

# MERIDIAN OIL

May 4, 1993

Sent Federal Express

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

Re: Meridian Oil Inc. San Juan 30-6 Unit #48R  
2295'FSL, 725'FWL Section 27, T-30-N, R-6-W  
Rio Arriba County, New Mexico

Dear Mr. LeMay:

Meridian Oil Inc. is applying for administrative approval of a non-standard location for the above location in the Mesa Verde formation.

This application for the referenced location is at the request of the Bureau of Land Management and due to terrain as shown on the enclosed maps.

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. Meridian Oil is the operator of the San Juan 30-6 Unit.
4. 7.5 minute topographic map showing the orthodox windows for the west half dedication and enlargement of the map to define topographic features.
5. If the well were directionally drilled to a standard bottom hole location, the economics would be severely burdened due to the incremental directional drilling costs of \$200,000.

Sincerely,

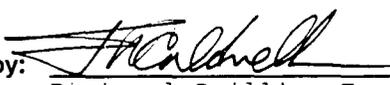


Peggy Bradfield  
Regulatory/Compliance Representative

encs.

**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 SF-080712A	
1b. Type of Well GAS	6. If Indian, All. or Tribe	
2. Operator <b>MERIDIAN OIL</b>	7. Unit Agreement Name San Juan 30-6 Unit	
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499  (505) 326-9700	8. Farm or Lease Name San Juan 30-6 Unit	9. Well Number 48R
4. Location of Well 2295' FSL, 725' FWL  Latitude 36° 46' 58", Longitude 107° 27' 22"	10. Field, Pool, Wildcat Blanco Mesa Verde	11. Sec., Twn, Rge, Mer. Sec 27, T-30-N, R-6-W NMFM
14. Distance in Miles from Nearest Town 11 miles to Navajo City	12. County Rio Arriba	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 725'		
16. Acres in Lease	17. Acres Assigned to Well 320 W/2	
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 150'		
19. Proposed Depth 6083'	20. Rotary or Cable Tools Rotary	
21. Elevations (DF, FT, GR, Etc.) 6439' GR	22. Approx. Date Work will Start 2nd quarter 1993	
23. Proposed Casing and Cementing Program See Operations Plan attached		
24. Authorized by: <u></u> Regional Drilling Engineer	Date <u>4/27/93</u>	

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

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

Archaeological Report submitted 12-23-92  
Threatened and Endangered Species Report to be submitted

Submit to Assessor  
District Office  
State Lands - 4 copies  
Fee Lands - 3 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-182  
Revised 1-1-80

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

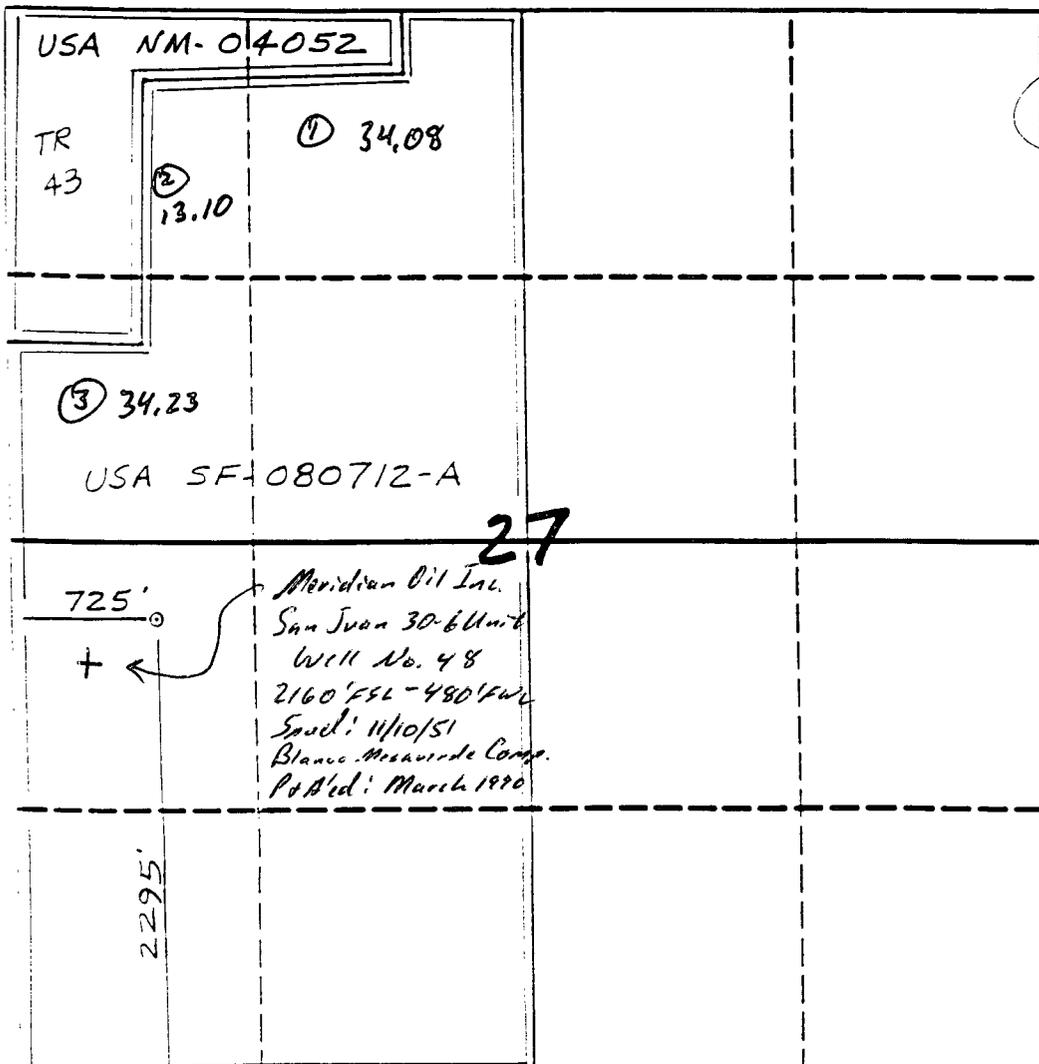
WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator Meridian Oil Inc.		Lease San Juan 30-6 Unit		Well No. 48R
U.S. Layer E	Section 27	Township 30 North	Range 6 West	County NMEM Rio Arriba
Actual Footage Location of Well: 2295 feet from the South line and 725 feet from the West line				
Ground level Elev. 6439'	Producing Formation Mesa Verde	Pool Blanco	Dedicated Acreage 320 Acres	

*Shown to be 640 acres*

- Outline the acreage dedicated to the subject well by correct pencil or section 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: unitization  
 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 tract, alienating 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 Bradford*  
Signature  
Peggy Bradford

Printed Name  
Regulatory Rep

Position  
Meridian Oil Inc.

