District I
PO Box 1980, Hobbs, NM 88241-1980
District II
811 S. 1st Street, Artesia, NM 88210-2834
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-101
Revised October 18, 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

[1] Operator name and Address	[2] OGRID Number
MOBIL PRODUCING TX & NM INC.* *MOBIL EXPLORATION & PRODUCING US INC. AS AGENT FOR MPTM P.O. Box 633, Midland TX 79702	15144
	[3] API Number 30-025-34564

[4] Property Code	[5] Property Name	[6] Well No.
24120	STATE "J" COM	1

[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
J	22	17 S	34 E		1600	SOUTH	1720	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

[9] Proposed Pool 1	[10] Proposed Pool 2
NORTH VACUUM ATOKA MORROW GAS	

[11] Work Type Code	[12] Well Type Code	[13] Cable/Rotary	[14] Lease Type Code	[15] Ground Level Elevation
N	G	ROTARY	S	4038'
[16] Multiple	**[17] Proposed Depth**	**[18] Formation**	**[19] Contractor**	**[20] Spud Date**
NO	13000'	MORROW	HALLIBURTON	1-15-1999

[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#	450'	450 SX PREMIUM+	SURFACE
12 1/4"	8 5/8"	32#	5000'	*#22	SURFACE
7 7/8"	5 1/2"	17#	12500'	**#22	TO BE DETERMINED

[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

SEE ATTACHED DRILLING PLAN & BOP STACK (PRODUCTION & INTERMEDIATE)

* 1420 SACKS LEAD INTEFILL + 200 SACKS PREMIUM PLUS.
** 250 SACKS INTERFILL H + 320 SACKS SUPER H.

Permit Expires 1 Year From Approval Date Unless Drilling Underway

[23] I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature: Shirley Mosley for

Printed name: SHIRLEY HOUCHINS

Title: ENV & REG TECHNICIAN

OIL CONSERVATION DIVISION

Approved by: ORIGINAL SIGNED BY CHRIS WILLIAMS
DISTRICT I SUPERVISOR

Title:

Approval Date: JAN 15 1999

Expiration Date:

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

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

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

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	Pool Name
30-025- 34564	86800	NORTH VACUUM ATOKA MORROW GAS

Property Code	Property Name	Well Number
24120	STATE "J" COM	1

OGRID No.	Operator Name	Elevation
15144	MOBIL EXPLORATION & PRODUCING U.S. INC.	4038

