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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101
Revised 1-1-65

5A. Indicate Type of Lease	
STATE <input checked="" type="checkbox"/>	FEE <input type="checkbox"/>
5. State Oil & Gas Lease No.	
L-3514	

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work		7. Unit Agreement Name	
b. Type of Well OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		8. Farm or Lease Name CHAVELEA-CARSON	
2. Name of Operator MARALO, INC.		9. Well No. 2	
3. Address of Operator P. O. Box 832, Midland, Texas 79702		10. Field and Pool, or Wildcat Wildcat	
4. Location of Well UNIT LETTER <u>G</u> LOCATED <u>1980</u> FEET FROM THE <u>North</u> LINE AND <u>1980</u> FEET FROM THE <u>East</u> LINE OF SEC. <u>16</u> TWP. <u>9-S</u> RGE. <u>31-E</u> NMPM		12. County Chaves	
19. Proposed Depth 11,000'		19A. Formation Morrow	
20. Rotary or C.T. Rotary		21. Elevations (Show whether DF, RT, etc.) 4244.3 GR	
21A. Kind & Status Plug. Bond Current Blanket		21B. Drilling Contractor Forster Drilling Co.?	
22. Approx. Date Work will start As rig available			

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
17 1/2"	13 3/8"	48#	450	500	Surface
11"	8 5/8"	24 & 32#	3350	1300	Surface
7 7/8"	5 1/2"	17#	TD	4000(2 Stages)	3000'

SEE ATTACHED PROGNOSIS FOR COMPLETE DETAILS

APPROVAL VALID
FOR 90 DAYS UNLESS
RENEWED OR COMMENCED

8-11-77

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed Jack L. Lamm Title Manager-Engineer Date 12 May 1977
(This space for State Use)

SUPERVISOR DISTRICT

MAY 16 1977

APPROVED BY [Signature] TITLE DATE
CONDITIONS OF APPROVAL, IF ANY:

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

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form O-102
Supersedes O-128
Effective 1-1-65

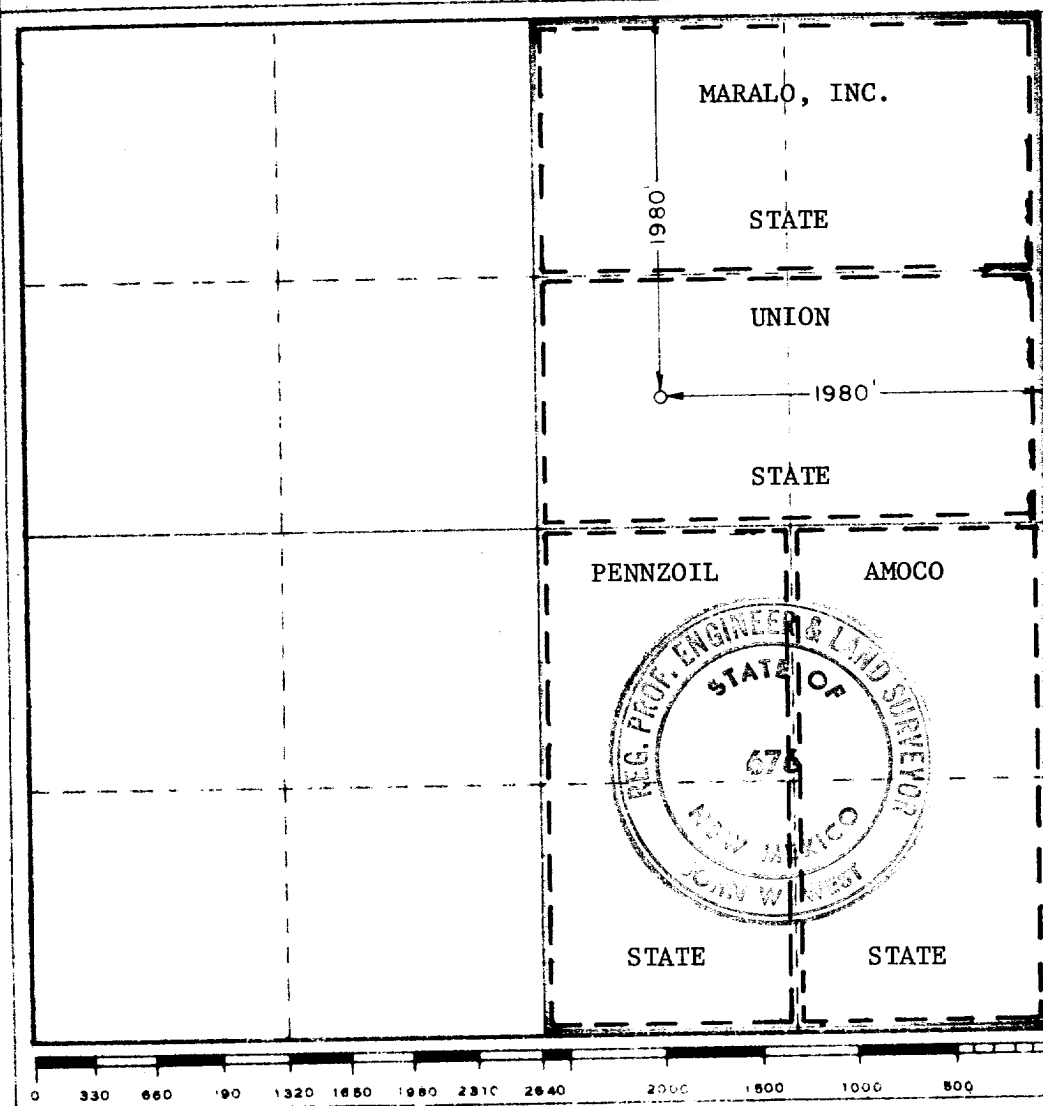
All distances must be from the outer boundaries of the Section