Company  
4-27-93

Date

**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.

1-14-93

Date Surveyed  
C. EDWARDS

Name  
C. Edwards

Signature  
Professional Surveyor

9857

OPERATIONS PLAN

Well Name: San Juan 30-6 Unit #48R  
Location: 2295'FSL, 725'FWL Section 27, T-30-N, R-6-W  
 Rio Arriba County, New Mexico  
 Latitude 36° 46' 59", Longitude 107° 27' 22"  
Formation: Blanco Mesa Verde  
Elevation: 6439'GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	2413'	
Ojo Alamo	2413'	2610'	aquifer
Kirtland	2610'	2988'	gas
Fruitland	2988'	3371'	gas
Pictured Cliffs	3371'	3613'	gas
Lewis	3613'	4113'	gas
Intermediate TD	3763'		
Chacra	4413'	5261'	gas
Mesa Verde	5261'		gas
Massive Cliff House	5261'	5303'	gas
Menefee	5303'	5583'	gas
Massive Point Lookout	5583'	5651'	gas
Lower Point Lookout	5651'		gas & oil
<b>Total Depth</b>	<b>6083'</b>		

Logging Program:

Openhole Wireline Logging -  
 Surface to Intermediate TD : DIL/LDT/CNL/ML  
 Intermediate TD to Total Depth : DIL/LDT/Ep Neut/Temp  
 Mud Logs/Coring/DST -  
 Mud logs - none  
 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
200-3763'	Weighted	8.4-9.1	30-60	no control
3763-6083'	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' - 3763'	7"	20.0#	K-55
6 1/4"	3613' - 6083'	4 1/2"	10.5#	K-55

Tubing Program:

0' - 6083'      2 3/8"      4.7#      J-55

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 #3).

**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 180 sx Class "B" cement with 1/4# flocele/sx and 3% calcium chloride (212 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 -**

Lead w/573 sx of 65/35 Class "B" poz w/6% gel, 2% calcium chloride, 5# gilsonite/sx and 1/4# flocele/sx. Tail w/100 sx Class "B" w/2% calcium chloride (1131 cu.ft. of slurry, 125% 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. Seven bowspring centralizers spaced every other joint off bottom, with three spaced every fourth joint to the base of the Ojo Alamo at 2610'. Two turbolating centralizers at the base of the Ojo Alamo at 2610'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

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

Cement to circulate liner top. Lead with 220 sx 50/50 Class "B" Poz with 2% gel, 0.6% fluid loss additive. Tail with 100 sx 50/50 Class "B" Poz with 2% gel, 0.6% fluid loss additive, 6.25#/sx gilsonite and 1/4#/sx cellophane flakes (507 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. Bowspring centralizers spaced every other joint off bottom to top of the Mesa Verde or above. 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 the blow pit a minimum of 100' from the wellhead.
- The blooie line will be equipped with an 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.

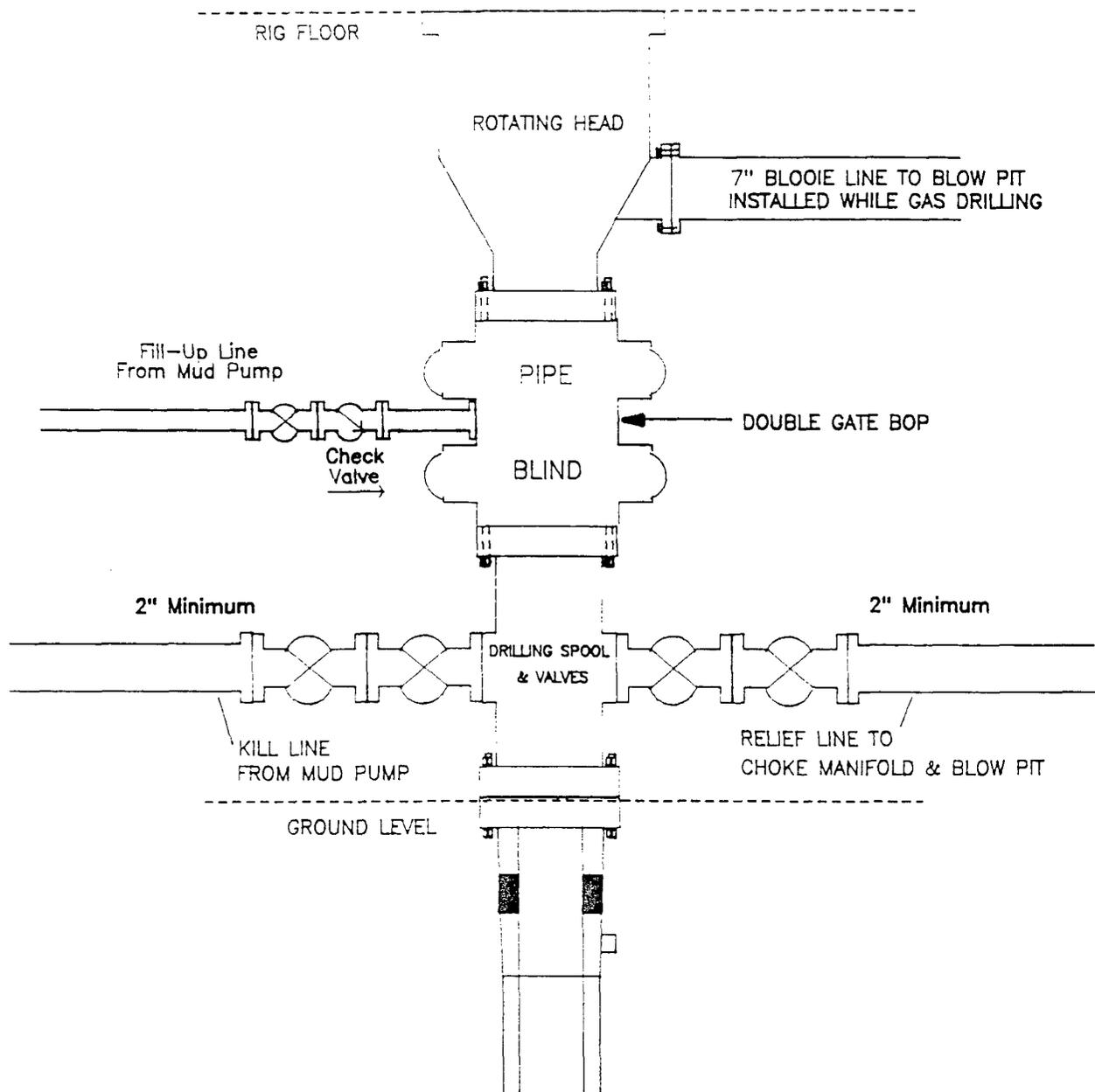
#### Additional Information:

- The Mesa Verde formation will be completed.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:
 

Fruitland Coal	1000 psi
Mesa Verde	700 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 West half of Section 26 is dedicated to this well.
- This gas is dedicated.

# MERIDIAN OIL INC.

## Mesaverde Well BOP Configuration

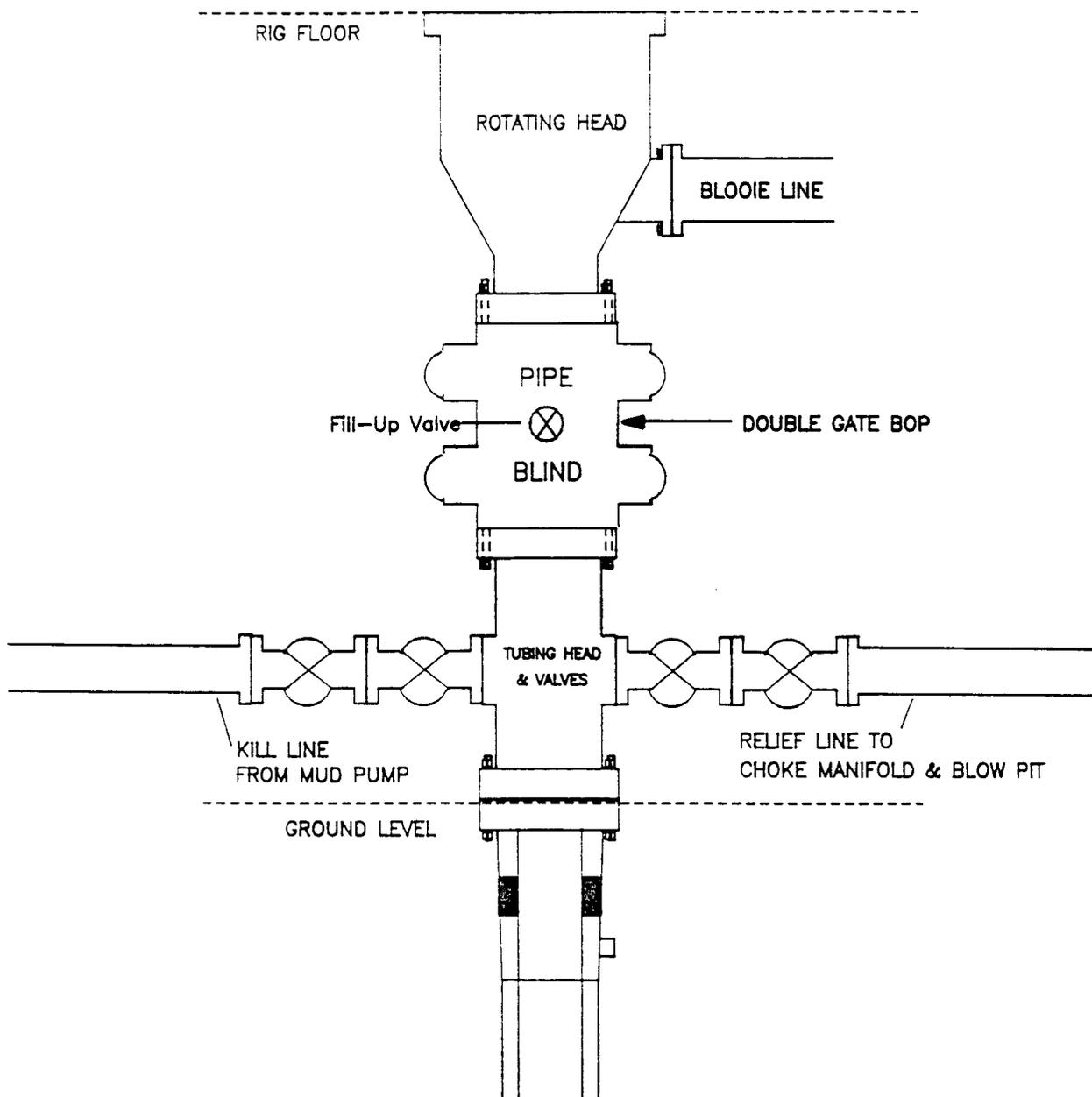


Minimum BOP installation for a Mesaverde well from Surface to Total Depth. 11" Bore, 2000psi minimum working pressure double gate BOP to be equipped with blind and pipe rams. A Schaffer Type 50 or equivalent rotating head to be installed on the top of the BOP. All equipment is 2000psi working pressure or greater.

