

**MERIDIAN OIL**

OIL CONSERVATION DIVISION  
RECEIVED

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August 9, 1994

Sent Federal Express

Mr. William LeMay  
New Mexico Oil Conservation Division  
Post Office Box 2088  
Santa Fe, New Mexico 87501

*Gavilan P.C.*

Re: Southland Royalty Jicarilla 447 #2  
1425'FNL, 1160'FWL Section 19, T-27-N, R3-W - Rio Arriba County, New Mexico  
API # 30-039-not assigned

Dear Mr. LeMay:

Southland Royalty is applying for administrative approval of a non-standard location for the above location in both the Tapacitos Pictured Cliffs and Blanco Mesa Verde formations. This application for the referenced location is due to terrain as shown on the topographic map and at the request of the Jicarilla Apache Tribe.

This well is planned as a Tapacitos Pictured Cliffs/Blanco Mesa Verde commingle. Application is being made to the New Mexico Oil Conservation Division for commingling approval.

The following attachments are for your review:

1. Application for Permit to Drill.
2. Completed C-102 at referenced location.
3. Offset operators/owners plat and affidavit of notification.
4. 7.5 minute topographic map showing the orthodox windows for the north half dedication for the Mesa Verde and northwest quarter dedication for the Pictured Cliffs; and enlargement of the map to define topographic features.

A copy of this application is being submitted to all offset owners/ operators by certified mail with a request that they furnish you with a Waiver of Objection, and return one copy to this office.

Sincerely,



Peggy Bradfield  
Regulatory/Compliance Representative  
encs.

**WAIVER**


\_\_\_\_\_ hereby waives objection to Southland Royalty's application for a non-standard location for their Jicarilla 447 #2 as proposed above.

By: \_\_\_\_\_ Date: \_\_\_\_\_

xc: Williams Production  
Jicarilla Apache Tribe

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a.	Type of Work DRILL	5. Lease Number Jic Contract 447
1b.	Type of Well GAS	6. If Indian, All. or Tribe Jicarilla Apache
2.	Operator SOUTHLAND ROYALTY	7. Unit Agreement Name
3.	Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499  (505) 326-9700	8. Farm or Lease Name Jicarilla 447  9. Well Number 2
4.	Location of Well 1425' FNL, 1160' FWL  Latitude 36° 34' 06", Longitude 107° 11' 18"	10. Field, Pool, Wildcat Choza Mesa PC/ Blanco Mesa Verde  11. Sec., Twn, Rge, Mer. Sec 19, T-27-N, R-3-W NMPM
14.	Distance in Miles from Nearest Town 40 miles to Counselors	12. County Rio Arriba
		13. State NM
15.	Distance from Proposed Location to Nearest Property or Lease Line 1160'	
16.	Acres in Lease	17. Acres Assigned to Well 141.68/301.68 NW/4 N/2
18.	Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 4000'	
19.	Proposed Depth 6605'	20. Rotary or Cable Tools Rotary
21.	Elevations (DF, FT, GR, Etc.) 7138'	22. Approx. Date Work will Start 3rd quarter 1994
23.	Proposed Casing and Cementing Program See Operations Plan attached	
24.	Authorized by:  Regional Drilling Engineer	Date <u>4/22/94</u>

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

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

Archaeological Report to be submitted  
Threatened and Endangered Species Report to be submitted  
NOTE: This format is issued in lieu of U.S. BLM Form 3160-3

Submit to Asst. Sec.  
District Office  
State Lease - 4 copies  
Fee Lease - 3 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised 1-1-88

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, Artesa, NM 88210

DISTRICT III

1000 Rio Arriba Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

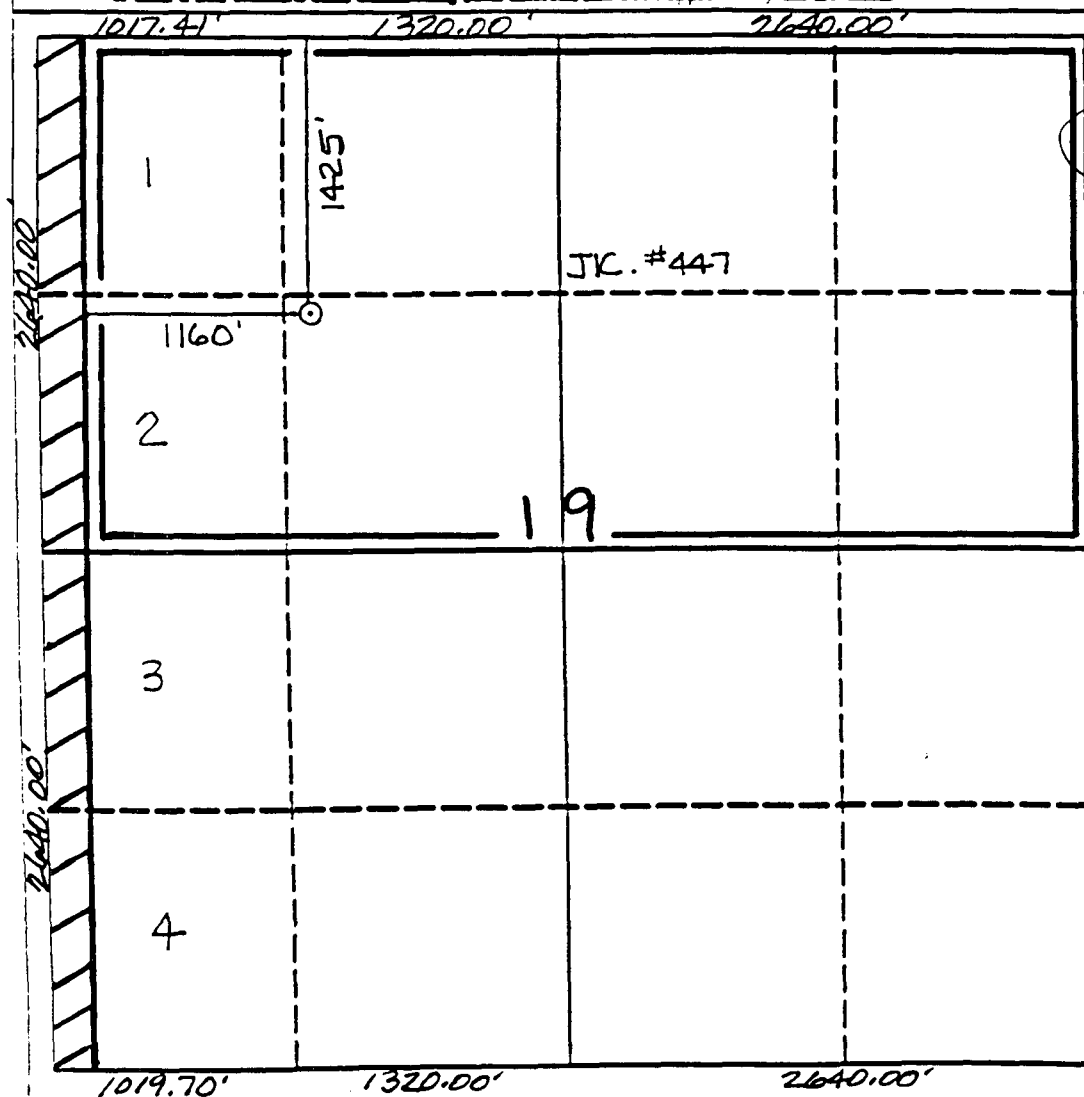
Operator Southland Royalty Company		Lease Jicarilla 447		Well No. 2
Unit Lease F	Section 19	Township 27 North	Range 3 West	County Rio Arriba
Actual Footage Location of Well: 1425' feet from the North line and 1160' feet from the West line				
Casualty Elev. 7138'	Producing Formation Pictured Cliffs/Mesa Verde	Foot Choza Mesa/Blanco	Dedicated Acreage 141.68/301.68 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or lacquer marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by commutation, 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 allowance will be assigned to the well until all interests have been consolidated (by commutation, unitization, force-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.

