



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

July 12, 1993

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

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-3277

Dear Ms. Bradfield:

Reference is made to your application dated June 16, 1993 for an unorthodox gas well location in both the Basin Fruitland Coal Gas Pool and Pictured Cliffs formation for your proposed ~~20-5 Unit Well No. 232~~ to be drilled 1490 feet from the South line and 610 feet from the West line ~~(Unit 1) of Section 24, Township 28 North, Range 5 West~~, NMPM, Rio Arriba County, New Mexico. It is our understanding that production from both the Basin Fruitland Coal and Pictured Cliffs intervals are to be downhole commingled.

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 No. 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 equivalent and the SW/4 of said Section 24 shall be dedicated to said well forming a standard 344.45-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



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

BY CARRUTHERS
GOVERNOR

1100 THE PLAZA ROAD
AZTEC, NEW MEXICO 87410
(505) 334-0170

Date: 6-21-93

Attn: Mike Hogner

Oil Conservation Division
P.O. Box 2000
Santa Fe, NM 87504-2000

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

Gentlemen:

I have examined the application dated 6-18-93
for the Meridian Oil Co. S.T. 28-5 Unit #232
Operator Lease & Well No.

L-24-28N-5W and my recommendations are as follows:
Unit, S-T-R

Approve

Yours truly,

Ernest Bush

MERIDIAN OIL

June 16, 1993

Sent Federal Express

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

RECEIVED

JUN 18 1993

**OIL CON. DIV
DIST. 3**

Re: Meridian Oil Inc. San Juan 28-5 Unit #232
1490'FSL, 610'FWL Section 24, T-28-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 Basin Fruitland Coal and South Blanco Pictured Cliffs formations. This well is planned as a Basin Fruitland Coal/South Blanco 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 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 28-5 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 \$200,000.

Sincerely,

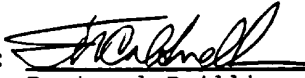


Peggy Bradfield
Regulatory/Compliance Representative

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	RECEIVED JUN 18 1993	5. Lease Number SF-079250
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 28-5 Unit
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700		8. Farm or Lease Name San Juan 28-5 Unit 9. Well Number 232
4. Location of Well 1490' FSL, 610' FWL Latitude 36° 38' 37", Longitude 107° 19' 01"		10. Field, Pool, Wildcat Basin Ft Coal/ So. Blanco Pic. Cliffs 11. Sec., Twn, Rge, Mer. Sec 24, T-28-N, R-5-W NMPM
14. Distance in Miles from Nearest Town 5 miles to Gobernador, NM	12. County Rio Arriba	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 610'		
16. Acres in Lease	17. Acres Assigned to Well 344.45 S/2 160.00 SW/4 Unit L	
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 200'		
19. Proposed Depth 4450'	20. Rotary or Cable Tools Rotary	
21. Elevations (DF, FT, GR, Etc.) 7317' 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		6/4/93 Date

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

Archaeological Report submitted 5-17-93
Threatened and Endangered Species Report submitted
NOTE: This format is issued in lieu of U.S. BLM Form 3160-3

Schedule of Assessments
District Office
State Lands - 4 copies
Fee Lands - 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 Arriba St., Alamogordo, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

