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Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

# APPLICATION FOR PERMIT TO DRILL OR REENTER

| | |
|---|---|
| 1a. Type of work: ☑ DRILL ☐ REENTER | 5. Lease Serial No. NMNM134893 |
| | 6. If Indian, Allotee or Tribe Name |
| | 7. If Unit or CA Agreement, Name and No. |
| 1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☑ Multiple Zone | 8. Lease Name and Well No. (320687) JAL FEDERAL 1 |
| 2. Name of Operator MACK ENERGY CORPORATION (13837) | 9. API Well No. 30-025-44409 |
| 3a. Address 11344 Lovington HWY Artesia NM 88211 | 3b. Phone No. (include area code) (575)748-1288 |
| | 10. Field and Pool, or Exploratory (34120) JUSTIS / BLINEBRY-TUBB-DRINKARD |
| 4. Location of Well (Report location clearly and in accordance with any State requirements.*) At surface SENE / 1670 FNL / 990 FEL / LAT 32.074913 / LONG -103.1113396 At proposed prod. zone SENE / 1670 FNL / 990 FEL / LAT 32.074913 / LONG -103.1113396 | 11. Sec., T. R. M. or Blk. and Survey or Area SEC 1 / T26S / R37E / NMP |
| 14. Distance in miles and direction from nearest town or post office* 5 miles | 12. County or Parish LEA / 13. State NM |

| | | |
|---|---|---|
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 330 feet | 16. No. of acres in lease 560 | 17. Spacing Unit dedicated to this well 40 |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 450 feet | 19. Proposed Depth 6300 feet / 6300 feet | 20. BLM/BIA Bond No. on file FED: NMB000286 |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3026 feet | 22. Approximate date work will start* 06/01/2017 | 23. Estimated duration 10 days |

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

| | | |
|---|---|---|
| 25. Signature (Electronic Submission) | Name (Printed/Typed) Deana Weaver / Ph: (575)748-1288 | Date 05/08/2017 |
| Title Production Clerk | | |
| Approved by (Signature) (Electronic Submission) | Name (Printed/Typed) Cody Layton / Ph: (575)234-5959 | Date 01/19/2018 |
| Title Supervisor Multiple Resources | Office CARLSBAD | |

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

*(Instructions on page 2)

APPROVED WITH CONDITIONS

Approval Date: 01/19/2018

KZ 01/31/18

Double sided

OCD Hobbs 17-456

AFMSS

U.S. Department of the Interior
Bureau of Land Management

*Application for Permit to Drill*

## APD Package Report

Date Printed: 01/23/2018 10:26 AM

| | |
|---|---|
| APD ID: 10400012844 | Well Status: AAPD |
| APD Received Date: 05/08/2017 10:33 AM | Well Name: JAL FEDERAL |
| Operator: MACK ENERGY CORPORATION | Well Number: 1 |

APD Package Report Contents

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- Form 3160-3

- Operator Certification Report

- Application Report
- Application Attachments
  -- Well Plat: 1 file(s)

- Drilling Plan Report
- Drilling Plan Attachments
  -- Blowout Prevention Choke Diagram Attachment: 1 file(s)
  -- Blowout Prevention BOP Diagram Attachment: 1 file(s)
  -- Casing Design Assumptions and Worksheet(s): 2 file(s)
  -- Other Facets: 1 file(s)

- SUPO Report
- SUPO Attachments
  -- Existing Road Map: 2 file(s)
  -- New Road Map: 2 file(s)
  -- Attach Well map: 1 file(s)
  -- Production Facilities map: 2 file(s)
  -- Water source and transportation map: 2 file(s)
  -- Construction Materials source location attachment: 1 file(s)
  -- Well Site Layout Diagram: 2 file(s)
  -- Recontouring attachment: 1 file(s)
  -- Surface use plan certification document: 1 file(s)
  -- Other SUPO Attachment: 3 file(s)

- PWD Report
- PWD Attachments
  -- PWD Map: 1 file(s)

- Bond Report

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

# Operator Certification Data Report

01/23/2018

## Operator Certification

*I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.*

**NAME:** Deana Weaver **Signed on:** 05/08/2017

**Title:** Production Clerk

**Street Address:** 11344 Lovington HWY

**City:** Artesia **State:** NM **Zip:** 88211

**Phone:** (575)748-1288

**Email address:** dweaver@mec.com

## Field Representative

**Representative Name:** Jerry Sherrell

**Street Address:** 11344 Lovington HWY

**City:** Artesia **State:** NM **Zip:** 88210

**Phone:** (575)748-1288

**Email address:** jerrys@mec.com

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

# Application Data Report

01/23/2018

**APD ID:** 10400012844 **Submission Date:** 05/08/2017

**Operator Name:** MACK ENERGY CORPORATION

**Well Name:** JAL FEDERAL **Well Number:** 1

**Well Type:** OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

## Section 1 - General

**APD ID:** 10400012844 **Tie to previous NOS?** 10400012214 **Submission Date:** 05/08/2017

**BLM Office:** CARLSBAD **User:** Deana Weaver **Title:** Production Clerk

**Federal/Indian APD:** FED **Is the first lease penetrated for production Federal or Indian?** FED

**Lease number:** NMNM134893 **Lease Acres:** 560

**Surface access agreement in place?** **Allotted?** **Reservation:**

**Agreement in place?** NO **Federal or Indian agreement:**

**Agreement number:**

**Agreement name:**

**Keep application confidential?** NO

**Permitting Agent?** NO **APD Operator:** MACK ENERGY CORPORATION

**Operator letter of designation:**

## Operator Info

**Operator Organization Name:** MACK ENERGY CORPORATION

**Operator Address:** 11344 Lovington HWY **Zip:** 88211

**Operator PO Box:**

**Operator City:** Artesia **State:** NM

**Operator Phone:** (575)748-1288

**Operator Internet Address:** jerrys@mec.com

## Section 2 - Well Information

**Well in Master Development Plan?** NO **Mater Development Plan name:**

**Well in Master SUPO?** NO **Master SUPO name:**

**Well in Master Drilling Plan?** NO **Master Drilling Plan name:**

**Well Name:** JAL FEDERAL **Well Number:** 1 **Well API Number:**

**Field/Pool or Exploratory?** Field and Pool **Field Name:** JUSTIS **Pool Name:** BLINEBRY-TUBB-DRINKARD

**Is the proposed well in an area containing other mineral resources?** USEABLE WATER,NATURAL GAS,OIL

**Operator Name:** MACK ENERGY CORPORATION

**Well Name:** JAL FEDERAL **Well Number:** 1

**Describe other minerals:**

**Is the proposed well in a Helium production area?** N **Use Existing Well Pad?** NO **New surface disturbance?**

**Type of Well Pad:** SINGLE WELL **Multiple Well Pad Name:** **Number:**

**Well Class:** VERTICAL **Number of Legs:** 1

**Well Work Type:** Drill

**Well Type:** OIL WELL

**Describe Well Type:**

**Well sub-Type:** DELINEATION

**Describe sub-type:**

**Distance to town:** 5 Miles **Distance to nearest well:** 450 FT **Distance to lease line:** 330 FT

**Reservoir well spacing assigned acres Measurement:** 40 Acres

**Well plat:** Jal_Federal_Plats_03-08-2017.pdf

**Well work start Date:** 06/01/2017 **Duration:** 10 DAYS

## Section 3 - Well Location Table

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83 **Vertical Datum:** NAVD88

**Survey number:** 5161

| | NS-Foot | NS Indicator | EW-Foot | EW Indicator | Twsp | Range | Section | Aliquot/Lot/Tract | Latitude | Longitude | County | State | Meridian | Lease Type | Lease Number | Elevation | MD | TVD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SHL Leg #1 | 1670 | FNL | 990 | FEL | 26S | 37E | 1 | Aliquot SENE | 32.074913 | -103.1113396 | LEA | NEW MEXICO | NEW MEXICO | F | NMNM 134893 | 3026 | 6300 | 6300 |
| BHL Leg #1 | 1670 | FNL | 990 | FEL | 26S | 37E | 1 | Aliquot SENE | 32.074913 | -103.1113396 | LEA | NEW MEXICO | NEW MEXICO | F | NMNM 134893 | -3274 | 6300 | 6300 |

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

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 | [2] Pool Code | [3] Pool Name |
|---|---|---|
| | | |

| [4] Property Code | [5] Property Name | [6] Well Number |
|---|---|---|
| | JAL FEDERAL | 1 |

| [7] OGRID No. | [8] Operator Name | [9] Elevation |
|---|---|---|
| 13837 | MACK ENERGY CORPORATION | 3026.6 |

## [10] Surface Location

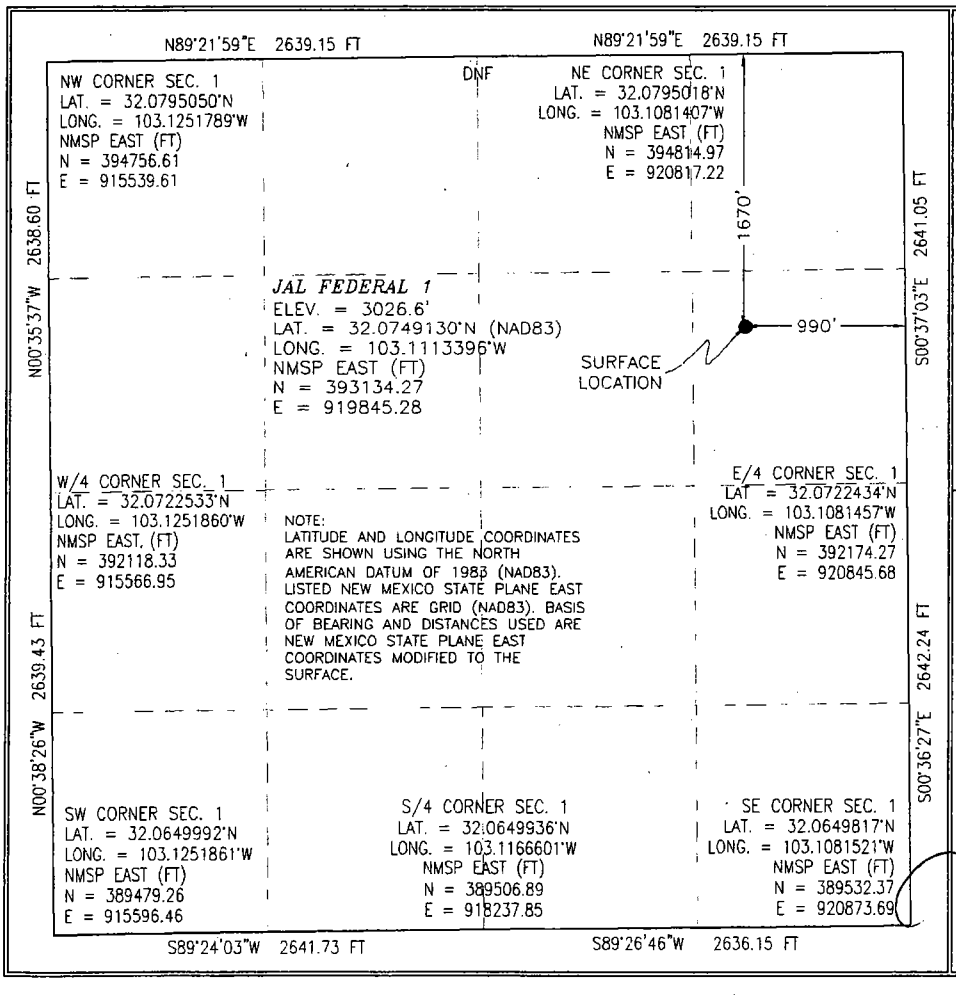
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| H | 1 | 26 S | 37 E | | 1670 | NORTH | 990 | EAST | LEA |

## [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 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

| [12] Dedicated Acres | [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.