Operator MARALO INC.		Lease CHAVE LEA CARSON		Well No. 2
Unit Letter G	Section 16	Township 9 South	Range 31 East	County Chaves
Actual Footage Location of Well: 1980 feet from the North line and 1980 feet from the East line				
Ground Level Elev. 4244.3	Producing Formation Atoka-Morrow Test	Fluid Wildcat	Estimated Average 320	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
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).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☒ *No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated (if so reverse side of this form if necessary.) As noted on plat *Owners have agreed to communitization after completion of successful well.
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

John D. Simon
Manager-Engineer

MARALO, INC.

12 May 1977

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
May 3, 1977

Registered Professional Engineer and Land Surveyor

John W. West
Certified to

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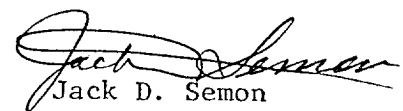
MAY 12 1977

OIL COMMISSION
HON. H. M. COMMA

PROGNOSIS

FOR

MARALO, INC.
CHAVELEA-CARSON NO. 2
CHAVES COUNTY, NEW MEXICO


Jack D. Semon
12 May 1977

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OL. COMM. DIV. / COMMA.
FBI, L. A.

Operator: MARALO, INC.

Lease and Well No.: CHAVELEA-CARSON NO. 2

Location: 1980' FNL & 1980' FEL, Section 16, T-9-S, R-31-E,
Chaves County, New Mexico

Elevation:

Surface Casing:

17 1/2" hole is to be drilled to 450'± using a fresh water gel-lime mud (8.5 to 8.8 PPG, 34 to 36 sec vis, NC on water loss).

Casing setting as follows (assuming 450' as setting depth):

Description	Thds Off Length	From	To
Rotary Correction	12	0	12
13 3/8" OD, 48#/ft, H-40, ST&C	398	12	410
13 3/8" OD, 48#/ft, H-40, ST&C	39	410	449
Howco type M guide shoe	1	449	450

The bottom three (3) joints are to be sand blasted to remove mill scale and lacquer and are to be welded and sealed with Howco-weld A. Positive type centralizers are to be used; one set on each of the bottom three (3) joints. API modified thread lubricant is to be used on the casing threads.

Casing is to be cemented to the surface using 500 sacks Class "C", 2% CaCl cement.

(slurry wt 15.0 PPG, slurry volume 1.324 CF/sack; 6.3 gal mixing wtr per sack; 3 hrs pumping time)

A W.O.C. time of twelve (12) hours, after plug is down, will be observed.

Prior to drilling the float, the casing is to be displaced with 10.0 PPG brine, and the casing is to be pressure tested to 500 psi for 30 minutes. After drilling the shoe the casing is again to be pressure tested to 500 psi for 30 minutes.

Intermediate Casing:

11" hole is to be drilled to 3350'±

(Actual casing point is to be determined by geologist on location and below the top of the San Andres formation. Sufficient to case off incompetent zones.)

using a 10.0 PPG brine (28 to 35 sec vis, NC on water loss) using

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MARALO, INC.
CHAVELEA-CARSON NO. 2
CHAVES COUNTY, NEW MEXICO

Intermediate Casing (Cont'd):

lime for pH control. A flosal sweep should be used to insure clean hole conditions.

