

CONFIDENTIAL

Form 3160-3
(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE
(Other instructions on
reverse side)

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

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

| | | | |
|---|-----------------------|--|---------------|
| 1a. TYPE OF WORK Drill <input checked="" type="checkbox"/> Deepen <input type="checkbox"/> | | 5. LEASE DESIGNATION AND SERIAL NO. JIC 451 | |
| b. TYPE OF WELL Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other <input type="checkbox"/> | | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME Jicarilla Apache | |
| 2. NAME OF OPERATOR Mallon Oil Company | | 7. UNIT AGREEMENT NAME N/A | |
| 3. ADDRESS AND TELEPHONE NO. P.O. Box 2797 Durango, CO 81302 (970) 382-9100 | | 8. FARM OR LEASE NAME, WELL NO. Jicarilla 451-3SJ No. 1 | |
| 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements) At surface 790' FNL and 2500' FEL (NW/NE) Unit B | | 9. API WELL NO. 30-039-96347 | |
| At proposed prod. zone 790' FNL and 2500' FEL (NW/NE) Unit B | | 10. FIELD AND POOL, OR WILDCAT Cabresto Canyon, San Jose ext. | |
| 14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE 54 miles east of Bloomfield, New Mexico | | 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 3, T29N-R03W | |
| 15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. 790' | | 12. COUNTY OR PARISH Rio Arriba | |
| 16. NO. OF ACRES IN LEASE 2,560 | | 13. STATE NM | |
| 17. NO. OF ACRES ASSIGNED TO THIS WELL 156 | | 18. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 100' | |
| 19. PROPOSED DEPTH 1800' | | 20. ROTARY OR CABLE TOOLS Rotary | |
| 21. ELEVATIONS (SHOW WHETHER DF, RT, GR, Etc.) 7124' GR | | 22. APPROX. DATE WORK WILL START 09/01/99 | |
| 23. PROPOSED CASING AND CEMENTING PROGRAM | | | |
| SIZE OF HOLE | GRADE, SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH |
| 12-1/4" | 8-5/8" | 24# | 500' |
| 7-7/8" | 4-1/2" | 14.7# | 1800' |
| | | QUANTITY OF CEMENT | |
| | | Circulate to surface 132.5 - 100% | |
| | | 300 sks 50/50 Poz w/additive | |
| | | 615 yd = 50% excess | |

Mallon Oil Co. proposes to drill this well to an approximate TD of 1800' in the San Jose formation. This well is placed on an existing well pad. Some additional pad extension may be required. The Jicarilla Oil and Gas Administration has waived any necessity of re-onsiting the well pad as long as any required archaeology survey is submitted. Environmental assessment was previously submitted under the initial well APD. If productive, 4-1/2" 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:

Drilling Program

Exhibit 1: Blow Out Preventor Equipment/Plan
Exhibit A: Location and Elevation Plat
Exhibit B: Roads and Pipelines
Exhibit C: One Mile Radius Map

Exhibit D: Drilling Site Layout
Exhibit E: Production Facilities
Exhibit F: H2S Contingency Plan
Exhibit G: Archaeology Report

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: Terry Lindeman TITLE: Operations Superintendent DATE: 07/30/99

(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: David Sitzler TITLE: Acting Asst Field Mgr DATE: JAN 28 2000

*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.

CONFIDENTIAL

DISTRICT I
P.O. Box 1980, Hobbs, N.M. 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, N.M. 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Artesia, N.M. 87410

DISTRICT IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994

Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | | |
|-----------------------------|--|---------------------|--|
| *API Number 30-039-26347 | | *Pool Code 96822 | *Pool Name Cabresto Canyon; San Jose ext. |
| *Property Code 25312 | *Property Name JICARILLA 451-3 S.J. | | *Well Number 1 |
| *OGRM No. 013925 | *Operator Name MALLON OIL COMPANY | | *Elevation 7124' |

