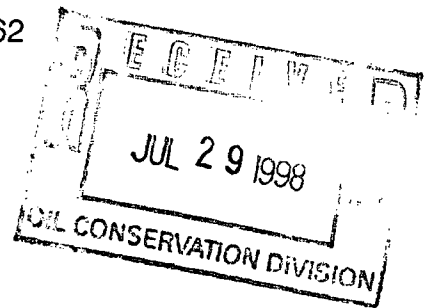


MACK ENERGY CORPORATION

NSL 8/18/98

Post Office Box 960
Artesia, New Mexico 88211-0960
(505) 748-1288 / FAX (505) 746-2362



July 23, 1998

Oil Conservation Division
Attn: Mike Stogner
2040 South Pacheco
Santa Fe, NM 87505

Dear Mr. Stogner:

Mack Energy Corporation respectfully requests an administrative approval without notice and hearing of the following unorthodox well location.

Because of our desire to drill this well in a timely manner, we also request your approval be expedited. The well location and legal description is as follows:

McIntyre A Federal #11
1615 FSL & 1065 FEL
Sec. 20, T17S, R30E
Eddy County, New Mexico

The well will be completed in the Paddock formation in the Loco Hills Paddock Pool.

Attached to this application are the following exhibits.

- A.) Well location and acreage dedication plat (form C-102) filed with the Artesia office of the Oil Conservation Division (Exhibit A).
- B.) A plat showing the proposed unorthodox locations, the respective proration units, and the offsetting proration units (Exhibit B).
- C.) A map showing the reason for the unorthodox location, the original location would have fallen to close to an existing trailer house. (Exhibit C).

Please note that Mack Energy Corporation is the operator of the offsetting proration units in which we are encroaching upon in the Paddock formation of the Loco Hills Paddock Pool, therefore no other operators are to be notified.

Oil Conservation Division

July 23, 1998

Page 2

Thank you for your assistance in this matter. If you have any questions, please feel free to call.

Sincerely,

MACK ENERGY CORPORATION

Matt J. Brewer

Matt J. Brewer

Geological Engineer

/mb

Enclosures

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 30-015-29903	Pool Code 96718	Pool Name Loco Hills Paddock	Well Number JUL 29 1998
Property Code 018384	Property Name McINTYRE A		Elevation 3633
GRID No. 013837	Operator Name MACK ENERGY CORPORATION		

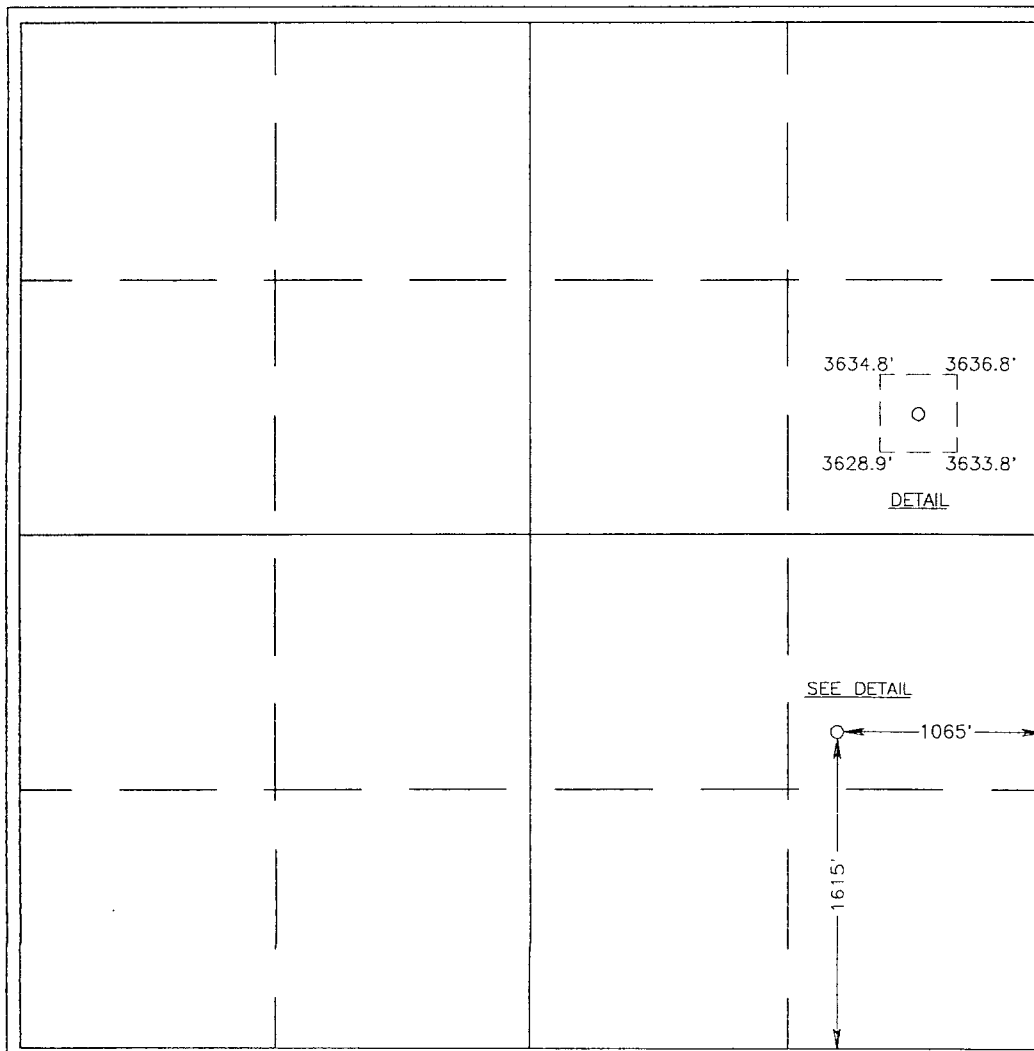
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	20	17 S	30 E		1615	SOUTH	1065	EAST	EDDY

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.						

