

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING  
GOVERNOR

ANITA LOCKWOOD  
CABINET SECRETARY

August 29, 1994

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

Southland Royalty Company  
c/o Meridian Oil, Inc.  
P.O. Box 4289  
Farmington, NM 87499-4289

Attention: Peggy Bradfield

RECEIVED  
SEP - 2 1994  
OIL CON. DIV.  
DIST. 3

*Administrative Order NSL-3422*

Dear Ms. Bradfield:

Reference is made to your application dated August 5, 1994 for an unorthodox gas well location for both the Blanco-Mesaverde Pool and the Undesignated Tapacito-Pictured Cliffs Pool for the proposed Jicarilla "447" Well No. 1-A (API No. 30-039-25441). Said well to be drilled 630 feet from the South line and 1420 feet from the East line (Unit O) of Section 19, Township 27 North, Range 3 West, NMPM, Rio Arriba County, New Mexico. It is our understanding that production from both zones are to be downhole commingled.

The existing 301.76-acre gas spacing and proration unit in the Blanco-Mesaverde Pool comprising Lots 3 and 4, the E/2 SW/4, and the SE/4 (the S/2 equivalent) of said Section 19, which is presently dedicated to the Southland Royalty Company Jicarilla "447" Well No. 1 (API No. 30-039-23725), located at a standard gas well location 940 feet from the South line and 1150 feet from the West line (Unit N) of said Section 19, and the SE/4 of said Section 19 being a standard 160-acre gas spacing and proration unit for the Pictured Cliffs interval, are to be dedicated to said well.

By the authority granted me under the provisions of Rule 2(c) of the "Special Rules and Regulations for both the Blanco-Mesaverde and Tapacito-Pictured Cliffs Pools", as promulgated by Division Order No. R-8170, as amended, the above-described unorthodox gas well location is hereby approved.

Sincerely,

William J. LeMay  
Director

WJL/MES/amg

cc: Oil Conservation Division - Aztec  
US Bureau of Land Management - Albuquerque

# MERIDIAN OIL

August 5, 1994

Sent Federal Express

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

RECEIVED  
AUG - 8 1994

OIL CON. DIV.  
DIST. 3

Re: Southland Royalty Jicarilla 447 #1A  
630'FSL, 1420'FEL, Section 19, T-27-N, R3-W - San Juan County, New Mexico  
API # 30-045-not assigned

Dear Mr. LeMay:

Southland Royalty is applying for administrative approval of a non-standard location for the above location in both the Choza Mesa 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 Choza Mesa 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 south half dedication for the Mesa Verde and southeast 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 #1A as proposed above.

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


xc: Williams Production  
Snyder Oil Corp

RECEIVED  
AUG - 8 1994

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OIL CON. DIV.  
DIST. 3

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL	5. Lease Number Jicarilla Cont 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 1A	
4. Location of Well 630' FSL, 1420' FEL  Latitude 36° 33' 15", Longitude 107° 10' 55"	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 from Counselors	12. County Rio Arriba	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 630'	17. Acres Assigned to Well 160 SE/4; 301.76 S/2	
16. Acres in Lease		
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 2500'		
19. Proposed Depth 6650	20. Rotary or Cable Tools Rotary	
21. Elevations (DF, FT, GR, Etc.) 7210' GR	22. Approx. Date Work will Start 3rd quarter 1994	
23. Proposed Casing and Cementing Program See Operations Plan attached		
24. Authorized by: 	6/1/94 Date	
Regional Drilling Engineer		

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_  
APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

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

Schedule to be submitted  
- District Office  
State Lease - 4 copies  
Fee Lease - 3 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Edition 4-1-

OIL CONSERVATION DIVISION

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

1

DISTRICT 1  
P.O. Box 1983, Hobbs, NM 88240

DISTRICT 2  
P.O. Drawer 100, Arama, NM 88210

DISTRICT 3  
1000 Rio Arriba Rd., Arama, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT  
All Distances must be from the corner collection of the section

Operator Southland Royalty Company			Lease Jicarilla 447			Well No. 1A		
Unit Lease O	Section 19	Township 27 North	Range 3 West	County Rio Arriba				
Adjoiner Location of Well:								
630 feet from the South line and			1420 feet from the East line					
Common corner Elev. 7210'			Fronting Township Pic.Cliffs/Mesa Verde			Facing Township Choza Mesa/Blanco		
						Deduction Acreage 160/301.76 A		

1. Outline the acreage dedicated to the subject well by section corner or section corner on the plat below.

2. If there then one more is dedicated to the well, outline same and identify the ownership thereof (such as so working interest and royalty).