*Peggy Bradfield*  
Signature

Peggy Bradfield

Printed Name

Regulatory Representative

Position

Southland Royalty

Company

Date

4-19-94

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 my supervision, and that the same is true and correct to the best of my knowledge and belief.

10-14-93

Date Surveyed

*C. Edwards*  
Needle C. Edwards

Signature of Surveyor  
Professional Surveyor

6857

Cartographic No.

6857

OPERATIONS PLAN

Well Name: Jicarilla 447 #2  
Location: 1425'FNL, 1160'FWL Section 19, T-27-N, R-3-W  
 Rio Arriba County, New Mexico  
 Latitude: 36° 34' 06", Longitude 107° 11' 18"  
Formation: Choza Mesa Pictured Cliffs/Blanco Mesa Verde  
Elevation: 7138'GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	3410'	
Ojo Alamo	3410'	3640'	aquifer
Kirtland	3640'	3775'	
Fruitland	3775'	3965'	gas
Pictured Cliffs	3965'	4140'	gas
Lewis	4140'	4580'	
<b>Intermediate TD</b>	<b>4290'</b>		
Chacra	4580'	5680'	
Upper Cliff House	5680'	5805'	gas
Menefee	5805'	6105'	gas
Point Lookout	6105'		gas
<b>Total Depth</b>	<b>6605'</b>		

Logging Program:

Openhole Wireline Logging -  
 Surface to Intermediate : DIL-GR, FDC-CNL & ML  
 Intermediate TD to Total Depth : DIL-GR, FDC-CNL & Temp  
 Mud Logs/Coring/DST -  
 Mud logs - 3350' to Total Depth  
 Coring - none  
 DST - none

Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
0- 200'	Spud	8.4-8.9	40-50	no control
200-4290'	LSND	8.4-9.1	30-60	no control
4290-6605'	Gas/Mist	n/a	n/a	n/a

Pit levels will be visually monitored to detect gain or loss of fluid control.

Casing Program:

<u>Hole Size</u>	<u>Depth Interval</u>	<u>Csg.Size</u>	<u>Wt.</u>	<u>Grade</u>
12 1/4"	0' - 200'	9 5/8"	32.3#	H-40
8 3/4"	0' - 4290'	7"	20.0#	K-55
6 1/4"	4140' - 6605'	4 1/2"	10.5#	K-55

Tubing Program:

0' - 6605'      2 3/8"      4.7#      J-55 EUE

BOP Specifications, Wellhead and Tests:

**Surface to Intermediate TD -**

11" 2000 psi minimum double gate BOP stack (Reference Figure #1). After nipple-up prior to drilling out surface casing, rams and casing will be tested to 600 psi for 30 minutes.

**Intermediate TD to Total Depth -**

11" 2000 psi minimum double gate BOP stack (Reference Figure #1). After nipple-up prior to drilling out intermediate casing, rams and casing will be tested to 1500 psi for 30 minutes.

**Surface to Total Depth -**

2" nominal, 2000 psi minimum choke manifold (Reference Figure #2).

**Completion Operations -**

6" 3000 psi double gate BOP stack (Reference Figure #2). After nipple-up prior to completion, pipe rams, casing and liner top will be tested to 3000 psi for 15 minutes.

**Wellhead -**

9 5/8" x 7" x 2 3/8" x 3000 psi tree assembly.

**General -**

- Pipe rams will be actuated once each day and blind rams will be actuated once each trip to test proper functioning.
- An upper kelly cock valve with handle available and drill string valves to fit each drill string will be available on the rig floors at all times.
- A BOP pit level drill will be conducted weekly for each drilling crew.
- All of the BOP tests and drills will be recorded in the daily drilling reports.
- Blind and pipe rams will be equipped with extension hand wheels.

**Cementing:**

9 5/8" surface casing - cement with 161 sx Class "B" cement with 1/4# flocele/sx and 3% calcium chloride (188 cu.ft. of slurry, 200% excess to circulate to surface). WOC 12 hrs. Test casing to 600 psi for 30 minutes.

Saw tooth guide shoe on bottom. Bowspring centralizers will be run in accordance with Onshore Order #2.

**7" intermediate casing -**

First stage - cement with 210 sx 65/35 Class "B" cement with 2% calcium chloride, 6% gel, and 1/4# flocele/sx. Tail w/100 sx Class "B" w/2% calcium chloride (457 cu.ft. of slurry, 80% excess to circulate stage tool @ 2600').

Second stage - lead w/394 sx of 65/35 Class "B" poz w/6% gel, 2% calcium chloride, and 1/4# flocele/sx. Tail w/100 sx Class "B" w/2% calcium chloride (782 cu.ft. of slurry, 100% excess to circulate to surface). WOC minimum of 12 hours before drilling out intermediate casing. If cement does not circulate to surface, a temperature log will be run after 8 hours to determine TOC. Test casing to 1500 psi for 30 minutes.

Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. Two bowspring centralizers spaced every other joint off bottom, with 11 spaced every fourth joint to the base of the Ojo Alamo at 3640'. Two turbolating centralizers at the base of the Ojo Alamo at 3640'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of surface casing. A cementing stage tool will be run at 2600'.

#### 4 1/2" Production Liner -

Cement to circulate liner top. Lead with 202 sx 65/35 Class "B" Poz with 6% gel, 2% calcium chloride, 3 pps gilsonite, 0.25 pps celloflake. Tail with 100 sx Class "B" with 1/4#/sx cellophane flakes (443 cu.ft., 75% excess to circulate liner top). WOC a minimum of 18 hrs prior to completing.

Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. The liner hanger will have a rubber packoff.

- If hole conditions permit, an adequate water spacer will be pumped ahead of each cement job to prevent cement/ mud contamination or cement hydration.
- The pipe will be rotated and/or reciprocated, if hole conditions permit.

#### Special Drilling Operations (Gas/Mist Drilling):

The following equipment will be operational while gas/mist drilling:

- An anchored blooie line will be utilized to discharge all cuttings and circulating medium to blow pit a minimum of 100' from wellhead.
- Blooie line will be equipped with automatic igniter or pilot light.
- Compressors will be located a minimum of 100' from the wellhead in the opposite direction from the blooie line.
- Engines will have spark arresters or water cooled exhaust.
- Deduster equipment will be utilized.
- The rotating head will be properly lubricated and maintained.
- A float valve will be utilized above the bit.
- Mud circulating equipment, water, and mud materials will be sufficient to maintain control of the well.

