OPER. C[illegible]ID NO. 13925
PROPERTY NO. 20068
POOL CODE 83280
EFF. DATE 10/3/97
API NO. 30-025-34151

Form 3160-3
(July 1992)

FORM APPROVED
OMB NO. 1004-0136
Expires February 28, 1995

AP

1a. TYPE OF WORK
Drill [X] Deepen [ ]

7-7-97 mm
7/07/97 SP

b. TYPE OF WELL
Oil Well [ ] Gas Well [X] Other Single Zone [ ] Multiple Zone [ ]

5. LEASE DESIGNATION AND SERIAL NO.
NM-57285

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
N/A

7. UNIT AGREEMENT NAME
N/A

2. NAME OF OPERATOR
Mallon Oil Company

8. FARM OR LEASE NAME, WELL NO.
Mallon 33 Federal

3. ADDRESS AND TELEPHONE NO.
P.O. Box 3256
Carlsbad, NM 88220 (505) 885-4596

9. API WELL NO.
6

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface 1140' FNL and 1980' FEL (NW NE) Unit B
At proposed prod. zone 1140' FNL and 1980' FEL (NW NE) Unit B

10. FIELD AND POOL, OR WILDCAT
Quail Ridge, Morrow

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 33, T19S-R34E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
36 miles east of Hobbs, New Mexico

12. COUNTY OR PARISH
Lea County

13. STATE
NM

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
1330'	320	320 Dedicated to the North half
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
1980	13,800'	Rotary

21. ELEVATIONS (SHOW WHETHER DF, RT, GR, Etc.) 3683 GR
22. APPROX. DATE WORK WILL START August 1, 1997

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
25"	20"	42#	40'	Ready mix to surface
17-1/2"	13-3/8"	48#	500'	270 sx or circ to surface
12-1/4"	9-5/8"	36# & 40#	5000'	800 sx Poz, 200 sx "C"
7-7/8"	5-1/2"	17#	13,800'	930 sx "C" modified 100 sx Class C

Mallon Oil Company proposes to drill to a depth sufficient to test the Morrow formation for gas. If productive, 5-1/2" casing will be cemented at TD. If non-productive, the well will be plugged and abandoned in a manner consistent with Federal regulations. Specific programs as per on-shore Oil and Gas Order No. 1 are outlined in the following attachments:

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

Drilling Program
Exhibit 1: Blow Out Preventor Equipment/Plan
Exhibit A: Location and Elevation Plat
Exhibit B: Existing Roads/Planned Access Roads
Exhibit C: One Mile Radius Map
Exhibit D: Drilling Site Layout
Exhibit E: Production Facilities
Exhibit F: Hydrogen Sulfide Drilling Plan
Exhibit G: Archaeological Clearance

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: Duane C Winkler TITLE: Operations Manager DATE 07/01/97
Duane C. Winkler

(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 (ORIG. SGD.) ARMANDO A. LOPEZ TITLE Acting ADM. MINERALS DATE 8/19/97

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Exhibit A

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, NM 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
30-025-34151	83280	Quail Ridge Morrow