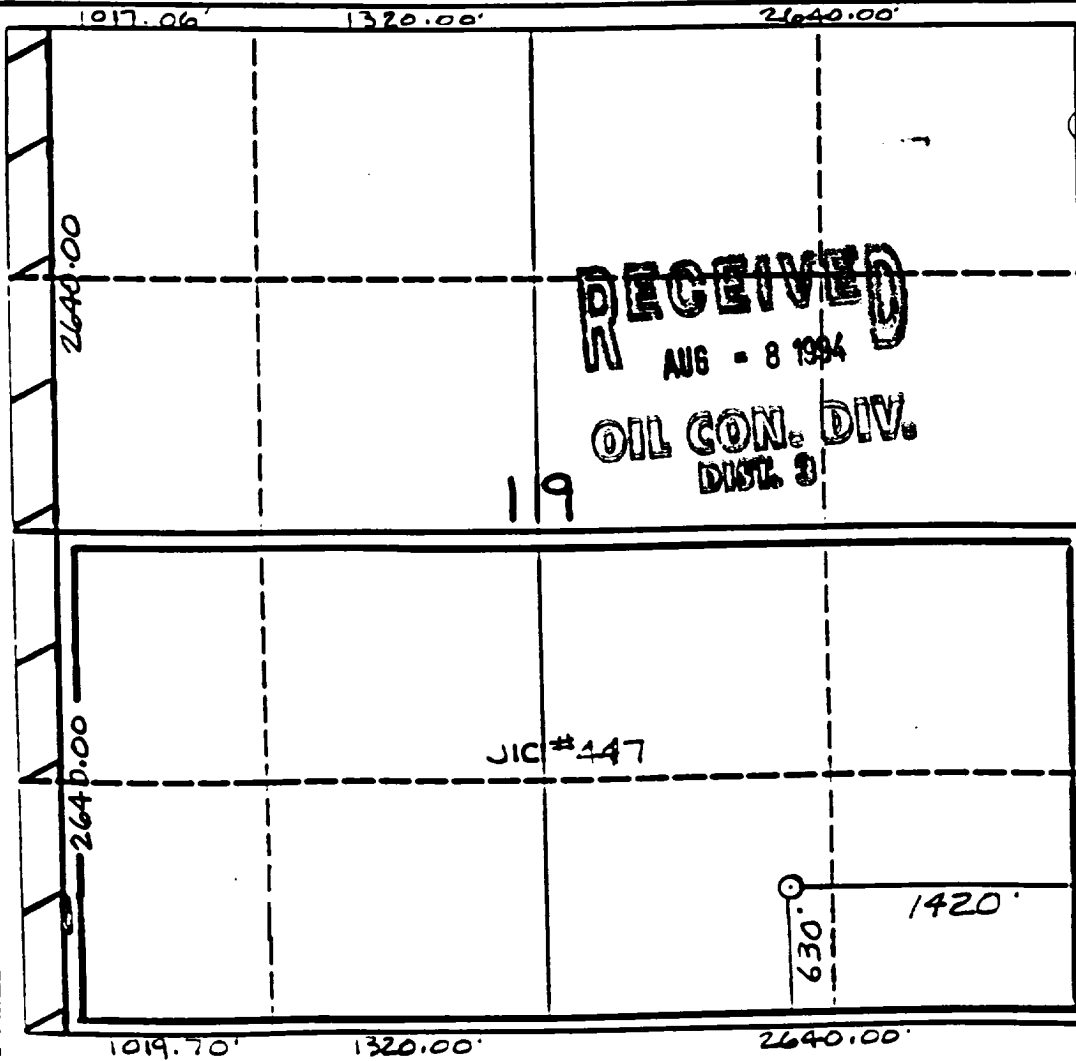
3. If there then one more of different ownership is dedicated to the well, have the interest of all owners been communicated by communication, assignment, lease-owning, etc.?

☐ Yes ☐ No

If answer is "yes" type of communication

If answer is "no" list the owners and what communications would have actually been communicated. (Use reverse side of this form if necessary).

No alteration will be assigned to the well until all interests have been communicated (by communication, assignment, lease-owning, or otherwise) or until a non-assignment deed, containing such interest, has been approved by the Division.



OPERATOR CERTIFICATE

I hereby certify that the common corner on this plat was placed from the actual survey made by me or my representative and belief.

*Peggy Bradfield*  
Signature

Peggy Bradfield  
Printed Name

Regulatory Represent  
Position

Southland Royalty  
Company

5-25-94  
Date

SURVEYOR CERTIFICATE

I hereby certify that the well location on this plat was placed from the actual survey made by me or my representative, and that the same conforms to the best of my own belief. 10-14-92

Date Surveyed  
G. EDY

NEEDS A SURVEYOR

Signature of Surveyor  
Professional Surveyor

9857

6857

OPERATIONS PLAN

**Well Name:** Jicarilla 447 #1A  
**Location:** 630'FSL, 1420'FEL Section 19, T-27-N, R-3-W  
 Rio Arriba County, New Mexico  
 Latitude: 36° 33' 15", Longitude 107° 10' 55"  
**Formation:** Gavilan Pictured Cliffs/Blanco Mesa Verde  
**Elevation:** 7210'GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	3455'	
Ojo Alamo	3455'	3685'	aquifer
Kirtland	3685'	3820'	
Fruitland	3820'	4005'	gas
Pictured Cliffs	4005'	4010'	gas
Lewis	4010'	4185'	
<b>Intermediate TD</b>	<b>4335'</b>		
Chacra	4185'	5725'	
Upper Cliff House	5725'	5850'	gas
Menefee	5850'	6130'	gas
Point Lookout	6130'		gas
<b>Total Depth</b>	<b>6650'</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 - 3375' to Intermediate 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
200-4335'	LSND	8.4-9.1	30-60	no control
4335-6650'	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' - 4335'	7"	20.0#	K-55
6 1/4"	4185' - 6650'	4 1/2"	10.5#	K-55

Tubing Program:

0' - 6650' 2 3/8" 4.7# J-55 EUE

BOP Specifications, Wellhead and Tests:

**Surface to Intermediate TD -**

11" 3000 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" 3000 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, 3000 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 108 sx Class "B" cement with 1/4# flocele/sx and 3% calcium chloride (125 cu.ft. of slurry, 100% 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 214 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 (469 cu.ft. of slurry, 80% excess to circulate stage tool @ 2600').

Second stage - lead w/389 sx of 65/35 Class "B" poz w/6% gel, 2% calcium chloride, and 1/4# flocele/sx. Tail w/25<sup>100</sup> 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 3685'. Two turbolating centralizers at the base of the Ojo Alamo at 3685'. 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 199 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.

