

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

Form C-101  
May 27, 2004

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

Submit to appropriate District Office

☐ AMENDED REPORT

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

Operator Name and Address Mack Energy Corporation P.O. Box 960 Artesia, NM 88211-0960		OGRID Number 013837 ✓
API Number 30-025-29288 ✓		
Property Code 36856	Property Name Mule SWD	Well No 1
Proposed Pool 1		Proposed Pool 2

7 Surface Location

UL or lot no M	Section 13	Township 18S	Range 34E	Lot Idn	Feet from the 660	North/South line South	Feet from the 660	East/West line West	County Lea ✓
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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
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Additional Well Information

Work Type Code E ✓	Well Type Code S	Cable/Rotary	Lease Type Code S	Ground Level Elevation 3982
Multiple No	Proposed Depth 11,200	Formation Wolfcamp	Contractor	Spud Date 12/27/07
Depth to Groundwater 85'		Distance from nearest fresh water well 1000'		Distance from nearest surface water 1000'
Pit Liner Synthetic <input type="checkbox"/> _____mils thick Clay <input type="checkbox"/> Pit Volume _____bbls Drilling Method - Closed-Loop System <input checked="" type="checkbox"/> Fresh Water <input type="checkbox"/> Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>				

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	54.5	350	350sx	Surface
12 1/4	8 5/8	24 & 32	3572	1700sx	Surface
7 7/8	5 1/2	17	11,200	2300sx	

2 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

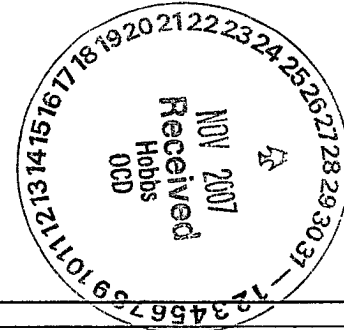
Describe the blowout prevention program, if any. Use additional sheets if necessary.

Mack Energy Corporation proposes to Re-enter this well to a depth of 11,200', perforate the wolfcamp formation and convert into a SWD well.

Note: Workover operations will be done without a pit.

Permit Expires 1 Year From Approval  
Date Unless Drilling Underway

Re-Entry



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 <input checked="" type="checkbox"/> a general permit <input type="checkbox"/> or an (attached) alternative OCD-approved plan. <input type="checkbox"/>		OIL CONSERVATION DIVISION	
Signature Jerry W. Sherrell		Approved by Garry W. Wink	
Printed name: Jerry W. Sherrell		Title: OCD FIELD REPRESENTATIVE / STAFF MANAGER	
Title: Production Clerk		Approval Date: DEC 04 2007	
E-mail Address: jerrys@mackenergycorp.com		Expiration Date	
Date: 11/27/07	Phone: (505)748-1288	Conditions of Approval Attached <input type="checkbox"/>	

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 30-025-29288		'Pool Code 96135		'Pool Name SWD; Wolfcamp	
'Property Code 36856		'Property Name Mule SWD			'Well Number 1
'OGRID No 013837		'Operator Name Mack Energy Corporation			'Elevation 3982

HI Surface Location

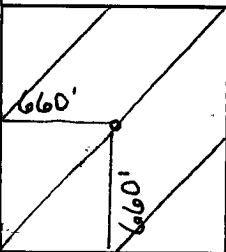
UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	13	18S	34E		660	South	660	West	Lea

" 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 40		" joint or Infill		" Consolidation Code		" Order No			

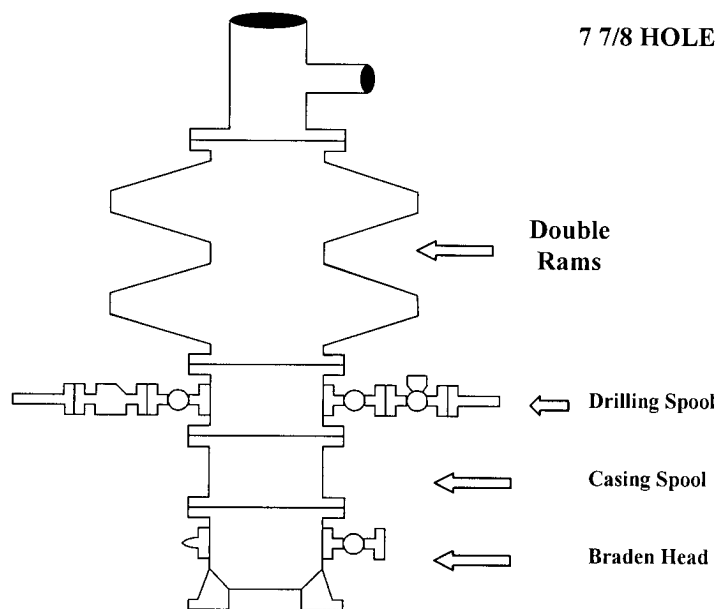
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL XL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16				<p><b>OPERATOR CERTIFICATION</b></p> <p><i>I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i></p> <p>Signature <u>Jerry W. Sherrell</u></p> <p>Printed Name <u>Jerry W. Sherrell</u></p> <p>Title <u>Production Clerk</u></p> <p>Date <u>11/27/07</u></p>
				<p><b>"SURVEYOR CERTIFICATION</b></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>Date of Survey _____</p> <p>Signature and Seal of Professional Surveyor _____</p> <p>Certificate Number _____</p>

