

Form 3160-3  
(December 1990)

N.M. OIL CONS. COMMISSION  
P.O. BOX 1980  
HOBBS, NEW MEXICO 88240  
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN: **LICATE\***  
Other instructions on  
reverse side

Form approved,  
Budget Bureau No. 1004-0136  
Expires: December 31, 1991

AUG 30 1993

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☐

DEEPEN ☐

b. TYPE OF WELL

OIL  
WELL ☒

GAS  
WELL ☐

OTHER ☐

SINGLE  
ZONE ☐

MULTIPLE  
ZONE ☐

2. NAME OF OPERATOR

Maralo, Inc.

3. ADDRESS AND TELEPHONE NO.

P.O. Box 832, Midland, Tx 79702 (915) 684-7441

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

At surface 660' FNL & 990' FEL Sec.20, T9S, R35E, Lea Co., N.M.

At proposed prod. zone

same

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

2 mi. NW of Cross Roads New Mexico

15. DISTANCE FROM PROPOSED\*  
LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, FT.  
(Also to nearest drlg. unit line, if any) 660'

16. NO. OF ACRES IN LEASE  
80

17. NO. OF ACRES ASSIGNED  
TO THIS WELL  
40

18. DISTANCE FROM PROPOSED LOCATION\*  
TO NEAREST WELL, DRILLING, COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT.

N.A.

19. PROPOSED DEPTH  
12,700

20. ROTARY OR CABLE TOOLS  
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

GL 4164

22. APPROX. DATE WORK WILL START\*

10/01/93

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2	J-55 13-3/8 LT&C	54.5	450'	550 sx cl "C" circulate to surface
12-1/2	K-55 8-5/8 ST&C	32	4200'	1550 sx Hal-light & 250 Premium, circulate
7-7/8	N-80 5 1/2 LT&C	17	12,700	1 stage 350 sx 50/50 poz
	S-95 5 1/2 LT&C	17		2 stage 425 sx 50/50 poz

- Set 40' of 20" conductor pipe & cement to surface with Redi-mix
- Drill 17 1/2" hole to 450'. Run 450' of J55 ST&C 13-3/8 csg. cement w/500 sx class c cement. 1/2# Flocele per sx. circulate cement to surface. Test csg & wellhead to 500 PSI.
- Drill 12 1/2" hole to 4200'. Run 4200' of 8-5/8 K55 32# ST&C csg. Cement with 100% excess 1550 s Halliburton light 9# salt & 1/2# Flocele/sx tail in with 250 sx premium 2% CaCl. Run fluid caliper or 100% excess. Circulate to surface. Nipple up BOP test csg & BOP to 1500 PSI
- Drill 7-7/8 hole to 12700'. Run 9100' of 595, 5 1/2" 17# LT&C + 3600' of N-80 5 1/2" 17# LT&C csg- cement first stage with 350 sx 50/50 POZ "H" 5# salt/sx + .5% Hela J 9. Both stages 50% excess

Approved Subject to  
Comments and  
Conditions

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

TITLE

AGENT

DATE 6-15-93

(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:

Ron Dunton

AREA MANAGER

APPROVED BY

TITLE

DATE

OCT 27 1993

\*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.

