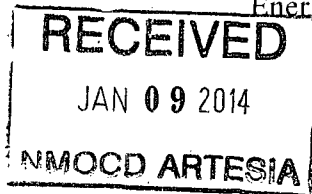


District I  
1625 N. French Dr. Hobbs NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6174 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico

Form C-101  
Revised July 18, 2013

Energy Minerals and Natural Resources



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

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address Mack Energy Corporation P.O. Box 960, Artesia, NM 88211-0960		UGRID Number 013837
Property Code 40319	Property Name Airplane SWD	Well No. 1

Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
I	32	14S	29E		1320	South	760	East	Chaves

Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County

Pool Information

Pool Name <del>SWD; Mississippian, Woodford, Devonian, Montoya, Simpson, Ellenburger</del> DEV-FDS-MON-SMP-ELL.	Pool Code 97775
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Additional Well Information

Work Type Drill	Well Type SWD	Cable/Rotary	Lease Type S	Ground Level Elevation 3782'
Multiple NO	Proposed Depth 11,700'	Formation Mississippian, Woodford, Devonian, Montoya, Simpson, Ellenburger	Contractor	Spud Date 2/1/2014
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
H-40	17 1/2	13 3/8	48	200	250sx	0
J-55	12 1/4	8 5/8	24	2280	1000sx	0
P-110	7 7/8	5 1/2	17	11700	1600sx	0

Casing/Cement Program: Additional Comments

Mack Energy proposes to drill a 17 1/2" hole to 200', run 13 3/8" casing and cement. Drill a 12 1/4" hole to 2280', run 8 5/8" casing and cement. Drill a 7 7/8" hole to 11,700', run 5 1/2" casing and cement. Put well on injection.

Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	3000	3000	

I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input type="checkbox"/> , if applicable. Signature: <i>Deana Weaver</i>		OIL CONSERVATION DIVISION	
Printed name Deana Weaver		Approved By: <i>T. C. Pharr</i>	
Title Production Clerk		Title <b>"Geologist"</b>	
E-mail Address dweaver@mec.com		Approved Date: <i>1-8-2014</i> Expiration Date: <i>1-8-2016</i>	
Date <i>1-8-14</i>	Phone 575-748-1288	Conditions of Approval Attached	

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-005-64189	<sup>2</sup> Pool Code 97775	<sup>3</sup> Pool Name Simpson, Ellenburger SWD; Mississippian, Woodford, Devonian, Montoya
<sup>4</sup> Property Code 40319	<sup>5</sup> Property Name AIRPLANE SWD	<sup>6</sup> Well Number DEU-FUS-MQW-SMP-ELL S/S 1
<sup>7</sup> OGRID No. 13837	<sup>8</sup> Operator Name MACK ENERGY CORPORATION	<sup>9</sup> Elevation 3782.1

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	32	14 S	29 E		1320	SOUTH	760	EAST	CHAVES

<sup>11</sup> 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

<sup>12</sup> Dedicated Acres 40	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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.

N89°21'34"E 2638.90 FT		N89°13'27"E 2639.21 FT	
NW CORNER SEC. 32 LAT. = 33.0665601°N LONG. = 104.0589187°W NMSP EAST N = 751838.32 E = 584067.84	N/4 CORNER SEC. 32 LAT. = 33.0666219°N LONG. = 104.0503074°W NMSP EAST N = 751867.79 E = 586705.89	NE CORNER SEC. 32 LAT. = 33.0666896°N LONG. = 104.0416952°W NMSP EAST N = 751899.66 E = 589344.22	
NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1927 (NAD27). NEW MEXICO STATE PLANE EAST COORDINATES ARE SHOWN IN NAD27 DATUM.			
W/4 CORNER SEC. 32 LAT. = 33.0594045°N LONG. = 104.0589703°W NMSP EAST N = 749234.92 E = 584058.84	AIRPLANE SWD #1 ELEV. = 3782.1' LAT. = 33.0557447°N (NAD27) LONG. = 104.0440802°W NMSP EAST (NAD 27) N = 747915.64 E = 588624.52		E/4 CORNER SEC. 32 LAT. = 33.0590923°N LONG. = 104.0416098°W NMSP EAST N = 749135.68 E = 589378.03
S/4 CORNER SEC. 32 LAT. = 33.0521810°N LONG. = 104.0503199°W NMSP EAST N = 746613.89 E = 586716.23		SE CORNER SEC. 32 LAT. = 33.0520914°N LONG. = 104.0415898°W NMSP EAST N = 746588.62 E = 589391.24	
COMPUTED			
N89°27'33"W 2675.83 FT			

