

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

30-039-25044

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

Richmond Petroleum Inc. (505) 327-4404

3. ADDRESS OF OPERATOR

P.O. Drawer 2039, Farmington, NM 87499

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

At surface

Surf 500' FSL & 500' FEL (SESE)

At proposed prod. zone

BHL 1915' FSL & 1915' FEL (NWSE)

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

28 air miles S of Dulce, NM

10. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any)

500'

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

2,755'

16. NO. OF ACRES IN LEASE

~20,000

19. PROPOSED DEPTH

7,500' TVD

17. NO. OF ACRES ASSIGNED
TO THIS WELL

430.56 ALL

20. ROTARY OR CABLE TOOLS

Rotary

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

This action is subject to technical and

procedural review pursuant to 43 CFR 3183.3

and appeal pursuant to 43 CFR 3185.4.

7,315' ungraded ground

22. APPROX. DATE WORK WILL START*

Jan. 25, 1991

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH
17-1/2"	13-3/8"	48* (H-55)	350' (TVD)
12-1/2"	9-5/8"	40* (K-55)	7,109' (TVD)
8-3/4"	5-1/2"	17* (K-55)	9,715' (MD)

DRILLING OPERATIONS AUTHORIZED ARE

SUBJECT TO COMPLIANCE WITH ATTACHED

"GENERAL REQUIREMENTS"

GENERAL REQUIREMENTS

~435 sx or to surface

~1,400 sx

Well will be vertically drilled to ~7,100'. Well will be then kicked off in a NW direction building a ~350' radius turn. Gavilan Mancos pool will be penetrated at ~7,412' and then drilled horizontally NW for $\leq 2,000'$. This is designed to improve chance of intersecting fractures and maximize oil recovery. True vertical total depth is ~7,500'. Measured total depth is ~9,715'.

Well is scheduled for a NMOCD hearing (Case 10198) on January 10. BHL is projected. In accordance with NMOCD hearing request, lateral portion of wellbore will be in a target window no closer than 790' to section lines.

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

Brian [Signature]

TITLE

Consultant

1-5-91

(This space for Federal State use)

cc: Adams, BIA (J. Atencio), BLM (4, + 2 for OCB), T. Velarde

PERMIT NO.

APPROVAL DATE

APPROVED
AS AMENDED

APPROVED BY

JAN 22 1991

TITLE

CONDITIONS OF APPROVAL, IF ANY:

JAN 15 1991

DATE

[Signature]

AREA MANAGER

OIL CON. DIV.

DIST. 3

NMOCD

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.

OIL CONSERVATION DIVISION - 10-17-57

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT

P.O. Box 1980, Hobbs, NM 88240

DISTRICT

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 RICHMOND PETROLEUM, INC			Lease <i>Apache 27-2W-28</i>		Well <i>#1</i>
Unit Letter <i>I</i>	Section 28	Township 27 North	Range 2 West	County NMJM	<i>Apache 27-2W-28 #1</i>

Actual Footage Location of Well:

500 feet from the South line and 500 feet from the East

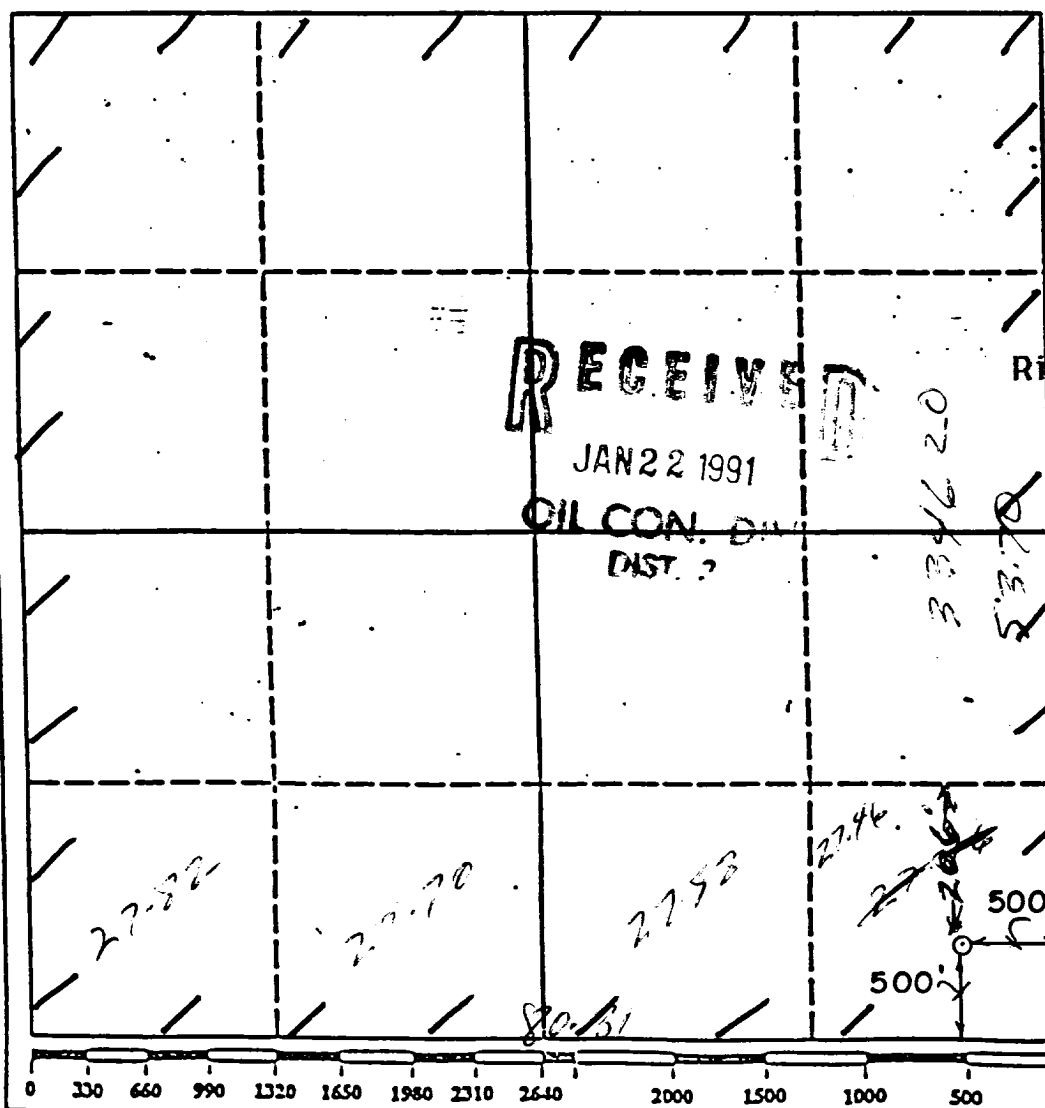
Ground level Elev. 7315'	Producing Formation Mancos	Pool Unders. Gavilan-Mancos <i>ET</i>	Dedicated Acreage: 430.56 Acres
-----------------------------	-------------------------------	--	------------------------------------

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

Printed Name **Brian Wood**

Position	Consultant
----------	------------

Richmond Petroleum Inc.

Date January 5, 1991

SURVEYOR CERTIFICATION

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

Date Surveyed _____

Signature & Seal of
Professional Engineer

Richmond Petroleum Inc. Apache 27-2W-28 #1
 500' FSL & 500' FEL (Surface)
 1915' FSL & 1915' FEL (BHL)
 Sec. 28, T. 27 N., R. 2 W.
 Rio Arriba County, New Mexico

PAGE 4

4. CASING & CEMENT

<u>Hole Size</u>	<u>O.D.</u>	<u>Weight (lb/ft)</u>	<u>Grade</u>	<u>Type</u>	<u>Age</u>	<u>GL Setting Depth</u>
17-1/2"	13-3/8"	48	H-55	ST&C	New	0' - 350'*
12-1/2"	9-5/8"	40	K-55	LT&C	New	0' - 7109'*
8-3/4"	5-1/2"	17	K-55	LT&C	New	6909'*-9715'**

*True Vertical Depth ** Measured Depth

Surface casing will be cemented to surface with ≈ 435 sx (≈ 500 cu ft @ 100% excess) Class B + 1/4 lb/sk celloflake + 2% CaCl_2 .