## [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.*

Signature Date

Printed Name

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.*

MARCH 1, 2017

Date of Survey

FIMON F. JARAMILLO NEW MEXICO 12797 REGISTERED PROFESSIONAL SURVEYOR

Signature and Seal of Professional Surveyor

Certificate Number FIMON F. JARAMILLO, PLS 12797

SURVEY NO. 5161

**APD ID:** 10400012844 **Submission Date:** 05/08/2017

**Operator Name:** MACK ENERGY CORPORATION

**Well Name:** JAL FEDERAL **Well Number:** 1

**Well Type:** OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

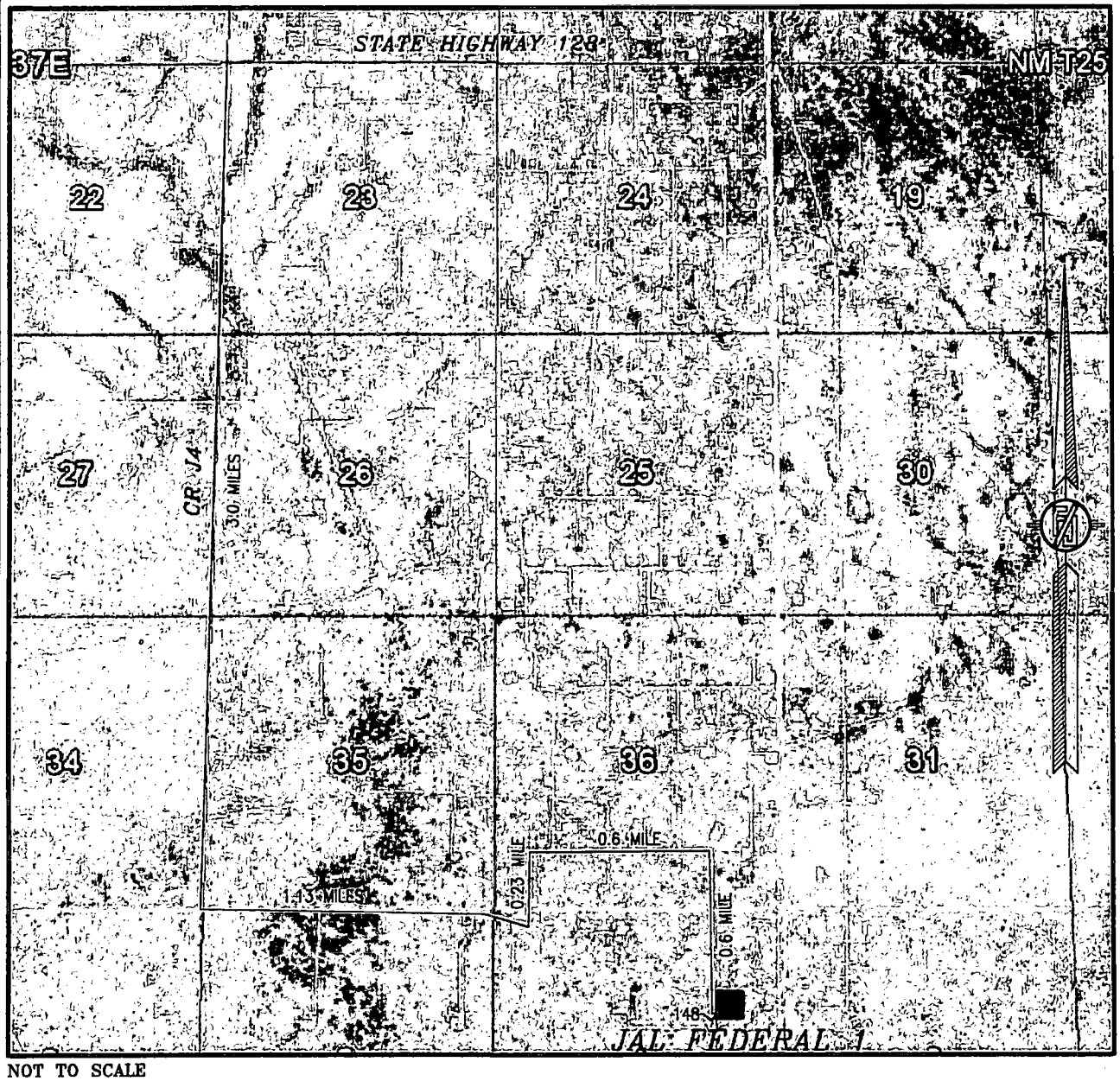
## Section 1 - Geologic Formations

| Formation ID | Formation Name | Elevation | True Vertical Depth | Measured Depth | Lithologies | Mineral Resources | Producing Formation |
|---|---|---|---|---|---|---|---|
| 1 | UNKNOWN | 3026.6 | 0 | 0 | ALLUVIUM | NONE | No |
| 2 | RUSTLER | 2091.6 | 935 | 935 | ANHYDRITE | NONE | No |
| 3 | TOP SALT | 1991.6 | 1035 | 1035 | SALT | NONE | No |
| 4 | BASE OF SALT | 761.5999999999999 | 2265 | 2265 | SALT | NONE | No |
| 5 | YATES | 641.5999999999999 | 2385 | 2385 | ANHYDRITE,SILTSTONE | NATURAL GAS,OIL | No |
| 6 | SEVEN RIVERS | 346.5999999999999 | 2680 | 2680 | ANHYDRITE,SILTSTONE | NATURAL GAS,OIL | No |
| 7 | QUEEN | -93.40000000000009 | 3120 | 3120 | ANHYDRITE,SILTSTONE | NATURAL GAS,OIL | No |
| 8 | GRAYBURG | -383.40000000000001 | 3410 | 3410 | ANHYDRITE,SILTSTONE | NATURAL GAS,OIL | No |
| 9 | SAN ANDRES | -628.40000000000001 | 3655 | 3655 | DOLOMITE,ANHYDRITE | NATURAL GAS,OIL | No |
| 10 | GLORIETA | -1738.4 | 4765 | 4765 | DOLOMITE,ANHYDRITE,SILTSTONE | NATURAL GAS,OIL | No |
| 11 | PADDOCK | -1823.4 | 4850 | 4850 | DOLOMITE,SILTSTONE | NATURAL GAS,OIL | No |
| 12 | BLINEBRY | -2118.4 | 5145 | 5145 | DOLOMITE | NATURAL GAS,OIL | Yes |
| 13 | TUBB | -2763.4 | 5790 | 5790 | DOLOMITE,ANHYDRITE,SILTSTONE | NATURAL GAS,OIL | Yes |
| 14 | DRINKARD | -2933.4 | 5960 | 5960 | DOLOMITE,ANHYDRITE | NATURAL GAS,OIL | Yes |

## Section 2 - Blowout Prevention

SECTION 1, TOWNSHIP 26 SOUTH, RANGE 37 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

# ACCESS AERIAL ROUTE MAP




NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
MARCH 2015

MACK ENERGY CORPORATION

**JAL FEDERAL 1**

LOCATED 1670 FT. FROM THE NORTH LINE
AND 990 FT. FROM THE EAST LINE OF
SECTION 1, TOWNSHIP 26 SOUTH,
RANGE 37 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

MARCH 1, 2017

SURVEY NO. 5161

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

**Operator Name:** MACK ENERGY CORPORATION

**Well Name:** JAL FEDERAL **Well Number:** 1

**Pressure Rating (PSI):** 3M **Rating Depth:** 6300

**Equipment:** Rotating Head. Mud-Gas Separator.

**Requesting Variance?** NO

**Variance request:**

**Testing Procedure:** The BOP/BOPE test shall include a low pressure test from 250 to 300psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

**Choke Diagram Attachment:**

jal_fed_1_choke_manifold_diagram_04-06-2017.pdf

**BOP Diagram Attachment:**

jal_fed_1_bop_diagram_04-06-2017.pdf

## Section 3 - Casing

| Casing ID | String Type | Hole Size | Csg Size | Condition | Standard | Tapered String | Top Set MD | Bottom Set MD | Top Set TVD | Bottom Set TVD | Top Set MSL | Bottom Set MSL | Calculated casing length MD | Grade | Weight | Joint Type | Collapse SF | Burst SF | Joint SF Type | Joint SF | Body SF Type | Body SF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SURFACE | 12.25 | 8.625 | NEW | API | N | 0 | 1200 | 0 | 1200 | -3274 | | 1200 | J-55 | 24 | STC | 2.287 | 5.619 | BUOY | 9.931 | BUOY | 5.9 |
| 2 | PRODUCTION | 7.875 | 5.5 | NEW | API | N | 0 | 6300 | 0 | 6300 | -3274 | | 6300 | L-80 | 17 | LTC | 1.864 | 2.667 | BUOY | 3.746 | BUOY | 2.58 |

**Casing Attachments**

**Casing ID:** 1 **String Type:** SURFACE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

jal_fed_1_surface_csg_04-06-2017.pdf

**Operator Name:** MACK ENERGY CORPORATION

**Well Name:** JAL FEDERAL **Well Number:** 1

**Casing Attachments**

**Casing ID:** 2 **String Type:** PRODUCTION

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

jal_fed_1_pro_csg_04-06-2017.pdf

## Section 4 - Cement

| String Type | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SURFACE | Lead | 1200 | 0 | 1025 | 400 | 1.98 | 12.9 | 846 | 100 | Class C | +4%PF20+2% PF1+0.125#/skPF29+.2 %PF 46 20bbls Gelled Water. 50 sacks of 11# Scavenger cement. |
| SURFACE | Tail | | 1025 | 1200 | 200 | 1.33 | 14.8 | 144 | 100 | Class C | +1%PF1 |
| PRODUCTION | Lead | 6300 | 0 | 3500 | 400 | 2.05 | 12.6 | 818 | 35 | 35/65Poz/H | +5%PF44(BWOW)+6% PF20+.25#/skPF46+3#/ sk42+ .6%PF13+.125#/skPF2 9 20bbls Gelled Water. 20bbls Chemical wash. 50 sacks of 11# Scavenger cement. |
| PRODUCTION | Tail | | 3500 | 6300 | 450 | 1.47 | 13 | 655 | 35 | PVL | +1.3%PF44(BWOW)+5 %PF174+.5%PF606+0. 1%PF153+.6%PF13 |

