



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR

July 12, 1993

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

ANITA LOCKWOOD
CABINET SECRETARY

Meridian Oil, Inc.
Attention: Peggy Bradfield
P.O. Box 4289
Farmington, NM 87499-4289

RECEIVED

JUL 19 1993

**OIL CON. DIV
DIST. 3**

Administrative Order NSL-3278

Dear Ms. Bradfield:

Reference is made to your application dated June 4, 1993 for an unorthodox gas well location in both the Undesignated Chozo Mesa, or Undesignated Gobernador Pictured Cliffs Gas Pool and the Basin-Fruitland Coal Gas Pool for Meridian's proposed San Juan 28-4 Unit Well No. 226 to be drilled 2030 feet from the South line and 1570 feet from the West line (Unit K) of Section 17, Township 28 North, Range 4 West, NMPM, Rio Arriba County, New Mexico. It is my understanding that the Pictured Cliffs zone is to be downhole commingled with the Basin-Fruitland Coal Gas Pool.

By the authority granted me under the provisions of Rule 8 of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool as promulgated by Division Order R-8768, as amended, and Division General Rule 104.F(1), the above-described unorthodox gas well location is hereby approved. Further, the S/2 and SW/4 equivalent of said Section 17 shall be dedicated to said well forming standard 320-acre and 160-acre gas spacing and proration units for the Fruitland Coal and Pictured Cliff zones, respectively.

Also, Meridian Oil, Inc. shall comply with all other provisions of said Order No. R-8768, as amended, pertaining to the downhole commingling of coal gas production with gas produced from the Pictured Cliffs interval.

Sincerely,

William J. LeMay
Director

WJL/MES/amg

cc: Oil Conservation Division - Aztec
US Bureau of Land Management - Farmington
US Forest Service - Blanco



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
 OIL CONSERVATION DIVISION
 AZTEC DISTRICT OFFICE

GREY CAPRUTHERS
 GOVERNOR

11301 THE HAZOS ROAD
 AZTEC, NEW MEXICO 87410
 (505) 334-0170

Date: 6-16-93

Attn: Mike Stogner

Oil Conservation Division
 P.O. Box 2088
 Santa Fe, NM 87504-2088

Re: Proposed HC _____
 Proposed DHC _____
 Proposed NSL X _____
 Proposed SWD _____
 Proposed WFX _____
 Proposed PMX _____

Gentlemen:

I have examined the application dated 6-7-93

for the Mission Oil Inc. S.T. 28-4 Unit #226
 Operator Lease & Well No.

K-17-28N-4u and my recommendations are as follows:
 Unit, S-T-R

Approve

Yours truly,

Gene Bussell

ok
12/91

MERIDIAN OIL

June 4, 1993

Sent Federal Express

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

RECEIVED
JUN 7 1993
OIL CON. DIV. 1
DIST. 3

Re: Meridian Oil Inc. San Juan 28-4 Unit #226
2030'FSL, 1570'FWL Section 17, T-28-N, R-4-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 Basin Fruitland Coal and Choza Mesa Pictured Cliffs formations. This well is planned as a Basin Fruitland Coal/Choza Mesa Pictured Cliffs commingled completion, and application will be made to the New Mexico Oil Conservation Division for the commingling.

This application for the referenced location is at the request of the Carson National Forest Service for proximity to an existing location and due to terrain and archaeology 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 28-4 Unit.
4. 7.5 minute topographic map showing the orthodox windows for the south half dedication for the Fruitland Coal and the southwest quarter dedication for the Pictured Cliffs. Also included is an 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 \$250,000.

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	RECEIVED JUN 7 1993	5. Lease Number SF-079729
1b. Type of Well GAS		6. If Indian, All. or Tribe
2. Operator MERIDIAN OIL	OIL CON. DIV. DIST. 3	7. Unit Agreement Name San Juan 28-4 Unit
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700		8. Farm or Lease Name San Juan 28-4 Unit 9. Well Number 226
4. Location of Well 2030'FSL, 1570'FWL Latitude 36° 39' 35", Longitude 107° 16' 36"		10. Field, Pool, Wildcat Basin Ft Coal Choza Mesa PC 11. Sec., Twn, Rge, Mer. Sec 17, T-28-N, R-4-W NMPM
14. Distance in Miles from Nearest Town 6 miles to Gobernador, NM	12. County Rio Arriba	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 1570'		
16. Acres in Lease	17. Acres Assigned to Well S/2 320 SW/4 160	
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 110'		
19. Proposed Depth 4570'	20. Rotary or Cable Tools Rotary	
21. Elevations (DF, FT, GR, Etc.) 7429'GR	22. Approx. Date Work will Start 2nd quarter 1993	
23. Proposed Casing and Cementing Program See Operations Plan attached		
24. Authorized by:  Regional Drilling Engineer	Date 5/26/93	

PERMIT NO. _____ APPROVAL DATE _____
APPROVED BY _____ TITLE _____ DATE _____

Archaeological Report to be submitted
Threatened and Endangered Species Report done by Forest Service

NOTE: This format is issued in lieu of U.S. BLM Form 3160-3

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, 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

