District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-101
May 27,2004

Submit to appropriate District Office

☐ AMENDED REPORT

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

1 Operator Name and Address: Mack Energy Corporation, P.O. Box 960 Artesia, NM 88211-0960	2 OGRID Number: 013837	3 API Number: 30- 025-30509
3 Property Code: 35973	5 Property Name: Vacuum State	6 Well No.: 1
9 Proposed Pool 1: Midway;Upper Pennsylvanian West	Proposed Pool 2:	

7 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	22	17S	35E		1980	South	660	East	Lea

8 Proposed 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

Additional Well Information

11 Work Type Code	12 Well Type Code	13 Cable/Rotary	14 Lease Type Code	15 Ground Level Elevation
P	O		S	3931'
16 Multiple	17 Proposed Depth	18 Formation	19 Contractor	20 Spud Date
No	11,100	Pennsylvanian		8/24/2006

Depth to Groundwater 35' | Distance from nearest fresh water well 1000' | Distance from nearest surface water 1000'

Pit Liner: Synthetic ☒ 12 mils thick Clay ☐ Pit Volume: 300 bbls Drdling Method -

Closed-Loop System ☐ Fresh Water ☐ Brine ☒ Diesel/Oil-based ☐ Gas/Air ☐

21 Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17 1/2	13 3/8	48	400'	400sx	Circulated
11	8 5/8	32	5000'	2250sx	Circulated
7 7/8	5 1/2	17	4495-12,240'	1845sx	

22 Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

Mack Energy Corporation proposes to Perforate this well at a depth of +-11,100' and evaluate the Pennsylvanian formation, put well on production. Note: If non-productive, set CIBP and complete up-hole.

Permit Expires 1 Year From Approval Date Unless Drilling Underway

Plugback

Received Hobbs OCD

23 I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify that the drilling pit will be constructed according to NMOCD guidelines** ☒, **a general permit** ☐, **or an (attached) alternative OCD-approved plan.** ☐	OIL CONSERVATION DIVISION
Signature [signature]	Approved by: [signature]
Printed name: Jerry W. Sherrell	Title: OC FIELD REPRESENTATIVE II/STAFF MANAGER
Title: Production Clerk	Approval Date: SEP 2 1 2006 Expiration Date:
E-mail Address: jerrys@mackenergycorp.com	
Date: 9/15/06 Phone: (505)748-1288	Conditions of Approval Attached ☐

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
EnerRy, Minerals & Natural Resources

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe. NM 87505

Form C-102
Revised March 17, 1999

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

'API Number	' Pool Code	'Pool Name
30-025-30509	96580	Midway;Upper Pennsylvanian West

' Property Code	' Property Name	'Well Number
35973	Vacuum State	1

'OGRID No.	' Operator Name	' Elevation
013837	Mack Energy Corporation	3931'

HI Surface Location

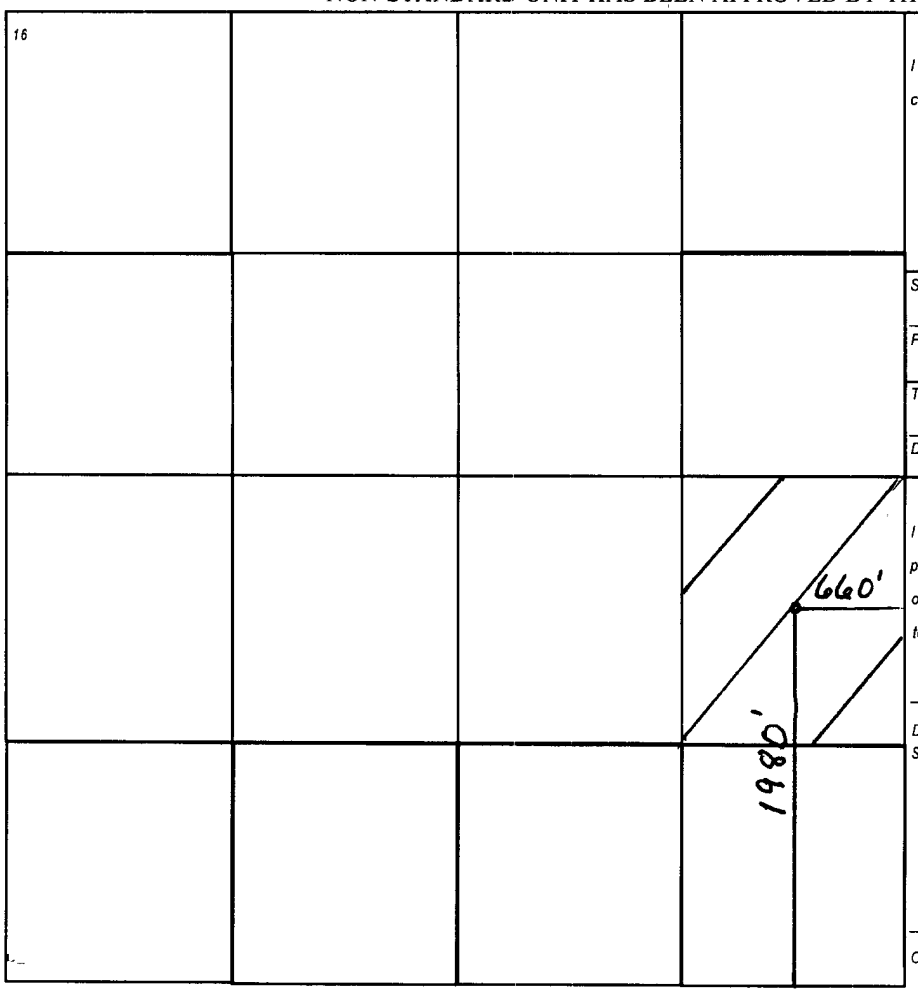
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	22	17S	35E		1980	South	660	East	Lea

