

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

MAR 16 2009

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
Property Code 37657		API Number 30-005-64109
Property Name Runway SWD		Well No 1
Proposed Pool 1 SWD;Devonian		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
B	20	14S	29E		660	North	1980	East	Chaves

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

Work Type Code N	Well Type Code S	Cable/Rotary Rotary	Lease Type Code S	Ground Level Elevation 3764' GR
Multiple No	Proposed Depth 11,750	Formation Devonian	Contractor	Spud Date 4/15/09
Depth to Groundwater 65'		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		
Closed-Loop System <input checked="" type="checkbox"/>		Drilling Method - Fresh Water <input checked="" 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	48	350	400sx	Surface
12 1/4	8 5/8	32	1800	800sx	Surface
7 7/8	5 1/2	17	10,750'	2500sx	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 proposes to drill a 17 1/2 hole to 350', run 13 3/8 casing and cement. Drill a 12 1/4 hole to 1800', run 8 5/8 casing and cement. Drill a 7 7/8 hole to 10,750', run 5 1/2 casing and cement.

\* Permit to drill only. Must receive  
Admin-SWD Order from Santa Fe prior to  
injection.

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: Jacqui Keen	
Printed name: Jerry W. Sherrell		Title: Geologist	
Title: Production Clerk		Approval Date: 4/8/2009	
E-mail Address: jerrys@mackenergycorp.com		Expiration Date: 4/8/2011	
Date: 3/13/09	Phone: (575)748-1288	Conditions of Approval Attached <input checked="" type="checkbox"/> Noted above	

## DISTRICT I

1625 N. FRENCH DR., HOBBS, NM 88240

## State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

## DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 88210

## OIL CONSERVATION DIVISION

1220 SOUTH ST. FRANCIS DR.

Santa Fe, New Mexico 87505

## DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

## DISTRICT IV

1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code 96101	Pool Name SWD;Devonian
Property Code	Property Name RUNWAY SWD	Well Number 1
OGRID No. 013837	Operator Name MACK ENERGY CORPORATION	Elevation 3764'

## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	20	14-S	29-E		660	NORTH	1980	EAST	CHAVES