Property Code	Property Name	Well Number
20068	MALLON "33" FEDERAL	6

OGRID No.	Operator Name	Elevation
13925	MALLON OIL COMPANY	3683

Surface Location

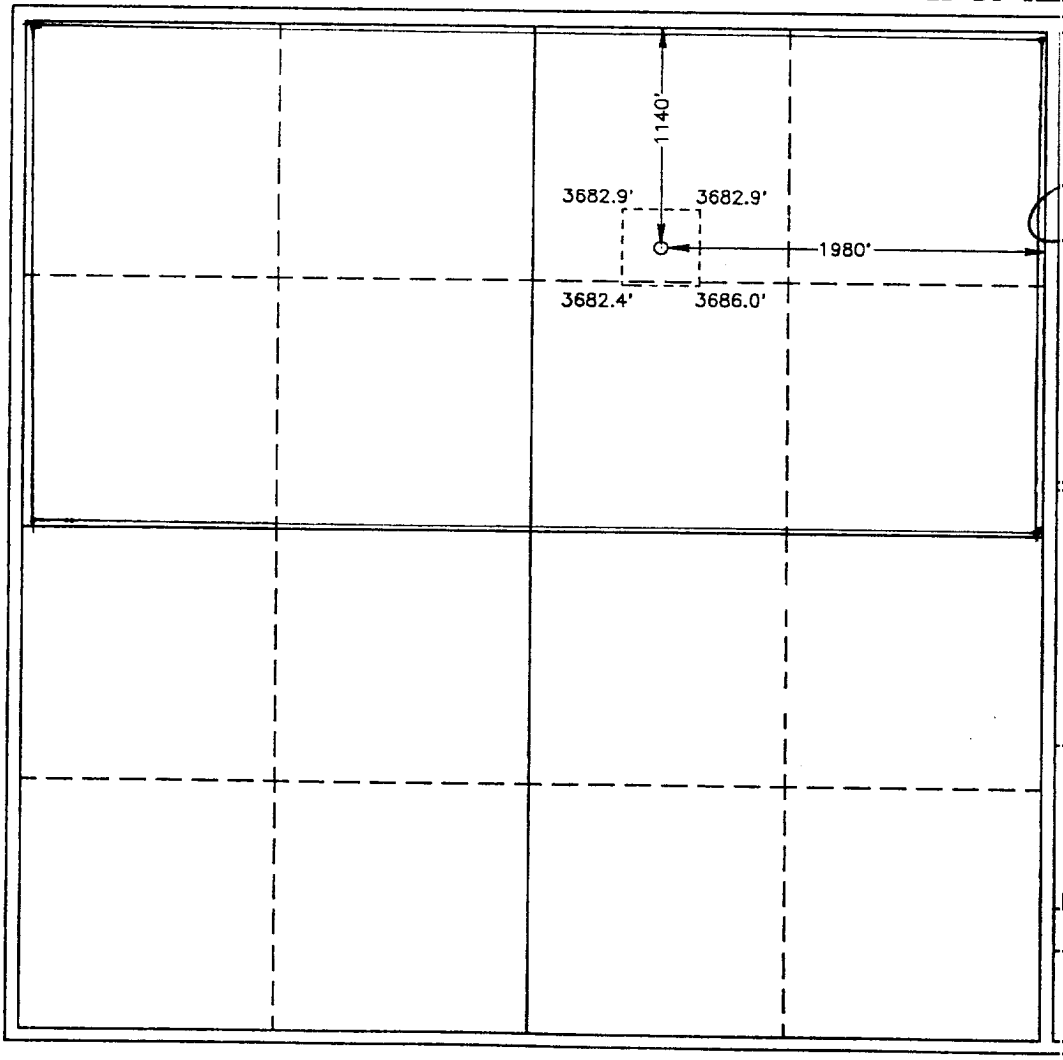
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	33	19 S	34 E		1140	NORTH	1980	EAST	LEA

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.

Duane C Winkler
Signature

Duane C. Winkler
Printed Name

Operations Manager
Title

July 1, 1997
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.

JUNE 17, 1997
Date Surveyed JLP
Signature & Seal of Professional Surveyer

NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR
RONALD J. EIDSON
3239

6-27-97

W.O. Num. 97-11-0987

Certificate No. JOHN W. WEST, 676
RONALD J. EIDSON, 3239
GARY G. EIDSON, 12641

DRILLING PROGRAM

Attached to Form 3160-3
Mallon Oil Company
Mallon 33 Federal No. 6
NW NE, 1140' FNL and 1980' FEL Unit B
Sec. 33, T19S-R34E
Lea County, New Mexico
Lease Number: NM-57285

1. Geologic Name of Surface Formation : Quaternary Alluvium

2. Estimated Tops of Important Geologic Markers

Quaternary Alluvium	Surface	San Andres	5157'
Rustler	1658'	Delaware	6070'
Top of Salt	1687'	Bone Springs	8136'
Base of Salt	3232'	Wolfcamp	10,861'
Yates	3423'	Strawn	12,164'
7 Rivers	3785'	Atoka	12,416'
Queen	4463'	Morrow	12,747'
Grayburg	4925'	TD	13,800'

3. The Estimated Depths of Anticipated Fresh Water, Oil or Gas:

Quaternary Alluvium	300'	Fresh water
Bone Springs	8400'	Oil
Morrow	13,500'	Gas

No other formations are expected to give up oil, gas, or fresh water in measurable quantities. The surface fresh water sands will be protected by setting 13-3/8" casing at 500' and circulating cement back to surface. Potash will be protected by setting 9-5/8" casing at 5000' and circulating cement back to surface.

Any shallower zones above TD which contain commercial quantities of oil and/or gas will have cement circulated across them by inserting a cementing stage tool into the 5-1/2" production casing which will be run to TD.

