

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

(Other Institutions on
Reverse)
811 S. 1ST ST.
ARTESIA, NM 88201

5. LEASE DESIGNATION AND SERIAL NO.
NM-14840

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL
WELL ☒

Gas
Well ☐

OTHER

SINGLE
ZONE ☐

ARTESIAL ☒

2. NAME OF OPERATOR

Mack Energy Corporation

3. ADDRESS AND TELEPHONE NO.

P.O. Box 960, Artesia, NM 88211-0960

(505) 748-1288

4. LOCATION OF WELL (Report location clearly and in accordance with any state requirements.)
At surface

2310 FSL 990 FEL

At proposed prod. zone

Unit I
2310 FSL 990 FEL

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

6.25 miles West of Loco Hills

15. DISTANCE FROM PROPOSED*
LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any)

330

16. NO. OF ACRES IN LEASE

40

17. NO OF ACRES IN LEASE
TO THIS WELL

40

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED
OR APPLIED FOR, ON THIS LEASE, FT.

660

19. PROPOSED DEPTH

5800

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

3582 GR

22. APPROX. DATE WORK WILL START*

01/02/99

23.

PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE | GRADE, SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT |
|--------------|-----------------------|-----------------|---------------|--------------------|
| 17 1/2 | K-55, 13 3/8 | 48 | 325 | Circ |
| 12 1/4 | K-55, 8 5/8 | 24 | 800 | Circ |
| 7 7/8 | J-55, 5 1/2 | 17 | 5800 | Suff to Circ |

Mack Energy proposes to drill to a depth sufficient to test the Paddock and San Andres formation for oil. If productive, 5 1/2" casing will be cemented. If non-productive, the well will be plugged and abandoned in a manor consistent with federal regulation. Specific programs as per Onshore Oil and Gas Order #1 are outlined in the following attachments:

1. Surveys

Exhibit #1- Well Location Plat
Exhibit #2- Vicinity Map
Exhibit #3- Location Verification Map

4. Certification

5. Hydrogen Sulfide Drilling Operation Plan

Exhibit #7- H2S Warning Sign
Exhibit #8- H2S Safety Equipment

7. Responsibility Statement

2. Drilling Program

3. Surface Use & Operating Plan

Exhibit #4- One Mile Radius Map
Exhibit #5- Production Facilities Layout
Exhibit #6- Location Layout

6. Blowout Preventers

Exhibit #9- BOPE Schematic
Exhibit #10- Blowout Preventer Requirements
Exhibit #11- Choke Manifold

Post FD-1
12-31-98
API & Loco

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

Matt J. Brower

TITLE

Geological Engineer

DATE

11/18/98

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

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:

Acting

Assistant Field Office Manager,
Lands and Minerals

APPROVED BY

(ORIG. SGD.) ARMANDO A. LOPEZ

TITLE

DATE

*See Instructions On Reverse Side

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

OIL CONSERVATION DIVISION
P.O. Box 2088

Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | | |
|---------------|-------------------------|-----------|------------------|
| API Number | | Pool Code | Pool Name |
| | | 96610 | East Empire Yeso |
| Property Code | Property Name | | Well Number |
| 023468 | BLUE STREAK FEDERAL | | k 2 |
| OGRID No. | Operator Name | | Elevation |
| 013837 | MACK ENERGY CORPORATION | | 3582' |