Figure #1

# MERIDIAN OIL INC.

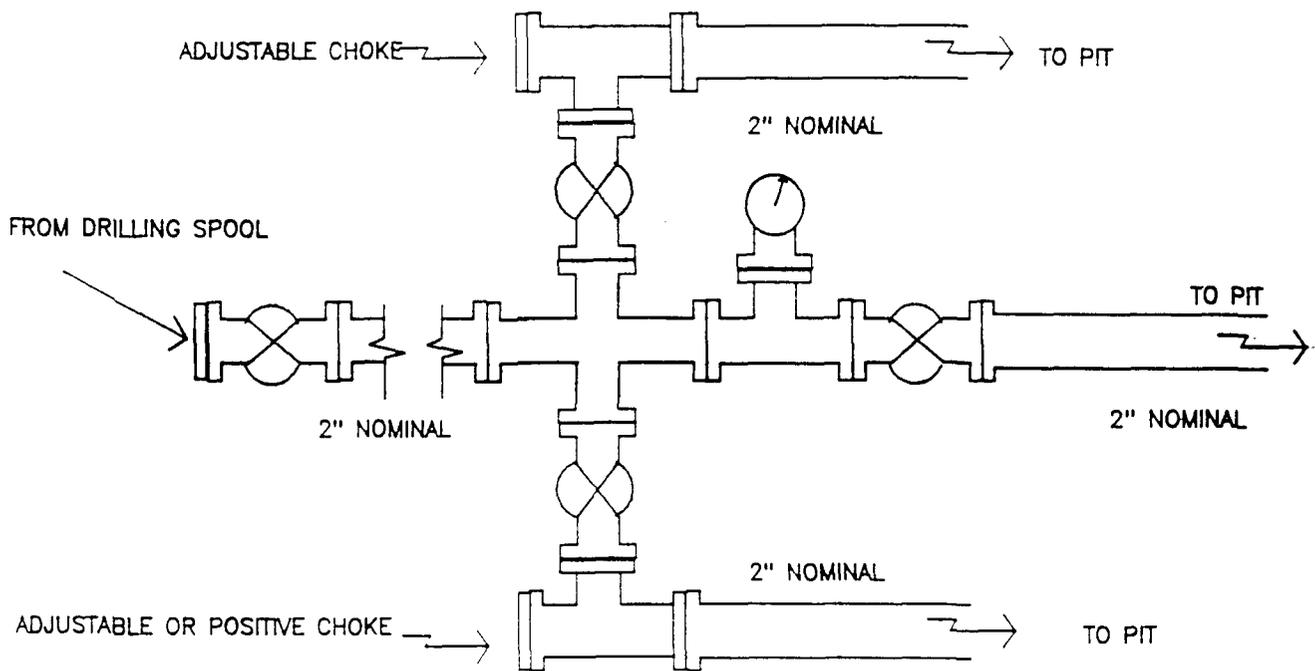
## Mesaverde Well – Completion Rig BOP Configuration



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.  
Mesaverde Well  
Choke Manifold Configuration



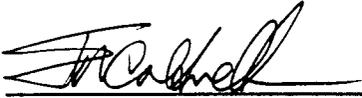
Minimum choke manifold installation from surface to Total Depth.  
2" minimum, 2000psi working pressure equipment with two chokes.

Figure #3

**MERIDIAN OIL**  
San Juan 30-6 Unit #48R  
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 Land Management right-of-way has been applied for as shown on Map No. 1.
2. Planned Access Road - Refer to Map No. 1. None required.
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 Navajo Dam at Francis Creek located in SE/4 Section 14, T-30-N, R-7-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. 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.

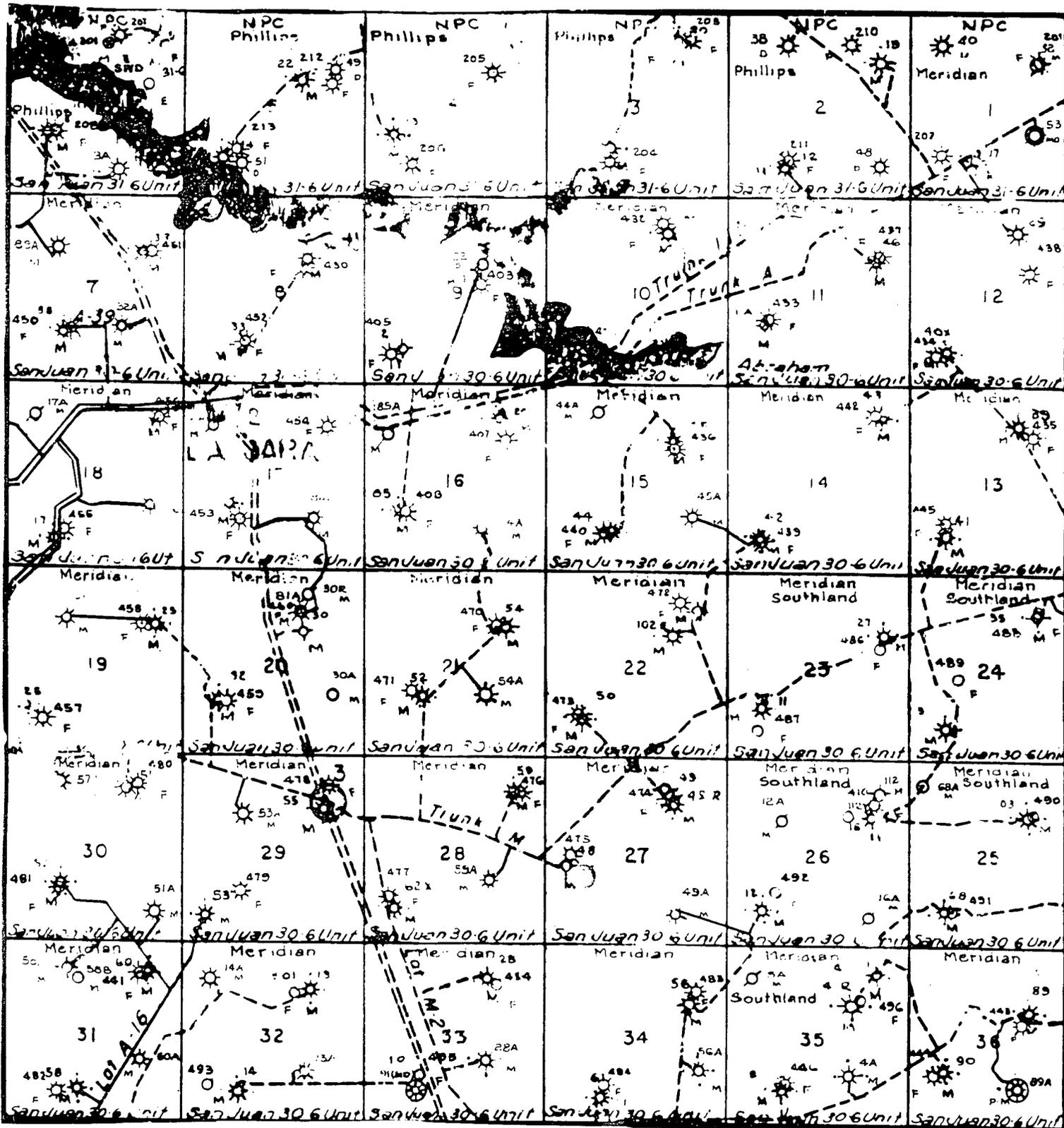
10. Plans for Restoration of the Surface - After completion of the proposed project, the location will be cleaned and leveled. The location will be left in such a condition that will enable reseeding operations to be carried out. Seed mixture as designated by the responsible government agency will be 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 - Bureau of Land Management.
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

