

N.M. OIL OPER. OGRID NO. 14007  
P. BOX PROPERTY NO. 15522  
HOBBS, N POOL CODE 39366  
UNITED DEPARTMENT C EFF. DATE 8/18/95  
BUREAU OF LAND API NO. 30-025-33064

CATE\*  
on

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

# APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK <b>DRILL</b> <input checked="" type="checkbox"/> <b>DEEPEN</b> <input type="checkbox"/>			5. LEASE DESIGNATION AND SERIAL NO. NM-86147		
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 -----		
2. NAME OF OPERATOR MARALO INC.			7. UNIT AGREEMENT NAME -----		
3. ADDRESS AND TELEPHONE NO. P. O. BOX 832 MIDLAND, TEXAS 79702 PHONE. 915-684-7441			8. FARM OR LEASE NAME, WELL NO. EMERALD FEDERAL # 2		
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*) At surface 1980' FSL & 1650' FWL SEC. 10 T22S-R32E Lea Co. NM At proposed prod. zone Same <b>Unit K</b>			9. AM WELL NO. -----		
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 33 Mi East of Carlsbad, New Mexico			10. FIELD AND POOL OR WILDCAT <b>E. Livingston Ridge Deke</b>		
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any) 330'		16. NO. OF ACRES IN LEASE 340	17. NO. OF ACRES ASSIGNED TO THIS WELL 40		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 10 T22S-R32E
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1600'		19. PROPOSED DEPTH 9000	20. ROTARY OR CABLE TOOLS Rotary		12. COUNTY OR PARISH Lea
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3801 GR. <b>Carlsbad Controlled Water Basin</b>			13. STATE NM		
22. APPROX. DATE WORK WILL START* As soon as approved					

## PROPOSED CASING AND CEMENTING PROGRAM

**Secretary's Potash**

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	K-55 13 3/8"	54.5	1100'	950 Sx Circulate to surface
12 1/4"	K-55 8 5/8"	32	4700'	1700 Sx Circulate to surface
7 7/8"	J-55 5 1/2"	17	9000'	1100 Sx Bring Cem. back to 4600'

1. Drill 17 1/2" hole to 1100'. Run and set 1100' of 13 3/8" K-55 54.5# ST&C Casing. Cement with 950 Sx Class "C" cement + 2% CaCl circulate to surface.
2. Drill 12 1/4" hole to 4700'. Run and set 4700' of 8 5/8" K-55 32# ST&C casing. Cement with 1500 Sx. Halliburton Light, tail in with 250 Sx. of Premium neat cement circulate to surface.
3. Drill 7 7/8" hole to 9000'. Run and set 9000' of 5 1/2" J-55 17# LT&C casing. Cement with 1000 Sx. Premium 50/50 POX cement, bring cement back to at least 4600'.

and is subject to  
General Requirements and  
Special Stipulations  
Attached

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.

23. SIGNED Joe T Janica TITLE Agent DATE 05/29/95  
(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 Albert J. Lucero TITLE Acting State Director DATE 8-9-95  
\*See Instructions On Reverse Side

RECEIVED  
NOV 1 1995

NOV 1 1995  
1-2 PM  
1995

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

DISTRICT IV  
PO BOX 2088, SANTA FE, NM 87504-2088

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised February 10, 1994  
Instruction on back  
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 <b>30-025-33064</b>	Pool Code 39366	Pool Name Livingston Ridge East-Delaware
Property Code 15522	Property Name EMERALD FEDERAL	Well Number 2
OGRID No. 14007	Operator Name MARALO INC.	Elevation 3801

Surface Location


UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	10	22 S	32 E		1980	SOUTH	1650	WEST	LEA