Surface Location

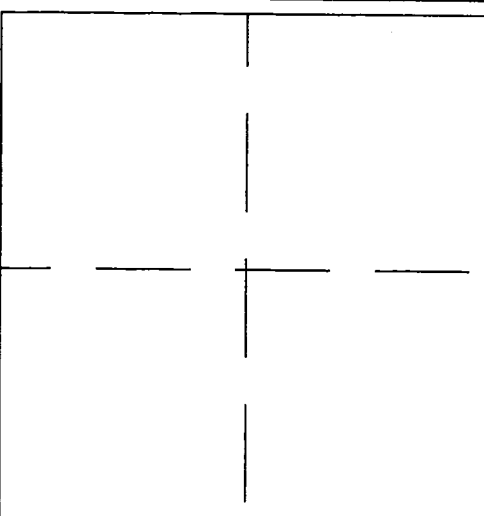
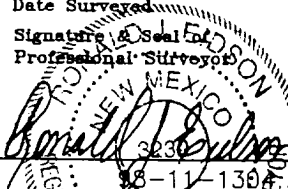
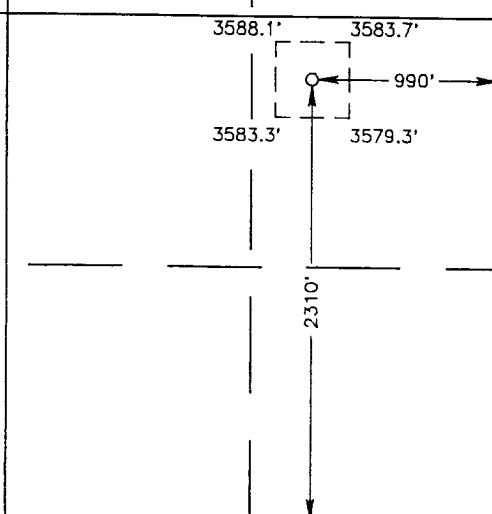
| | | | | | | | | | |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
| 1 | 29 | 17 S | 29 E | | 2310 | SOUTH | 990 | EAST | EDDY |

Bottom Hole Location If Different From Surface

[illegible]

| | | | |
|-----------------|-----------------|--------------------|-----------|
| Dedicated Acres | Joint or Infill | Consolidation Code | 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

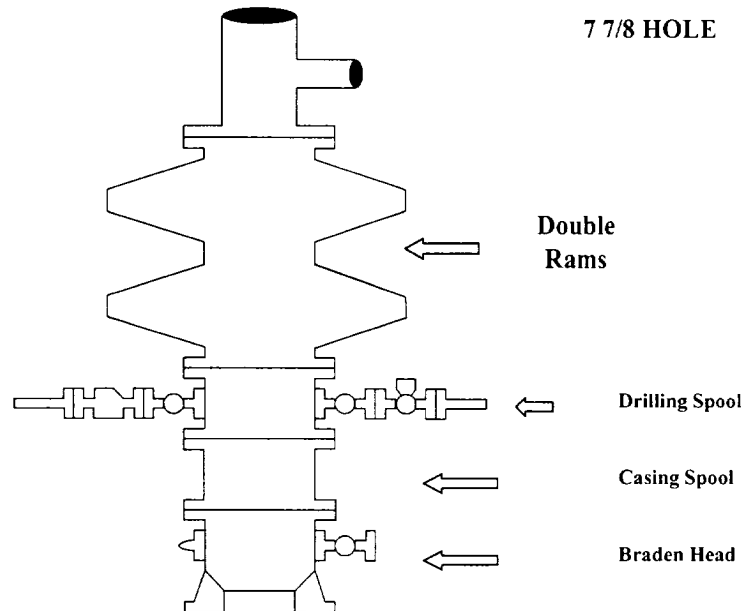
| | |
|--|---|
|  | <div style="border: 1px solid black; padding: 10px; margin-bottom: 10px;"> <p style="text-align: center;">OPERATOR CERTIFICATION</p> <p><i>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</i></p> <p style="text-align: right;"><u><i>Matt J. Brewer</i></u> Signature</p> <p><u>Matt J. Brewer</u> Printed Name</p> <p><u>Geological Engineer</u> Title</p> <p><u>11-10-98</u> Date</p> </div> <div style="border: 1px solid black; padding: 10px;"> <p style="text-align: center;">SURVEYOR CERTIFICATION</p> <p><i>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.</i></p> <p style="text-align: right;">OCTOBER 1, 1998</p> <p>Date Surveyed _____ CDG</p> <p>Signature & Seal of Professional Surveyor _____</p> <div style="text-align: center;">  </div> <p>Certificate No. RONALD D. EDSON 3239 GARY EDSON 12641</p> </div> |
|  | |

Attachment to Exhibit #9
NOTES REGARDING THE BLOWOUT PREVENTERS
Blue Streak Federal #2
Eddy County, New Mexico

