944532					Longitude 104.0452977			NAD 83	

Last Take Point (LTP)

UL A	Section 20	Township 15S	Range 29E	Lot	Feet 100	From N/S NORTH	Feet 987	From E/W EAST	County CHAVES
Latitude 33.0083938					Longitude 104.0452443			NAD 83	

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #

Operator Name:	Property Name:	Well Number
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KZ 06/29/2018

Mack Energy

Chaves County

Sec 20-T15S-R29E

Montreal Federal Com #1H

Wellbore #1

Survey: Survey #1

Survey Report - Geographic

03 September, 2019

RECEIVED

DEC 17 2019

DISTRICT/ARTESIAO.C.D.

A Certified Directional Survey
requested as required by NMOCD
Rule 19.15.16.14 NMAC

Microsoft
Survey Report - Geographic

Company:	Mack Energy	Local Co-ordinate Reference:	Well Montreal Federal Com #1H
Project:	Chaves County	TVD Reference:	3774.8+13 @ 3787.80usft
Site:	Sec 20-T15S-R29E	MD Reference:	3774.8+13 @ 3787.80usft
Well:	Montreal Federal Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.15 Single User Db

Project		Chaves County	
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		Sec 20-T15S-R29E			
Site Position:		Northing:	725,582.19 usft	Latitude:	32.994317
From:	Map	Easting:	626,879.18 usft	Longitude:	-104.054330
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.15 °

Well	Montreal Federal Com #1H					
Well Position	+N/-S	0.00 usft	Northing:	724,974.79 usft	Latitude:	32.992622
	+E/-W	0.00 usft	Easting:	630,236.97 usft	Longitude:	-104.043383
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,774.80 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	08/08/19	7.00	60.66	48,117.97515429

Design		Wellbore #1			
Audit Notes:					
Version:		1.0		Phase: ACTUAL	
				Tie On Depth: 0.00	
Vertical Section:		Depth From (TVD)		+N/-S	
		(usft)		(usft)	
		0.00		0.00	
				+E/-W	
				(usft)	
				Direction	
				(°)	
				0.00	
				354.26	

Survey Program		Date	09/03/19		
From	To				
(usft)	(usft)	Survey (Wellbore)	Tool Name	Description	
125.00	8,908.00	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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	724,974.79	630,236.97	32.992622	-104.043383
125.00	0.40	39.80	125.00	0.34	0.28	724,975.13	630,237.25	32.992623	-104.043383
1st MWD Survey									
172.00	0.60	198.90	172.00	0.23	0.30	724,975.02	630,237.27	32.992623	-104.043382
251.00	0.70	153.80	250.99	-0.60	0.38	724,974.19	630,237.35	32.992621	-104.043382
310.00	0.80	149.70	309.99	-1.27	0.75	724,973.52	630,237.72	32.992619	-104.043381
398.00	0.30	207.20	397.98	-2.01	0.96	724,972.78	630,237.92	32.992617	-104.043380
488.00	0.20	174.10	487.98	-2.38	0.86	724,972.41	630,237.83	32.992616	-104.043381
580.00	0.30	281.20	579.98	-2.49	0.64	724,972.30	630,237.61	32.992616	-104.043381
666.00	0.40	324.50	665.98	-2.20	0.25	724,972.59	630,237.22	32.992616	-104.043383
753.00	0.20	318.90	752.98	-1.84	-0.03	724,972.95	630,236.94	32.992617	-104.043384
847.00	0.20	12.40	846.98	-1.56	-0.10	724,973.23	630,236.87	32.992618	-104.043384

