

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Secretary

Adrienne Sandoval, Division Director
Oil Conservation Division



Notice of C-104 Denial and Request for Information

OCD denies your C-104 – *Request for Allowable and Authorization to Transport* because it is incomplete or conflicts with other information provided to OCD.

The sale or transport of product without a C-104 approved by OCD violates the Oil and Gas Act and the implementing rules, including 19.15.7.15 and 19.15.16.19 NMAC.

To avoid an enforcement action, you must submit the indicated information no later than 30 days after receipt of this notice.

Test Allowable, New Well and Recompleted Well

- ☐ C-103 (or BLM equivalent) for all casing strings
 - ☐ Spud Notice
 - ☐ Surface Casing
 - ☐ Intermediate Casing (if applicable)
 - ☐ Additional Intermediate Casing (if applicable)
 - ☐ Production Casing or Liner
- ☐ Applicable Order (NSL, NSP, Other _____)
- ☐ Deviation Survey for Vertical Wells
- ☒ Directional Survey *Certified Copy*
 - ☒ C-102 (As-Drilled Plat for Horizontal Well)

New Well and Recompleted Well Only

- ☒ C-103 Completion Sundry (or BLM equivalent) *approved copy*
- ☐ C-105 Completion Report (or BLM equivalent)
- ☐ All Logs Run on Well

If you have any questions please contact the local OCD District Office

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

Form C-104
Revised August 1, 2011

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit one copy to appropriate District Office

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

1 Operator name and Address Mack Energy Coporation P.O. Box 960 Artesia, NM 88210		2 OGRID Number 013837
		3 Reason for Filing Code/ Effective Date NW
4 API Number 30-005-64307	5 Pool Name Round Tank; San Andres	6 Pool Code 52770
7 Property Code 320519	8 Property Name Hamilton Federal Com	9 Well Number 1H

II. ¹⁰Surface Location

UI or lot no. M	Section 15	Township 15S	Range 29E	Lot Idn	Feet from the 383	North/South Line South	Feet from the 598	East/West line West	County Chaves, NM
--------------------	---------------	-----------------	--------------	---------	----------------------	---------------------------	----------------------	------------------------	----------------------

11. Bottom Hole Location

UL or lot no. M	Section 22	Township 15S	Range 29E	Lot Idn	Feet from the 2	North/South line South	Feet from the 329	East/West line West	County Chaves, NM
12 Lse Code F	13 Producing Method Code P	14 Gas Connection Date 10/14/2019	15 C-129 Permit Number	16 C-129 Effective Date	17 C-129 Expiration Date				

III. Oil and Gas Transporters

18 Transporter OGRID	19 Transporter Name and Address	20 O/G/W
278421	Holly Marketing & Refining Co LLC P.O. Box 1600 Artesia, NM 88211-1600	O
036788	DCP Midstream 4001 Penbrook Odessa, TX 79762	G
	NM OIL CONSERVATION ARTESIA DISTRICT OCT 23 2019 RECEIVED	

IV. Well Completion Data

21 Spud Date 8/3/2019	22 Ready Date 10/4/2019	23 TD ^{1-TVD} 8750' / 3349'	24 PBTD 8701.11'	25 Perforations 3699-8650	26 DHC, MC
27 Hole Size	28 Casing & Tubing Size	29 Depth Set	30 Sacks Cement		
17 1/2"	13 3/8" J-55	220'	425		
12 1/4"	9 5/8" LT&C	1200'	465		
8 3/4"	7" & 5 1/2" HCP-110	8750'	1925		
	2 7/8 & 3 1/2" J-55 (tubing)	2456'			

V. Well Test Data

31 Date New Oil 10/16/2019	32 Gas Delivery Date 10/14/2019	33 Test Date 10/16/2019	34 Test Length 24 hours	35 Tbg. Pressure	36 Csg. Pressure
37 Choke Size 14	38 Oil	39 Water 2224	40 Gas 26		41 Test Method Pumping

42 I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature: *Deana Weaver*

Printed name:
Deana Weaver

Title:
Production Clerk

E-mail Address:
dweaver@mec.com

Date:
10/22/19

Phone:
(575) 748-1288

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date:

DENIED

See Attached Cover Sheet

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 **OIL CONSERVATION**
ARTESIA DISTRICT
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505 **RECEIVED**

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-005-64307	² Pool Code 52770	³ Pool Name Round Tank; San Andres
⁴ Property Code 320519	⁵ Property Name HAMILTON FEDERAL COM	
⁷ OGRID No. 13837	⁸ Operator Name MACK ENERGY CORPORATION	
		⁶ Well Number 1H
		⁹ Elevation 3863.7

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
M	15	15 S	29 E		383	SOUTH	598	WEST	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
M	22	15 S	29 E		2	SOUTH	329	WEST	CHAVES

¹² Dedicated Acres 160	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
---	-------------------------------	----------------------------------	-------------------------

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. 15 LAT. = 33.0232846"N LONG. = 104.0248543"W NWSP EAST (FT) N = 736146.75 E = 635885.28 W Q CORNER SEC. 15 LAT. = 33.0160243"N LONG. = 104.0248725"W NWSP EAST (FT) N = 733505.21 E = 635887.45 SW CORNER SEC. 15 LAT. = 33.0086425"N LONG. = 104.0247523"W NWSP EAST (FT) N = 730819.43 E = 635889.46 W Q CORNER SEC. 22 LAT. = 33.0012599"N LONG. = 104.0247493"W NWSP EAST (FT) N = 728133.59 E = 635940.04 SW CORNER SEC. 22 LAT. = 32.9939935"N LONG. = 104.0247493"W NWSP EAST (FT) N = 725489.88 E = 635948.72	N 89°50'34"E 2641.36 FT S 89°36'54"E 2648.07 FT N Q CORNER SEC. 15 LAT. = 33.0232830"N LONG. = 104.0162387"W NWSP EAST (FT) N = 736153.99 E = 638525.95 HAMILTON FEDERAL COM 1H ELEV. = 3863.7 LAT. = 33.0097108"N (NA083) LONG. = 104.0229943"W NWSP EAST (FT) N = 731209.87 E = 636469.94 S Q CORNER SEC. 15 LAT. = 33.0087116"N LONG. = 104.0163901"W NWSP EAST (FT) N = 730852.37 E = 638495.53 S 89°16'53"W 2626.96 FT S 89°16'05"W 2626.21 FT FIRST TAKE POINT 127' FNL 358' FWL LAT. = 33.0083030"N LONG. = 104.0237799"W LAST TAKE POINT 100' FSL 330' FWL LAT. = 32.9942675"N LONG. = 104.0236727"W BOTTOM OF HOLE LAT. = 32.9939982"N LONG. = 104.0236776"W NWSP EAST (FT) N = 725492.58 E = 636277.31 S Q CORNER SEC. 22 LAT. = 32.9939871"N LONG. = 104.0162451"W NWSP EAST (FT) N = 725495.33 E = 638556.12 LTP BOTTOM OF HOLE LAT. = 32.9939871"N LONG. = 104.0162451"W NWSP EAST (FT) N = 725495.33 E = 638556.12 S 89°52'49"W 2608.08 FT S 88°06'39"W 2626.35 FT	NE CORNER SEC. 15 LAT. = 33.0232118"N LONG. = 104.0076016"W NWSP EAST (FT) N = 736136.21 E = 641173.28 E Q CORNER SEC. 15 LAT. = 33.0158685"N LONG. = 104.0077346"W NWSP EAST (FT) N = 733464.36 E = 641140.79 SE CORNER SEC. 15 LAT. = 33.0087818"N LONG. = 104.0078257"W NWSP EAST (FT) N = 730885.92 E = 641120.85 E Q CORNER SEC. 22 LAT. = 33.0015079"N LONG. = 104.0077509"W NWSP EAST (FT) N = 728239.54 E = 641151.97 SE CORNER SEC. 22 LAT. = 32.9942030"N LONG. = 104.0076851"W NWSP EAST (FT) N = 725581.88 E = 641180.37	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. <i>Deana Weaver</i> 10/22/19 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. JULY 11, 2019 Date of Survey <i>[Signature]</i> Signature and Seal of Professional Surveyor Certificate Number FPM 10000 JARAMILLO, D.S. 5311C Professional Surveyor No. 5311C
---	---	---	---