Surface Location

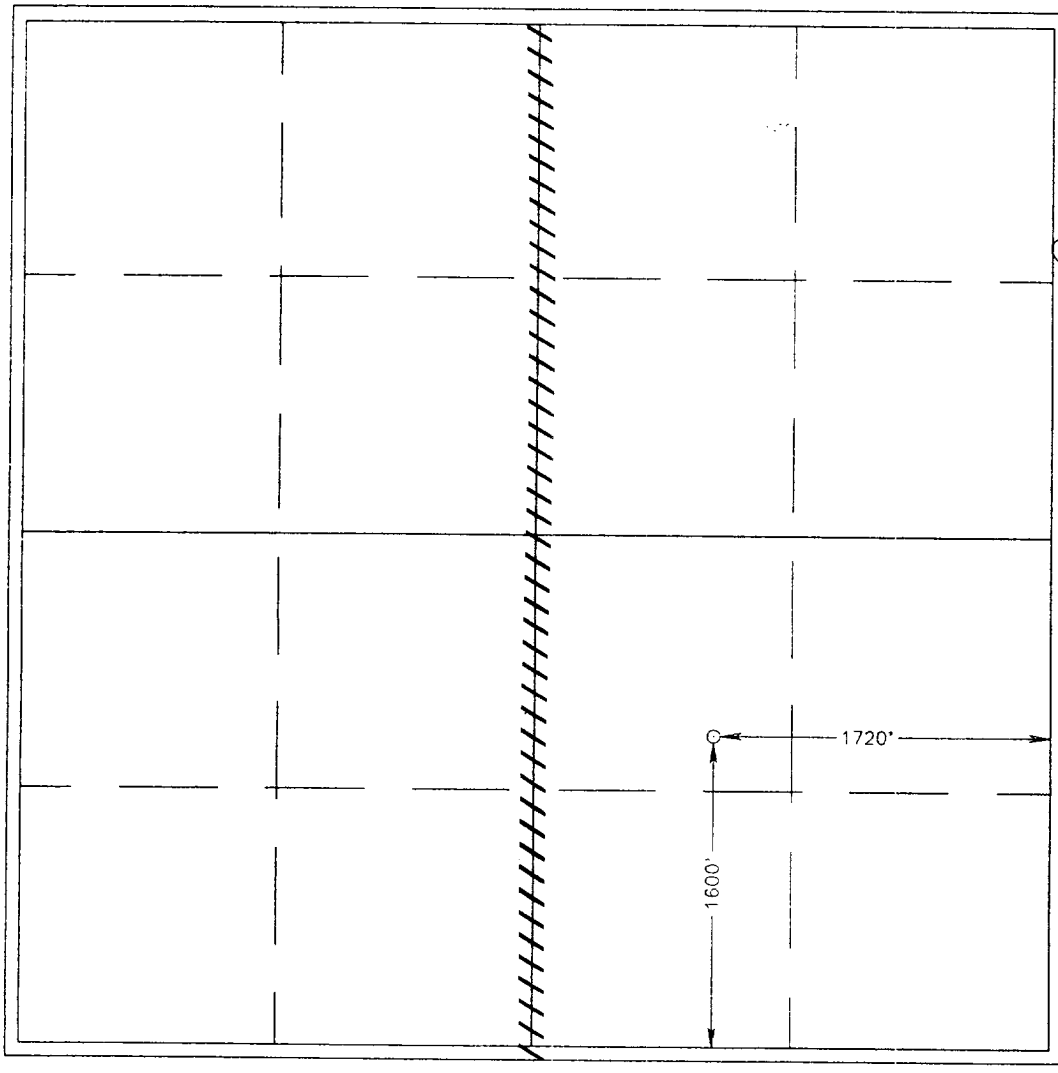
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	22	17 S	34 E		1600	SOUTH	1720	EAST	LEA

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.
320			

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.

Signature

SHIRLEY HOUCHINS
Printed Name

ENV & REG TECHNICIAN
Title

1-4-1999
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 supervison, and that the same is true and correct to the best of my belief.

NOVEMBER 12, 1998
Date Surveyed DMCC

Signature & Seal of Professional Surveyor

11-20-98

98-11-1460

Certificate No. RONALD J. EIDSON 3239
GARY L. JIDSON 12641
JACON MCDONALD 12185

DRILLING PLAN
HALLIBURTON ENERGY SERVICES

MOBIL EXPLORATION AND PRODUCING U.S., INC.
STATE V "A" COM #1 (RED PROSPECT)
LEA COUNTY, NEW MEXICO

NOTES

1) Notify the New Mexico Oil Conservation Division in Hobbs, NM. @ 505-393-6161 at least 24 hours prior to spud. As well as 12 hours prior to running surface casing. Notification must be documented on the IADC report and on Halliburton's daily drilling report. If cement fails to circulate on the surface casing string, notify the agency and obtain permission to remediate. Spills and well control problems are to be reported to the proper agencies immediately as well.

2) Pressure test BOPs after each nipple up. Function test daily.

DRILLING SURFACE HOLE:

1) Prepare the location and cellar for work with Nabors Rig #311. Dig pits for circulating the reserve with fresh water in the outside reserve and salt water in the inside reserve. Line both pits.

2) Install a 20" conductor to 40'.

3) Move in and rig up Nabors rig #311. Nipple up a rotating head to divert flow away from the drilling rig.

4) Mix a minimum of spud mud according to the attached recommendation from Halliburton/Baroid.

