

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>			5. LEASE DESIGNATION AND SERIAL NO. NM 053434	
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	
2. NAME OF OPERATOR Marathon Oil Company			7. UNIT AGREEMENT NAME Lea Unit	
3. ADDRESS OF OPERATOR P.O. Box 2409 Hobbs, New Mexico 88240			8. FARM OR LEASE NAME Lea Unit Deep	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 1980' FNL & 990' FEL Sec 13, T-22S, R-34E At proposed prod. zone Same as above			9. WELL NO. 12	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 14.6 miles west southwest of Monument, NM			10. FIELD AND POOL, OR WILDCAT Wildcat (ND)	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 2213.7'			11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec 13, T-20S, R-34E	
16. NO. OF ACRES IN LEASE 2.560			12. COUNTY OR PARISH Lea	
17. NO. OF ACRES ASSIGNED TO THIS WELL 320			13. STATE NM	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1650'			20. ROTARY OR CABLE TOOLS Rotary	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) GR 3661.7'			22. APPROX. DATE WORK WILL START* Upon Approval	

23. PROPOSED CASING AND CEMENTING PROGRAM				
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2	13 3/8	48# (K-55)	900	1375 sacks circulate
12 1/4	9 5/8	36 & 40# (K55 & S80)	5500	3500 sacks circulate
8 3/4	7 5/8	29.7, 33.7 & 39# (P110 & S98)	14000	1380 sacks
6 1/2	4 1/2	15.5# (C-75)	16600	770 sacks

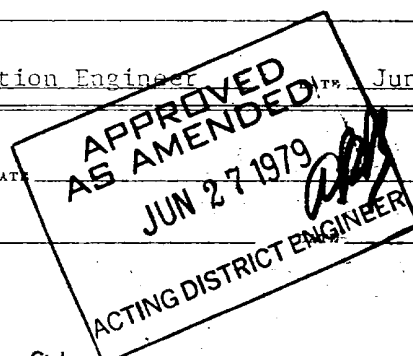
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HOBBS, NEW MEXICO

1. Intend to drill to a depth not greater than 17,000'.
2. Will cement and test all casing by approved methods.
3. Blowout equipment to be used 5000# W. P. Cameron or equivalent with blind and pipe rams on surface casing and 10,000# W. P. Cameron or equivalent with blind and pipe rams on intermediate and production casing. Equipment will have remote controls on drilling floor and a closing unit a minimum of 75' from wellhead.
4. Target zone and probable completion interval is the Ellenburger formation of approximately 16,000 to 16,500'.

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS"

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. 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.

SIGNED <u>Michael L. Anderson</u>	TITLE <u>Production Engineer</u>	DATE <u>June 5, 1979</u>
(This space for Federal or State office use)		
PERMIT NO. _____	APPROVAL DATE _____	
APPROVED BY _____	TITLE _____	
CONDITIONS OF APPROVAL, IF ANY:		



NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

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

All distances must be from the outer boundaries of the Section

Operator Marathon Oil Co.		Lease Lea Unit Deep		Well No. 12
County H	Section 13	Township 20 South	Range 34 East	Lea
Actual Date of Completion of Well 1980				
Feet from the North		Line and 990		Feet from the East
Ground Level 3661.7	Producing Formation Ellenburger	Pool Undesignated	Dedicated Acreage 320 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hashure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty)
- 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?

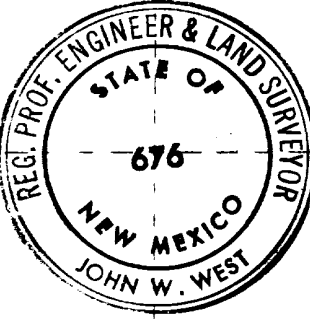
☒ Yes ☐ No If answer is "yes," type of consolidation Unitization

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)

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.

R-34E

Dedicated Acreage →	
T 20	13
S	



CERTIFICATION

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

Michael D. Anderson

Michael D. Anderson

Production Engineer

Marathon Oil Company

May 26, 1979

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.