Mack Energy

Chaves County

Sec 15-T15S-R29E

Hamilton Federal Com #1H

Wellbore #1

Survey: Survey #1

Standard Survey Report

15 August, 2019

NM OIL CONSERVATION
ARTESIA DISTRICT

OCT 23 2019

RECEIVED

Microsoft
Survey Report

Company:	Mack Energy	Local Co-ordinate Reference:	Well Hamilton Federal Com #1H
Project:	Chaves County	TVD Reference:	3863.7 + 13 @ 3876.70usft
Site:	Sec 15-T15S-R29E	MD Reference:	3863.7 + 13 @ 3876.70usft
Well:	Hamilton 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 15-T15S-R29E			
Site Position:		Northing:	731,209.87 usft	Latitude:	33.009711
From:	Map	Easting:	636,469.94 usft	Longitude:	-104.022995
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.17 °

Well	Hamilton Federal Com #1H					
Well Position	+N/-S	0.00 usft	Northing:	731,209.87 usft	Latitude:	33.009711
	+E/-W	0.00 usft	Easting:	636,469.94 usft	Longitude:	-104.022995
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,863.70 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	07/15/19	7.00	60.68	48,136.34560560

Design					Wellbore #1						
Audit Notes:											
Version:		1.0		Phase:		ACTUAL		Tie On Depth:		0.00	
Vertical Section:		Depth From (TVD)			+N/-S		+E/-W		Direction		
		(usft)			(usft)		(usft)		(°)		
		0.00			0.00		0.00		181.92		

Survey Program		Date	08/15/19		
From	To	Survey (Wellbore)	Tool Name	Description	
(usft)	(usft)				
162.00	8,750.00	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162.00	0.40	121.00	162.00	-0.29	0.48	0.27	0.25	0.25	0.00
1st MWD Survey									
180.00	0.40	102.80	180.00	-0.34	0.60	0.32	0.70	0.00	-101.11
248.00	0.70	98.50	248.00	-0.45	1.24	0.41	0.45	0.44	-6.32
307.00	1.00	103.80	306.99	-0.63	2.10	0.56	0.53	0.51	8.98
395.00	1.60	92.40	394.97	-0.86	4.07	0.73	0.74	0.68	-12.95
485.00	1.50	98.90	484.93	-1.10	6.49	0.88	0.22	-0.11	7.22
576.00	1.30	98.10	575.91	-1.43	8.69	1.14	0.22	-0.22	-0.88
665.00	0.80	90.50	664.89	-1.57	10.31	1.23	0.58	-0.56	-8.54
752.00	1.00	84.30	751.88	-1.50	11.67	1.11	0.26	0.23	-7.13