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

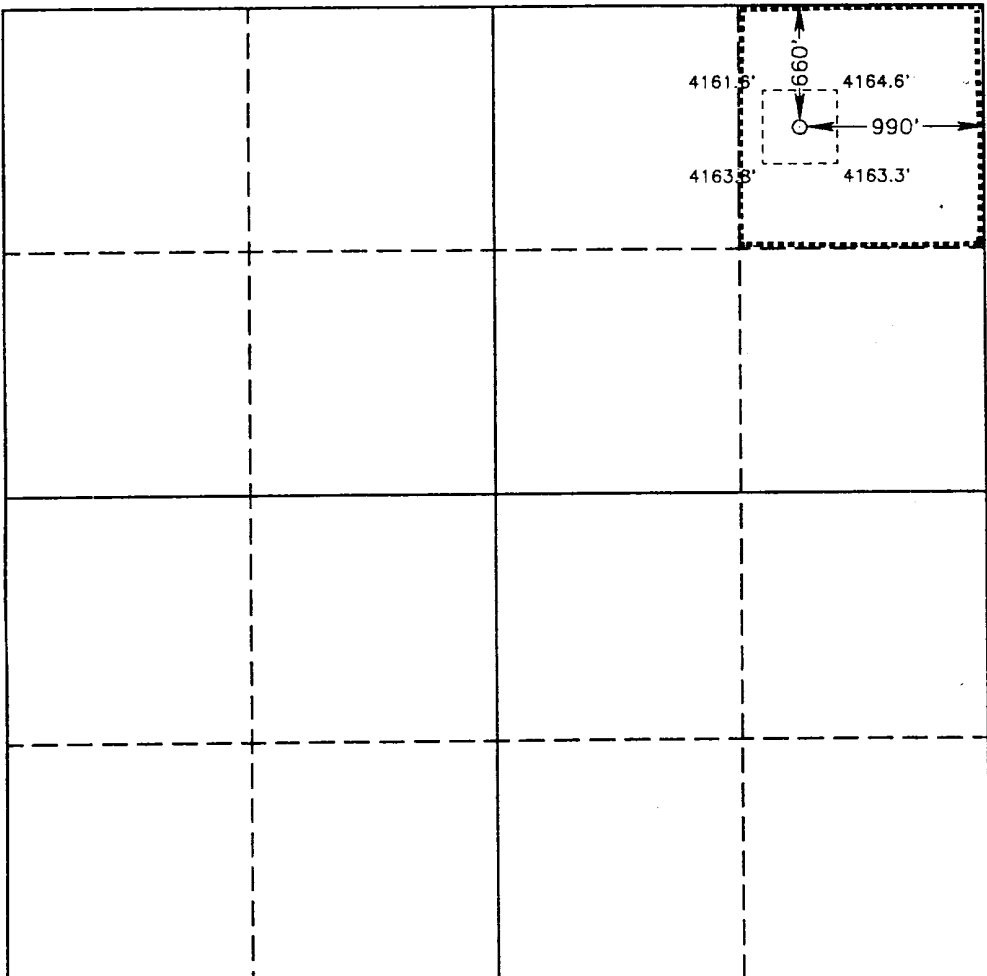
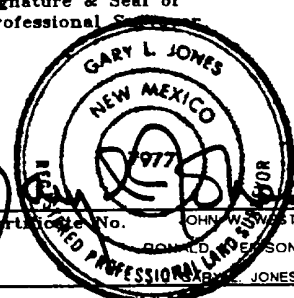
P.O. Drawer DD, Artesia, NM 88210

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 MARALO INC.		Lease S.L. "20" FEDERAL		Well No. 1
Unit Letter A	Section 20	Township 9 SOUTH	Range 35 EAST NMPM	County LEA
Actual Footage Location of Well: 660 feet from the NORTH line and 990 feet from the EAST line				
Ground Level Elev. 4163.9'	Producing Formation Devonian	Pool Jenkins	Dedicated Acreage: 40 Acres	
<p>1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.</p> <p>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).</p> <p>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.?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No If answer is "yes" type of consolidation _____</p> <p>If answer is "no" list of owners and tract descriptions which have actually been consolidated. (Use reverse side of this form necessary. _____)</p> <p>No allowable will be assigned to the well unit all interests have been consolidated (by communitization, unitization, forced-pooling, otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.</p>				
			<b>OPERATOR CERTIFICATION</b>  I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.  Signature _____  Printed Name Joe T. Janica  Position Agent  Company Maralo, INC.  Date 9-23-93	
			<b>SURVEYOR CERTIFICATION</b>  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 JULY 13, 1993  Signature & Seal of Professional Surveyor  Certificate No. JOHN W. WEST, 676 DONALD PERSON, 3239 GARY L. JONES, 7917  93-11-1232	