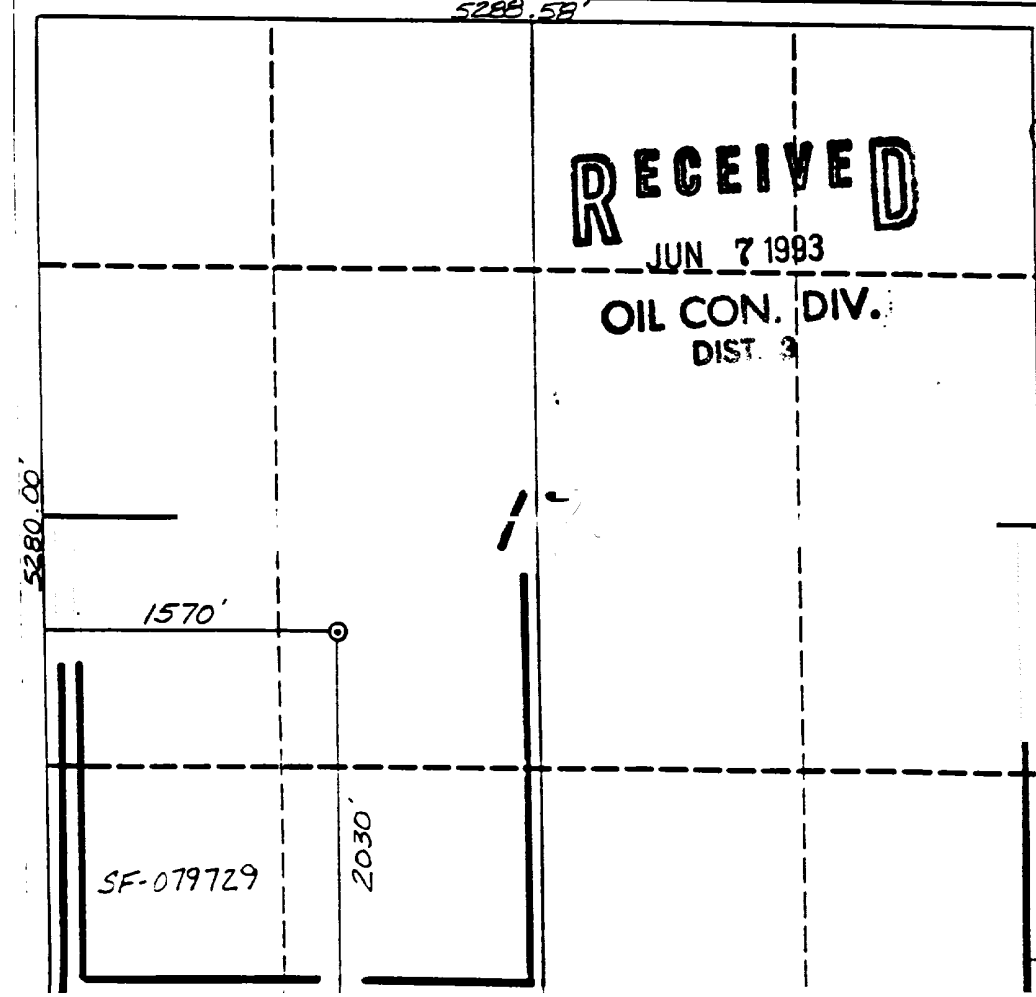
Operator: Meridian Oil Inc. Lease: San Juan 28-4 Unit Well No. 226

U.S. Letter: K Section: 17 Township: 28 North Range: 4 West County: S/M/M Rio Arriba

Actual Footage Location of Well:
2030 feet from the South line and 1570 feet from the West line

Ground Level Elev. 7429' Producing Formation: Fruitland Coal/Pic. Cliffs Pool: Basin/Choza Mesa Dedicated Acreage: 320/160 Acres

- Outline the acreage dedicated to the subject well by corner point or location 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 considered by communitization, force-pooling, etc.?
 - Yes No If answer is "yes" type of consideration: unitization
- If answer is "no" list the owners and what dispositions which have actually been considered. (Use reverse side of this form if necessary.)
- No acreage will be assigned to the well until all interests have been considered (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 Affairs
Position
Meridian Oil Inc.
Company
5-25-93
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. 4-14-93
Date Surveyed
C. EDWARDS
Name
Needle W. Edwards
Signature of Surveyor
Professional Surveyor
9857
New Mexico State Surveyor

OPERATIONS PLAN

Well Name: San Juan 28-4 Unit #226
Location: 2030'FSL, 1570'FWL Section 17, T-28-N, R-04-W
 Rio Arriba County, New Mexico
 Latitude 36° 39' 35", Longitude 107° 16' 36"
Formation: Basin Fruitland Coal/Choza Mesa Pictured Cliffs
Elevation: 7429'GL

Formation:	Top	Bottom	Contents
Surface	San Jose	3765'	
Ojo Alamo	3765'	3925'	aquifer
Kirtland	3925'	4160'	
Fruitland	4160'	4310'	
Fruitland Coal Top	4235'	4390'	gas
Pictured Cliffs	4310'	4570'	gas
Total Depth	4570'		

Logging Program: Mud logs from 4100' to Total Depth.
 DIL, CNL-LDT, ML, NGT, HR Density -surface to TD.

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
200-4570'	Non-dispersed	8.4-9.5	30-60	no 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'	8 5/8"	24.0#	K-40
7 7/8"	0 - 4570'	4 1/2"	10.5#	K-55

Tubing Program:

0 - 4570'	2 3/8"	4.7#	J-55
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Float Equipment: 8 5/8" surface casing - saw tooth guide shoe.
 Centralizers will be run in accordance with Onshore Order #2.

4 1/2" production casing - float shoe on bottom. Three centralizers run every other joint above shoe. Four centralizers run every 3rd joint to the base of the Ojo Alamo @ 3925'. Two turbolizing type centralizers - one below and one into the base of the Ojo Alamo @ 3925'. Standard centralizers thereafter every fourth joint up to the base of the surface pipe.

