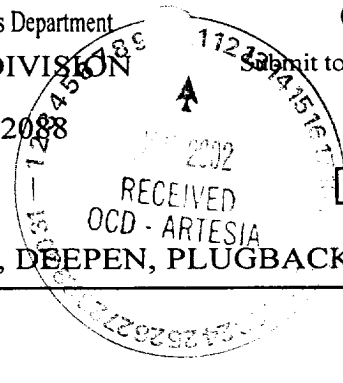


District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
811 S. 1st Street Artesia, NM 88210-1404  
District III  
1000 Rio Brazos Rd, Aztec, NM 87410  
District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
PO Box 2088  
Santa Fe, NM 87504-2088

Form C-101  
Revised February 10, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 6 Copies  
Fee Lease - 5 Copies



☐ 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 30-015-32159
Property Code 23810	Property Name Mesquite State	Well No. 12

**Surface Location**

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	20	17S	29E		910	South	2310	West	Eddy

**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
Proposed Pool 1 East Empire Yeso, 96610					Proposed Pool 2				

Work Type Code	Well Type Code	Cable/Rotary	Lease Type Code	Ground Level Elevation
N	O	R	S	3617'
Multiple	Proposed Depth	Formation	Contractor	Spud Date
No	4350'	Yeso	LaRue	1/31/02

**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	350'	Circ	Surface
12 1/4	8 5/8	24	800'	Sufficient to Circ	Surface
7 7/8	5 1/2	17	4350'	Sufficient to Circ	Surface

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 drill to 350', run 13 3/8" casing and cement. Drill to 800', run 8 5/8" casing and cement. Drill to 4350" and test Paddock Zone, run 5 1/2" casing and cement. Put well on production.

Note: On Production string, a fluid caliber will be run, will figure cement, with 25% excess, attempt to circulate.

I hereby certify that the information given above is true and complete to the best of my knowledge and belief  
Signature *Crissa D. Carter*

Printed name: Crissa D. Carter

Title: Production Analyst

Date: 1/9/02 Phone: (505)748-1288

OIL CONSERVATION DIVISION	
Approval by: <i>BW</i>	<b>ORIGINAL SIGNED BY TIM W. GUM</b>
Title:	<b>DISTRICT II SUPERVISOR</b>
Approval Date: <b>JAN 11 2002</b>	Expiration: <b>JAN 11 2003</b>
Conditions of Approval: Attached <input type="checkbox"/>	

[illegible]

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains.

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

State of New Mexico  
Energy, Minerals and Natural Resources Department

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

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 96610	Pool Name East Empire Yeso
Property Code 23810	Property Name MESQUITE STATE	Well Number 12
OGRID No. 013837	Operator Name MACK ENERGY CORP.	Elevation 3617