Stage 1 of intermediate string will be cemented with a lead slurry of ≈ 800 sx 50-50-2 + 1/4 lb/sk celloflake + 6-1/4 lb/sk gilsonite + 0.5% FL-19. Tail in ≈ 100 sx 50-50-2 + 1% CaCl_2 + 1/4 lb/sk celloflake at 30% excess.

Stage 2 of intermediate string will be cemented with a lead slurry of ≈ 400 sx 50-50-2 + 1/4 lb/sk celloflake + 6-1/4 lb/sk gilsonite + 0.5% FL-19. Tail in ≈ 100 sx 50-50-2 + 1% CaCl_2 + 1/4 lb/sk celloflake at 30% excess.

There will be 6 hours setting time between stages. Stage collar will be set at $\approx 4,500'$ with ≈ 500 sx 50-50-2 with LCM + retarder. Turbulators and centralizers will be used as needed.

Production liner will not be cemented, but will be set on a TIW type casing packer.

5. MUD PROGRAM

<u>Depth</u>	<u>Type</u>	<u>ppg</u>	<u>Viscosity</u>	<u>Fluid Loss</u>	<u>ph</u>
0' - 350'	Gel/lime	8-8.9	34-36	NC	8.5-9
350' - 7,090'	New Drill	9.0	32-36	12 cc	8.5-9
7,090 - 9,715'	LSND	9-9.2	34-36	10 cc	8.5

Richmond Petroleum Inc. Apache 27-2W-28 #1
500' FSL & 500' FEL (Surface)
1915' FSL & 1915' FEL (BHL)
Sec. 28, T. 27 N., R. 2 W.
Rio Arriba County, New Mexico

PAGE 1

Drilling Program

1. FORMATION TOPS

The estimated tops* of important geologic markers are:

<u>Formation Name</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Subsea Elevation</u>
San Jose	000'	12'	+7,315'
Ojo Alamo	3,380'	3,392'	+3,935'
Fruitland	3,620'	3,632'	+3,695'
Pictured Cliffs	3,800'	3,812'	+3,515'
Lewis Shale	3,333'	3,345'	+3,982'
Mesa Verde Ss	5,581'	5,593'	+1,734'
Mancos Shale	6,105'	6,117'	+1,210'
Niobrara A	7,201'	7,213'	+ 114'
Niobrara B	7,355'	7,367'	+ 40'
Niobrara C	7,387'	7,399'	- 72'
Base Niobrara C	7,427'	7,439'	- 112'
Total Depth (TD)**	7,500'	7,512'	- 185'

* elevations are based on an ungraded ground level of 7,315'

** True vertical depth is \approx 7,500'. Measured total depth is \approx 9,715'

2. NOTABLE ZONES

<u>Oil & Gas Zone</u>	<u>Water Zone</u>	<u>Coal Zone</u>
Fruitland (3,620')	Ojo Alamo (3,380')	Fruitland (3,620')
Pictured Cliffs (3,800')	Fruitland (3,620')	
Mesa Verde (5,581')		
Niobrara Interval (7,201')		

Objective is the Niobrara Interval of the Mancos Shale.