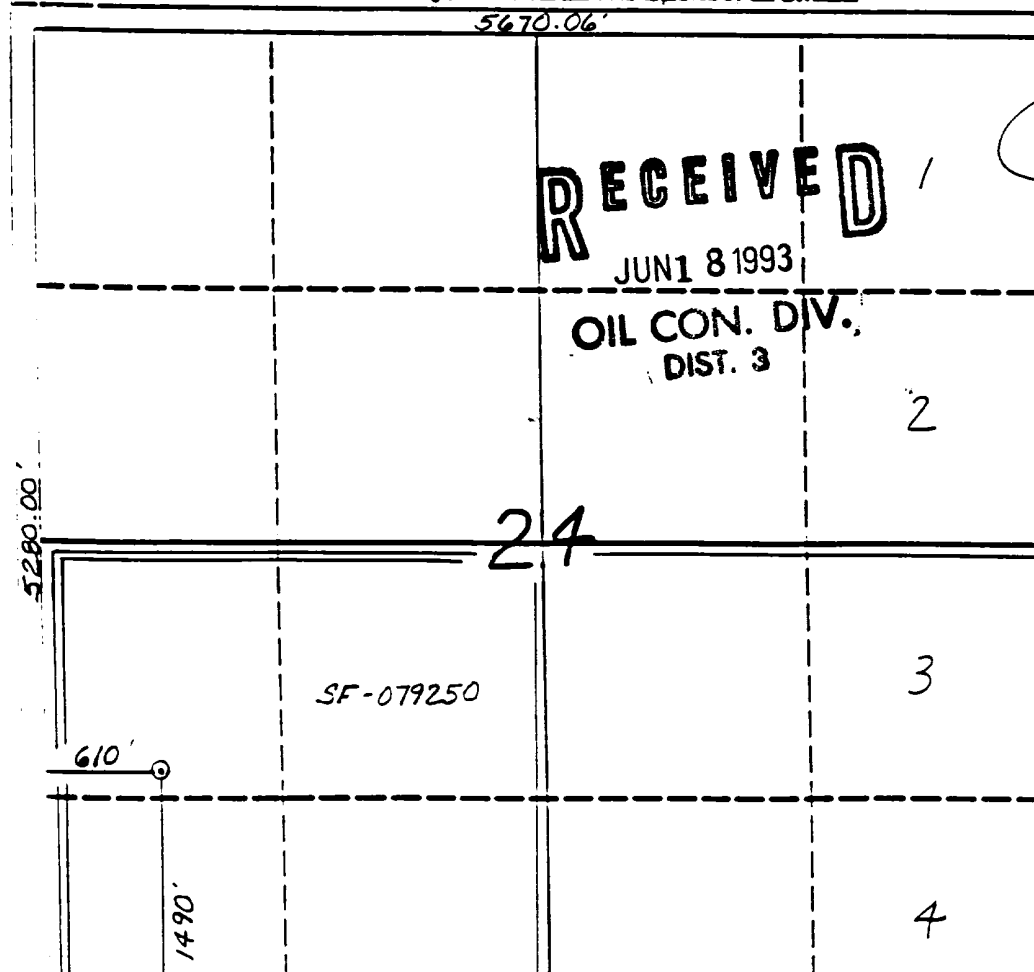
All Distances must be from the outer boundaries of the section

Operator		Well No.					
Meridian Oil Inc.		232					
San Juan 28-5 Unit							
U.S. Lat.	Section	Township	Range	County			
L	24	28 North	5 West	Rio Arriba			
Adm. Footage Location of Well:							
1490	feet from the	South	line and	610	feet from the	West	line
Ground level Elev.		Provening Formation		Foot		Distance Acreage	
7317'		Fruitland Coal/Pic. Cliffs		Basin/So. Blanco		344.45/160	

- Outline the acreage dedicated to the subject well by corner points or section corners on this plat below.
- If more than one tract is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one tract 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 their descriptions which have already been consolidated. (Use reverse side of this form if necessary.)

No allowable well be assigned to the well until all interests have been consolidated (by commutation, unitization, force-pooling, or otherwise) or until a non-consolidated unit, commencing with 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

6-3-93

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. 12-17-92

Date Surveyed C. EDW

Neale G. Edwards

Signature of Surveyor
Professional Surveyor

9357

June 3, 1993

OPERATIONS PLAN

Well Name: San Juan 28-5 Unit #232
Location: 1490'FSL, 610'FWL Section 24, T-28-N, R-05-W
 Rio Arriba County, New Mexico
 Latitude 36° 38' 37", Longitude 107° 19' 01"
Formation: Basin Fruitland Coal/So.Blanco Pictured Cliffs
Elevation: 7317'GL

Formation:	Top	Bottom	Contents
Surface	San Jose	3500'	
Ojo Alamo	3500'	3760'	aquifer
Kirtland	3760'	3980'	
Fruitland	3980'	4248'	
Fruitland Coal Top	4160'	4240'	gas
Pictured Cliffs	4248'	4450'	gas
Total Depth	4450'		

Logging Program: Mud logs from 3950' to Total Depth.
 IND, Dens, Neut, GR, ML to TD.

