

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>			5. LEASE DESIGNATION AND SERIAL NO. NM-59392
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>			6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
2. NAME OF OPERATOR Yates Petroleum Corporation			7. UNIT AGREEMENT NAME N/A
3. ADDRESS OF OPERATOR 105 South Fourth Street, Artesia, New Mexico 88210			8. FARM OR LEASE NAME Lusk "AHB" Federal
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface 1780' FNL and 760' FWL At proposed prod. zone same Unit E			9. WELL NO. 11
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 12 miles south of Maljamar, New Mexico			10. FIELD AND POOL, OR WILDCAT E. Lusk Delaware
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 35-T19S-R32E
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	19. PROPOSED DEPTH 7900'	20. ROTARY OR CABLE TOOLS Rotary	12. COUNTY OR PARISH Lea
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3562' GR			13. STATE NM
22. APPROX. DATE WORK WILL START* ASAP			

PROPOSED CASING AND CEMENTING PROGRAM				Secretary's Potash
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	54.50#	1140'	1150 sacks - <u>circulated</u>
12 1/4"	8 5/8"	32#	4430'	2500 sacks - <u>circulated</u>
7 7/8"	5 1/2"	17 & 10 15.5#	TD	<u>Tie Back to 8 5/8" casing</u> <u>@ least 200'</u>

Yates Petroleum Corporation proposes to ⁵³⁵drill and test the Delaware and Intermediate formations. Approximately 1140' of surface casing will be set and cement circulated. Approximately 4430' of intermediate casing will be set and cement circulated. If commercial, production casing will be run and cemented with adequate cover, perforated and stimulated as needed for production.

MUD PROGRAM: FW to 1140'; Brine to 4430'; cut Brine to TD.

BOPE PROGRAM: BOPE will be installed at the offset and tested daily for operational.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, 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 Clifton R. May TITLE Permit Agent DATE 8-20-92
(This space for Federal or State office use)

PERMIT NO. 151 Frank Splendoris APPROVAL DATE Acting State Director
APPROVED BY Acting State Director TITLE Acting State Director DATE 9-8-93
CONDITIONS OF APPROVAL, IF ANY:
APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED.

*See Instructions On Reverse Side

RECEIVED

SEP 11 1993

JOHN HOBBS
OFFICE

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

P.O. Drawer DD, Artesia, NM 88210

DISTRICT III

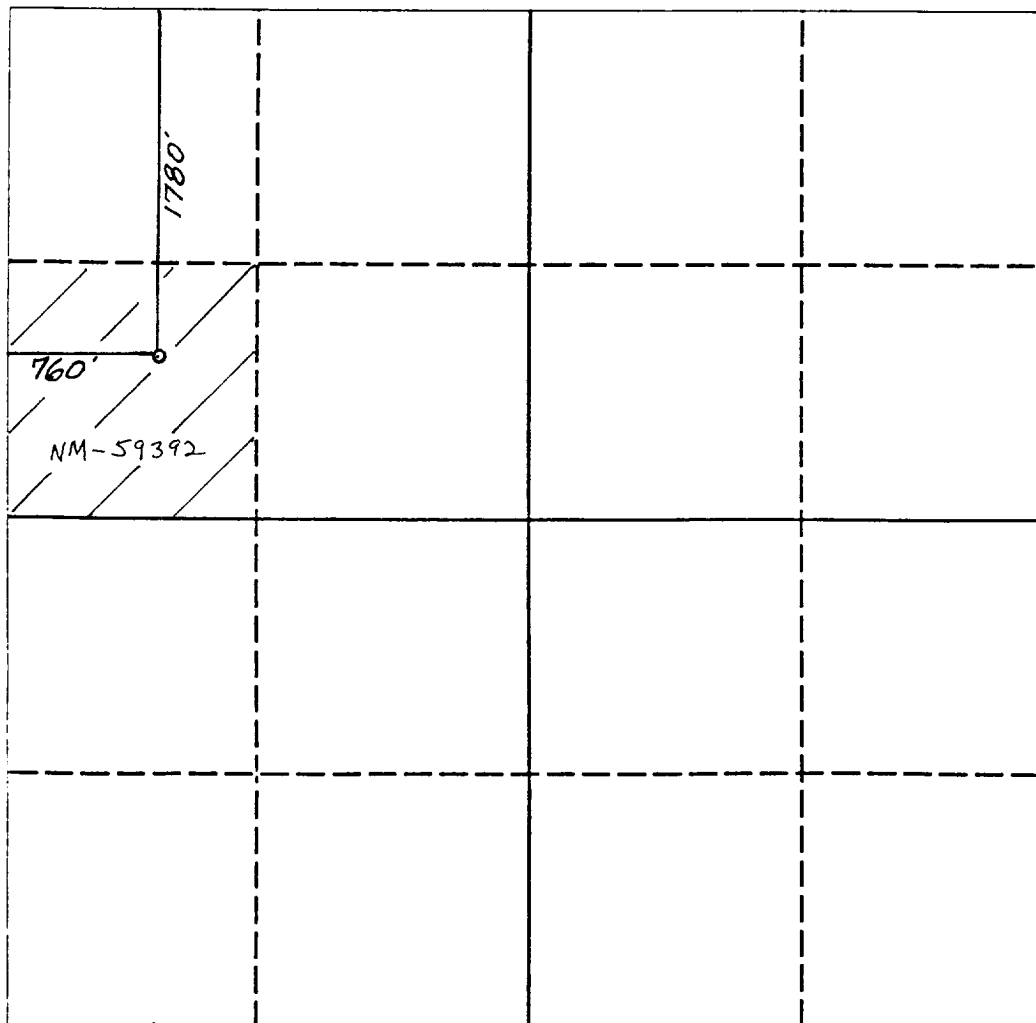
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator YATES PETROLEUM CORPORATION			Lease LUSK AHB FEDERAL		Well No. 11
Unit Letter E	Section 35	Township 19 SOUTH	Range 32 EAST	County LEA COUNTY, NM	
Actual Footage Location of Well: 1780 feet from the NORTH line and 760 feet from the WEST line					
Ground level Elev. 3562.	Producing Formation DELAWARE		Pool EAST LUSK DELAWARE	Dedicated Acreage: 40 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?
☐ Yes ☐ No If answer is "yes" type of consolidation _____
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary).
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