Surface Location

UL or lot No. N	Section 20	Township 17 S	Range 29 E	Lot Idn	Feet from the 910	North/South line SOUTH	Feet from the 2310	East/West line WEST	County EDDY
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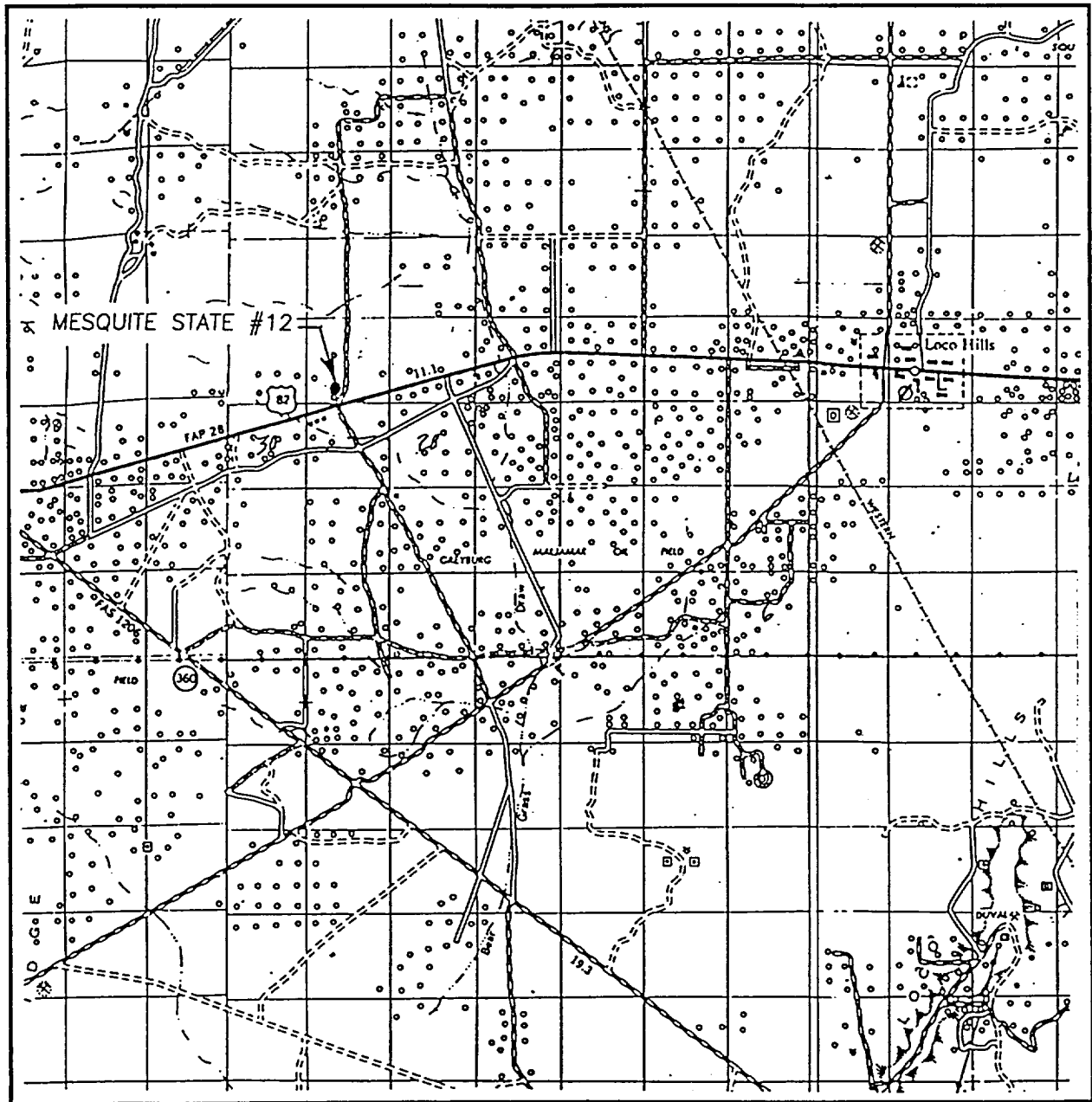
Bottom Hole Location If Different From Surface

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

	<b>OPERATOR CERTIFICATION</b> <i>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</i>  Signature Crissa D. Carter Printed Name Production Analyst Title 1/9/2002 Date	
	<b>SURVEYOR CERTIFICATION</b> <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> DECEMBER 26, 2001 Date Surveyed LMP Signature & Seal of Professional Surveyor  01-11-1333 Certificate No. RONALD J. EIDSON 3239 GARY EIDSON 12641	

# VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 20 TWP. 17-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 910' FSL & 2310' FWL