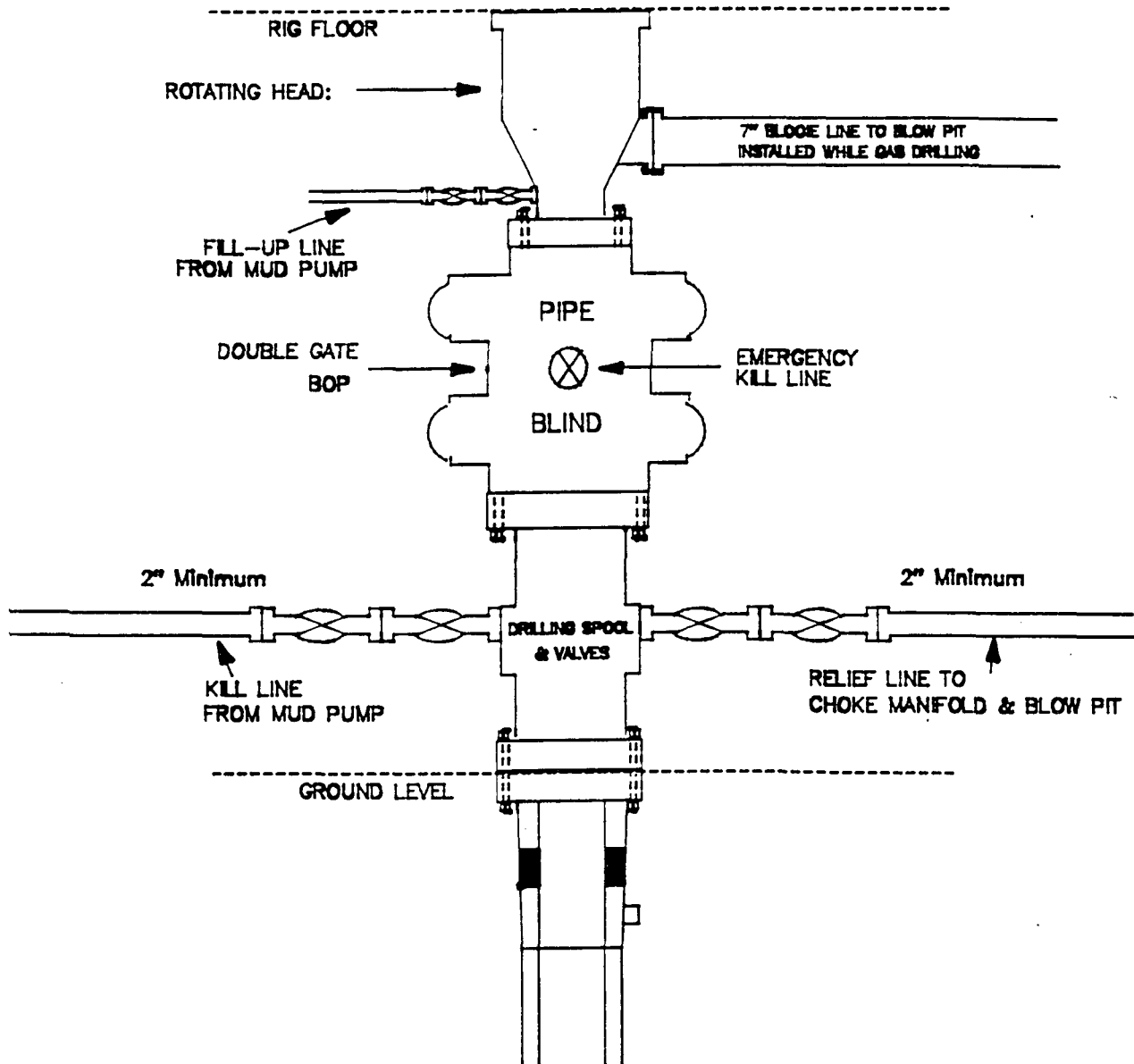
#### Additional Information:

- The Pictured Cliffs and Mesa Verde formations will be completed and commingled per New Mexico Oil Conservation Division order.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressure for the Pictured Cliffs is 800 psi and the Mesa Verde is 1100 psi.
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered below the top of the Pictured Cliffs.
- The North half of Section 19 is dedicated to the Mesa Verde formation, and the Northwest quarter is dedicated to the Pictured Cliffs.
- This gas is dedicated.
- New casing will be utilized.
- Pipe movement (either rotation or reciprocation) will be done if hole conditions permit.

# MERIDIAN OIL INC.

## BOP Configuration

### 2M psi SYSTEM



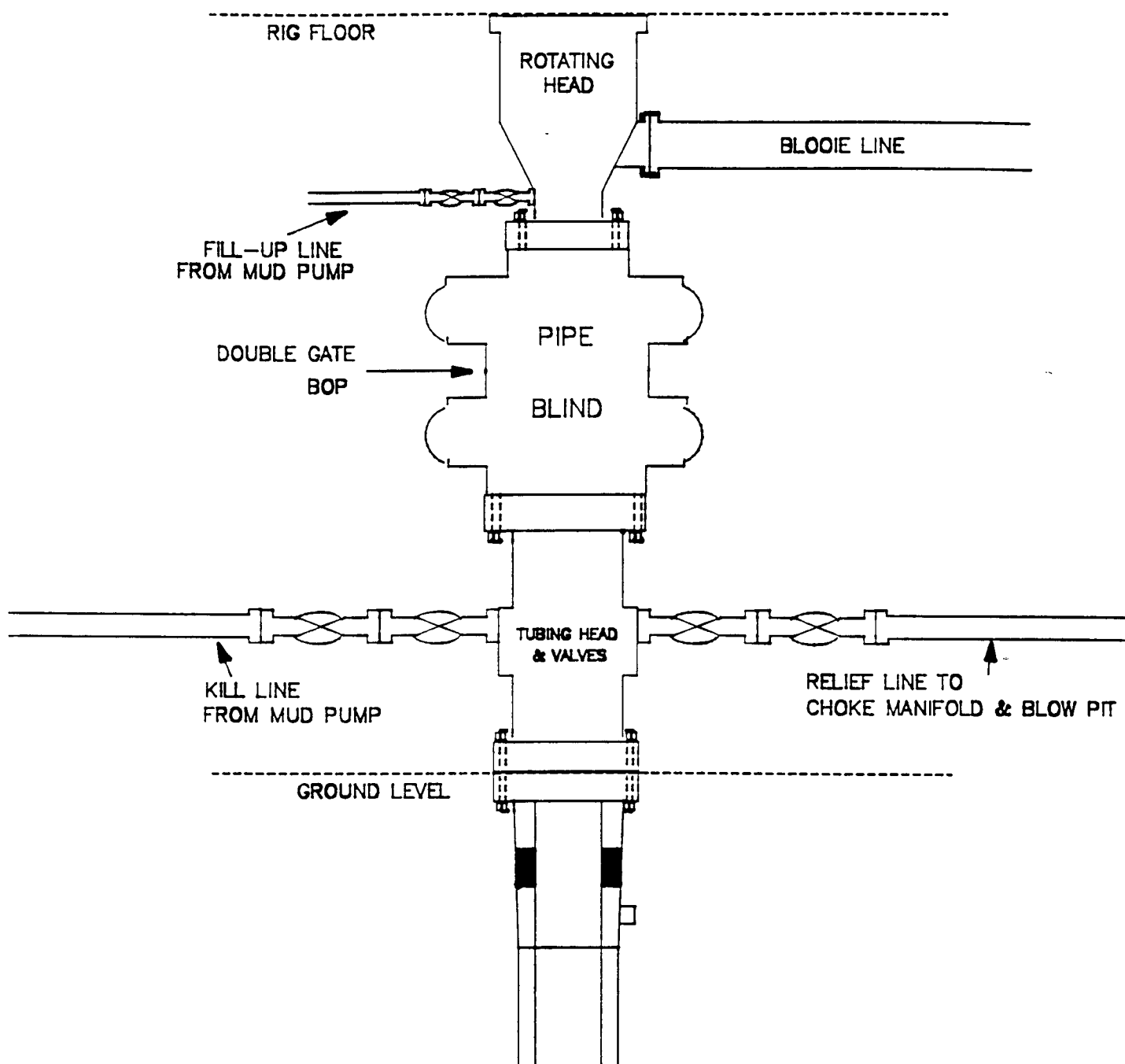
11" Bore, 2000psi minimum working pressure double gate BOP to be equipped with blind and pipe rams. A Schaffer Type 50 or equivalent rotating head to be installed on the top of the BOP. All equipment is 2000psi working pressure/or greater.