4/27/93  
Date

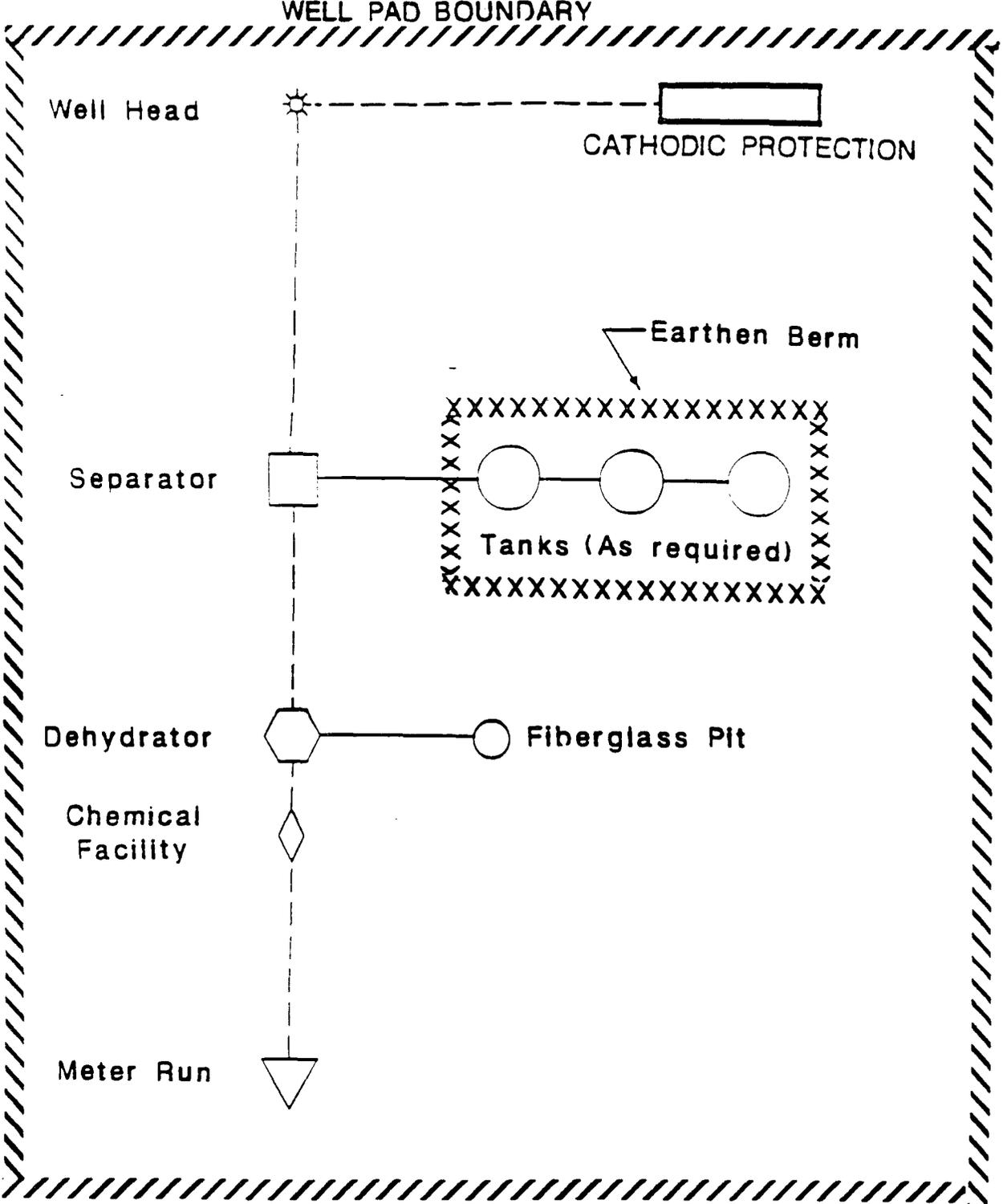
JWC:pb





MERIDIAN OIL INC.  
 Pipeline Map  
 T-30-N, R-06-W  
 San Juan County, New Mexico