**Operator Name:** MACK ENERGY CORPORATION

**Well Name:** JAL FEDERAL **Well Number:** 1

## Section 5 - Circulating Medium

**Mud System Type:** Closed

**Will an air or gas system be Used?** NO

**Description of the equipment for the circulating system in accordance with Onshore Order #2:**

**Diagram of the equipment for the circulating system in accordance with Onshore Order #2:**

**Describe what will be on location to control well or mitigate other conditions:** BOPE. Brine Water.

**Describe the mud monitoring system utilized:** Pason PVT with Pit Volume recorder

### Circulating Medium Table

| Top Depth | Bottom Depth | Mud Type | Min Weight (lbs/gal) | Max Weight (lbs/gal) | Density (lbs/cu ft) | Gel Strength (lbs/100 sqft) | PH | Viscosity (CP) | Salinity (ppm) | Filtration (cc) | Additional Characteristics |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1200 | SPUD MUD | 8.3 | 10 | | | | | | | |
| 6300 | 6300 | LSND/GEL | 8.3 | 10 | 10 | 0.5 | 11 | | 180000 | 20 | |

## Section 6 - Test, Logging, Coring

**List of production tests including testing procedures, equipment and safety measures:**

None

**List of open and cased hole logs run in the well:**

CDL,CNL,DLL,GR

**Coring operation description for the well:**

None

**Operator Name:** MACK ENERGY CORPORATION

**Well Name:** JAL FEDERAL **Well Number:** 1

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 3276 **Anticipated Surface Pressure:** 1890

**Anticipated Bottom Hole Temperature(F):** 105

**Anticipated abnormal pressures, temperatures, or potential geologic hazards?** NO

**Describe:**

**Contingency Plans geoharzards description:**

**Contingency Plans geohazards attachment:**

**Hydrogen Sulfide drilling operations plan required?** NO

**Hydrogen sulfide drilling operations plan:**

## Section 8 - Other Information

**Proposed horizontal/directional/multi-lateral plan submission:**

**Other proposed operations facets description:**

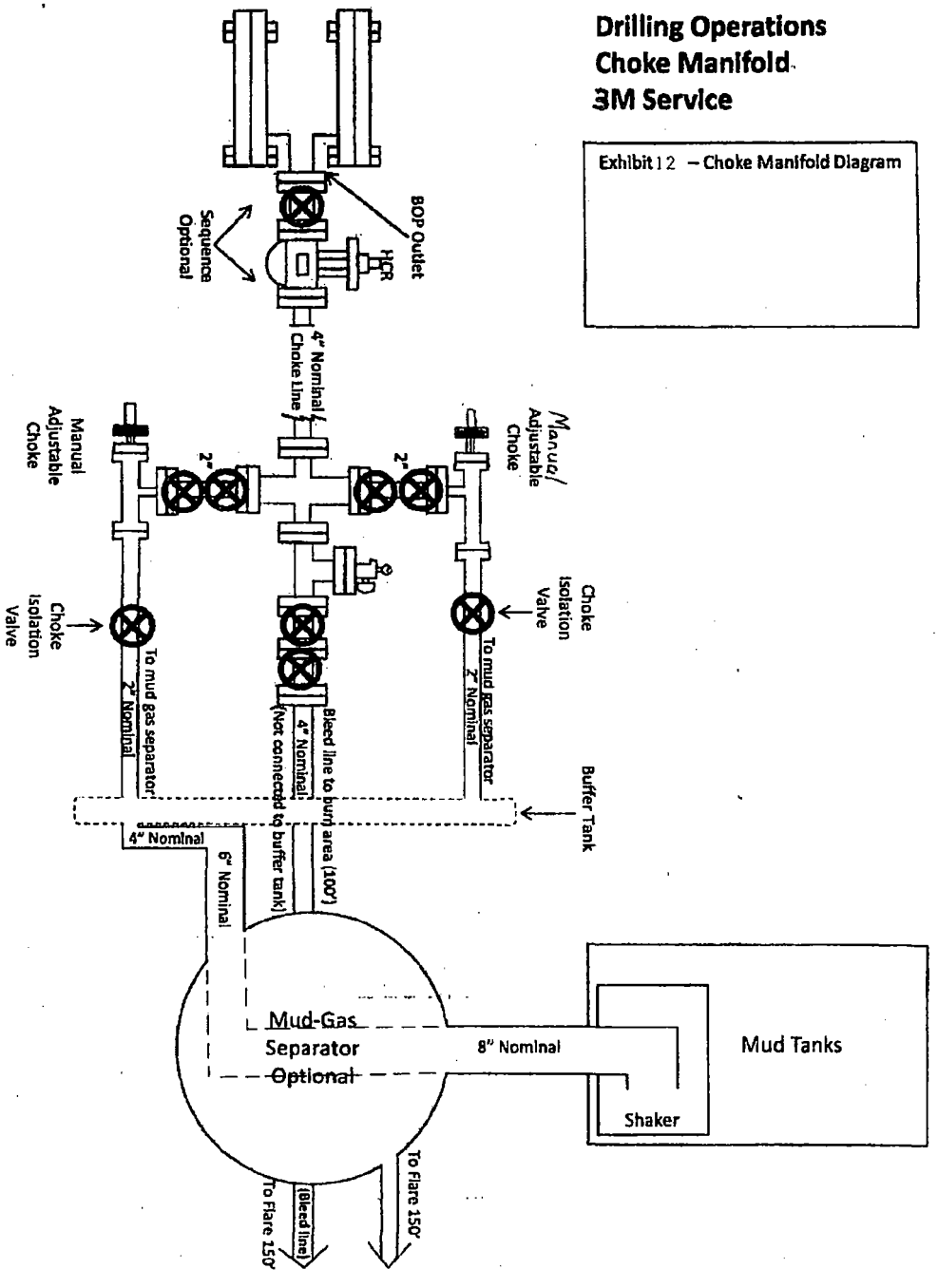
**Other proposed operations facets attachment:**

jal_1_drill_plan_20170831095136.pdf

**Other Variance attachment:**

# Mack Energy Corporation

MANIFOLD SCHEMATIC
Exhibit #12



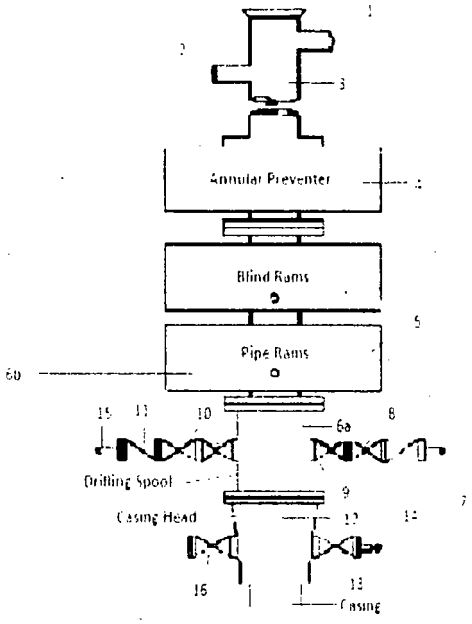
# Mack Energy Corporation
## Minimum Blowout Preventer Requirements
### 5000 psi Working Pressure
### 13 5/8 inch- 5 MWP
### 11 Inch - 5 MWP

## Stack Requirements

| NO. | Items | Min. I.D. | Min. Nominal |
|---|---|---|---|
| 1 | Flowline | | 2" |
| 2 | Fill up line | | 2" |
| 3 | Drilling nipple | | |
| 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 | Flanged Valve | 1 13/16 | |




CONTRACTOR'S OPTION TO CONTRACTOR'S OPTION TO FURNISH

1. All equipment and connections above bradenhead 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 rams to fit drill pipe in use on location at all times.
9. Type RX ring gaskets in place of Type R.
10. 
11. Mi-

MEC TO FURNISH

1. Bradenhead 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

Replaceable parts for adjustable choke, or bean sizes, retainers, and choke wrenches to be conveniently located for immediate use.

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

**Casing Design** **Well:** Jal Federal #1

**String Size & Function:** 8 5/8 in surface x intermediate

**Total Depth:** 1200 ft

**Pressure Gradient for Calculations** **(While drilling)**

Mud weight, collapse: 9.6 #/gal Safety Factor Collapse: 1.125

Mud weight, burst: 9.6 #/gal Safety Factor Burst: 1.25

Mud weight for joint strength: 9.6 #/gal Safety Factor Joint Strength 1.8

BHP @ TD for: collapse: 599.04 psi Burst: 599.04 psi. joint strength: 599.04 psi

**Partially evacuated hole?** Pressure gradient remaining: 10 #/gal

**Max. Shut in surface pressure:** 500 psi

| **1st segment** | 1200 ft to 0 ft | | | Make up Torque ft-lbs | | Total ft = 1200 |
|---|---|---|---|---|---|---|
| O.D | Weight | Grade | Threads | opt. | min. | mx. |
| **8.625** inches | **24** #/ft | **J-55** | **ST&C** | **2440** | **1830** | **3050** |
| Collapse Resistance | Internal Yield | Joint Strength | | Body Yield | | Drift |
| **1.370** psi | **2.950** psi | **244** ,000 # | | **381** ,000 # | | **7.972** |

| **2nd segment** | 0 ft to 0 ft | | | Make up Torque ft-lbs | | Total ft = 0 |
|---|---|---|---|---|---|---|
| O.D. | Weight | Grade | Threads | opt. | min. | mx. |
| inches | #/ft | | | | | |
| Collapse Resistance | Internal Yield | Joint Strength | | Body Yield | | Drift |
| psi | psi | ,000 # | | ,000 # | | |

| **3rd segment** | 0 ft to 0 ft | | | Make up Torque ft-lbs | | Total ft = 0 |
|---|---|---|---|---|---|---|
| O.D. | Weight | Grade | Threads | opt | min. | mx. |
| inches | #/ft | | | | | |
| Collapse Resistance | Internal Yield | Joint Strength | | Body Yield | | Drift |
| psi | psi | ,000 # | | ,000 # | | |

| **4th segment** | 0 ft to 0 ft | | | Make up Torque ft-lbs | | Total ft = 0 |
|---|---|---|---|---|---|---|
| O.D. | Weight | Grade | Threads | opt. | min | mx |
| inches | #/ft | | | | | |
| Collapse Resistance | Internal Yield | Joint Strength | | Body Yield | | Drift |
| psi | psi | ,000 # | | ,000 # | | |

| **5th segment** | 0 ft to 0 ft | | | Make up Torque ft-lbs | | Total ft = 0 |
|---|---|---|---|---|---|---|
| O.D | Weight | Grade | Threads | opt. | min. | mx. |
| inches | #/ft | | | | | |
| Collapse Resistance | Internal Yield | Joint Strength | | Body Yield | | Drift |
| psi | psi | ,000 # | | ,000 # | | |

| **6th segment** | 0 ft to 0 ft | | | Make up Torque ft-lbs | | Total ft = 0 |
|---|---|---|---|---|---|---|
| O.D. | Weight | Grade | Threads | opt. | min. | mx. |
| inches | #/ft | | | | | |
| Collapse Resistance | Internal Yield | Joint Strength | | Body Yield | | Drift |
| psi | psi | ,000 # | | ,000 # | | |

