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FEB 12 2020

Form C-102

Revised August 1, 2011

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

EMNRD-OCDA-ARTESIA

Submit to appropriate District Office

AMENDED REPORT

AS-DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-005-64340		² Pool Code 52770		³ Pool Name Round Tank; San Andres	
⁴ Property Code 318386		⁵ Property Name MONTREAL FEDERAL COM			⁶ Well Number 2H
⁷ OGRID No. 13837		⁸ Operator Name MACK ENERGY CORPORATION			⁹ Elevation 3775.0

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	398	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		2	NORTH	330	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 NMSP EAST (FT) N = 730802.99 E = 625370.10 W/4 CORNER SEC. 20 LAT. = 33.0014276°N LONG. = 104.0592265°W NMSP EAST (FT) N = 728165.36 E = 625371.02 SW CORNER SEC. 20 LAT. = 32.9941778°N LONG. = 104.0592205°W NMSP EAST (FT) N = 725527.69 E = 625379.72 W/4 CORNER SEC. 29 LAT. = 32.9869244°N LONG. = 104.0592279°W NMSP EAST (FT) N = 722888.70 E = 625384.34 SW CORNER SEC. 29 LAT. = 32.9797416°N LONG. = 104.0594521°W NMSP 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 NMSP EAST (FT) N = 730807.76 E = 628006.72 BOTTOM OF HOLE LAT. = 33.0086622°N LONG. = 104.0430932°W NMSP EAST (FT) N = 730810.75 E = 630309.76 LAST TAKE POINT 100' PNL 331' FEL LAT. = 33.0083930°N LONG. = 104.0431041°W NMSP EAST (FT) N = 730712.82 E = 630306.71 FIRST TAKE POINT 101' PNL 324' FEL LAT. = 32.9944518°N LONG. = 104.0430588°W NMSP EAST (FT) N = 725640.64 E = 630334.60 N89°49'39"E 2639.85 FT N89°53'39"E 2643.73 FT N/4 CORNER SEC. 29 LAT. = 32.9941805°N LONG. = 104.0506126°W NMSP EAST (FT) N = 725535.63 E = 628018.88 MONTREAL FEDERAL COM 2H & KOP ELEV. = 3775.0' LAT. = 32.9926224°N (NAD83) LONG. = 104.0433177°W NMSP EAST (FT) N = 724974.87 E = 630257.05 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 NAVD88. S/4 CORNER SEC. 29 LAT. = 32.9797446°N LONG. = 104.0508471°W NMSP EAST (FT) N = 720283.29 E = 627961.08 S89°49'27"W 2639.40 FT S89°35'43"W 2642.38 FT		NE CORNER SEC. 20 LAT. = 33.0086670°N LONG. = 104.0420158°W NMSP EAST (FT) N = 730813.44 E = 630640.06 E/4 CORNER SEC. 20 LAT. = 33.0014268°N LONG. = 104.0422246°W NMSP EAST (FT) N = 728179.05 E = 630583.33 SE CORNER SEC. 20 LAT. = 32.9941741°N LONG. = 104.0419921°W NMSP EAST (FT) N = 725540.51 E = 630661.92 E/4 CORNER SEC. 29 LAT. = 32.9869756°N LONG. = 104.0421225°W NMSP EAST (FT) N = 722921.40 E = 630629.19 SE CORNER SEC. 29 LAT. = 32.9797762°N LONG. = 104.0422325°W NMSP 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: FIRMON E. JARAMILLO - PLS 12797 SURVEY NO. 7218
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Intent ☐ As Drilled ☒ XXXXXXXX

API #

Operator Name: MACK ENERGY CORPORATION	Property Name: MONTREAL FEDERAL COM	Well Number 2H
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Kick Off Point (KOP)

UL A	Section 29	Township 15S	Range 29E	Lot	Feet 565	From N/S NORTH	Feet 398	From E/W EAST	County CHAVES
Latitude 32.9926224					Longitude 104.0433177			NAD 83	

First Take Point (FTP)

UL P	Section 20	Township 15S	Range 29E	Lot	Feet 101	From N/S SOUTH	Feet 324	From E/W EAST	County CHAVES
Latitude 32.9944518					Longitude 104.0430588			NAD 83	

Last Take Point (LTP)

UL A	Section 20	Township 15S	Range 29E	Lot	Feet 100	From N/S NORTH	Feet 331	From E/W EAST	County CHAVES
Latitude 33.0083930					Longitude 104.0431041			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 #2H

Wellbore #1

Survey: Survey #1

Survey Report - Geographic

17 September, 2019

RECEIVED

DEC 17 2019

DISTRICT 7-ARTESIA O.C.D.