San Juan 30-6 Unit #48R  
 Map #1A



**PLAT #1**

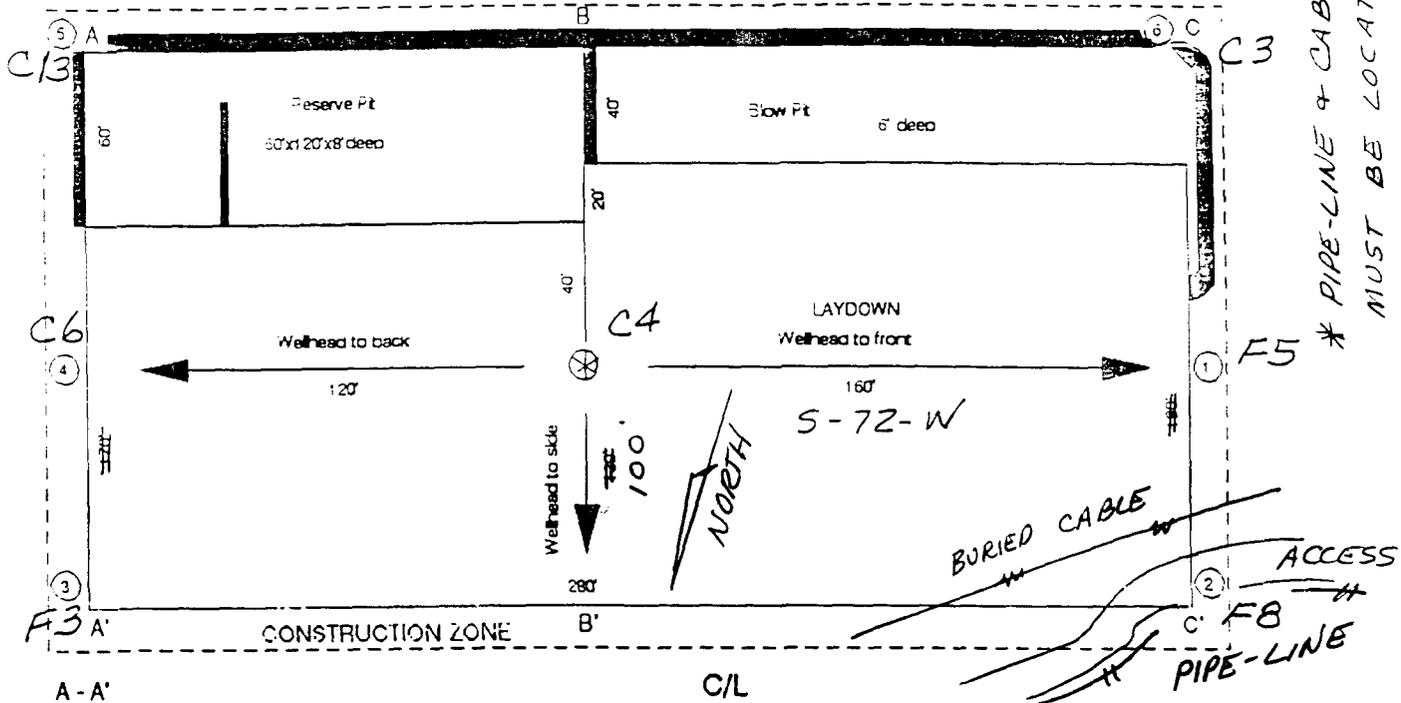
**MERIDIAN OIL**

ANTICIPATED  
 PRODUCTION FACILITIES  
 FOR A  
 MESA VERDE WELL

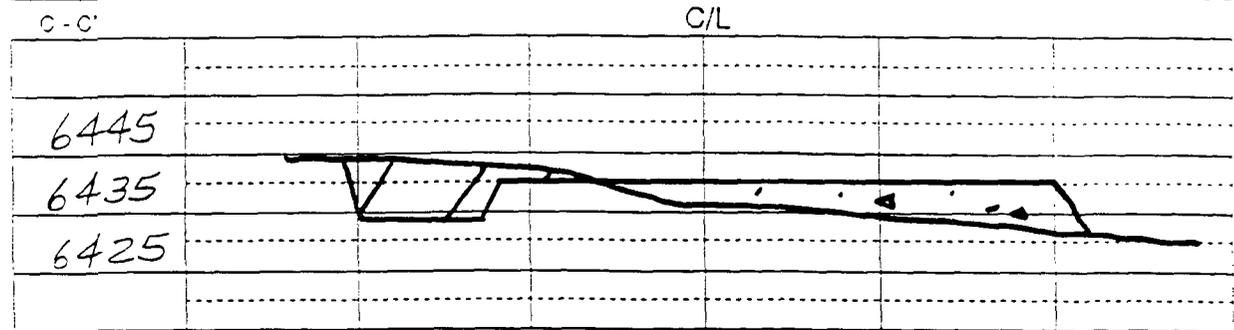
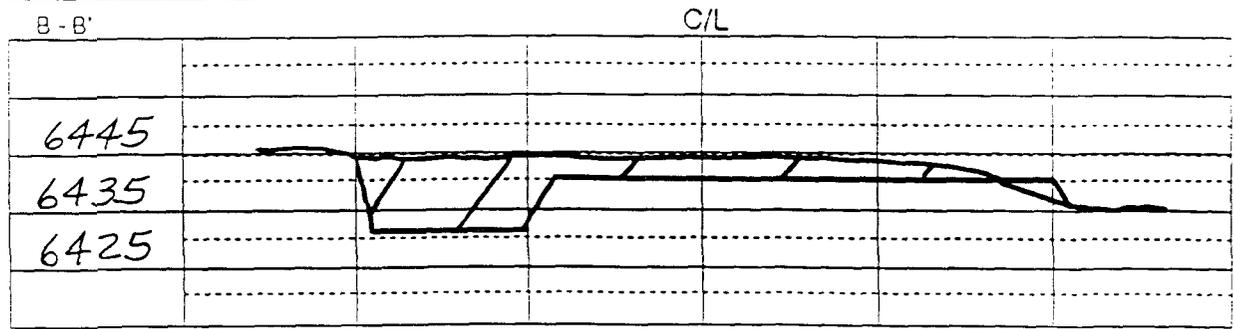
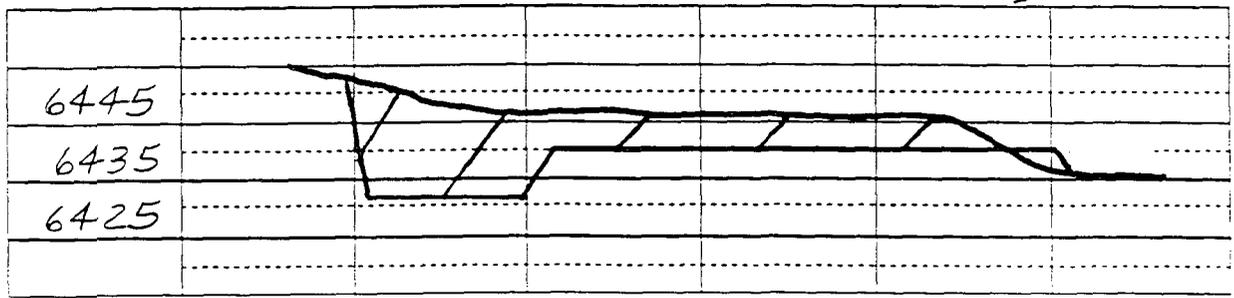
# MERIDIAN OIL