May 13, 1979

Registered Professional Engineer

John W. West

John W. West

Certificate No. John W. West 676
Ronald J. Eidson 3239

330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500

MARATHON OIL COMPANY
Lea Unit Deed Well No. 12
Additional Information To
Comply With NTL-6

1. Geologic Name of Surface Formation:

Quaternary

2. Estimated Tops of Important Geologic Markers:

Anhydrite	-	1750'
Salt	-	1900'
Base Salt	-	3200'

3. Estimated Depth of Anticipated Water, Oil or Gas Bearing Formations:

Ogallala (water)	-	150'
Bone Springs (oil)	-	9500'
Wolfcamp (oil)	-	11500'
Bend Sand (gas)	-	12800'
Devonian (oil)	-	14350'

4. Proposed Casing Program:

See attached application

5. Blowout Equipment Specifications:

Installed on Surface Casing: 13 5/8" 5000# W.P. Cameron or equivalent, 5000# Hydril Annular type or equivalent, and rotating load. All BOP rams, flow and choke lines, choke manifold, and kill lines to be tested to 5000#. Annular BOP's tested to 3500#.

Installed on Intermediate Casing: 11" 10,000# W. P. BOP's, with 2 pipe and 1 blind ram, 10,000# W.P. Hydril annular type or equivalent, and rotating head. All BOP rams, flow and choke lines, choke manifold, and kill lines to be tested to 10,000#. Annular BOP's will be tested to 7000#.

6. Proposed Mud Program:

0 - 900'	Fresh water containing bentonite and lime. Mud wt. 8.5 - 9.0 ppg; viscosity 33 - 34 sec.
900 - 5500'	Brine water with lost circulation material. Mud wt. 10 ppg; viscosity 29 sec.
5500 - 10000'	Brine water with Benex Gel and Lime. Mud wt. 9.3 - 9.5 ppg. Weight controlled with fresh water.
10000 - 11900'	4 percent KCl water
11900 - T.D.	KCl Dextrid and Drispak polymer Brine mud.

7. Auxiliary Equipment:

A stabbing valve will be kept on the floor to be used when the kelly is not in the string

8. Testing, Logging, and Coring Programs:

No cores will be taken

The proposed logging program is as follows:

A. Before setting 7 5/8" casing string:

Compensated Neutron and Compensated Density	14,000 to 5500'
Gamma Ray and Caliper	14,000 to surface
Dual Laterolog with Gamma Ray	14,000 to 5500'

B. After setting 7 5/8" casing string:

Cement Bond - Collar Log with Gamma Ray	14,000 to cement top
Compensated Neutron and Compensated Density	TD to 14,000
Dual Laterolog with Gamma Ray	TD to 14,000

9. Abnormal Pressures, Temperatures, or Potential Hazards:

None anticipated.

10. The Anticipated Starting Date is as soon as permitted with Completion Operations finished, approximately 180 days following spud date, barring any unforeseen difficulties.

Multi-Point Surface Use and Operations Plant
Marathon Oil Company
Lea Unit Deep Well No. 12
1980' FNL and 990' FEL Sec. 13, T-20S, R-34E
Lea County, New Mexico
Lease New Mexico 02127-B

This plan is submitted with the Application for Permit to Drill the above described Well. The purpose of the plan is to describe the location of the proposed Well, the proposed construction activities and operations plan, the magnitude of necessary surface disturbance involved, and the procedures to be followed in rehabilitating the surface after completion of the operation so that a complete appraisal can be made of the environmental effect associated with the operation.

