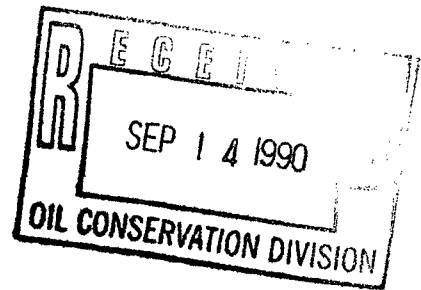


# MERIDIAN OIL

*Verbal OK by E. Brund*  
*10/4/90*

September 12, 1990

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



Re: Meridian Oil Inc. Rosa Unit #265  
2075'FNL, 1990'FEL, Section 27, T-31-N, R-5-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 Fruitland Coal formation.

This application for the referenced location is due to the Carson National Forest request to stay out of the canyon and archaeological concerns. This is the only surface location acceptable to the Carson National Forest, based on our field conversations.

The following attachments are for your review:

1. Application for Permit to Drill.
2. Completed C-102 at referenced footages.
3. Offset operators/owners plat. All surrounding lands are within Rosa Unit boundaries - Meridian Oil Inc. operator.
4. 7.5 minute topographic map showing the orthodox windows for the east-half dedication, and enlargement of the map to define topographic features.
5. This well would be deemed economically unfeasible if directionally drilled to a standard bottom hole location due to incremental directional drilling costs of \$70,000.00.

The archaeological report is extensive and is in the process of being prepared. This report will be submitted to you as soon as it is received.

Please let me know if you require any other information.


Sincerely,

Peggy Bradfield  
Regulatory Affairs

xc: Bureau of Land Management, Farmington  
New Mexico Oil Conservation Division, Aztec District  
Meridian Oil Inc., 3535 East 30th St., P.O. Box 4289, Farmington, New Mexico 87499-4289, Telephone 505-327-0251

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-078770
1b. TYPE OF WELL GAS	6. IF INDIAN, ALL. OR TRIBE NAME
2. OPERATOR MERIDIAN OIL INC.	7. UNIT AGREEMENT NAME ROSA UNIT
3. ADDRESS & PHONE NO. OF OPERATOR P O BOX 4289 FARMINGTON, NM 87499	8. FARM OR LEASE NAME ROSA UNIT
4. LOCATION OF WELL 2075' FNL 1990' FEL	9. WELL NO. 265
10. FIELD, POOL, OR WILDCAT BASIN FRUITLAND COAL	11. SEC. T. R. M OR BLK. SEC. 27 T31N R05W NMPM
14. DISTANCE IN MILES FROM NEAREST TOWN 17 MI FROM NAVAJO DAM PO	12. COUNTY RIO ARRIBA
	13. STATE NM
15. DISTANCE FROM PROPOSED LOCATION 1990' TO NEAREST PROPERTY OR LEASE LINE.	16. ACRES IN LEASE 17. ACRES ASSIGNED TO WELL 320.00
18. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL DR. 3700' COMPL., OR APPLIED FOR ON THIS LEASE.	19. PROPOSED DEPTH 20. ROTARY OR CABLE TOOLS 3410' ROTARY
21. ELEVATIONS (DF, FT, GR, ETC.) 6524' GL	22. APPROX. DATE WORK WILL START
23. PROPOSED CASING AND CEMENTING PROGRAM	
*SEE OPERATIONS PLAN	
24. AUTHORIZED BY:  REG. DRILLING ENGR.	8/31/90 DATE

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

NOTE: THIS FORMAT IS ISSUED IN LIEU OF US BLM FORM 3160-3.

Submit to Appropriate  
District Office  
State Lease - 4 copies  
Fee Lease - 3 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised 1-1-89

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 00, Aramis, NM 88210

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

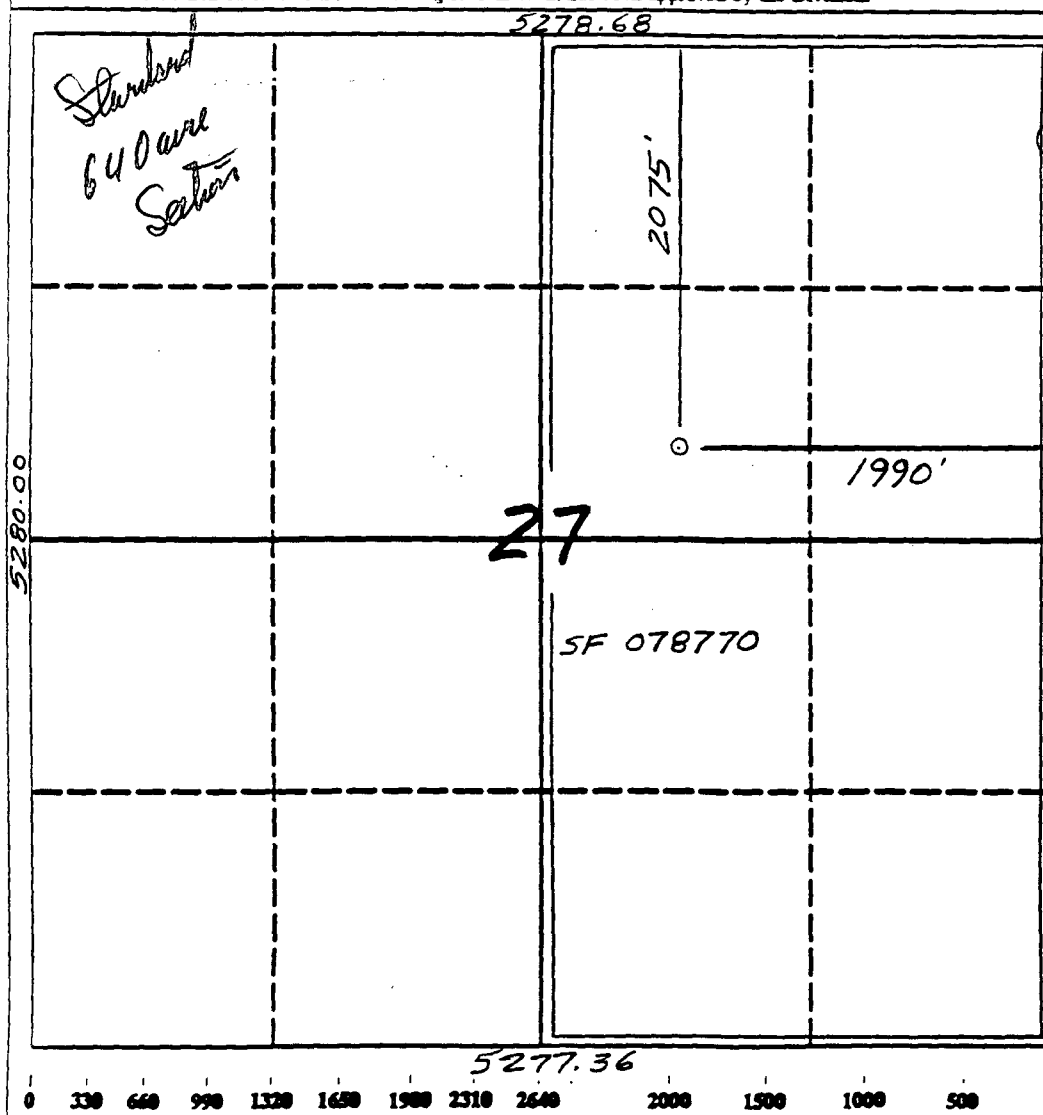
All Distances must be from the outer boundaries of the section