Microsoft
Survey Report

Company:	Mack Energy	Local Co-ordinate Reference:	Well Hamilton Federal Com #1H
Project:	Chaves County	TVD Reference:	3863.7 + 13 @ 3876.70usft
Site:	Sec 15-T15S-R29E	MD Reference:	3863.7 + 13 @ 3876.70usft
Well:	Hamilton 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)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
847.00	1.70	80.00	846.85	-1.18	13.89	0.71	0.74	0.74	-4.53
942.00	1.00	89.90	941.83	-0.93	16.10	0.39	0.77	-0.74	10.42
1,038.00	0.10	58.20	1,037.82	-0.89	17.01	0.32	0.95	-0.94	-33.02
1,140.00	0.30	242.50	1,139.82	-0.96	16.85	0.40	0.39	0.20	-172.25
1,241.00	0.26	285.27	1,240.82	-1.02	16.39	0.47	0.21	-0.04	42.35
1,336.00	0.26	256.09	1,335.82	-1.02	15.98	0.48	0.14	0.00	-30.72
1,431.00	0.48	266.72	1,430.82	-1.09	15.37	0.58	0.24	0.23	11.19
1,526.00	0.70	257.05	1,525.81	-1.25	14.41	0.76	0.25	0.23	-10.18
1,622.00	0.83	254.07	1,621.80	-1.57	13.17	1.13	0.14	0.14	-3.10
1,717.00	0.35	241.50	1,716.80	-1.90	12.25	1.49	0.52	-0.51	-13.23
1,812.00	0.48	254.77	1,811.79	-2.14	11.61	1.75	0.17	0.14	13.97
1,907.00	0.48	256.97	1,906.79	-2.33	10.84	1.97	0.02	0.00	2.32
2,002.00	0.57	240.71	2,001.79	-2.65	10.04	2.32	0.18	0.09	-17.12
2,097.00	0.97	284.48	2,096.78	-2.68	8.85	2.39	0.72	0.42	46.07
2,192.00	1.10	298.10	2,191.76	-2.05	7.27	1.81	0.29	0.14	14.34
2,288.00	1.05	290.98	2,287.75	-1.30	5.63	1.12	0.15	-0.05	-7.42
2,383.00	0.88	291.60	2,382.73	-0.72	4.14	0.59	0.18	-0.18	0.65
2,478.00	1.05	283.77	2,477.72	-0.25	2.62	0.16	0.23	0.18	-8.24
2,513.00	1.58	244.49	2,512.71	-0.38	1.87	0.32	2.90	1.51	-112.23
2,573.00	4.92	223.22	2,572.61	-2.61	-0.64	2.63	5.82	5.57	-35.45
2,620.00	9.32	221.28	2,619.23	-6.94	-4.53	7.09	9.37	9.36	-4.13
2,668.00	13.49	216.45	2,666.28	-14.37	-10.42	14.71	8.90	8.69	-10.06
2,715.00	17.14	211.44	2,711.60	-24.69	-17.30	25.26	8.25	7.77	-10.66
2,763.00	19.02	205.73	2,757.23	-37.78	-24.38	38.57	5.38	3.92	-11.90
2,810.00	21.84	204.32	2,801.27	-52.64	-31.31	53.66	6.09	6.00	-3.00
2,858.00	24.52	203.18	2,845.39	-69.94	-38.91	71.20	5.66	5.58	-2.37
2,905.00	27.69	203.18	2,887.59	-88.95	-47.05	90.47	6.74	6.74	0.00
2,953.00	30.67	205.73	2,929.50	-110.24	-56.75	112.07	6.73	6.21	5.31
3,000.00	34.89	205.81	2,969.01	-133.15	-67.82	135.34	8.98	8.98	0.17
3,049.00	39.81	205.64	3,007.95	-159.92	-80.71	162.53	10.04	10.04	-0.35
3,096.00	44.43	206.34	3,042.80	-188.24	-94.53	191.30	9.88	9.83	1.49
3,144.00	47.94	207.04	3,076.03	-219.18	-110.09	222.74	7.39	7.31	1.46
3,191.00	50.63	208.63	3,106.68	-250.67	-126.73	254.77	6.27	5.72	3.38
3,226.00	52.87	207.48	3,128.35	-274.93	-139.65	279.44	6.90	6.40	-3.29
3,236.00	53.04	207.13	3,134.37	-282.02	-143.31	286.65	3.27	1.70	-3.50
3,246.00	53.31	207.31	3,140.37	-289.14	-146.98	293.89	3.06	2.70	1.80
3,256.00	53.35	206.78	3,146.34	-296.28	-150.62	301.15	4.27	0.40	-5.30
3,266.00	53.44	206.96	3,152.30	-303.44	-154.25	308.43	1.70	0.90	1.80
3,276.00	53.70	206.96	3,158.24	-310.61	-157.90	315.72	2.60	2.60	0.00
3,286.00	53.79	206.52	3,164.16	-317.82	-161.53	323.04	3.66	0.90	-4.40
3,296.00	53.88	206.43	3,170.06	-325.04	-165.13	330.38	1.16	0.90	-0.90
3,306.00	54.10	206.43	3,175.94	-332.29	-168.73	337.74	2.20	2.20	0.00
3,316.00	54.18	206.25	3,181.79	-339.55	-172.32	345.12	1.66	0.80	-1.80