Mud Program:

Interval	Type	Weight	Vis.	Fluid Loss
0- 200'	Spud	8.4-8.9	40-50	no control
200-4450'	Non-dispersed	8.4-9.5	30-60	no control

Casing Program:

Hole Size	Depth Interval	Csg.Size	Wt.	Grade
12 1/4"	0 - 200'	8 5/8"	24.0#	K-40
7 7/8"	0 - 4450'	4 1/2"	10.5#	K-55

Tubing Program:

0 - 4450'	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 @ 3760'. Two turbolizing type centralizers - one below and one into the base of the Ojo Alamo @ 3760'. 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 28-5 Unit #232

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/75 sx Class "B" 65/35 Poz w/6% gel, 2% calcium chloride, 6.25# gilsonite/sx and 1/4# flocele/sx (133 cu.ft. of slurry), tail w/100 sx Class "B" w/2% calcium chloride, 5#/sx gilsonite, 0.25#/sx celloflake (118 cu.ft.), 100% excess to circulate stage tool @ 3900').

Second stage - lead w/865 sx of Class "B" 65/35 Poz w/6% gel, 2% calcium chloride, 6.25# gilsonite/sx and 1/4# flocele/sx (1526 cu.ft.). Tail w/25 sx Class "B" w/2% calcium chloride (30 cu.ft. of slurry, 75% 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).

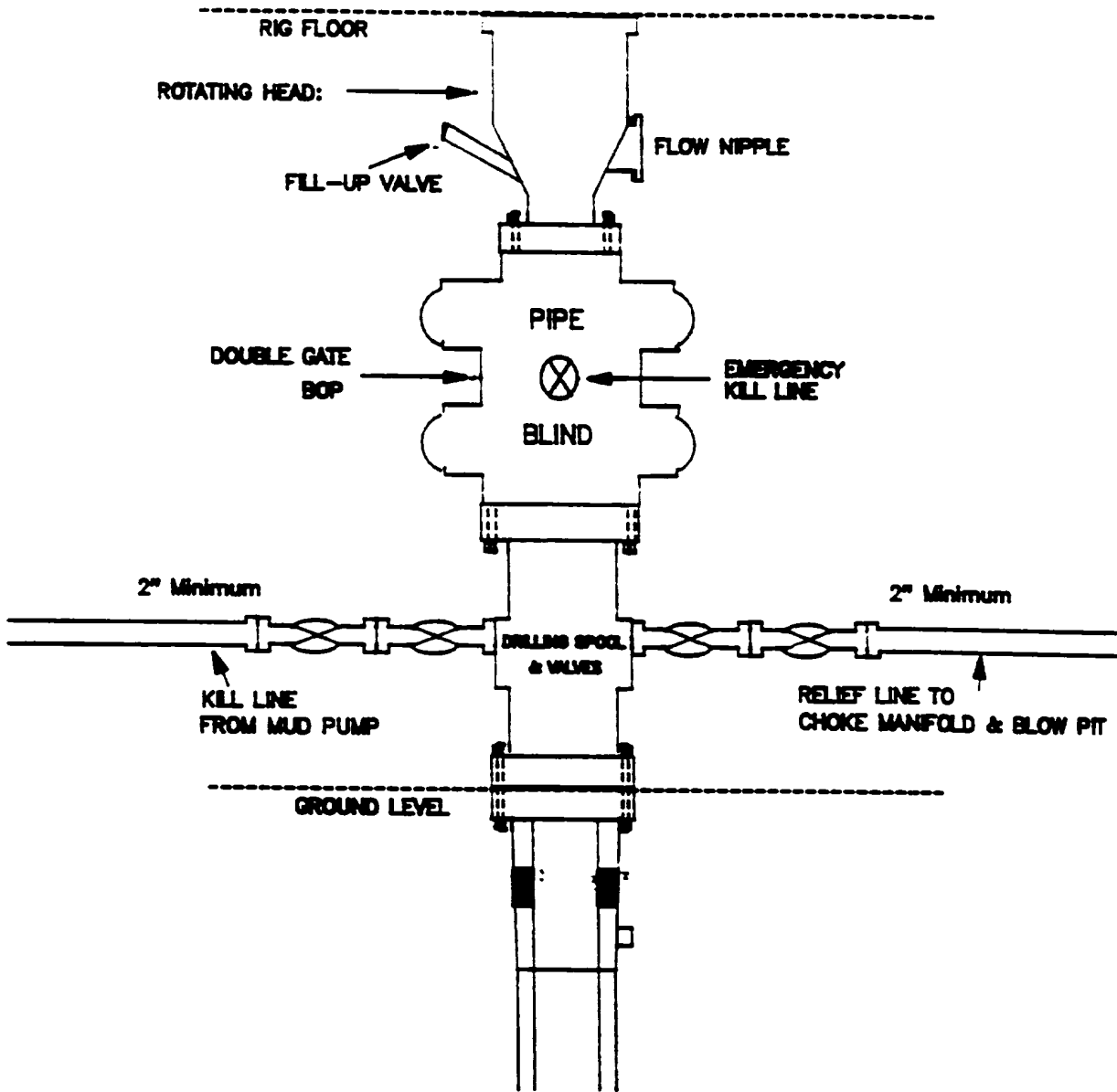
Pipe rams will be actuated to least once each day and blind rams actuated once each trip to test proper functioning. An upper kelly cock valve with handle and drill string safety valves to fit each drill string will be maintained and available on the rig floor.