1. Existing Roads:

- A. Exhibit "A" is a portion of a highway map showing the location of the proposed well as staked. Approximately 8.4 miles southwest of the junction of State Highway 529 and U. S. Highway 62 and 180 on U. S. Highway 62 and 180, an improved road goes south along the west sides of Sec. 25 and 36, T-19S, R-34E and Sections 1, 12, 13, 24, 25, and 36, T-20S, R-34E. Approximately 4.3 miles south a lease road proceeds south passing Marathon Oil Company's Lea Unit Compressor Station, through a cattle guard, turns east and then proceeds to Marathon Oil Company's Lea Unit Well No. 3.
- B. Exhibit "B" is a plat showing all existing roads within a three mile radius of the proposed well site.
- C. The portion of the lease road running from the main access road east to Well No. 3 will be repaired over a distance of 1380' with new caliche 6" deep and 16' wide, watered and compacted.

2. Planned Access Roads:

- A. Length and width: The new road required will be 16 feet wide and 1830 feet long. This new road is labeled and color coded red on Exhibits "B" and "C". The center line of the proposed new road from the beginning to the well site has been staked and flagged with the stake being visible from any one to the next.
- B. Surfacing material: Six inches of caliche, watered, compacted and graded.
- C. Maximum grade: 3 percent.
- D. Turnouts: None required.
- E. Drainage design: New road will have a drop of 6" from center to each side.
- F. Culverts: None required.
- G. Cuts and fills: None required.
- H. Gates, cattle guards, and fences: None required.

3. Location of Existing Wells:

- A. All wells within a two-mile radius of the proposed well are shown on

4. Location of Existing and/or Proposed Facilities:

- A. Location of the existing compressor station, tank battery, buried transmission lines, flowlines, salt water disposal line, and gas-lift servicing lines are shown on Exhibit "C".
- B. If the proposed well is completed for production as a gas well gas separation facilities will be constructed on the location with gas metered at the wellhead and condensate transmitted to the existing tank battery by the flowline shown on Exhibit "C". If the well is completed as an oil producer, the location for the new flowline from the wellhead to the tank battery is the same as above. In the event of completion, the liquid hydrocarbons produced will be either commingled with existing production or separate facilities for water removal and storage will be constructed within the boundaries of existing facilities with no additional surface disturbance occurring. The center of the proposed new flowline has been staked. The flowline will not be buried.

5. Location and Type of Water Supply.

- A. Water for drilling will be purchased from Sonny's Oilfield Servicing Company of Hobbs, New Mexico, and transported by truck to the well site.

6. Source of Construction Materials:

- A. Caliche for surfacing the road and the well pad will be obtained from an existing pit SE 1/4, NE 1/4 of Sec. 36, T-20S, R-34E. The pit is on land owned by Federal Government. Location of the pit is shown on Exhibit "B".

7. Methods of Handling Waste Disposal:

- A. Drill cuttings will be disposed of in the drilling pits.
- B. Drilling fluids will be allowed to evaporate in the pits until pits are dry.
- C. Water produced during tests will be disposed of in the drilling pits or hauled to an approved salt water disposal well.
- D. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- E. Trash, waste paper, garbage, and junk will be buried on a separate trash pit and covered with a minimum of 24" of dirt. Location of the trash pit is shown on Exhibit "D".
- F. All trash and debris will be buried or removed from the well site within 30 days after finishing drilling and completion operations.

8. Ancillary Facilities:

- A. None required.

9. Well Site Layout:

- A. Exhibit "D" shows the relative locations of the pad, mud pits, and reserve pit, trash pit, burn pit, and locations of major rig components.
- B. Only minor leveling of the well site will be required. No significant cuts or fills will be necessary.
- C. The reserve pit will be plastic-lined.
- D. The pad and pit area has been staked and flagged.

10. Plans for Restoration of Surface:

- A. After finishing drilling and completion operations, all equipment and other material not needed for operations will be removed. Pits will be filled and leveled, and the location cleaned of all trash and junk to leave the well site in an aesthetically pleasing condition as possible.
- B. Any unguarded pits containing fluids or trash will be fenced until they are filled or leveled.
- C. After abandonment of well, all equipment will be removed, location cleaned, and the pad and access road will be left as agreed to by Marathon Oil Company and the surface rights owner.