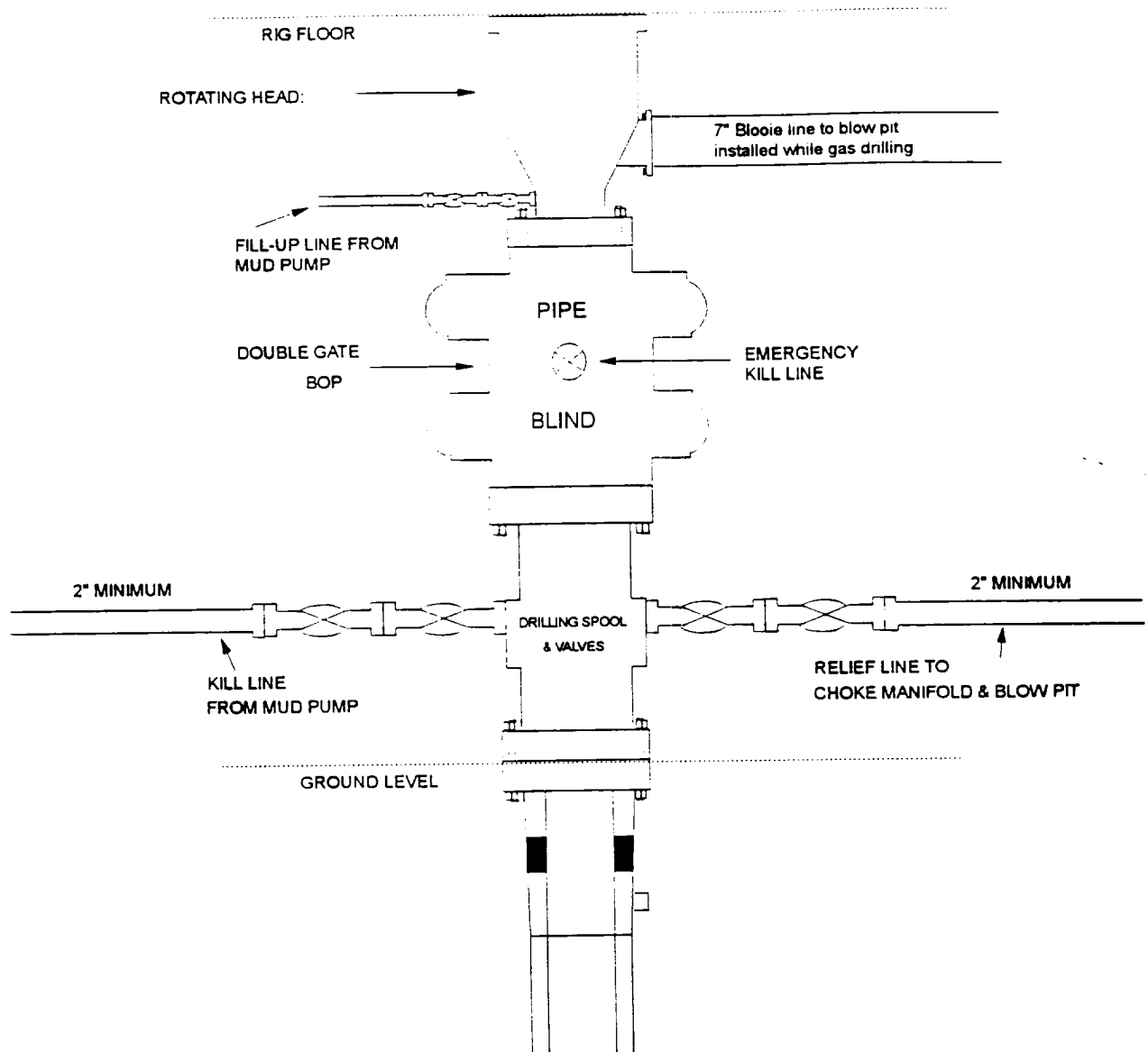
#### Additional Information:

- 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 South half of Section 19 is dedicated to the Mesa Verde formation, and the Southeast 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