5) Pick up a 17 ½" re-tip mill tooth bit with an 10" shock sub and 6 -8" drill collars and 12-15 6 ½" drill collars with and spud in. Run a 3 point reamer at 60'. Drill to 450'. Circulate bottoms up. (The New Mexico Engineer requires that all fresh water be cased off. The procedure is to drill not more than 50' of Red Bed. The 450' setting depth selected should meet this criteria).

6) Make a wiper trip to surface (SLM out of the hole). Check depths, GIH and circulate bottoms up. POOH to run casing.

7) Pick up and run 13 3/8" casing as follows:

1 13 3/8" Float Shoe
1 Jt. 13 3/8" H-40, 48 #/Ft., ST & C , Casing
1 13 3/8" Float Collar
20 Jts. 13 3/8" H-40, 48 #/Ft., ST & C , Casing

Arrange to match TD with the amount of casing to be run. The preceeding should approximate the 450' target depth. Run 1 centralizer 20' up on the shoe joint and every 4th joint to surface. Thread lock the shoe and float collar.

8) Cement with the amount and type recommended in the attached procedure.

9) WOC 12 hours or as indicated by cement samples.

DRILLING INTERMEDIATE HOLE

1) Cut off surface casing and weld on a 13 3/8" 3000# Surface Head with two 2" 3000# valves. As shown in the attached wellhead diagram. Nipple up a 13 3/8" 5000# BOP stack with drill pipe rams, blind rams, an annular BOP, and a rotating head. Hook up a 5000# choke manifold with a gas buster. Test to 5000#.

2) Prepare to drill with 10# brine circulating through the inner reserve pit.

3) Pick up a 12 ¼" mill tooth bit and drill out the float collar. Test casing to 500#. Drill out the float shoe and 150' of new hole. POOH and pick up the 12 ¼" bit with a 10" shock sub, 2- 8" drill collars, a 3 point reamer, 1-8" drill collar, 3-8" drill collars, and 12-6 ½" drill collars. GIH and drill to approximately 3300' or as indicated by drilling performance. POOH.

4) Pick up and run an 11" insert bit with a similar bottom hole assembly as above. Drill to 5000' or the base of the San Andress. Pump sweeps to clean the hole. Short trip to the end of the 12 ¼" bit run and pump sweeps to clean the hole. POOH to run 8 5/8"casing.

5) Run 8 5/8" casing as follows:

1 8 5/8" Float shoe
1 Jt. 8 5/8" S-95, 32 #/Ft., LT & C Casing
1 8 5/8" Float collar
40 Jts. 8 5/8" S-95, 32 #/Ft., LT & C Casing
80 Jts. 8 5/8" J-55, 32 #/Ft., LT & C Casing

Arrange for TD to match the casing on location for a floor cementing connection if possible. Thread lock the float shoe and collar. Run one centralizer 20 feet up on the shoe joint and on 160 foot centers to surface.

6) Cement with the amount and type recommended in the attached procedure.

7) Pick up the BOP stack and install the 8 5/8" casing slips. Install a 13 3/8" 3000# by 11" 5000# casing spool with two 5000# valves. Nipple the stack back up and re-test to 5000#.

DRILLING PRODUCTION HOLE

1) Prepare to drill with fresh water through the outside reserve pit.

2) Mudlogging unit to be rigged up and running just after drilling out.

3) Pick up a 7 7/8" mill tooth bit and 20-6 ½" drill collars. Drill out the float collar. Test the casing to 1000# (EMW of 12 #/Gal.). Drill out the float shoe and 150' of new hole. POOH to pick up the new BHA.

4) Pick up an insert bit, 6 point reamer, short drill collar, I.B. stabilizer, 1-6 ½" drill collar, I.B. stabilizer, and 19-6 ½" drill collars. GIH and drill to 8200' circulating the reserve with fresh water.

5) The top of the Abo is at 8440'. The well should be monitored to check for flow from the active waterflood in the area. If a flow is encountered, begin circulating with brine out of the inner reserve.

2) Drill ahead with either clear fresh or brine water as dictated by above to 11,000'. At this point, bring the fluid into the steel tanks and mud up as indicated in the attached Halliburton/Baroid recommendation. The mud will be a Brine base with a minimum weight of 10 #/Gal.