## Plat 5

Name: SAN JUAN 30-6 UNIT #48R  
 Footage: 2295 FSL 725 FNL  
 Sec 27 T- 30 N.R- 6 W NMPM  
 Co. RIO ARRIBA St. NM  
 Elevation: 6439' Date: 1-14-93



\* PIPE-LINE & CABLE MUST BE LOCATED.



Submit to Assignments  
 District Office  
 State Leases - 4 copies  
 Fee Leases - 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

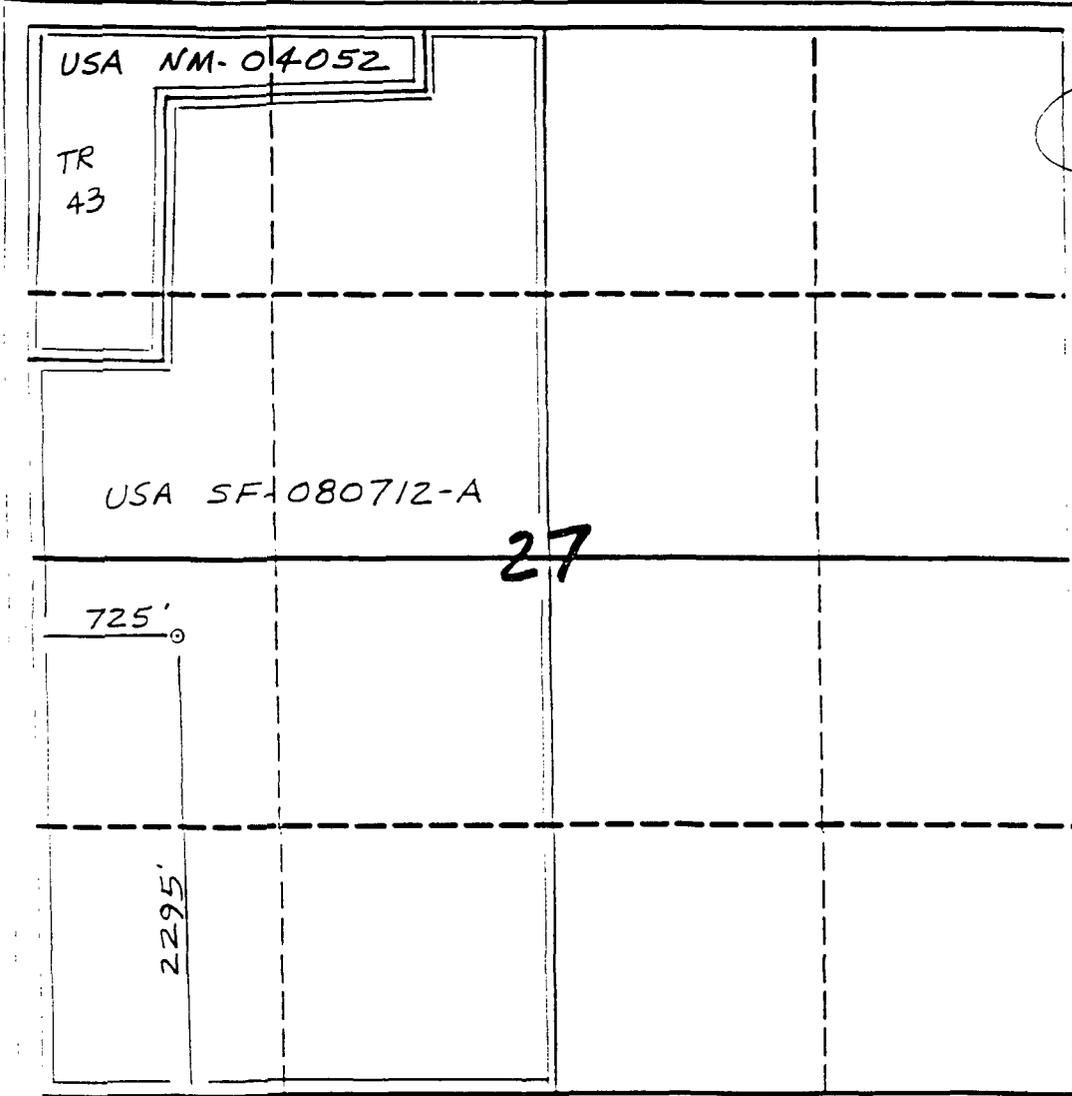
DISTRICT II  
 P.O. Drawer DD, Artesa, NM 88210