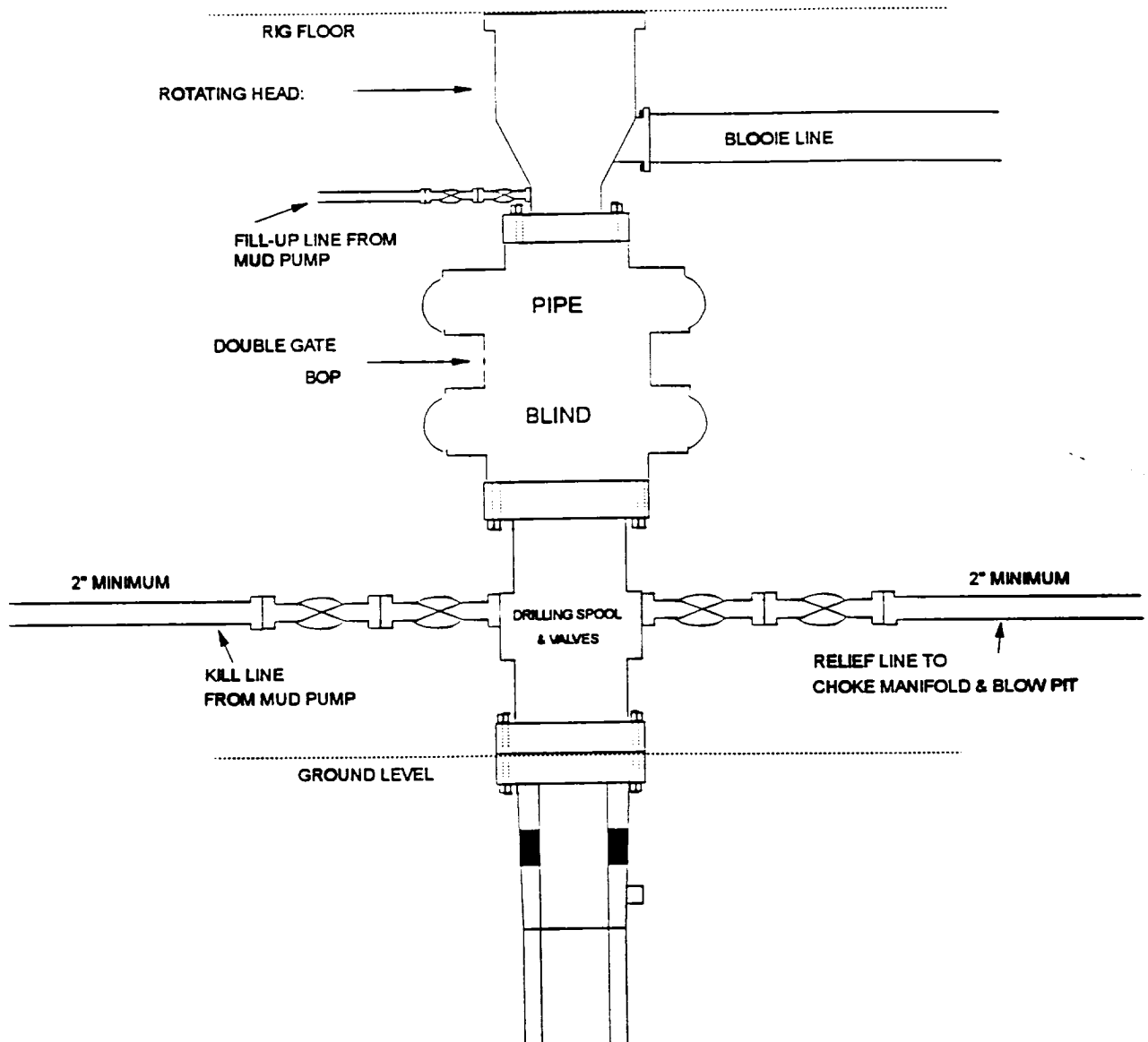


11" Bore, 3,000psi minimum working pressure double gate BOP to be equipped with blind and pipe rams. A Schaffer Type 50 or equivalent rotating head to be installed on the top of the BOP. All equipment is 3,000psi working pressure/or greater.

Figure #1

# MERIDIAN OIL INC.

## BOP Configuration 3M PSI System

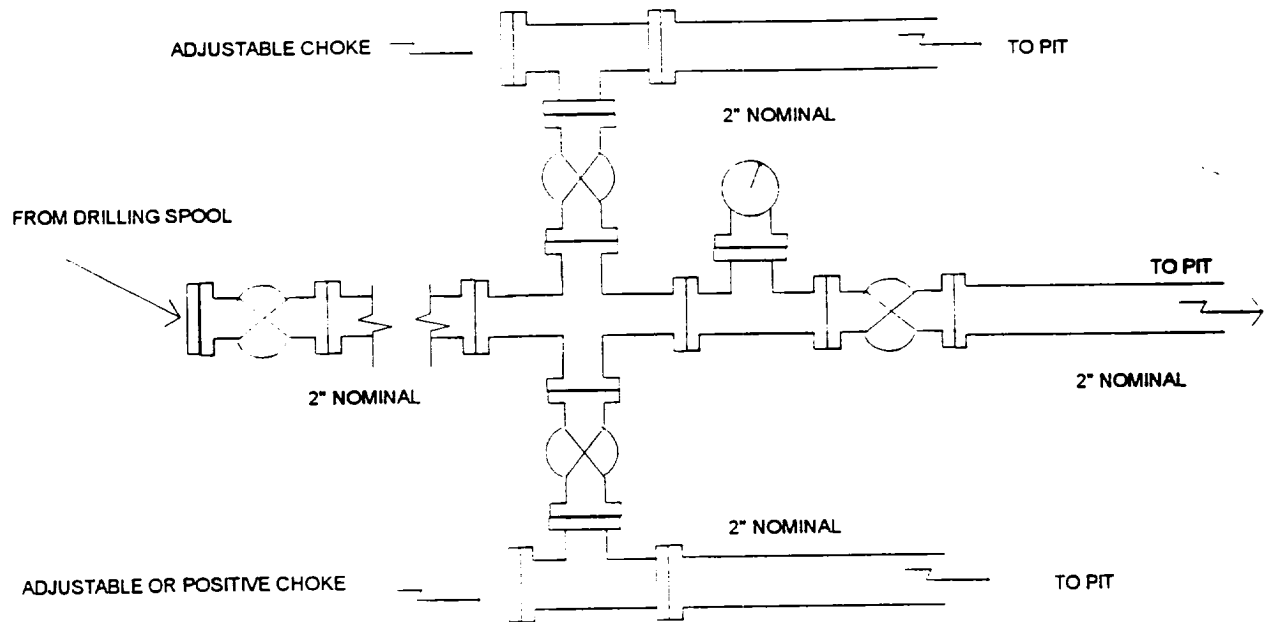


Minimum BOP installation for Completion operations. 7 1/16" Bore  
(6" Nominal), 3,000psi minimum working pressure double gate BOP to  
be equipped with blind and pipe rams.

Figure #2

# MERIDIAN OIL INC.

## Choke Manifold Configuration 2M System



Minimum choke manifold installation from surface to Total Depth.  
2" minimum, 3000psi working pressure equipment with two chokes.