Microsoft
Survey Report - Geographic

Company:	Mack Energy	Local Co-ordinate Reference:	Well Montreal Federal Com #1H
Project:	Chaves County	TVD Reference:	3774.8+13 @ 3787.80usft
Site:	Sec 20-T15S-R29E	MD Reference:	3774.8+13 @ 3787.80usft
Well:	Montreal Federal Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.15 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
941.00	0.40	351.30	940.98	-1.07	-0.11	724,973.72	630,236.85	32.992620	-104.043384
1,035.00	0.30	20.80	1,034.98	-0.52	-0.08	724,974.27	630,236.89	32.992621	-104.043384
1,131.00	0.20	52.50	1,130.98	-0.18	0.15	724,974.61	630,237.11	32.992622	-104.043383
1,229.00	0.30	310.60	1,228.98	0.09	0.09	724,974.88	630,237.05	32.992623	-104.043383
1,323.00	0.40	282.40	1,322.97	0.32	-0.42	724,975.11	630,236.55	32.992623	-104.043385
1,417.00	0.40	279.40	1,416.97	0.45	-1.07	724,975.24	630,235.90	32.992624	-104.043387
1,511.00	0.30	315.20	1,510.97	0.67	-1.56	724,975.46	630,235.41	32.992624	-104.043389
1,605.00	0.40	300.80	1,604.97	1.02	-2.02	724,975.81	630,234.95	32.992625	-104.043390
1,698.00	0.40	299.80	1,697.97	1.34	-2.58	724,976.13	630,234.39	32.992626	-104.043392
1,793.00	0.40	311.40	1,792.96	1.73	-3.11	724,976.52	630,233.85	32.992627	-104.043394
1,887.00	0.30	307.50	1,886.96	2.10	-3.56	724,976.89	630,233.41	32.992628	-104.043395
1,981.00	0.50	323.70	1,980.96	2.58	-3.99	724,977.37	630,232.97	32.992630	-104.043396
2,075.00	0.50	320.40	2,074.96	3.22	-4.50	724,978.01	630,232.47	32.992631	-104.043398
2,169.00	0.50	320.00	2,168.95	3.85	-5.02	724,978.64	630,231.95	32.992633	-104.043400
2,267.00	0.50	312.80	2,266.95	4.47	-5.61	724,979.26	630,231.36	32.992635	-104.043402
2,322.00	0.70	318.60	2,321.95	4.89	-6.01	724,979.68	630,230.96	32.992636	-104.043403
2,361.00	2.10	317.50	2,360.93	5.59	-6.65	724,980.38	630,230.32	32.992638	-104.043405
2,408.00	5.40	314.60	2,407.83	7.78	-8.81	724,982.57	630,228.16	32.992644	-104.043412
2,455.00	9.10	315.20	2,454.44	11.97	-13.00	724,986.76	630,223.97	32.992655	-104.043426
2,486.00	11.50	313.10	2,484.94	15.82	-16.99	724,990.61	630,219.98	32.992666	-104.043439
2,548.00	17.40	307.00	2,544.96	25.63	-28.91	725,000.42	630,208.05	32.992693	-104.043478
2,591.00	21.00	305.80	2,585.56	34.01	-40.30	725,008.80	630,196.67	32.992716	-104.043515
2,643.00	23.40	304.70	2,633.70	45.34	-56.35	725,020.13	630,180.62	32.992748	-104.043567
2,690.00	25.50	302.90	2,676.48	56.15	-72.52	725,030.94	630,164.45	32.992777	-104.043619
2,737.00	27.70	302.60	2,718.51	67.54	-90.22	725,042.33	630,146.75	32.992809	-104.043677
2,784.00	31.40	302.70	2,759.39	80.04	-109.73	725,054.83	630,127.24	32.992843	-104.043741
2,832.00	35.30	302.90	2,799.47	94.33	-131.91	725,069.12	630,105.06	32.992883	-104.043813
2,879.00	39.30	302.50	2,836.85	109.71	-155.87	725,084.50	630,081.10	32.992925	-104.043891
2,926.00	43.60	302.30	2,872.07	126.38	-182.14	725,101.17	630,054.83	32.992971	-104.043976
2,973.00	47.40	302.70	2,905.01	144.39	-210.40	725,119.18	630,026.57	32.993021	-104.044068
3,021.00	50.60	302.80	2,936.50	163.99	-240.87	725,138.78	629,996.10	32.993075	-104.044168
3,060.00	53.00	303.00	2,960.61	180.63	-266.60	725,155.42	629,970.37	32.993121	-104.044251
3,070.00	53.20	302.90	2,966.62	184.98	-273.31	725,159.77	629,963.66	32.993133	-104.044273
3,080.00	53.50	302.90	2,972.59	189.34	-280.04	725,164.13	629,956.93	32.993145	-104.044295
3,090.00	53.60	302.90	2,978.53	193.71	-286.80	725,168.50	629,950.17	32.993157	-104.044317
3,100.00	53.80	302.80	2,984.45	198.08	-293.57	725,172.87	629,943.40	32.993169	-104.044339
3,110.00	54.00	302.70	2,990.34	202.45	-300.36	725,177.24	629,936.61	32.993181	-104.044361
3,115.00	54.20	302.70	2,993.27	204.64	-303.77	725,179.43	629,933.20	32.993187	-104.044372
3,125.00	54.30	302.70	2,999.11	209.02	-310.60	725,183.81	629,926.37	32.993199	-104.044395
3,135.00	54.50	302.60	3,004.93	213.41	-317.45	725,188.20	629,919.52	32.993211	-104.044417
3,145.00	54.70	302.50	3,010.73	217.80	-324.32	725,192.59	629,912.65	32.993224	-104.044439
3,155.00	54.90	302.50	3,016.49	222.19	-331.21	725,196.98	629,905.76	32.993236	-104.044462
3,165.00	55.00	302.40	3,022.23	226.58	-338.12	725,201.37	629,898.85	32.993248	-104.044484
3,175.00	55.20	302.30	3,027.96	230.97	-345.05	725,205.76	629,891.92	32.993260	-104.044507
3,185.00	55.30	302.40	3,033.66	235.36	-351.99	725,210.15	629,884.98	32.993272	-104.044529
3,195.00	55.50	302.30	3,039.33	239.77	-358.94	725,214.56	629,878.03	32.993284	-104.044552
3,205.00	55.60	302.30	3,044.99	244.18	-365.91	725,218.97	629,871.06	32.993296	-104.044575
3,208.00	55.60	302.30	3,046.69	245.50	-368.00	725,220.29	629,868.96	32.993300	-104.044582
3,218.00	55.80	302.10	3,052.32	249.90	-374.99	725,224.69	629,861.97	32.993312	-104.044604
3,228.00	56.00	302.30	3,057.93	254.31	-382.00	725,229.10	629,854.97	32.993324	-104.044627
3,238.00	56.30	303.10	3,063.50	258.80	-388.99	725,233.59	629,847.98	32.993337	-104.044650
3,272.00	58.80	308.10	3,081.75	275.51	-412.29	725,250.30	629,824.67	32.993383	-104.044726
3,303.00	61.30	313.80	3,097.23	293.11	-432.56	725,267.90	629,804.41	32.993431	-104.044792
3,350.00	65.30	322.00	3,118.38	324.26	-460.63	725,299.05	629,776.34	32.993517	-104.044883
3,398.00	67.50	324.20	3,137.59	359.43	-487.03	725,334.22	629,749.94	32.993614	-104.044969