4. Proposed Casing Program:

Hole Size	Interval	Casing OD	Casing weight grade, Jt., Type Cond	
25"	0'-40'	20"	Conductor, 0.25" wall thickness	
17-1/2"	0'-500'	13-3/8"	48#	H40 STC

12-1/4"	500'-5000'	9-5/8"	500'-2500' 9-5/8" 36# K-55 STC 2500'-5000' 9-5/8" 40# S80 STC
7-7/8"	5000'-TD	5-1/2"	0'-2800' 5-1/2" 17# N80 Butt 2800'-9000' 5-1/2" 17# N80 LTC 9000'-TD 5-1/2" 17# S95 LTC

Cement Program:

20" Conductor casing:	Cemented with ready-mix to surface
13-3/8" Surface casing:	Lead Slurry: 270 sks 35:65 Poz + 6% gel + 1/2# Celloseal + 2% CaCl2 Tail: 200 sks Class C + 1/4# Celloseal + 2% CaCl2
9-5/8" Intermediate casing:	Lead Slurry: 800 sks 35:65 Poz + 6% gel + 1/4# Celloseal + 2% CaCl2. Tail: 200 sks Class C +1/4# Celloseal + 2% CaCl2
5-/2" Production casing:	930 sks Super C modified + 15# Poz A + 11# BA-90 + 8# gilsonite + .44# FL-52 + .44# FL-25 This cement slurry is designed to bring TOC to 5000'

5. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a double ram-type (3000 psi WP) preventer and a bag-type (hydril) preventer (3000 psi WP). Both units will be hydraulically operated and the ram-type preventer will be equipped with blind rams on top and 4-1/2" drill pipe rams on bottom. Both BOPs will be nippled up on 13-3/8" surface casing and used continuously until TD is reached. All BOPs and accessory equipment will be tested to 1000 psi before drilling out of surface casing. Before drilling out of intermediate casing, the ram-type BOP and accessory equipment will be tested to 3000 psi and the hydril to 70% or rated working pressure (2100 psi). Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. A 2" kill line and 3" choke line will be included in the drilling spool located below the ram-type BOP. Other accessories to the BOP equipment will include a kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold with 3000 psi WP rating.

6. Types and Characteristics of the Proposed Mud System:

The well will be drilled to TD with a combination of brine, cut brine, and polymer/KCL mud system. The applicable depths and properties of this system are as follows:

Depth	Type	Weight (ppg)	Viscosity (sec)	Water loss (cc)
0'-500'	Fresh Water (spud)	8.5	40-45	N.C.
500'-5000'	Brine Water	10.0	30	N.C.
5000'-TD	Cut Brine/Brine Water	8.8-10.0	32-34	10-12 cc

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the well site at all times.

7. Auxiliary Well Control and Monitoring Equipment:

   (A) A Kelly cock will be kept in the drill string at all times.

   (B) A full opening drill pipe stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

   (C) An electronic pit-volume-totalizer system will be used continuously below 8000' to monitor the mud and pump system. The drilling fluids system will also be visually monitored at all times.

   (D) A mud logging unit complete with H2S detector will be continuously monitoring drilling penetration rate and hydrocarbon shows from 5000; to TD.

8. Testing, Logging and Coring Program:

   (A) Drill stem tests will be run on the basis of drilling shows.

   (B) The electric logging program will consist of GR-Dual Laterolog-MSFL and GR-Sonic from TD to intermediate casing and GR-Compensated-Neutron-Density from TD to surface. Selected SW cores will be taken in zones of interest.

   (C) No conventional coring is anticipated.

   (D) Further testing procedures will be determined after the 5-1/2" production casing has been cemented at TD based on drill shows, log evaluation and drill stem test results.