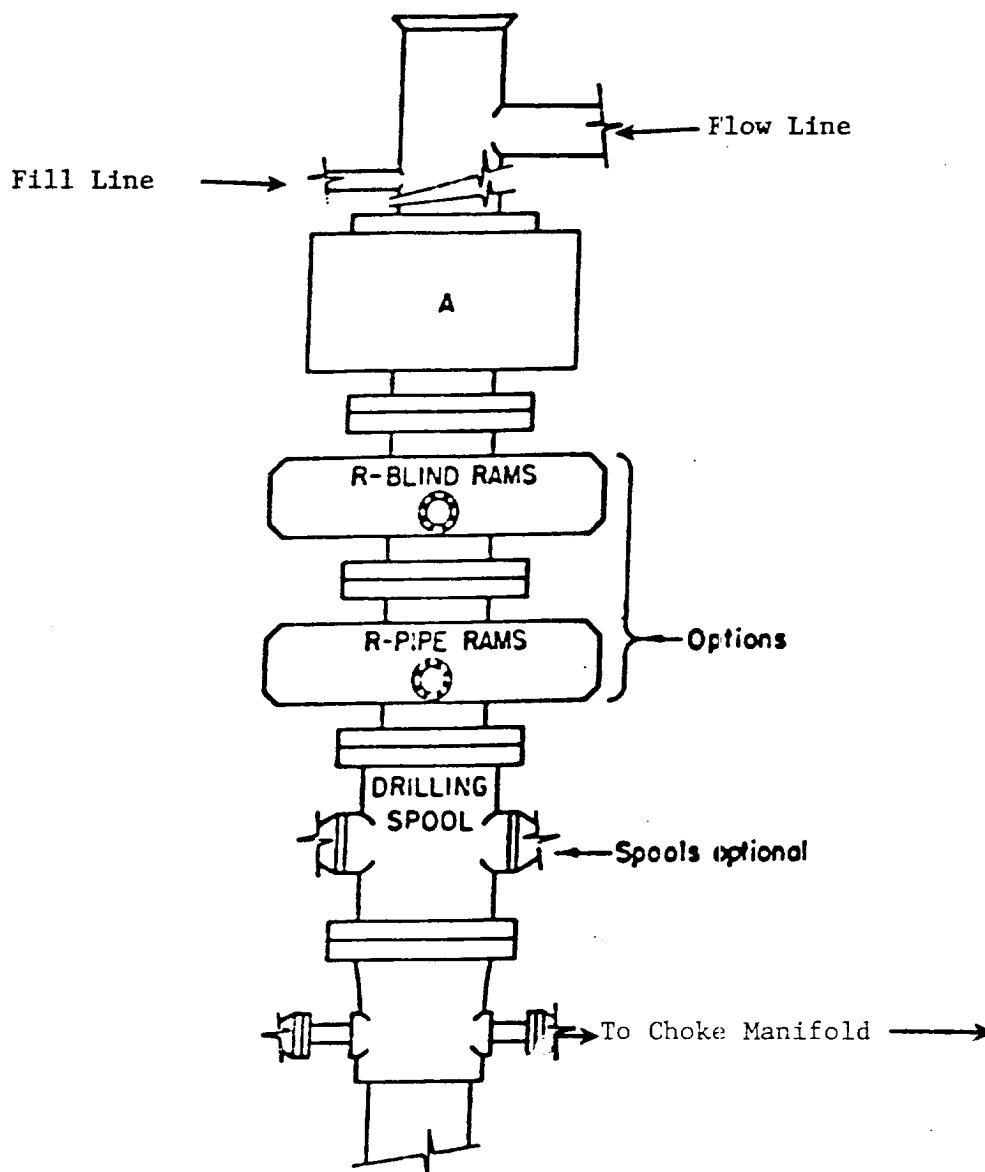
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres 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

	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Joe T. Janica</i> Signature</p> <p>Joe T. Janica Printed Name</p> <p>Agent</p> <p>Title</p> <p>05/31/95 Date</p>
	<p>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>MAY 25, 1995</p> <p>Date Surveyed</p> <p>Signature &amp; Seal of Professional Surveyor</p> <p><i>Ronald J. Eidson</i> Professional Surveyor</p> <p>W.O. Num. 95-0825</p> <p>Certificate No. 676 JONN J. WEST RONALD J. EIDSON GARY EIDSON</p>



### ARRANGEMENT SRRA

1500 Series  
5000# Working Pressure

EXHIBIT "E"  
B.O.P. SKETCH TO BE USED ON  
MARALO INC.  
EMERALD FEDERAL # 2  
1980' FSL & 1650' FWL SEC. 10  
T22S-R32E LEA CO. NM