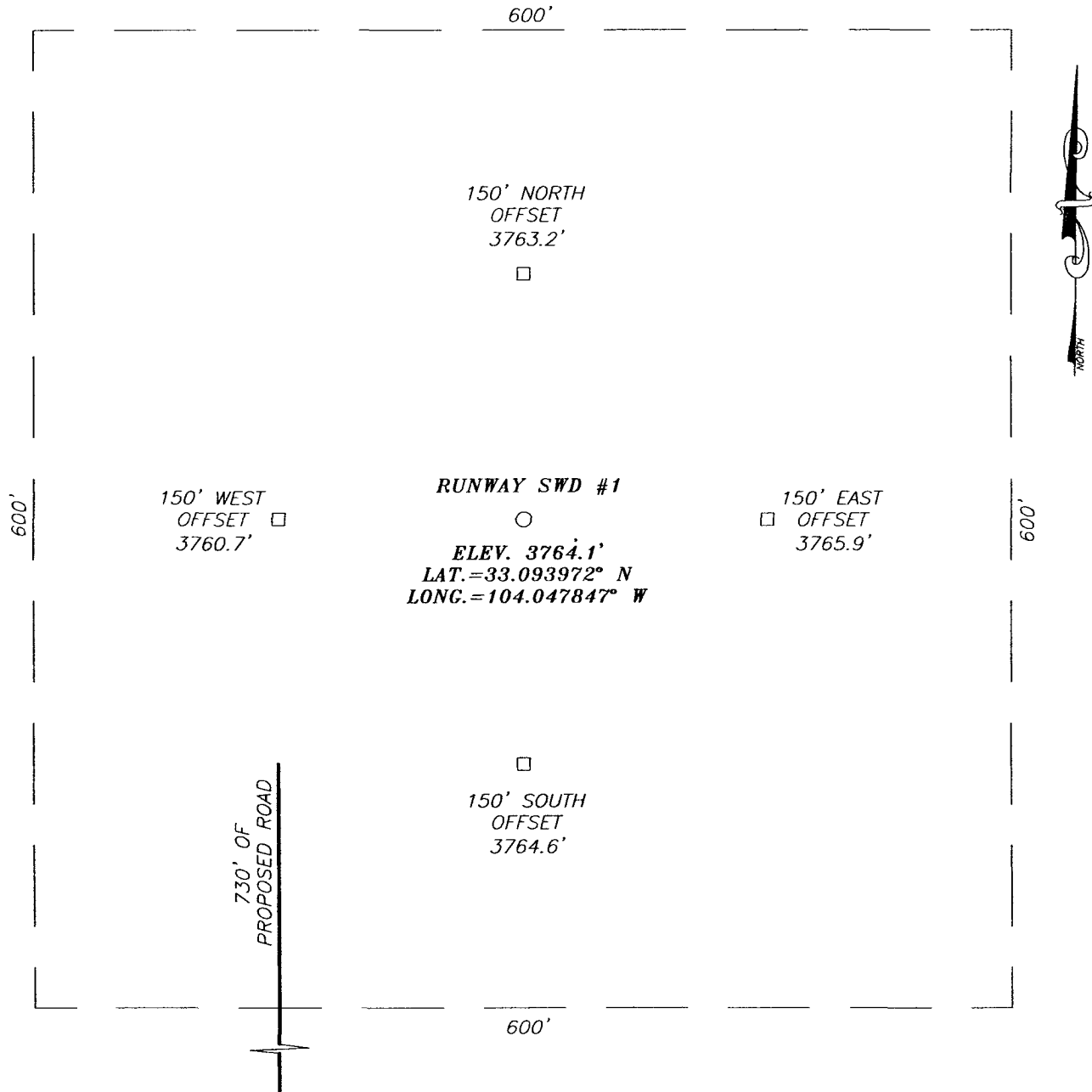
## Bottom Hole Location If Different From Surface

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

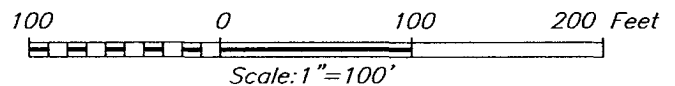
<p>GEODETIC COORDINATES NAD 27 NME</p> <p>Y=761820.5 N X=587432.7 E</p> <p>LAT.=33.093972° N LONG.=104.047847° W</p>	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns 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.</p> <p><i>Jerry W. Sherrell</i> 3/13/09 Signature Date</p> <p>Jerry W. Sherrell Printed Name</p>
	<p><b>SURVEYOR CERTIFICATION</b></p> <p>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.</p>
	<p>DATE SURVEYED: MARCH 4, 2009</p> <p>SIGNATURE &amp; SEAL OF PROFESSIONAL SURVEYOR: <i>Ronald J. Eidson</i></p>
	<p>Certificate No. RONALD EIDSON 3239</p>

SECTION 20, TOWNSHIP 14 SOUTH, RANGE 29 EAST, N.M.P.M.,  
CHAVES COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

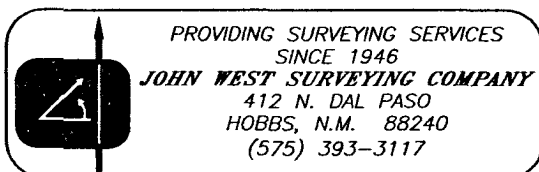
FROM THE INTERSECTION OF KATRINA ROAD AND  
TERESA ROAD GO NORTHWEST ON KATRINA ROAD  
APPROX. 1.5 MILES TO A PROPOSED ROAD  
SURVEY. FOLLOW ROAD SURVEY APPROX. 730  
FEET NORTH TO THIS WELL.