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

Signature <i>Clifton R. May</i>
Printed Name Clifton R. May
Position Permit Agent
Company Yates Petroleum Corporation
Date August 20, 1992

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 knowledge and belief.

Date Surveyed JUNE 20, 1992
Signature & Seal of Professional Surveyor <i>[Signature]</i> NEW MEXICO 5412 REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. SURVEYOR NM RE&PS NO. 5412

0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

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SEP 11 1983

OUR HOUSE
OFFICE

MARTIN YATES, III
1912 - 1985
FRANK W. YATES
1936 - 1986

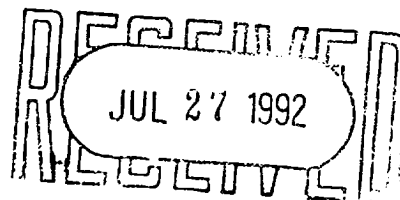


105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

S. P. YATES
CHAIRMAN OF THE BOARD
JOHN A. YATES
PRESIDENT
PEYTON YATES
EXECUTIVE VICE PRESIDENT
RANDY G. PATTERSON
SECRETARY
DENNIS G. KINSEY
TREASURER

July 8, 1992

Mississippi Chemical Corporation
Randy Foote, General Manager
P. O. Box 101
Carlsbad, New Mexico 88220-0101



Gentlemen:

Yates Petroleum Corporation is the operator of the Oil and Gas Lease NM-59392. We have staked the following location:

Lusk AHB Federal #11
1780' FNL and 760' FWL
Section 35-T19S-R32E
Lea County, New Mexico

An Application to Drill is being filed with the Bureau of Land Management.

We have been advised that your company is the owner of record of certain potash leases in this area. We respectfully request that you waive any objection you may have to this proposed well location and so indicate by signing and returning one copy of this letter in the enclosed envelope.

Your favorable consideration of this request will be greatly appreciated.

Sincerely,

YATES PETROLEUM CORPORATION

Clifton R. May
Clifton R. May
Permit Agent

CRM/mw

NO OBJECTIONS OFFERED

MISSISSIPPI CHEMICAL CORPORATION

By: _____

Title: _____

Date: _____

OBJECTIONS OFFERED

MISSISSIPPI CHEMICAL CORPORATION

By: *Randy Foote*

Title: *Gen. Mgr.*

Date: *7-24-92*

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JOHN HODGES
OFFICE

MARTIN YATES, III
1912 - 1985
FRANK W. YATES
1936 - 1986

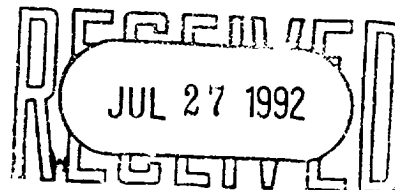


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TREASURER

July 8, 1992

Mr. Frank Condon
Norando Minerals, Inc.
1 Adelaide Street East
Suite 2700
Toronto, Ontario, Canada M5C2T6



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Sincerely,

YATES PETROLEUM CORPORATION

Clifton R. May
Permit Agent

CRM/mw

NO OBJECTIONS OFFERED

NORANDO MINERALS, INC.