Richmond Petroleum Inc. Apache 27-2W-28 #1
500' FSL & 500' FEL (Surface)
1915' FSL & 1915' FEL (BHL)
Sec. 28, T. 27 N., R. 2 W.
Rio Arriba County, New Mexico

PAGE 5

6. CORING, TESTING, & LOGGING

No cores or DSTs are planned. A mud logging unit will be on site from intermediate casing point to TD. Dual induction and FDC/CNL logs will be used in Run 1. Formation Micro scanner, bore hole televiewer, or long spaced sonic logs may be used in Run 2.

7. DOWNHOLE CONDITIONS

Neither abnormal temperatures nor hydrogen sulfide are anticipated. Lost circulation may be encountered in Mesa Verde. Maximum pressure will be $\approx 3,000$ psi.

Well will be vertically drilled to $\approx 7,100'$. Well will be then kicked off in a northwest direction building a $\approx 350'$ radius turn. Gavilan Mancos pool will be penetrated at $\approx 7,412'$ and then drilled horizontally to the northwest for a distance not to exceed 2,000'. This is designed to improve chance of intersecting fractures and maximize oil recovery.

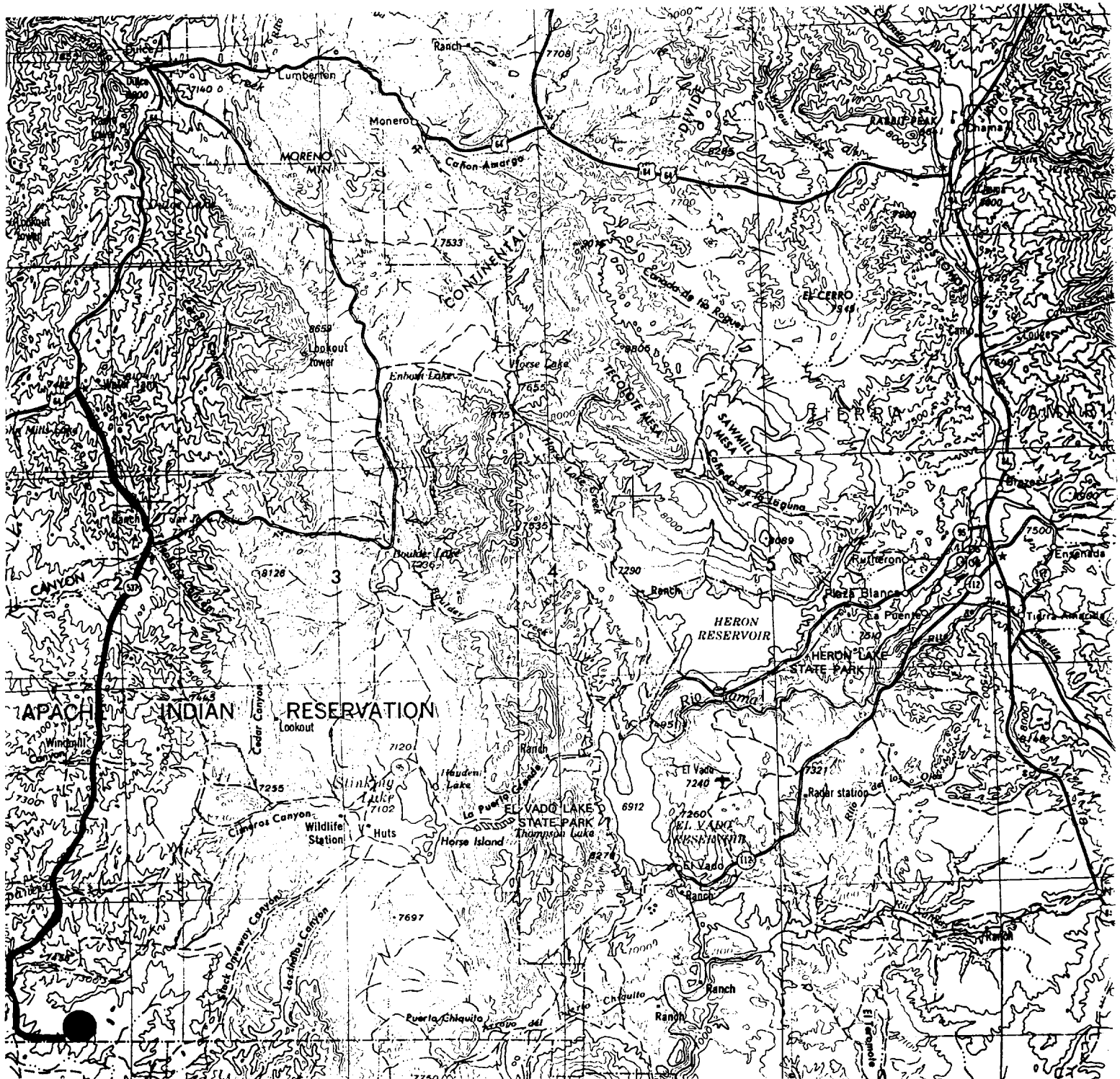
8. OTHER INFORMATION

Well is scheduled for a NMOCD hearing (Case 10198) on January 10. BHL is projected. In accordance with NMOCD hearing request, lateral portion of wellbore will be in a target window no closer than 790' to section lines.

Anticipated spud date is January 25, 1991. It is expected it will take ≈ 5 weeks to drill and ≈ 10 days to complete the well.

Richmond Petroleum Inc. Apache 27-2W-28 #1
 500' FSL & 500' FEL (Surface)
 1915' FSL & 1915' FEL (BHL)
 Sec. 28, T. 27 N., R. 2 W.
 Rio Arriba County, New Mexico

PAGE 11



Proposed Well:

Access Route:

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

Budget Bureau No. 1001-1-1
Expires August 31, 1985
5. LEASE DESIGNATION AND SERIAL NO.

701-90-0001

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Jicarilla Apache

7. UNIT AGREEMENT NAME

N/A

8. FARM OR LEASE NAME

Apache 27-2W-28

9. WELL NO.

#1

