Form 3160-3
(December 1990)

SUBMIT IN TRIPLICATE* (Other Instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires: December 31, 1991

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N. M. Oil Cons. Division
811 S. 1ST ST.
ARTESIA, NM 88210-2834

5. LEASE DESIGNATION AND SERIAL NO.: LC-055259

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WORK: DRILL ☒ DEEPEN ☐

7. UNIT AGREEMENT NAME:

b. TYPE OF WELL: OIL WELL ☒ Gas Well ☐ OTHER — SINGLE ZONE ☐ MULTIPLE ZONE ☐

8. FARM OR LEASE NAME, WELL NO. 24553: Mohawk Federal #1

2. NAME OF OPERATOR: Mack Energy Corporation 13837

9. API WELL NO.: 30-015-30630

3. ADDRESS AND TELEPHONE NO.: P.O. Box 960, Artesia, NM 88211-0960 (505) 748-1288

10. FIELD AND POOL, OR WILDCAT: Loco Hills Paddock

4. LOCATION OF WELL (Report location clearly and in accordance with any state requirement.*)
At surface: 990 FSL & 330 FWL
At proposed prod. zone: 990 FSL & 330 FWL Unit M

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec 14 T17S R30E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 1 mile east of Loco Hills

12. COUNTY OR PARISH: Eddy — 13. STATE: NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO OF ACRES IN LEASE TO THIS WELL
330	40	40
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
660	5800	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): GR-3689

22. APPROX. DATE WORK WILL START*: 5/10/99

23. PROPOSED CASING AND CEMENTING PROGRAM — NATIONAL CONTROLLED WATER BASIN

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2	K-55,13 3/8	48	450	Circ WITNESS
12 1/4	K-55, 8 5/8	24	1200	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
2. Drilling Program
3. Surface Use & Operating Plan
   - Exhibit #4- One Mile Radius Map
   - Exhibit #5- Production Facilities Layout
   - Exhibit #6- Location Layout
4. Certification
5. Hydrogen Sulfide Drilling Operation Plan
   - Exhibit #7- H2S Warning Sign
   - Exhibit #8- H2S Safety Equipment
6. Blowout Preventers
   - Exhibit #9- BOPE Schematic
   - Exhibit #10- Blowout Preventer Requirements
   - Exhibit #11- Choke Manifold
7. Responsibility Statement

RECEIVED APR 1999 OCD - ARTESIA

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. Brewer TITLE Geological Engineer DATE 02/26/1999

(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
APPROVED BY /s/ Gary A. Stephens TITLE Assistant Field Office Manager, Lands and Minerals DATE APR 12 1999

Post ED-1 4-16-99 APD Exp

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes 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.

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

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

State of New Mexico
Energy, Minerals and Natural Resources Departm.