Operator Meridian Oil Inc.			Lease Rosa Unit (SF-078770)			Well No. 265		
Unit Letter G	Section 27	Township 31 North	Range 5 West	County NMPM		Rio Arriba		
Actual Footage Location of Well: 2075 feet from the North line and 1990 feet from the East line								
Ground level Elev. 6524'		Producing Formation Fruitland Coal		Pool Basin		Dedicated Acreage 320.00 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hectare 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 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, 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.

*Peggy Bradfield*  
Signature

Peggy Bradfield  
Printed Name

Regulatory Affairs  
Position

Meridian Oil Inc.  
Company

8-31-90  
Date

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 and correct to the best of my knowledge and belief.

8-17-90  
Date Surveyed

*Neale C. Edwards*  
Signature  
Professional Surveyor

NEW MEXICO  
6857  
REGISTERED LAND SURVEYOR  
Neale C. Edwards  
Certificate No.

Well Name: 265 ROSA UNIT  
 Sec. 27 T31N R05W  
 BASIN FRUITLAND COAL

2075'FNL 1990'FEL  
 RIO ARRIBA NEW MEXICO  
 Elevation 6524'GL

Formation tops: Surface- SAN JOSE

Ojo Alamo- 2645

Kirtland- 2825

Fruitland- 3210

Fruitland Coal Top- 3270

Fruitland Coal Base- 3399

Pictured Cliffs- 3415

Intermediate TD- 3230

Total Depth- 3410

Logging Program: Mud logs from intermediate to total depth.

Mud Program:	Interval	Type	Weight	Visc.	Fl. Loss
	0 - 200	Spud	8.4 - 8.9	40-50	no control
	200 - 3230	Non-dispersed	8.4 - 9.1	30-60	no control
	3230 - 3410	Formation Water	8.4		no control

Casing Program:	Hole Size	Depth Interval	Csg. Size	Weight	Grade
	12 1/4"	0 - 200	9 5/8"	32.3#	H-40
	8 3/4"	0 - 3230	7"	20.0#	K-55
	6 1/4"	3180 - 3410	5 1/2"	15.5#	K-55

Tubing Program:	Depth Interval	Csg. Size	Weight	Grade
	0 - 3410	2 7/8"	6.5#	J-55

Float Equipment: 9 5/8" surface casing - saw tooth guide shoe. Centralizers will be run in accordance with Onshore Order #2.

7" intermediate casing - guide shoe and self-fill insert float valve. Three centralizers run every other joint above shoe. Run insert float one joint above the guide shoe. Two turbolizing type centralizers - one below and one into the base of the Ojo Alamo @ 2825'. Standard centralizers thereafter every fourth joint up to the base of the surface pipe.

5 1/2" production casing - float shoe on bottom and a pre-drilled liner run to the 7" casing with a minimum 50' overlap. Liner hanger is a double slip grip type.

Wellhead Equipment: 9 5/8" x 7" x 2 7/8" x 11" 3000 psi xmas tree assembly.

#### Cementing:

9 5/8" surface casing - cement with 160 sacks of class "B" cement with 1/4# flocele/sack and 3% calcium chloride (189 cu ft. of slurry, 200% excess to circulate to surface). WOC 12 hours. Test casing to 600 psi for 30 minutes.

7" intermediate casing - lead with 472 sacks of 65/35 class "B" poz with 6% gel, 2% calcium chloride and 1/2 cu ft. Perlite/sack (10.3 gallons of water/sack) tail with 100 sacks of class "B" with 2% calcium chloride. 1030 cu ft. of slurry, 110% excess to circulate to surface. If hole conditions permit, a 600 ft spacer will be run ahead of the cement slurry to avoid mud contamination of the cement. WOC 12 hours. If cement does not circulate to surface, a temperature log will be run after 8 hours to determine TOC.

5 1/2" liner - do not cement.

## BOP and Tests:

Surface to intermediate TD - 11" 2000 psi(minimum) double gate BOP stack (Reference Figure #1). Prior to drilling out surface casing, test rams to 600 psi for 30 minutes.

Intermediate TD to TD - 7 1/16" 2000 psi(minimum) double gate BOP stack (Reference Figure #2). Prior to drilling out intermediate casing, test blind rams and casing to 2500 psi for 30 minutes; all pipe rams and casing to 2500 psi for 30 minutes each.

