

**NMOCC COPY**

SUBMIT IN ~~TRIPPLICATE~~  
(Other instructions on reverse side)

Form approved.  
Budget Bureau No. 42-R1425.

30-015-22556

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK  
 DRILL  DEEPEN  PLUG BACK

b. TYPE OF WELL  
 OIL WELL  GAS WELL  OTHER   
 SINGLE ZONE  MULTIPLE ZONE

2. NAME OF OPERATOR  
 Atlantic Richfield Company ✓

3. ADDRESS OF OPERATOR  
 P. O. Box 1710, Hobbs, New Mexico 88240

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*)  
 At surface  
 1100' FNL & 1200' FWL (Unit letter D)  
 At proposed prod. zone  
 as above

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 approx 13 miles East of Artesia, New Mexico

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)  
 16. NO. OF ACRES IN LEASE

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.  
 19. PROPOSED DEPTH  
 6300'

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 3568.3' GR

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
11"	8-5/8" OD	24# K-55	1000'	400 sx
7-7/8"	5-1/2" OD	14# K-55	6000'	
	5-1/2" OD	15.5# K-55	6300'	1205 sx

Propose to drill an infill development well within the Empire Abo Unit area to more economically recover additional oil reserves and conserve reservoir pressure in accordance with Unit OCC Rules & Regulations NSL-915.

Blowout Preventer Program attached.

**RECEIVED**  
 MAY 24 1978  
 O. C. C.  
 ARTESIA, OFFICE

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 APR 21 1978  
 U.S. GEOLOGICAL SURVEY  
 ARTESIA, NEW MEXICO

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 \_\_\_\_\_ TITLE Dist. Drlg. Supt. DATE 4/17/78

(This space for Federal or State office use)  
 PERMIT NO. \_\_\_\_\_ APPROVAL DATE MAY 23 1978

APPROVED BY Lee D. Lara TITLE ACTING DISTRICT ENGINEER DATE MAY 23 1978  
 CONDITIONS OF APPROVAL, IF ANY:

THIS APPROVAL IS RESCINDED IF OPERATIONS ARE NOT COMMENCED WITHIN 3 MONTHS, EXPIRES AUG 23 1978, \*See Instructions On Reverse Side

5. LEASE DESIGNATION AND SERIAL NO.  
 LC 067858  
 6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
 7. UNIT, AGREEMENT NAME  
 Empire Abo Pressure Maintenance Project  
 8. FARM OR LEASE NAME  
 Empire Abo Unit "M"  
 9. WELL NO.  
 131  
 10. FIELD AND POOL, OR WILDCAT  
 X Empire Abo  
 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
 11-18S-27E  
 12. COUNTY OR PARISH  
 Eddy  
 13. STATE  
 N.M.

17. NO. OF ACRES ASSIGNED TO THIS WELL  
 40  
 20. ROTARY OR CABLE TOOLS  
 Rotary  
 22. APPROX. DATE WORK WILL START\*  
 7/1/78

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 <b>Atlantic Richfield Co.</b>		Lease <b>Empire Abo Unit - M</b>		Well No. <b>131</b>
Unit Letter <b>D</b>	Section <b>11</b>	Township <b>18 South</b>	Range <b>27 East</b>	County <b>Eddy</b>
Actual Footage Location of Well: <b>1100</b> feet from the <b>North</b> line and <b>1200</b> feet from the <b>West</b> line				
Ground Level Elev. <b>3568.3</b>	Producing Formation <b>Abo Reef</b>	Pool <b>Empire Abo</b>	Dedicated Acreage: <b>40</b> Acres	