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





Microsoft
Survey Report - Geographic



Company:	Mack Energy	Local Co-ordinate Reference:	Well Montreal Federal Com #2H
Project:	Chaves County	TVD Reference:	3775 + 13 @ 3788.00usft
Site:	Sec 20-T15S-R29E	MD Reference:	3775 + 13 @ 3788.00usft
Well:	Montreal Federal Com #2H	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
From:	Map	Easting:	626,879.18 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.99431680
		Longitude:	-104.05432942
		Grid Convergence:	0.15 °

Well	Montreal Federal Com #2H					
Well Position	+N-S	0.00 usft	Northing:	724,974.85 usft	Latitude:	32.99262240
	+E-W	0.00 usft	Easting:	630,257.05 usft	Longitude:	-104.04331770
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,775.00 usft

Wellbore		Wellbore #1			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	08/02/19	7.00	60.66	48,119.68643699

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	
				0.52	

Survey Program	Date	09/17/19		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
164.00	8,725.00	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	724,974.85	630,257.05	32.99262240	-104.04331770
164.00	0.20	130.00	164.00	-0.18	0.22	724,974.66	630,257.27	32.99262189	-104.04331699
1st MWD Survey									
208.00	0.20	158.00	208.00	-0.30	0.31	724,974.54	630,257.36	32.99262156	-104.04331670
310.00	0.50	212.40	310.00	-0.85	0.14	724,974.00	630,257.19	32.99262008	-104.04331727
397.00	1.30	111.20	396.99	-1.52	0.85	724,973.32	630,257.90	32.99261821	-104.04331494
488.00	2.20	102.50	487.95	-2.27	3.52	724,972.57	630,260.57	32.99261612	-104.04330624
579.00	1.60	101.90	578.90	-2.91	6.47	724,971.93	630,263.52	32.99261434	-104.04329663
667.00	1.30	95.10	666.87	-3.26	8.66	724,971.59	630,265.72	32.99261338	-104.04328947
755.00	1.20	102.70	754.85	-3.55	10.56	724,971.30	630,267.61	32.99261257	-104.04328330
850.00	0.50	113.70	849.84	-3.93	11.91	724,970.91	630,268.96	32.99261150	-104.04327890
945.00	0.30	120.10	944.83	-4.22	12.50	724,970.62	630,269.55	32.99261070	-104.04327696



