

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

30-015-22097

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

Box 1710, Hobbs, New Mexico 88240

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

At surface 1300' FNL & 1220' FWL (Unit letter D)

At proposed prod. zone
same as above

APR 7 1977

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 ASSIGNED

TO THIS WELL

40

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

19. PROPOSED DEPTH

6100'

20. ROTARY OR CABLE TOOLS

Rotary

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

3507.7' GR

22. APPROX. DATE WORK WILL START*

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'	350 sx Circ to surface
7-7/8"	5-1/2" OD	14 & 15.5# K-55	6100'	1725 sx Circ to surface

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

Blowout Preventer Program attached.

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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.

24.

SIGNED

John G. ...

TITLE

Dist. Drlg. Supt.

DATE 1/19/77

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

DECLARED WATER BASIN

APPROVED BY
CONDITIONS OF APPROVAL, IF ANY:THIS APPROVAL IS REVOKED IF OPERATIONS
ARE NOT COMMENCED WITHIN 3 MONTHS.
EXPIRES 1977
*See Instructions On Reverse SideCASH DATE THE 8/8/77
CASING MUST BE CIRCULATEDNOTIFY US IN SUFFICIENT TIME TO
WITNESS CEMENTING THE 8/8/77 CASING.

ACTING DISTRICT ENGINEER

NEW MEXICO OIL CONSERVATION COMMISSION
WE LOCATION AND ACREAGE DEDICATION PLAT

Form O-112
 Supersedes O-128
 Effective 1-1-65

All distances must be from the outer boundaries of the Section

ATLANTIC RICHFIELD COMPANY			Lease Empire Abo Unit "M"		Well 91
Section D	Section 10	Township 18 South	Range 27 East	County Eddy	
Actual Well Location of Wells					
1300 feet from the north line and		1220 feet from the west			
Ground Surface Elev. 3507.7	Producing Formation Abo Reef	Pool Empire Abo	Estimated Acreage 40		

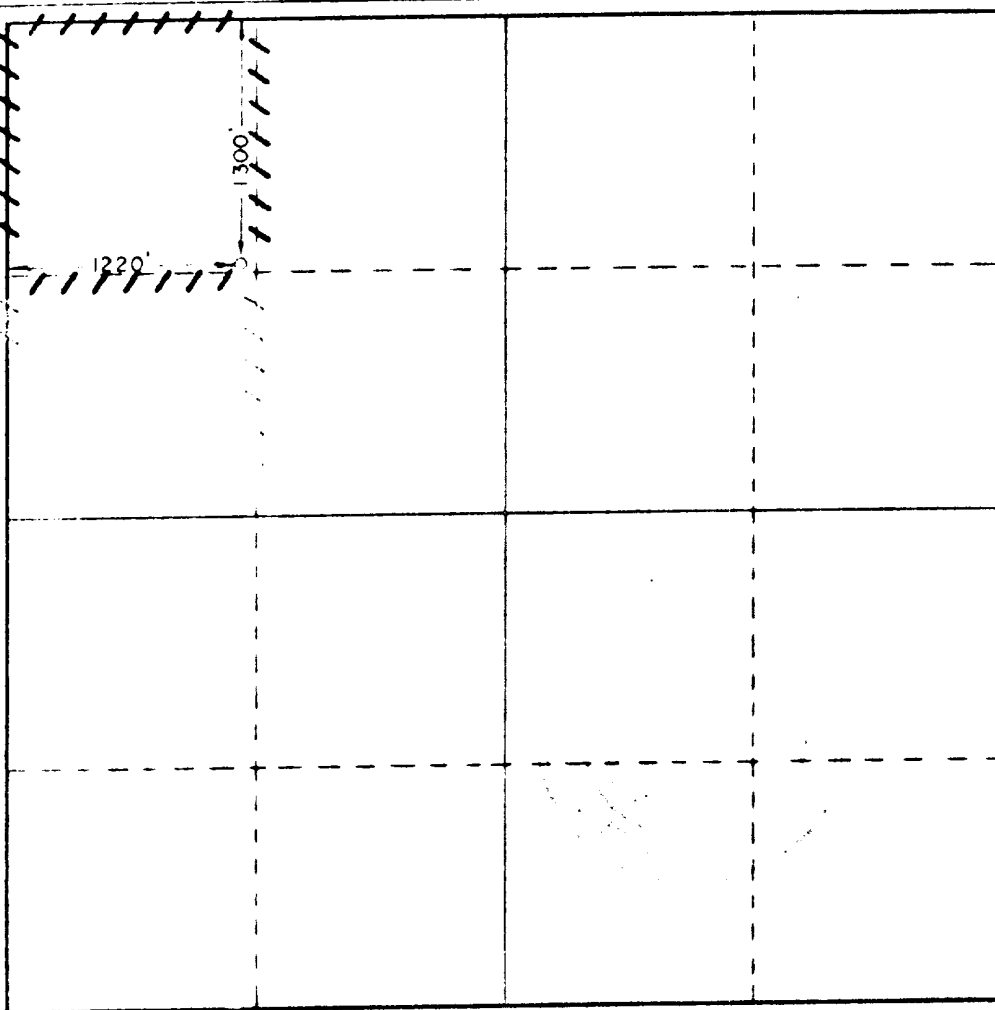
1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (as to working interest and royalty).
3. If more than one lease of different ownership is dedicated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