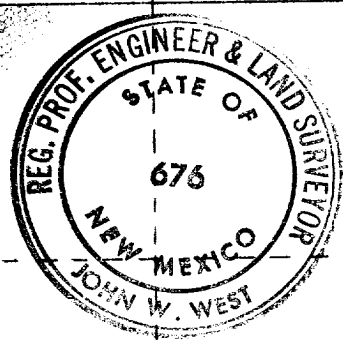
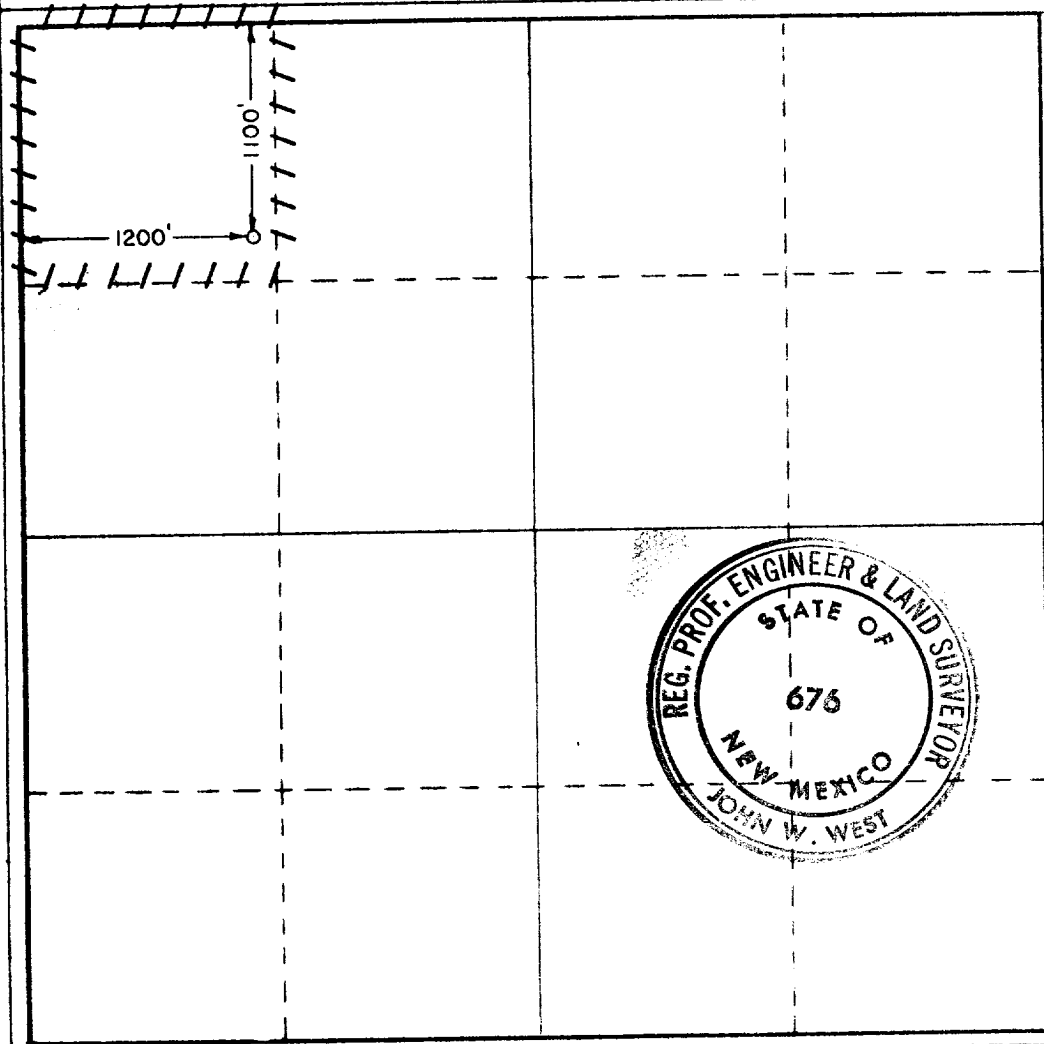
- Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated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

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**ARTESIA, NEW MEXICO**

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.

Name \_\_\_\_\_  
 Position  
**Dist. Drig. Supt.**  
 Company  
**Atlantic Richfield Company**  
 Date  
**4/17/78**

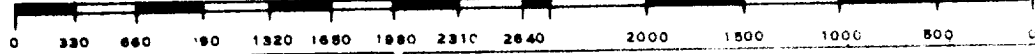
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