**Figure #3**

SOUTHLAND ROYALTY  
Jicarilla 447 #1A  
Multi-Point Surface Use Plan

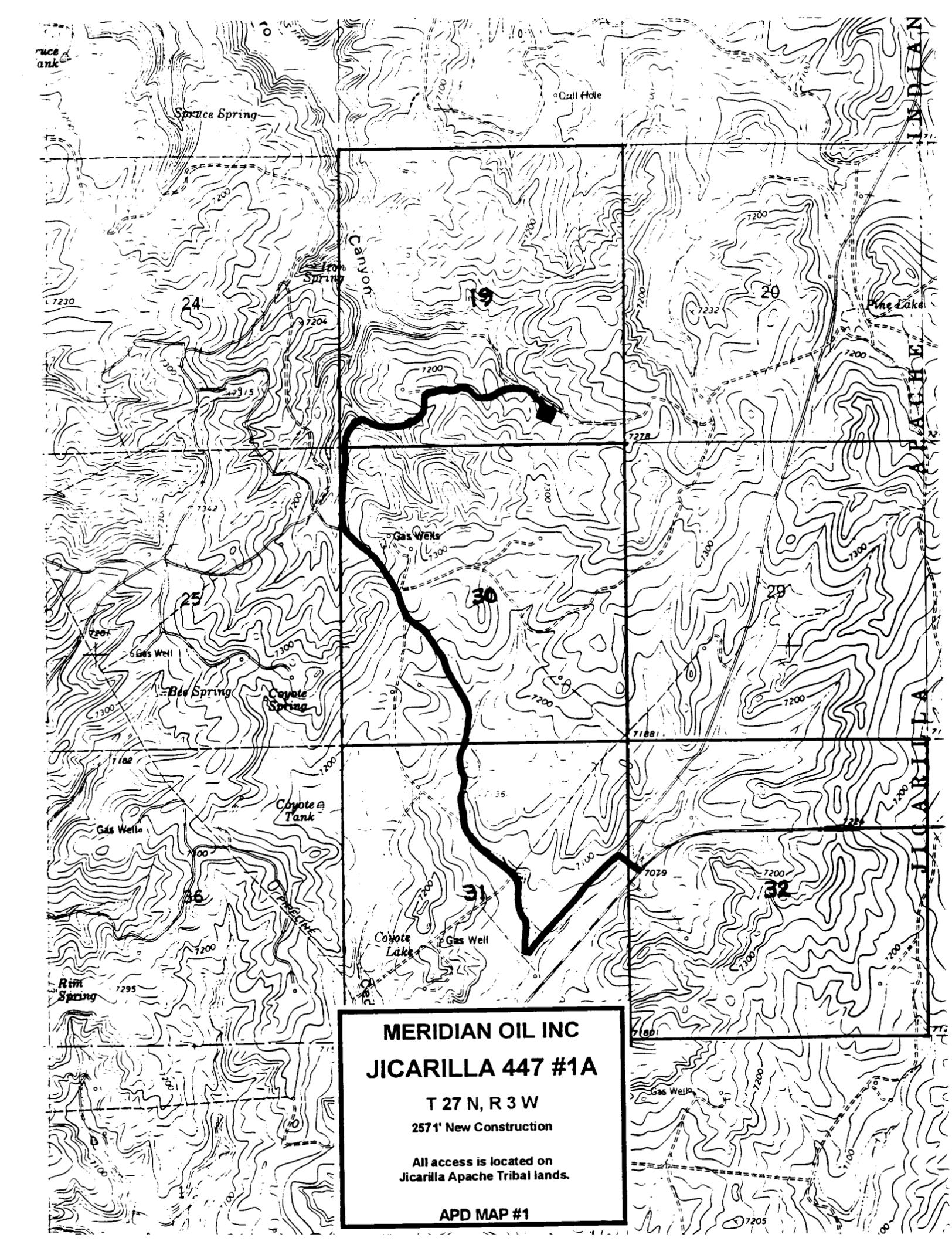
1. Existing Roads - Refer to Map No. 1. Existing roads used to access the proposed location will be properly maintained for the duration of the project. Bureau of Indian Affairs right-of-way has been applied for as shown on Map No. 1.
2. Planned Access Road - Refer to Map No. 1. The required new access 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 2571' 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

