

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

20-034-27522  
Form approved.  
Budget Bureau No. 1004-0136  
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.

SF 078510

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

NA

7. UNIT AGREEMENT NAME

NA

8. FARM OR LEASE NAME

Jacquez

9. WELL NO.

#2

10. FIELD AND POOL, OR WILDCAT

BLANCO - FRUITLAND coal

QTR. QTR. SEC. T. R. AND MERIDIAN

NE/4 Section 6, T31N - R8W

12. COUNTY OR PARISH

San Juan

13. STATE

New Mexico

1a. TYPE OF WORK DRILL ☒ DEEPEN ☐ PLUG BACK ☐

b. TYPE OF WELL

OIL WELL ☐

GAS WELL ☒

OTHER

SINGLE ZONE ☒

MULTIPLE ZONE ☐

2. OPERATOR: ARCO Oil and Gas Company  
A Division of Atlantic Richfield

3. ADDRESS: P. O. 1610

CITY: Midland

STATE: Texas

ZIP: 79701

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

At surface 1370' FNL & 1295' FEL

At proposed Prod. zone Approximately the same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE

Approximately 11 miles Southwest of Ignacio, Colorado DIST. 3

15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.

(Also to nearest drig. line, if any) 1295'

16. NO. OF ACRES IN LEASE\*

2047.19

17. NO. OF ACRES AND/OR DRILLING UNIT ASSIGNED TO THIS WELL

320 321.27

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

488.5'

19. PROPOSED DEPTH

3500'

20. ROTARY OR CABLE TOOLS

Rotary

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

6548' GR

DRILLING OPERATIONS AUTHORIZED ARE  
SUBJECT TO COMPLIANCE WITH ATTACHED

22. APPROX. DATE WORK WILL START

October 1989

23. "GENERAL REQUIREMENTS" Casing and Cementing Program. This section is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4.

| SIZE OF HOLE | SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT |
|--------------|----------------|-----------------|---------------|--------------------|
| 12-1/4"      | 8-5/8"         | 24#             | 500'          | 415                |
| 7-7/8"       | 5-1/2"         | 15.5#           | 3500'         | 1400               |

It is proposed to drill a 12-14" hole to 500' using fresh water spud mud. After setting surface casing, the shoe will be drilled out with a 7-7/8" bit, continuing to TD. A low solids, fresh water gel/polymer mud system will be utilized. A water loss of less than 20cc will be maintained to minimize hole heave and a mud weight of 9.5 ppg will be used to balance the 1600 psi Fruitland pore pressure. At TD, open-hole logs consisting of GR/CNL/FDL will be run and 5-1/2" production casing will be set and cemented to surface. Completion operations will consist of perforating approximately 50' of coal followed by 2 stimulation stages. The first stage will be a 2000 gal acid breakdown, the second will be a hydraulic fracture treatment consisting of 150,000 gals of 35 ppt cross-linked gel carrying 214,000# 12/20 mesh sand. After cleanup, gas lift equipment will be run on 2-7/8" production tubing with a retrievable packer set 50' above the top perf.

IN THE ABOVE SPACE DISCRIBE 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 surface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED Ken W. Gosnell TITLE Engr. Tech. 915 688-5672 DATE 9-1-89

(This space for Federal or State Use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_ EXPIRATION DATE \_\_\_\_\_

APPROVED  
AS AMENDED

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

OCT 23 1989  
AREA MANAGER

NMOCD

100-111111  
100-111111

100-111111  
100-111111

100-111111  
100-111111

Submit to Appropriate  
District Office  
State Lease - 4 copies  
Fee Lease - 3 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

|  |                                  |                      |                               |   |               |
|--|----------------------------------|----------------------|-------------------------------|---|---------------|
| Operator<br>ARCO Oil and Gas Company   |                                  |                      | Lease<br>Jaquez               |   | Well No.<br>2 |
| Unit Letter<br>H   | Section<br>6                     | Township<br>31 North | Range<br>8 West               | County<br>San Juan                        |               |
| Actual Footage Location of Well:<br>1370 feet from the North line and 1295 feet from the East line |                                  |                      |                               |   |               |
| Ground level Elev.<br>6548   | Producing Formation<br>Fruitland |                      | Pool<br>Blanco Fruitland coal | Dedicated Acreage: 321.31<br>320.32 Acres |               |