Wellhead Equipment: 8 5/8" x 4 1/2" x 2 3/8" x 11" 3000 psi xmas tree assembly.

San Juan 28-4 Unit #226

Cementing:

8 5/8" surface casing - cement with 235 sx Class "B" cement with 1/4# flocele/sx and 3% calcium chloride (298 cu.ft. of slurry, 200% excess to circulate to surface). WOC 12 hrs. Test casing to 600 psi for 30 minutes.

4 1/2" production casing -

First stage - lead w/54 sx Class "B" 65/35 Poz w/6% gel, 2% calcium chloride, 6.25# gilsonite/sx and 1/4# flocele/sx (96 cu.ft. of slurry), tail w/100 sx Class "B" w/2% calcium chloride, 6.25#/sx gilsonite, 0.25#/sx celloflake (118 cu.ft.), 100% excess to circulate stage tool @ 4100'.

Second stage - lead w/1039 sx of Class "B" 65/35 Poz w/6% gel, 2% calcium chloride, 6.25# gilsonite/sx and 1/4# flocele/sx (1839 cu.ft.). Tail w/25 sx Class "B" w/2% calcium chloride (118 cu.ft. of slurry, 100% excess to circulate to surface). WOC 12 hrs. If cement does not circulate to surface, a temperature log will be run after 8 hours to determine TOC. Test casing to 1500 psi/minutes.

BOP and tests:

Surface to TD - 11" 2000 psi (minimum double gate BOP stack (Reference Figure #1 and #2). Prior to drilling out surface casing, test rams to 600#/30 min.

Completion - 6" 2000 psi (minimum) double gate BOP stack (Reference Figure #2). Prior to completion operations, test rams to 3000#/15 min.

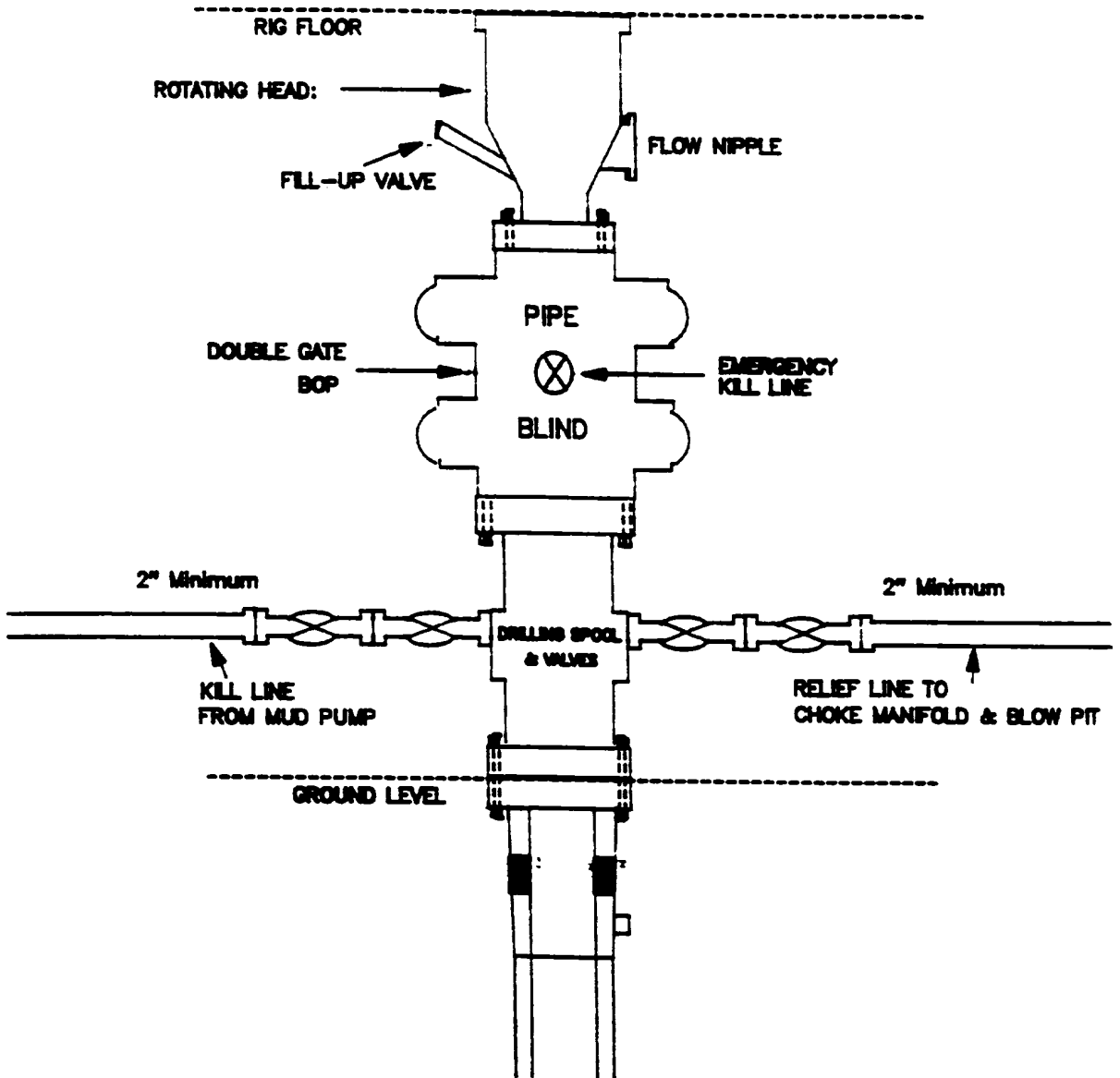
From surface to TD - choke manifold (Reference Figure #3).