Figure #1

# MERIDIAN OIL INC.

BOP Configuration

2M psi SYSTEM

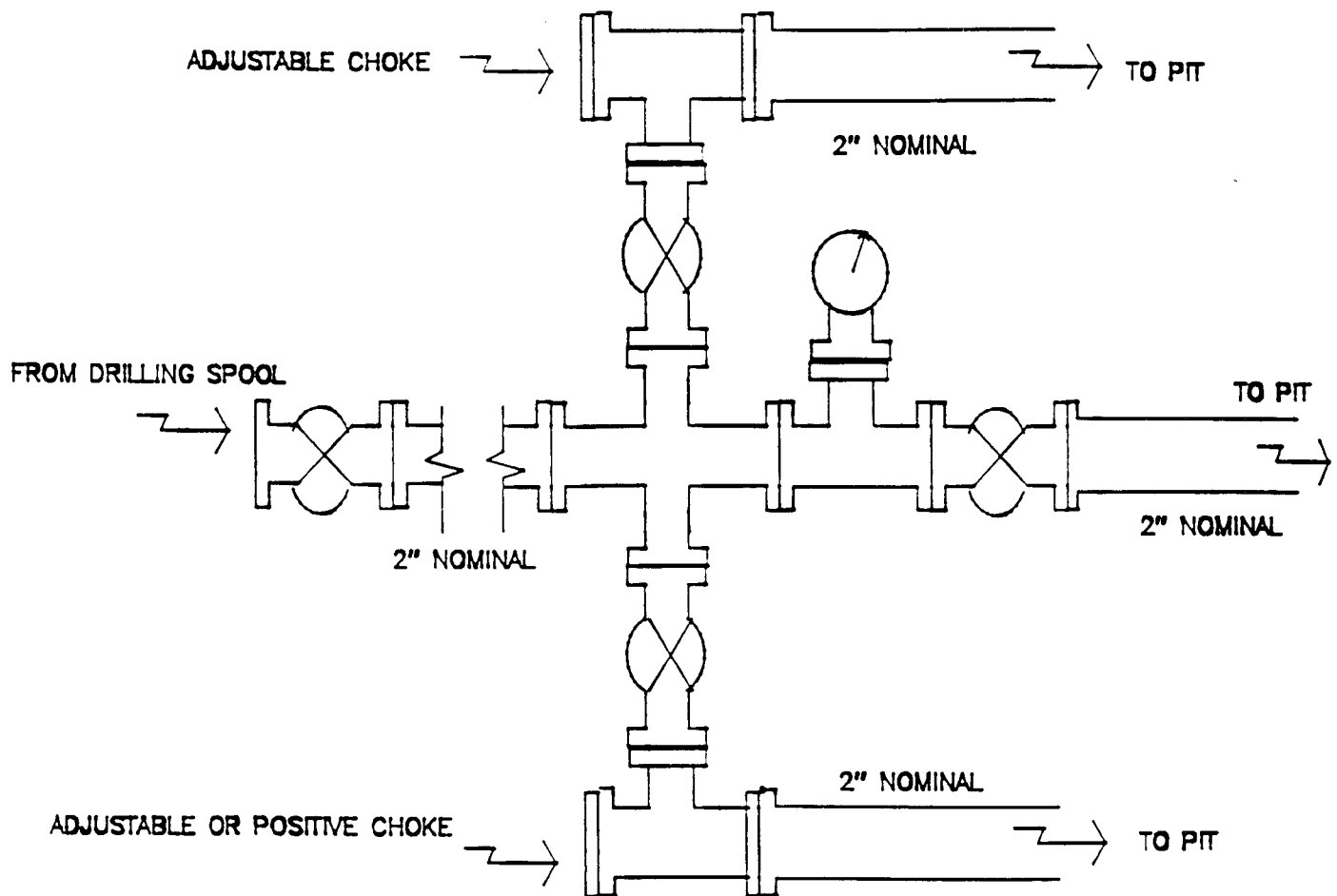


Minimum BOP installation for Completion operations. 7 1/16" Bore (6" Nominal), 3000psi minimum working pressure double gate BOP to be equipped with blind and pipe rams.

Figure #2



MERIDIAN OIL INC.  
Choke Manifold Configuration  
2M psi SYSTEM



Minimum choke manifold installation from surface to Total Depth.  
2" minimum, 2000psi working pressure equipment with two chokes.