Microsoft
Survey Report - Geographic



Company:	Mack Energy	Local Co-ordinate Reference:	Well Montreal Federal Com #2H
Project:	Chaves County	TVD Reference:	3775 + 13 @ 3788.00usft
Site:	Sec 20-T15S-R29E	MD Reference:	3775 + 13 @ 3788.00usft
Well:	Montreal Federal Com #2H	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	
1,039.00	0.30	107.80	1,038.83	-4.42	12.95	724,970.42	630,270.00	32.99261015	-104.04327551	
1,133.00	0.30	136.20	1,132.83	-4.68	13.35	724,970.17	630,270.41	32.99260945	-104.04327419	
1,229.00	0.10	126.60	1,228.83	-4.91	13.60	724,969.94	630,270.65	32.99260881	-104.04327340	
1,323.00	0.00	260.20	1,322.83	-4.96	13.66	724,969.89	630,270.71	32.99260868	-104.04327319	
1,416.00	0.00	359.80	1,415.83	-4.96	13.66	724,969.89	630,270.71	32.99260868	-104.04327319	
1,510.00	0.10	225.10	1,509.83	-5.01	13.60	724,969.83	630,270.65	32.99260852	-104.04327338	
1,604.00	0.00	287.40	1,603.83	-5.07	13.55	724,969.77	630,270.60	32.99260836	-104.04327357	
1,698.00	0.10	278.70	1,697.83	-5.06	13.46	724,969.79	630,270.51	32.99260839	-104.04327383	
1,792.00	0.10	25.00	1,791.83	-4.97	13.42	724,969.87	630,270.47	32.99260863	-104.04327399	
1,886.00	0.10	260.90	1,885.83	-4.91	13.37	724,969.93	630,270.42	32.99260880	-104.04327414	
1,981.00	0.20	4.40	1,980.83	-4.76	13.30	724,970.09	630,270.35	32.99260922	-104.04327436	
2,075.00	0.10	93.40	2,074.83	-4.60	13.40	724,970.24	630,270.45	32.99260965	-104.04327405	
2,168.00	0.30	335.20	2,167.83	-4.38	13.38	724,970.46	630,270.43	32.99261025	-104.04327412	
2,263.00	0.30	298.20	2,262.83	-4.04	13.05	724,970.80	630,270.10	32.99261120	-104.04327517	
2,357.00	0.40	311.80	2,356.83	-3.71	12.59	724,971.14	630,269.64	32.99261212	-104.04327667	
2,455.00	1.20	353.70	2,454.82	-2.46	12.22	724,972.39	630,269.27	32.99261555	-104.04327786	
2,502.00	3.90	3.30	2,501.77	-0.37	12.26	724,974.47	630,269.31	32.99262128	-104.04327772	
2,550.00	7.60	6.80	2,549.52	4.41	12.73	724,979.26	630,269.78	32.99263443	-104.04327614	
2,597.00	12.10	10.00	2,595.81	12.35	13.95	724,987.20	630,271.01	32.99265624	-104.04327208	
2,644.00	16.10	9.00	2,641.39	23.64	15.83	724,998.49	630,272.88	32.99268727	-104.04326586	
2,691.00	19.70	7.90	2,686.10	37.93	17.94	725,012.78	630,274.99	32.99272652	-104.04325885	
2,737.00	23.40	8.00	2,728.88	54.66	20.28	725,029.51	630,277.33	32.99277249	-104.04325108	
2,784.00	27.10	7.60	2,771.38	74.52	22.99	725,049.37	630,280.04	32.99282706	-104.04324204	
2,831.00	30.90	6.40	2,812.48	97.14	25.75	725,071.98	630,282.81	32.99288919	-104.04323283	
2,878.00	33.00	6.30	2,852.36	121.85	28.50	725,096.70	630,285.56	32.99295710	-104.04322364	
2,925.00	36.60	6.30	2,890.95	148.51	31.45	725,123.36	630,288.50	32.99303035	-104.04321380	
2,972.00	41.00	6.30	2,927.57	177.78	34.68	725,152.62	630,291.73	32.99311076	-104.04320300	
3,018.00	44.40	6.50	2,961.37	208.77	38.16	725,183.62	630,295.21	32.99319593	-104.04319137	
3,065.00	47.60	6.60	2,994.01	242.36	42.01	725,217.20	630,299.07	32.99328821	-104.04317849	
3,112.00	51.10	6.70	3,024.63	277.77	46.14	725,252.62	630,303.19	32.99338551	-104.04316470	
3,141.00	53.40	6.50	3,042.38	300.55	48.78	725,275.39	630,305.83	32.99344809	-104.04315591	
3,151.00	53.50	6.60	3,048.34	308.53	49.69	725,283.37	630,306.75	32.99347002	-104.04315285	
3,161.00	53.70	6.50	3,054.27	316.52	50.61	725,291.37	630,307.66	32.99349199	-104.04314978	
3,171.00	53.80	6.40	3,060.18	324.54	51.52	725,299.38	630,308.57	32.99351401	-104.04314675	
3,181.00	54.00	6.40	3,066.07	332.57	52.42	725,307.41	630,309.47	32.99353607	-104.04314374	
3,191.00	54.10	6.30	3,071.95	340.61	53.32	725,315.46	630,310.37	32.99355818	-104.04314075	
3,201.00	54.20	6.20	3,077.80	348.67	54.20	725,323.52	630,311.25	32.99358032	-104.04313780	
3,206.00	54.30	6.20	3,080.72	352.70	54.64	725,327.55	630,311.69	32.99359141	-104.04313633	
3,216.00	54.50	6.10	3,086.54	360.79	55.51	725,335.63	630,312.56	32.99361362	-104.04313342	
3,226.00	54.60	6.10	3,092.34	368.89	56.37	725,343.73	630,313.42	32.99363588	-104.04313052	
3,236.00	54.80	6.10	3,098.12	377.00	57.24	725,351.85	630,314.29	32.99365817	-104.04312762	
3,246.00	55.00	5.90	3,103.87	385.14	58.09	725,359.99	630,315.15	32.99368053	-104.04312476	
3,256.00	55.10	5.80	3,109.60	393.29	58.93	725,368.14	630,315.98	32.99370294	-104.04312196	
3,266.00	55.30	6.00	3,115.31	401.46	59.77	725,376.31	630,316.83	32.99372538	-104.04311914	
3,276.00	55.40	5.80	3,120.99	409.64	60.62	725,384.49	630,317.67	32.99374786	-104.04311630	
3,286.00	55.70	5.80	3,126.65	417.85	61.45	725,392.69	630,318.50	32.99377041	-104.04311351	
3,296.00	56.30	5.60	3,132.24	426.10	62.28	725,400.94	630,319.33	32.99379307	-104.04311075	
3,347.00	62.90	4.70	3,158.04	469.88	66.21	725,444.73	630,323.26	32.99391339	-104.04309753	
3,394.00	69.10	4.00	3,177.14	512.68	69.46	725,487.52	630,326.51	32.99403098	-104.04308654	
3,441.00	74.00	3.90	3,192.01	557.14	72.53	725,531.99	630,329.58	32.99415317	-104.04307613	
3,449.19	74.80	3.70	3,194.22	565.01	73.05	725,539.86	630,330.10	32.99417480	-104.04307436	
Cross Lease Line 3449.19 MD/3194.22 TVD 565.01 N 73.05 E N: 725539.8 E: 630330.1										
3,487.00	78.50	2.80	3,202.95	601.74	75.14	725,576.58	630,332.19	32.99427572	-104.04306723	
3,534.00	81.00	2.10	3,211.31	647.94	77.11	725,622.78	630,334.16	32.99440270	-104.04306037	