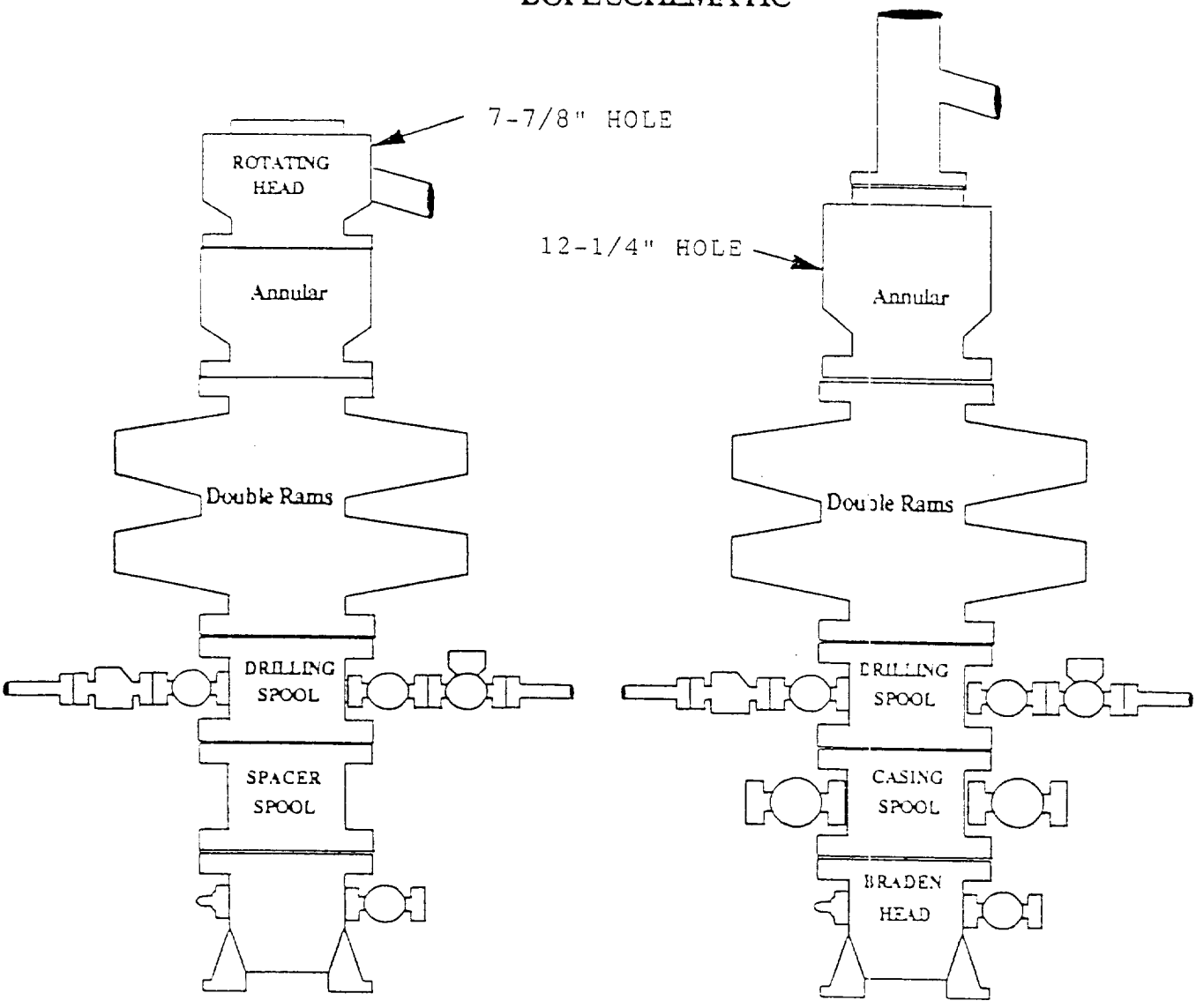
9. Abnormal Conditions, Pressures, Temperatures, & Potential Hazards:

No abnormal pressures or temperatures are anticipated. The estimated bottom hole temperature (BHT) at TD is 195° F and estimated maximum bottom hole pressure (BHP) is 5000 psig. No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. No major loss circulation zones have been reported in offsetting wells.

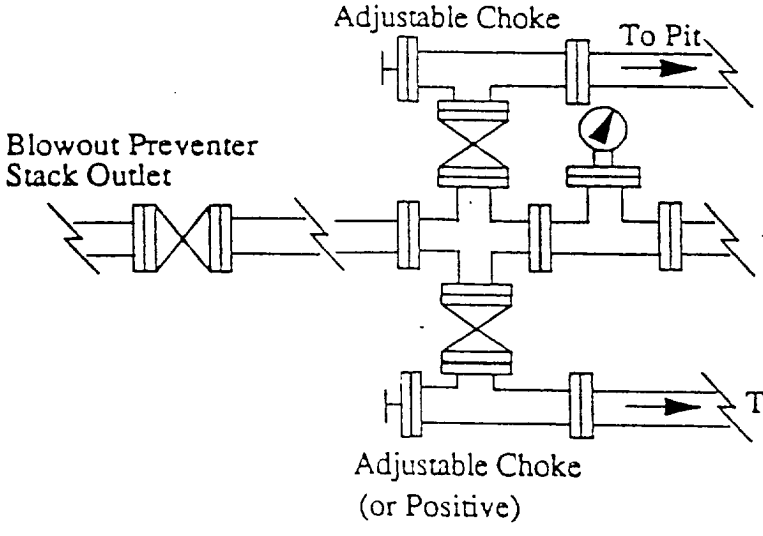
10. Anticipated Starting Date and Duration of Operations:

Road and location work will not begin until approval has been received from the BLM. The anticipated spud date is August 1, 1997. Once commenced, the drilling operation should be finished in approximately 40 days. If the well is productive, an additional 30 days will be required for completion and testing before a decision is made to install permanent facilities.