Pipe rams will be actuated to 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 and Pictured Cliffs formations will be completed and commingled per New Mexico Oil Conservation Division order.
- * Anticipated pore pressure for the Fruitland is 1150 psi and for the Pictured Cliffs is 1150 psi.
- * This gas is dedicated.
- * This south half of Section 17 is dedicated to the Fruitland Coal and the southwest quarter of the section is dedicated to the Pictured Cliffs.
- * New casing will be utilized.
- * Pipe movement (either rotation or reciprocation) will be done if hole conditions permit.

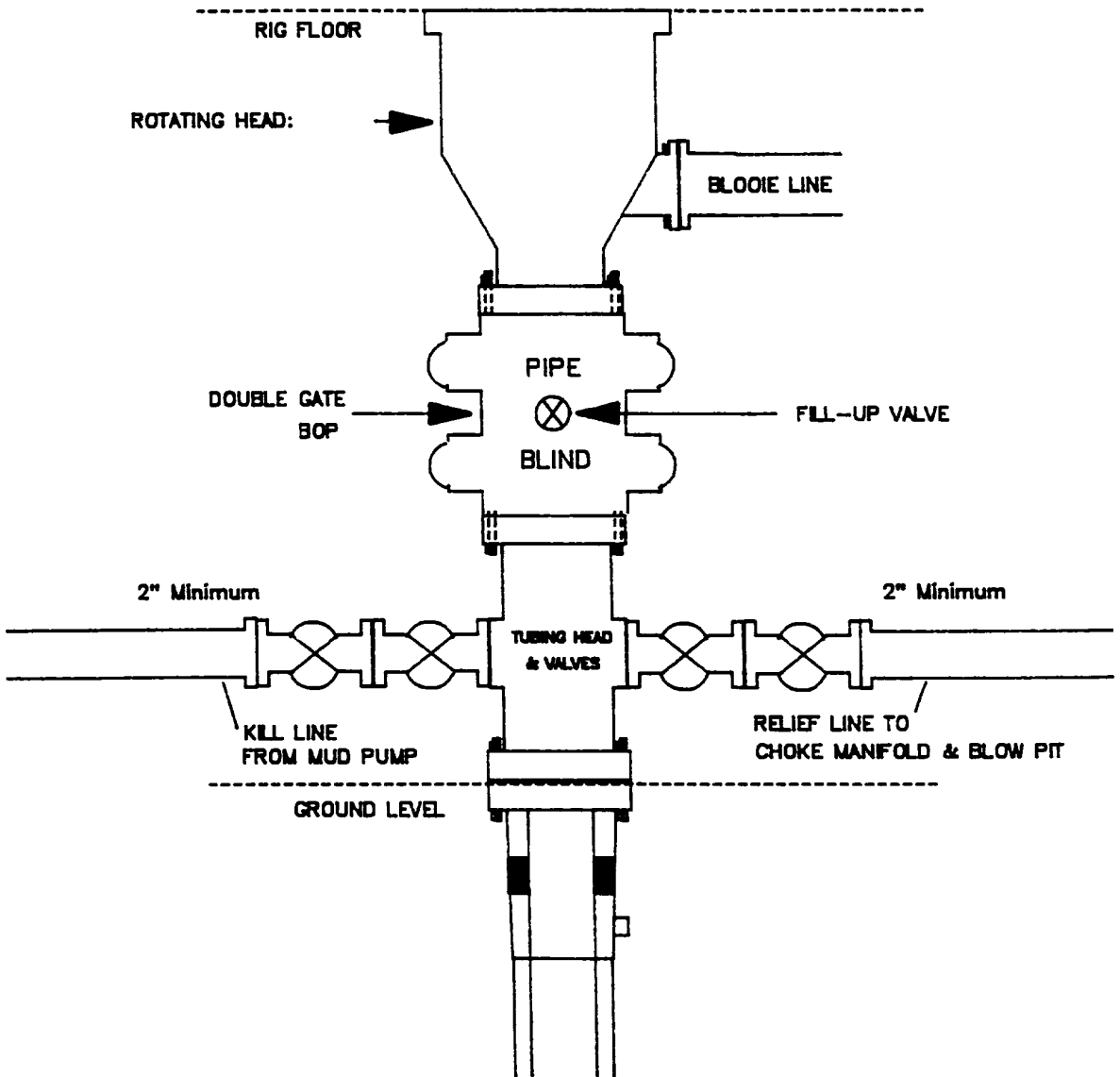
MERIDIAN OIL INC.
Drilling Rig
BOP Configuration



Minimum BOP installation for a typical Pictured Cliffs well from surface to Total Depth. 11" Bore (10" Nominal), 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 BOP. All equipment is 2000psi working pressure/or greater.