" 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 XL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



" OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best ofiny knowledge and belief

Jerry W. Sherrell
Signature

Jerry W. Sherrell
Printed Name

Production Clerk
Title

9/15/06
Date

"SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes ofactuai surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

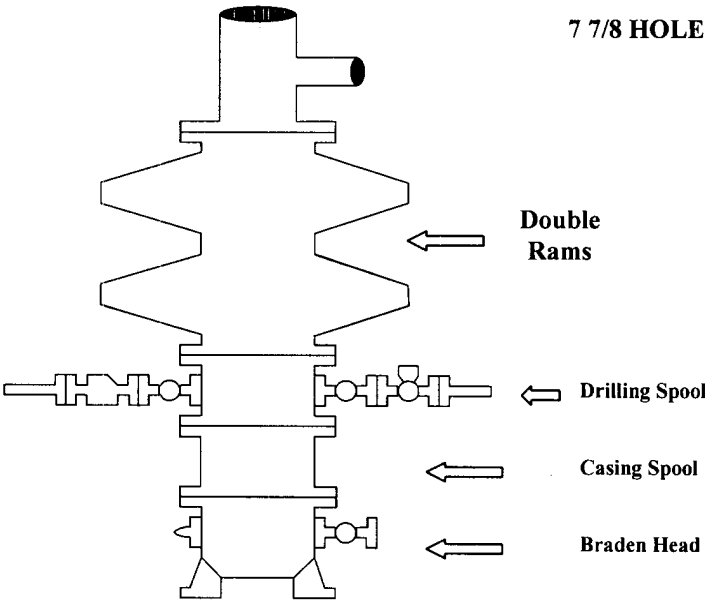
Date of Survey
Signature and Seaj of ProfessionalSurveyer.

Certificate Number

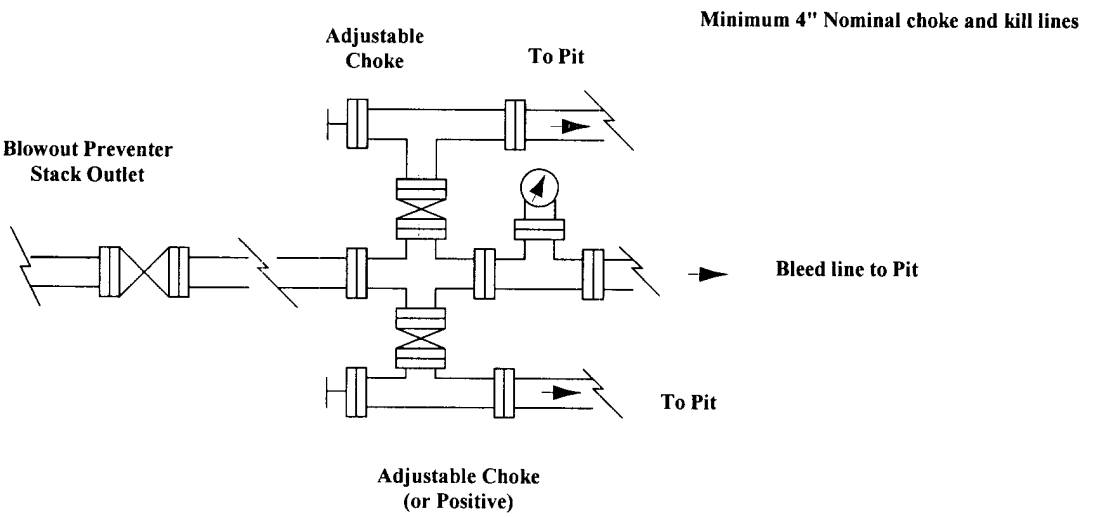
Mack Energy Corporation

Exhibit #1-A

BOPE Schematic

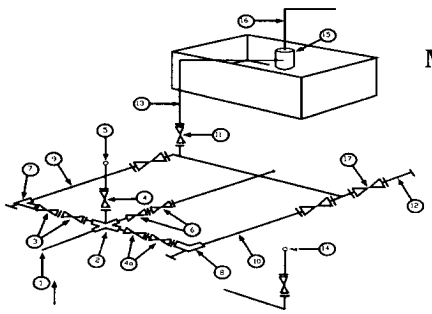


Choke Manifold Requirement (2000 psi WP)
No Annular Required



Mack Energy Corporation

Exhibit #1-A
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.

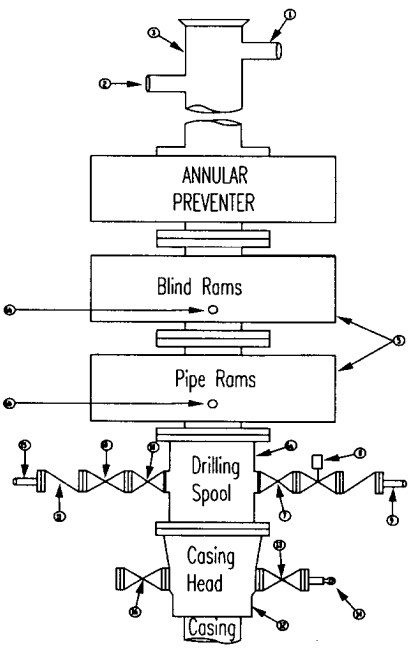
Mack Energy Corporation
Minimum Blowout Preventer Requirements
3000 psi Working Pressure
3 MWP
EXHIBIT #1-A

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 3000 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 (3000 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.