11. Other Information:

- A. Topography: Land surface is flat, fairly smooth, and sandy.
- B. Soil: Fine sand underlain by caliche.
- C. Flora and Fauna: The vegetative cover is generally sparse and consists of mesquite, yucca, sand sage, and native range grasses. Wildlife in the area includes; rabbits, coyotes, reptiles, dove, quail, and other inhabitants typical of semi-arid desert land.
- D. Ponds and Streams: There are no rivers, lakes, ponds, or streams in the area.
- E. Residence and other structures: There are no occupied dwellings within a three mile radius of the well site. The nearest water well is one-half mile north of proposed well site and is used seasonally for watering of grazing cattle.
- F. Archeological, Historical, and Cultural Sites: None observed in the area. Archeological Inspection Report is forthcoming.
- G. Land Use: Grazing and hunting in season.
- H. Surface Ownership: Well site and all proposed access roads and flow-line routes are under Private Ownership. Representative for the owner is Mr. Tom Davenport, Midland, Texas.

12. Operator's Representative:

C. S. Hilton, Jr.
P.O. Box 2409
Hobbs, New Mexico 88240

505/393-7106

13. Certification:

I hereby certify that I have inspected the proposed drillsite and access route; that I am familiar with the conditions that 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 Marathon Oil Company and its contractors and sub contractors in conformity with this plan and the terms and conditions under which it is approved.