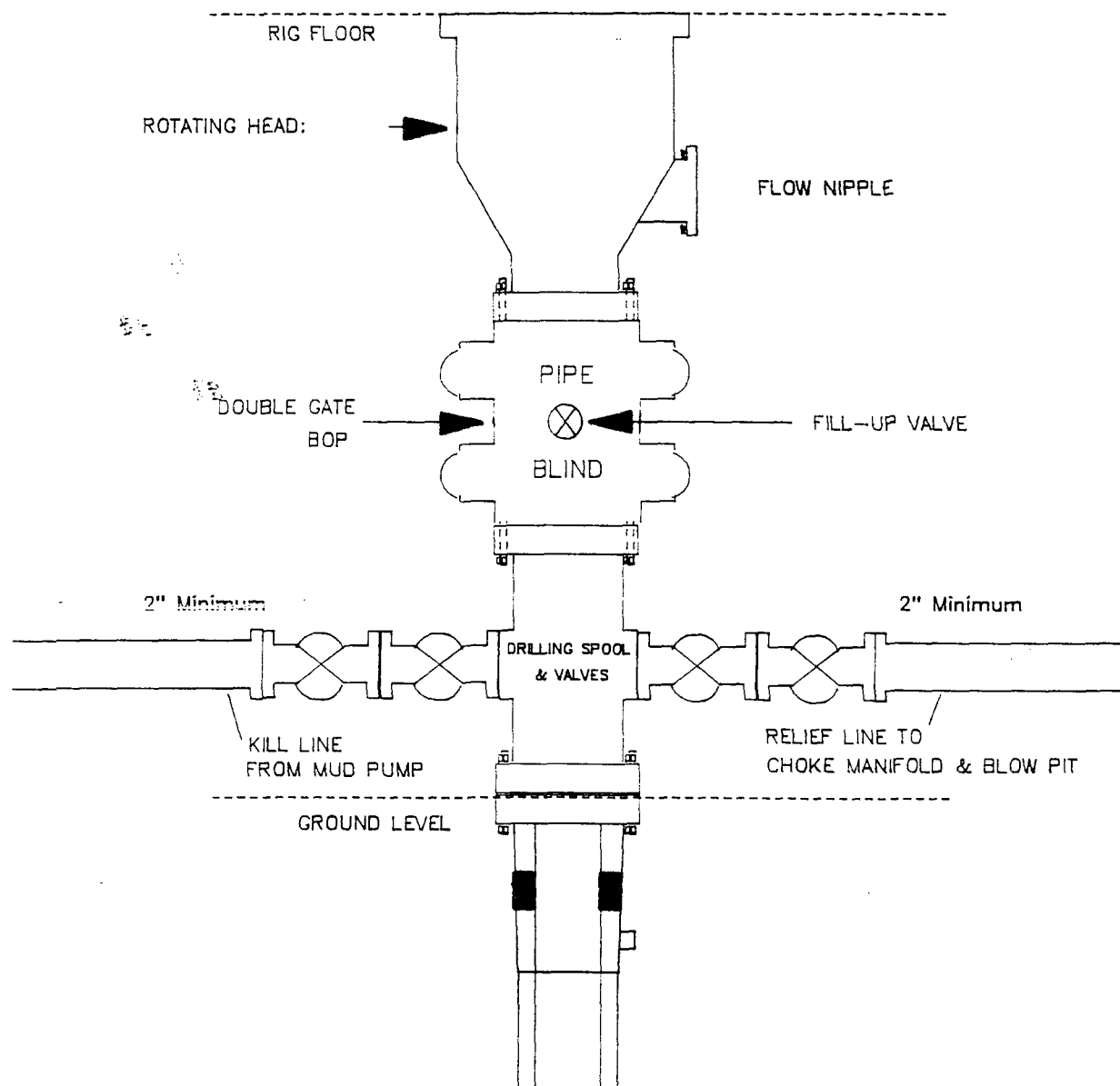
From surface to TD - choke manifold (Reference Figure #3).

Pipe rams will be actuated at least once each day and blind rams actuated once each trip to test proper functioning. An upper kelly cock valve with handle and drill string safety valves to fit each drill string will be maintained and available on the rig floor.

## Additional Information:

- \* The Fruitland coal formation will be completed.
- \* Anticipated Fruitland pore pressure is 1694 psi.
- \* This gas is dedicated.
- \* The E/2 of Section 27 is dedicated to this well.
- \* New casing will be utilized.
- \* Cementing Contractor will provide the BLM with a chronological log including the pump rate and pressure, and the slurry density and volume for all cement jobs.
- \* Pipe movement (either rotation or reciprocation) will be done if hole conditions permit.

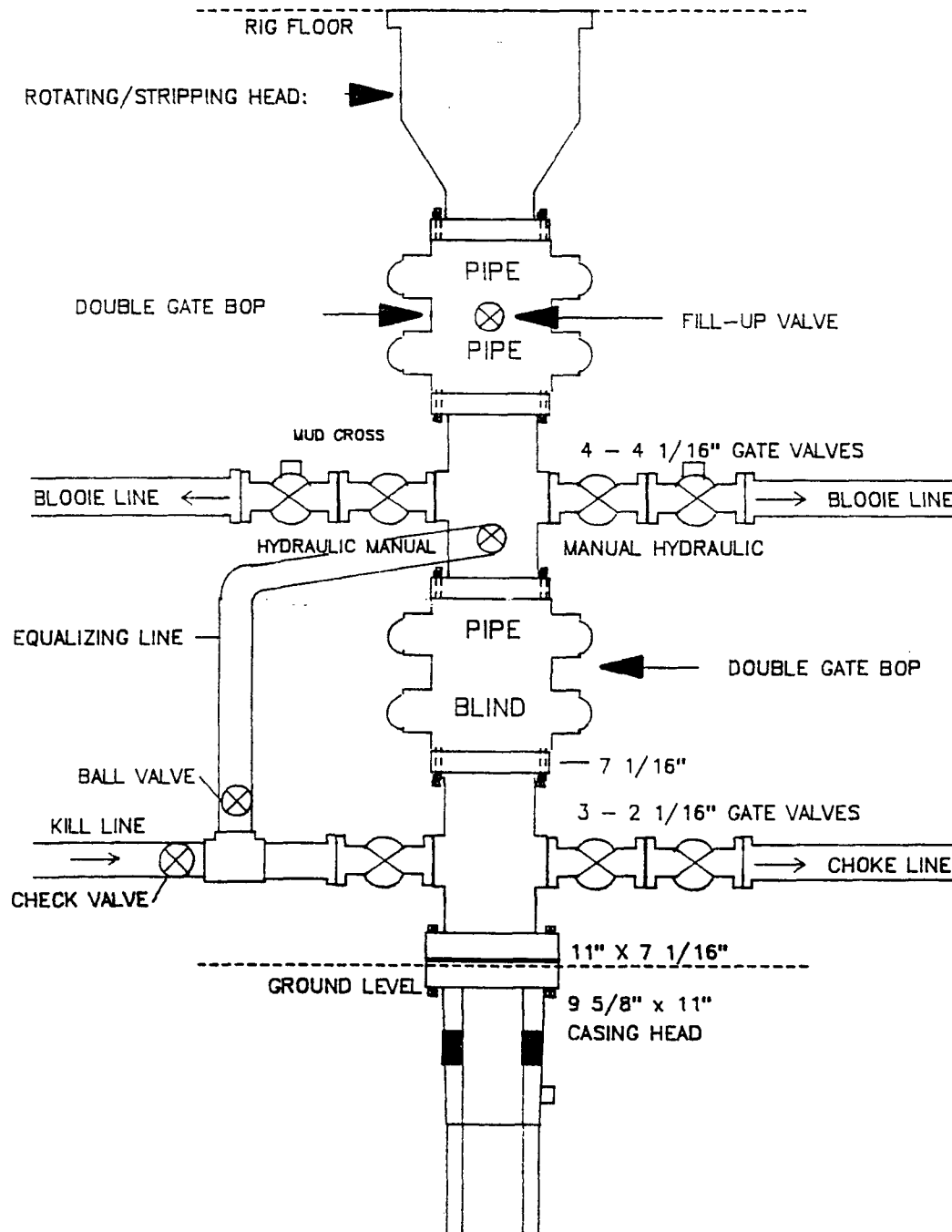
**MERIDIAN OIL INC.**  
Drilling Rig  
BOP Configuration



Minimum BOP installation for a typical Fruitland Coal well from surface to Intermediate casing point. 11" Bore (10" Nominal), 2000psi minimum working pressure double gate BOP to be equipped with blind and pipe rams. A Schaffer Type 50 equivalent rotating head to be installed on the top of BOP. All equipment is 2000psi working pressure/or greater.