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

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
	96718	Loco Hills Paddock

Property Code	Property Name	Well Number
	MOHAWK FEDERAL	1

OGRID No.	Operator Name	Elevation
013837	MACK ENERGY CORP.	3689

Surface Location

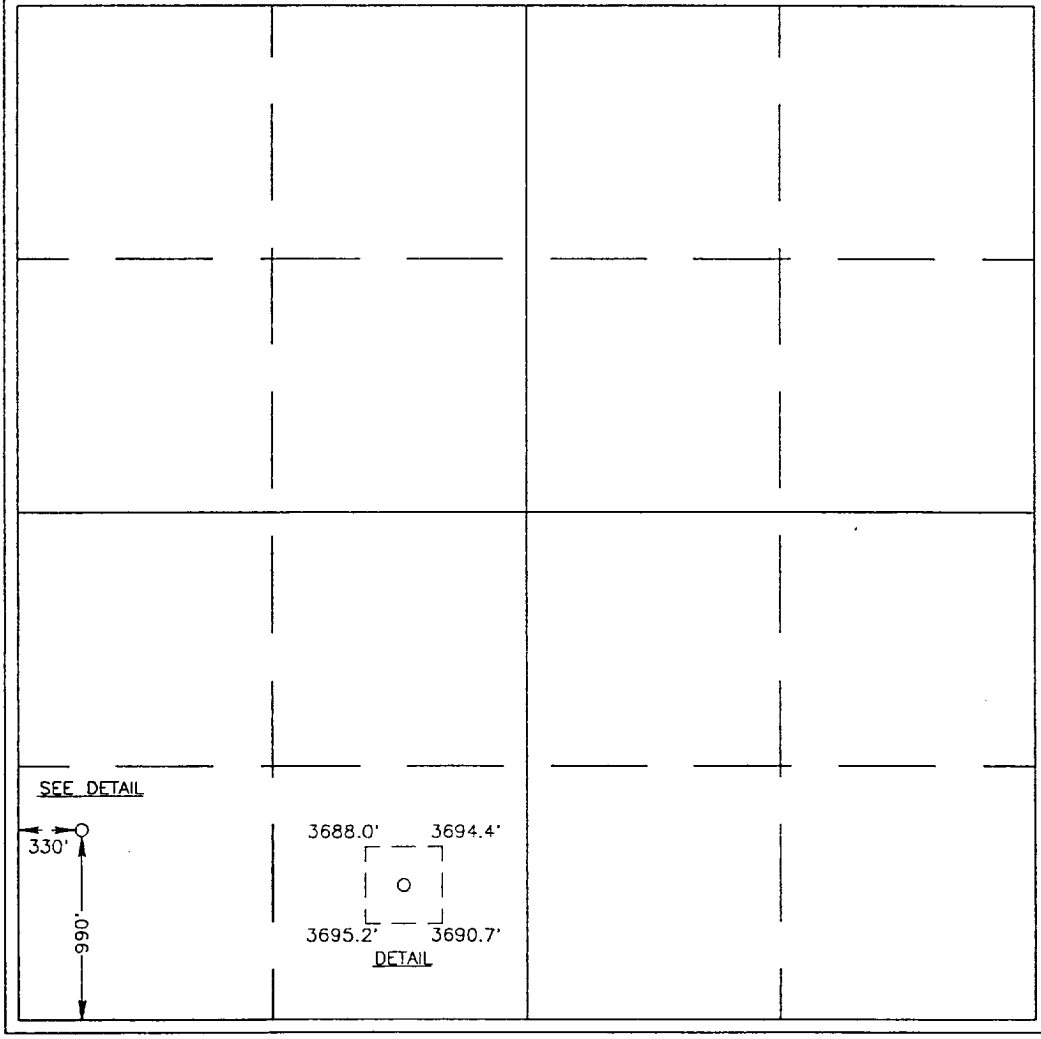
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	14	17 S	30 E		990	SOUTH	330	WEST	EDDY

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

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



OPERATOR CERTIFICATION

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

Matt J. Brewer
Signature

Matt J. Brewer
Printed Name

Geological Engineer
Title

2/24/99
Date

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 supervison, and that the same is true and correct to the best of my belief.

FEBRUARY 12, 1999
Date Surveyed DMCC

Signature & Seal of Professional Surveyor

GARY L. EIDSON
NEW MEXICO
REGISTERED PROFESSIONAL SURVEYOR

2/16/99

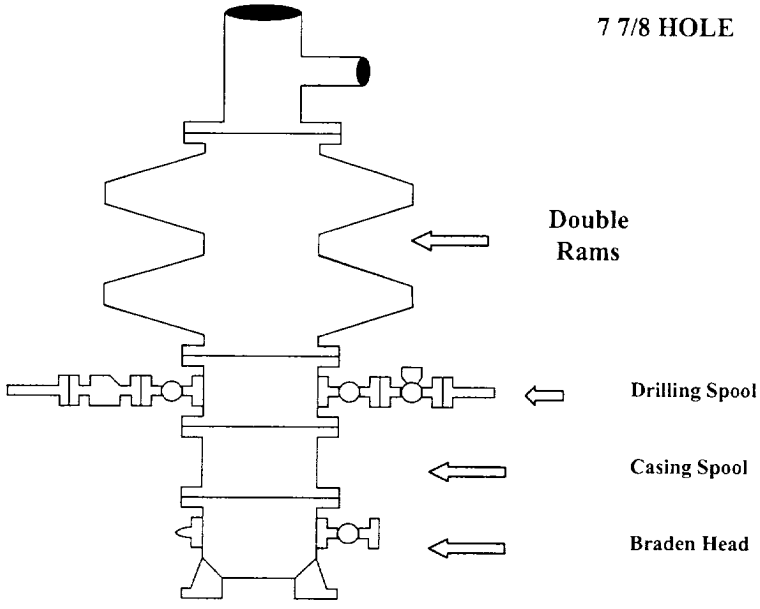
99-11-0108

Certificate No. RONALD J. EIDSON 3239
GARY L. EIDSON 12641
JACKIE D. McDONALD 12185