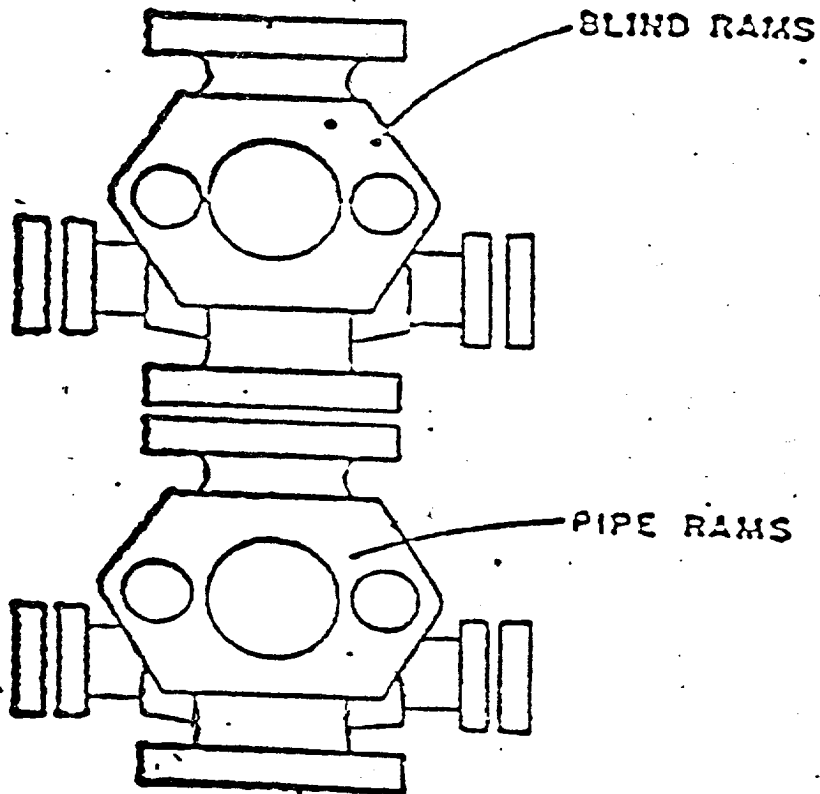
**December 14, 1977**  
Date Surveyed

Registered Professional Engineer and/or Land Surveyor

*John W. West*

Certificate No. **676**





**ATLANTIC RICHFIELD COMPANY**  
**Blow Out Preventer Program**

**Lease Name** Empire Abo Unit "M"

**Well No.** 131

**Location** 1100' FNL & 1200' FWL  
Sec 11-18S-27E, Eddy County

**BOP to be tested before installed on well and will be maintained in good working condition during drilling. All wellhead fittings to be of sufficient pressure to operate in a safe manner.**

Multi-Point Surface Use and Operations Plan

Atlantic Richfield Company  
Well No. "M" 131 Empire Abo Unit  
1100' FNL & 1200' FWL Sec 11-T18S-R27E  
Eddy County, New Mexico  
Lease - LC 067858  
Development Well

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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 effects associated with the operation.

1. Existing Roads:

- A. Exhibit "A" from Artesia go east 9 miles on U.S. Highway 82, turn south off Hwy 82 on Amoco Gasoline Plant black top road 2.9 miles, continue south on existing caliche road .9 miles, turn east on existing caliche road .5 miles, turn south approx 165' along staked and flagged proposed new road to location.
- B. Exhibit "B" is a plat showing all existing roads within a one mile radius of the wellsite and the planned access road.

2. Planned Access Roads:

- A. Length & Width: New road required will be 65' long and 12' wide. This road is labled and color coded brown on Exhibit "B". The center line of the proposed new road from beginning to the wellsite has been staked and flagged with the stakes visible from anyone to the next.
- B. Turnouts: None
- C. Culverts: None
- D. Cuts and Fills: None
- E. Gate, Cattleguards: None

3. Location of Existing Wells:

- A. See Exhibit "B" for existing wells within a one mile radius of location.

4. Location of Exisiting and/or Proposed Facilities:

- A. Location of the existing tank battery and flow lines from well no. 131 are shown on Exhibit "C". The gas injection and salt water disposal lines are buried. The flow lines are not buried.

5. Location and Type of Water Supply:

- A. Water for drilling will be used from a fresh water well within the Empire Abo Unit boundaries located in Sec 6-18S-28E and transported by pipeline to wellsite. The water line will be temporary and will not cause additional surface disturbance and will be removed soon after drilling is completed.

6. Source of Construction Materials:

- A. Road and well pad construction materials will furnish caliche for surfacing the road and well pad. The source of caliche will be from an existing pit located in SE/4, NW/4, Sec 12-18S-27E, Eddy County, and royalty fees will be paid by the construction company.

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 drilling pits until pits are dry.
- C. Water produced during tests will be disposed of in the drilling pits. Oil produced during tests will be stored in test tanks until sold.
- 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 covered with a minimum of 24 inches of dirt. All waste material will be contained to prevent scattering by the wind.
- F. All trash and debris will be buried or removed from the wellsite within 30 days after finishing drilling and/or completion operations.