**Figure #1**

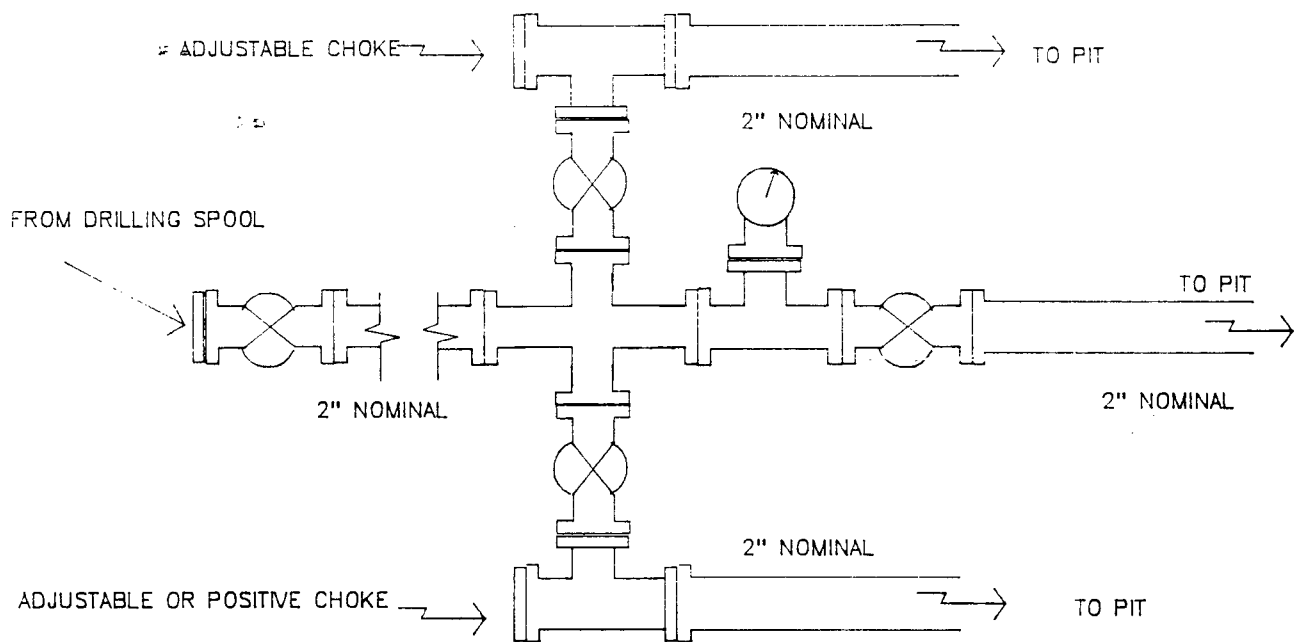
**MERIDIAN OIL INC.**  
Completion Rig  
BOP Configuration



Minimum BOP installation for a typical open-hole Fruitland Coal well from intermediate TD to TD. 7 1/16" Bore (6" Nominal), 2000psi working pressure/ or greater double stack double gate BOP equipped with three pipe and one blind ram.

**Figure #2**

**MERIDIAN OIL INC.**  
Typical Fruitland Coal Well  
Choke Manifold Configuration



Minimum choke manifold installation for a typical Fruitland Coal well from surface to Total Depth. 2", 2000psi working pressure equipment with two chokes.

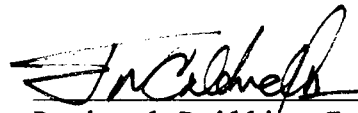
**Figure #3**



Multi-Point Surface Use Plan  
Meridian Oil Inc.  
Rosa Unit #265

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. 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 5,100' 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 La Jara Water Hole located in SW/4 Section 11, T-30-N, R-06-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 earthen pits will be so constructed as to prevent leakage from occurring; no earthen pit will be located on natural drainage. Hazardous waste will be disposed of in accordance with Federal Regulations.
8. Ancillary Facilities - None anticipated.
9. Wellsite Layout - Refer to the location diagram (Plat No. 2) and to the wellsite cut and fill diagram (Plat No. 2A). 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 - Carson National Forest.
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.

 8/31/90  
Regional Drilling Engineer

JWC/adw

Fee Lands

5,100 New Construction  
16,500 Forest Roads  
13,500 Existing BLM  
roads within  
unit boundaries