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 Meridian Oil Inc.		Lease San Juan 30-6 Unit			Well No. 48R
U.S. Letter L	Section 27	Township 30 North	Range 6 West	County NMEM	Rio Arriba
Actual Footings Location of Well:					
2295 feet from the		South	line and	725 feet from the	West line
Ground level Elev. 6439'	Producing Formation Mesa Verde		Foot Blanco	Dedicated Acreage: 320 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 communitization, unitization, force-pooling, etc.?  
 Yes     No    If answer is "yes" type of consolidation unitization  
 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, force-pooling, or otherwise) or until a non-standard unit, encompassing 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 Rep  
 Position  
 Meridian Oil Inc.  
 Company  
 4-27-93  
 Date

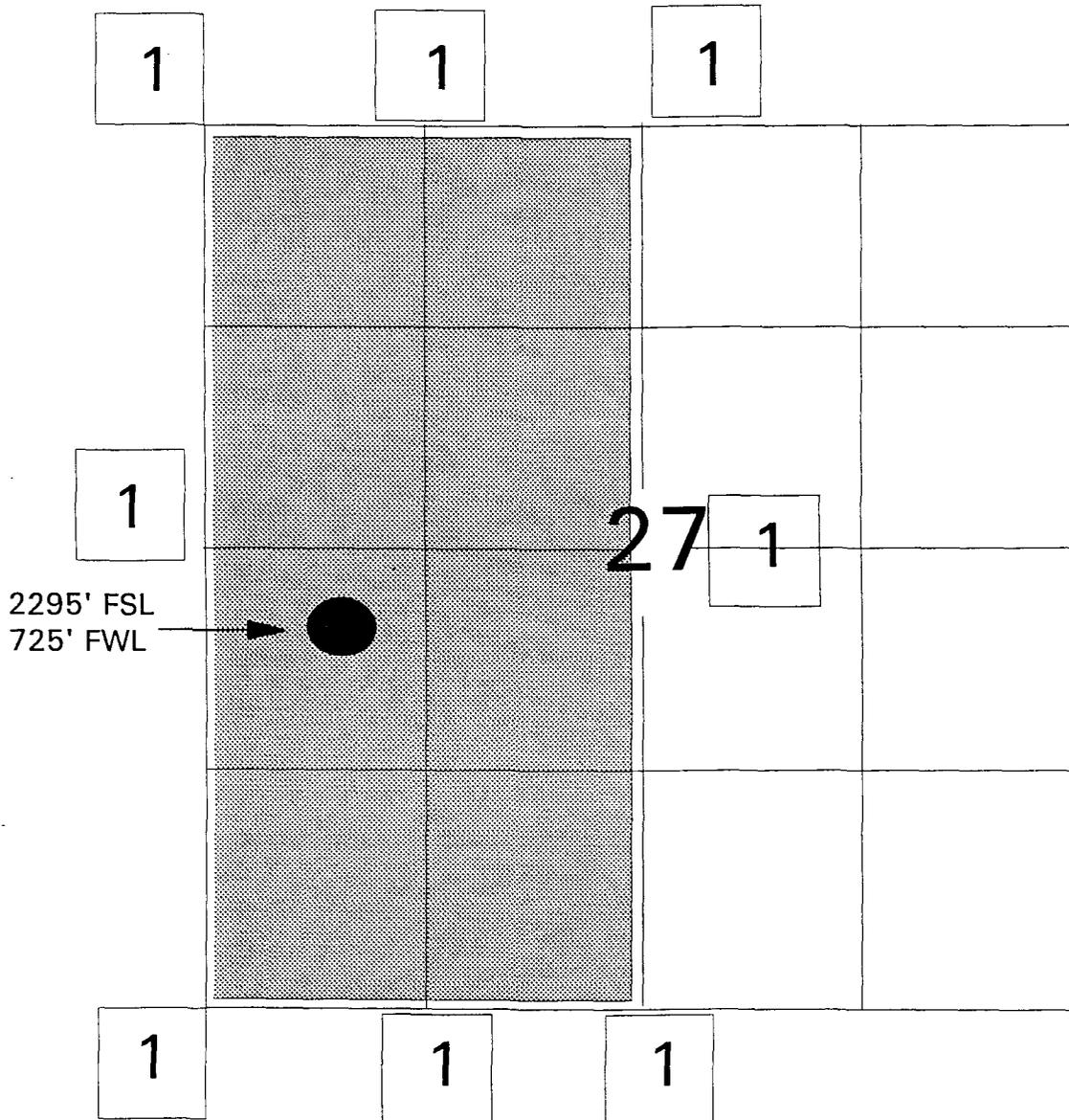
**SURVEYOR CERTIFICATION**

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.

1-14-93  
 Date Surveyed  
 G. EDWARDS  
 Name  
 Signature of Surveyor  
 Professional Surveyor  
 8857  
 Certificate No.  
 6857

# MERIDIAN OIL INC.

OFFSET OPERATOR/OWNER PLAT  
San Juan 30-6 Unit 48R, MV  
NW SW Section 27  
Township 30 North, Range 6 West



1) Meridian Oil Inc., Operator San Juan 30-6 Unit, 3535 East 30th St., P.O. Box 4289, Farmington, New Mexico 87499-4289







STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

AZTEC DISTRICT OFFICE

OIL CONSERVATION DIVISION  
RECEIVED

11000 THE PLAZA ROAD  
AZTEC, NEW MEXICO 87410  
15051334-0170

GARREY CARRUTHERS  
GOVERNOR

'93 JUN 2 AM 8 52

Date: 5-28-93

*Atmi M. Stogner*

Oil Conservation Division  
P.O. Box 2000  
Santa Fe, NM 07504-2000

Re: Proposed HC \_\_\_\_\_  
Proposed DHC \_\_\_\_\_  
Proposed NSL X \_\_\_\_\_  
Proposed SWD \_\_\_\_\_  
Proposed WFX \_\_\_\_\_  
Proposed PMX \_\_\_\_\_

NSL-3246

Gentlemen:

I have examined the application dated 5-5-93  
for the MERIDIAN OIL INC. S.S. 30-6 Unit #485  
Operator Lease & Well No.

L-27-30N-6W and my recommendations are as follows:  
Unit, S-T-R

Approve  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Yours truly,

*Eric Bush*