Casing setting as follows (assuming 3350' as setting depth):

Description	Thds Off Length	From	To
Rotary Correction	11	0	11
8 5/8" OD, 24#/ft, K-55, ST&C Csg	2135	11	2146
8 5/8" OD, 24#/ft, K-55, (ST Collar X LT Pin)	40	2146	2196
8 5/8" OD, 32#/ft, K-55, LT&C Csg	1110	2196	3306
Float Collar	2	3306	3308
8 5/8" OD, 32#/ft, K-55, LT&C Csg	40	3308	3348
Float Shoe, Howco down jet *	2	3348	3350

(NOTE: 32#/ft casing is to be drifted for 7 7/8" bit)

* Float shoe is to have lateral exits for cement as it is intended to rest part of casing weight on bottom.

The bottom three (3) joints are to be sand blasted to remove mill scale and lacquer and, in addition, are to be welded and sealed with Howco-weld A. Positive type centralizers are to be used; one set on each of the bottom three (3) joints. API modified thread lubricant is to be used on casing threads.

Prior to running the 8 5/8" OD casing a volume meter is to be run to determine the actual cement volume required.

Casing is to be cemented with Halliburton light cement with 5# gilsonite and 10# salt per sack (slurry wt 12.9 PPG, slurry volume 1.963 CF/sack; 9.9 gal mixing water per sack; 3 hrs pumping time) followed by 300 sacks Class "C", 2% CaCl (slurry wt 15.0 PPG, slurry volume 1.31 CF/sack; 6.2 gal mixing water per sack; 3 hrs pumping time).

A W.O.C. of twelve (12) hours, after plug is down, will be observed.

Prior to drilling the float collar, the casing is to be displaced with 9.9 to 10.0 PPG brine water and pressure tested to 600 psi for 30 minutes. After drilling the float shoe, the casing is again to be tested to 600 psi for 30 minutes.

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HONOLULU, HI. 96814

MARALO, INC.
CHAVELEA-CARSON NO. 2
CHAVES COUNTY, NEW MEXICO

Production Casing:

7 7/8" hole is to be drilled from the 8 5/8" OD casing seat to total depth. A 10.0 PPG brine water, using lime for pH control, is to be used. At approximately 6800' the hole is to be mudded up with salt water gel and 5% oil by volume (40 to 45 sec vis, NC on water loss). At approximately 9000' the water loss is to be reduced to 10 to 15 cc. Appropriate corrosion inhibitors are to be used.

5 1/2" OD casing is to be set at total depth if commercial shows are encountered; actual setting depth may vary. Estimated casing setting is as follows:

Description	Thds Off Length	From	To
Rotary Correction	10	0	10
5 1/2" OD, 17#/ft, N-80, LT&C Csg	1783	10	1793
5 1/2" OD, 17#/ft, K-55, LT&C Csg	5707	1793	7500
Howco DV Stage Cementing Tool	3	7500	7503
5 1/2" OD, 17#/ft, K-55, LT&C Csg	493	7503	7996
5 1/2" OD, 17#/ft, N-80, LT&C Csg	2560	7996	10,556
Float Collar	2	10,556	10,558
5 1/2" OD, 17#/ft, N-80, LT&C Csg	40	10,558	10,598
Float Shoe, down jet type *	2	10,598	10,600

* Float shoe is to be equipped with lateral exits as it is intended to rest part of the casing weight on bottom.

5 1/2" OD casing is to be inspected using a combination mechanical optical and magnetic particle full length; in addition, the casing is to be drifted.

The bottom three (3) joints are to be sealed with Howco-weld A. API modified thread lubricant is to be used on casing threads.

Positive type centralizers are to be used on bottom three (3) joints and are to be included over any possible prospective pay zones. Casing is also to be sand blasted to remove mill scale and lacquer across any prospective zones and bottom three (3) joints.

Prior to running the 5 1/2" casing, a caliper survey is to be run to determine actual cement volumes. Cement is to be calculated to fill the annulus to 3000' on the second stage. Casing will be cemented in two (2) stages as follows:

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WASHINGTON, D.C. 20540

MARALO, INC.
CHAVELEA-CARSON NO. 2
CHAVES COUNTY, NEW MEXICO

Production Casing (Cont'd):

First Stage: Class "H" cement with 0.8% HALAD-22 and 6# KCl per sack (slurry wt 15.9 PPG, slurry volume 1.21 CF/sack; 5.2 gal mixing water per sack; 3 hrs pumping time). Cement volume is to fill from casing shoe to DV stage cementing tool.

NOTE: Open DV tool and circulate out excess cement above tool --- then circulate slowly 8 hours while W.O.C. before beginning second stage.