By: Frank Condon

Title: Director Business Development

Date: July 21, 1992

OBJECTIONS OFFERED

NORANDO MINERALS, INC.

BY: _____

Title: _____

Date: _____

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U.S. HOUSE
OFFICE

MARTIN YATES, III
1912 - 1985
FRANK W. YATES
1936 - 1986



105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

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DENNIS G. KINSEY
TREASURER

July 28, 1992

Mr. Richard L. Manus
Area Manager
Bureau of Land Management
Carlsbad Resource Area
P. O. Box 1778
Carlsbad, New Mexico 88220

Re: Application for Establishment of
Drilling Island Within the Potash
Area

Dear Mr. Manus:

Pursuant to the Order of the Secretary of the Interior, issued October 28, 1986, (the Secretarial Order) Section III.E, Yates Petroleum Corporation (Yates) hereby applies to the Area Manager, Bureau of Land Management, Carlsbad Resource Area, to establish a drilling island from which the drilling of the well hereinafter described and subsequent wells will be permitted. The proposed well for which the drilling island is requested is as follows:

Lusk "AHB" Federal #11
1980' FNL and 660' FWL
Section 35-T19S-R32E
Lea County, New Mexico

The objective for the well is the Delaware formation presently being developed in the Wildcat pool. The drilling unit for the well is forty acres and the maximum objective depth projected for said well is 7900' feet. A copy of the application and/or Notice of Staking of this well is attached. The drilling island requested is a square, 500' on each side, its center being the location of the proposed wellbore, containing 5.74 acres, more or less.

It is believed that a drilling island would reasonably permit multiple use of the area and not unduly interfere with primary mining of potash. If the area is ever mined, the potash company can complete primary mining operations, leaving the islands or such larger area as they deem necessary, for secondary mining.

Yates respectfully requests that the Authorized Officer establish this drilling island in accordance with the Secretarial Order.

Thank you for your consideration.

Very truly yours,

YATES PETROLEUM CORPORATION

Randy G. Patterson
Land Manager

RGP/tgr

Enclosure

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YATES PETROLEUM CORPORATION

**Lusk "AHB" Federal #11
1780' FNL and 760' FWL
Section 35-T19S-R32E
Lea County, New Mexico**

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Yates Petroleum Corporation submits the following ten items of pertinent information in accordance with USGS requirements.

1. The geological surface formation is Alluvium of Quaternary AGE.
2. The estimated tops of geologic markers are as follows:

Rustler	1,043'
Yates	2,923'
Delaware	4,423'
Brushy Canyon	6,253'
Bone Springs	7,713'
TD	7,900'
3. The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:

Water:	150' - 1100' Red Bed
Oil or Gas:	6253' and 7713'
4. Proposed Casing Program: See Form 3160-3.
5. Pressure Control Equipment: See Form 3160-3 and Exhibit B.
6. Mud Program: See Form 3160-3.
7. Auxiliary Equipment: Kelly Cock; pit level indicators and flow sensor equipment; sub with full-opening valve on floor, drill pipe connections.
8. Testing, Logging and Coring Program:

Samples: Surface casing to TD.

DST's: As warranted.

Coring: None anticipated.

Logging: Dual Induction Laterolog, Gamma Ray/Litho Density, Gamma Ray/Compensated Neutron with Caliper Log.
9. No abnormal pressures or temperatures are anticipated. No H₂S is expected to be encountered during the drilling of this well. If H₂S is encountered, well will be secured and drilling operations commenced following attached H₂S operations plan.
10. Anticipated starting date: As soon as possible after approval.