Microsoft
Survey Report - Geographic

Company:	Mack Energy	Local Co-ordinate Reference:	Well Montreal Federal Com #1H
Project:	Chaves County	TVD Reference:	3774.8+13 @ 3787.80usft
Site:	Sec 20-T15S-R29E	MD Reference:	3774.8+13 @ 3787.80usft
Well:	Montreal Federal Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.15 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
3,445.00	70.30	330.60	3,154.53	396.36	-510.62	725,371.15	629,726.35	32.993716	-104.045045
3,492.00	72.00	332.50	3,169.71	435.46	-531.80	725,410.25	629,705.17	32.993823	-104.045114
3,523.00	73.70	336.10	3,178.86	462.15	-544.64	725,436.94	629,692.33	32.993897	-104.045156
3,561.00	75.80	339.60	3,188.85	496.10	-558.45	725,470.89	629,678.51	32.993990	-104.045200
3,585.00	77.30	341.30	3,194.44	518.09	-566.26	725,492.88	629,670.71	32.994051	-104.045226
3,634.53	81.10	347.32	3,203.73	564.91	-579.39	725,539.70	629,657.57	32.994180	-104.045268
Cross Lease Line 3634.53 MD /3203.73 TVD 564.91 N -579.39 W N: 725539.7 E: 629657.5									
3,641.00	81.60	348.10	3,204.70	571.16	-580.76	725,545.95	629,656.21	32.994197	-104.045273
3,679.00	84.90	353.90	3,209.17	608.41	-586.65	725,583.20	629,650.32	32.994299	-104.045291
3,734.53	89.72	1.55	3,211.78	663.78	-588.84	725,638.57	629,648.13	32.994451	-104.045298
FTP 3734.53 MD 3211.78 TVD 663.78 N -588.84 W N: 725638.5 E: 629648.1									
3,735.24	89.79	1.65	3,211.78	664.49	-588.82	725,639.28	629,648.15	32.994453	-104.045298
FTP Montreal Federal Com #1H									
3,740.00	90.20	2.30	3,211.78	669.24	-588.66	725,644.03	629,648.31	32.994466	-104.045297
3,774.00	90.50	2.80	3,211.57	703.21	-587.15	725,678.00	629,649.82	32.994560	-104.045292
3,867.00	89.50	1.00	3,211.57	796.15	-584.06	725,770.94	629,652.91	32.994815	-104.045281
3,961.00	89.50	0.20	3,212.39	890.14	-583.08	725,864.93	629,653.89	32.995073	-104.045277
4,055.00	89.60	359.60	3,213.13	984.14	-583.24	725,958.93	629,653.73	32.995332	-104.045277
4,149.00	89.50	359.70	3,213.87	1,078.13	-583.82	726,052.92	629,653.15	32.995590	-104.045278
4,242.00	90.20	359.00	3,214.11	1,171.13	-584.87	726,145.92	629,652.10	32.995846	-104.045281
4,336.00	90.60	357.80	3,213.46	1,265.09	-587.50	726,239.88	629,649.47	32.996104	-104.045288
4,429.00	91.10	356.70	3,212.08	1,357.97	-591.96	726,332.76	629,645.01	32.996359	-104.045302
4,524.00	89.70	357.50	3,211.41	1,452.84	-596.76	726,427.63	629,640.21	32.996620	-104.045317
4,617.00	90.80	359.00	3,211.01	1,545.79	-599.60	726,520.58	629,637.37	32.996876	-104.045325
4,711.00	91.40	359.00	3,209.20	1,639.76	-601.24	726,614.55	629,635.73	32.997134	-104.045330
4,804.00	89.80	358.90	3,208.23	1,732.74	-602.95	726,707.53	629,634.02	32.997390	-104.045335