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



OPERATOR CERTIFICATION

I hereby certify the the information
contained herein is true and complete to the
best of my knowledge and belief.

Matt J. Brewer
Signature

Matt J. Brewer
Printed Name

Geological Engineer
Title

7/23/98
Date

SURVEYOR CERTIFICATION

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.

JULY 10, 1998

Date Surveyed _____ DMCC

Signature _____
Professional Surveyor

Ronald E. Nelson
7-20-98
88-11-101
Certificate No. RONALD E. NELSON 3239
GARY DONSON 12641
DONALD 12185

NORTH



CONTOUR INTERVAL:
 LOCO HILLS - 10'
 RED TANK SE - 10'

LOCO HILLS - 10'

RED TANK SE - 10'

**JOHN WEST ENGINEERING
HOBBS, NEW MEXICO**

(505) 393-3117

OPERATOR MACK ENERGY CORPORATION

U.S.G.S. TOPOGRAPHIC MAP

LOCO HILLS, RED TANK SE, N.M.

This is a detailed geological map of the McINTYRE A #11 well area. The map is overlaid with a grid. Key features include:

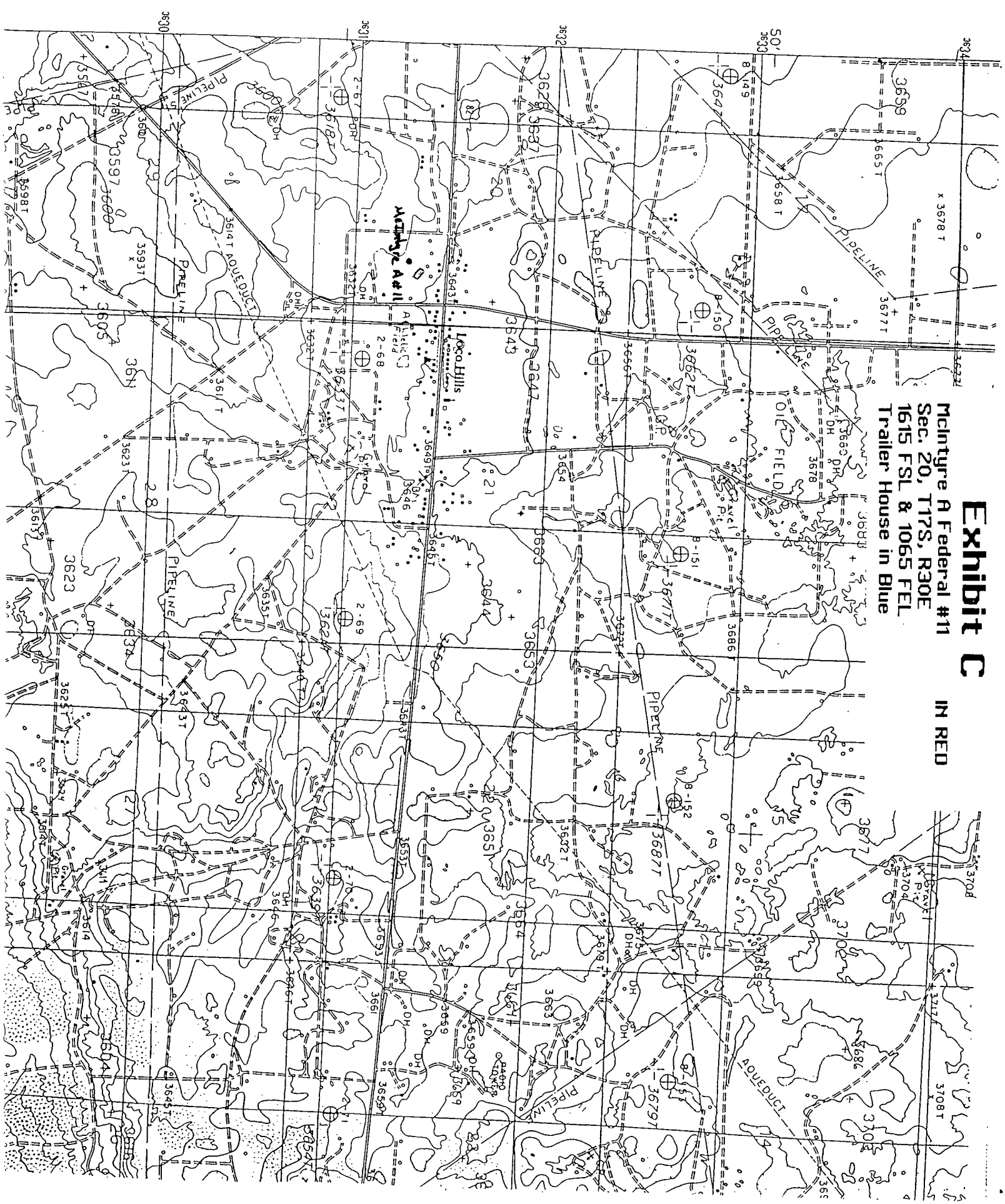
- Wells:** Numerous wells are marked with dots and numbers, including 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.
- Geological Features:** Various geological features are labeled, including "Loco Hills", "McINTYRE A #11", "Walters Lake", "Cedar", "Dyke", "Fault", "Lake", "Mud", "Gravel", "Sand", "Clay", "Shale", "Limestone", "Gypsum", "Salt", "Oil", "Gas", "Water", "Electricity", "Road", "Railroad", "Highway", "Bridge", "Dam", "Well", "Pump", "Valve", "Meter", "Controller", "Transformer", "Substation", "Power Plant", "Factory", "Warehouse", "Store", "House", "Farm", "Ranch", "Camp", "Hotel", "Restaurant", "Bar", "Club", "School", "Church", "Synagogue", "Mosque", "Temple", "Monastery", "Convent", "Nunnery", "Priory", "Abbey", "Bishopric", "Diocese", "Archdiocese", "Metropolitan Area", "County", "State", "Territory", "District", "Zone", "Sector", "Quadrant", "Decade", "Century", "Millennium", "Eon", "Era", "Age", "Period", "Epoch", "Eon", "Era", "Age", "Period", "Epoch".
- Other Labels:** "11.10", "11.11", "11.12", "11.13", "11.14", "11.15", "11.16", "11.17", "11.18", "11.19", "11.20", "11.21", "11.22", "11.23", "11.24", "11.25", "11.26", "11.27", "11.28", "11.29", "11.30", "11.31", "11.32", "11.33", "11.34", "11.35", "11.36", "11.37", "11.38", "11.39", "11.40", "11.41", "11.42", "11.43", "11.44", "11.45", "11.46", "11.47", "11.48", "11.49", "11.50", "11.51", "11.52", "11.53", "11.54", "11.55", "11.56", "11.57", "11.58", "11.59", "11.60", "11.61", "11.62", "11.63", "11.64", "11.65", "11.66", "11.67", "11.68", "11.69", "11.70", "11.71", "11.72", "11.73", "11.74", "11.75", "11.76", "11.77", "11.78", "11.79", "11.80", "11.81", "11.82", "11.83", "11.84", "11.85", "11.86", "11.87", "11.88", "11.89", "11.90", "11.91", "11.92", "11.93", "11.94", "11.95", "11.96", "11.97", "11.98", "11.99", "12.00", "12.01", "12.02", "12.03", "12.04", "12.05", "12.06", "12.07", "12.08", "12.09", "12.10", "12.11", "12.12", "12.13", "12.14", "12.15", "12.16", "12.17", "12.18", "12.19", "12.20", "12.21", "12.22", "12.23", "12.24", "12.25", "12.26", "12.27", "12.28", "12.29", "12.30", "12.31", "12.32", "12.33", "12