Map 1

Box #258

Rose #263

Rosa #265

Page # 266

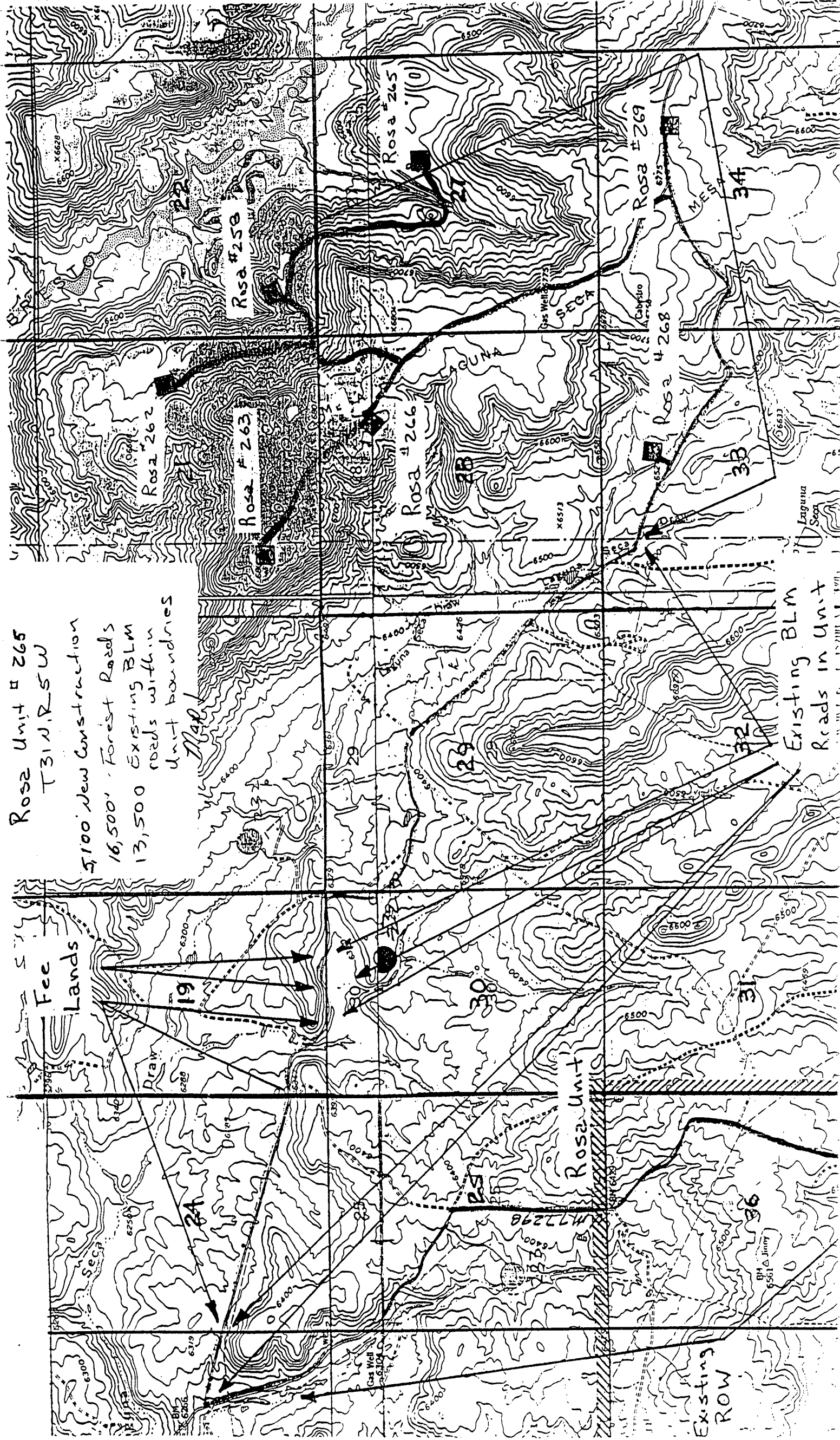
Roca #769

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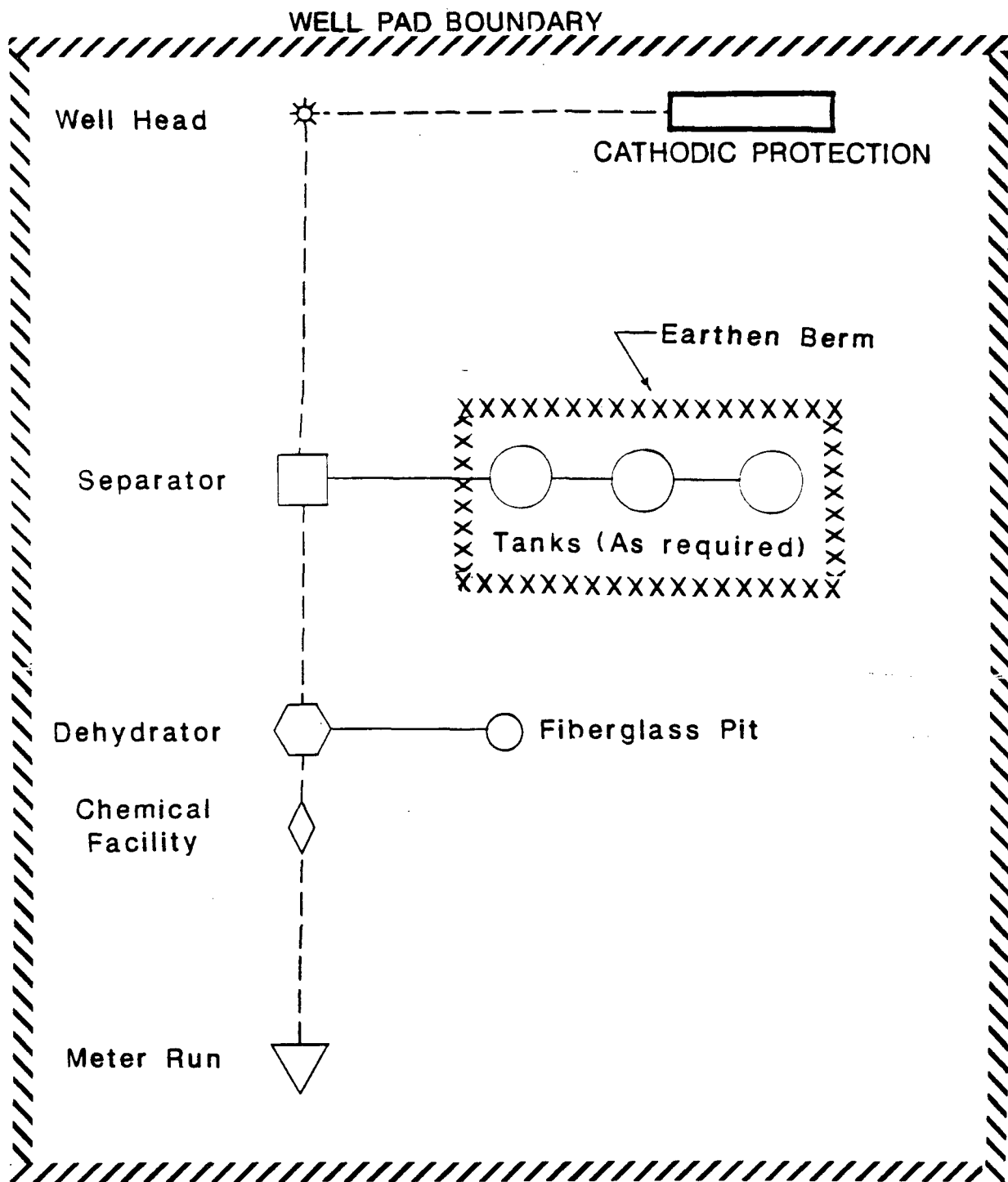
4

