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Form 3160 -3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No: NMLC-029406B

6. If Indian, Allotee or Tribe Name:

7 If Unit or CA Agreement, Name and No:

1a Typeofwork-- ☒ DRILL ☐ REENTER

1b Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

8. Lease Name and Well No: Pintail Federal #2 <37844>

2 Name of Operator: Mack Energy Corporation <13837>

9 API Well No: 30-025-40577

3a. Address: P.O. Box 960 Artesia, NM 88211-0960

3b PhoneNo *(include area code)*: (575)748-1288

10 Field and Pool, or Exploratory: Maljamar; Grayburg-San Andres <43329>

4 Location of Well *(Report location clearly and maccorounce with any State requirements*)*

At surface: 330 FSL & 2110 FWL

At proposed prod zone:

11 Sec , T R M or Blk and Survey or Area: Sec. 8 T17S R32E

14 Distance in miles and direction from nearest town or post office*: 2 miles SW of Maljamar, NM

12 County or Parish: Lea

13 State: NM

15 Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg unit line, if any): 330 ft

16 No. of acres in lease: 1606.80

17 Spacing Unit dedicated to this well: 40

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft: 1120

19 Proposed Depth: 5500'

20 BLM/BIA Bond No on file: NMB000286

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 4032' GR

22 Approximate date work will start*: 4/30/2012

23 Estimated duration: 15 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, shall 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 shall 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 authorized officer

25 Signature: Jerry W. Sherrell	Name *(Printed/Typed)*: Jerry W. Sherrell	Date: 3-29-2012
Title: Production Clerk		
Approved by *(Signature)*: /s/ Don Peterson	Name *(Printed/Typed)*	Date: MAY 10 2012
Title: FIELD MANAGER	Office: CARLSBAD FIELD OFFICE	

Application approval does not warrantor certify that the applicant holds lega orequitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon
Conditions of approval, if any, are attached

APPROVAL FOR TWO YEARS

Title 18 U S C Section 1001 and Tide 43 U S C Section 1212, make it a crime for any person knowirilly and willfully to make to any department or agency ofthe United States any false, fictitious or fraudulent statements or representations as to any matter within its juris iction

(Instructions on page 2)

Roswell Controlled Water Basin KK 05/18/12

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

MAY 21 2012

Attached to Form 3160-3
Mack Energy Corporation
Pintail Federal #2
330 FSL & 2110 FWL, SE/SW, Sec. 8 T17S R32E
Lea County, NM

DRILLING PROGRAM

1. Geologic Name of Surface Formation

Quaternary

2. Estimated Tops of Important Geologic Markers:

Rustler	829'		
TOS	937'	Queen	3108'
BOS	2134'	Grayburg	3534'
Yates	2154'	San Andres	3851'
Seven Rivers	2492'	Glorieta	5354'

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

Water Sand	150'	Fresh Water
Yates	2154'	Oil/Gas
San Andres	3851'	Oil/Gas
Glorieta	5354'	Oil/Gas

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Setting 8 5/8" casing to ~~900'~~ and circulating cement back to surface will protect the surface fresh water sand. Salt section and zones above producing interval will be protected by the 5 ½" production casing set 5400', 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
See COA 12 1/2"	0-~~900'~~ 855	8 5/8"	24#,J-55, ST&C, New, 3.11/5.58/5.90
7 7/8"	0-5400'	5 ½"	17#,L-80,LT&C, New, 2.24/2.68/2.58

5. Cement Program:

-8 5/8" Surface Casing: Lead 425sx, Class C + 4% PF20 + 2% PF46 + 2% PF1 + .125% PF130, yield 1.75, excess 100% ,Tail 200sx Class C 2% PF1 + .125% PF130, yield 1.33.
-5 ½" Production Casing: Lead 400sx 35/65 P/C + 5% PF44 + 6% PF20 + 2#/sx PF42 + 1.5% PF112 + .125#/sx PF130 + .25#/sx PF46 + .2% PF13, yield 2.19, excess 35%, Tail 400sx PVL + 2% PF167 + .2% PF65 + .2% PF13 + .25#/sx PF46, yield 1.38.

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 with annular. 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 surface 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 brine and cut brine mud system. The applicable depths and properties of this system are as follows:

DEPTH	TYPE	WEIGHT	VISCOSITY	WATERLOSS
0-~~900~~ 855'	Fresh Water	8.5	28	N.C.
~~900~~'-TD'	Brine	10	30	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: See COA

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 2,268 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 April 30, 2012. Once commenced, the drilling operation should be finished in approximately 15 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.

Attached to Form 3160-3
Mack Energy Corporation
Pintail Federal #2
330 FSL & 2110 FWL, SE/SW, Sec. 8 T17S R32E
Lea County, NM

Attachment to Exhibit #10
NOTES REGARDING THE BLOWOUT PREVENTERS
Pintail Federal #2
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.