RECEIVED

ADJ. GEN.  
U.S. HOUSE  
OFFICE

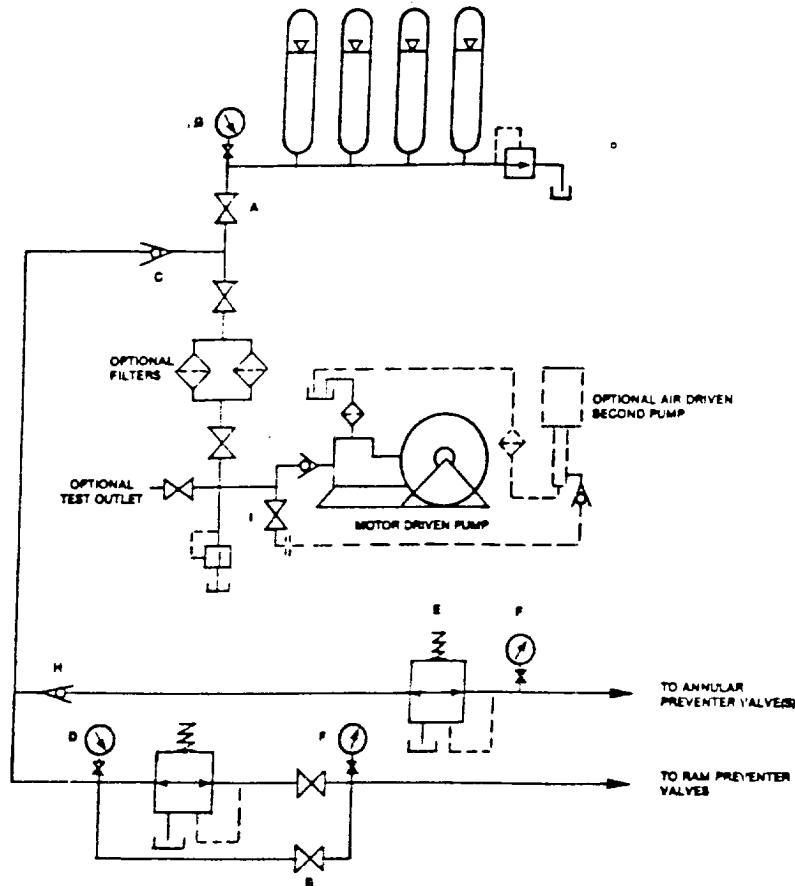


FIGURE K6-1. The schematic sketch of an accumulator system shows required and optional components.

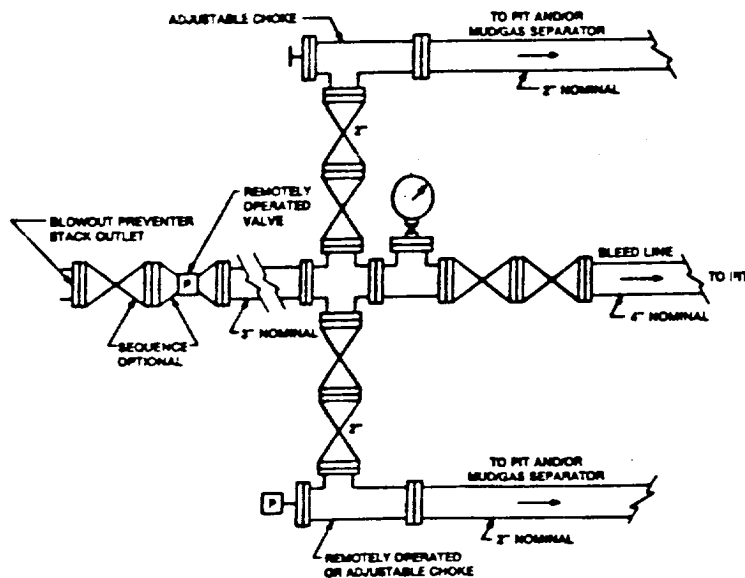


FIGURE K4-2. Typical choke manifold assembly for 5M rated working pressure service — surface installation.