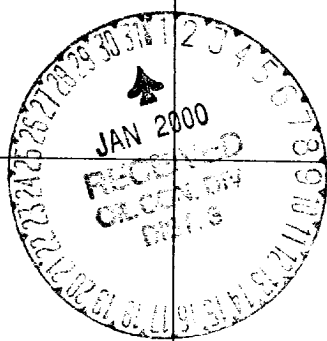
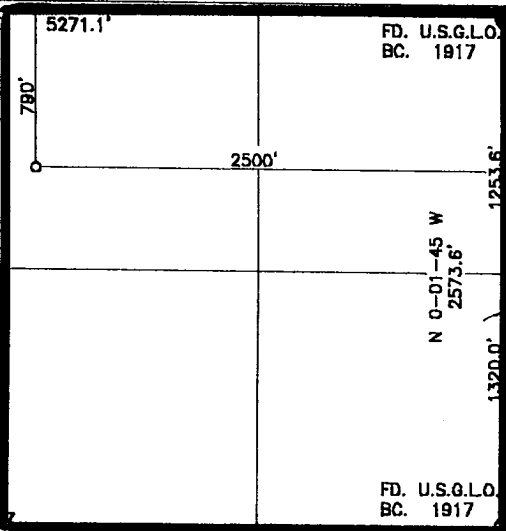



¹⁰ Surface Location

| | | | | | | | | | |
|--------------------|--------------|------------------|--------------|---------|----------------------|---------------------------|-----------------------|------------------------|----------------------|
| UL or lot no. B | Section 3 | Township 29-N | Range 3-W | Lot Idn | Feet from the 790 | North/South line NORTH | Feet from the 2500 | East/West line EAST | County RIO ARRIBA |
|--------------------|--------------|------------------|--------------|---------|----------------------|---------------------------|-----------------------|------------------------|----------------------|

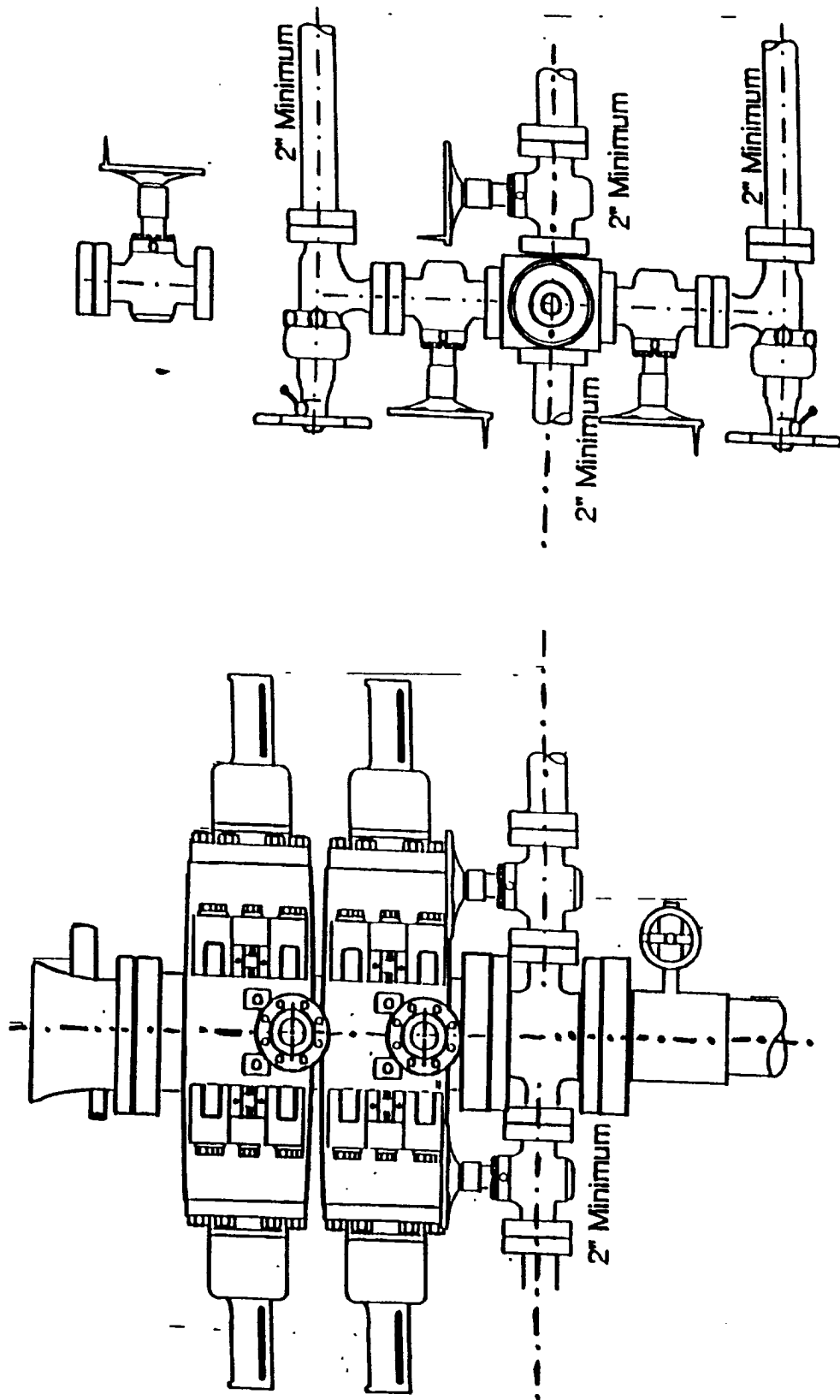
¹¹ Bottom Hole Location If Different From Surface

