

(July 1992)

OPER ORDER NO 13925

PROPERTY NO 2287

UNIT POOL CODE 37584

EFFECT DATE 3/2/98

APPROX NO 30-025-34315

DATE
FILED ON

FORM APPROVED

OMB NO. 1004-0136

UNIT
DEPARTMENT
BUREAU OF LA

APPLICATION FOR PERMIT

1a TYPE OF WORK

Drill



Deepen



b TYPE OF WELL

Oil Well



Gas Well



Other

Single Zone



Multiple Zone



2. NAME OF OPERATOR

Mallon Oil Company

3 ADDRESS AND TELEPHONE NO.

P.O. Box 3256

Carlsbad, NM 88220

(505) 885-4596

4 LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At surface

1980'FNL, 1980' FWL (SE NW) Unit F

At proposed prod. zone

1980'FNL, 1980' FWL (SE NW) Unit F

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

36 miles southwest of Hobbs, New Mexico

15 DISTANCE FROM PROPOSED *

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT

660'

(Also to nearest drlg. unit line, if any)

18 DISTANCE FROM PROPOSED LOCATION *

TO NEAREST WELL, DRILLING, COMPLETED,

1900'

OR APPLIED FOR, ON THIS LEASE, FT

16 NO. OF ACRES IN LEASE

320

17 NO. OF ACRES ASSIGNED
TO THIS WELL

40

19. PROPOSED DEPTH

6200'

20 ROTARY OR CABLE TOOLS

Rotary

21 ELEVATIONS (SHOW WHETHER OF RT, GR, Etc.)

3703' GR

22 APPROX. DATE WORK WILL START

23 PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
25"	20"	0.3 wall	40'	Redi-mix to surface
13-3/4"	9-5/8"	36# WITNESS	1500'	700 sks Lite, 200 sks Class C
8-3/4"	5-1/2"	17# & 15.5#	TD	580 sks Lite, 800 sks Class C

CAPTAN CONTROLLED WATER BASIN

Mallon Oil Company proposes to drill to a depth sufficient to test the Delaware/Bone Springs 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 regulations. Specific programs as per on-shore Oil and Gas Order No. 1 are outlined in the following attachments:

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: Well Site Layout

Exhibit E: Production Facilities

Exhibit F: Archaeological Survey

Submit under separate letterhead

APPROVAL SUBJECT TO
 GENERAL REQUIREMENTS AND
 SPECIAL STIPULATIONS

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If pr

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

Terry Lindeman

TITLE: Production Superintendent

DATE 01/21/98

(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

DATE

*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.

RECEIVED
JAN 28 38
BLM
ROSWELL NM

DRILLING PROGRAM

Attached to Form 3160-3
Mallon Oil Company
Mallon 28 Federal No. 2
1980' FNL, 1980' FWL, Sec. 28, T19S R34E
Lea County, New Mexico

Lease Number: NM-056376

1. Geologic Name of Surface Formation :
Quaternary Alluvium
2. Estimated Tops of Important Geologic Markers

Quaternary Alluvium	Surface
Rustler	1590'
Top of Salt	1720'
Base of Salt	3326'
Yates	3513'
Seven Rivers	3821'
Queen	4516'
Delaware	5800'
Total Depth	6200'

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

Quaternary Alluvium	300'	Fresh Water.
Yates	3513'	Oil
Queen	4516'	Oil
Delaware	5800'	Oil

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 9 5/8" casing at 1500' and circulating cement back to surface. Potash will be protected by setting 5 1/2" casing at total depth and circulating cement back to 1300' from surface.

4. Proposed Casing Program:

<u>Hole Size</u>	<u>Interval</u>	<u>Casing OD</u>	<u>Casing weight grade, Jt., Type Cond</u>
25"	0'-40'	20"	Conductor, 0.25" wall thickness
13-3/4"	0'-1500'	9-5/8"	36# K-55 STC
8-3/4"	0'-5300'	5-1/2"	15.5# K-55 STC
	6200-TD	5-1/2"	17.0# N80 STC

Cement Program:

20" Conductor casing:	Cemented with ready-mix to surface
9 5/8" Surface casing:	Cemented to Surface with 700 sx Pacesetter Lite 6.00% Gel (Bentonite)+0.25 lb/sk Cello-Seal 105.% Fresh Water
5 1/2" Production casing:	<u>Stage #1</u> - Cement with 800 sacks Class "C" + 5 lb/sk CSE + 0.5% CF-14 + 5 lb/sk salt + 5lb/sk Gilsonite + 0.25 lb/sk Cello-Seal + 59.390% fresh water. This cement slurry is designed to bring TOC to 5000'. <u>Stage #2</u> - Cement with 580 sacks Pacesetter Lite, 6.0% Gel (Bentonite) + 5.0% salt + 0.25 lb/sk Cello-Seal + 105.0% fresh water followed with 100 sacks Class "C" cement + 5.0 lb/sk CSE + 5 lb/sk salt + 0.25 lb/sk + Cello-Seal + 5.0 lb/sk Gilsonite + 0.5 % CF-14 + 105.0% fresh water. This cement slurry is designed to bring TOC to 1300'.