Figure #1

MERIDIAN OIL INC.
Completion Rig
BOP Configuration

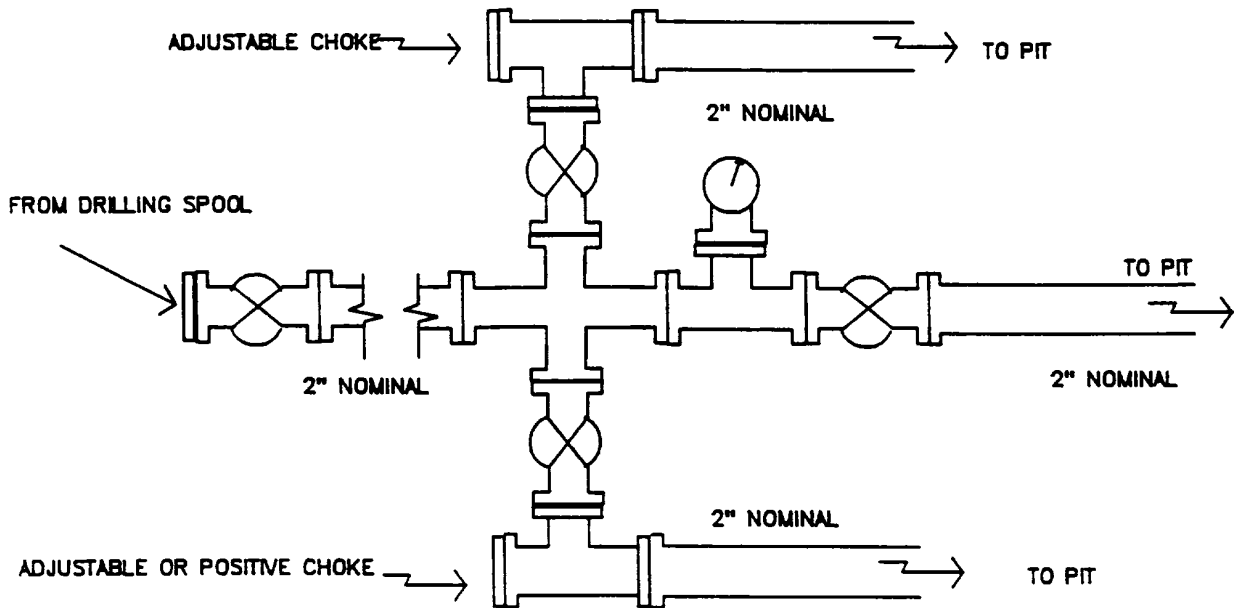


Minimum BOP installation for Completion Operations. 7 1/16" Bore (6" Nominal), 2000psi minimum working pressure double gate BOP to be equipped with blind and pipe rams.

Figure #2

MERIDIAN OIL INC.

Typical Pictured Cliffs Well Choke Manifold Configuration



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

Figure #3

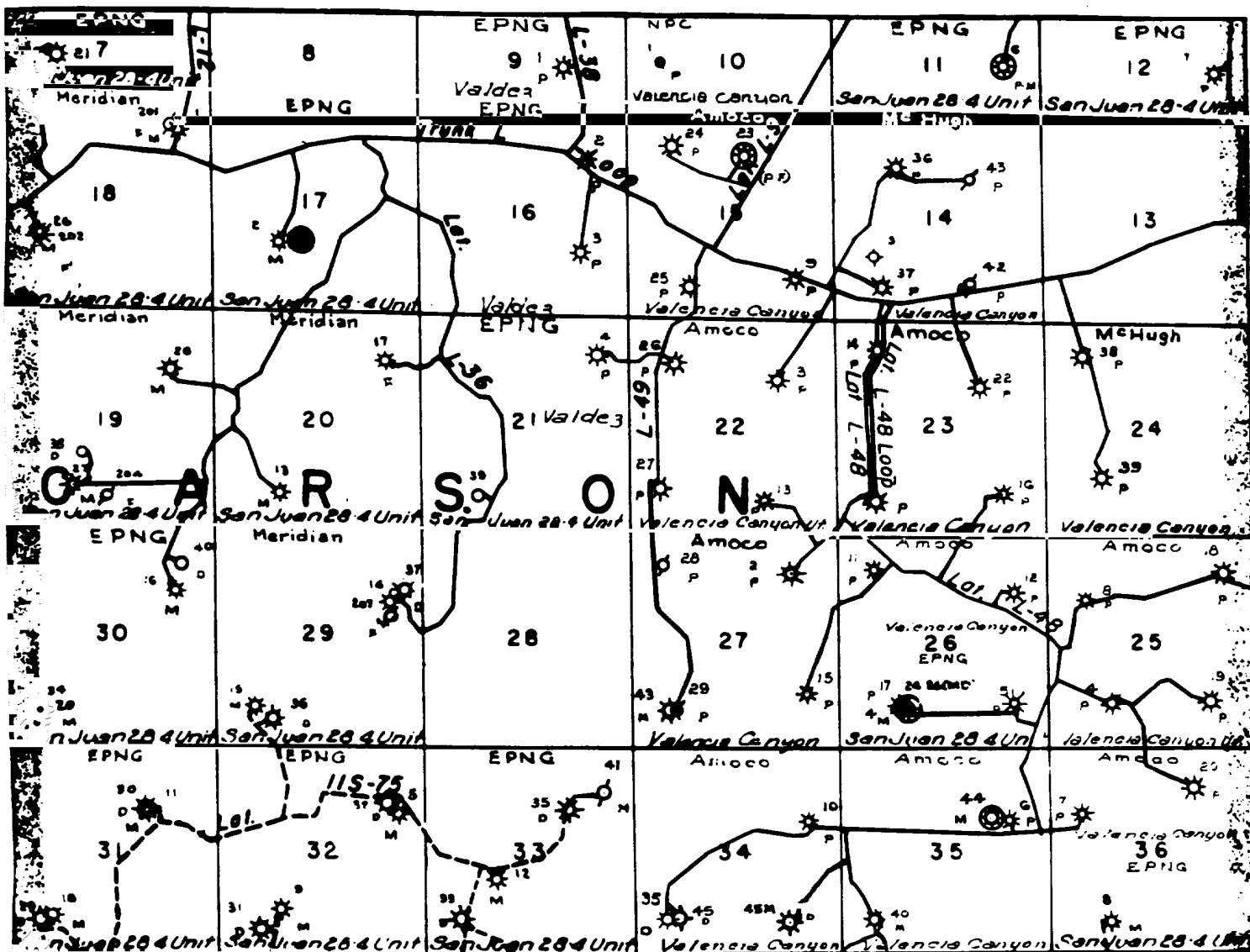
MERIDIAN OIL
San Juan 28-4 Unit #226
Multi-Point Surface Use Plan