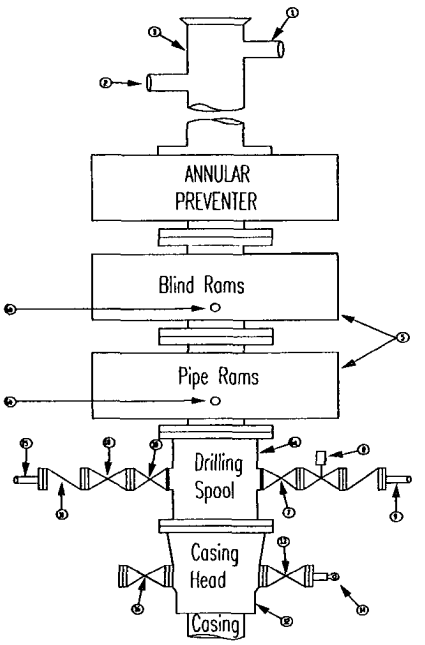
Mack Energy Corporation
Minimum Blowout Preventer Requirements
3000 psi Working Pressure
13 3/8 inch- 3 MWP
11 Inch - 3 MWP
EXHIBIT #10

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 10
CONTRACTOR'S OPTION TO FURNISH ME

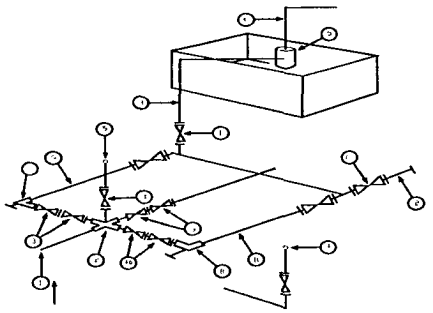
1. All equipment and connections above bradenhead or casinghead Working pressure of preventers to be 2000 psi minimum.
2. Automatic accumulator (80 gallons, minimum) capable of closing BOP in 30 seconds or less and, holding them closed against full rated working pressure
3 BOP controls, to be located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

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

		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

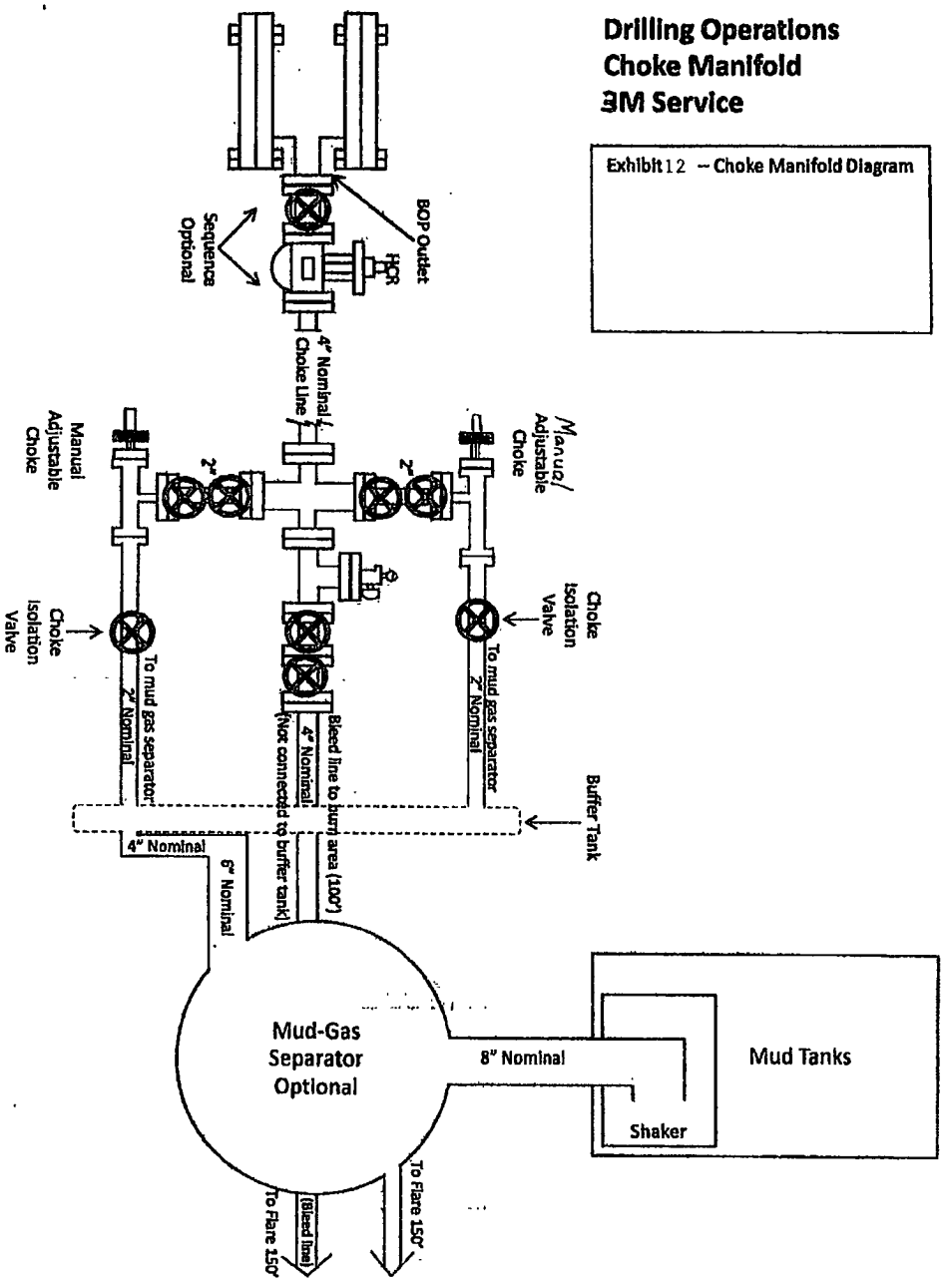
EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTION

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 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



DRILLING LOCATION H2S SAFTY EQUIPMENT
Exhibit # 8