If answer is "no," list the owners and tract descriptions which have actually been consolidated (on 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.

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CERTIFICATION

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

Alton Knott

Dist. Dir. Supt.

Atlantic Richfield Company

January 18, 1977

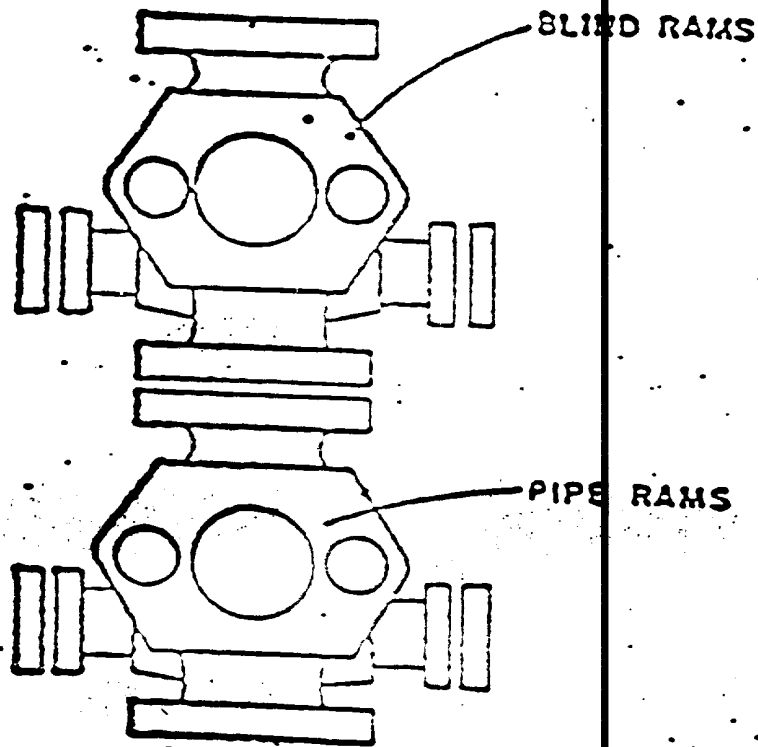
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my knowledge and belief

Date Surveyed

Spet 30, 1976

Registered Professional Engineer
 and State Surveyor

John W. Wet



ATLANTIC RICHFIELD COMPANY
Blow Out Preventer Program

Lease Name Empire Abo Unit "M"

Well No. 91

Location 1300' FNL & 1220' FWL
Sec 10-18S-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.