.34", "12.35", "12.36", "12.37", "12.38", "12.39", "12.40", "12.41", "12.42", "12.43", "12.44", "12.45", "12.46", "12.47", "12.48", "12.49", "12.50", "12.51", "12.52", "12.53", "12.54", "12.55", "12.56", "12.57", "12.58", "12.59", "12.60", "12.61", "12.62", "12.63", "12.64", "12.65", "12.66", "12.67", "12.68", "12.69", "12.70", "12.71", "12.72", "12.73", "12.74", "12.75", "12.76", "12.77", "12.78", "12.79", "12.80", "12.81", "12.82", "12.83", "12.84", "12.85", "12.86", "12.87", "12.88", "12.89", "12.90", "12.91", "12.92", "12.93", "12.94", "12.95", "12.96", "12.97", "12.98", "12.99", "13.00", "13.01", "13.02", "13.03", "13.04", "13.05", "13.06", "13.07", "13.08", "13.09", "13.10", "13.11", "13.12", "13.13", "13.14", "13.15", "13.16", "13.17", "13.18", "13.19", "13.20", "13.21", "13.22", "13.23", "13.24", "13.25", "13.26", "13.27", "13.28", "13.29", "13.30", "13.31", "13.32", "13.33", "13.34", "13.35", "13.36", "13.37", "13.38", "13.39", "13.40", "13.41", "13.42", "13.43", "13.44", "13.45", "13.46", "13.47", "13.48", "13.49", "13.50", "13.51", "13.52", "13.53", "13.54", "13.55", "13.56", "13.57", "13.58", "13.59", "13.60", "13.61", "13.62", "13.63", "13.64", "13.65", "13.66", "13.67", "13.68", "13.69", "13.70", "13.71", "13.72", "13.73", "13.74", "13.75", "13.76", "13.77", "13.78", "13.79", "13.80", "13.81", "13.82", "13.83", "13.84", "13.85", "13.86", "13.87", "13.88", "13.89", "13.90", "13.91", "13.92", "13.93", "13.94", "13.95", "13.96", "13.97", "13.98", "13.99", "14.00", "14.01", "14.02", "14.03", "14.04", "14.05", "14.06", "14.07", "14.08", "14.09", "14.10", "14.11", "14.12", "14.13", "14.14", "14.15", "14.16", "14.17", "14.18", "14.19", "14.20", "14.21", "14.22", "14.23", "14.24", "14.25", "14.26", "14.27", "14.28", "14.29", "14.30", "14.31", "14.32", "14.33", "14.34", "14.35", "14.36", "14.37", "14.38", "14.39", "14.40", "14.41", "14.42", "14.43", "14.44", "14.45", "14.46", "14.47", "14.48", "14.49", "14.50", "14.51", "14.52", "14.53", "14.54", "14.55", "14.56", "14.57", "14.58", "14.59", "14.60", "14.61", "14.62", "14.63", "14.64", "14.65", "14.66", "14.67", "14.68", "14.69", "14.70", "14.71", "14.72", "14.73", "14.74", "14.75", "14.76", "14.77", "14.78", "14.79", "14.80", "14.81", "14.82", "14.83", "14.84", "14.85", "14.86", "14.87", "14.88", "14.89", "14.90", "14.91", "14.92", "14.93", "14.94", "14.95", "14.96", "14.97", "14.98", "14.99", "15.00", "15.01", "15.02", "15.03", "15.04", "15.05", "15.06", "15.07", "15.08", "15.09", "15.10", "15.11", "15.12", "15.13", "15.14", "15.15", "15.16", "15.17", "15.18", "15.19", "15.20", "15.21", "15.22", "15.23", "15.24", "15.25", "15.26", "15.27", "15.28", "15.29", "15.30", "15.31", "15.32", "15.33", "15.34", "15.35", "15.36", "15.37", "15.38", "15.39", "15.40", "15.41", "15.42", "15.43", "15.44", "15.45", "15.46", "15.47", "15.48", "15.49", "15.50", "15.51", "15.52", "15.53", "15.54", "15.55", "15.56", "15.57", "15.58", "15.59", "15.60", "15.61", "15.62", "15.63", "15.64", "15.65", "15.66", "15.67", "15.68", "15.69", "15.70", "15.71", "15.72", "15.73", "15.74", "15.75", "15.76", "15.77", "15.78", "15.7