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.
- * The south half of Section 24 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.

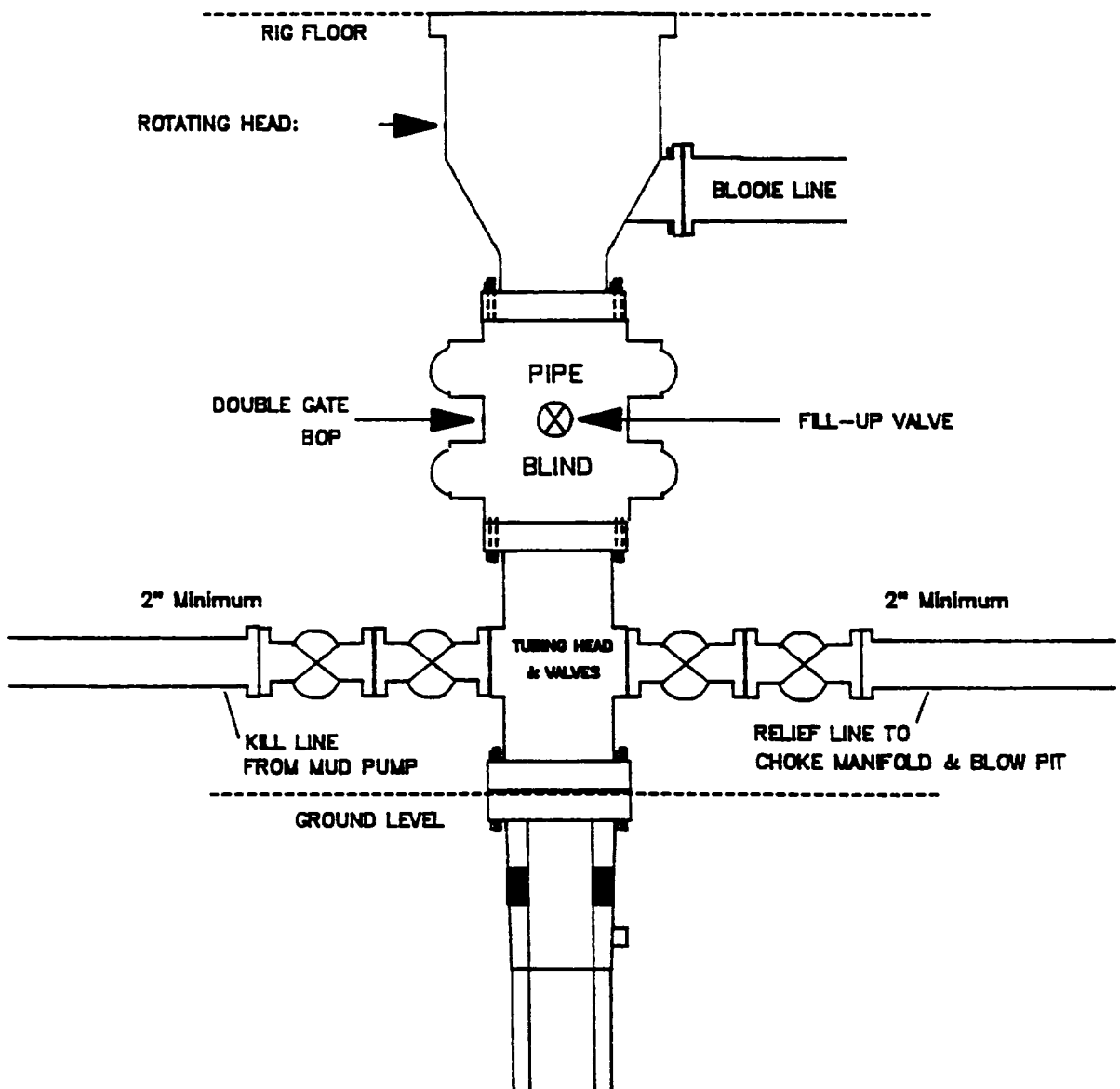
Drilling Rig BOP Configuration