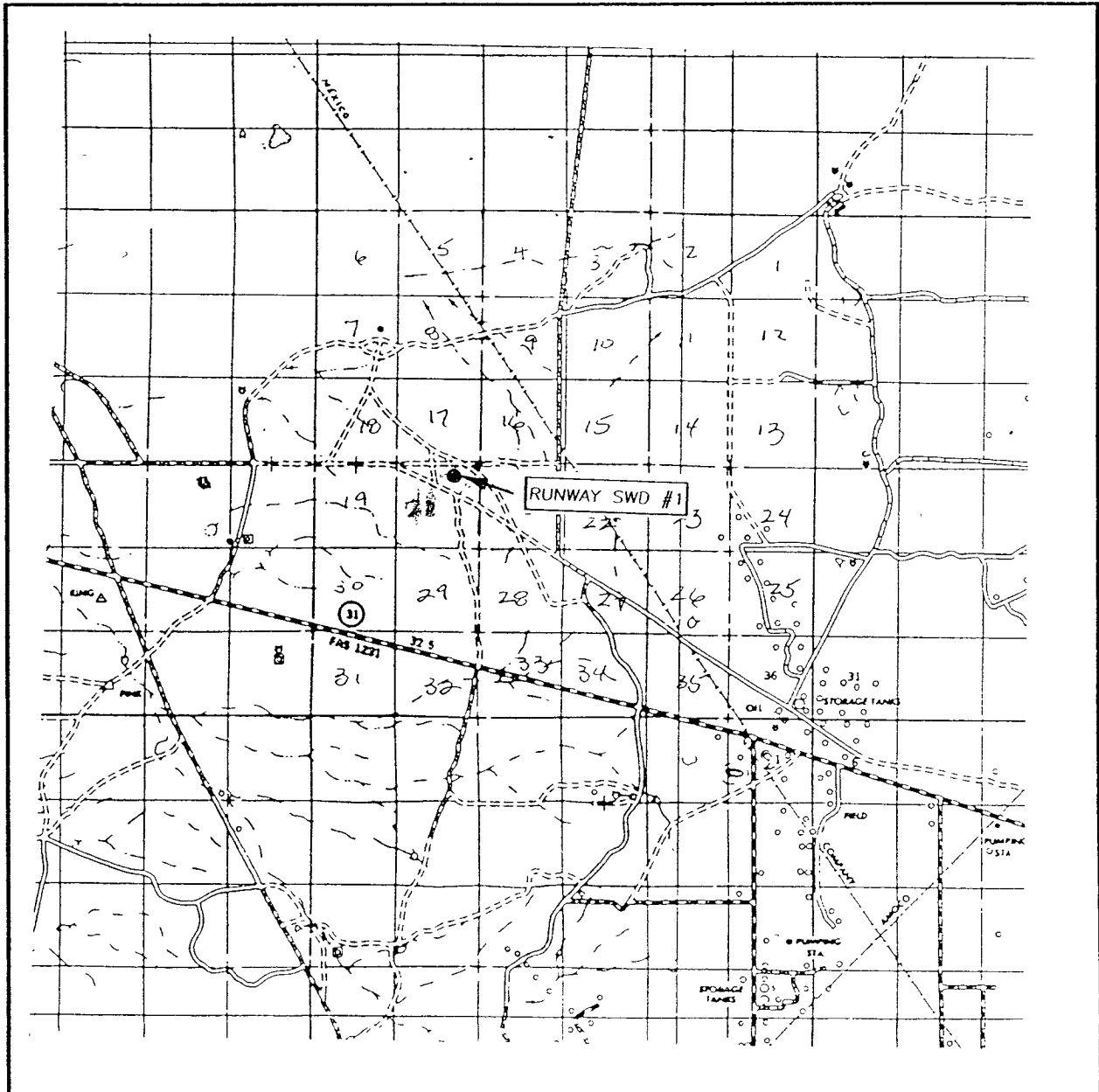
**MACK ENERGY CORPORATION**

RUNWAY SWD #1 WELL  
LOCATED 660 FEET FROM THE NORTH LINE  
AND 1980 FEET FROM THE EAST LINE OF SECTION 20,  
TOWNSHIP 14 SOUTH, RANGE 29 EAST, N.M.P.M.,  
CHAVES COUNTY, NEW MEXICO.