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Drilling Plan
YATES PETROLEUM CORPORATION
Lusk AHB Federal #11
1780' FNL and 760' FWL
Section 35-T19S-R32E
Lea County, New Mexico

Hole Size: 17 1/2" Total Depth: 1140' Casing Size: 13 3/8"
Setting Depth: 1140' Mud Weight: 8.8 ppg

Casing Design:

<u>O.D.</u>	<u>Weight</u>	<u>Grade</u>	<u>Thread</u>	<u>Coupling</u>	<u>Interval</u>	<u>Length</u>
13 3/8	54.50#	J-55	8R	ST & C	0 - 1140'	1140'

Minimum Casing Design Factors: Collapse 1.125, Burst 1.0, Tensile Strength 1.8

Cement Program: Lead Slurry: 700 sacks "Lite C" with 1/4# sack Celloclol, 2% Caciz
Expected Linear Fill: True Hole Volume - 1840 feet.
Slurry Properties: Weight: 12.7 ppg Yield 1.84 cu.ft./sack

Tail Slurry 250 sacks "Class C" with 2% Caciz
Expected Linear Fill: True Hole Volume - 478 feet.
Slurry Properties: Weight: 14.8 ppg Yield 1.32 cu.ft./sack

Hole Size: 12 1/4" Total Depth: 4430' Casing Size: 8 5/8"
Setting Depth: 4430' Mud Weight: 10.1 ppg

Casing Design:

<u>O.D.</u>	<u>Weight</u>	<u>Grade</u>	<u>Thread</u>	<u>Coupling</u>	<u>Interval</u>	<u>Length</u>
8 5/8'	32#	J-55	8R	ST & C	0 - 4200'	4200'
8 5/8'	32#	HC-80	8R	ST & C	4200'-4430'	230'

Minimum Casing Design Factors: Collapse 1.125, Burst 1.0, Tensile Strength 1.8

Cement Program: Lead Slurry: 1700 sacks "Lite C" with 10# sack salt, 5# Gilsonite
Calculated Linear Fill: True Hole Volume - 7996 feet.
Slurry Properties: Weight: 12.8 ppg Yield 1.94 cu.ft./sack

Tail Slurry 250 sacks "Class C" with 2% Caciz
Calculated Linear Fill: True Hole Volume - 800 feet.
Slurry Properties: Weight: 14.8 ppg Yield 1.32 cu.ft./sack

Hole Size: 7 7/8" Total Depth: 7900' Casing Size: 5 1/2"
Setting Depth: 7900' Mud Weight: 8.7 ppg

Casing Design:

<u>O.D.</u>	<u>Weight</u>	<u>Grade</u>	<u>Thread</u>	<u>Coupling</u>	<u>Interval</u>	<u>Length</u>
5 1/2"	17#	J-55	8R	LT & C	0 - 200'	200'
5 1/2"	15.50#	J-55	8R	LT & C	200' - 7800'	7600'
5 1/2"	17#	J-55	8R	LT & C	7800' - 7900'	100'

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Drilling Plan
Lusk AHB Federal #11
Page 2

Minimum Casing Design Factors: Collapse 1.125, Burst 1.0, Tensile Strength 1.8

Cement Program: Lead Slurry: 300 sacks "Class H" + 8# CSE per sack + 5# Gilsonite, + .6% CF-14

Calculated Linear Fill: True Hole Volume - 3029' feet.

A stage cementing collar will be used and placed at approximately 5500'.

Slurry Properties: Weight: 13.6 ppg Yield 1.75 cu.ft./sack

2nd Stage Slurry 350 sacks "Class H" + 8# per sack CSE, 5# per sack Gilsonite, + .5% CF-14

Calculated Linear Fill: True Hole Volume - 3500 feet.

Slurry Properties: Weight: 13.6 ppg Yield 1.75 cu.ft./sack

Anticipated Drilling Mud Program:

From 0 to 1140' (Minimum Properties)

Mud Weight: 8.8 ppg, Viscosity: 32 sec./1000 cc, Water Loss: N/C cc, Mud Type: FW Gel/LCM

Mud will be checked tourly by rig personnel. Sufficient quantities of mud will be kept on location to maintain minimum properties.

From 1140' to 4430' (Minimum Properties)

Mud Weight: 10.1 ppg, Viscosity: 28 sec./1000cc, Water Loss: N/c cc, Mud Type: Brine, use salt water gel for hole sweeps.

Mud will be checked tourly by rig personnel. Sufficient quantities of mud will be kept on location to maintain minimum properties

From 4430' to 7900' (Minimum Properties)

Mud Weight: 8.7 ppg, Viscosity: 28 sec.1000cc, Water Loss: N/C cc, Mud Type: Cut Brine. Use salt water gel for hole sweeps.

Mud will be checked tourly by rig personnel. Sufficient quantities of mud will be kept on location to maintain minimum properties

Anticipated BHP:

From: <u>-0-</u>	TO <u>1140'</u>	Anticipated Max. BHP:	<u>-0-</u> PSI
From: <u>1100'</u>	TO <u>4430'</u>	Anticipated Max. BHP:	<u>1920</u> PSI
From: <u>4400'</u>	TO <u>7900'</u>	Anticipated Max. BHP:	<u>2400</u> PSI

Abnormal Pressures Anticipated: None

Lost Circulation zones anticipated: Possible lost circulation 2500' - 4400'.