<sup>17</sup> 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* 1.7.14  
Signature Date

Deana Weaver  
Printed Name

dweaver@mec.com  
E-mail Address

<sup>18</sup> 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.

AUGUST 5, 2013  
Date of Survey

*[Signature]*  
Signature and Seal of Professional Surveyor

Certificate Number FIRMONT-PARAMILLO, PLS 12797  
SURVEY NO. 2060

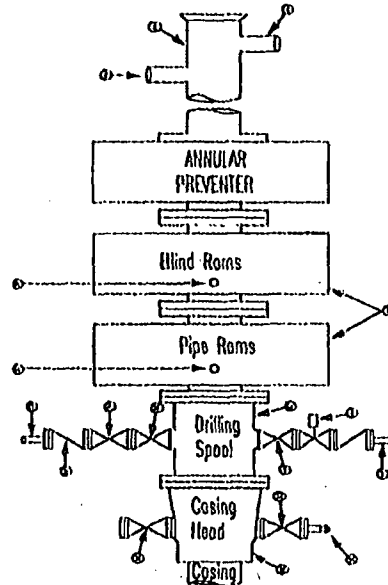
**Mack Energy Corporation**  
**Minimum Blowout Preventer Requirements**  
 3000 psi Working Pressure  
 13 3/8 inch- 3 MWP  
 11 inch - 3 MWP  
**EXHIBIT #1**

**Stack Requirements**

NO.	Items	Min. I.D.	Min. Nominal
1	Flowline		2"
2	Fill up line		2"
3	Drilling tripple		
4	Annular preventer		
5	Two single or one dual hydraulically operated rams		
6a	Drilling spool with 2" min. kill line and 3" min choke line outlets		2" Choke
6b	2" min. kill line and 3" min. choke line outlets in ram. (Alternate to 6a above)		
7	Valve Gate Plug	3 1/8	
8	Gate valve-power operated	3 1/8	
9	Line to choke manifold		3"
10	Valve Gate Plug	2 1/16	
11	Check valve	2 1/16	
12	Casing head		
13	Valve Gate Plug	1 13/16	
14	Pressure gauge with needle valve		
15	Kill line to rig mud pump manifold		2"

**OPTIONAL**

16	Plugged Valve	1 13/16	
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**CONTRACTOR'S OPTION TO FURNISH:**

1. All equipment and connections above blindhead or casinghead. Working pressure of preventers to be 2000 psi minimum.
2. Automatic accumulator (80 gallons, minimum) capable of closing BOP in 30 seconds or less and, holding them closed against full rated working pressure.
3. BOP controls, to be located near drillers' position.
4. Kelly equipped with Kelly cock.
5. Inside blowout preventer or its equivalent on derrick floor at all times with proper threads to fit pipe being used.
6. Kelly saver-sub equipped with rubber casing protector at all times.
7. Plug type blowout preventer tester.
8. Extra set pipe nuts to fit drill pipe in use on location at all times.
9. Type RX ring gaskets in place of Type R.

**MEC TO FURNISH:**

1. Blindhead or casing head and side valves.
2. Wear bushing, if required.

**GENERAL NOTES:**

1. Deviations from this drawing may be made only with the express permission of MEC's Drilling Manager.
2. All connections, valves, fittings, piping, etc., subject to well or pump pressure must be flanged (suitable clamp connections acceptable) and have minimum working pressure equal to rated working pressure of preventers up through choke valves must be full opening and suitable for high pressure mud service.
3. Controls to be of standard design and each marked, showing opening and closing position.
4. Chokes will be positioned so as not to hamper or delay changing of choke beans.