10. FIELD AND POOL, OR WILDCAT

Unds. Gavilan-Mancos

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

28-27n-2w NMPM

12. COUNTY OR PARISH

Rio Arriba

13. STATE

NM

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT" for such proposals.)

1. ☒ OIL WELL ☒ GAS WELL ☐ OTHER

2. NAME OF OPERATOR

Richmond Petroleum Inc.

(505) 327-4404

3. ADDRESS OF OPERATOR

P.O. Drawer 2039, Farmington, NM 87499

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface

Surface: 500' FS & 500' FE BHL: 1915 FS & 1915 FE

14. PERMIT NO.

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

7,315' ungraded ground

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETION

ABANDON*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. (When State all pertinent details, and give pertinent dates, including estimated date of starting any
proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones perti-
nent to this work.)*

Revise APD

As requested by Steve Mason of BLM on 1-10-91, APD is revised as follows:

- 1) Schematic of horizontal well attached.
- 2) Amount of cement for intermediate casing increased. Actual will be determined by running caliper log. Stage 1 will be cemented with a lead slurry of ≈ 900 sx 50-50-2 + 1/4 lb/sk celloflake + 6-1/4 lb/sk gilsonite + 0.5% FL-19. Tail ≈ 115 sx 50-50-2 + 1% CaCl_2 + 1/4 lb/sk celloflake @ 30% excess. Stage 2 will be cemented with a lead slurry of ≈ 450 sx 50-50-2 + 1/4 lb/sk celloflake + 6-1/4 lb/sk gilsonite + 0.5% FL-19. Tail in ≈ 115 sx 50-50-2 + 1% CaCl_2 + 1/4 lb/sk celloflake @ 30% excess.

There will be 6 hours setting time between stages. Stage collar will be set at $\approx 4,500'$ with ≈ 575 sx 50-50-2 with LCM + retarder. Turbulators and centralizers will be used as needed.

18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE

Consultant

DATE

1-11-91

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

cc: Adams, BLM(S)

*See Instructions on Reverse Side