Existing BLM  
Roads in Unit

Existing  
ROW







**PLAT #1**

**MERIDIAN OIL**  
ANTICIPATED  
PRODUCTION FACILITIES  
FOR A  
FRUITLAND WELL

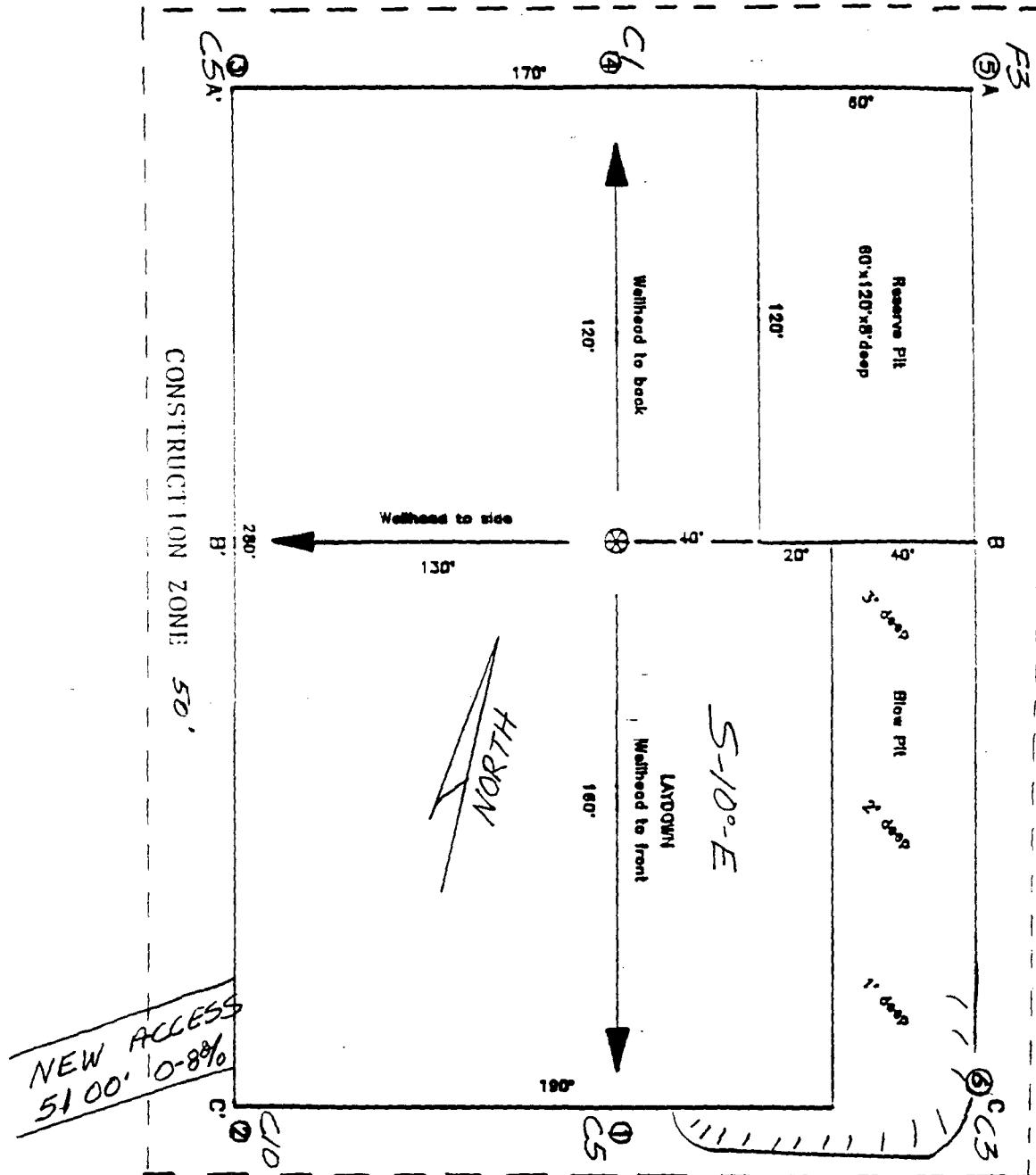
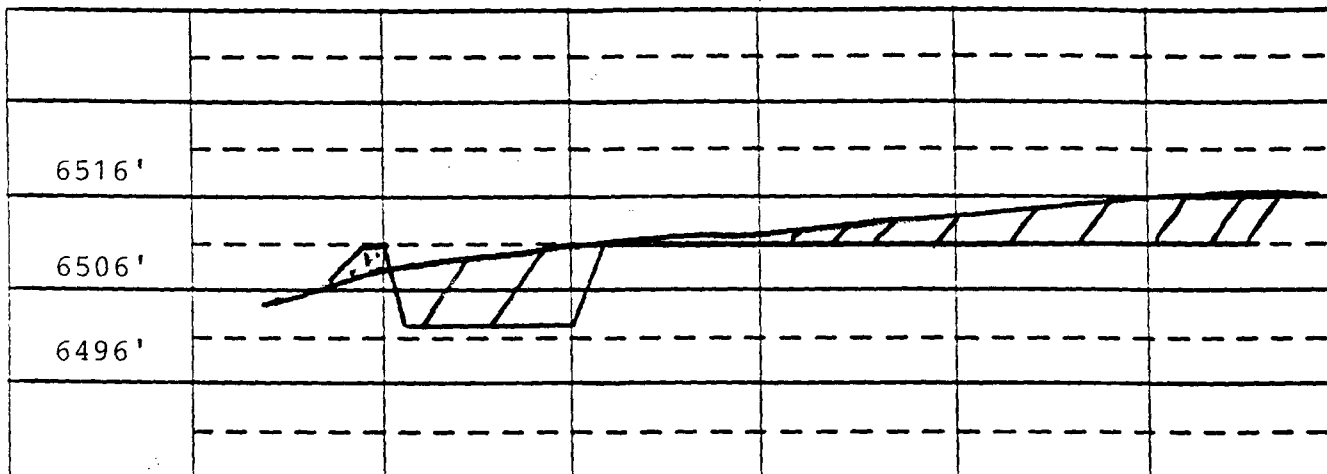


EXHIBIT: <u>PIAT 2</u>	
Name: <u>MOI Rosa Unit # 265</u>	
Footage: <u>1960' FNL, 1345' FEL,</u>	
Sec <u>27</u>	T- <u>31</u> -N, R- <u>5</u> -W NMPM
Co. <u>Rio Arriba</u>	St. <u>N.M.</u>
Elevation: <u>6506'</u>	Date: <u>8-10-90</u>