BOPE SCHEMATIC



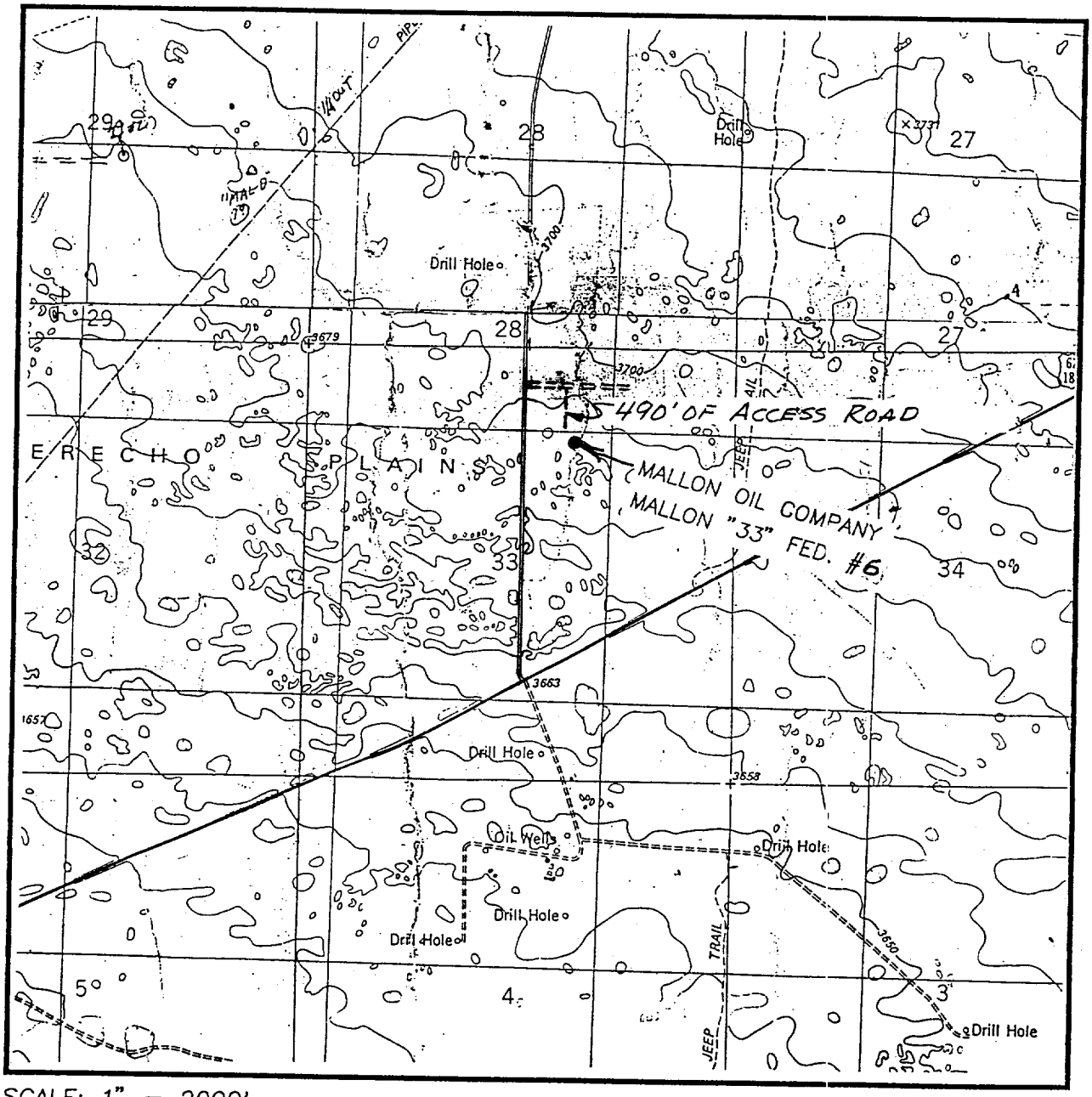
Choke Manifold Requirement (3000 psi WP)



Minimum 4" Nominal choke and kill lines

Exhibit 1

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL – 10'

SEC. 33 TWP. 19-S RGE. 34-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 1140' FNL & 1980' FEL

ELEVATION 3683

OPERATOR MALLON OIL COMPANY

LEASE MALLON "33" FED.

U.S.G.S. TOPOGRAPHIC MAP

LEA, N.M.

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

Exhibit B