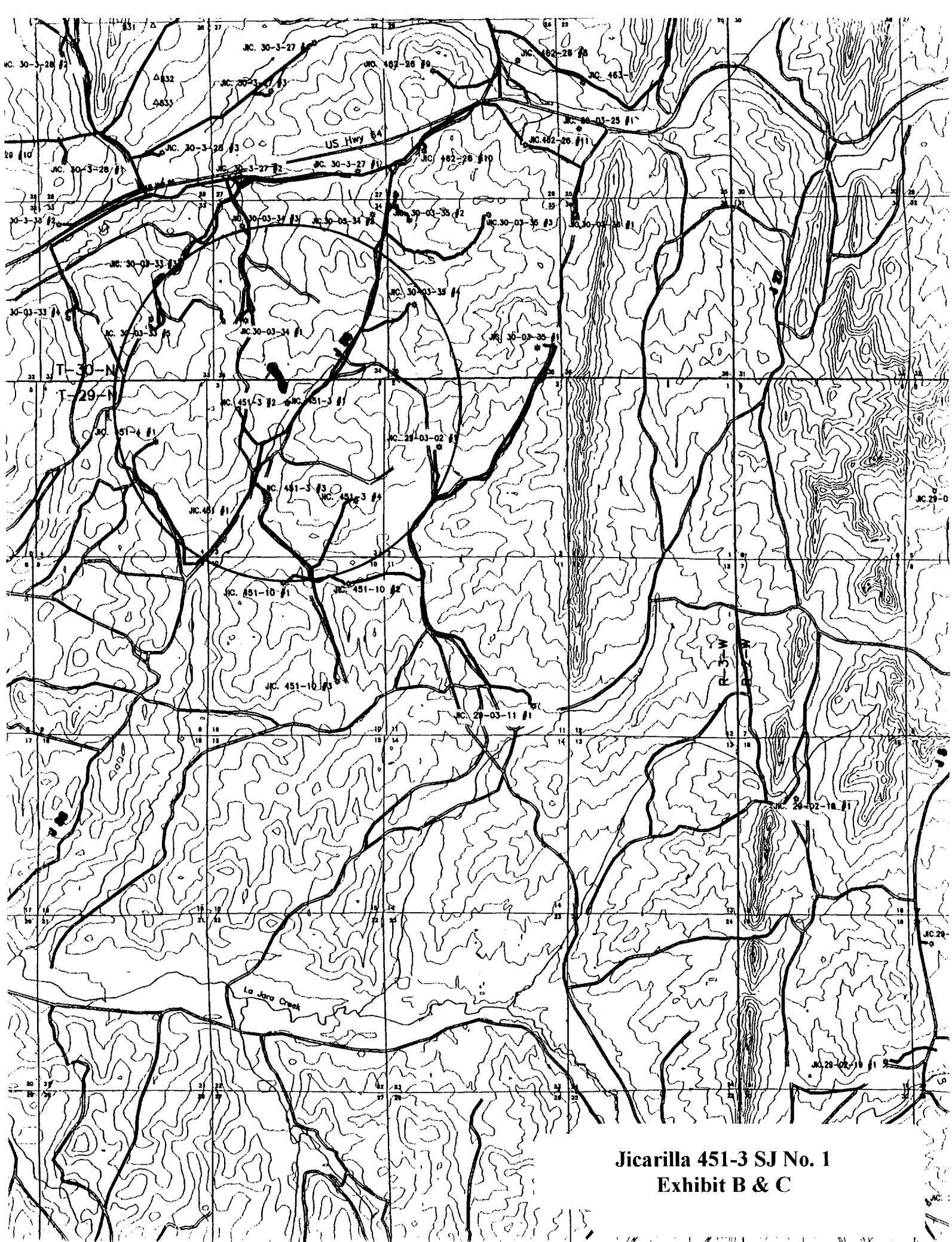
| | | | | | | | | | |
|----------------------------|------------------|---------------------|-------|------------|---------------|------------------|---------------|----------------|--------|
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
| | | | | | | | | | |
| *Dedicated Acres 158.17 | *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