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

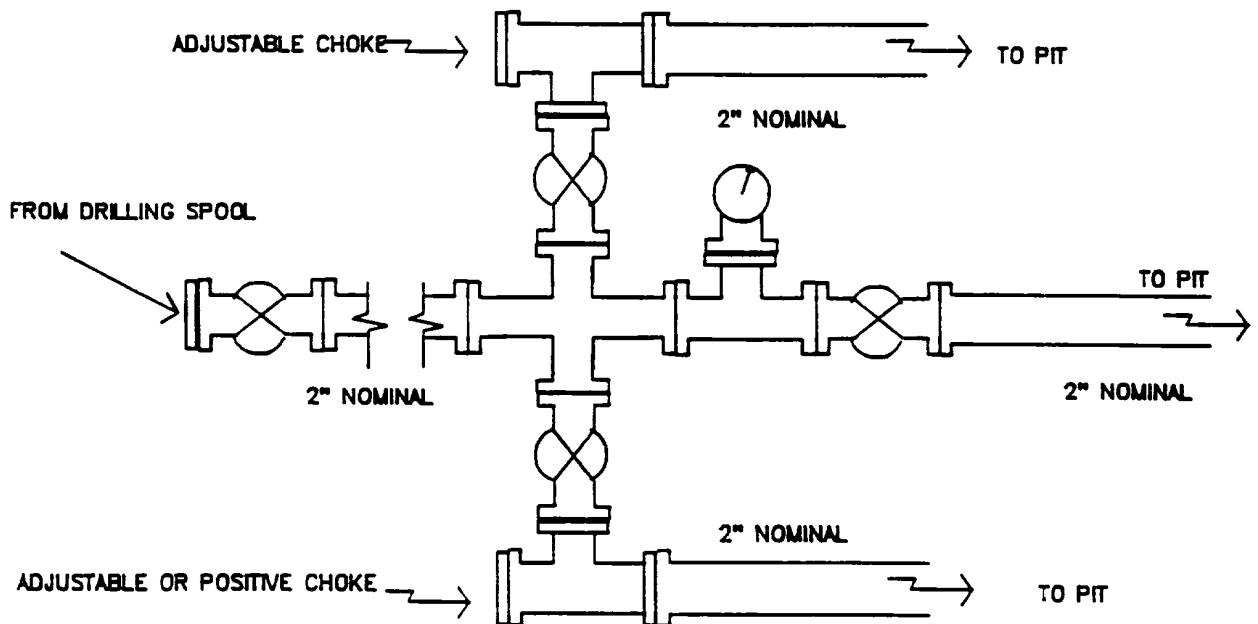


Minimum BOP installation for Completion Operations. 7 1/16" Bore (6" Nominal), 2000psi minimum working pressure double gate BOP to be equipped with blind and pipe rams.