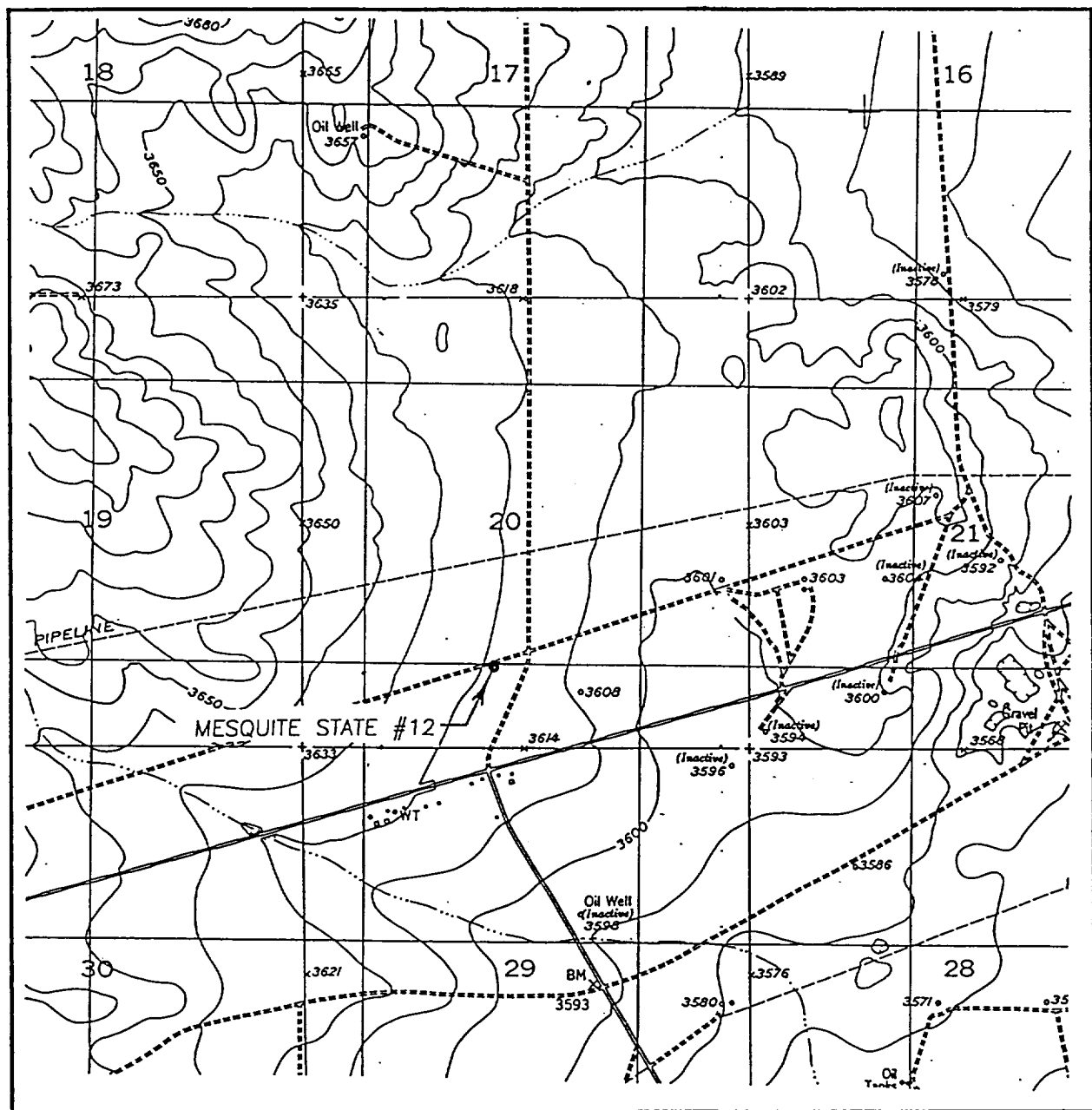
ELEVATION 3617

OPERATOR MACK ENERGY CORP.

LEASE MESQUITE STATE

JOHN WEST SURVEYING  
HOBBS, NEW MEXICO  
(505) 393-3117

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:  
RED LAKE SE, N.M. - 10'

SEC. 20 TWP. 17-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 910' FSL & 2310' FWL

ELEVATION 3617

OPERATOR MACK ENERGY CORP.

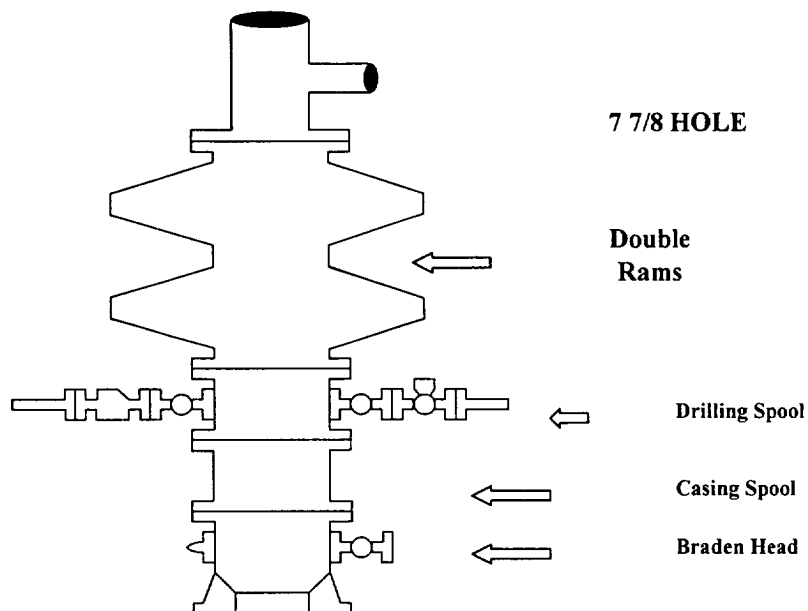
LEASE MESQUITE STATE

U.S.G.S. TOPOGRAPHIC MAP  
RED LAKE SE, N.M.