Microsoft
Survey Report

Company:	Mack Energy	Local Co-ordinate Reference:	Well Hamilton Federal Com #1H
Project:	Chaves County	TVD Reference:	3863.7 + 13 @ 3876.70usft
Site:	Sec 15-T15S-R29E	MD Reference:	3863.7 + 13 @ 3876.70usft
Well:	Hamilton 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)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,326.00	54.32	206.34	3,187.64	-346.83	-175.92	352.51	1.58	1.40	0.90
3,336.00	54.45	205.90	3,193.46	-354.12	-179.50	359.93	3.81	1.30	-4.40
3,346.00	54.45	205.29	3,199.27	-361.46	-183.01	367.38	4.96	0.00	-6.10
3,356.00	54.67	205.64	3,205.07	-368.82	-186.51	374.85	3.60	2.20	3.50
3,366.00	54.49	205.37	3,210.87	-376.17	-190.02	382.32	2.84	-1.80	-2.70
3,376.00	54.89	205.37	3,216.65	-383.55	-193.52	389.80	4.00	4.00	0.00
3,379.00	54.93	205.27	3,218.37	-385.77	-194.57	392.06	2.86	1.18	-3.19
Cross Lease Line 3379' MD/3218.37 TVD -385.77 S -194.57 W N: 730824.1 E: 636275.3									
3,387.00	55.02	205.02	3,222.96	-391.70	-197.35	398.08	2.86	1.18	-3.18
3,398.00	55.90	204.23	3,229.20	-399.93	-201.13	406.43	9.95	8.00	-7.18
3,429.00	58.05	200.98	3,246.10	-423.92	-211.11	430.75	11.20	6.94	-10.48
3,476.00	62.53	198.08	3,269.39	-462.39	-224.73	469.64	10.93	9.53	-6.17
3,503.81	65.20	196.17	3,281.64	-486.25	-232.07	493.73	11.41	9.59	-6.88
FTP 3503.81 MD/3281.64 TVD -486.25 S -232.07 W N: 730723.6 E: 636237.8									
3,524.00	67.15	194.83	3,289.80	-504.04	-237.01	511.69	11.41	9.67	-6.62
3,531.01	67.68	194.47	3,292.49	-510.31	-238.64	518.00	8.99	7.62	-5.17
FTP Hamilton Federal Com #1H Plan #2									
3,533.92	67.91	194.32	3,293.59	-512.92	-239.31	520.63	8.99	7.63	-5.14
FTP Hamilton Federal Com #1H									
3,620.00	74.53	190.08	3,321.30	-592.52	-256.46	600.76	8.99	7.69	-4.92
3,667.00	79.23	187.97	3,331.97	-637.71	-263.63	646.17	10.91	10.00	-4.49
3,715.00	84.55	184.46	3,338.74	-684.93	-268.76	693.53	13.24	11.08	-7.31
3,769.00	86.84	183.58	3,342.79	-738.64	-272.54	747.34	4.54	4.24	-1.63
3,832.00	87.41	183.23	3,345.95	-801.45	-276.27	810.24	1.06	0.90	-0.56
3,895.00	90.53	178.74	3,347.08	-864.40	-277.36	873.19	8.68	4.95	-7.13
3,916.00	90.40	178.90	3,346.91	-885.40	-276.92	894.16	0.98	-0.62	0.76
4,011.00	91.30	176.70	3,345.50	-980.31	-273.28	988.90	2.50	0.95	-2.32
4,107.00	90.20	175.40	3,344.25	-1,076.07	-266.66	1,084.39	1.77	-1.15	-1.35
4,202.00	88.90	175.20	3,344.99	-1,170.75	-258.88	1,178.75	1.38	-1.37	-0.21
4,297.00	89.60	176.90	3,346.24	-1,265.51	-252.34	1,273.24	1.94	0.74	1.79
4,392.00	90.00	179.00	3,346.57	-1,360.44	-248.94	1,368.01	2.25	0.42	2.21
4,487.00	91.70	178.80	3,345.16	-1,455.41	-247.12	1,462.86	1.80	1.79	-0.21
4,582.00	90.40	178.30	3,343.42	-1,550.36	-244.71	1,557.68	1.47	-1.37	-0.53
4,677.00	89.50	178.00	3,343.50	-1,645.31	-241.65	1,652.47	1.00	-0.95	-0.32
4,772.00	90.00	178.70	3,343.91	-1,740.27	-238.91	1,747.29	0.91	0.53	0.74
4,868.00	89.90	177.60	3,344.00	-1,836.22	-235.81	1,843.08	1.15	-0.10	-1.15
4,963.00	88.50	178.30	3,345.33	-1,931.15	-232.41	1,937.84	1.65	-1.47	0.74
5,058.00	89.60	177.90	3,346.90	-2,026.08	-229.26	2,032.61	1.23	1.16	-0.42
5,153.00	91.00	176.50	3,346.40	-2,120.96	-224.62	2,127.28	2.08	1.47	-1.47
5,248.00	90.50	178.10	3,345.16	-2,215.84	-220.15	2,221.96	1.76	-0.53	1.68
5,343.00	89.70	179.90	3,344.99	-2,310.82	-218.49	2,316.84	2.07	-0.84	1.89
5,439.00	91.00	179.70	3,344.41	-2,406.82	-218.16	2,412.77	1.37	1.35	-0.21
5,534.00	90.20	180.90	3,343.41	-2,501.81	-218.65	2,507.72	1.52	-0.84	1.26
5,629.00	89.60	179.50	3,343.58	-2,596.81	-218.99	2,602.68	1.60	-0.63	-1.47