(505) 393-3117

Exhibit C

IN RED

McIntyre A Federal #11
Sec. 20, T17S, R30E
1615 FSL & 1065 FEL
Trailer House in Blue



CMD :
OG5SECT

ONGARD
INQUIRE LAND BY SECTION

08/18/98 13:06:30
OGOIV -EME1
PAGE NO: 1

Sec : 20 Twp : 17S Rng : 30E Section Type : NORMAL

D 40.00 Federal owned A A	C 40.00 Federal owned A A	B 40.00 Federal owned A A	A 40.00 Federal owned A
E 40.00 Federal owned A A A	F 40.00 Federal owned A A	G 40.00 Federal owned A A A A	H 40.00 Federal owned A A A

PF01 HELP
PF07 BKWD

PF02
PF08 FWD

PF03 EXIT
PF09 PRINT

PF04 GoTo
PF10 SDIV

PF05
PF11

PF06
PF12

CMD :
OG5SECT

ONGARD
INQUIRE LAND BY SECTION

08/18/98 13:06:39
OGOIV -EME1
PAGE NO: 2

Sec : 20 Twp : 17S Rng : 30E Section Type : NORMAL

19 9.40	20 1.10	21 29.52	K 40.00	J 40.00	***	***	***
Federal owned			Federal owned	Federal owned	Federal owned		
A	A	A	A	A	A	A	A
M 40.00			N 40.00	O 40.00	P 40.00		
Federal owned			Federal owned	Federal owned	Federal owned		
A A				A A A	A A A		

PF01 HELP
PF07 BKWD

PF02
PF08 FWD

PF03 EXIT
PF09 PRINT

PF04 GoTo
PF10 SDIV

PF05
PF11

PF06
PF12

CMD :
OG5SECT

ONGARD
INQUIRE LAND BY SECTION

08/18/98 13:09:56
OGOIV -EME1
PAGE NO: 2

Sec : 20 Twp : 17S Rng : 30E Section Type : NORMAL

19 9.40	20 1.10	21 29.52	K 40.00	J 40.00	***	***	***
Federal owned			Federal owned	Federal owned	Federal owned		
A	A	A	A	A	A	A	A
M 40.00			N 40.00	O 40.00	P 40.00		
Federal owned			Federal owned	Federal owned	Federal owned		
A	A			A	A	A	

PF01 HELP
PF07 BKWD

PF02
PF08 FWD

PF03 EXIT
PF09 PRINT

PF04 GoTo
PF10 SDIV

PF05
PF11

PF06
PF12



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

April 16, 1997

Mack Energy Corporation
P. O. Box 960
Artesia, New Mexico 88211-0960
Attention: Crissa D. Carter

Administrative Order NSL-3788

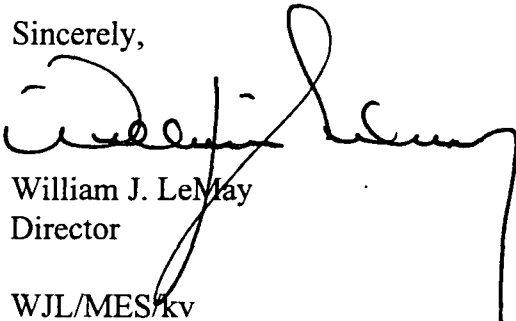
Dear Ms. Carter:

Reference is made to your application dated March 21, 1997 for a non-standard oil well location for the existing McIntyre "A" Well No. 1 (API No. 30-015-04219), located approximately 2430 feet from the South line and 990 feet from the East line (Unit I) of Section 20, Township 17 South, Range 30 East, NMPM, Eddy County, New Mexico.