EXHIBIT "E-1"  
CHOKE MANIFOLD & CLOSING UNIT

MARALO INC.  
EMERALD FEDERAL # 2  
1980' FSL & 1650' FWL SEC. 10  
T22S-R32E LEA CO. NM

## APPLICATION TO DRILL

MARALO INC.  
EMERALD FEDERAL # 2  
1980' FLS & 1650' FWL SEC. 10  
T22S-R32E LEA CO. NM

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

1. Location: 1980' FSL & 1650' FWL SECTION 10 T22S-R32E LEA CO.  
New Mexico
2. Elevation Above Sea Level: 3801 GR.
3. Geologic Name of Surface Formation: Quaternary Aeolian Deposits
4. Drilling Tools and Associated Equipment: Conventional rotary  
drilling rig using mud for the circulation medium.
5. Proposed Drilling Depth: 9000'
6. Estimated Geological Marker Tops:  
Castile 2770'  
Bell Canyon 4842'  
Cherry Canyon 5790'  
Brushy Canyon 6990'  
Bone Springs 8775'
7. Possible Mineral Bearing Formation:  
Brushy Canyon Oil

### 8. Casing Program:

Hole Size	Interval	OD Csg	Weight	Thread	Collar	Grade	Cond.
17½"	0-1100	13 3/8"	54.5#	8-R	ST&C	K-55	New
12¼"	1100-4700	8 5/8"	32.0#	8-R	ST&C	K-55	New
7 7/8"	4700-9000	5½"	17.0#	8-R	LT&C	J-55	New

RECEIVED

AUG 17 1995

JOJO HUBBS  
OFFICE



# APPLICATION TO DRILL

MARALO INC.

EMERALD FEDERAL # 2

1980' FSL & 1650' FWL SEC. 10

T22S-R32E LEA CO. NM

## 9. Cementing and setting depth:

20" Conductor	Set @ 40' cement with Redi-mix to surface
13 3/8" Surface Casing	Set @ 1100' cement with 950 Sx Class "C" plus additives circulate to surface.
8 5/8" Intermediate Casing	Set @ 4720' cement with 1500 Sx Hal-light tail in/200 Sx. neat circulate to surface.
5 1/2" Production Casing	Set @ 9000' Cement with 350 Sx Halliburton light + 6# salt tail in with 750 Sx 50/50 POZ + 6# salt/sx .5% Halad 22, .3% CFR2. Bring cement back to 4600' 100' into 8 5/8" casing.

10. Pressure Control Equipment: Exhibit "E". A Blow-out Preventer (no less than 1500 series 5000 psi working pressure) 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 13 3/8 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 3000 psi anticipated.

## 11. Proposed Mud Circulating System:

Depth	Mud Wt.	Mud Visc.	Fluid Loss	Type Mud
0-1100	8.6-9	34-36	NC	Spud mud
1100-4700	10.1-10.2	28-29	NC	Brine water
4700-7000	9.0-9.2	28-29	20-30 CC	Cut brine with starch for water loss control.
7000-9000	9.0-9.5	29-35	10 CC or less	Cut brine with starch for water loss control.

Sufficient mud materials to maintain mud properties, meet lost circulation and weight increase requirements will be kept at wellsite at all times. In order to run casing and log well viscosity may have to be raised and water loss may have to be lowered.

RECEIVED

NOV 17 1995

U.S. DEPT. OF JUSTICE  
FEDERAL BUREAU OF INVESTIGATION

APPLICATION TO DRILL

MARALO INC.

EMERALD FEDERAL # 2

1980' FSL & 1650' FWL SEC. 10

T22S-R32E LEA CO. NM

12. Testing, Logging and Coring Programs:

- A. No cores or DST'S are planned.
- B. Open hole logs will be run. CNL/ LDT/GR from TD to casing shoe GR to surface. DLL/GR/MSFL from TD over pay section.
- C. Cased hole logs will be run from TD over pay section for correlation in order to complete well.

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. No major lost circulation is expected (none reported in this area). H2S contingency attached "13-A".

14. Anticipated Starting Date and Duration of Operation: Road and location construction will begin after BLM approval of APD. Anticipated spud date 7/1/95 . Drilling expected to take 20 to 27 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 Delaware pay will be perforated and stimulated. The well will be swab tested and potentialized as an oil well.

RECEIVED

1945  
OUR PUBLIC  
OFFICE