Second Stage: Class "H", pozmix A 50-50 2% gel with 0.6% HALAD-22 and 5# salt per sack (slurry wt 14.5 PPG, slurry volume 1.28 CF/sack; 5.7 gal mixing water per sack; 3 hrs pumping time).

After the second stage plug is down the 5 1/2" OD casing is to be cut off, equipment nipped down and the rig released.

Completion:

Completion procedure will be determined after total depth is reached and zones of interest have been evaluated.

Logging:

Mud Logging Unit	8 5/8" Csg Seat to TD
GR-Compensated Neutron	Surface to TD
Dual Laterolog	8 5/8" Csg Seat to TD
Density	8 5/8" Csg Seat to TD
Microlaterolog	Selected Intervals

Drill Stem Tests:

DST's in the Morrow are anticipated; however, the exact number will be as required by the Geological Department when zones of interest are encountered.

Samples and Drilling Time:

10' drill cutting samples will be required from 2200' to TD.

10' drilling time will be required from surface to TD.

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CHL COG
ROSS, R. W.

MARALO, INC.
CHAVELEA-CARSON NO. 2
CHAVES COUNTY, NEW MEXICO

Estimated Formation Tops:

Rustler	1325
Yates	1900
San Andres	3125
Glorieta	4545
Tubbs	6022
Abo	6902
Wolfcamp	8017
Bell Zone	8687
Atoka	9647
Morrow	9907
Mississippian	10,590

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12 May 1977

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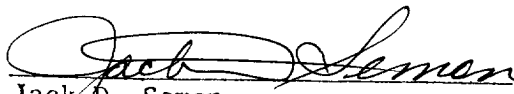
12/14/1977

U.S. COAST & GEOD. SURV.
HOBBS, N. M.

MARALO, INC.
CHAVELEA-CARSON NO. 2
CHAVES COUNTY, NEW MEXICO

- (1) Existing roadway to the Maralo, Inc., Chavelea-Carson No. 1 will be utilized. New roadway will be constructed due south from the Chavelea-Carson No. 1 approximately 4300' thence west approximately 4000' to the Chavelea-Carson No. 2 location. All construction to be on state land. See attached map for details.
- (2) Production facilities, if a commercial well is realized, will be constructed on the extreme edge of the drilling pad.
- (3) Water, both fresh and brine, will be trucked to the drill site. Water to be purchased from a commercial source.
- (4) Materials for construction of access roadway and location will be secured from state land; pit approximately 2 1/2 miles distant.
- (5) No ancillary facilities are proposed.
- (6) After completion of operations all waste materials will be disposed of through burial to a sufficient depth. Liquids will be trucked to proper disposal facilities.
- (7) Surface of land will be restored to original conditions acceptable to Bureau of Land Management.
- (8) Well site layout -- as attached diagram.
- (9) Well control sketch -- as attached diagram.
- (10) OPERATORS representative designated as Cecil Evans, Production Superintendent, P. O. Box 832, Midland, Texas 79702; Telephone - 915-684-7441 (Office).
- (11) I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by MARALO, INC., its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

12 May 1977


Jack D. Semon
Manager-Engineer

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ROBBINS, N. H.