Microsoft
Survey Report - Geographic



Company:	Mack Energy	Local Co-ordinate Reference:	Well Montreal Federal Com #2H
Project:	Chaves County	TVD Reference:	3775 + 13 @ 3788.00usft
Site:	Sec 20-T15S-R29E	MD Reference:	3775 + 13 @ 3788.00usft
Well:	Montreal Federal Com #2H	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	
3,551.19	82.66	0.81	3,213.75	664.95	77.54	725,639.79	630,334.59	32.99444945	-104.04305881	
FTP 3551.19 MD/3213.75 TVD 664.95 N 77.54 E N: 725639.8 E: 630334.5										
3,552.04	82.75	0.74	3,213.86	665.79	77.55	725,640.64	630,334.61	32.99445177	-104.04305877	
FTP Montreal Federal Com #2H										
3,566.00	84.10	359.70	3,215.46	679.66	77.61	725,654.50	630,334.66	32.99448988	-104.04305847	
3,625.00	88.20	357.10	3,219.42	738.48	75.96	725,713.33	630,333.01	32.99465158	-104.04306331	
3,676.00	89.10	357.60	3,220.62	789.42	73.60	725,764.26	630,330.65	32.99479158	-104.04307054	
3,770.00	89.80	357.40	3,221.52	883.32	69.50	725,858.17	630,326.55	32.99504971	-104.04308307	
3,864.00	90.60	357.20	3,221.19	977.22	65.08	725,952.06	630,322.13	32.99530782	-104.04309666	
3,958.00	90.60	356.70	3,220.21	1,071.08	60.07	726,045.92	630,317.13	32.99556584	-104.04311213	
4,053.00	89.80	358.60	3,219.88	1,165.99	56.18	726,140.84	630,313.23	32.99582674	-104.04312398	
4,147.00	90.70	358.90	3,219.47	1,259.97	54.13	726,234.81	630,311.18	32.99608505	-104.04312982	
4,240.00	91.40	358.90	3,217.76	1,352.93	52.34	726,327.78	630,309.40	32.99634059	-104.04313481	
4,334.00	91.30	358.30	3,215.55	1,446.88	50.05	726,421.72	630,307.10	32.99659882	-104.04314145	
4,428.00	90.20	357.70	3,214.32	1,540.81	46.77	726,515.66	630,303.82	32.99685702	-104.04315131	
4,523.00	90.20	357.20	3,213.99	1,635.72	42.54	726,610.56	630,299.59	32.99711790	-104.04316424	
4,617.00	90.40	356.30	3,213.50	1,729.56	37.21	726,704.41	630,294.26	32.99737588	-104.04318078	
4,712.00	89.80	358.20	3,213.33	1,824.45	32.65	726,799.29	630,289.71	32.99763671	-104.04319479	
4,806.00	90.20	357.80	3,213.33	1,918.39	29.37	726,893.24	630,286.43	32.99789494	-104.04320464	
4,901.00	90.50	358.90	3,212.75	2,013.35	26.64	726,988.19	630,283.69	32.99815595	-104.04321271	
5,024.00	90.70	358.70	3,211.46	2,136.31	24.06	727,111.16	630,281.11	32.99849395	-104.04322001	
5,118.00	91.10	358.40	3,209.98	2,230.27	21.68	727,205.12	630,278.74	32.99875222	-104.04322692	
5,212.00	89.90	359.00	3,209.16	2,324.24	19.55	727,299.09	630,276.60	32.99901051	-104.04323303	
5,306.00	90.30	359.00	3,209.00	2,418.23	17.91	727,393.07	630,274.96	32.99926885	-104.04323754	
5,401.00	90.50	358.90	3,208.34	2,513.21	16.17	727,488.06	630,273.22	32.99952992	-104.04324236	
5,495.00	90.70	358.90	3,207.35	2,607.19	14.37	727,582.03	630,271.42	32.99978823	-104.04324740	