Figure #3

SOUTHLAND ROYALTY  
Jicarilla 447 #2  
Multi-Point Surface Use Plan

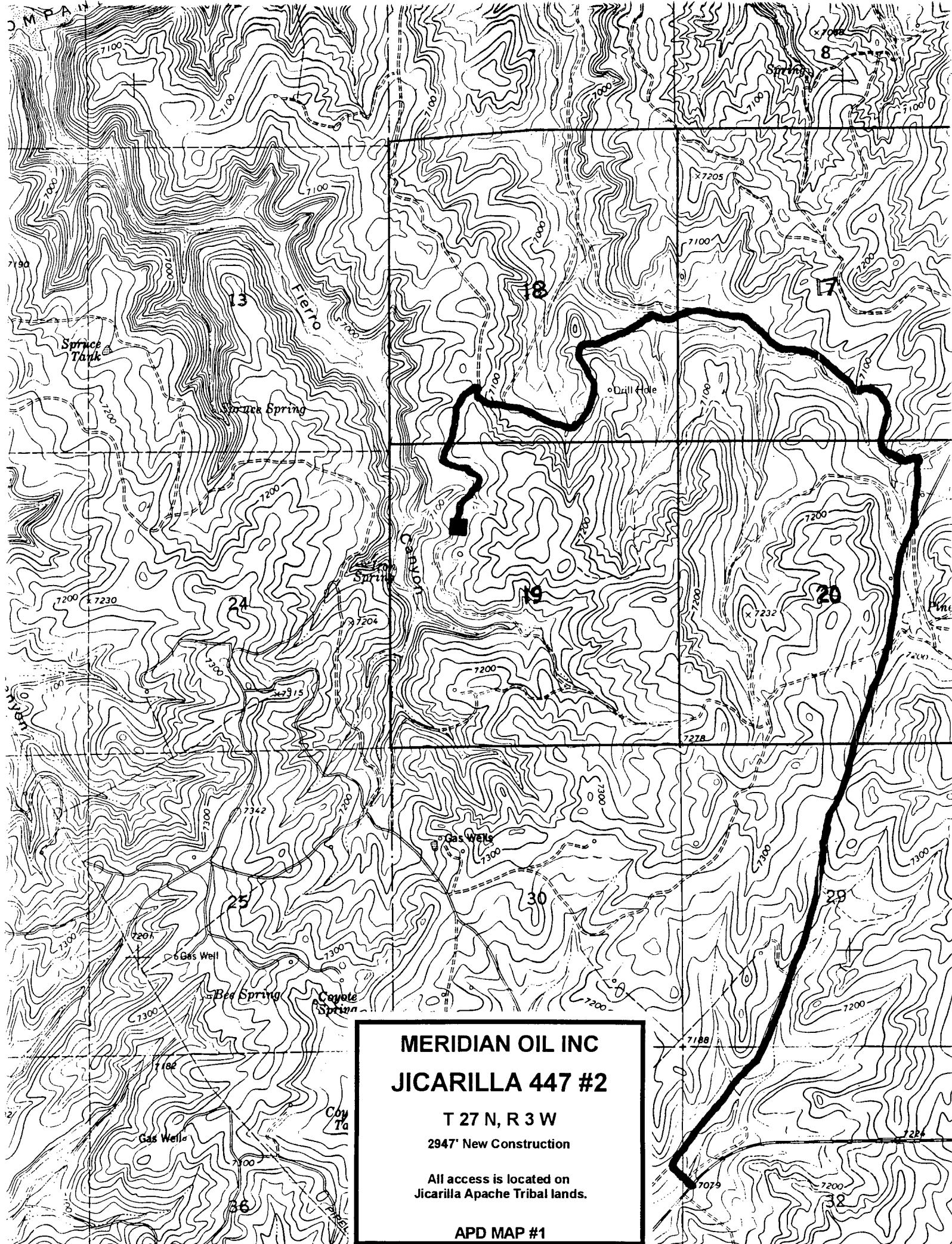
1. Existing Roads - Refer to Map No. 1. Existing roads used to access the proposed location will be properly maintained for the duration of the project. Bureau of Indian Affairs right-of-way has been applied for as shown on Map No. 1.
2. Planned Access Road - Refer to Map No. 1. The required new access road is shown on Map No. 1. The gradient, shoulder, crowning and other design elements will meet or exceed those specified by the responsible government agency. The new access road surface will not exceed twenty feet (20') in width. No additional turnarounds or turnouts will be required. Upon completion of the project, the access road will be adequately drained to control soil erosion. Approximately 2947' of access road will be constructed. Pipelines are indicated on Map No. 1A.
3. Location of Existing Wells - Refer to Map No. 1A.
4. Location of Existing and/or Proposed Facilities if Well is Productive -
  - a. On the Well Pad - Refer to Plat No. 1, anticipated production facilities plat.
  - b. Off the Well Pad - Anticipated facilities off the well pad will be applied for as required.
5. Location and Type of Water Supply - Water will be hauled by truck for the proposed project and will be obtained from Bull Pasture Well located SW Section 17, T-26-N, R-4-W, New Mexico.
6. Source of Construction Materials - If construction materials are required for the proposed project, such materials will be obtained from a commercial quarry.
7. Methods of Handling Waste Materials - All garbage and trash materials will be removed from the site for proper disposal. A portable toilet will be provided for human waste and serviced in a proper manner. Waste minimization techniques will be used to reduce drilling waste volumes. If liquids are left in the reserve pit after completion of the project, the pit will be fenced until the liquids have had adequate time to dry. The location clean-up will not take place until such time as the reserve pit can be properly covered over to prevent run-off from carrying waste materials into the watershed. All reserve pits will be lined with 12 mil bio-degradable plastic liner. All earthen pits will be so constructed as to prevent leakage from occurring; no earthen pit will be located on natural drainage. Generation of hazardous waste is not anticipated. Federal regulations will be adhered to regarding handling and disposal of such waste if so generated.
8. Ancillary Facilities - None anticipated.
9. Wellsite Layout - Refer to the location diagram and to the wellsite cut and fill diagram (Figure No. 4). The blow pit will be constructed with a 2'/160' grade to allow positive drainage to the reserve pit and prevent standing liquids in the blow pit.

10. Plans for Restoration of the Surface - After completion of the proposed project, the location will be cleaned and leveled. The location will be left in such a condition that will enable reseeding operations to be carried out. Seed mixture as designated by the responsible government agency will be used. The reseeding operations will be performed during the time period set forth by the responsible government agency. The permanent location facilities will be painted as designated by the responsible government agency.
11. Surface Ownership - Jicarilla Apache Tribe.
12. Other Information - Environmental stipulations as outlined by the responsible government agency will be adhered to. Refer to the archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, historical and cultural sites.
13. Operator's Representative and Certification - Meridian Oil Regional Drilling Manager, Post Office Box 4289, Farmington, NM 87499, telephone (505) 326-9700. I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site 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 Meridian Oil Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