**Microsoft
Survey Report**

Company:	Mack Energy	Local Co-ordinate Reference:	Well Hamilton Federal Com #1H
Project:	Chaves County	TVD Reference:	3863.7 + 13 @ 3876.70usft
Site:	Sec 15-T15S-R29E	MD Reference:	3863.7 + 13 @ 3876.70usft
Well:	Hamilton 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)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,724.00	89.60	177.80	3,344.24	-2,691.77	-216.75	2,697.52	1.79	0.00	-1.79
5,819.00	89.40	177.20	3,345.07	-2,786.68	-212.60	2,792.23	0.67	-0.21	-0.63
5,914.00	89.80	178.30	3,345.73	-2,881.60	-208.87	2,886.97	1.23	0.42	1.16
6,009.00	90.10	179.30	3,345.82	-2,976.58	-206.88	2,981.83	1.10	0.32	1.05
6,105.00	89.70	179.00	3,345.98	-3,072.57	-205.46	3,077.72	0.52	-0.42	-0.31
6,200.00	90.00	178.70	3,346.23	-3,167.55	-203.55	3,172.58	0.45	0.32	-0.32
6,295.00	89.40	178.70	3,346.73	-3,262.52	-201.40	3,267.43	0.63	-0.63	0.00
6,391.00	89.10	179.30	3,347.99	-3,358.50	-199.72	3,363.30	0.70	-0.31	0.62
6,486.00	90.20	180.10	3,348.57	-3,453.49	-199.23	3,458.22	1.43	1.16	0.84
6,581.00	90.10	179.70	3,348.32	-3,548.49	-199.06	3,553.17	0.43	-0.11	-0.42
6,677.00	89.30	180.40	3,348.82	-3,644.49	-199.14	3,649.11	1.11	-0.83	0.73
6,772.00	90.60	180.10	3,348.90	-3,739.49	-199.56	3,744.07	1.40	1.37	-0.32
6,867.00	90.60	180.70	3,347.91	-3,834.48	-200.22	3,839.03	0.63	0.00	0.63
6,962.00	90.20	180.20	3,347.25	-3,929.47	-200.97	3,934.00	0.67	-0.42	-0.53
7,057.00	89.70	178.70	3,347.33	-4,024.47	-200.06	4,028.91	1.66	-0.53	-1.58
7,152.00	89.20	179.10	3,348.24	-4,119.44	-198.23	4,123.77	0.67	-0.53	0.42
7,247.00	90.90	178.90	3,348.16	-4,214.43	-196.57	4,218.64	1.80	1.79	-0.21
7,342.00	90.70	179.40	3,346.83	-4,309.41	-195.16	4,313.52	0.57	-0.21	0.53
7,438.00	90.50	180.50	3,345.83	-4,405.40	-195.08	4,409.46	1.16	-0.21	1.15
7,533.00	90.10	180.40	3,345.33	-4,500.40	-195.83	4,504.43	0.43	-0.42	-0.11
7,628.00	89.70	181.00	3,345.49	-4,595.39	-196.99	4,599.40	0.76	-0.42	0.63
7,724.00	89.90	180.00	3,345.83	-4,691.38	-197.83	4,695.37	1.06	0.21	-1.04
7,818.00	89.50	180.00	3,346.32	-4,785.38	-197.83	4,789.32	0.43	-0.43	0.00
7,913.00	90.00	180.30	3,346.74	-4,880.38	-198.07	4,884.27	0.61	0.53	0.32
8,009.00	89.70	179.50	3,346.99	-4,976.38	-197.91	4,980.21	0.89	-0.31	-0.83