Select 1st segment bottom 1200

| 1200 ft | to | 0 ft | |
|---|---|---|---|
| 8.625 | 0 | J-55 | ST&C |

| S.F. | Actual | | Desire |
|---|---|---|---|
| collapse | 2.286993 | >= | 1.125 |
| burst-b | 5.619476 | >= | 1.25 |
| burst-t | 5.9 | | |

Top of segment 1 (ft) 0

Select 2nd segment from bottom

| 0 ft | to | 0 ft | |
|---|---|---|---|
| 0 | 0 | 0 | 0 |

| S.F. | Actual | | Desire |
|---|---|---|---|
| collapse | #DIV/0! | >= | 1.125 |
| burst-b | 0 | >= | 1.25 |
| burst-t | 0 | | |
| jnt strngth | 9.930868 | >= | 1.8 |

**Casing Design** **Well:** Jal Federal #1

**String Size & Function:** 5 1/2 in Production x

**Total Depth:** 6300 ft **TVD:** 6300 ft

**Pressure Gradient for Calculations** **(While drilling)**

| | | | |
|---|---|---|---|
| Mud weight, collapse: | 10.3 #/gal | Safety Factor Collapse: | 1.125 |
| Mud weight, burst: | 10.3 #/gal | Safety Factor Burst: | 1.25 |
| Mud weight for joint strength: | 10.3 #/gal | Safety Factor Joint Strength | 1.8 |

BHP @ TD for: collapse: 3374.28 psi Burst: 3374.28 psi. joint strength: 3374.28 psi

**Partially evacuated hole?** Pressure gradient remaining: 10 #/gal

**Max. Shut in surface pressure:** 3000 psi

| **1st segment** | 6300 ft to 0 ft | | | Make up Torque ft-lbs | | | Total ft = 6300 |
|---|---|---|---|---|---|---|---|
| O.D. | Weight | Grade | Threads | opt. | min. | mx. | |
| **5.5** inches | **17** #/ft | **L-80** | **LT&C** | **3410** | **2560** | **4260** | |
| Collapse Resistance | Internal Yield | Joint Strength | | Body Yield | | Drift | |
| **6,290** | **7,740** psi | **338** ,000 # | | **397** ,000 # | | **4.767** | |

| **2nd segment** | ft to 0 ft | | | Make up Torque ft-lbs | | | Total ft = |
|---|---|---|---|---|---|---|---|
| O.D. | Weight | Grade | Threads | opt. | min. | mx. | |
| inches | #/ft | | | | | | |
| Collapse Resistance | Internal Yield | Joint Strength | | Body Yield | | Drift | |
| psi | psi | ,000 # | | ,000 # | | | |

| **3rd segment** | 0 ft to 0 ft | | | Make up Torque ft-lbs | | | Total ft = 0 |
|---|---|---|---|---|---|---|---|
| O.D. | Weight | Grade | Threads | opt. | min | mx. | |
| inches | #/ft | | | | | | |
| Collapse Resistance | Internal Yield | Joint Strength | | Body Yield | | Drift | |
| psi | psi | ,000 # | | ,000 # | | | |

| **4th segment** | 0 ft to 0 ft | | | Make up Torque ft-lbs | | | Total ft = 0 |
|---|---|---|---|---|---|---|---|
| O.D. | Weight | Grade | Threads | opt. | min. | mx. | |
| inches | #/ft | | | | | | |
| Collapse Resistance | Internal Yield | Joint Strength | | Body Yield | | Drift | |
| psi | psi | ,000 # | | ,000 # | | | |

| **5th segment** | 0 ft to 0 ft | | | Make up Torque ft-lbs | | | Total ft = 0 |
|---|---|---|---|---|---|---|---|
| O.D | Weight | Grade | Threads | opt. | min. | mx. | |
| inches | #/ft | | | | | | |
| Collapse Resistance | Internal Yield | Joint Strength | | Body Yield | | Drift | |
| psi | psi | ,000 # | | ,000 # | | | |

| **6th segment** | 0 ft to 0 ft | | | Make up Torque ft-lbs | | | Total ft = 0 |
|---|---|---|---|---|---|---|---|
| O.D. | Weight | Grade | Threads | opt. | min. | mx. | |
| inches | #/ft | | | | | | |
| Collapse Resistance | Internal Yield | Joint Strength | | Body Yield | | Drift | |
| psi | psi | ,000 # | | ,000 # | | | |

Select 1st segment bottom

| 6300 ft | to | 0 ft | |
|---|---|---|---|
| 5.5 | 0 | L-80 | LT&C |

Top of segment 1 (ft)

Select 2nd segment from bottom

| 0 ft | to | 0 ft | |
|---|---|---|---|
| 0 | 0 | 0 | 0 |

| S.F. | Actual | | Desire |
|---|---|---|---|
| collapse | 1.864101 | >= | 1.125 |
| burst-b | 2.667383 | >= | 1.25 |
| burst-t | 2.58 | | |

| S.F. | Actual | | Desire |
|---|---|---|---|
| collapse | #DIV/0! | >= | 1.125 |
| burst-b | 0 | >= | 1.25 |
| burst-t | 0 | | |
| jnt strngth | 3.74631 | >= | 1.8 |

Attached to Form 3160-3
Mack Energy Corporation
Jal Federal #1
1670 FNL & 990 FEL, SE/NE, Sec. 1 T26S R37E
Chaves County, NM

# DRILLING PROGRAM

## 1. Geologic Name of Surface Formation

Quaternary

## 2. Estimated Tops of Important Geologic Markers:

| | | | |
|---|---|---|---|
| Rustler | 935' | Grayburg | 3410' |
| Top Salt | 1035' | San Andres | 3655' |
| Base of Salt | 2265' | Glorieta | 4765' |
| Yates | 2385' | Paddock | 4850' |
| Seven Rivers | 2680' | Blinebry | 5145' |
| Queen | 3120' | Tubb | 5790' |
| | | Drinkard | 5960' |

## 3. Estimated Depths of Anticipated Fresh Water, Oil and Gas:

| | | |
|---|---|---|
| Water Sand | 150' | Fresh Water |
| Yates | 2385' | Oil/Gas |
| Seven Rivers | 2680' | Oil/Gas |
| Queen | 3120' | Oil/Gas |
| Grayburg | 3410' | Oil/Gas |
| San Andres | 3655' | Oil/Gas |
| Glorieta | 4765' | Oil/Gas |
| Paddock | 4850' | Oil/Gas |
| Blinebry | 5145' | Oil/Gas |
| Tubb | 5790' | Oil/Gas |
| Drinkard | 5960' | Oil/Gas |

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Setting 8 5/8" casing to 1200' and circulating cement back to surface will protect the surface fresh water sand. Salt section and shallower zones above TD, which contain commercial quantities of oil and/or gas, will have cement circulated across them by cementing 5 ½" production casing, sufficient cement will be pumped to circulate back to surface.

## 4. Casing Program:

| Hole Size | Interval | OD Casing | Wt, Grade, Jt, cond, collapse/burst/tension |
|---|---|---|---|
| 12 ¼" | 0-1200' | 8 5/8" | 24#, J-55, ST&C, New, 2.287/5.619/5.9 |
| 7 7/8" | 0-6300' | 5 ½" | 17#,L-80,LT&C, New, 1.864101/2.667383/2.58 |

## 5. Cement Program:

8 5/8" Surfac Casing: Lead 400sx, Class C + 4% PF20, yld 1.98, wt 12.9 ppg, 9.138gals/sx, excess 100% ; Tail 200sx, Class C + 1% PF1, yld 1.33, wt 14.8 ppg, 6.323gals/sx, excess 100%

5 ½" Production Casing: Lead 400sx 35/65Poz/H + 5%PF44 (BWOW)+6%PF20+.25#/sx PF46+3#/sk42+.6%PF13+.125#/skPF29, yield 2.05, wt 12.6, 10.991gals/sx, excess 35%, Tail 450sx PVL + 1.3% PF44 (BWOW), 5% PF174 + .5% PF606 + .1% PF153 +.6% PF13, yield 1.47, wt 13.0, 7.57gals/sx, 35% excess.

**6. Minimum Specifications for Pressure Control:**

The blowout preventer equipment (BOP) shown in Exhibit #10 will consist of a double ram-type (3000 psi WP) minimum preventer. This unit will be hydraulically operated and the ram type preventer will be equipped with blind rams on top of 4 1/2" drill pipe rams on bottom. The 11" BOP will be nippled up on the 8 5/8" surface casing and tested by a 3rd party to 2000 psi used continuously until TD is reached. All BOP's and accessory equipment will be tested to 2000 psi before drilling out of intermediate casing. Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment (Exhibit #10) will include a Kelly cock and floor safety valve and choke lines and choke manifold (Exhibit #11) with a minimum 3000 psi WP rating

**7. Types and Characteristics of the Proposed Mud System:**

The well will be drilled to TD with a combination of fresh and cut brine mud system. The applicable depths and properties of this system are as follows:

| DEPTH | TYPE | WEIGHT | VISCOSITY | WATERLOSS |
|---|---|---|---|---|
| 0-1200' | Fresh Water | 8.5 | 28 | N.C. |
| 1200'-TD' | Cut Brine | 9.1 | 29 | N.C. |

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the well site at all times.

**8. Auxiliary Well Control and Monitoring Equipment:**

A. Kelly cock will be kept in the drill string at all times.
B. A full opening drill pipe-stabbing valve with proper drill pipe connections will be on the rig floor at all times.

**9. Logging, Testing and Coring Program:**

A. The electric logging program will consist of GR-Dual Laterolog, Spectral Density, Dual Spaced Neutron, CSNG Log from T.D. to 8 5/8 casing shoe.
B. Drill Stem test is not anticipated.
C. No conventional coring is anticipated.
D. Further testing procedures will be determined at TD.

**10. Abnormal Conditions, Pressures, Temperatures and Potential Hazards:**

No abnormal pressures or temperatures are anticipated. The estimated bottom hole at TD is 120 degrees and estimated maximum bottom hole pressure is 3,276 psig. Low levels of Hydrogen sulfide have been monitors in producing wells in the area, so H2S may be present

while drilling of the well; a plan is attached to the Drilling program. No major loss of circulation zones has been reported in offsetting wells.

**11. Anticipated Starting Date and Duration of Operations:**

Road and location work will not begin until approval has been received from the BLM. The anticipated spud date is November 1, 2017. Once commenced, the drilling operation should be finished in approximately 10 days. If the well is productive, an additional 30 days will be required for completion and testing before a decision is made to install permanent facilities.