4,899.00	90.20	358.40	3,208.23	1,827.71	-605.19	726,802.50	629,631.78	32.997651	-104.045341
4,993.00	90.50	358.20	3,207.65	1,921.67	-607.97	726,896.46	629,628.99	32.997909	-104.045349
5,088.00	90.80	358.10	3,206.58	2,016.61	-611.04	726,991.40	629,625.93	32.998170	-104.045358
5,183.00	91.30	357.80	3,204.84	2,111.53	-614.44	727,086.32	629,622.53	32.998431	-104.045369
5,277.00	89.70	358.70	3,204.02	2,205.48	-617.31	727,180.27	629,619.66	32.998689	-104.045377
5,304.00	89.80	358.80	3,204.13	2,232.47	-617.90	727,207.26	629,619.07	32.998763	-104.045379
5,399.00	90.50	358.10	3,203.89	2,327.44	-620.47	727,302.23	629,616.50	32.999024	-104.045386
5,493.00	90.90	357.70	3,202.74	2,421.37	-623.91	727,396.16	629,613.06	32.999282	-104.045397
5,587.00	91.30	357.30	3,200.93	2,515.26	-628.01	727,490.05	629,608.96	32.999541	-104.045409
5,681.00	91.00	358.90	3,199.05	2,609.19	-631.13	727,583.98	629,605.84	32.999799	-104.045419
5,776.00	90.10	359.80	3,198.13	2,704.17	-632.20	727,678.96	629,604.76	33.000060	-104.045421
5,872.00	89.20	358.60	3,198.72	2,800.16	-633.54	727,774.95	629,603.42	33.000324	-104.045425
5,966.00	89.50	358.70	3,199.79	2,894.13	-635.76	727,868.92	629,601.21	33.000582	-104.045431
6,060.00	89.50	358.90	3,200.61	2,988.10	-637.73	727,962.89	629,599.24	33.000840	-104.045437
6,153.00	89.90	359.00	3,201.09	3,081.09	-639.43	728,055.88	629,597.54	33.001096	-104.045441
6,247.00	89.90	358.90	3,201.26	3,175.07	-641.15	728,149.86	629,595.81	33.001354	-104.045446
6,342.00	90.30	359.60	3,201.09	3,270.06	-642.40	728,244.85	629,594.57	33.001615	-104.045449
6,437.00	90.90	0.10	3,200.10	3,365.06	-642.65	728,339.85	629,594.32	33.001876	-104.045449
6,532.00	90.30	0.90	3,199.10	3,460.05	-641.82	728,434.84	629,595.15	33.002137	-104.045446
6,627.00	91.30	1.50	3,197.78	3,555.01	-639.83	728,529.80	629,597.14	33.002398	-104.045439
6,721.00	91.30	0.70	3,195.64	3,648.97	-638.02	728,623.76	629,598.94	33.002657	-104.045432
6,815.00	91.10	1.60	3,193.67	3,742.93	-636.14	728,717.72	629,600.83	33.002915	-104.045425
6,909.00	90.20	1.60	3,192.61	3,836.89	-633.51	728,811.68	629,603.45	33.003173	-104.045415
7,003.00	90.70	2.10	3,191.87	3,930.83	-630.48	728,905.62	629,606.49	33.003431	-104.045405
7,097.00	91.50	2.50	3,190.07	4,024.74	-626.71	728,999.53	629,610.26	33.003689	-104.045392
7,193.00	90.70	0.70	3,188.22	4,120.68	-624.03	729,093.47	629,612.94	33.003953	-104.045382
7,287.00	91.80	1.30	3,186.17	4,214.64	-622.39	729,189.43	629,614.58	33.004211	-104.045376
7,382.00	91.00	0.80	3,183.85	4,309.60	-620.65	729,284.39	629,616.32	33.004472	-104.045369
7,477.00	90.10	1.30	3,182.94	4,404.58	-618.91	729,379.37	629,618.06	33.004733	-104.045363