## APPLICATION TO DRILL

Maralo, Inc.  
S.L. Federal "20" #1  
Section 20, T9S-R35E  
Lea County, New Mexico

In response to questions asked under Section II B of Bulletin NTL-6, the following information is provided for your consideration:

1. Location: 660' FNL, & 990' FEL Section 20, T9S-R35E, Lea Co.,  
New Mexico

2. Elevation Above Sea Level: GL 4164

3. Geologic Name of Surface Formation: Pleistocene Aeolian Deposit

4. Drilling Tools and Associated Equipment: Conventional rotary  
drilling rig using mud for the circulation medium.

5. Proposed Drilling Depth: 12700'

6. Estimated Geological Marker Tops:

Tansill	2200'	Wolfcamp	8780'
Yates	2780'	Penn Lime	10720'
San Andres	4090'	Miss Lime	11825'
Tubb	6890'	Woodford Sh	12545'
Abo	7725'	Devonian	12600'

7. Possible Mineral Bearing Formation:

San Andres	4090'
Abo	8050'
Wolfcamp	8900'
Penn Limestone	10790'
Mississippian LS	11875'
Devonian	12625'

8. Casing Program:

Hole Size	Interval	OD Csg	Weight Thread Grade Condition
25"	0- 40	20"	N/A
17 1/2"	40- 450	13 3/8"	54.5# 8R J-55 New
12 1/4"	450- 4200	8 5/8"	32# 8R J-55 ST&C New
7 7/8"	4200-12700	5 1/2"	3600-12700 17# S-95 LT&C 0-36000 17# N-80 LT&C

Application to Drill  
Marais, Inc.  
S.L. Federal "20" #1

9. Cementing and Setting Depth:  
20" Conductor

Set @ 40' cement to surface w/Redimix

13 3/8" Surface Casing

Set @ 450' cement with 500 sx Class "C"  
1/4# Flocele/sx circulate cement

8 5/8" Intermediate Casing

Set @ 4200' cement with 1550 sx  
Halliburton Light Premium with 9# salt  
per sx 1/4# Flocele/sx tail in with  
250 sx Premium + 2% Cacl circulate  
cement to surface. Run fluid caliper  
to confirm volumes or calculate volume  
+ 100% excess.

5 1/2" Production Casing

Set @ 12700' cement with 400 sx of  
Halliburton Light + 850 sx Poz + tail  
in with 900 sx 50/50 Poz to cover all  
potential pay zones.

10. Pressure Control Equipment: Exhibit "E". A Blow-out Preventer (no less than 900 series) consisting of double ram type preventer with bag type preventer. Units will be hydraulically operated. Exhibit "E-1" Choke Manifold and Closing Unit. Blind rams on top, pipe rams on bottom to correspond with size of drill pipe in use. BOP will be nipped up on 8 5/8" casing and remain on well until casing is run and cemented. BOP will be tested as well as choke manifold. BOP will be worked at least once each day while drilling and blind ram will be worked on trips when no drill pipe is in hole. Flow sensor PVT, full opening stabbing valve and upper kelley cock will be utilized. No pressures greater than 2000 psi anticipated. 3000# working pressure

11. Proposed Mud Circulating System:

Depth	Mud Wt.	Mud Visc.	Fluid Loss	Type Mud
0- 450	8.7 - 9.0	35-38	NC	Spud Mud
450- 2100	8.4 - 9.4	33-35	NC	Fresh water
				Native mud
2100- 4200	10.0 - 10.2	33-35	NC	Native brine
4200 -7500	10.0 - 10.1	26-28	NC	Brine
7500- 9700	9.8 - 10.2	34-38	NC	Salt Gel - Oil
9700-12300	9.6 - 10.2	38-45	15-20cc	My-Lo-Jel
				starch for WL
				control
12300-12700	9.6 - 10.0	40-45	12cc or less	My-Lo-Jel
				starch for WL
				control

To log, core, DST and run casing may have to lower water loss to 12cc or less depending on hole conditions.