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

Operator: Atlantic Richfield Company
Lease & Well No: Empire Abo Unit "M" #91
Location: Unit letter D, 1300' FNL & 1220' FWL
Section 10-18S-27E, Eddy County, New Mexico

1. See Form 9-331C
2. See Form 9-331C
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 933', San Andres 1858', Glorieta 3326', Abo 5473'
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	-	± 340'	Oil & Gas
Artesia Grayburg Queen SA	-	933'	Oil & Gas
Abo	-	5473'	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. Cl C cmt cont'g 4% gel, $\frac{1}{4}$ # flocele, 6# salt/sk & 2% CaCl will be used for cmtg surface csg. Cl C cmt 50:50 pozmix cont'g 2% gel, .6% CFF-2, 8# salt/sk & 5# gilsonite/sk will be used to cmt 1st stage on producing string and HLW cmt cont'g 8#/sk salt, followed by Cl C cmt cont'g 8#/sk salt will be used to cement 2nd stage.
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"-900 Series - Dbl Hyd Pipe and Blind Rams
Pressure Ratings (or API Series) - 3000# WP, 6000# T.
Testing Procedures: Pressure up to 1500# PSIG before drilling out of casing
Testing Frequency: Upon installation, daily and on all trips.

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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 material to be maintained will be as follows:

0-1000' Spud Mud, 1000-5370' Brackish water, 5370-6100' SWG 34-38 Vis, 5-8 WL, 30,000 PPM salinity.
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 (MSFL) & Caliper, GR-Calibrated Neutron, CNL-FDC, Sonic, Tape logs for Coriband Analysis. There will be no coring or DST.
14. No abnormal pressures or temperatures are expected to be encountered.
15. The starting date will be approx 3/1/77 and will be completed approx 3/16/77.

A handwritten signature in dark ink, appearing to be "J. E. Jones" or similar, written in a cursive style.

Multi-Point Surface Use and Operations Plan

Atlantic Richfield Company
Well No. "M" 91 Empire Abo Unit
1300' FNL & 1220' FWL Sec. 10-T18S-R27E
Eddy County, New Mexico
Lease, New Mexico 025604
(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 Highway 82 on AMOCO Gasoline Plant blacktop road 2.5 miles, turn southwest off blacktop onto caliche existing road 1.1 miles, turn south .8 mile, then left 100' 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 12' wide and approximately 100' long. This new road is labeled and color coded red 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 any one to the next.
- B. Turnouts:
None
- C. Culverts:
None
- D. Cuts and Fills
None
- E. Gates, Cattleguards
None

3. Location of Existing Wells:

- A. See Exhibit "B" for existing wells within a 1 mile radius of location.

4. Location of Existing and/or Proposed Facilities:

- A. Location of the existing tank battery and flow lines from Well No. "M" 91 are shown on Exhibit "C". The gas injection and salt water disposal lines are buried. The flow lines are not buried.
- B. When the proposed well is completed for production the location of the new flow line to the existing battery is shown on Exhibit "C". The line will not be buried. The proposed flow line has not been staked and flagged.

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 Section 6-18S-28E and transported by pipeline to wellsite. The water line will not cause additional surface disturbance and will be removed after drilling is completed.

6. Source of Construction Materials:

- A. Johnson Construction Co., P. O. Box 837, Eunice, N. M., will be furnishing caliche for surfacing the road and well pad. The source of caliche will be from an existing pit located in the SE/4, NW/4 of Section 12-18S-27E, Eddy Co., and royalty fees will be paid by the Construction Co.

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:

- A. None

9. Wellsite Layout:

- A. Exhibit "D" shows the relative location and dimensions of the well pad, 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 as 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 consist of cockle burs, needle grass, rag weeds, grease bush, cat claw, and nature grasses. Fauna consist of coyotes, jack rabbits, cotton tail rabbits, kangaroo mice, hawks, quail, dove, field larks and rattlesnakes.