5. Minimum Specifications for Pressure Control:

The blowout preventor equipment (BOP) shown in Exhibit #1 will consist of a double ram type (3000 psi WP) preventor. The unit will be hydraulically operated and the ram type preventor will be equipped with blind rams on top and drill pipe rams on bottom. The BOP will be nipped up on the 9-5/8" surface casing and used continuously until TD is reached. BOP and accessory equipment will be tested to 1000 psi before drilling out of surface casing. Pipe 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 2" 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 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)
0-40	Fresh Water (spud)	8.5	40-45	N.C.
0-1500	F.W. (Gel/Lime)	8.5-9.0	32-36	N.C.
1500-TD	Brine Water	10.0	32-34	10-12cc

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) The drilling fluids systems will be visually monitored at all times.

8. Testing, Logging and Coring Program:

Drill Stem Tests:	None Anticipated
Logging:	TD to Surface casing, GR, CNL-FDC, DLL, MSFL
Coring:	None Planned

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

No abnormal pressures or temperatures are anticipated. The proposed mud program will be modified to control excess pressure if abnormal pressures are encountered. The estimated bottom hole temperature (BHT) at TD is 150 F and estimated maximum bottom-hole pressure (BHP) is 3200 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: February 28, 1998

Anticipated completion of Drilling operations: Expected duration of 3 weeks.

MINIMUM BLOWOUT PREVENTER REQUIREMENTS

- 3,000 psi Working Pressure

3 MWP

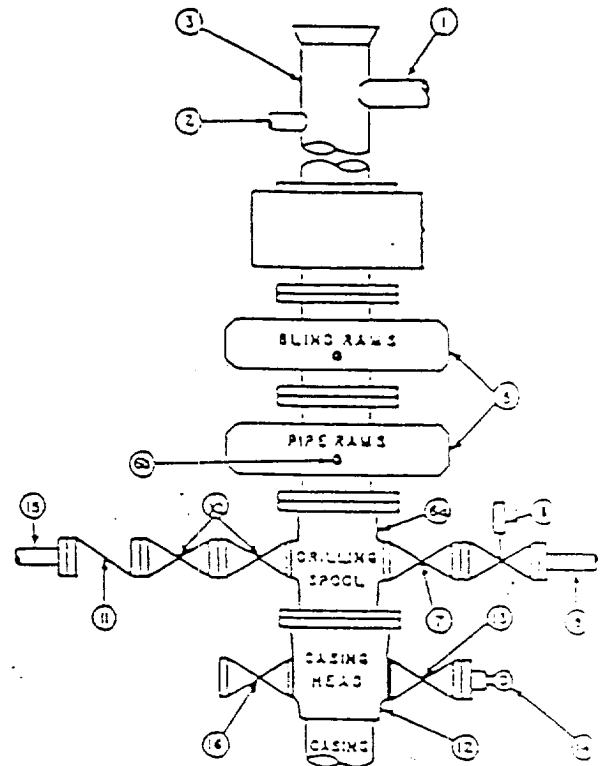
STACK REQUIREMENTS

No.	Item	Min. I.D.	Min. Nominal
1	Flowline		
2	Fill up line		2"
3	Drilling nipple		
4			
5	Two single or one dual hydraulically operated rams		
6a	Drilling spool with 2" min. kill line and 3" min. choke line outlets		
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 3,000 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 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 chokes, 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 (5000 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.

Exhibit 1

Attachment to Exhibit #1
NOTES REGARDING THE BLOWOUT PREVENTERS

1. Drilling nipple to be so constructed that it can be removed without use of a welder through rotary table opening, with minimum ID equal to preventer bore.
2. Wear ring to be properly installed in head.
3. Blow out preventer and all fittings must be in good condition, 3000 psi WP minimum.
4. All fittings to be flanged.
5. Safety valve must be available on rig floor at all times with proper connections, valve to be full bore 3000 psi WP minimum.
6. All choke and fill lines to be securely anchored, especially ends of choke stem.
7. Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.
8. Kelly cock on kelly.
9. Extension wrenches and hand wheels to be properly installed.
10. Blow out preventer control to be located as close to driller's position as feasible.
11. Blow out preventer closing equipment to include minimum 40 gallon accumulator, two independent sources of pump power on each closing unit installation, and meet all API specifications.