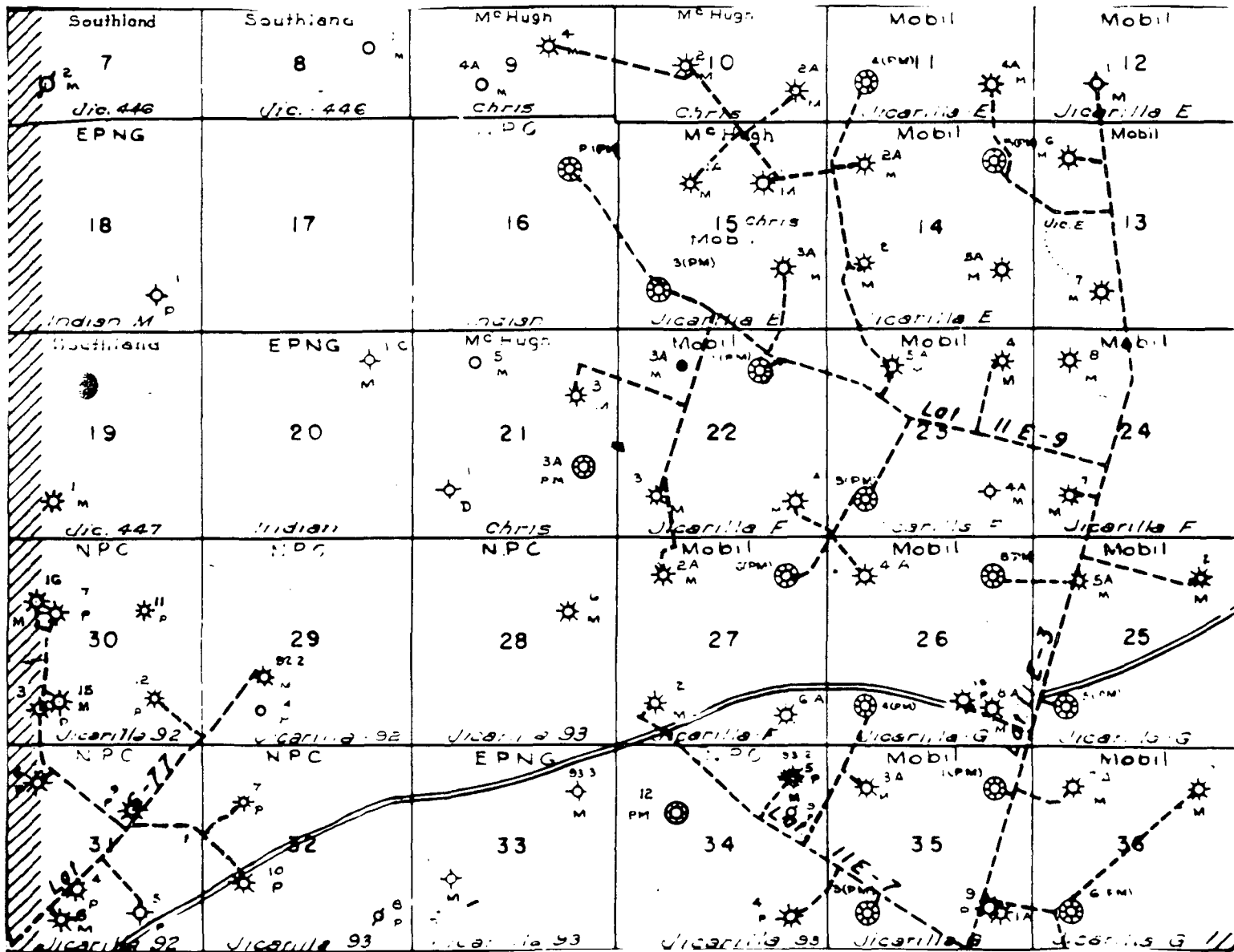
  
Regional Drilling Engineer

4/22/94  
Date

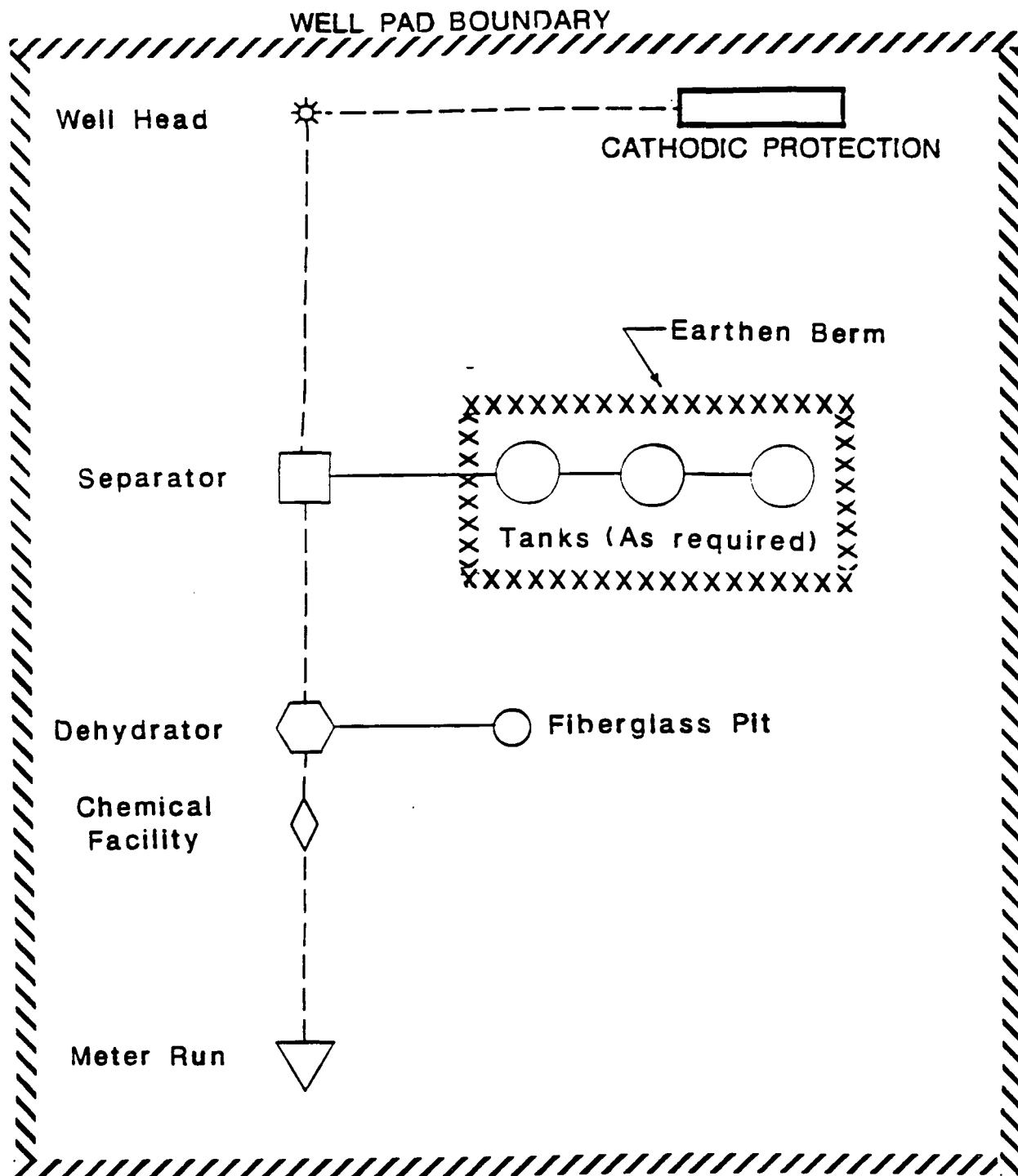
JWC:pb



**MERIDIAN OIL INC**  
**JICARILLA 447 #2**  
**T 27 N, R 3 W**  
**2947' New Construction**  
**All access is located on**  
**Jicarilla Apache Tribal lands.**  
**APD MAP #1**



Pipeline Map  
T-27-N, R-03-W  
Rio Arriba County, New Mexico  
Jicarilla 447 #2  
Map #1A



**PLAT #1**

**MERIDIAN**   
ANTICIPATED  
PRODUCTION FACILITIES  
FOR A  
MESA VERDE WELL

KFR 2/90

ALL DK

[illegible]