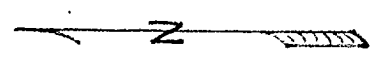
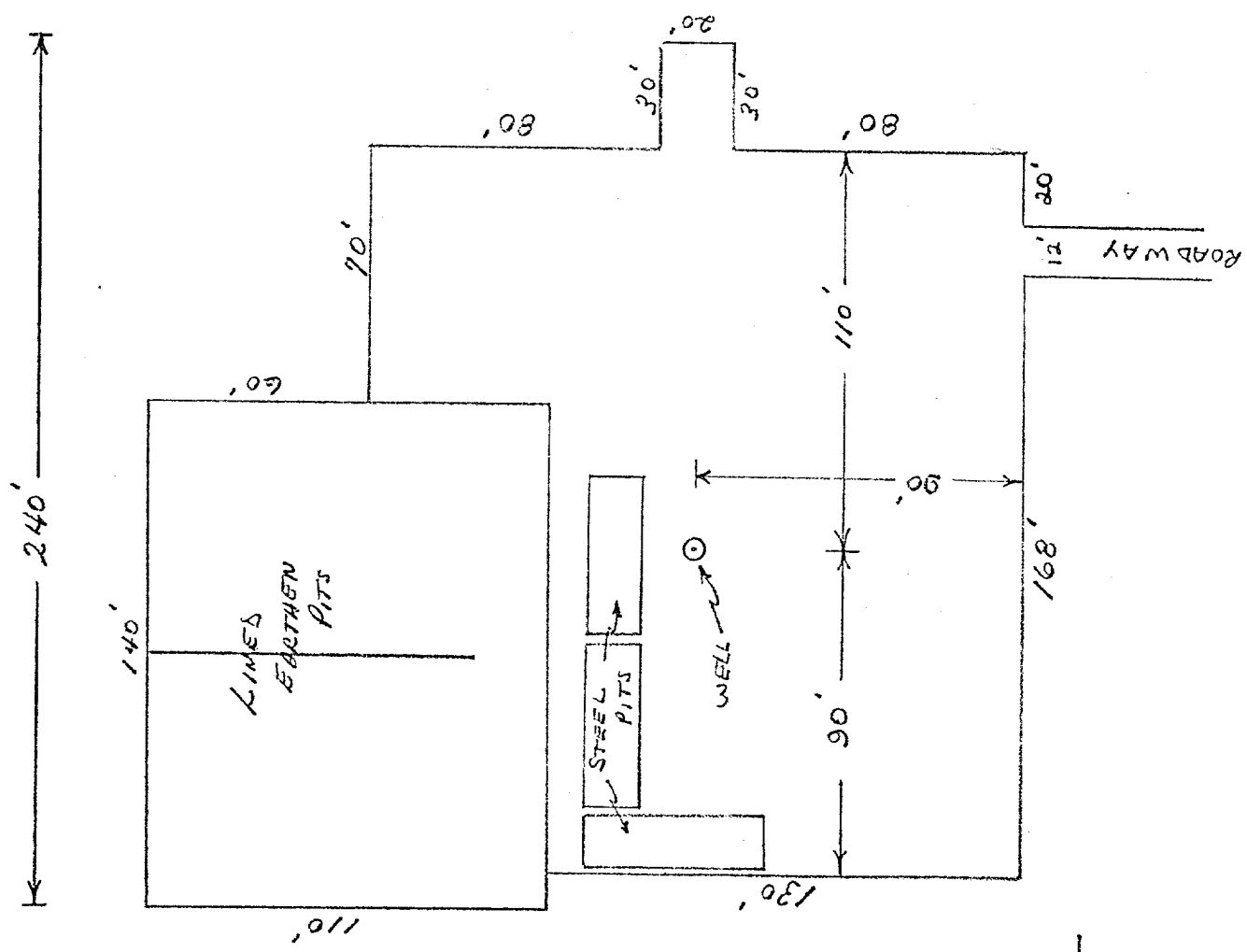
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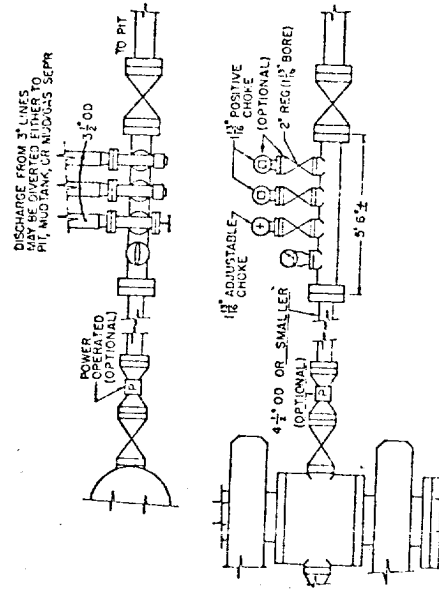
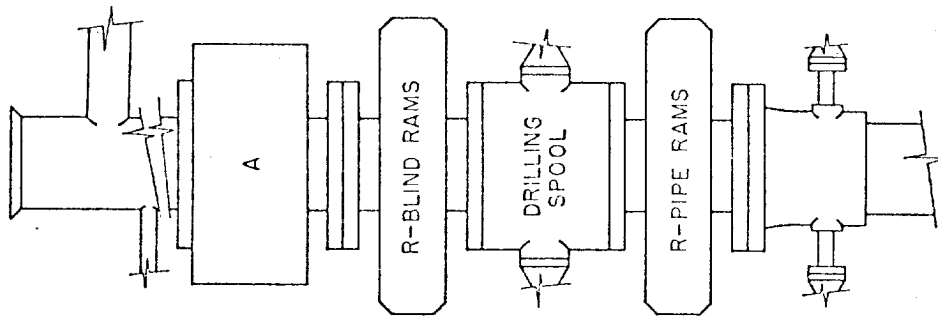


LOCATION LAYOUT
SCALE 1" = 50'

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HUBBS, R. M.



BLOW OUT PREVENTER PROGRAM
API CLASS 5M

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