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

DISTRICT II
P.O. Drawer 20, 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 3D-025-34315	Pool Code 37584	Pool Name NE Lea Delaware
Property Code 22873	Property Name MALLON "28" FEDERAL	Well Number 2
OGRID No. 13925	Operator Name MALLON OIL COMPANY	Elevation 3703

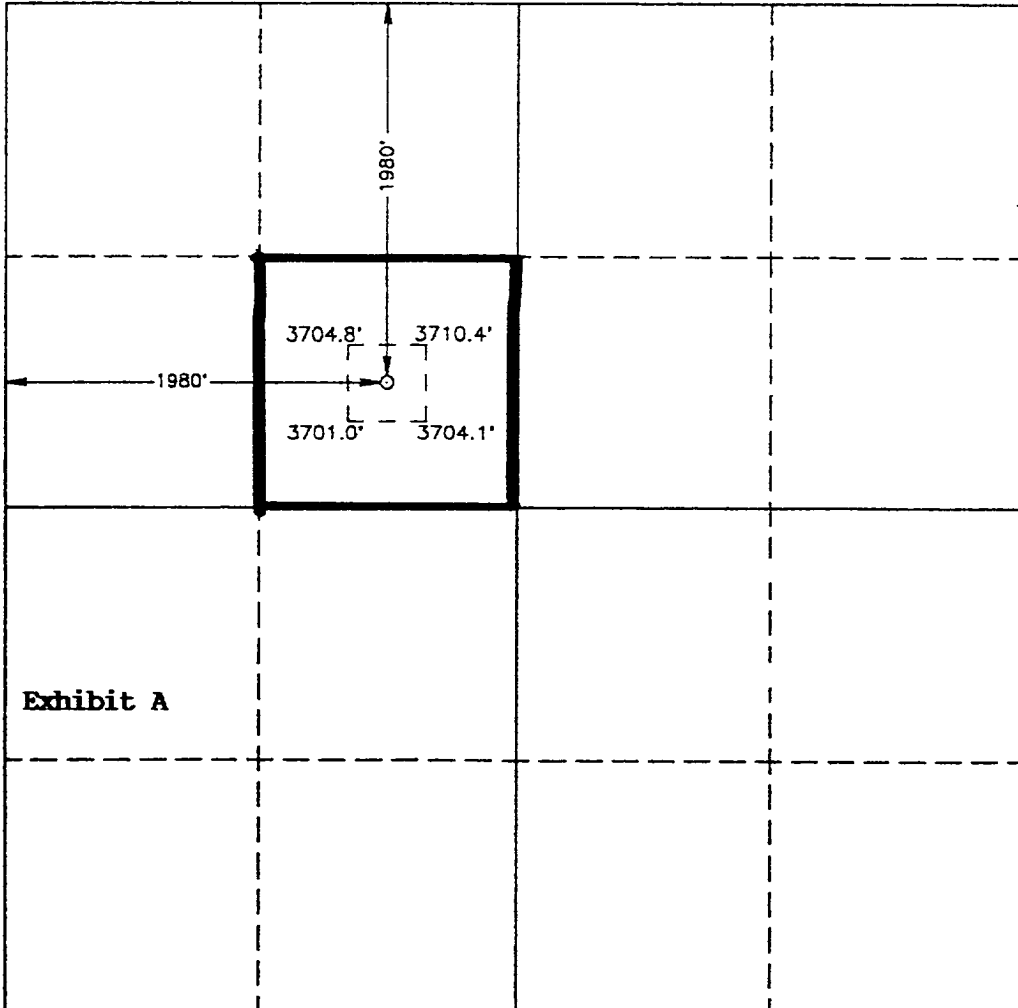

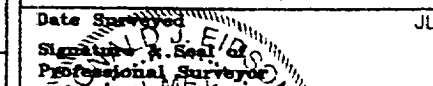
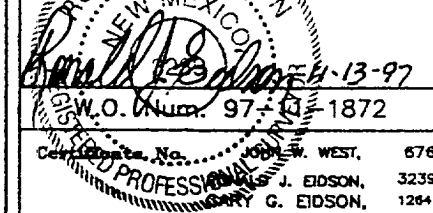
Surface Location