6/1/94  
Date

JWC:pb

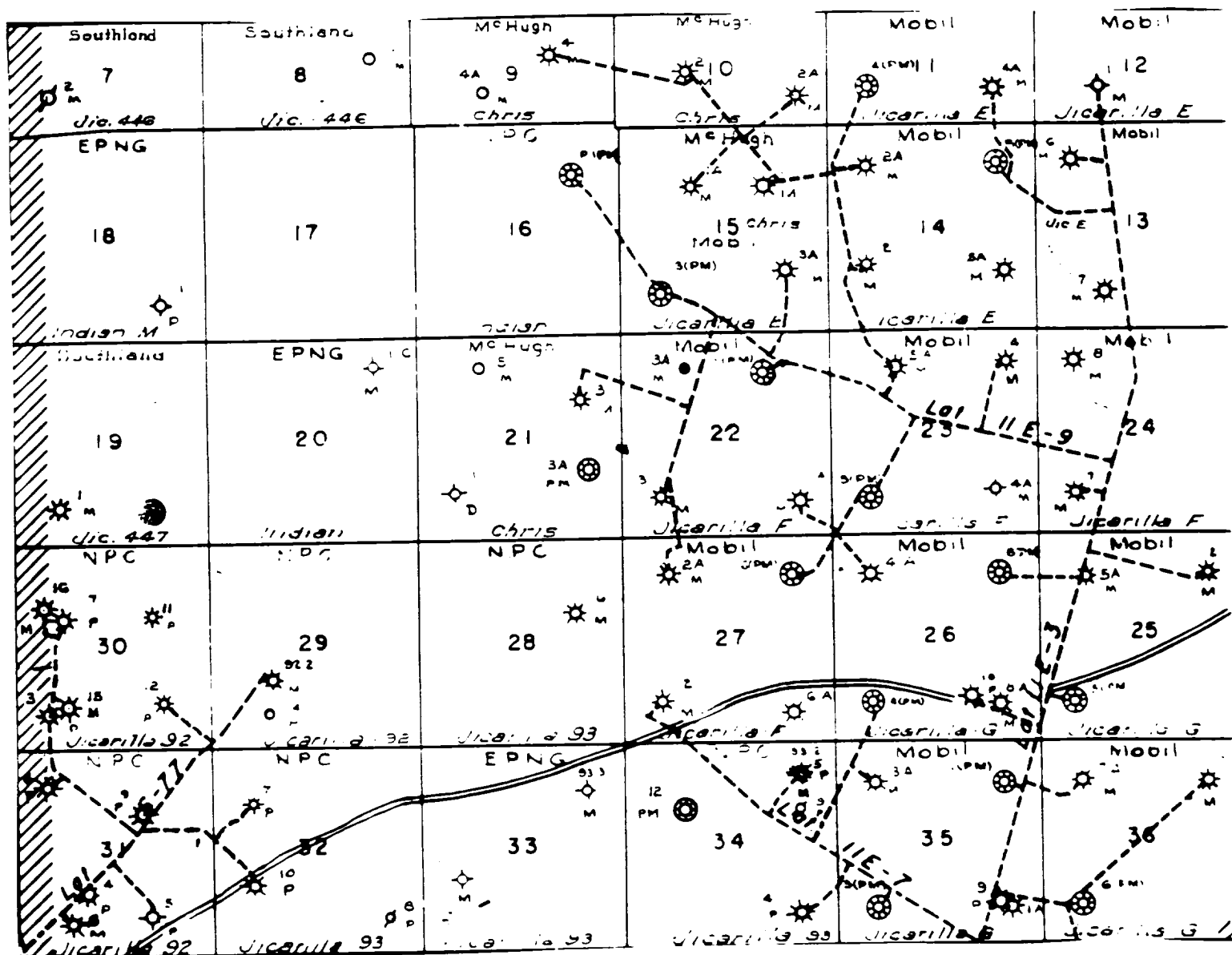


**MERIDIAN OIL INC**  
**JICARILLA 447 #1A**

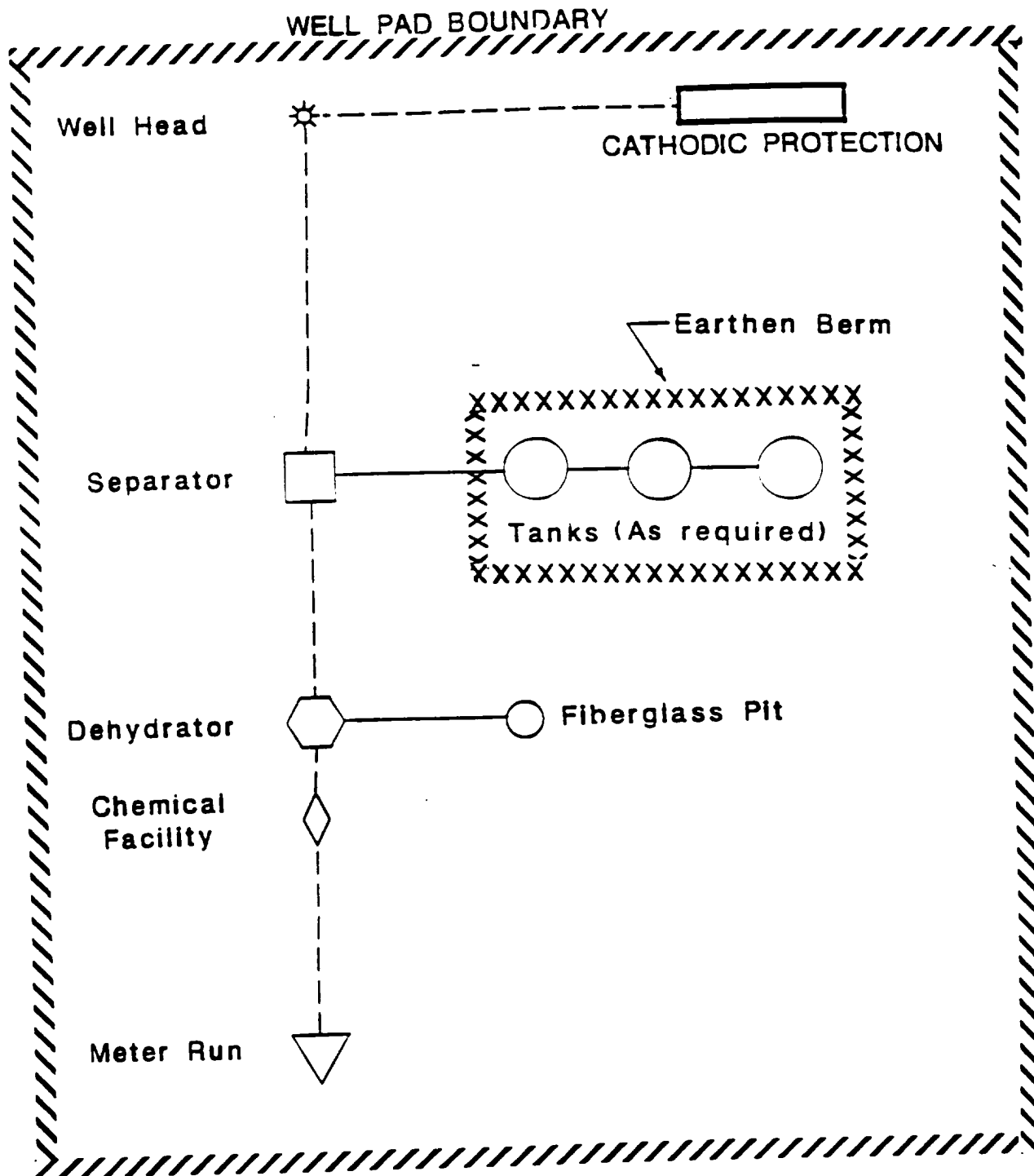
T 27 N, R 3 W  
2571' New Construction

All access is located on  
Jicarilla Apache Tribal lands.