The application has been duly filed under the provisions of Rule 104.F of the General Rules and Regulations of the New Mexico Oil Conservation Division ("Division"), revised by Division Order No. R-10533, issued by the Oil Conservation Commission in Case 11,351 on January 18, 1996.

By the authority granted me under the provisions of Division General Rule 104.F(2), the above-described unorthodox oil well location is hereby approved.

Sincerely,



William J. LeMay
Director

WJL/MES/kv

cc: Oil Conservation Division - Artesia
U. S. Bureau of Land Management - Carlsbad

County Eddy

Pool Loco Hills-Paddock

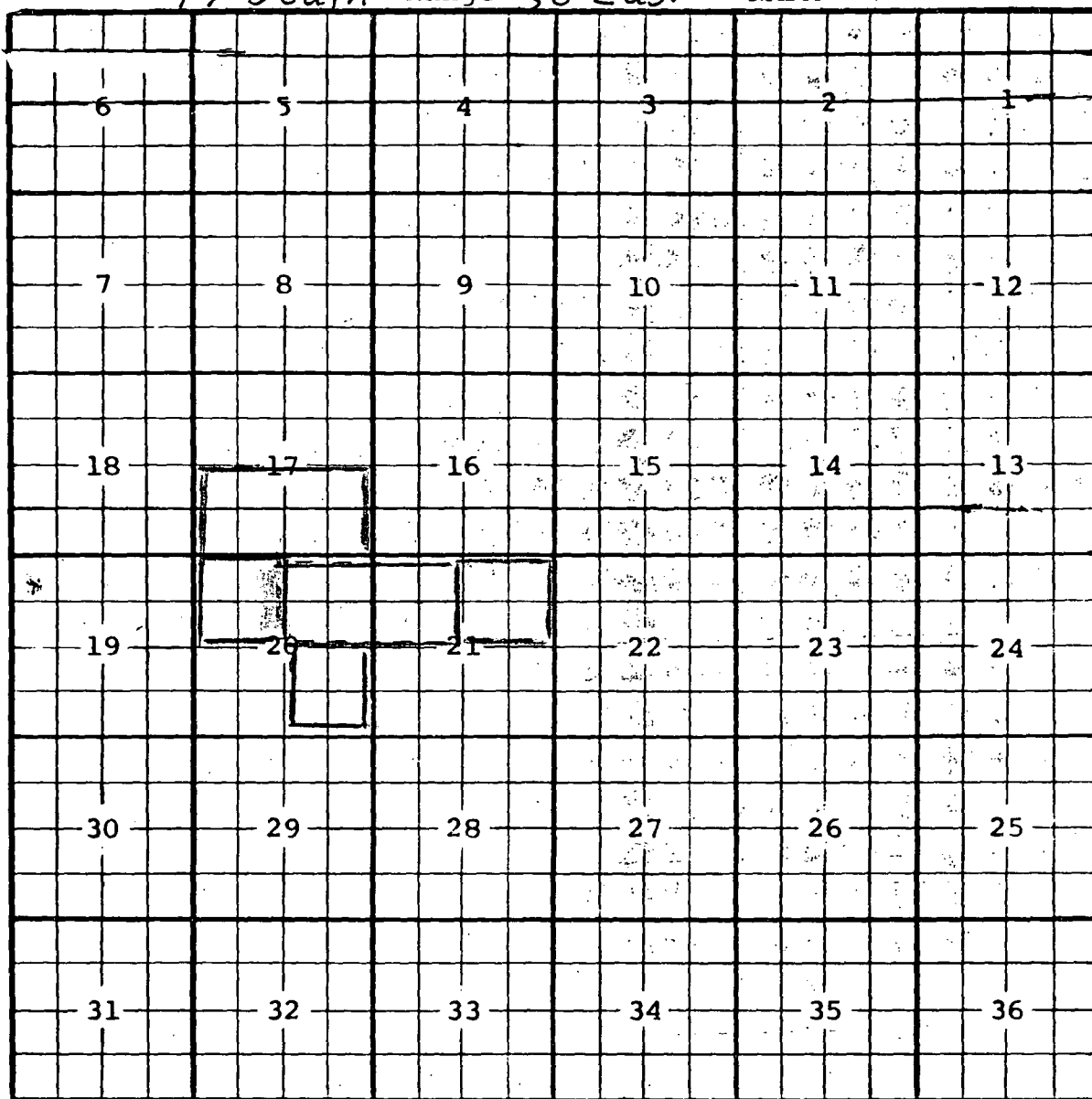
TOWNSHIP

17 South

RANGE

30 East

NMPM



Description: NW 1/4 Sec. 20 (R-10822, 6-17-97)

Ext: NE 1/4 Sec. 20, NW 1/4 Sec. 21 (R-10951, 2-4-98)

Ext: SE 1/2 Sec. 17, SE 1/4 Sec. 20, NE 1/4 Sec. 21 (R-11003, 7-24-98)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL
WELL ☒

Gas
Well ☐

OTHER

SINGLE
ZONE ☐

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Mack Energy Corporation

13837

3. ADDRESS AND TELEPHONE NO

P.O. Box 960, Artesia, NM 88211-0960

(505) 748-1288

4. LOCATION OF WELL (Report location clearly and in accordance with any state requirement.)

At surface

At proposed prod. zone

1650 FSL 990 FEL

1650 FSL 990 FEL

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

.25 miles North Loco Hills

15. DISTANCE FROM PROPOSED*
LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.

330

16. NO. OF ACRES IN LEASE

80

17. NO. OF ACRES IN LEASE
TO THIS WELL

40

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED
OR APPLIED FOR, ON THIS LEASE, FT.