Plot 2  
2/3/90

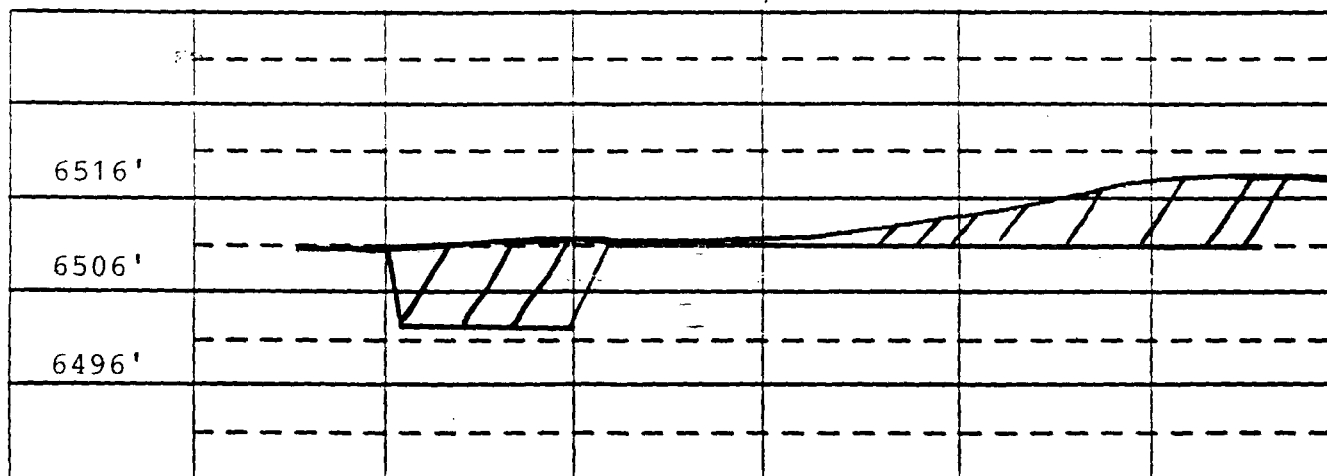
A - A' Vert: 1" = 20' Horiz: 1" = 50'

C/L



B - B'

C/L



C - C'

C/L

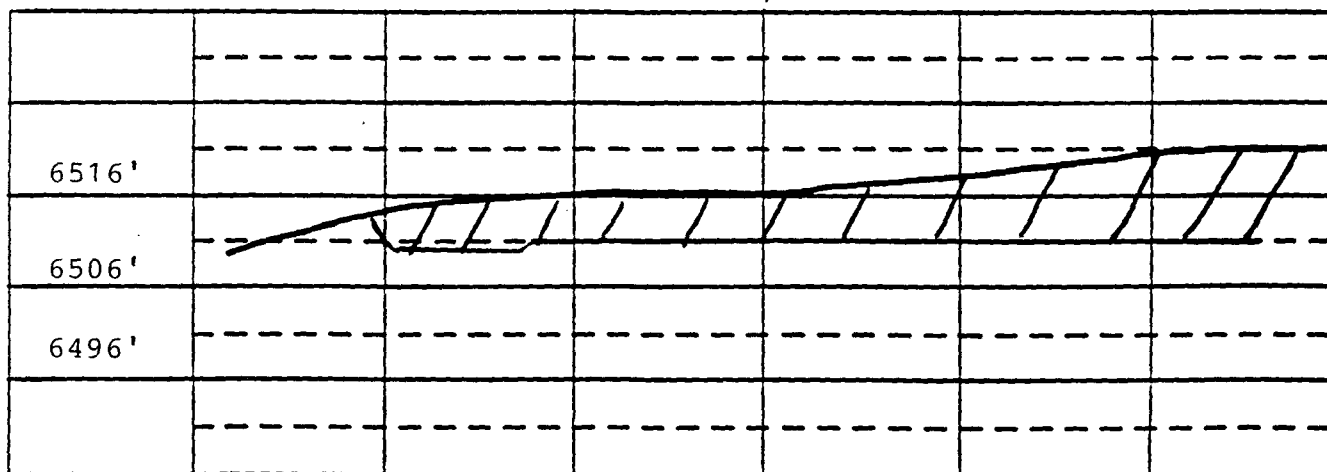


EXHIBIT: PLAT 2A

Name: MOI Rosa Unit # 265

Footage: 1960' FNL, 1345' FEL,

Sec 27 T 31 -N,R- 5 -W NMPM

Co. Rio Arriba St. N.M.

Elevation: 6506' Date: 8-10-90

Plat XC  
2/4/90

Submit to Appropriate  
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 00, Artesia, NM 88210

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

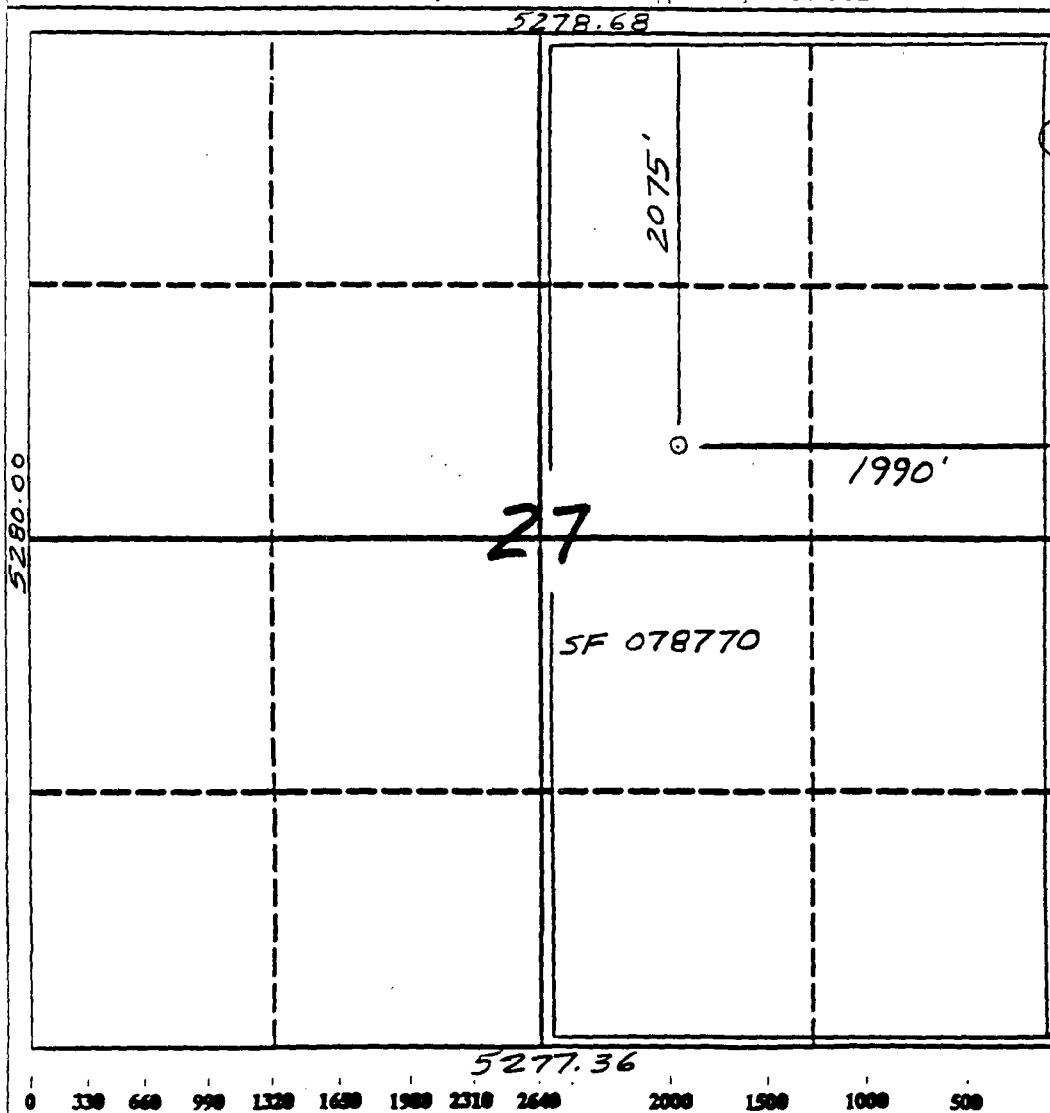
All Distances must be from the outer boundaries of the section