Microsoft
Survey Report - Geographic

Company:	Mack Energy	Local Co-ordinate Reference:	Well Montreal Federal Com #1H
Project:	Chaves County	TVD Reference:	3774.8+13 @ 3787.80usft
Site:	Sec 20-T15S-R29E	MD Reference:	3774.8+13 @ 3787.80usft
Well:	Montreal Federal Com #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.15 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
7,572.00	89.10	0.90	3,183.60	4,499.55	-617.08	729,474.34	629,619.89	33.004994	-104.045356
7,667.00	89.60	0.80	3,184.68	4,594.54	-615.67	729,569.33	629,621.29	33.005255	-104.045350
7,761.00	90.40	1.40	3,184.68	4,688.52	-613.87	729,663.31	629,623.10	33.005514	-104.045344
7,855.00	91.30	1.30	3,183.29	4,782.48	-611.65	729,757.27	629,625.31	33.005772	-104.045336
7,949.00	89.90	1.80	3,182.30	4,876.44	-609.11	729,851.23	629,627.86	33.006030	-104.045327
8,043.00	90.40	1.80	3,182.05	4,970.39	-606.16	729,945.18	629,630.81	33.006288	-104.045316
8,137.00	91.10	1.80	3,180.82	5,064.34	-603.21	730,039.13	629,633.76	33.006547	-104.045306
8,231.00	90.00	1.50	3,179.92	5,158.29	-600.50	730,133.08	629,636.47	33.006805	-104.045296
8,327.00	90.60	1.50	3,179.42	5,254.26	-597.99	730,229.05	629,638.98	33.007068	-104.045287
8,421.00	91.30	2.10	3,177.86	5,348.20	-595.04	730,322.99	629,641.93	33.007327	-104.045276
8,516.00	91.00	1.50	3,175.95	5,443.13	-592.05	730,417.92	629,644.92	33.007588	-104.045266
8,609.00	90.70	1.10	3,174.57	5,536.10	-589.94	730,510.89	629,647.03	33.007843	-104.045258
8,704.00	89.40	0.90	3,174.49	5,631.08	-588.29	730,605.87	629,648.68	33.008104	-104.045252
8,798.00	90.20	1.20	3,174.82	5,725.06	-586.56	730,699.85	629,650.41	33.008362	-104.045245
8,809.46	90.30	1.16	3,174.77	5,736.52	-586.33	730,711.31	629,650.64	33.008394	-104.045245
LTP Montreal Federal Com #1H									
8,809.51	90.30	1.16	3,174.77	5,736.57	-586.33	730,711.36	629,650.64	33.008394	-104.045245
LTP 8809.51 MD/3174.77 TVD 5736.57 N -586.33 W N: 730711.3 E: 629650.6									
8,853.00	90.70	1.00	3,174.39	5,780.05	-585.51	730,754.84	629,651.46	33.008514	-104.045241
Last MWD Survey 8853 MD/3174.39 TVD 5708.05 N -585.51 W N: 730754.8 E: 629651.4									
8,908.00	90.70	1.00	3,173.72	5,835.04	-584.55	730,809.83	629,652.42	33.008665	-104.045238
PTB 8908 MD/3173.72 TVD 5835.04 N -584.55 W N: 730809.8 E: 629652.4 - BHL Montreal Federal Com #1H									

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
125.00	125.00	0.34	0.28	1st MWD Survey	
3,634.53	3,203.73	564.91	-579.39	Cross Lease Line 3634.53 MD /3203.73 TVD 564.91 N -579.39 W N: 725539.7	
3,734.53	3,211.78	663.78	-588.84	FTP 3734.53 MD 3211.78 TVD 663.78 N -588.84 W N: 725638.5 E: 629648.1	
8,809.51	3,174.77	5,736.57	-586.33	LTP 8809.51 MD/3174.77 TVD 5736.57 N -586.33 W N: 730711.3 E: 629650.6	
8,853.00	3,174.39	5,780.05	-585.51	Last MWD Survey 8853 MD/3174.39 TVD 5708.05 N -585.51 W N: 730754.8 E:	
8,908.00	3,173.72	5,835.04	-584.55	PTB 8908 MD/3173.72 TVD 5835.04 N -584.55 W N: 730809.8 E: 629652.4	

Checked By: _____	Approved By: _____	Date: _____
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