UL or lot No. F	Section 28	Township 19 S	Range 34 E	Lot Idn	Feet from the 1980	North/South line NORTH	Feet from the 1980	East/West line WEST	County LEA
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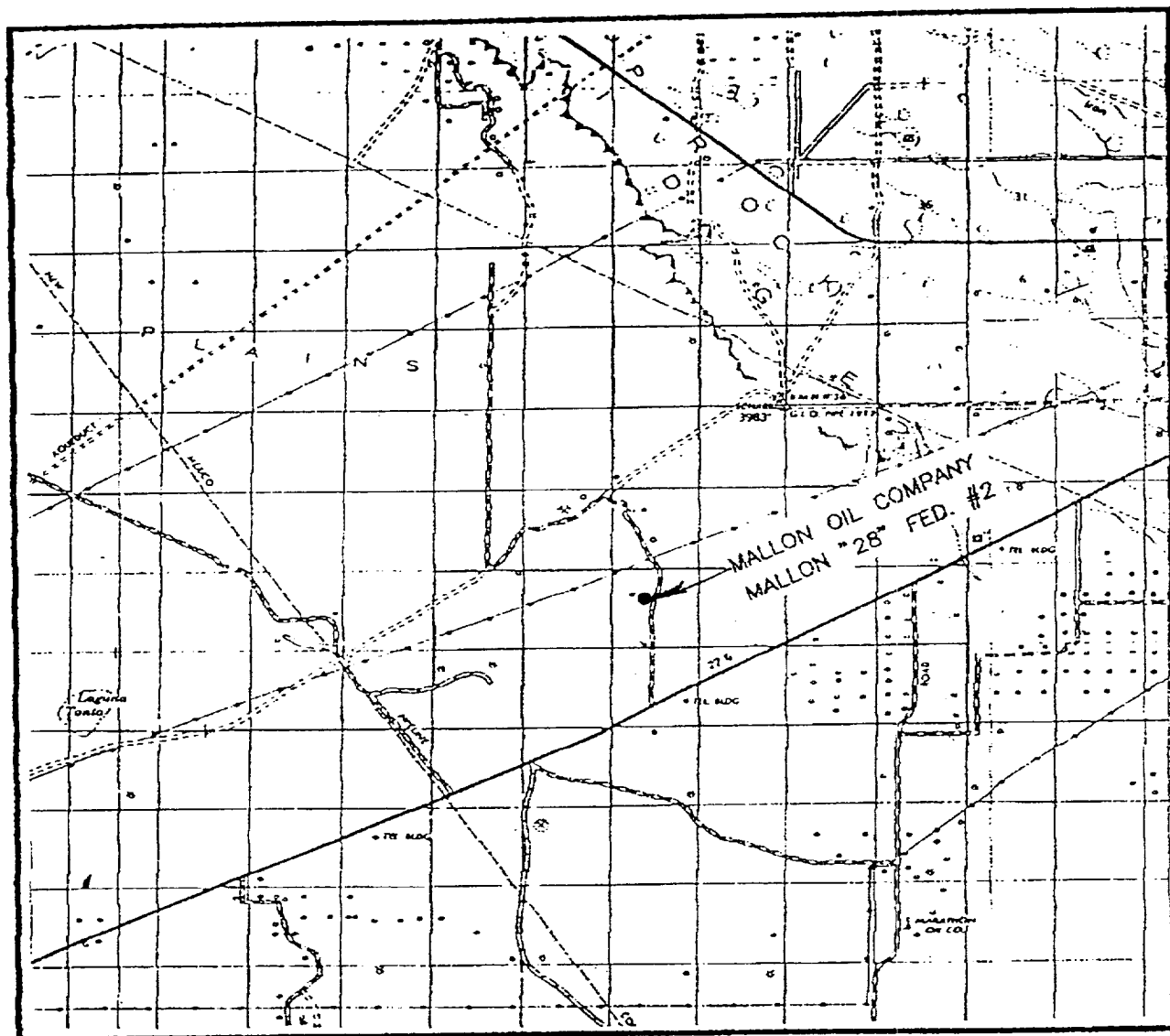
Bottom Hole Location If Different From Surface

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

Exhibit A		OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.  Signature Terry Lindeman Printed Name Production Superintendent Title January 21, 1998 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. NOVEMBER 12, 1997 Date Surveyed  Signature J. Eidson Professional Surveyor  W.O. Num. 97-13-97 1872 Certificate No. J. Eidson, 676 J. Eidson, 3239 G. Eidson, 12641

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 28 TWP. 19-S RGE. 34-E

SURVEY: N.M.P.M.