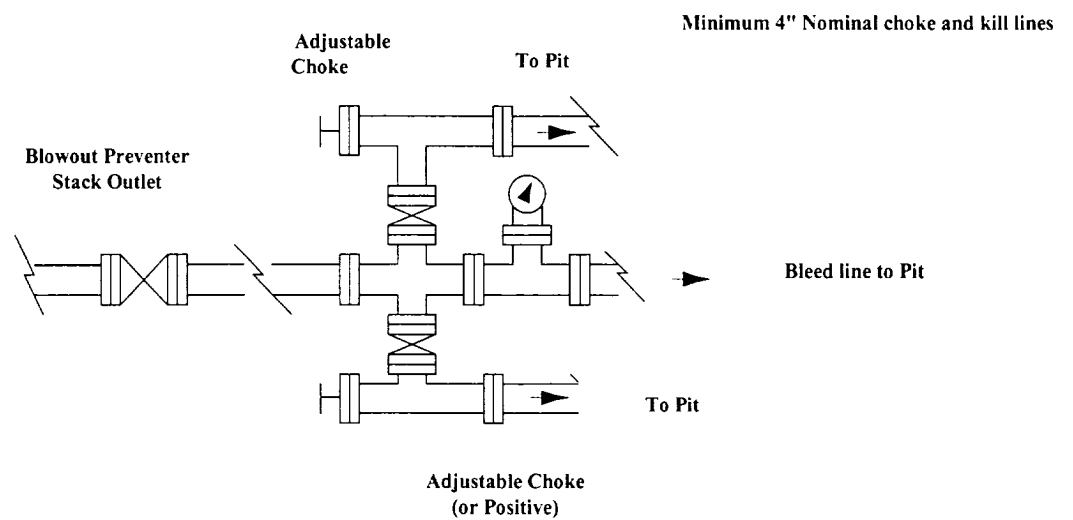
1. Drilling nipple to be so constructed that it can be removed without use of a welder through rotary table opening, with minimum I.D. equal to preventer bore.
2. Wear ring to be properly installed in head.
3. Blow out preventer and all fittings must be in good condition, 2000 psi WP minimum.
4. All 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

Exhibit #9 BOPE Schematic



Choke Manifold Requirement (2000 psi WP)
No Annular Required



Mack Energy Corporation.
Minimum Blowout Preventer Requirements
2000 psi Working Pressure
2 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 FURNISH:

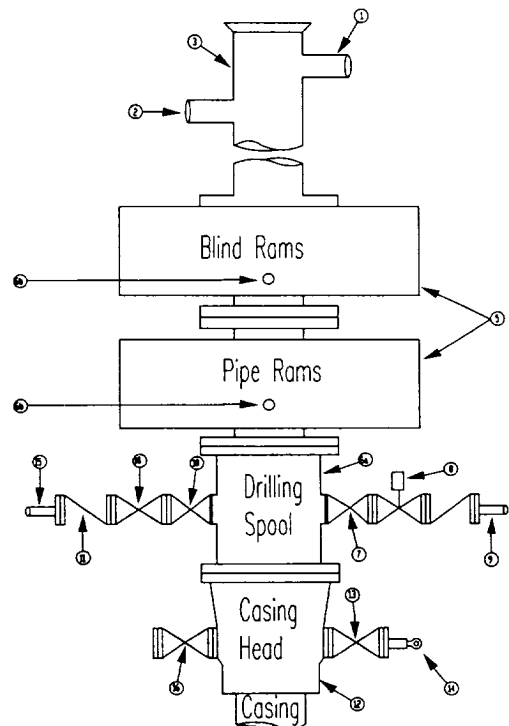
1. All equipment and connections above bradenhead or casinghead. Working pressure of preventers to be 2000 psi minimum.
2. Automatic accumulator (80 gallon, minimum) capable of closing BOP in 30 seconds or less and, holding them closed against full rated working pressure.
3. BOP controls, to be located 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:

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. Do not use kill line for routine fill up operations.

Mack Energy Corporation

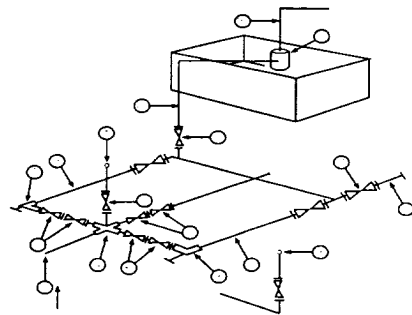
Exhibit #11

MINIMUM CHOKE MANIFOLD

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

2 M will be used or greater

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 | | | |
| 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 quage | | | 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

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. Choke manifold pressure and standpipe pressure gauges shall be available at the choke manifold to assist in regulating chokes. As an 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 be as straight as possible. Lines downstream from chokes shall make turns by large bends or 90 degree bends using bull plugged tees.