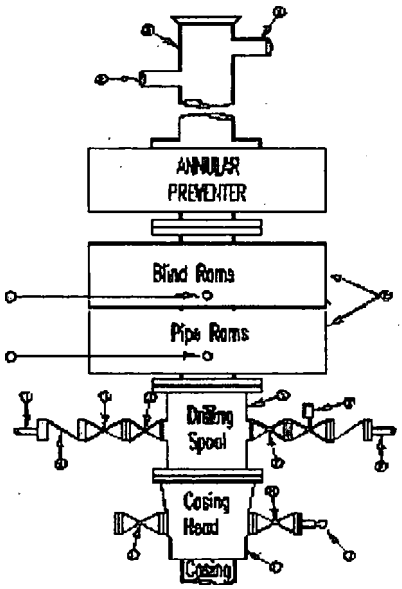
**Attachment to Exhibit #10**
**NOTES REGARDING THE BLOWOUT PREVENTERS**
**Jal Federal #1**
**Lea County, New Mexico**

1. Drilling nipple to be so constructed that it can be removed without use of a welder through rotary table opening, with minimum I.D. equal to preventer bore.
2. Wear ring to be properly installed in head.
3. Blow out preventer and all fittings must be in good condition. 2000 psi WP minimum.
4. All fittings to be flanged.
5. Safety valve must be available on rig floor at all times with proper connections, valve to be full 2000 psi WP minimum.
6. All choke and fill lines to be securely anchored especially ends of choke lines.
7. Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.
8. Kelly cock on Kelly.
9. Extension wrenches and hands wheels to be properly installed.
10. Blow out preventer control to be located as close to driller's position as feasible.
11. Blow out preventer closing equipment to include minimum 40-gallon accumulator, two independent sources of pump power on each closing unit installation all API specifications.

# Mack Energy Corporation
## Minimum Blowout Preventer Requirements
### 3000 psi Working Pressure
### 13 3/8 inch- 3 MWP
### 11 Inch - 3 MWP
### EXHIBIT #10

## Stack Requirements

| NO. | Items | Min. I.D. | Min. Nominal |
|---|---|---|---|
| 1 | Flowline | | 2" |
| 2 | Fill up line | | 2" |
| 3 | Drilling nipple | | |
| 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 | Flanged Valve | 1 13/16 | |

CONTRACTOR'S OPTION TO

CONTRACTOR'S OPTION TO FURNISH:

1. All equipment and connections above bradenhead 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 rams to fit drill pipe in use on location at all times.
9. Type RX ring gaskets in place of Type R.

MEC TO FURNISH:

10.

ME

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. Replaceable parts for adjustable choke, or bean sizes, retainers, and choke wrenches to be conveniently located for immediate use
5. All valves to be equipped with

Attached to Form 3160-3
Mack Energy Corporation
Jal Federal #1
1670 FNL & 990 FEL, SE/NE, Sec. 1 T26S R37E
Chaves County, NM

hand-wheels or handles ready for immediate use.

6. Choke lines must be suitably anchored.
7. Handwheels and extensions to be connected and ready for use.
8. Valves adjacent to drilling spool to be kept open. Use outside valves except for emergency.
9. All seamless steel control piping (2000 psi working pressure) to have flexible joints to avoid stress. Hoses will be permitted.
10. Casinghead connections shall not be used except in case of emergency.
11. Does not use kill line for routine fill up operations.

1. Bradenhead or casing head and side valves
2. Wear bushing. If required.

# Mack Energy Corporation

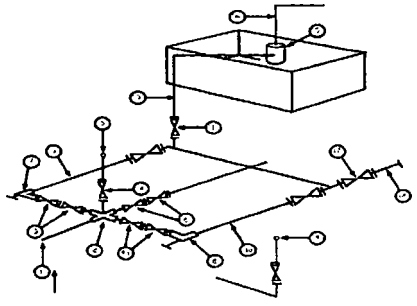
Exhibit #11

MIMIMUM CHOKE 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**

**Mimimum 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 | | | |
| 2 | Cross 3" x 3" x 3" x 2" | | | | | | | | | 10,000 |
| 3 | Valve Gate<br>Plug | 3 1/8 | | 3,000 | 3 1/8 | | 5,000 | 3 1/8 | | 10,000 |
| 4 | Valve Gate<br>Plug | 1<br>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<br>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<br>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 quage | | | 3,000 | | | 5,000 | | | 10,000 |
| 15 | Gas Separator | | 2' x5' | | | 2' x5' | | | 2' x5' | |
| 16 | Line | | 4" | 1,000 | | 4" | 1,000 | | 4" | 2,000 |
| 17 | Valve Gate<br>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.

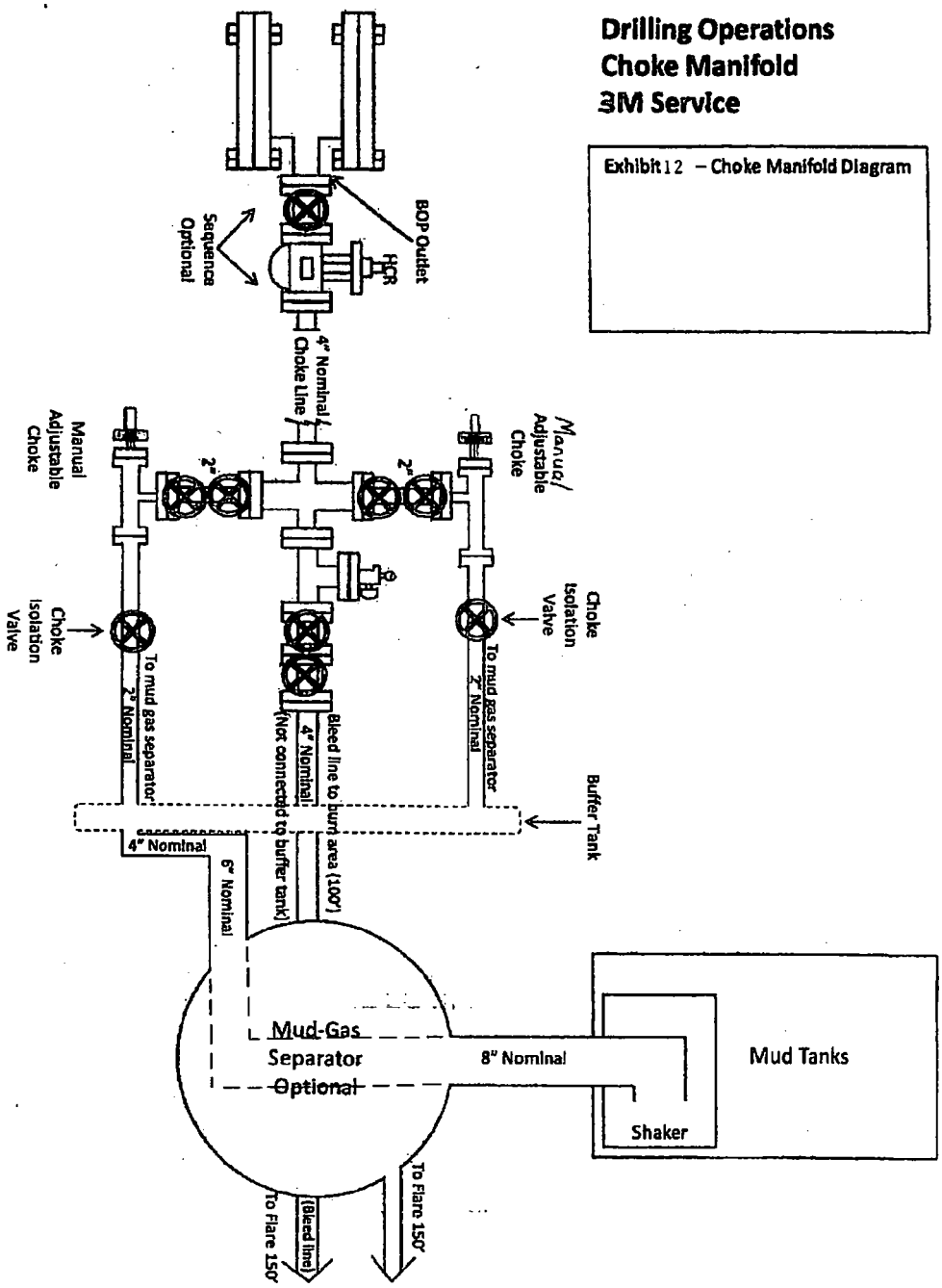
EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTION

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

# Mack Energy Corporation

MANIFOLD SCHEMATIC

Exhibit #12



**APD ID:** 10400012844 **Submission Date:** 05/08/2017

**Operator Name:** MACK ENERGY CORPORATION

**Well Name:** JAL FEDERAL **Well Number:** 1

**Well Type:** OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

## Section 1 - Existing Roads

**Will existing roads be used?** YES

**Existing Road Map:**

jal_fed_1_access_rd_plat_07-11-2017.pdf

Jal_Fed_1_Road_Description_20170831110427.pdf

**Existing Road Purpose:** ACCESS,FLUID TRANSPORT **Row(s) Exist?** NO

### ROW ID(s)

**ID:**

**Do the existing roads need to be improved?** NO

**Existing Road Improvement Description:**

**Existing Road Improvement Attachment:**

## Section 2 - New or Reconstructed Access Roads

**Will new roads be needed?** YES

**New Road Map:**

jal_fed_1_access_rd_plat_07-11-2017.pdf

Jal_Fed_1_Road_Description_20170831110444.pdf

**New road type:** TWO-TRACK

**Length:** 148 Feet **Width (ft.):** 14

**Max slope (%):** 2 **Max grade (%):** 1

**Army Corp of Engineers (ACOE) permit required?** NO

**ACOE Permit Number(s):**

**New road travel width:** 14

**New road access erosion control:** The Maximum width of the running surface will be 14'. The road will be crowned and ditched and constructed of 6" rolled and compacted caliche. Ditches will be at 3:1 slope and 3 feet wide. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns.

**New road access plan or profile prepared?** NO

**Operator Name:** MACK ENERGY CORPORATION

**Well Name:** JAL FEDERAL **Well Number:** 1

**New road access plan attachment:**

**Access road engineering design?** NO

**Access road engineering design attachment:**

**Access surfacing type:** OTHER

**Access topsoil source:** ONSITE

**Access surfacing type description:** Surfacing material will consist of native caliche. Caliche will be obtained from the nearest approved caliche pit located at NWNW Sec 27 T25S R37E and SENW Sec 26 T25S R37E .

**Access onsite topsoil source depth:** 2

**Offsite topsoil source description:**

**Onsite topsoil removal process:** Blade topsoil into windrow along up-slope edge of road

**Access other construction information:** Jal Federal – Access Road (a) Access Road from Willis Road to the Jal Federal #1. (b) Jal Federal #1 SENE Sec. 1 T26S R37E. (c) Proposed on the onsite that the road will exit the southwest corner of the pad. (d) Total distance is 14,419.04' (14,271.04' existing & 148' new) in length all on Fee Land. Access road is 14' wide. Existing 14,271.04' is caliche lease road and 148' new road will require a caliche topping. (e) The duration needed is 30 years. (f) Access road will be used daily. Multiple vehicles during and completion, then single vehicle during production. (g) Total construction time 3 days

**Access miscellaneous information:**

**Number of access turnouts:** **Access turnout map:**

## Drainage Control

**New road drainage crossing:** OTHER

**Drainage Control comments:** The Maximum width of the running surface will be 14'. The road will be crowned and ditched and constructed of 6" rolled and compacted caliche. Ditches will be at 3:1 slope and 3 feet wide. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns.