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 San Juan 29-6 Water Well #1 in located in SW/4 Section 28, T-29-N, R-6-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 reseeded operations to be carried out. Seed mixture as designated by the responsible government agency will be used. The reseeded 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.**

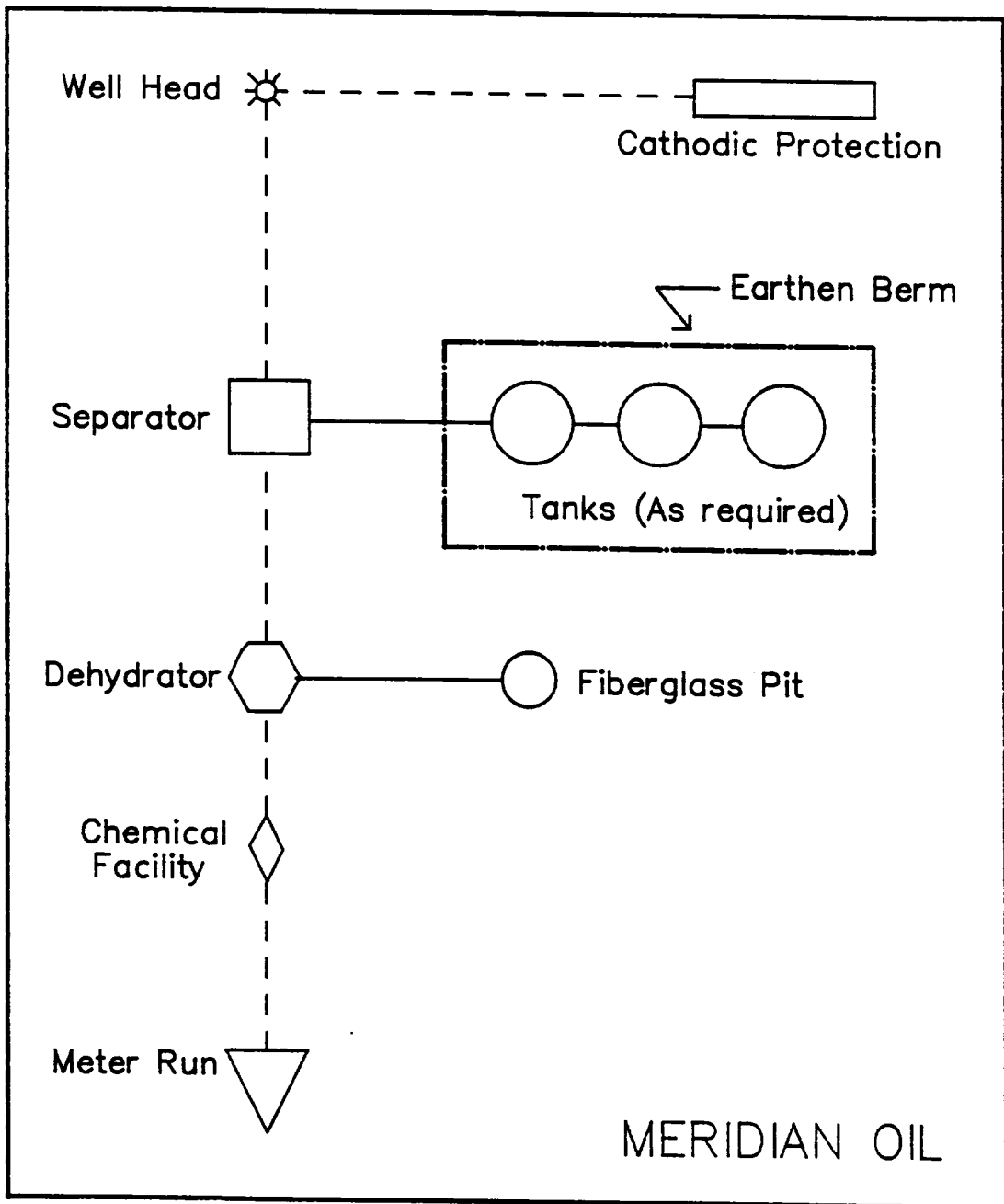
Regional Drilling Engineer

Date



MERIDIAN OIL INC.
 Pipeline Map
 T-28-N, R-04-W
 San Juan County, New Mexico
 San Juan 28-4 Unit #226
 Map #1A