3) Drill ahead to 100' above the top of the Atoka (approximately 11,470') making sure that there is a fresh bit in the hole before drilling the Atoka @ 11,570' and the Morrow target interval @ 11,710'. This interval could be pressured up such that weighting up will become necessary. Mud properties need to be checked and maintained exactly as prescribed before drilling this interval.

4) Drill ahead to Total Depth at 12,500'. Condition the hole for logging with a short trip a circulating. Be sure the well is under control before beginning to trip for logs.

5) POOH for logs and run same as in the attached recommendation.

6) GIH after logging and circulate and condition the hole for running 5 ½" casing. If the well is to be plugged be sure that instructions have been received from the NMOCD. Lay down the drill pipe and drill collars.

7) POOH and run the 5 ½" casing as follows:

1 Float Shoe
1 Jt. of 5 ½", 17 #/Ft., S-95, LT&C Casing
1 Float Collar
312 Jts. of 5 ½", 17 #/Ft., S-95, LT&C Casing

Total depth will be 12,500'. The casing should be set as near to bottom as possible. Thread lock the float shoe and collar. Run one centralizer should be run 20' up on the shoe joint and on 80' centers to 11,500'. Then on 160' centers to 8000'.

8) Circulate the casing on bottom and condition mud as instructed. Cement with the amount and type as recommended in the attached procedure.

9) Pick up the BOP stack and set the casing slips and cut off. Install a 11" 5000# by 7 1/16" casing head. Nipple down the BOPs and install a blanking flange.

10) Clean the rig tanks and release the drilling rig. Rig down and move off the drilling rig.

COMPLETION PROCEDURE

1) Clean off the location for a well service rig. Move in a well service rig capable of handling 2 7/8" tubing at 12,500'.

2) Pick up a 4 ¾" mill cutter bit on the 2 7/8" 6.5 #/Ft., L-80 tubing. GIH to TD. Pickle the tubing and casing as recommende in the attached procedure. POOH.

3) Make up the Power Perforating assembly as recommended with a retrievable packer . GIH, set the packer, and perforate th appropriate interval. Test this interval and evaluate. If the zone needs a fracture stimulation, this will be performed as recommended after evaluation. The casing string is designed to accommodate a frac job down the casing string.

4) After treatment down the casing, rig up a wireline unit and lubricate the packer into place. Rig down the wireline unit and run the 2 7/8" tubing with a off/on tool and tie into the packer. Install the 5,000# tree.

5) Rig the well up to a testing unit and flow the well back. After an appropriate testing period, build the production facilities and put the well to sales.

HALLIBURTON

Cement Surface Casing

Job Recommendation

Cement 450 feet of 13 3/8 inch casing in a 17 1/2 hole with 495 sacks of Premium Plus Cement. Cement volume based on 100% excess. Cement is to be circulated to the surface.

FLUID 1: CEMENT

Premium Plus
2.0% Calcium Chloride (Accelerator)
Mixed With Fresh Water

Fluid Weight:	14.80 lb/gal
Fluid Yield:	1.34 ft³/sk
Fluid Water Ratio:	6.31 gal/sk
Total Mixing Fluid:	74.4 bbls
Top of Fluid:	0 ft
Calculated Fill:	450 ft
Fluid Volume:	117.61 bbls
Calculated Volume:	466.7 sks
Shoe Joint Volume:	26.26 sks
Total Volume:	493.00 sks
Proposed Volume:	495 sks

FLUID 2: DISPLACEMENT

Total Displacement Volume:	70.50 bbls
Spacer On Top Of Plug: 0 bbls	
Displacement to Shoe Joint:	64.24 bbls

HALLIBURTON

Cement Intermediate Casing

Job Recommendation

Cement 5000 ft of 8 5/8 inch casing in 12 1/2 inch hole. Cement volumes are based off 75% excess in the open hole. Cement is to be circulated to surface. Centralizers are to placed on every 3rd joint to help insure good cement bonding.