**Road Drainage Control Structures (DCS) description:** The Maximum width of the running surface will be 14'. The road will be crowned and ditched and constructed of 6" rolled and compacted caliche. Ditches will be at 3:1 slope and 3 feet wide. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns.

**Road Drainage Control Structures (DCS) attachment:**

## Access Additional Attachments

**Additional Attachment(s):**

## Section 3 - Location of Existing Wells

**Existing Wells Map?** YES

**Attach Well map:**

Jal_Fed_1_existing_well_map_07-11-2017.pdf

**Existing Wells description:**

**Operator Name:** MACK ENERGY CORPORATION

**Well Name:** JAL FEDERAL **Well Number:** 1

## Section 4 - Location of Existing and/or Proposed Production Facilities

**Submit or defer a Proposed Production Facilities plan?** SUBMIT

**Production Facilities description:** A. Mack Energy Corporation will construct facility on the NORTH Side of the Jal Federal #1 Pad, located SENE Sec 1 T26D R37E . B. If the well is productive, contemplated facilities will be as follows: 1) Round Tank;San Andres Completion: Will be sent to the Jal Federal TB located on the NORTH Side of the Jal Federal #1 Pad, located SENE Sec 1 T26D R37E. 2) The tank battery and facilities including all SURFACE flow lines and piping will be installed according to API specifications. 3) Any additional caliche will be obtained from caliche pit located at NWNW Sec 27 T25S R37E and SENW Sec 26 T25S R37E . Any additional construction materials will be purchased from contractors. 4) It will be necessary to run electric power if this well is productive. Power will be run by CVE and they will send in a separate plan for power. C. Proposed flow lines will stay on location, TB will be built on location. Flowline will be a 3" poly SURFACE line, 300' in length with a 40 psi working pressure.

**Production Facilities map:**

jal_fed_1_tb_05-08-2017.pdf

jal_reclaimed_diagram_20170831092648.pdf

## Section 5 - Location and Types of Water Supply

### Water Source Table

**Water source use type:** CAMP USE, DUST CONTROL, DUST CONTROL, INTERMEDIATE/PRODUCTION CASING, INTERMEDIATE/PRODUCTION CASING, STIMULATION, STIMULATION, SURFACE CASING, SURFACE CASING

**Water source type:** GW WELL

**Describe type:**

**Source longitude:**

**Source latitude:**

**Source datum:**

**Water source permit type:** OTHER

**Source land ownership:** OTHER

**Describe land ownership:**

**Water source transport method:** TRUCKING

**Source transportation land ownership:** OTHER

**Describe transportation land ownership:**

**Water source volume (barrels):** 20000

**Source volume (acre-feet):** 2.577862

**Source volume (gal):** 840000

**Water source and transportation map:**

JAL_FED_1_WATER_SOURCE_MAPS_04-18-2017.pdf

Jal_fed_water_source_map_07-11-2017.pdf

**Water source comments:** City/Municipal Water: Jal Country Club FW S 18 T 25S R 37E Brine Water: Key Energy State BW S 15 T 21S R 37E. Fresh Water: Mid Lea FW S 9 T 22S R 37E Brine Water: Salty Dog BW S 5 T 19S R 36E

**New water well?** NO

### New Water Well Info

**Operator Name:** MACK ENERGY CORPORATION

**Well Name:** JAL FEDERAL **Well Number:** 1

**Well latitude:** **Well Longitude:** **Well datum:**

**Well target aquifer:**

**Est. depth to top of aquifer(ft):** **Est thickness of aquifer:**

**Aquifer comments:**

**Aquifer documentation:**

**Well depth (ft):** **Well casing type:**

**Well casing outside diameter (in.):** **Well casing inside diameter (in.):**

**New water well casing?** **Used casing source:**

**Drilling method:** **Drill material:**

**Grout material:** **Grout depth:**

**Casing length (ft.):** **Casing top depth (ft.):**

**Well Production type:** **Completion Method:**

**Water well additional information:**

**State appropriation permit:**

**Additional information attachment:**

## Section 6 - Construction Materials

**Construction Materials description:** All caliche required for construction of the drill pad and proposed new access road (approximately 2500 cubic yards) will be obtained from a private pit managed by the landowner Sec. 26 T25S R37E and SESW Sec. 21 T25S R37E (map attached).
**Construction Materials source location attachment:**

jal_caliche_pits_07-25-2017.pdf

## Section 7 - Methods for Handling Waste

**Waste type:** SEWAGE

**Waste content description:** Sewage and Gray Water will be placed in container and hauled to a approved facility. Container and disposal handled by L&S Septic.
**Amount of waste:** barrels

**Waste disposal frequency :** Weekly

**Safe containment description:** Sewage and Gray Water will be placed in container and hauled to a approved facility. Container and disposal handled by L&S Septic.
**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
**Disposal type description:**

**Disposal location description:** Black Hawk will dispose at an approved location. Black Hawk Keith Willis 15756316378

**Waste type:** GARBAGE

**Waste content description:** Garbage and trash produced during drilling or completion operations will be collected in a trash bin and hauled to an approved local landfill. No toxic waste or hazardous chemicals will be produced by this operation.
**Amount of waste:** pounds

**Waste disposal frequency :** Weekly

**Safe containment description:** Garbage and trash produced during drilling or completion operations will be collected in a trash bin and hauled to an approved local landfill. No toxic waste or hazardous chemicals will be produced by this operation.
**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
**Disposal type description:**

**Disposal location description:** Black Hawk will dispose at an approved location. Black Hawk Keith Willis 15756316378

**Waste type:** PRODUCED WATER

**Waste content description:** Water produced from the well during completion may be disposed into a steel tank. After the well is permanently placed on production, produced water will be collected in tanks (fiberglass) and pipelined to Rice Operating Disposal System SWD; produced oil will be collected in steel tanks until sold.
**Amount of waste:** 2080 barrels

**Waste disposal frequency :** Weekly

**Safe containment description:** Water produced from the well during completion may be disposed into a steel tank. After the well is permanently placed on production, produced water will be collected in tanks (fiberglass) and pipelined to Rice Operating Disposal System SWD; produced oil will be collected in steel tanks until sold.
**Safe containmant attachment:**

**Waste disposal type:** OFF-LEASE INJECTION **Disposal location ownership:** PRIVATE

**Disposal type description:**

**Disposal location description:** Rice Operating Disposal System SWD

**Waste type:** DRILLING

**Waste content description:** Drill cuttings and fluids will be disposed into the steel tanks and hauled to R-360 disposal facility, permit number NM-01-0006. Located on Hwy 62 at MM 66.
**Amount of waste:** 380 barrels

**Waste disposal frequency :** Weekly

**Safe containment description:** Drill cuttings and fluids will be disposed into the steel tanks and hauled to R-360 disposal facility, permit number NM-01-0006. Located on Hwy 62 at MM 66.
**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
**Disposal type description:**

**Disposal location description:** R-360 disposal facility, permit number NM-01-0006. Located on Hwy 62 at MM 66

## Reserve Pit

**Reserve Pit being used?** NO

**Temporary disposal of produced water into reserve pit?**

**Reserve pit length (ft.)** **Reserve pit width (ft.)**

**Reserve pit depth (ft.)** **Reserve pit volume (cu. yd.)**

**Is at least 50% of the reserve pit in cut?**

**Reserve pit liner**

**Reserve pit liner specifications and installation description**

## Cuttings Area

**Cuttings Area being used?** NO

**Are you storing cuttings on location?** NO

**Description of cuttings location**

**Cuttings area length (ft.)** **Cuttings area width (ft.)**

**Cuttings area depth (ft.)** **Cuttings area volume (cu. yd.)**

**Is at least 50% of the cuttings area in cut?**

**WCuttings area liner**

**Cuttings area liner specifications and installation description**

## Section 8 - Ancillary Facilities

**Are you requesting any Ancillary Facilities?:** NO

**Ancillary Facilities attachment:**

**Comments:**

## Section 9 - Well Site Layout

**Well Site Layout Diagram:**

jal_fed_1_site_map_04-06-2017.pdf

jal_reclaimed_diagram_20170831093824.pdf

**Comments:** Access Road will exit the Southwest Corner of the Pad. Tank Battery will be on the North Side of the Pad. After Reclamation the pad will be downsized to 1.43 acres 250' x 250' It will be necessary to run electric power if this well is productive. Power will be run by Lea County Electric and they will send in a separate plan for power. A. The well site and elevation plat for the proposed well is attached. It was staked by Maddron Surveying, Carlsbad, NM. B. The drill pad layout, with elevations staked by Maddron Surveying, is shown attached. Dimensions of the pad are shown. Topsoil, if available, will be stockpiled per BLM specifications. Because the pad is almost level no major cuts will be required. C. Diagram below shows the proposed orientation of the location. No permanent living facilities are planned, but a temporary foreman/toolpusher's trailer will be on location during the drilling operations.

**Operator Name:** MACK ENERGY CORPORATION

**Well Name:** JAL FEDERAL **Well Number:** 1

## Section 10 - Plans for Surface Reclamation

**Type of disturbance:** New Surface Disturbance **Multiple Well Pad Name:**

**Multiple Well Pad Number:**

**Recontouring attachment:**

jal_reclaimed_diagram_07-25-2017.pdf

**Drainage/Erosion control construction:** Edges of location will be bermed to prevent run off or erosion

**Drainage/Erosion control reclamation:** 1) Caliche will be removed, ground ripped and stockpiled topsoil used to recontoured as close as possible to the original natural level to prevent erosion and ponding of water. 2) Area will be reseeded as per BLM specifications. Seeding will be done when moisture is available and weather permitting. Pure live seed will be used to prevent noxious weeds. Annual inspection of growth will be done and necessary measures taken to eliminate noxious weeds.