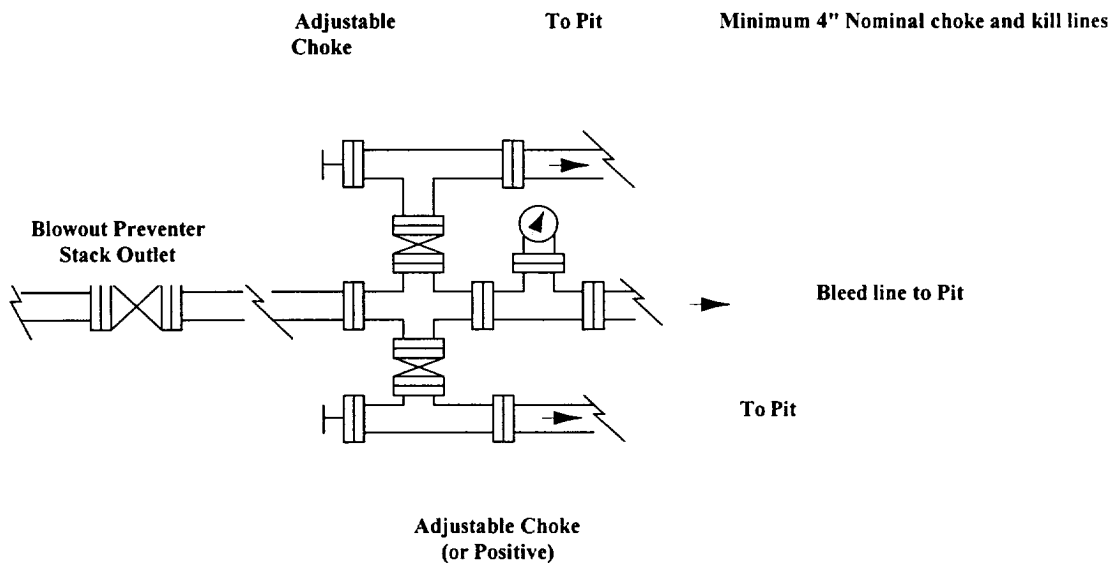
JOHN WEST SURVEYING  
HOBBS, NEW MEXICO  
(505) 393-3117

# Mack Energy Corporation

## Exhibit #1 BOPE Schematic



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



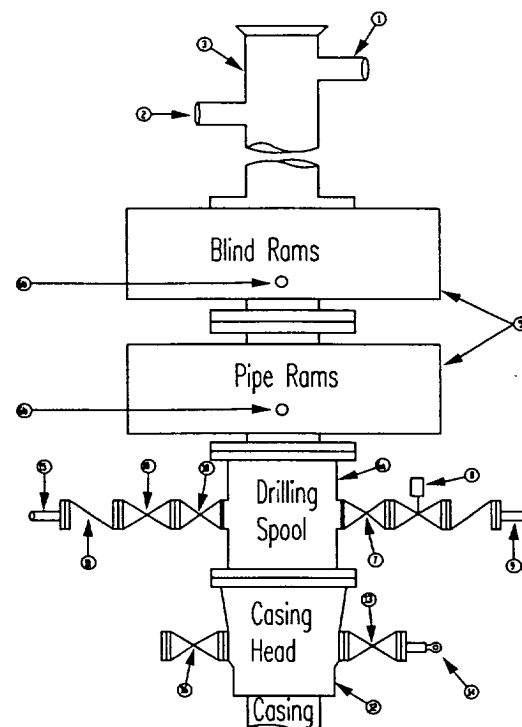
**Mack Energy Corporation**  
**Minimum Blowout Preventer Requirements**  
**2000 psi Working Pressure**  
**2 MWP**  
**EXHIBIT #2**

**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

5. sizes, retainers, and choke wrenches to be conveniently located for immediate use.
6. All valves to be equipped with hand-wheels or handles ready for immediate use.
7. Choke lines must be suitably anchored.
8. Handwheels and extensions to be connected and ready for use.
9. Valves adjacent to drilling spool to be kept open. Use outside valves except for emergency.
10. All seamless steel control piping (2000 psi working pressure) to have flexible joints to avoid stress. Hoses will be permitted.
11. Casinghead connections shall not be used except in case of emergency.
12. Do not use kill line for routine fill up operations.

# Mack Energy Corporation..

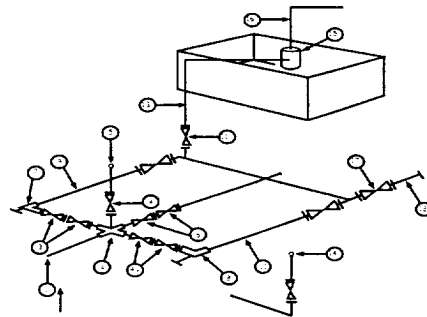
Exhibit #3

## 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.