FLUID 1: LEAD
Intefill C
Mixed With Fresh Water

Fluid Weight:	11.70 lb/gal
Fluid Yield:	2.61 ft³/sk
Fluid Water Ratio:	15.21 gal/sk
Total Mixing Fluid:	514.2 bbls
Top of Fluid:	0 ft
Calculated Fill:	4692 ft
Fluid Volume:	658.48 bbls
Calculated Volume:	1417.00 sks
Proposed Volume:	1420 sks

FLUID 2: TAIL
Premium Plus
2.0% Calcium Chloride
Mixed With Fresh Water

Fluid Weight:	14.80 lb/gal
Fluid Yield:	1.34 ft³/sk
Fluid Water Ratio:	6.31 gal/sk
Total Mixing Fluid:	30.0 bbls
Top of Fluid:	4692 ft
Calculated Fill:	308 ft
Fluid Volume:	47.73 bbls
Calculated Volume:	189.8 sks
Shoe Joint Volume:	10.22 sks
Total Volume:	200.00 sks
Proposed Volume:	200 sks

FLUID 3: DISPLACEMENT

Total Displacement Volume:	304.73 bbls
Spacer On Top Of Plug: 0 bbls	
Displacement to Shoe Joint:	302.30 bbls

HALLIBURTON

Cement Production Casing

Job Recommendation

Cement 5 1/2 inch casing from 12,500ft to 8,000ft in 7 7/8 inch hole. Pump 2000 gallons of Mudflush followed by 1000 gallons of Super Flush 101. A 20 bbl water spacer should be placed between the Mud Flush and Super Flush, and a 40bbl spacer between the Super Flush and the Cement. Mud Flush and Super Flush are pumped to help clean-up the wellbore and insure bonding properties with the cement. The drilling mud viscosity is to be lowered while circulating on bottom to also help the cement bond. Zonal Isolation Tech Van to be on location to monitor and record data.

FLUID 1: MUD FLUSH

Mud Flush	Top of Fluid:	6471 ft
	Calculated Fill:	1015 ft
	Fluid Volume:	46.98 bbls

FLUID 2: SUPER FLUSH

Super Flush 101	Top of Fluid:	7486 ft
	Calculated Fill:	514 ft
	Fluid Volume:	23.79 bbls

FLUID 3: INTERFILL H

Interfill H	Fluid Weight:	11.70 lb/gal
.4% HALAD®-322 (Fluid Loss)	Fluid Yield:	2.62 ft³/sk
Mixed With Fresh Water	Fluid Water Ratio:	15.21 gal/sk
	Total Mixing Fluid:	90.5 bbls
	Top of Fluid:	8000 ft
	Calculated Fill:	2500 ft
	Fluid Volume:	115.71 bbls
	Calculated Volume:	248.00 sks
	Proposed Volume:	250 sks

FLUID 4: SUPER H

Premium Cement	Fluid Weight:	13.00 lb/gal
.4% CFR-3 (Dispersant)	Fluid Yield:	1.66 ft³/sk
5 lb/sk Gilsonite (bulk) (Lost Circulation)	Fluid Water Ratio:	8.18 gal/sk
.5% HALAD®-344 (Fluid Loss)	Total Mixing Fluid:	62.3 bbls
1 lb/sk Salt (6 %) (Accelerator)	Top of Fluid:	10500 ft
Mixed With Fresh Water	Calculated Fill:	2000 ft
	Fluid Volume:	94.51 bbls
	Calculated Volume:	313.4 sks
	Shoe Joint Volume:	6.56 sks
	Total Volume:	320.00 sks
	Proposed Volume:	320 sks

FLUID 5: DISPLACEMENT

Total Displacement Volume:	302.95 bbls
Spacer On Top Of Plug: 0 bbls	
Displacement to Shoe Joint:	301.01 bbls