**Wellpad long term disturbance (acres):** 2.5

**Wellpad short term disturbance (acres):** 2.19

**Access road long term disturbance (acres):** 3.996

**Access road short term disturbance (acres):** 3.996

**Pipeline long term disturbance (acres):** 0.3443526

**Pipeline short term disturbance (acres):** 0.20661157

**Other long term disturbance (acres):** 0

**Other short term disturbance (acres):** 0

**Total long term disturbance:** 6.8403525

**Total short term disturbance:** 6.3926115

**Reconstruction method:** Jal Federal 1 will be reclaimed to 250' x 250', 1.43 acres after reclamation. 1) Caliche will be removed, ground ripped and stockpiled topsoil used to recontoured as close as possible to the original natural level to prevent erosion and ponding of water. 2) Area will be reseeded as per BLM specifications. Seeding will be done when moisture is available and weather permitting. Pure live seed will be used to prevent noxious weeds. Annual inspection of growth will be done and necessary measures taken to eliminate noxious weeds

**Topsoil redistribution:** 1) Caliche will be removed, ground ripped and stockpiled topsoil used to recontoured as close as possible to the original natural level to prevent erosion and ponding of water. 2) Area will be reseeded as per BLM specifications. Seeding will be done when moisture is available and weather permitting. Pure live seed will be used to prevent noxious weeds. Annual inspection of growth will be done and necessary measures taken to eliminate noxious weeds

**Soil treatment:** 1) Caliche will be removed, ground ripped and stockpiled topsoil used to recontoured as close as possible to the original natural level to prevent erosion and ponding of water. 2) Area will be reseeded as per BLM specifications. Seeding will be done when moisture is available and weather permitting. Pure live seed will be used to prevent noxious weeds. Annual inspection of growth will be done and necessary measures taken to eliminate noxious weeds

**Existing Vegetation at the well pad:** The area is grassland and the topsoil is sandy. The vegetation is native scrub grass with sagebrush

**Existing Vegetation at the well pad attachment:**

**Existing Vegetation Community at the road:** The area is grassland and the topsoil is sandy. The vegetation is native scrub grass with sagebrush

**Existing Vegetation Community at the road attachment:**

**Existing Vegetation Community at the pipeline:** The area is grassland and the topsoil is sandy. The vegetation is native scrub grass with sagebrush

**Existing Vegetation Community at the pipeline attachment:**

**Existing Vegetation Community at other disturbances:** A. The area is grassland and the topsoil is sandy. The vegetation

is native scrub grass with sagebrush

**Existing Vegetation Community at other disturbances attachment:**

**Non native seed used?** NO

**Non native seed description:**

**Seedling transplant description:**

**Will seedlings be transplanted for this project?** NO

**Seedling transplant description attachment:**

**Will seed be harvested for use in site reclamation?** YES

**Seed harvest description:** C. A Cultural Resources Examination has been requested and will be forwarded to your office in the near future

**Seed harvest description attachment:**

## Seed Management

### Seed Table

**Seed type:** **Seed source:**

**Seed name:**

**Source name:** **Source address:**

**Source phone:**

**Seed cultivar:**

**Seed use location:**

**PLS pounds per acre:** **Proposed seeding season:**

### Seed Summary

**Total pounds/Acre:**

| Seed Type | Pounds/Acre |
|---|---|

**Seed reclamation attachment:**

## Operator Contact/Responsible Official Contact Info

**First Name:** Jerry **Last Name:** Sherrell

**Phone:** (575)748-1288 **Email:** jerrys@mec.com

**Seedbed prep:**

**Seed BMP:**

**Seed method:**

**Existing invasive species?** NO

**Existing invasive species treatment description:**

**Existing invasive species treatment attachment:**

**Weed treatment plan description:** The holder shall seed all disturbed areas with the seed mixture listed by BLM. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.
**Weed treatment plan attachment:**

**Monitoring plan description:** After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided by BLM. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.
**Monitoring plan attachment:**

**Success standards:** The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.
**Pit closure description:** NO Pit

**Pit closure attachment:**

## Section 11 - Surface Ownership

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** PRIVATE OWNERSHIP

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:** **USFS Ranger District:**

**Operator Name:** MACK ENERGY CORPORATION

**Well Name:** JAL FEDERAL **Well Number:** 1

**Fee Owner:** Willis Family Trust **Fee Owner Address:** PO Box 307

**Phone:** (575)631-8752 **Email:**

**Surface use plan certification:** YES

**Surface use plan certification document:**

SUA_Final_cert_page_20171003141054.pdf

**Surface access agreement or bond:** Agreement

**Surface Access Agreement Need description:** Agreement was signed 9/12/2017

**Surface Access Bond BLM or Forest Service:**

**BLM Surface Access Bond number:**

**USFS Surface access bond number:**

## Section 12 - Other Information

**Right of Way needed?** NO **Use APD as ROW?**

**ROW Type(s):**

## ROW Applications

**SUPO Additional Information:**

**Use a previously conducted onsite?** YES

**Previous Onsite information:** 3/30/2017 Jal Federal #1

## Other SUPO Attachment

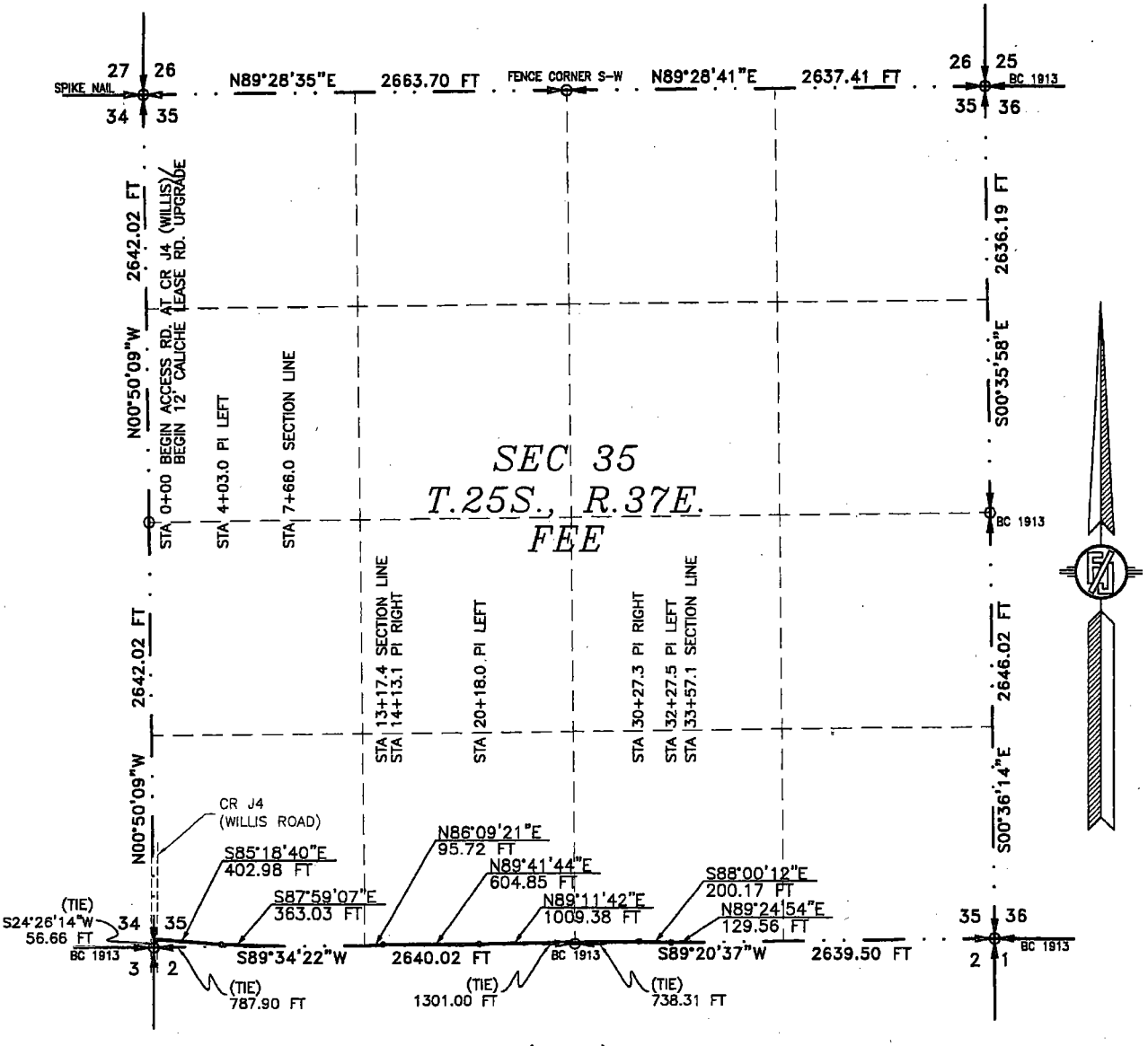
jal_fed_1_gas_capture_07-11-2017.pdf
jal_1_h2s_20170831095157.pdf
Jal_Fed_1_SUPO_20170831110603.pdf

# ACCESS ROAD PLAT

*ACCESS ROAD TO THE JAL FEDERAL 1*

## MACK ENERGY CORPORATION

*CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING*
*SECTION 35, TOWNSHIP 25 SOUTH, RANGE 37 EAST, N.M.P.M.*
*LEA COUNTY, STATE OF NEW MEXICO*
*MARCH 8, 2017*




SEE NEXT SHEET (2-10) FOR DESCRIPTION

1000 0 1000
Scale: 1" = 1000'

*GENERAL NOTES*

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

*SURVEYOR CERTIFICATE*

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 8 DAY OF MARCH 2017.


MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3341

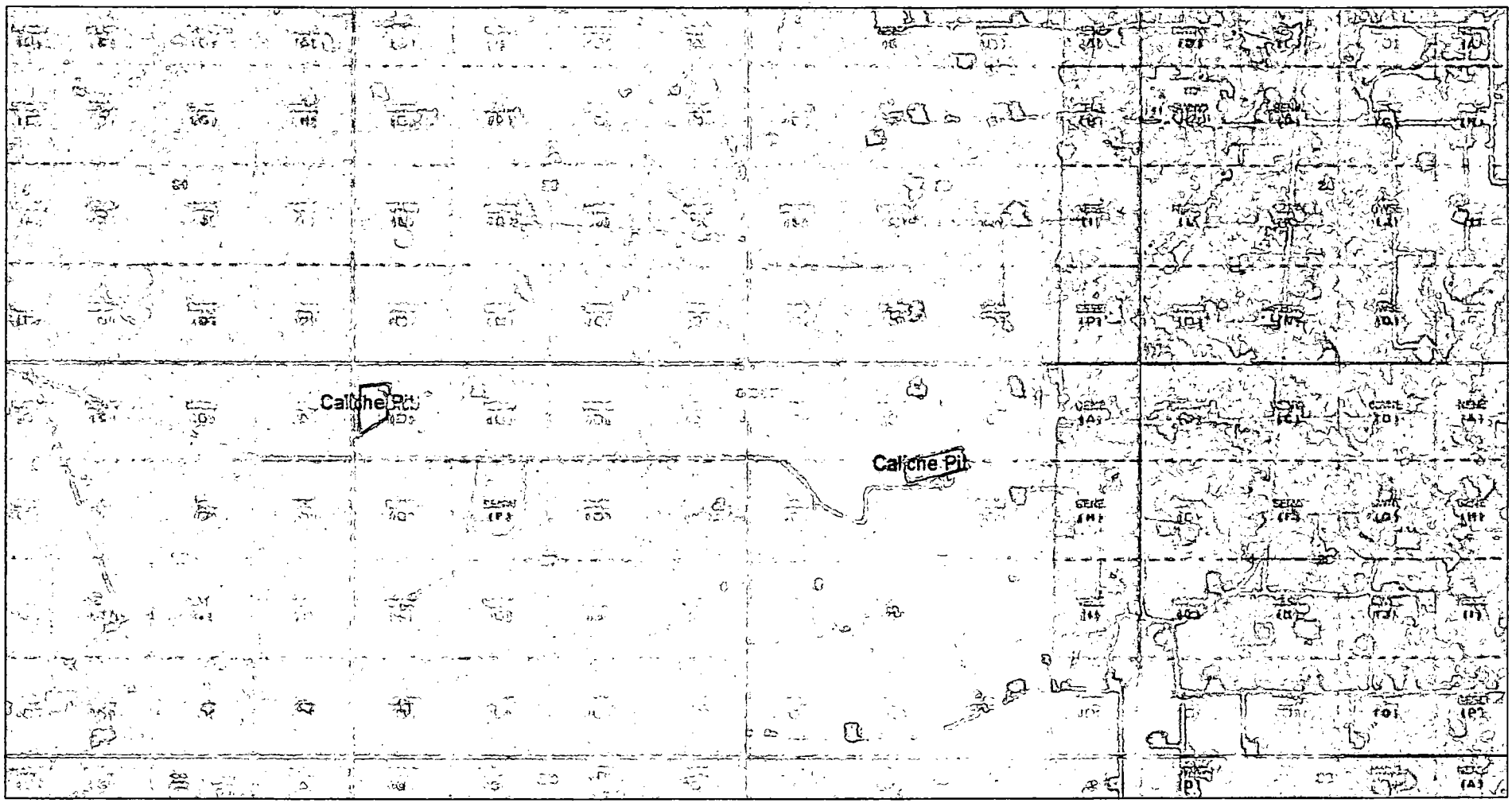

FILIMON F. JARAMILLO PLS. 12797

*SHEET: 1-10*

*SURVEY NO. 5162*

*MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO*

# ArcGIS Web Map




July 25, 2017

**Areas**

- Override 1
- OCD District Offices
- PLSSTownship
- PLSSSecondDivision_WMAS84_UnitLtr
- PLSSFirstDivision