Well Pad Boundary

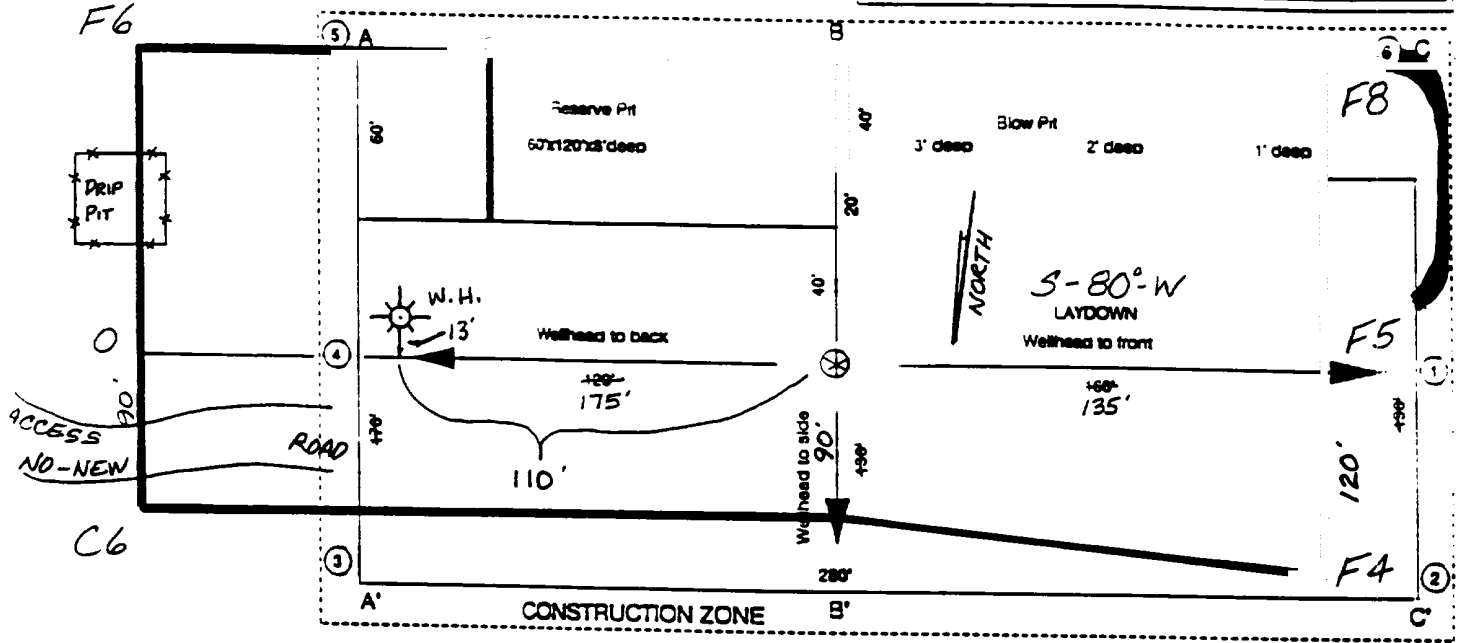


ANTICIPATED
PRODUCTION FACILITIES
FOR A
FRUITLAND COAL/PICTURED CLIFFS COMMINGLED WELL

MERIDIAN OIL

Plat 2

Name: MOI SAN JUAN 28-4 UNIT # 226
 Footage: 2030' ESL, 1570' FWL
 Sec 17 - 28 N.R. 4 W NMPM
 Co. RIO ARRIBA St. N. M.
 Elevation: 7429' Date: 4-14-93