8,104.00	88.90	179.60	3,348.15	-5,071.37	-197.16	5,075.12	0.85	-0.84	0.11
8,199.00	89.90	179.70	3,349.14	-5,166.36	-196.58	5,170.04	1.06	1.05	0.11
8,294.00	90.10	179.70	3,349.14	-5,261.36	-196.08	5,264.97	0.21	0.21	0.00
8,389.00	90.50	178.80	3,348.65	-5,356.35	-194.84	5,359.87	1.04	0.42	-0.95
8,485.00	89.50	178.30	3,348.65	-5,452.31	-192.41	5,455.70	1.16	-1.04	-0.52
8,580.00	89.90	180.20	3,349.14	-5,547.30	-191.17	5,550.59	2.04	0.42	2.00
8,652.02	89.90	180.20	3,349.27	-5,619.32	-191.42	5,622.58	0.00	0.00	0.00
LTP Hamilton Federal Com #1H Plan #2									
8,652.03	89.90	180.20	3,349.27	-5,619.33	-191.42	5,622.59	0.00	0.00	0.00
LTP 8652.03 MD/3349.27 TVD -5619.33 S -191.42 W N: 725590.5 E: 636278.5									
8,652.04	89.90	180.20	3,349.27	-5,619.34	-191.42	5,622.59	0.00	0.00	0.00
LTP Hamilton Federal Com #1H									
8,675.00	89.90	180.20	3,349.31	-5,642.30	-191.50	5,645.55	0.00	0.00	0.00
8,701.00	90.30	181.00	3,349.26	-5,668.30	-191.77	5,671.54	3.44	1.54	3.08
Last MWD Survey 8701 MD/3349.26 TVD -5668.3 S -191.77 W N: 725541.5 E: 636278.1									
8,750.00	90.30	181.00	3,349.01	-5,717.29	-192.63	5,720.53	0.00	0.00	0.00
PTB 8750 MD/3349.01 TVD -5717.29 S -192.63 W N: 725492.5 E: 636277.3 - BHL Hamilton Federal Com #1H - BHL Hamilton Federal Com #									

Microsoft
Survey Report

Company:	Mack Energy	Local Co-ordinate Reference:	Well Hamilton Federal Com #1H
Project:	Chaves County	TVD Reference:	3863.7 + 13 @ 3876.70usft
Site:	Sec 15-T15S-R29E	MD Reference:	3863.7 + 13 @ 3876.70usft
Well:	Hamilton 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 Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
162.00	162.00	-0.29	0.48	1st MWD Survey
3,379.00	3,218.37	-385.77	-194.57	Cross Lease Line 3379' MD/3218.37 TVD -385.77 S -194.57 W N: 730824.1 E:
3,503.81	3,281.64	-486.25	-232.07	FTP 3503.81 MD/3281.64 TVD -486.25 S -232.07 W N: 730723.6 E: 636237.8
8,652.03	3,349.27	-5,619.33	-191.42	LTP 8652.03 MD/3349.27 TVD -5619.33 S -191.42 W N: 725590.5 E: 636278.5
8,701.00	3,349.26	-5,668.30	-191.77	Last MWD Survey 8701 MD/3349.26 TVD -5668.3 S -191.77 W N: 725541.5 E:
8,750.00	3,349.01	-5,717.29	-192.63	PTB 8750 MD/3349.01 TVD -5717.29 S -192.63 W N: 725492.5 E: 636277.3

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------