1:18,056

0 0.175 0.35 0.7 mi

0 0.35 0.7 1.4 km

OCD

Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors and the GIS user community

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics

Web AppBuilder for ArcGIS

NM OSE | U.S. BLM | US Census Bureau, NMDOT | BLM | OCD | USDA FSA, DigitalGlobe, GeoEye, Microsoft, CNES/Airbus DS | Esri, HERE, Garmin, iPC |

EXECUTED this 12th day of September, 2017.

Owner

**Willis Family Trust**

Martin Willis, Agent

Mack

**Mack Energy Corporation**

Staci D. Sanders
Attorney in Fact

STATE OF New Mexico §
§
COUNTY OF Lea §

The foregoing instrument was acknowledged before me this 12 day of September, 2017 by Martin Willis as an Agent of the Willis Family Trust.

Notary Public

My Commission Expires: July 16, 2019

STATE OF NewMexico §
§
COUNTY OF Eddy §

The foregoing instrument was acknowledged before me this 18th day of September, 2017 by Staci D. Sanders, Attorney in Fact for Mack Energy Corporation, a New Mexico corporation.

Notary Public

My Commission Expires: 1/5/2021

OFFICIAL SEAL
KELSEY STARNES
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 1/5/2021

**Additional bond information attachment:**

## Section 3 - Unlined Pits

**Would you like to utilize Unlined Pit PWD options?** NO

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:** **PWD disturbance (acres):**

**Unlined pit PWD on or off channel:**

**Unlined pit PWD discharge volume (bbl/day):**

**Unlined pit specifications:**

**Precipitated solids disposal:**

**Decribe precipitated solids disposal:**

**Precipitated solids disposal permit:**

**Unlined pit precipitated solids disposal schedule:**

**Unlined pit precipitated solids disposal schedule attachment:**

**Unlined pit reclamation description:**

**Unlined pit reclamation attachment:**

**Unlined pit Monitor description:**

**Unlined pit Monitor attachment:**

**Do you propose to put the produced water to beneficial use?**

**Beneficial use user confirmation:**

**Estimated depth of the shallowest aquifer (feet):**

**Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?**

**TDS lab results:**

**Geologic and hydrologic evidence:**

**State authorization:**

**Unlined Produced Water Pit Estimated percolation:**

**Unlined pit: do you have a reclamation bond for the pit?**

**Is the reclamation bond a rider under the BLM bond?**

**Unlined pit bond number:**

**Unlined pit bond amount:**

**Additional bond information attachment:**

## Section 4 - Injection

**Would you like to utilize Injection PWD options?** NO

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:** **PWD disturbance (acres):**

**Injection PWD discharge volume (bbl/day):**

**Injection well mineral owner:**

**Injection well type:**

**Injection well number:** **Injection well name:**

**Assigned injection well API number?** **Injection well API number:**

**Injection well new surface disturbance (acres):**

**Minerals protection information:**

**Mineral protection attachment:**

**Underground Injection Control (UIC) Permit?**

**UIC Permit attachment:**

## Section 5 - Surface Discharge

**Would you like to utilize Surface Discharge PWD options?** NO

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:** **PWD disturbance (acres):**

**Surface discharge PWD discharge volume (bbl/day):**

**Surface Discharge NPDES Permit?**

**Surface Discharge NPDES Permit attachment:**

**Surface Discharge site facilities information:**

**Surface discharge site facilities map:**

## Section 6 - Other

**Would you like to utilize Other PWD options?** NO

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:** **PWD disturbance (acres):**

**Other PWD discharge volume (bbl/day):**

**Other PWD type description:**

**Other PWD type attachment:**

**Have other regulatory requirements been met?**

**Other regulatory requirements attachment:**

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

# Bond Info Data Report

01/23/2018

## Bond Information

**Federal/Indian APD:** FED

**BLM Bond number:** NMB000286

**BIA Bond number:**

**Do you have a reclamation bond?** NO

**Is the reclamation bond a rider under the BLM bond?**

**Is the reclamation bond BLM or Forest Service?**

**BLM reclamation bond number:**

**Forest Service reclamation bond number:**

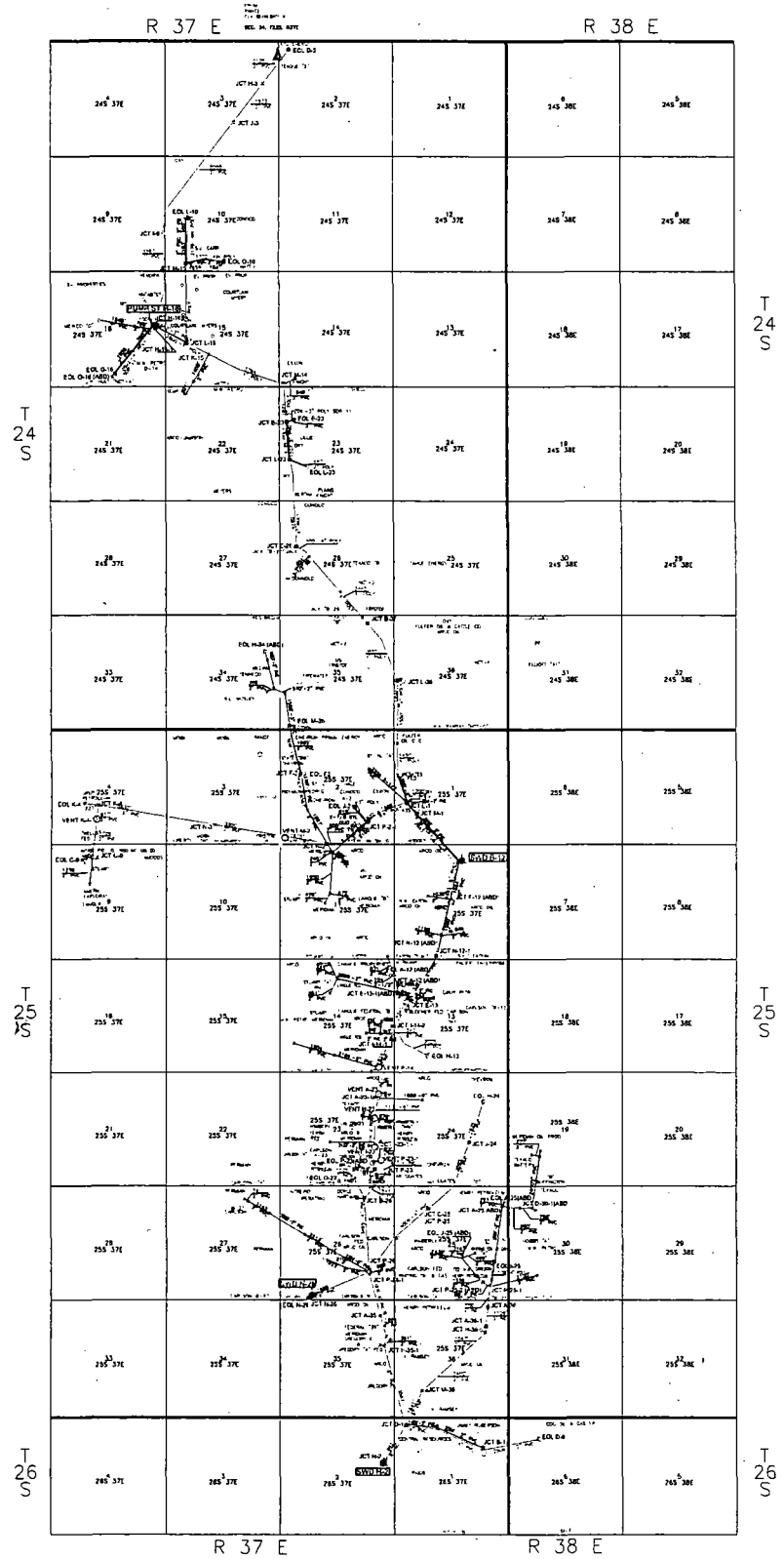
**Forest Service reclamation bond attachment:**

**Reclamation bond number:**

**Reclamation bond amount:**

**Reclamation bond rider amount:**

**Additional reclamation bond information attachment:**




10/7/14 TG

ROC SINCE 1955

| | |
|---|---|
| JUSTIS SWD SYSTEM | |
| LEA COUNTY, NEW MEXICO | |
| ROC OPERATING COMPANY | |

## Section 1 - General

**Would you like to address long-term produced water disposal?** YES

**Water quality analysis:**

Jal_Fed_1_PWD_MAP_04-20-2017.pdf

**Average monthly evaporation (in.):**

**Average monthly precipitation (in.):**

**Do you have a Produced Water Management Plan?** NO

## Section 2 - Lined Pits

**Would you like to utilize Lined Pit PWD options?** NO

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Lined pit PWD on or off channel:**

**Lined pit PWD discharge volume (bbl/day):**

**Lined pit specifications:**

**Pit liner description:**

**Pit liner manufacturers information:**

**Precipitated solids disposal:**

**Decribe precipitated solids disposal:**

**Precipitated solids disposal permit:**

**Lined pit precipitated solids disposal schedule:**

**Lined pit precipitated solids disposal schedule attachment:**

**Lined pit reclamation description:**

**Lined pit reclamation attachment:**

**Leak detection system description:**

**Leak detection system attachment:**

**Lined pit Monitor description:**

**Lined pit Monitor attachment:**

**Lined pit: do you have a reclamation bond for the pit?**

**Is the reclamation bond a rider under the BLM bond?**

**Lined pit bond number:**

**Lined pit bond amount:**