5,590.00	91.20	358.80	3,205.78	2,702.15	12.46	727,677.00	630,269.51	33.00004927	-104.04325276	
5,683.00	90.20	358.30	3,204.64	2,795.12	10.11	727,769.96	630,267.16	33.00030479	-104.04325960	
5,778.00	90.40	358.50	3,204.14	2,890.08	7.45	727,864.92	630,264.51	33.00056582	-104.04326740	
5,872.00	90.80	358.40	3,203.16	2,984.04	4.91	727,958.88	630,261.96	33.00082409	-104.04327485	
5,967.00	91.30	358.60	3,201.42	3,078.99	2.43	728,053.83	630,259.48	33.00108509	-104.04328211	
6,062.00	89.40	358.40	3,200.84	3,173.95	-0.06	728,148.80	630,256.99	33.00134611	-104.04328936	
6,156.00	89.80	358.30	3,201.50	3,267.91	-2.77	728,242.75	630,254.28	33.00160438	-104.04329735	
6,250.00	89.50	0.40	3,202.07	3,361.90	-3.83	728,336.74	630,253.22	33.00186271	-104.04329998	
6,344.00	90.10	1.80	3,202.40	3,455.88	-2.03	728,430.72	630,255.02	33.00212100	-104.04329325	
6,439.00	91.30	1.80	3,201.24	3,550.82	0.95	728,525.67	630,258.01	33.00238194	-104.04328266	
6,534.00	91.30	1.60	3,199.08	3,645.75	3.77	728,620.60	630,260.82	33.00264284	-104.04327262	
6,628.00	91.50	1.60	3,196.78	3,739.69	6.40	728,714.53	630,263.45	33.00290101	-104.04326321	
6,723.00	90.90	1.40	3,194.80	3,834.64	8.88	728,809.48	630,265.93	33.00316195	-104.04325425	
6,817.00	90.90	1.50	3,193.32	3,928.59	11.26	728,903.44	630,268.31	33.00342018	-104.04324565	
6,911.00	90.90	1.40	3,191.84	4,022.55	13.64	728,997.40	630,270.69	33.00367841	-104.04323704	
7,004.00	91.30	1.10	3,190.06	4,115.51	15.67	729,090.36	630,272.72	33.00393390	-104.04322959	
7,098.00	90.10	1.10	3,188.91	4,209.49	17.47	729,184.33	630,274.52	33.00419218	-104.04322286	
7,191.00	90.70	1.20	3,188.26	4,302.46	19.34	729,277.31	630,276.39	33.00444772	-104.04321593	
7,286.00	91.30	1.40	3,186.60	4,397.43	21.49	729,372.27	630,278.54	33.00470870	-104.04320805	
7,381.00	90.20	1.70	3,185.36	4,492.38	24.06	729,467.23	630,281.11	33.00496967	-104.04319881	
7,476.00	90.50	1.70	3,184.78	4,587.34	26.88	729,562.18	630,283.93	33.00523064	-104.04318877	
7,570.00	90.50	1.30	3,183.96	4,681.30	29.34	729,656.15	630,286.39	33.00548888	-104.04317990	
7,664.00	89.50	0.60	3,183.96	4,775.29	30.90	729,750.13	630,287.95	33.00574719	-104.04317397	
7,758.00	89.60	0.30	3,184.70	4,869.28	31.64	729,844.13	630,288.69	33.00600553	-104.04317071	
7,852.00	90.20	0.40	3,184.86	4,963.28	32.21	729,938.12	630,289.26	33.00626388	-104.04316799	
7,948.00	89.30	0.60	3,185.28	5,059.27	33.05	730,034.12	630,290.10	33.00652772	-104.04316440	
8,041.00	89.90	0.50	3,185.93	5,152.27	33.94	730,127.11	630,290.99	33.00678331	-104.04316065	
8,137.00	90.60	0.70	3,185.51	5,248.26	34.95	730,223.10	630,292.00	33.00704714	-104.04315650	
8,231.00	90.90	0.70	3,184.28	5,342.24	36.10	730,317.09	630,293.15	33.00730545	-104.04315191	