Application to Drill  
Maralo, Inc.  
S.L. Federal "20" #1

12. Testing, Logging and Coring Programs:

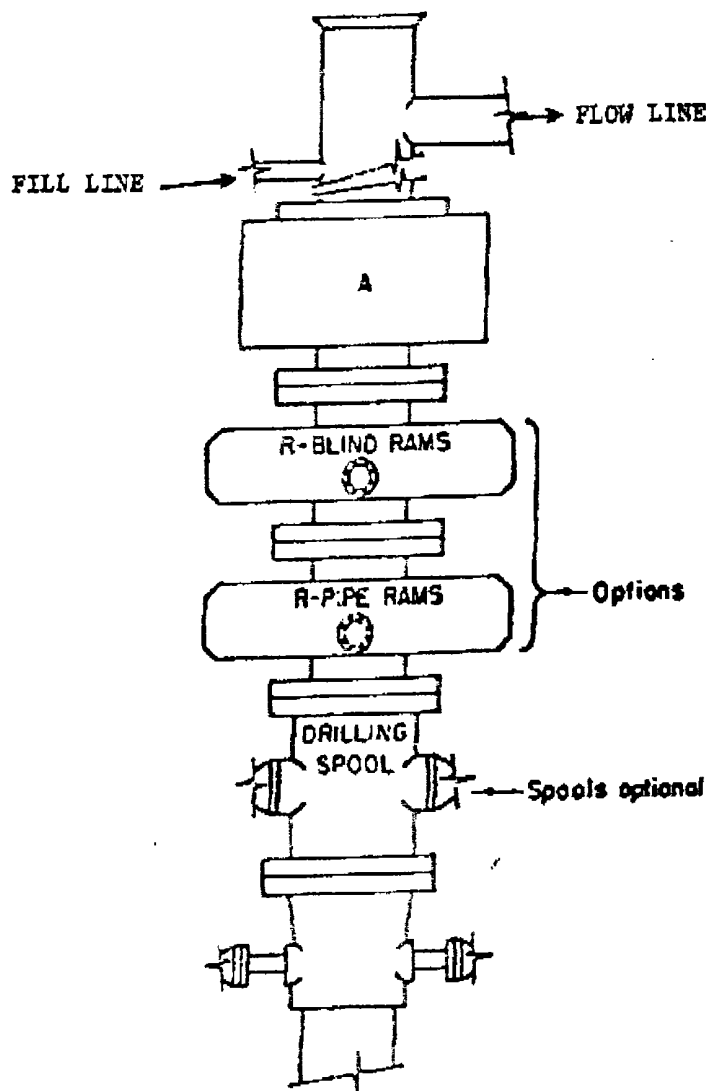
- (A) Possible D.S.T. if shows dictate.
- (B) Open Hole Logs
  - DLL/MSFL/CNL/LDT/GR      From TD to 4200' base of surface casing  
Run Gamma Ray to surface.
  - Dip Meter      From TD to 11500'
  - LSS/Gamma Ray      From TD to surface
- (C) No coring planned.
- (D) Two man mud logging unit will start logging @ 4200' and log to TD.

13. Potential Hazards:

No abnormal pressures of temperature zones expected (nothing abnormal in offset wells or other wells in the area). Hydrogen sulfide gas is not anticipated however, precautions for detection will be observed (See item 13-A - H2S Contingency Plan). No major lost circulation is expected (none reported in this area).

14. Anticipated Starting Date and Duration of Operation: Road and location construction will begin after BLM approval of APD. Anticipated spud date 10/01/93. Drilling expected to take 30 to 40 days. If production casing is run an additional 30 days to complete and construct surface facility and place well on production.

15. Other Facets of Operations: After running casing, cased hole gamma ray collar correlation logs will be run from total depth over possible pay intervals. The Bone Springs pay will be perforated and stimulated. The well will be swab tested and potentialized as an oil well.



**ARRANGEMENT SRRA**

900 series 3000# working pressure

EXHIBIT E  
MARALO, INC.  
BOP Sketch of type to be used on  
S.L. Federal "20" #1  
660' FNL & 990' FKL  
Sec.20, T98, R35E