1. Outline the acreage dedicated to the subject well by colored pencil or machine marks on the plat herein

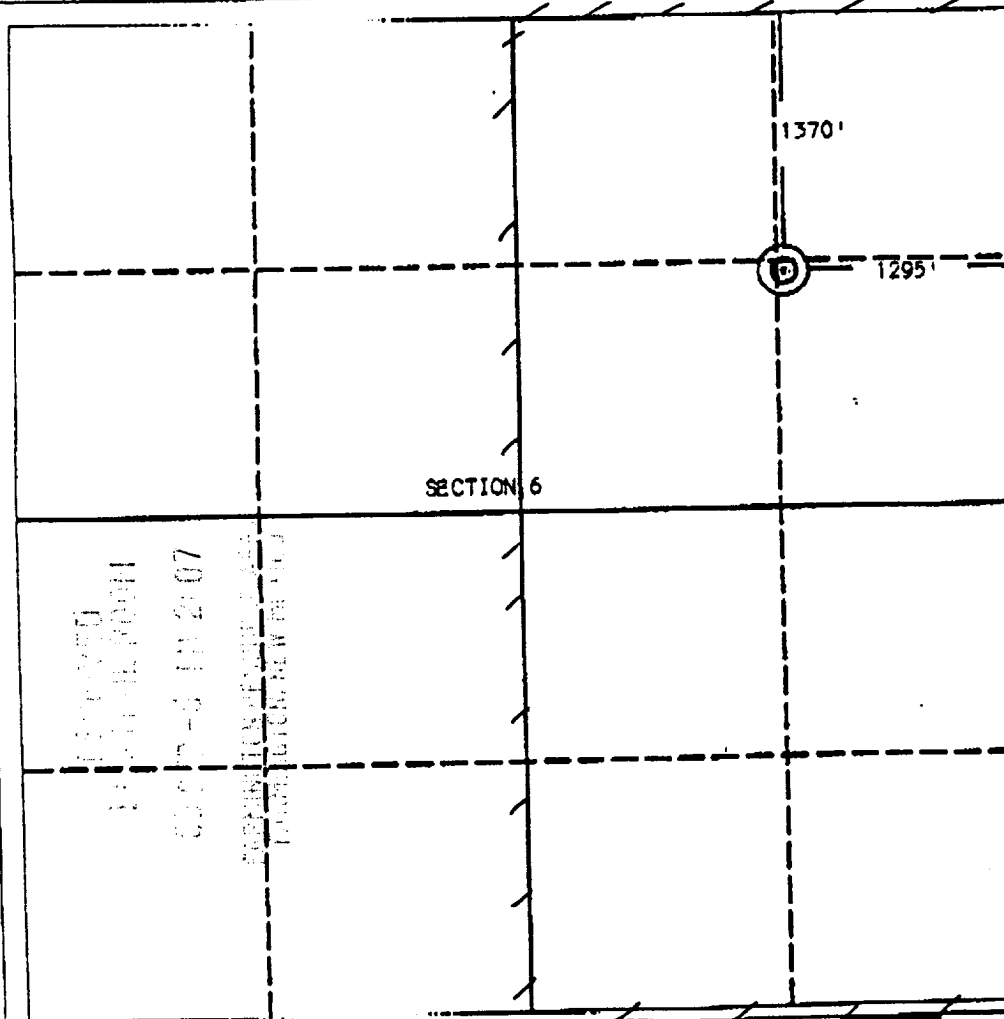
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interest 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. (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 interest, has been approved by the Division.



OPERATOR CERTIFICATION

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

Signature  
Ken W. Gosnell  
Printed Name  
Ken W. Gosnell  
Position  
Engr. Tech.  
Company  
ARCO Oil & Gas Company  
Date  
8-31-89

SURVEYOR CERTIFICATION

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  
August 23, 1989

Signature & Seal  
Professional Surveyor  
Edgar L. Risenhoover  
NEW MEXICO  
5979  
Certificate No. 5979  
Edgar L. Risenhoover

$$\begin{array}{r} 161.21 \\ 160.00 \\ \hline 321.21 \end{array}$$