Survey Date: 3/4/09		Sheet 1 of 1 Sheets	
W.O. Number: 09.11.0202		Dr By: LA	Rev 1:N/A
Date: 3/11/09		09110202	Scale: 1"=100'



# VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 20 TWP. 14-S RGE. 29-E

SURVEY N.M.P.M.


COUNTY CHAVES STATE NEW MEXICO

DESCRIPTION 660' FNL & 1980' FEL

ELEVATION 3764'

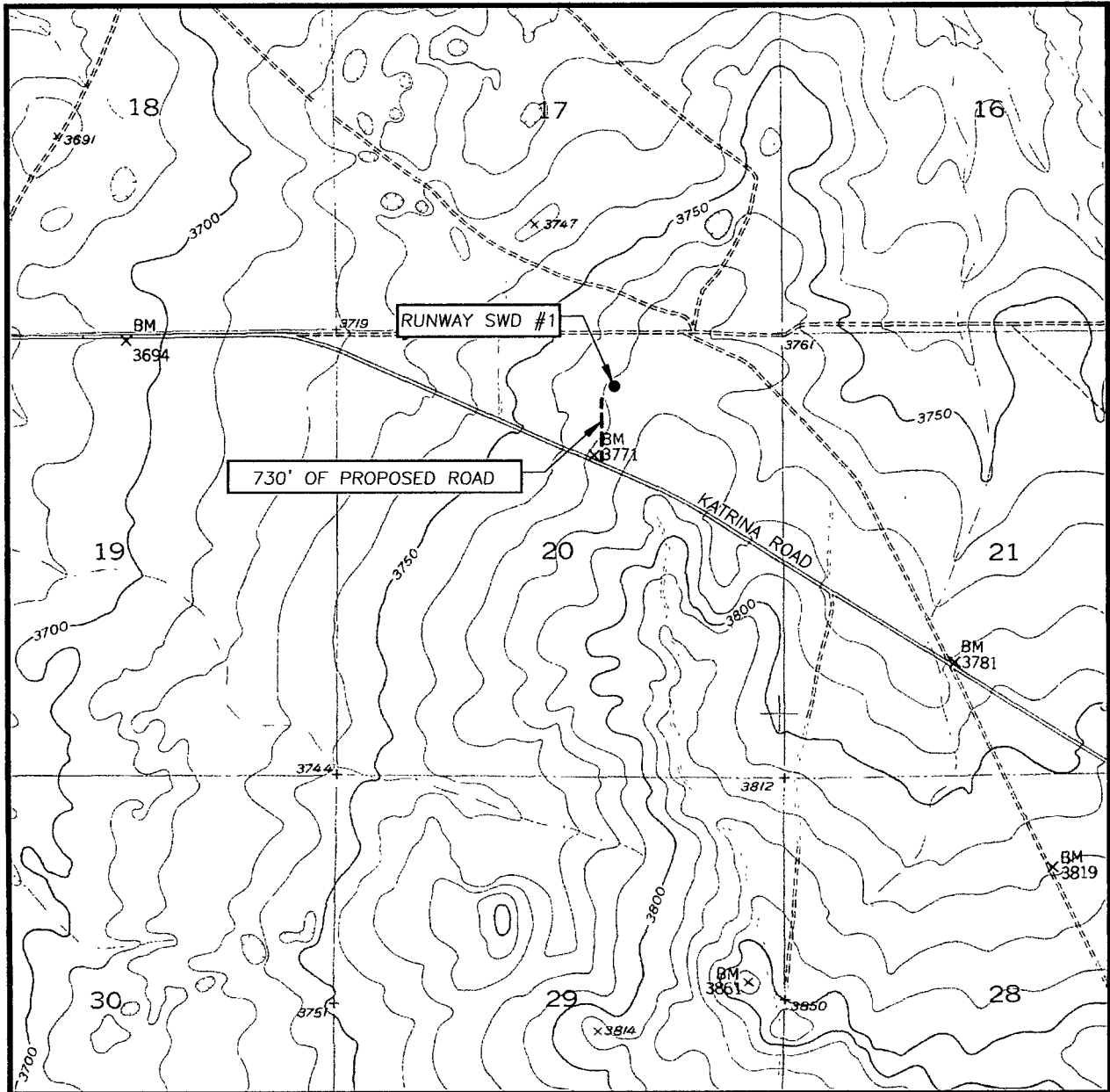
OPERATOR MACK ENERGY CORPORATION

LEASE RUNWAY SWD



PROVIDING SURVEYING SERVICES  
SINCE 1946  
**JOHN WEST SURVEYING COMPANY**  
412 N. DAL PASO  
HOBBS, N.M. 88240  
(575) 393-3117

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:  
KING CAMP, N.M. - 10'

SEC. 20 TWP. 14-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY CHAVES STATE NEW MEXICO

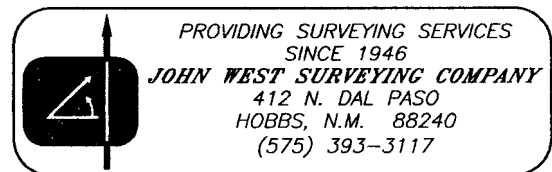
DESCRIPTION 660' FNL & 1980' FEL

ELEVATION 3764'

OPERATOR MACK ENERGY CORPORATION

LEASE RUNWAY SWD

U.S.G.S. TOPOGRAPHIC MAP  
KING CAMP, N.M.



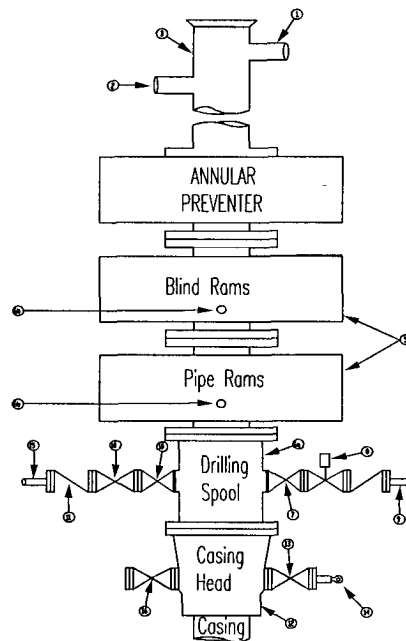
**Mack Energy Corporation**  
**Minimum Blowout Preventer Requirements**  
**3000 psi Working Pressure**  
**3 MWP**  
**EXHIBIT #1-A**

**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	
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**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:**

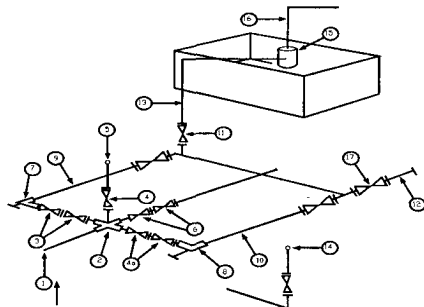
1. Deviations from this drawing may be made only with the express permission of MEC's Drilling Manager.
2. All connections, valves, fittings, piping, etc., subject to well or pump pressure must be flanged (suitable clamp connections acceptable) and have minimum working pressure equal to rated working 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 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 (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.

# Mack Energy Corporation

Exhibit #1-A

MINIMUM CHOKE MANIFOLD  
3,000, 5,000, and 10,000 PSI Working Pressure  
3 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.