COUNTY _____ LEA _____

DESCRIPTION 1980' FNL & 1980' FWL

ELEVATION 3703'

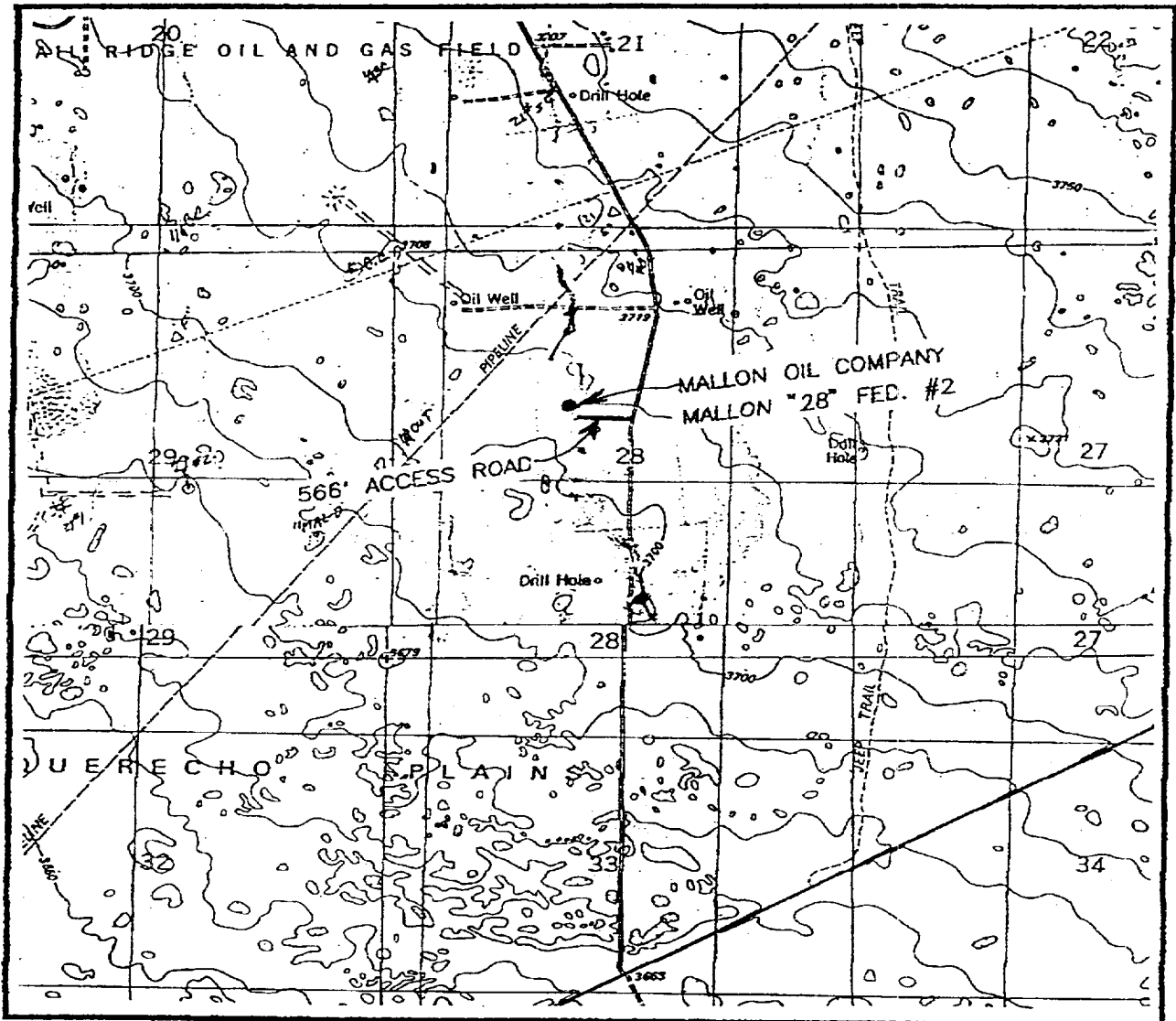
OPERATOR MALLON OIL COMPANY

LEASE MALLON "27" FED.

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

Exhibit B

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL - 10'

SEC. 28 TWP. 19-S RGE. 34-ESURVEY N.M.P.M.COUNTY LEADESCRIPTION 1980' FNL & 1980' FWLELEVATION 3703'OPERATOR MALLON OIL COMPANYLEASE MALLON "27" FED.

U.S.G.S. TOPOGRAPHIC MAP

LEA & IRONHOUSE WELL, N.M.

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