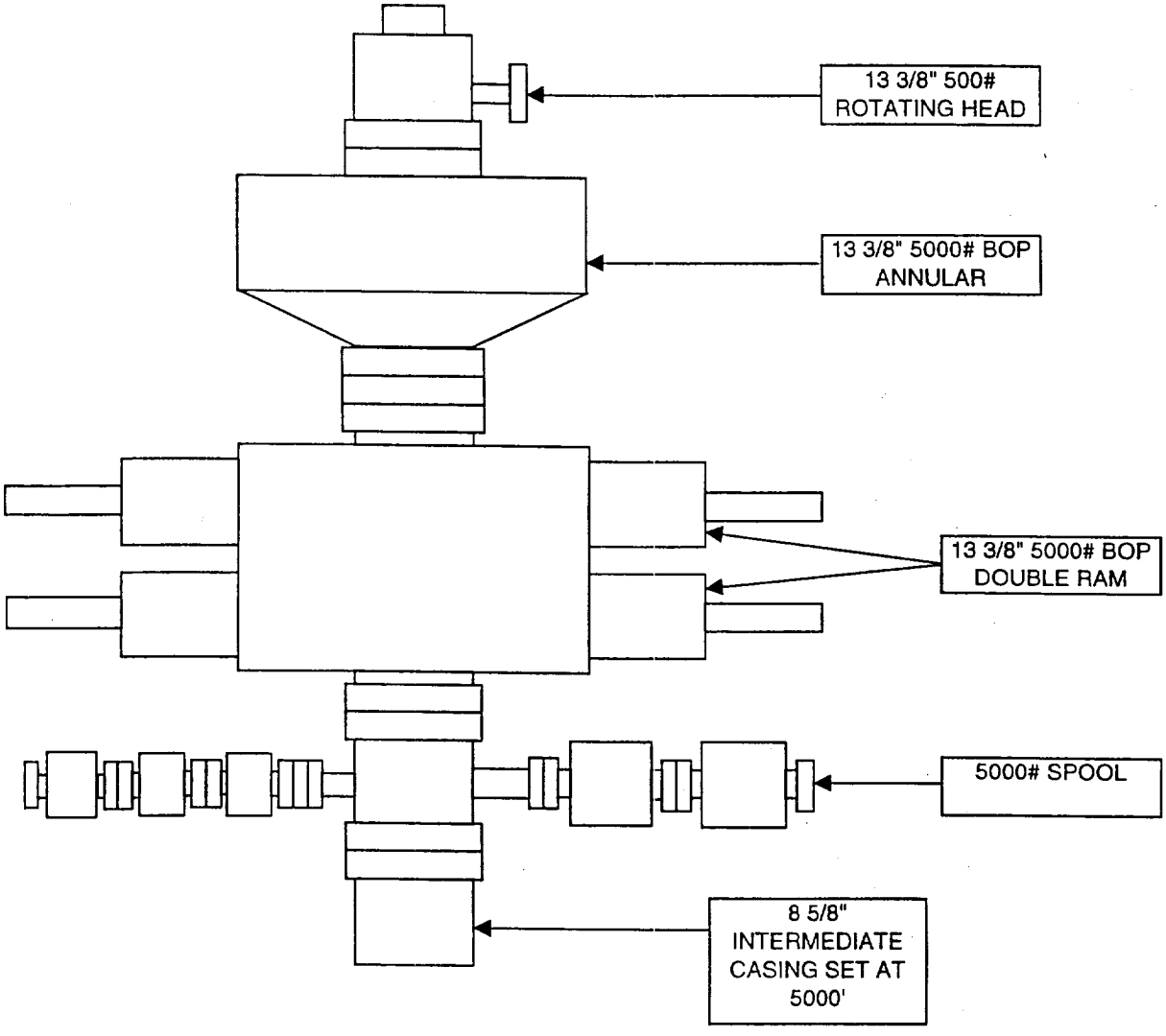
MOBIL EXPLORATION & PRODUCTION

STATE "J" COM

PRODUCTION CASING BOP STACK

7 7/8" HOLE FROM 5000' TO 12,500'

SET 5 1/2" CASING TO 12,500'



MOBIL EXPLORATION & PRODUCTION

STATE "J" COM

INTERMEDIATE CASING BOP STACK

12 1/4" HOLE FROM 450' TO 5000'

SET 8 5/8" CASING TO 5000'