8. Ancillary Facilities: None

9. Wellsite Layout:

- A. Exhibit "D" shows the location and dimensions of the wellpad, mud pits, reserve pit and location of major rig components.
- B. Only minor levelling of the wellsite will be required. No significant cuts and 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 the Surface:

- A. After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. Pits will be filled and location cleaned of all trash and junk to leave the wellsite in an aesthetically pleasing a condition as possible.
- B. Any unguarded pits containing fluids will be fenced until they are filled.
- C. On Federal surface - after abandonment, any special rehabilitation and/or revegetation requirements of the surface management agency will be complied with and accomplished as expeditiously as possible. All pits to be abandoned within 90 days.

11. Other Information:

- A. Topography: Rolling hills.
- B. Soil: Caliche and sand.
- C. Flora and Fauna: Flora consists of cockle burrs, needle grass, rag weeds, grease bush, cat claw, native grass. Fauna consists of coyotes, jack rabbits, cotton tails, skunks, rattlesnakes, kangaroo mice, hawks, quail, dove, field larks, song birds.
- D. Ponds and streams: None
- E. Residences and other structures: None
- F. Land Use: Oil and gas production, grazing and hunting in season.
- G. Surface Ownership: BLM.

12. Operator's Representative:

The field representative responsible for assuring compliance with the approved surface use and operations plan are as follows:

Name: LeRoy Lane  
Address: Box 1710, Hobbs, New Mexico 88240  
Office Phone: (505) 393-7163  
Home Phone: (505-393-7972

13. Certification:

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 Atlantic Richfield Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

5/17/72  
Date

LeRoy Lane  
LeRoy Lane  
District Drilling Supt.

To supplement USGS Form 9-331-C " Application for Permit to Drill, Deepen or Plugback", the following additional information is submitted:

Operator: Atlantic Richfield Company  
Lease & Well No: "M" 131 Empire Abo Unit  
Location: Unit letter D, 1100' FNL & 1200' FWL  
Sec 11-18S-27E, Eddy County, New Mexico

1. See Form 9-331-C.
2. See Form 9-331-C.
3. The geologic name of the surface formation is:  
Tertiary with some Triassic exposed.
4. See Form 9-331C.
5. See Form 9-331C.
6. The estimated tops of important geologic markers are:  
Queen 930', San Andres 1860', Abo 6038'
7. The estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered are:

Santa Rosa Water Formation	+ 300'	Brackish
Empire Yates Seven Rivers	+ 350'	Oil & Gas
Artesia Grayburg Queen SA	+ 930'	Oil & Gas
Abo Reef	- 6038'	Oil & Gas
8. The proposed casing program including the size, grade and weight-per-foot of each string has been indicated on Form 9-331C. All strings of casing will be new.
9. See Form 9-331C for amount of cmt. The type of cmt & additives for the production string will be 1st stage 100 BFW w/2% KCL, 1 gal/1000 Mor-flo II, 10 bbls SAM-5 spacer, 25 BFW, 480 sx Howco C1 C, 2% CaCl. 2nd stage thru DV tool will be 50 BFW, 25 sx Thin cmt, 600 sx Howco Lite cont'g 8# salt/sk, 100 sx C1 C cont'g 8# salt/sk. Cement for surface string will be 250 sx C1 C cont'g 4% gel, 6# salt, 2% CaCl, 1/4# flocele/sk followed by 150 sx C1 C cont'g 6# salt/sk, 2% CaCl.
10. The pressure control diagram is attached to Form 9-331C. The following additional information of the pressure control equipment is as follows:

Size: 10" x 900 API Series - Dbl ram w/hydraulic closing unit  
Pressure Ratings or API Series - 3000# WP, 6000# T  
Testing Procedures - Pressure up to 1500# before drilling out of casing  
Testing Frequency - Upon installation, daily and on all trips.

11. The type and characteristics of the proposed circulating medium or mediums to be employed for rotary drilling and the quantities and types of mud and weighting materials to be maintained will be as follows:

0 - 1000'	Spud Mud
1000 - 6000'	Brackish Water
6000 - 6300'	Starch-SWG, 8.8#/gal, 35-50 Vis as needed, 9.5 ph will be maintained below surface pipe

12. The auxiliary equipment to be used will consist of: Kelly cocks and a sub on floor with full opening valve to be used when needed. No mud logging to be performed.
13. The testing, logging and coring programs will be:  
GR-DLL w/RXO, GR-Neutron, GR-CNL-FDC, Sonic-VDL and tape logs for Coriband Analysis. There will be coring and Drill Stem testing of the Abo Reef section.
14. No abnormal pressures or temperatures are expected to be encountered.
15. The starting date will be approximately 7/1/78 and will be completed approximately 7/30/78.