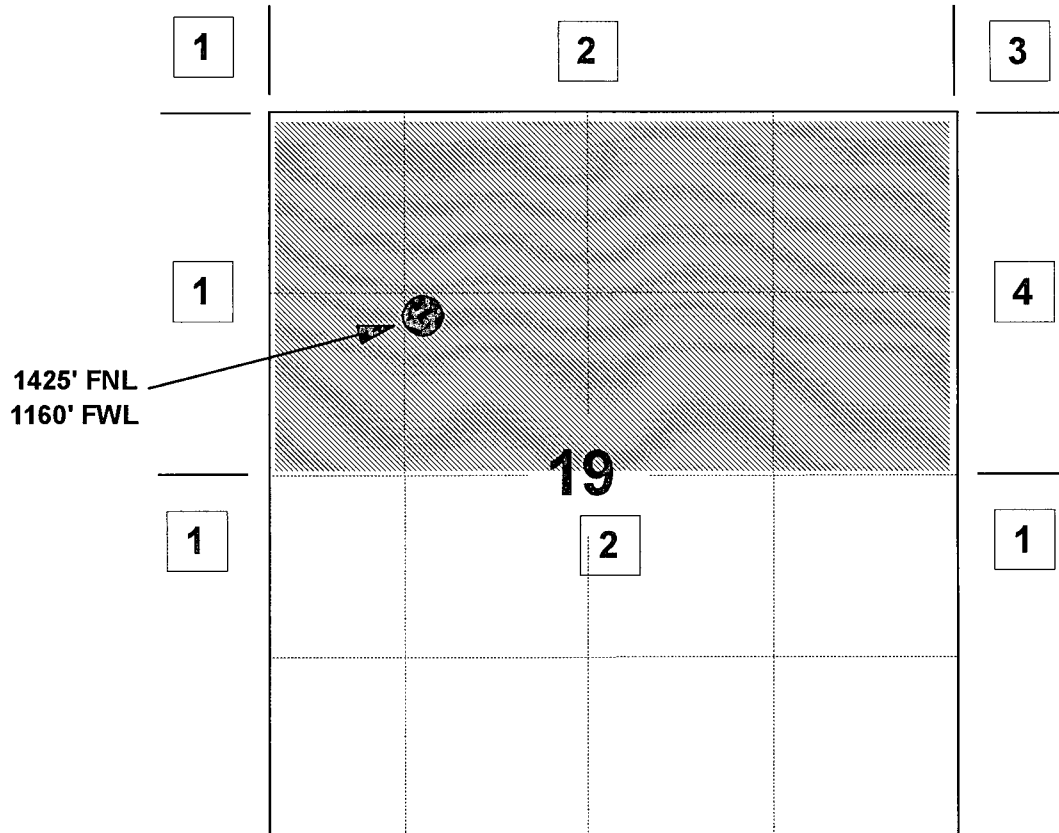
# MERIDIAN OIL INC

## JICARILLA 447 #2

### OFFSET OPERATOR \ OWNER PLAT

### Unorthodox Mesaverde Well Location

Township 27 North, Range 3 West



1) Meridian Oil Inc

2) Southland Royalty Company

3) Jicarilla Apache Tribe

PO Box 167, Dulce, NM 87528

4) Williams Production Company

PO Box 58900, Salt Lake City, UT 84158-0900

Mesaverde Formation



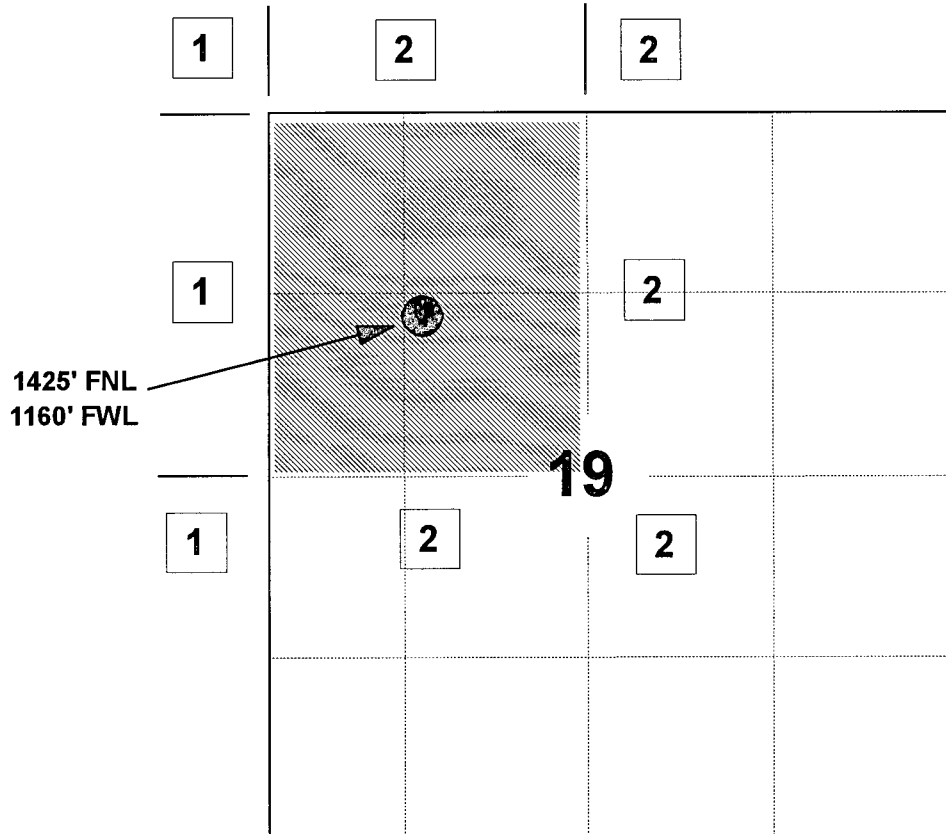
# MERIDIAN OIL INC

## JICARILLA 447 #2

OFFSET OPERATOR \ OWNER PLAT

### Pictured Cliffs Unorthodox Well Location

Township 27 North, Range 3 West



1) Meridian Oil Inc

2) Southland Royalty Company

Pictured Cliffs Formation

# MERIDIAN OIL

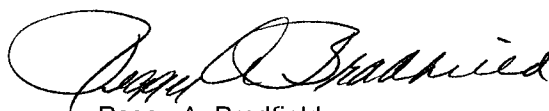
Re: Southland Royalty Co. Jicarilla 447 #2  
1425'FNL, 1160'FWL, Section 19, T-27-N, R-3-W - Rio Arriba County, New Mexico  
API # 30-039-not yet assigned

I hereby certify that the following offset operators/owners have been mailed notification of our application for non-standard location to drill the referenced well.