Operator Meridian Oil Inc.			Lease Rosa Unit (SF-078770)		Well No. 265
Unit Letter G	Section 27	Township 31 North	Range 5 West	County NMNM	Rio Arriba
Actual Footage Location of Well: 2075 feet from the North line and 1990 feet from the East line					
Ground level Elev. 6524'	Producing Formations Fruitland Coal		Foot Basin	Dedicated Acreage 320.00 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or backbone 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, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

I hereby certify that the information furnished herein is true and complete to the best of my knowledge and belief.

*Peggy Bradfield*  
Signature

Peggy Bradfield  
Printed Name

Regulatory Affairs  
Position

Meridian Oil Inc.  
Company

8-31-90  
Date

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 and correct to the best of my knowledge and belief.

8-17-90  
Date Surveyed

*Neale G. Edwards*  
Signature

Professional Surveyor  
NEW MEXICO  
6857  
6857

Certification  
REGISTERED LAND SURVEYOR

Neale G. Edwards



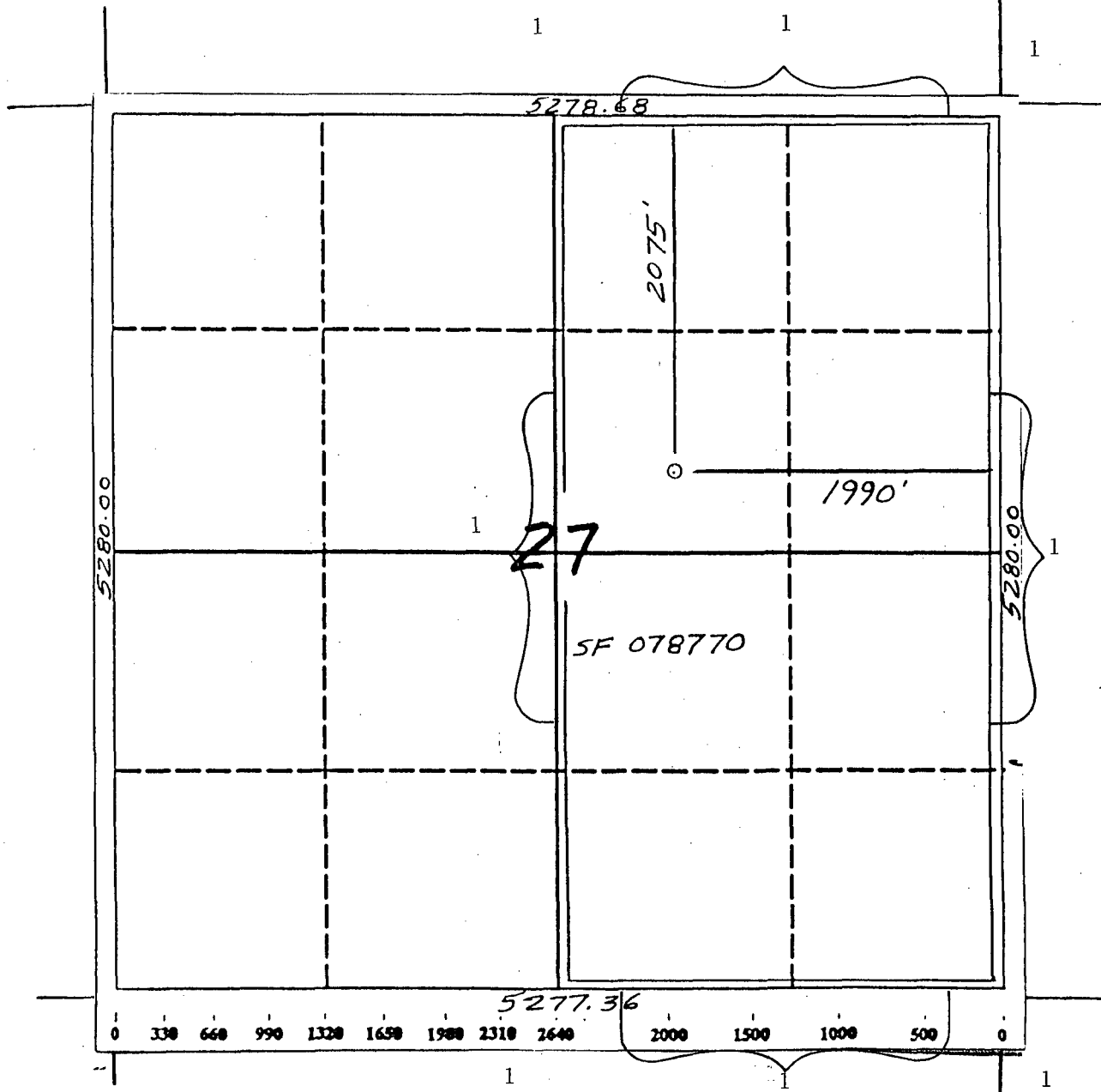
# MERIDIAN OIL INC.

Well Name Rosa Unit #265, Basin Fruitland Coal

Footage----- 2075' FNL, 1990' FEL

## APPLICATION FOR NON-STANDARD LOCATION

County Rio Arriba State New Mexico Section 27 Township 31N Range 5W



REMARKS: (1) Meridian Oil Inc. - Rosa Unit  
Designated Operator of Fruitland Coal