APD MAP #1



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



**PLAT #1**

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

ALL DK

7220						
7210						
7200						

Re: Southland Royalty Co. Jicarilla 447 #1A  
630'FSL, 1420'FEL, Section 19, T-27-N, R-3-W - San Juan County, New Mexico  
API # 30-045-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

Snyder Oil Corp  
777 Main, Suite 2500  
Ft Worth, TX 76102

**Pictured Cliffs**

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



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

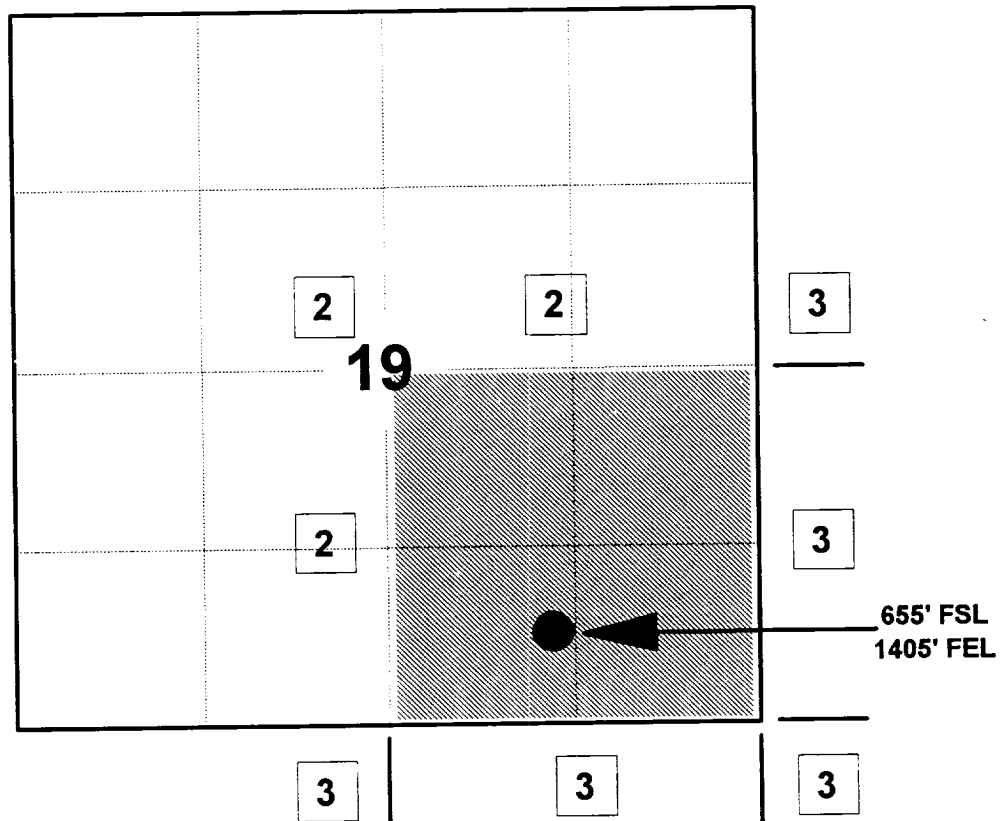
# MERIDIAN OIL INC

JICARILLA 447 #1A

OFFSET OPERATOR \ OWNER PLAT