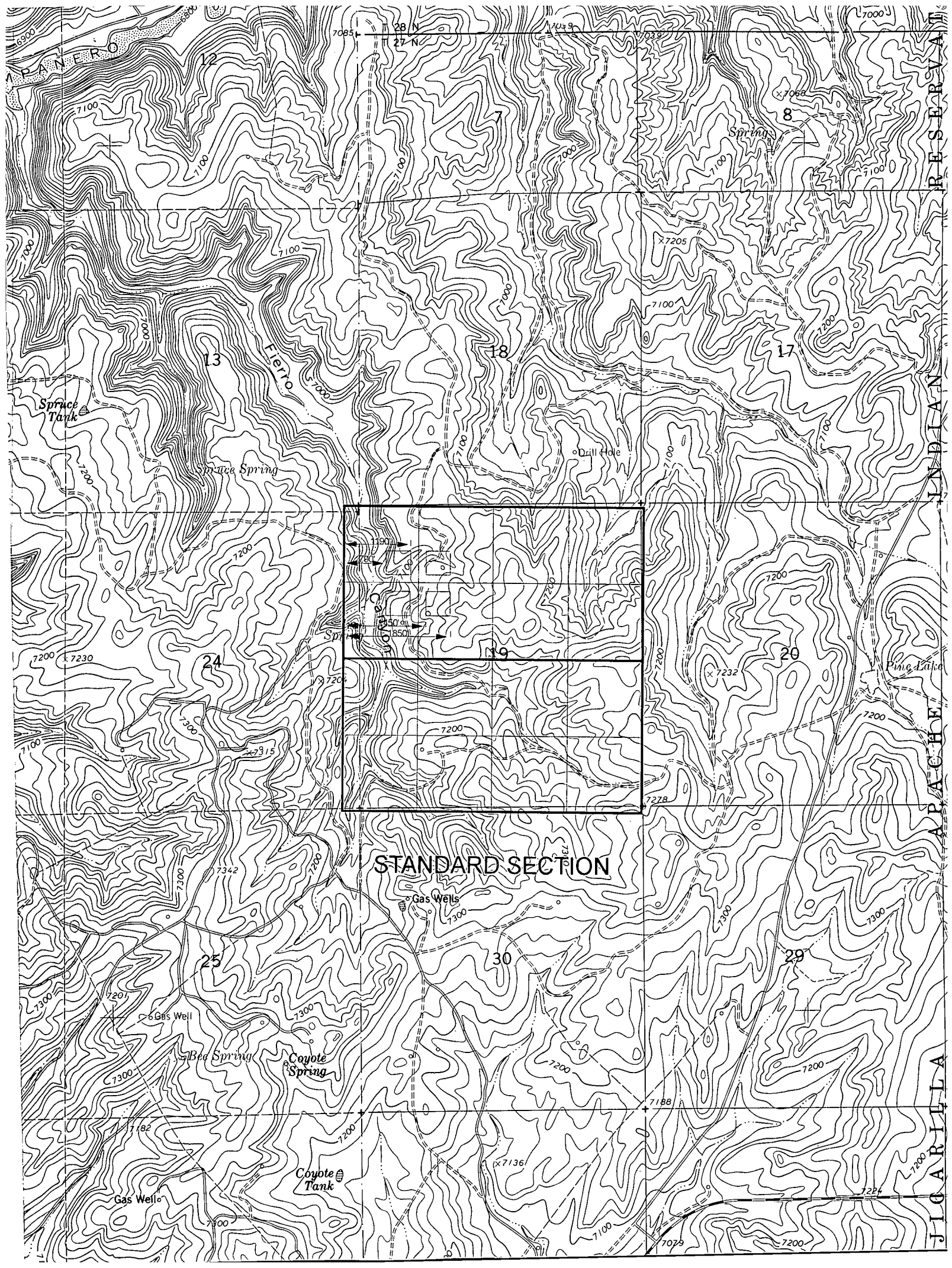
## Mesa Verde

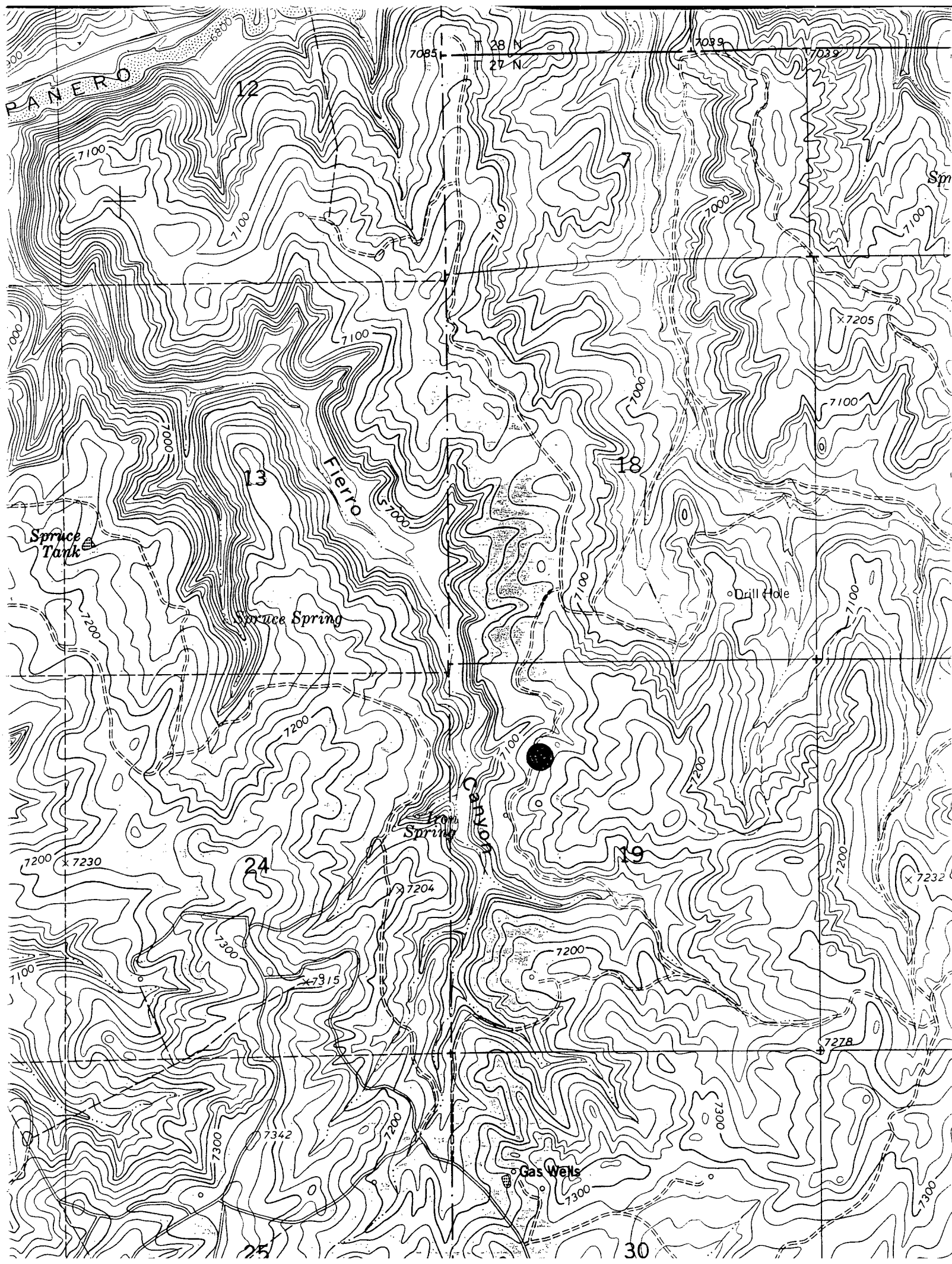
Williams Production Co  
PO Box 58900  
Salt Lake City, UT 84158-0900

Jicarilla Apache Tribe  
PO Box 167  
Dulce, NM 87528



Peggy A. Bradfield  
San Juan County, State of New Mexico  
My commission expires August 17, 1996





:  
OG5SECT

ONGARD  
INQUIRE LAND BY SECTION

08/25/94 12:59:28  
OGOMES -EMEG  
PAGE NO: 1

Sec : 19 Twp : 27N Rng : 03W Section Type : NORMAL

1 30.83  Indian owned	C 40.00  Indian owned	B 40.00  Indian owned	A 40.00  Indian owned
2 30.85  Indian owned	F 40.00  Indian owned A	G 40.00  Indian owned	H 40.00  Indian owned

PF01 HELP  
PF07 BKWD

PF02  
PF08 FWD

PF03 EXIT  
PF09 PRINT

PF04 GoTo  
PF10 SDIV

PF05  
PF11

PF06  
30.83  
30.85  
61.68  
8  
141.68  
16  
301.68

CMD :  
OG5SECT

ONGARD  
INQUIRE LAND BY SECTION

08/25/94 12:59:47  
OGOMES -EMEG  
PAGE NO: 2

Sec : 19 Twp : 27N Rng : 03W Section Type : NORMAL

3 30.87  Indian owned	K 40.00  Indian owned	J 40.00  Indian owned	I 40.00  Indian owned
4 30.89  Indian owned	N 40.00  Indian owned A	O 40.00  Indian owned A	P 40.00  Indian owned

PF01 HELP  
PF07 BKWD

PF02  
PF08 FWD

PF03 EXIT  
PF09 PRINT

PF04 GoTo  
PF10 SDIV

PF05  
PF11

PF06  
PF12