330

19. PROPOSED DEPTH

5500

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

3635 GR

22. APPROX. DATE WORK WILL START*

4/31/97

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4	K-55, 8 5/8	24	450	Circ
7 7/8	J-55, 5 1/2	17	5500	Suff to Circ

Mack Energy proposes to drill to a depth sufficient to test the Paddock and San Andres formation for oil. If productive, 5 1/2" casing will be cemented. If non-productive, the well will be plugged and abandoned in a manner consistent with federal regulation. Specific programs as per Onshore Oil and Gas Order #1 are required in the following attachments:

Drilling Program

Surface Use & Operating Plan

Exhibit #1 & 1A - Blowout Preventer Equipment

Exhibit #2 - Location and Elevation Plat

Exhibit #3 - Planned Access Road

Exhibit #4 - One-Mile Radius Map

Exhibit #5 - Production Facilities Layout

Exhibit #6 - Location Layout

Exhibit #7 - H2S Drilling Operations Plan

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

Crista D. Carter

TITLE

Production Clerk

DATE

3/26/97

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY

TITLE

Acting Manager

DATE

10-23-97

*See Instructions On Reverse Side

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
D.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 30-015-29903	Pool Code 29260	Pool Name Grayburg Paddock
Property Code 018384	Property Name McINTYRE A	Well Number 11
OGRID No. 013837	Operator Name MACK ENERGY CORPORATION	Elevation 3635'

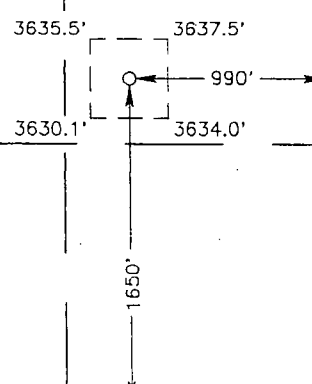
Surface Location

UL or lot No. 1	Section 20	Township 17 S	Range 30 E	Lot Idn	Feet from the 1650	North/South line SOUTH	Feet from the 990	East/West line EAST	County EDDY
--------------------	---------------	------------------	---------------	---------	-----------------------	---------------------------	----------------------	------------------------	----------------

Bottom Hole Location If Different From Surface

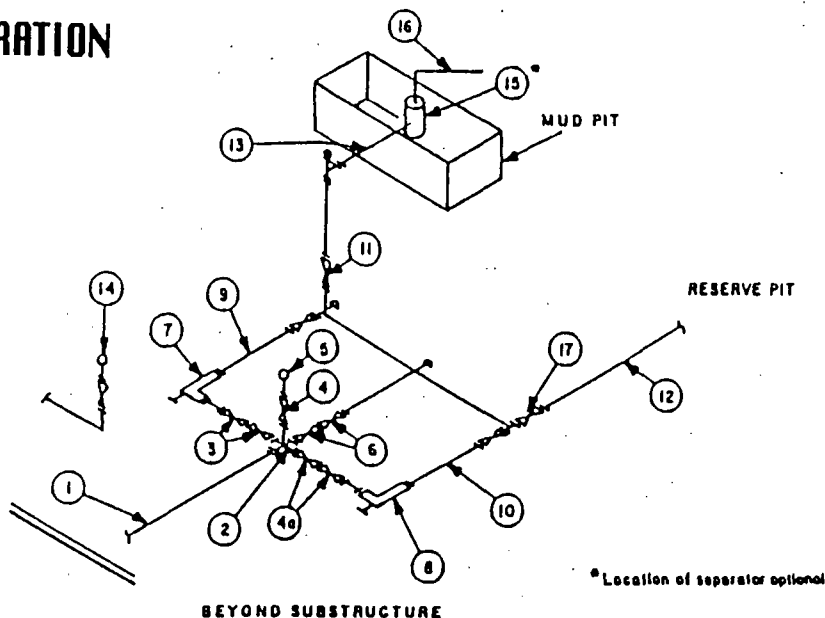
UL or lot No. 40	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

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

								OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. <u>Crissa D. Carter</u> Signature <u>Crissa D. Carter</u> Printed Name <u>Production Clerk</u> Title <u>3-26-97</u> Date			
								SURVEYOR CERTIFICATION 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. <u>DECEMBER 30, 1996</u> Date Surveyed <u>CDG</u> Signature <u>Ronald J. Gibson</u> Professional Surveyor <u>3-14-97</u> Date <u>36-11-16</u> Certificate No. <u>JOHN W. WEST</u> 576 <u>RONALD J. GIBSON</u> 3239 <u>CARY GIBSON</u> 12641			
											

MINIMUM CHOKE MANIFOLD
3,000, 5,000 and 10,000 PSI Working Pressure
2M will be used, or greater
3 MWP - 5 MWP - 10 MWP

MACK ENERGY CORPORATION **EXHIBIT #1-A**



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"x3"x3"x2"			3,000			5,000			
	Cross 3"x3"x3"x3"									10,000
3	Valves (1) Gate <input type="checkbox"/> Plug <input type="checkbox"/> (2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
4	Valve Gate <input type="checkbox"/> Plug <input type="checkbox"/> (2)	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	3-1/8"		10,000
5	Pressure Gauge			3,000			5,000			10,000
6	Valves Gate <input type="checkbox"/> Plug <input type="checkbox"/> (2)	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		3"	10,000
11	Valves Gate <input type="checkbox"/> Plug <input type="checkbox"/> (2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
12	Lines		3"	1,000		3"	1,000		3"	2,000
13	Lines		3"	1,000		3"	1,000		3"	2,000
14	Remote reading compound standpipe pressure gauge			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	Valves Gate <input type="checkbox"/> Plug <input type="checkbox"/> (2)	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 10M.