Pictured Cliffs Unorthodox Well Location

Township 27 North, Range 3 West



1) Southland Royalty Company

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

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Pictured Cliffs Formation

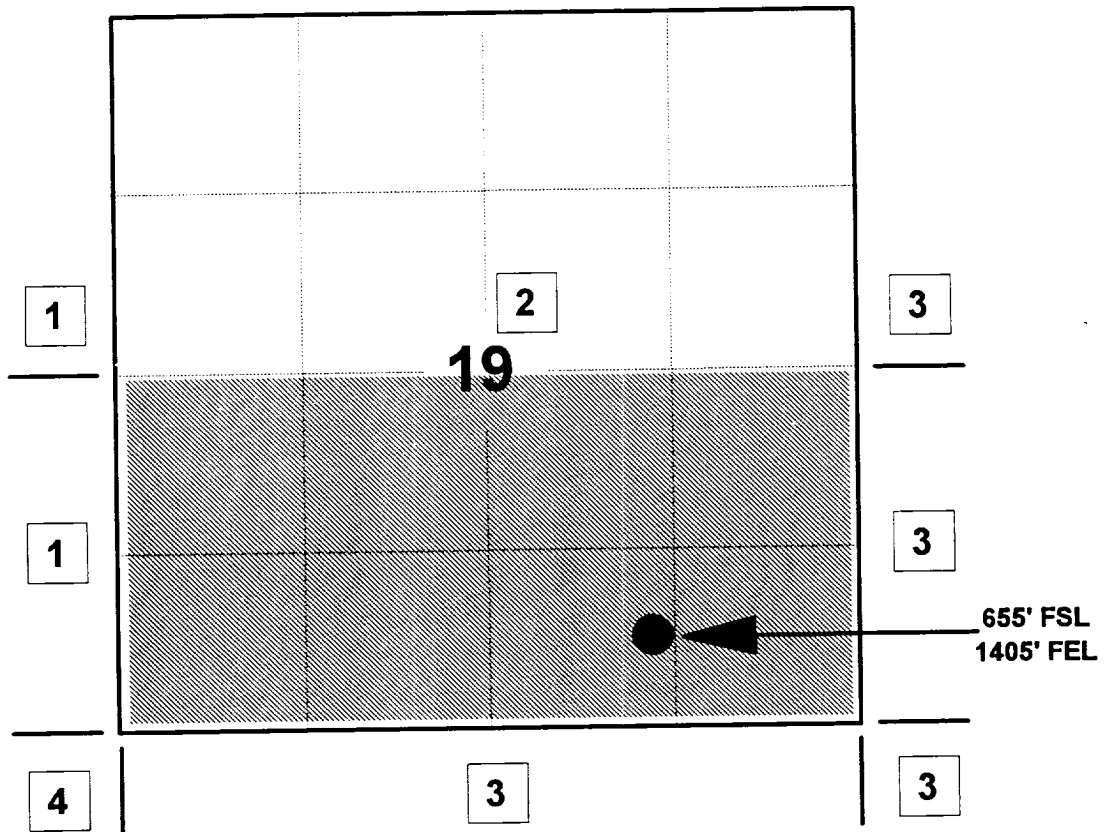
# MERIDIAN OIL INC

JICARILLA 447 #1A

OFFSET OPERATOR \ OWNER PLAT

Mesaverde Unorthodox Well Location

Township 27 North, Range 3 West



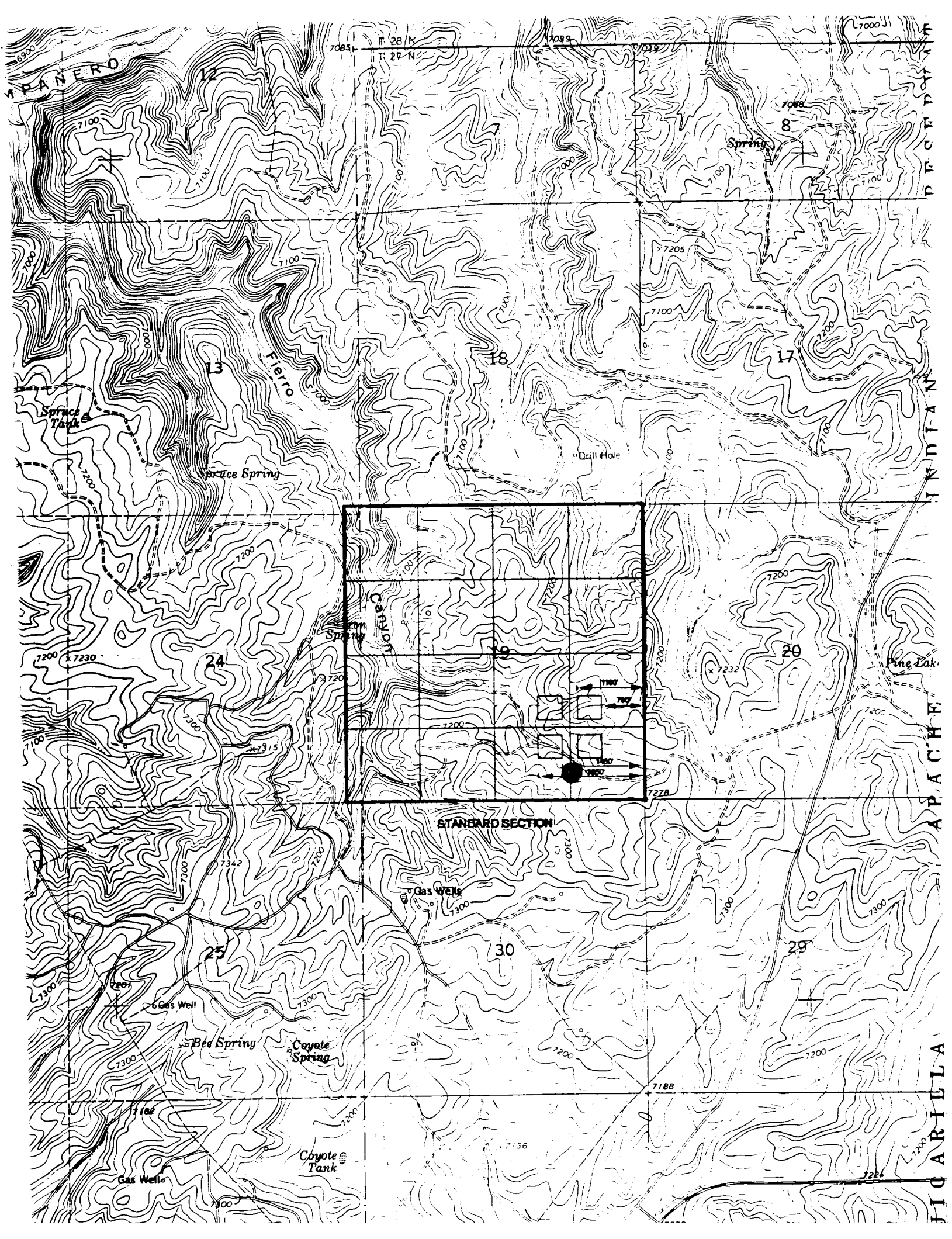
1) Meridian Oil Inc

2) Southland Royalty Company

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

4) Snyder Oil Corporation 777 Main, Suite 2500, Fort Worth, TX 76102

Mesaverde Formation



Spring