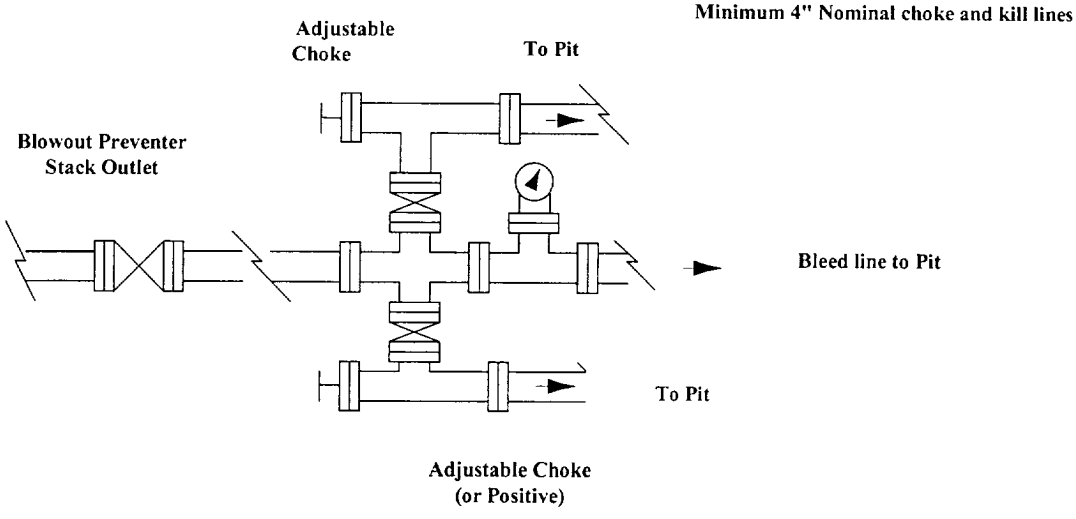
Mack Energy Corporation

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

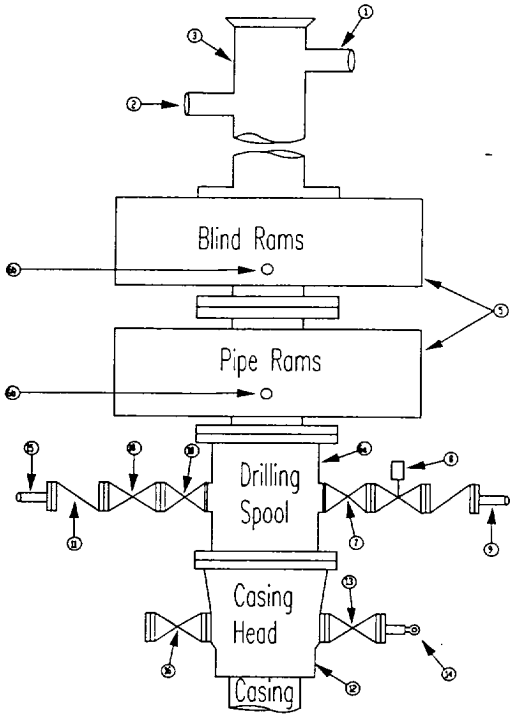
EXHIBIT #10

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:

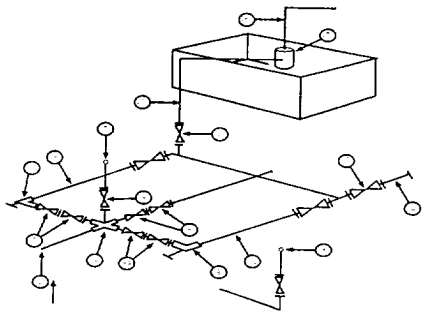
1. Bradenhead or casing head and side valves.
2. Wear bushing. If required.

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 Corpora 1

Exhibit #11
MIMIMUM 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

Mimimum requirements

		3,000 MWP			5,000 MWP			10,000 MWP		
No.		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' x5'			2' x5'			2' x5'	
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 bee as straight as possible. Lines downstream from chokes shall make turns by large bends or 90 degree bends using bull plugged tees.

Seven Rivers/BGA

Yeso/Tubb	206	Grayburg	2622
Salado	415	San Andres	2965
Rx	1139	Lovington Sand	3062
Lyates	1295	Glorieta	4425
7 Rivers	1605		
Penrose	1955		
Queen	2223		