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

Name: Jack D. Jones
Address: P. O. Box 1710, Hobbs, NM 88240
Office Phone: (505) 393-7163
Home Phone: (505) 392-5268

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 sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

1/25/72
Date

J. D. Jones
J. D. Jones, District Drlg. Supt.

R 27 E

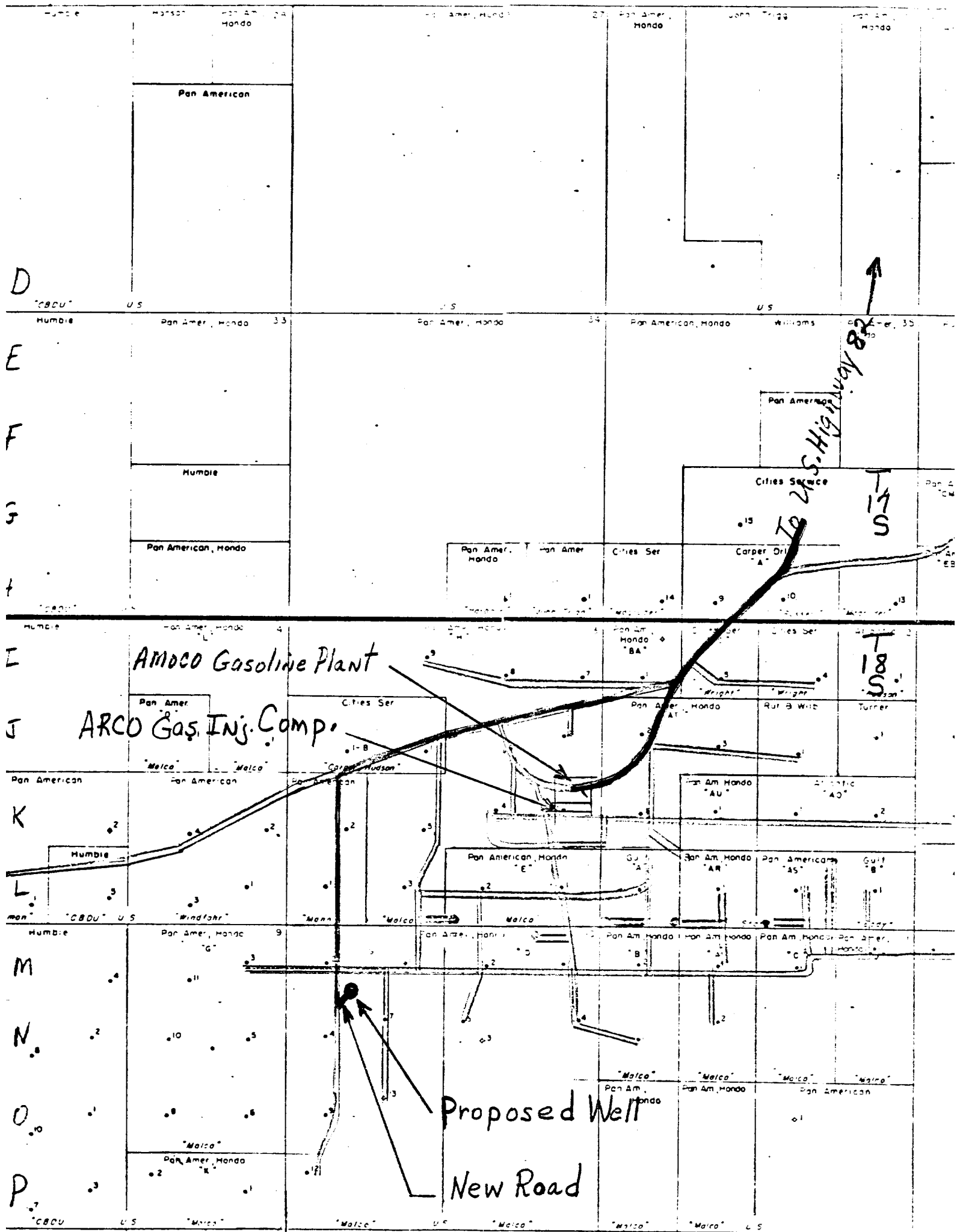


Exhibit "B"

Atlantic Richfield Co.

Well No. "M" 91 Empire Pipe Line
 1300' FNL & 1220' FWL Sec. 10-18S-27E
 Eddy County, N.M. Scale: 2 3/4" = 1 Mi.