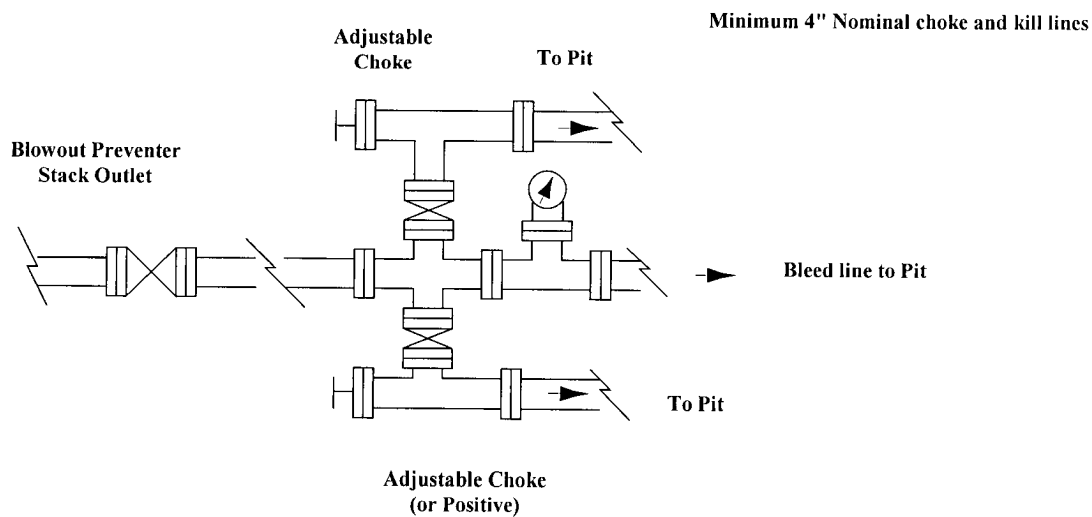


# Mack Energy Corporation

## Exhibit #1-A BOPE Schematic



**Choke Manifold Requirement (2000 psi WP)**  
**No Annular Required**



# Mack Energy Corporation

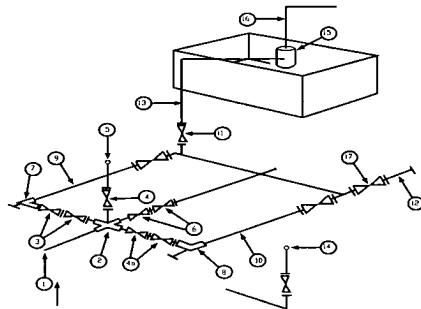
Exhibit #1-A

## 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' 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 be as straight as possible Lines downstream from chokes shall make turns by large bends or 90 degree bends using bull plugged tees

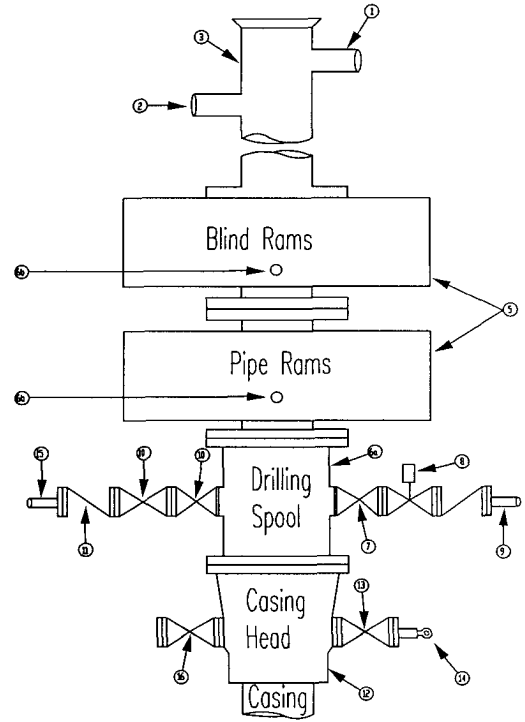
**Mack Energy Corporation**  
**Minimum Blowout Preventer Requirements**  
 2000 psi Working Pressure  
 2 MWP  
 EXHIBIT #1-A

**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	
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**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 handwheels 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.