H2S Zones Anticipated: None.

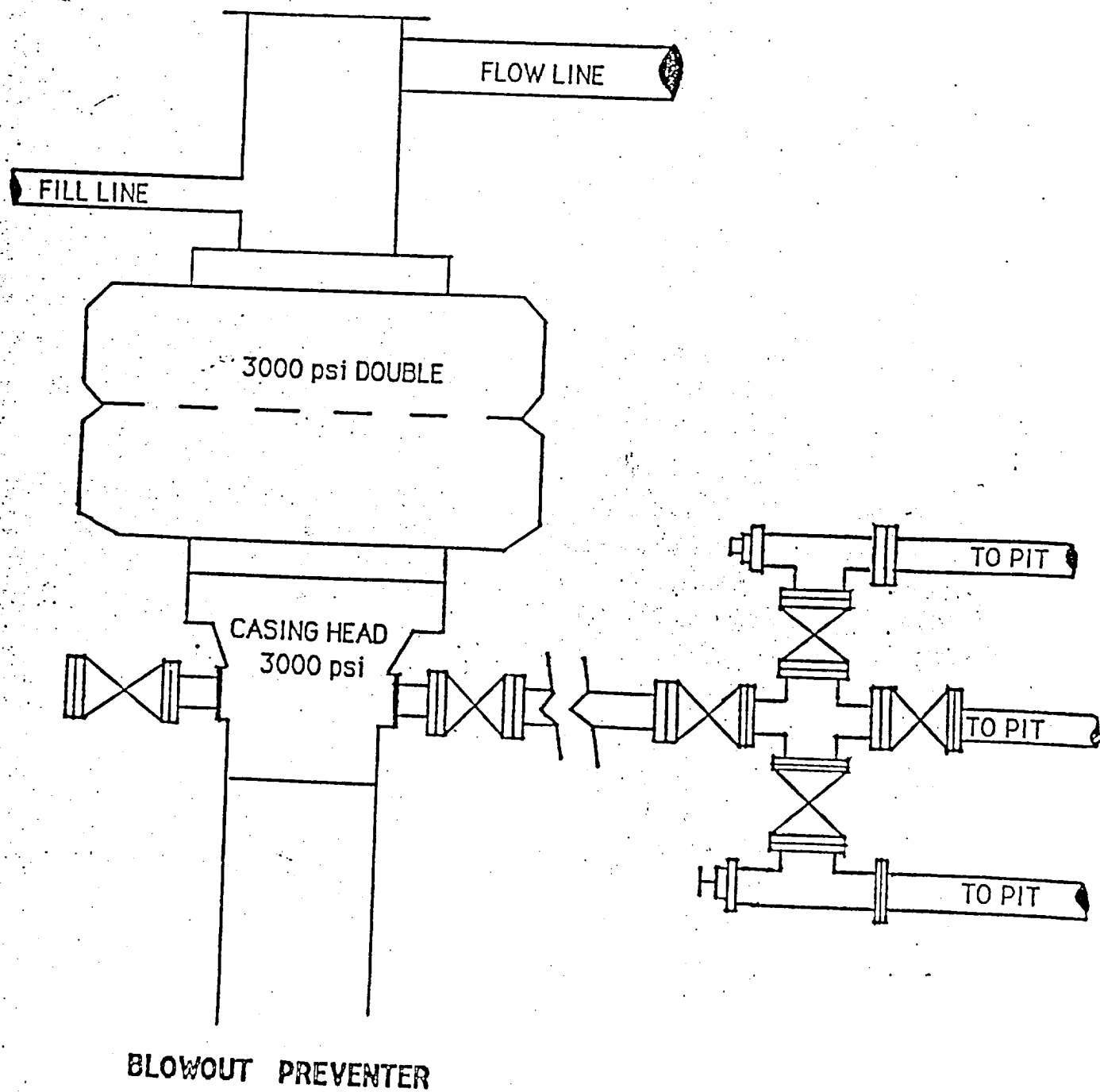
Maximum Bottom Hole Temperature: 130 F

Anticipated Drilling Time 15 days. Anticipated Completion Time 15 days.

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SEP 17 1993

**JOE HOBBS
OFFICE**



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SEP 17 1993

GOVERNMENT
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