A-A' C/L

7439			
7429			
7419			

B-B' C/L

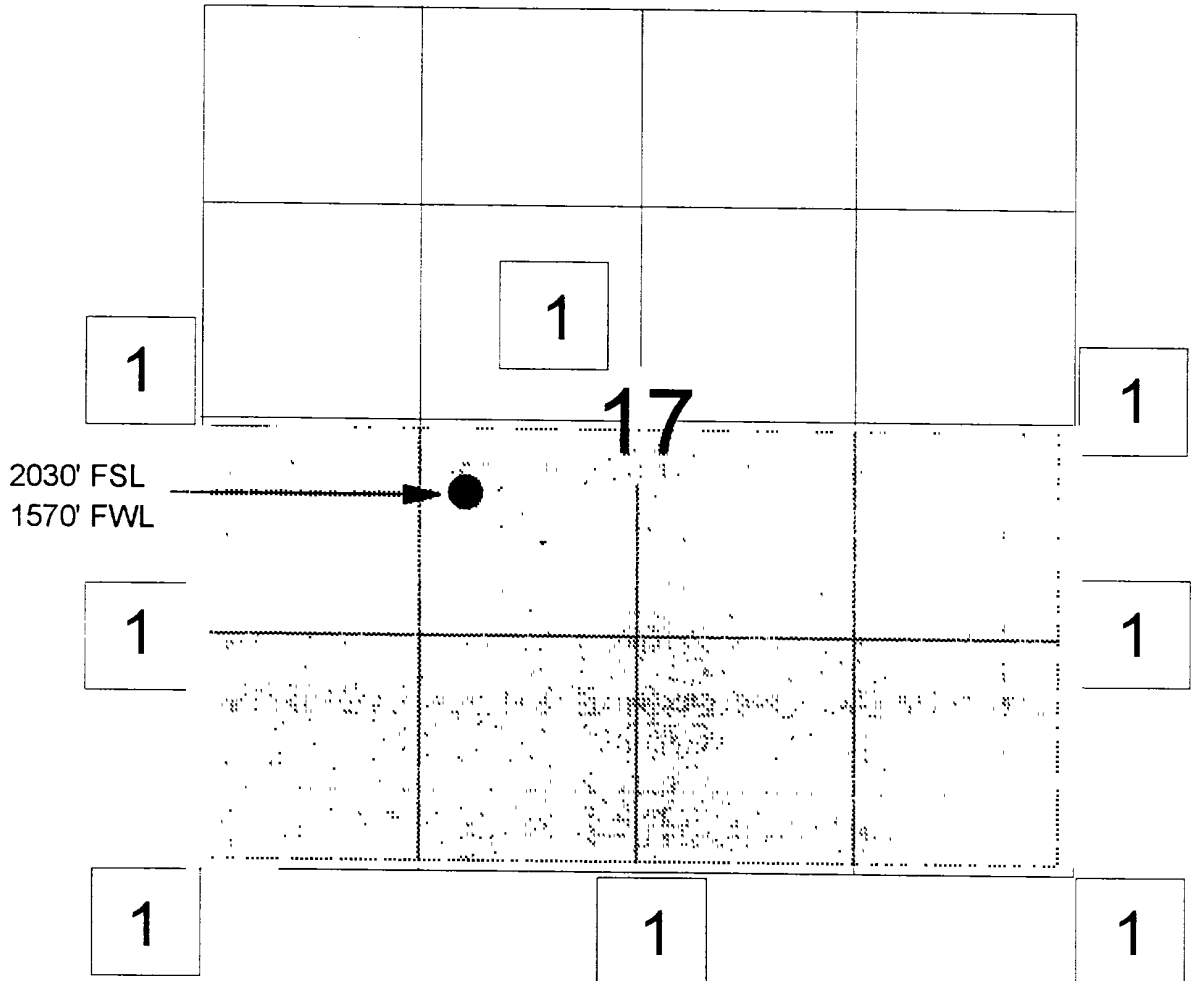
7439			
7429			
7419			

C-C' C/L

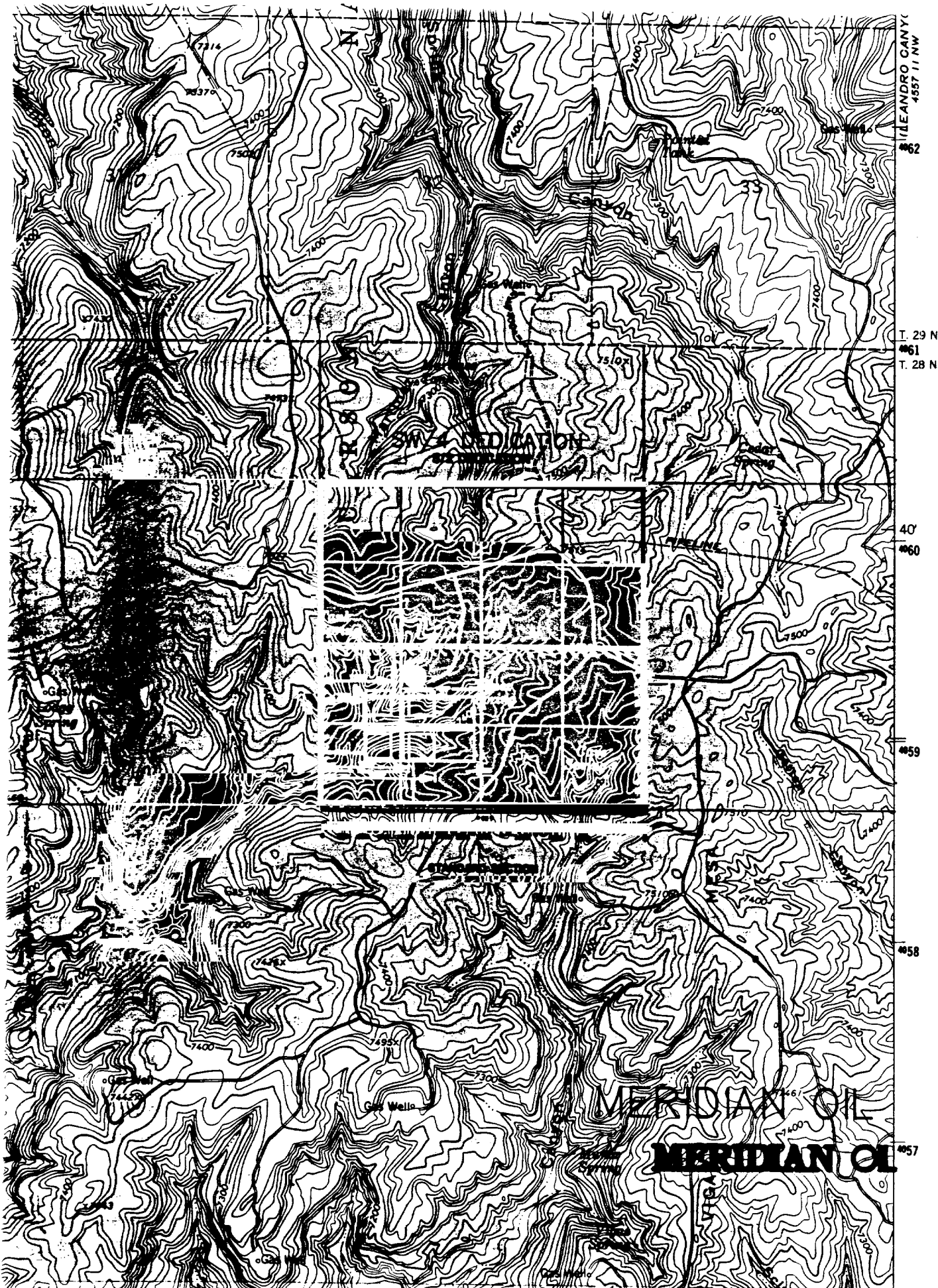
7439			
7429			
7419			

MERIDIAN OIL INC.

OFFSET OPERATOR/OWNER PLAT
Non-Standard Location
Pictured Cliffs-Fruitland Commingle
San Juan 28-4 Unit #226
NE SW Section 17, T28N, R4W
Rio Arriba County, New Mexico



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



LEANDRO CANY
4557 11 NW

T. 29 N.
#61
T. 28 N.

40'
#60

#59

#58

#57

MERIDIAN OIL
MERIDIAN OIL

SW MEDIATION

Gas Wells