May 29, 1979
Date

Michael D. Anderson
Michael D. Anderson
Production Engineer
Marathon Oil Company

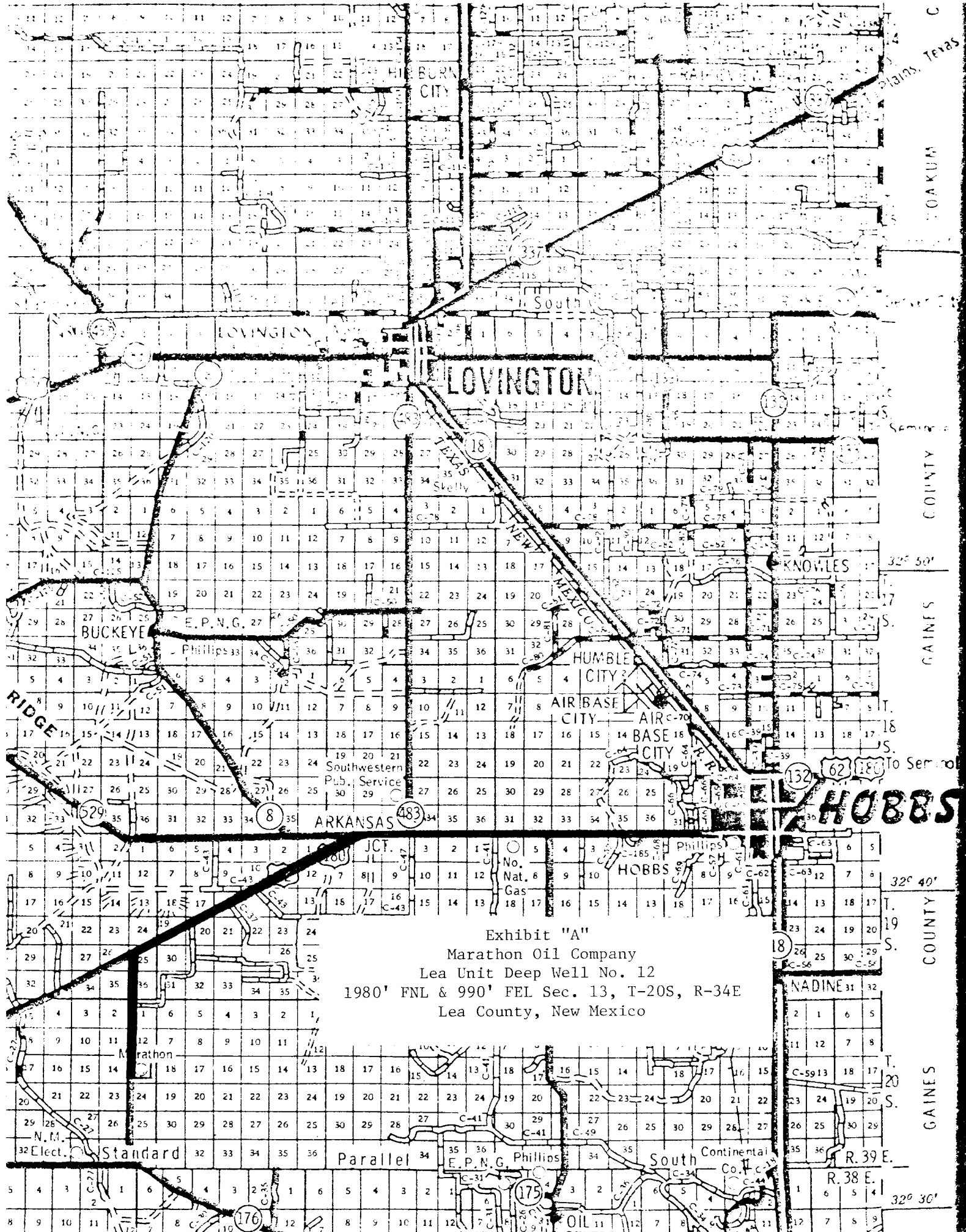


Exhibit "A"
Marathon Oil Company
Lea Unit Deep Well No. 12
1980' FNL & 990' FEL Sec. 13, T-20S, R-34E
Lea County, New Mexico

- ⊙ Well locations
- Main compressor station
- Secondary compressor station
- ⊙⊙ Tank Battery

- Black - existing roads
- Red - new road
- Orange - flow lines
- Blue - gas lift lines
- Purple - SWD line
- Green - new flow line

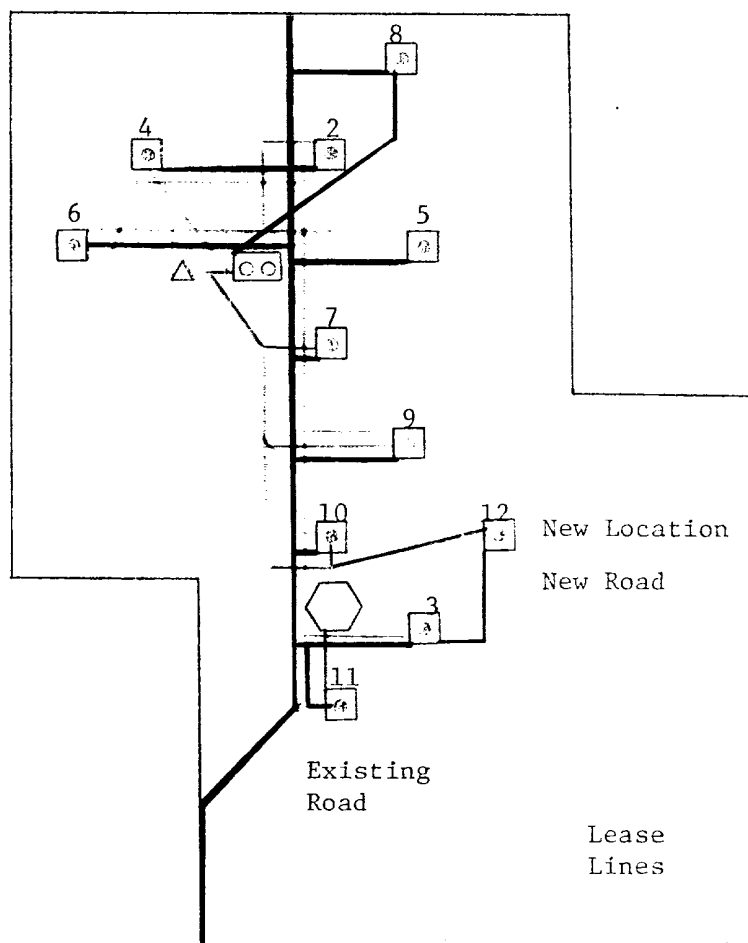


Exhibit "C"
 Marathon Oil Company
 Lea Unit Deep Well No. 12
 1980' FNL & 990' FEL Sec. 13, T-20S, R-34E
 Lea County, New Mexico