(3) Remote operated hydraulic choke required on 5,000 psi and 10,000 psi for drilling.

EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTIONS

- All connections in choke manifold shall be welded, studded, flanged or Cameron clamp of comparable rating.
- All flanges shall be API 6B or 6BX and ring gaskets shall be API RX or BX. Use only BX for 10 MWP.
- All lines shall be securely anchored.
- Chokes shall be equipped with tungsten carbide seats and needles, and replacements shall be available.
- 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.
- Line from drilling spool to choke manifold should be as straight as possible. Lines downstream from chokes shall make turns by large bands or 90° bands using bull plugged tees.

MINIMUM BLOWOUT PREVENTER REQUIREMENTS

2,000 psi Working Pressure

2 MWP

MACK ENERGY CORPORATION EXHIBIT #1-A

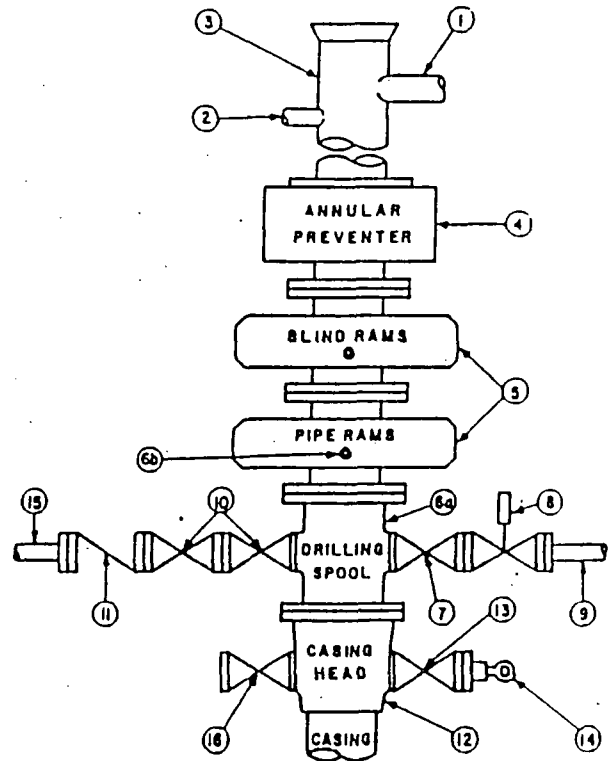
STACK REQUIREMENTS

No.	Item	Min. I.O.	Min. Nominal
1	Flowline		
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 <input type="checkbox"/> Plug <input type="checkbox"/>	3-1/8"	
8	Gate valve—power operated	3-1/8"	
9	Line to choke manifold		3"
10	Valves Gate <input type="checkbox"/> Plug <input type="checkbox"/>	2-1/16"	
11	Check valve	2-1/16"	
12	Casing head		
13	Valve Gate <input type="checkbox"/> Plug <input type="checkbox"/>	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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CONFIGURATION A



CONTRACTOR'S OPTION TO FURNISH:

1. All equipment and connections above bradenhead or casinghead. Working pressure of preventers to be 2,000 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:

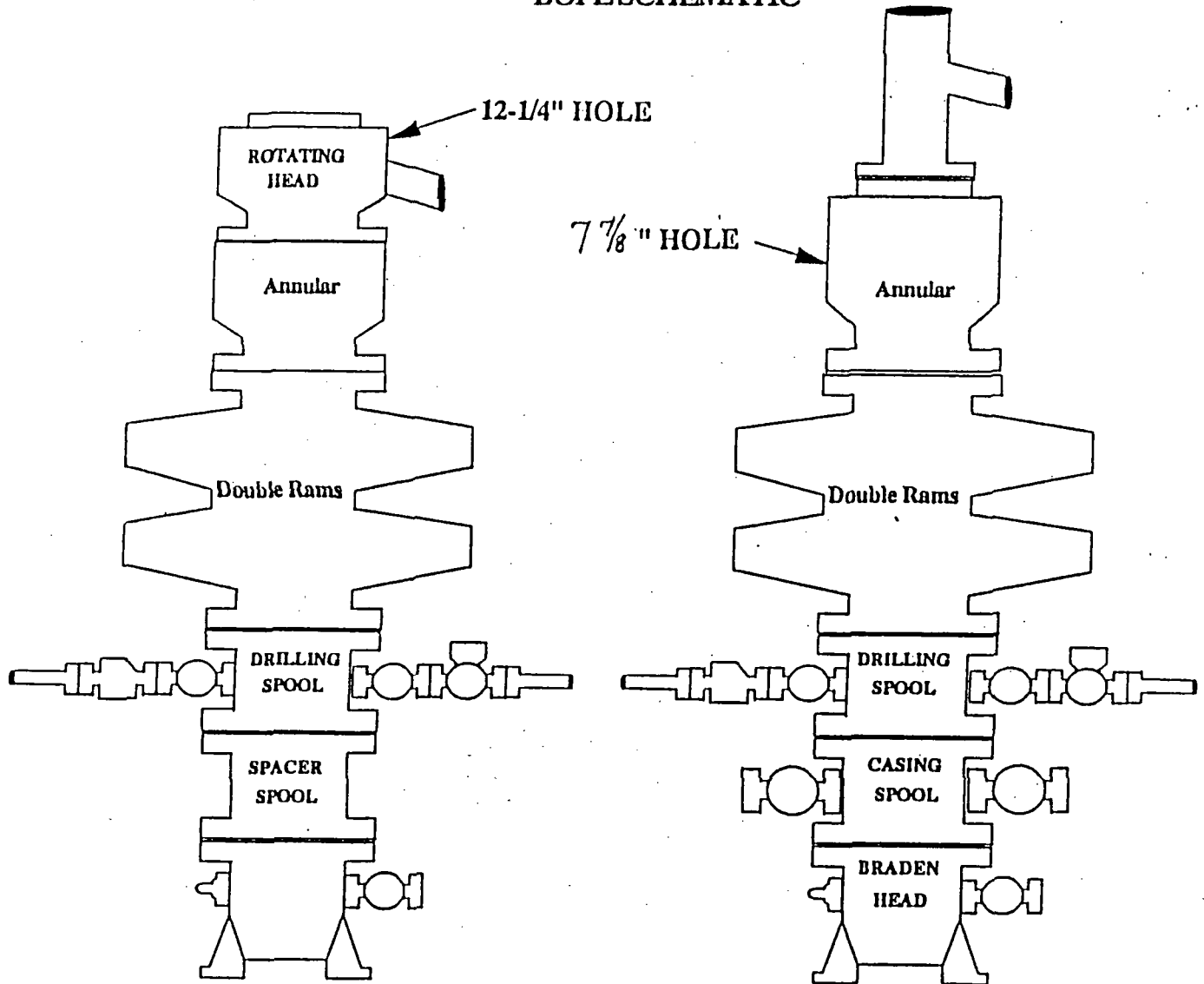
1. Bradenhead or casinghead and side valves.
2. Wear bushing, if required.

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 chokes. 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, other 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.

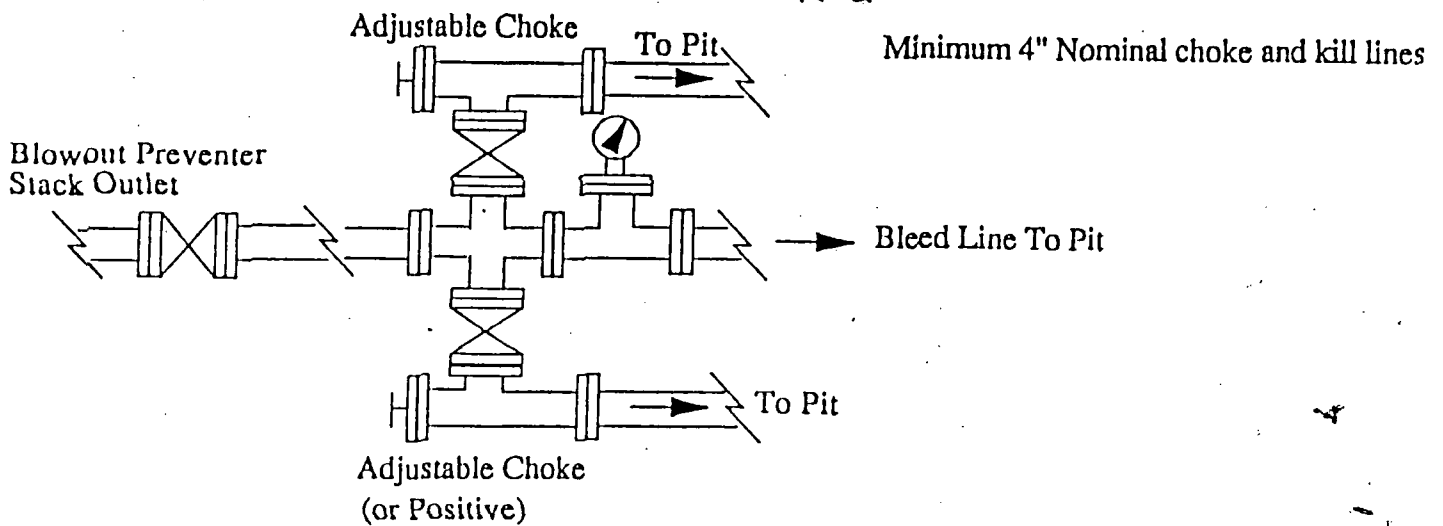
7. Handwheels and extensions to be connected and ready for use.
8. Valves adjacent to drilling spool to be kept open. Use outside valves except for emergency.
9. All seamless steel control piping (2,000 psi working pressure) to have flexible joints to avoid stress. Hoses will be permitted.
10. Casinghead connections shall not be used except in case of emergency.
11. Do not use kill line for routine fill-up operations.

BOPE SCHEMATIC



Choke Manifold Requirement (2 000 psi WP)

NO ANNULAR REQ'D



MACK ENERGY CORPORATION

EXHIBIT #1-A