| | | | |
|---|---|------------------------------------|---|
| <p>16 FD. U.S.G.L.O. BC. 1917</p>  | <p>N 89-42-24 E</p>  | <p>FD. U.S.G.L.O. BC. 1917</p> | <p>17 OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p> Signature Terry Lindeman Printed Name Operations Superintendent Title July 30, 1999 Date</p> |
| | | | <p>18 SURVEYOR CERTIFICATION</p> <p>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</p> <p>7-31 Date of Survey  Signature and Seal of Professional Surveyor  8894 Certificate Number</p> |

2-M SYSTEM





Jicarilla 451-3 SJ No. 1
Exhibit B & C

DRILLING PROGRAM

Attached to Form 3160-3

Mallon Oil Company

Jicarilla 451-3SJ No. 1

790' FNL and 2500' FEL (NW/NE) Unit B

Sec. 3, T29N-R3W

Rio Arriba County, New Mexico

LEASE NUMBER: JIC 451

1. Geologic name of surface formation: San Jose

2. Estimated tops of important geologic markers:

| | |
|-------------|---------|
| San Jose | Surface |
| Total Depth | 1800' |

3. Estimated depths of anticipated fresh water, oil, or gas:

| | | |
|----------|-------|-----|
| San Jose | 1500' | 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 8-5/8" casing at 500' and circulating cement back to surface.

4. Proposed casing program:

| <u>Hole Size</u> | <u>Interval</u> | <u>Casing OD</u> | <u>Casing weight, grade, thread</u> |
|------------------|-----------------|------------------|-------------------------------------|
| 12-1/4" | 0-500' | 8-5/8" | 24 lb/ft, K55, ST&C |
| 7-7/8" | 0-1800' | 4-1/2" | 10.5 lb/ft, K55, ST&C |

Cement program:

8-5/8" surface casing: Cemented to surface with Class B containing 2% CaCl₂, 0.25 lb/sk Cello Seal, slurry to be mixed at 15.6 lb/gal, yield 1.18 cu ft/sk. Circulate cement to surface.

4-1/2" production casing: 50/50 Poz with 8 lbs/sk CPS, 5 lbs/sk Gilsonite, .4% FL-62, 3% salt.

Consolidated

5. Minimum specifications for pressure control (2M System):

The blowout preventor equipment (BOP) shown in Exhibit 1 will consist of a double ram-type (2000 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 8-5/8" 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 2000 psi WP rating.

6. Types and characteristics of the proposed mud system:

The well will be drilled to TD with a combination of fresh water and fresh water polymer mud system. The applicable depths and properties of this system are as follows:

| <u>Depth</u> | <u>Type</u> | <u>Weight</u> (ppg) | <u>Viscosity</u> (sec) | <u>Water loss</u> (cc) |
|--------------|------------------|------------------------|---------------------------|---------------------------|
| 0-500' | FW | 8.5 | 30-33 | NC |
| 500-1800' | FW (Gel polymer) | 8.5 - 8.8 | 30-33 | <10 cc |

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, and 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 pressure (BHP) is 250 psig. Hydrogen sulfide gas is anticipated in the San Jose formation and an H₂S drilling plan is attached.

10. Anticipated starting date: September 1, 1999

Anticipated completion of drilling operations: Expected duration of 6 days