5. Replaceable parts for adjustable choke, or bean sizes, retainers, and choke wrenches to be conveniently located for immediate use.
6. All valves to be equipped with hand-wheels or handles ready for immediate use.
7. Choke lines must be suitably anchored.
8. Handwheels and extensions to be connected and ready for use.
9. Valves adjacent to drilling spool to be kept open. Use outside valves except for emergency.
10. All seamless steel control piping (2000 psi working pressure) to have flexible joints to avoid stress. Hoses will be permitted.
11. Casinghead connections shall not be used except in case of emergency.
12. Does not use kill line for routine fill up operations.

# Mack Energy Corporation

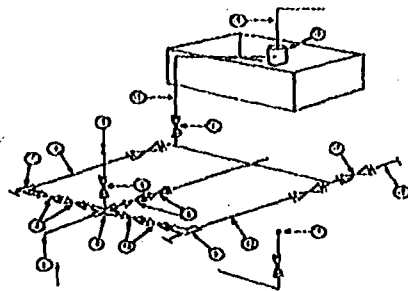
Exhibit #2

## MINIMUM CHOKES MANIFOLD

3,000, 5,000, and 10,000 PSI Working Pressure

3M will be used

3 MWP - 5 MWP - 10 MWP



Mud Pit

Reserve Pit

\* Location of separator optional

Below Substructure

### Minimum requirements

No.		3,000 MWP			5,000 MWP			10,000 MWP		
		I.D.	Nominal	Rating	I.D.	Nominal	Rating	I.D.	Nominal	Rating
1	Line from drilling Spool		3"	3,000		3"	5,000		3"	10,000
2	Cross 3" x 3" x 3" x 2"			3,000			5,000			10,000
2	Cross 3" x 3" x 3" x 2"									10,000
3	Valve Gate Plug	3 1/8		3,000	3 1/8		5,000	3 1/8		10,000
4	Valve Gate Plug	1 13/16		3,000	1 13/16		5,000	1 13/16		10,000
4a	Valves (1)	2 1/16		3,000	2 1/16		5,000	2 1/16		10,000
5	Pressure Gauge			3,000			5,000			10,000
6	Valve Gate Plug	3 1/8		3,000	3 1/8		5,000	3 1/8		10,000
7	Adjustable Choke (3)	2"		3,000	2"		5,000	2"		10,000
8	Adjustable Choke	1"		3,000	1"		5,000	2"		10,000
9	Line		3"	3,000		3"	5,000		3"	10,000
10	Line		2"	3,000		2"	5,000		2"	10,000
11	Valve Gate Plug	3 1/8		3,000	3 1/8		5,000	3 1/8		10,000
12	Line		3"	1,000		3"	1,000		3"	2,000
13	Line		3"	1,000		3"	1,000		3"	2,000
14	Remote reading compound Standpipe pressure gauge			3,000			5,000			10,000
15	Gas Separator		2' x 5'			2' x 5'			2' x 5'	
16	Line		4"	1,000		4"	1,000		4"	2,000
17	Valve Gate Plug	3 1/8		3,000	3 1/8		5,000	3 1/8		10,000

(1) Only one required in Class 3M

(2) Gate valves only shall be used for Class 10 M

(3) Remote operated hydraulic choke required on 5,000 psi and 10,000 psi for drilling.

### EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTION

- All connections in choke manifold shall be welded, studded, flanged or Cameron clamp of comparable rating.
- All flanges shall be API 6B or 6BX and ring gaskets shall be API RX or BX. Use only BX for 10 MWP.
- All lines shall be securely anchored.
- Chokes shall be equipped with tungsten carbide seats and needles, and replacements shall be available.
- alternate with automatic chokes, a choke manifold pressure gauge shall be located on the rig floor in conjunction with the standpipe pressure gauge.
- Line from drilling spool to choke manifold should be as straight as possible. Lines downstream from chokes shall make turns by large bends or 90 degree bends using ball plugged tees