Microsoft
Survey Report - Geographic



Company:	Mack Energy	Local Co-ordinate Reference:	Well Montreal Federal Com #2H
Project:	Chaves County	TVD Reference:	3775 + 13 @ 3788.00usft
Site:	Sec 20-T15S-R29E	MD Reference:	3775 + 13 @ 3788.00usft
Well:	Montreal Federal Com #2H	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
8,326.00	90.90	2.20	3,182.79	5,437.20	38.50	730,412.04	630,295.55	33.00756642	-104.04314322
8,421.00	91.40	2.50	3,180.88	5,532.10	42.39	730,506.94	630,299.44	33.00782723	-104.04312966
8,516.00	90.80	2.00	3,179.06	5,627.01	46.12	730,601.85	630,303.17	33.00808806	-104.04311664
8,610.00	90.00	1.70	3,178.40	5,720.96	49.16	730,695.80	630,306.21	33.00834625	-104.04310590
8,626.98	90.08	1.73	3,178.39	5,737.93	49.67	730,712.77	630,306.72	33.00839290	-104.04310409
LTP 8626.98 MD/3178.39 TVD 5737.93 N 49.67 E N: 730712.7 E: 630306.7									
8,627.02	90.08	1.73	3,178.39	5,737.97	49.67	730,712.81	630,306.72	33.00839301	-104.04310408
LTP Montreal Federal Com #2H									
8,670.00	90.30	1.80	3,178.24	5,780.93	50.99	730,755.77	630,308.04	33.00851107	-104.04309938
Last MWD Survey 8670 MD/3178.24 TVD 5780.93 N 50.99 E N: 730755.7 E: 630308.0									
8,725.00	90.30	1.80	3,177.95	5,835.90	52.72	730,810.74	630,309.77	33.00866215	-104.04309325
PTB 8725 MD/3177.95 TVD 5835.90 N 52.72 E N: 730810.7 E: 630309.7 - BHL Montreal Federal Com #2H									

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
164.00	164.00	-0.18	0.22	1st MWD Survey	
3,449.19	3,194.22	565.01	73.05	Cross Lease Line 3449.19 MD/3194.22 TVD 565.01 N 73.05 E N: 725539.8 E: 630334.5	
3,551.19	3,213.75	664.95	77.54	FTP 3551.19 MD/3213.75 TVD 664.95 N 77.54 E N: 725639.8 E: 630334.5	
8,626.98	3,178.39	5,737.93	49.67	LTP 8626.98 MD/3178.39 TVD 5737.93 N 49.67 E N: 730712.7 E: 630306.7	
8,670.00	3,178.24	5,780.93	50.99	Last MWD Survey 8670 MD/3178.24 TVD 5780.93 N 50.99 E N: 730755.7 E: 630308.0	
8,725.00	3,177.95	5,835.90	52.72	PTB 8725 MD/3177.95 TVD 5835.90 N 52.72 E N: 730810.7 E: 630309.7	

Checked By: _____	Approved By: _____	Date: _____
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