Scale: 1" = 1/2 mile

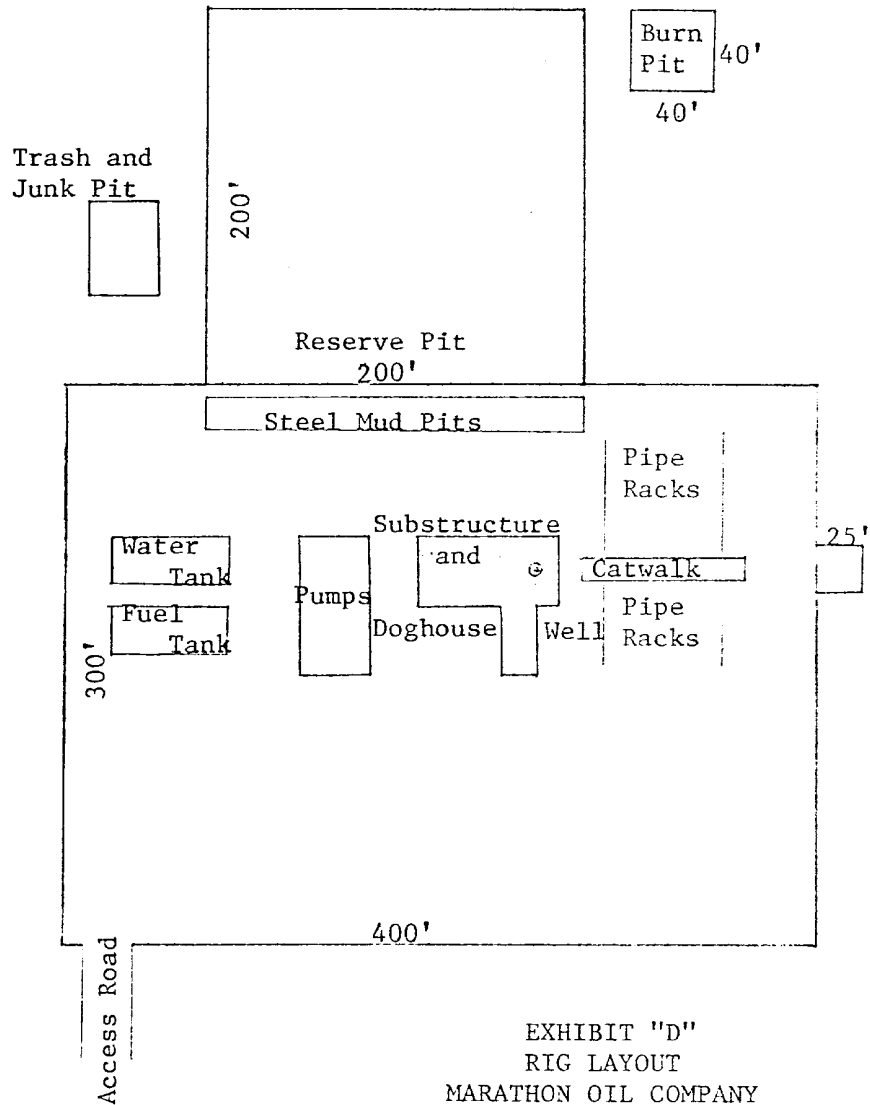


EXHIBIT "D"
 RIG LAYOUT
 MARATHON OIL COMPANY
 LEA UNIT DEEP WELL NO. 12
 1980' FNL & 990' FEL SEC. 13, T-20S, R-34E
 LEA COUNTY, NEW MEXICO

SCALE 1" = 100'