

DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL WELL ☒

GAS WELL ☐ OTHER

SINGLE ZONE ☐

MULTIPLE ZONE ☐

2. NAME OF OPERATOR

ARCH PETROLEUM INC.

3. ADDRESS AND TELEPHONE NO.

10 DESTA DRIVE, STE. 420E, MIDLAND TX 79705 915-685-1961

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

At surface UNIT C, 1216' FNL, 2620' FWL

UNORTHODOX  
LOCATION:

Subject to  
State Approval  
by State

At proposed prod. zone

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

10 1/4 MILES SOUTH OF EUNICE, NM

15. DISTANCE FROM PROPOSED\*

LOCATION TO NEAREST 1216'

PROPERTY OR LEASE LINE, FT.

(Also to nearest drlg. unit line, if any)

18. DISTANCE FROM PROPOSED LOCATION\*

TO NEAREST WELL, DRILLING, COMPLETED,

OR APPLIED FOR, ON THIS LEASE, FT.

850.6

16. NO. OF ACRES IN LEASE

1520

17. NO. OF ACRES ASSIGNED

TO THIS WELL

40

19. PROPOSED DEPTH

6000'

20. ROTARY OR CABLE TOOLS

ROTARY

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

3303' 3290'

22. APPROX. DATE WORK WILL START\*

ASAP

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
11"	K-55, 8-5/8"	24#	1075'	500 sx. Cl.'c' circ.
7-7/8"	J-55, 5-1/2"	15.5#	6000'	1380 sx. Cl.'c' circ.

Mud Program:

0' - 1075' FW/Spud Mud 8.8 - 9.0 #/gal., 32 visc., 10 pH

1075' - 5000' BW 10 #/gal., 28 visc., 10 pH

5000' - 6000' BW/Starch 10 #/gal., 30 visc., 10 pH

See attached BOP drawing for 3000 psi system.

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

PROPERTY NO. 14898

POOL CODE 58300

EFF. DATE 8/13/96

API NO. 30-025-33537

1'SL-3674<SD>

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new production 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.

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SIGNED Bahmi Brode TITLE PRODUCTION ANALYST DATE 5/29/1996

(This space for Federal or State office use)

PERMIT NO. APPROVAL DATE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY TITLE DATE JUL 25 1996

\*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

AP

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III  
1000 Rio Brazos Rd., Axtec, NM 87410

DISTRICT IV  
P.O. Box 2066, Santa Fe, NM 87504-2066

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102

Revised February 10, 1994  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-025-33537</b>	Pool Code <b>58300</b>	Pool Name <b>TEAGUE BLINEBRY</b>
Property Code <b>014898</b>	Property Name <b>C. E. LAMUNYON FEDERAL</b>	Well Number <b>61</b>
OGRID No. <b>000962</b>	Operator Name <b>ARCH PETROLEUM INC.</b>	Elevation <b>3303</b>

Surface Location

UL or lot No. <b>C</b>	Section <b>28</b>	Township <b>23 S</b>	Range <b>37 E</b>	Lot Idn	Feet from the <b>1216</b>	North/South line <b>NORTH</b>	Feet from the <b>2620</b>	East/West line <b>WEST</b>	County <b>LEA</b>
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Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres <b>40</b>	Joint or Infill <b>Infill</b>	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Bobbie Brooks</i> Signature <b>Bobbie Brooks</b> Printed Name <b>Production Analyst</b> Title <b>5-29-96</b> Date</p> <p><b>SURVEYOR CERTIFICATION</b></p> <p>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 belief.</p> <p><b>MAY 13, 1996</b> Date Surveyed <b>GARY G. EIDSON</b> Signature &amp; Seal of Professional Surveyor <b>546-96</b> W.O. Num <b>96-11-0571</b> Certificate No. <b>JOHN W. WEST, 676</b> <b>RONALD J. EIDSON, 3239</b> <b>GARY G. EIDSON, 12641</b></p>
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## DRILLING PROGRAM

C. E. LAMUNYON #61  
Arch Petroleum Inc.  
Section 28, T23S, R37E  
Lea Co., New Mexico

1. Geologic Name of Surface Formation: Quaternary

2. Estimated Tops of Geologic Markers:

Rustler 1,030'	7 Rivers 2,780'	Paddock 4,950'
Top Salt 1,130'	Penrose 3,375'	T/Blinbry 5,290'
Base Salt 2,365'	Grayburg 3,555'	B/Blinbry 5,850'
Yates 2,535'	San Andres 3,800'	Tubb 5,950'

3. Estimated Depths of Anticipated Fresh Water, Oil or Gas:

Fresh Water 300'-500'  
Penrose 3,375'-3,550'  
Paddock 4,950'-5,290'  
Blinbry 5,290'-5,950'

4. Casing Program:

<u>Casing</u>	<u>Hole Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Setting Depth</u>
8 5/8" Surface	11"	24#	K-55	1,075'
5 1/2" Production	7 7/8"	15.5#	J-55	6,000'

Cement Program:

- (a) Surface casing will be 8-5/8" set at 1075' and cemented with 300 sacks of Class 'C' lead cement and 200 sacks of Class 'C' tail cement.
- (b) Production casing will be 5-1/2" set at approximately 6,000' and cemented in one stage with approximately 850 sacks of Class 'C' lead cement and 450 sacks of tail cement. Exact volumes to circulate to surface to be determined by caliper log.

5. Pressure Control Equipment:

The minimum specifications for pressure control equipment can be seen on the attached Exhibit 1 for a blowout preventer hook-up for 3,000 psi working pressure.

## Drilling Program

6. Proposed Mud System:

0-1075' fresh water spud mud  
1075'-5000' saturated salt water  
5000'-6000' salt water polymer with the following properties: Viscosity 30 sec., water loss 10 cc or less, weight 10 ppg with 5% KCl. Heavier weight mud will be used if required by well condition. 10 ppg brine is only used to minimize salt washout and formation damage and not for well control. No significant well control problems are anticipated.

7. Logging, Testing, and Coring Program:

- (a) Formation testing may be done at any depth where samples, drilling rate, or log information indicates a possible show of oil or gas.
- (b) Open hole logs will be run at total depth
- (c) or cased hole.

8. Abnormal Conditions, Pressures, Temperatures, and Potential Hazards:

No abnormal pressures or temperatures are anticipated. The estimated Bottom Hole Temperature (BHT) at TD is 115°F and estimated maximum Bottom Hole Pressure (BHP) is 3000 psig. Hydrogen sulfide is not considered to be a significant safety hazard since well control should not be a problem. In anticipation of encountering H<sub>2</sub>S gas, Exhibit 2 is the Plan of Operation for H<sub>2</sub>S Drilling. No major loss circulation zones have been reported in offsetting wells.

9. Anticipated Starting Date and Duration of Operations:

Road and location work will not begin until approval has been received from the BLM. Anticipated spud date should be July 1, 1996. Once commenced, the drilling operation should be finished in approximately 10 days. The time required to complete and test the well will be about 30 days.

10. Other Facets of the Proposed Operation:      None.

# BOP SCHEMATIC

3M (3,000 psi) Working Pressure

• Spacesaver preventers are acceptable