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 28-5 Unit #232
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 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

6/4/93

Date

33

Gobernador

PIPELINE

Gas Well

16

NEW BLM
ROW

Gas Tank

Sanillo
Reservoir

Gas Well

15

22

Corral

Gas Tank

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6700

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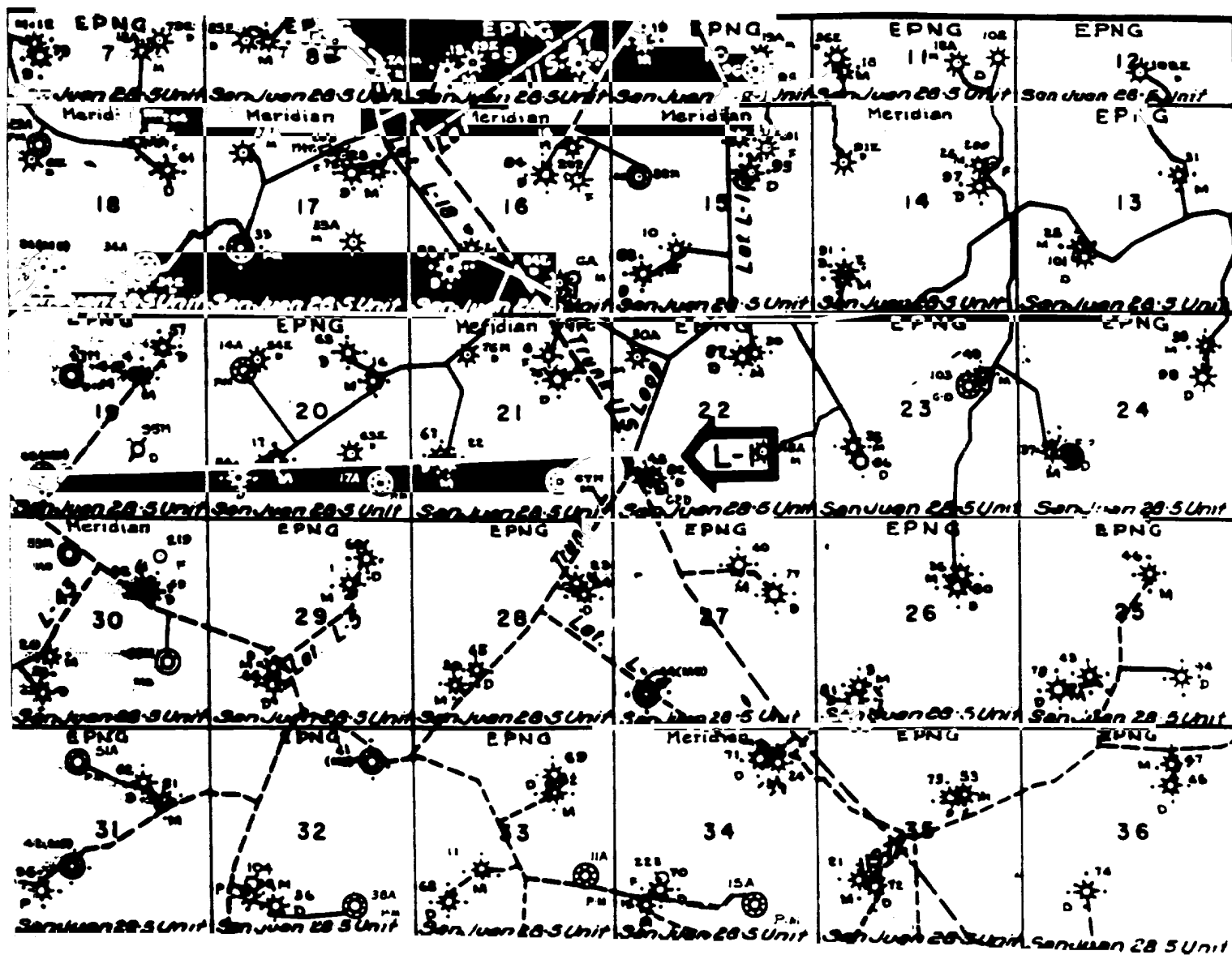
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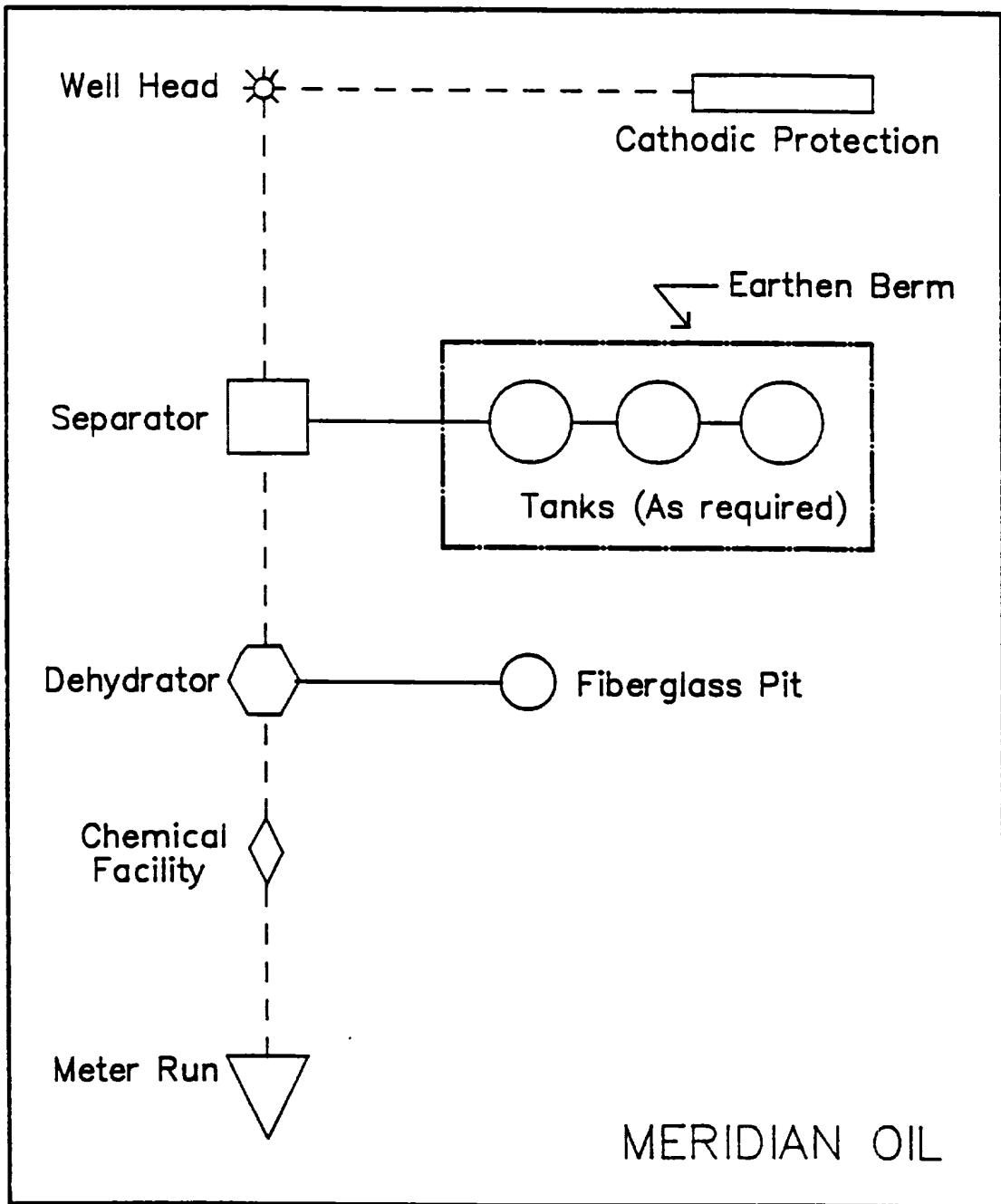
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MERIDIAN OIL INC.
 Pipeline Map
 T-28-N, R-05-W
 San Juan County, New Mexico
 San Juan 28-5 Unit #232
 Map #1A

Well Pad Boundary

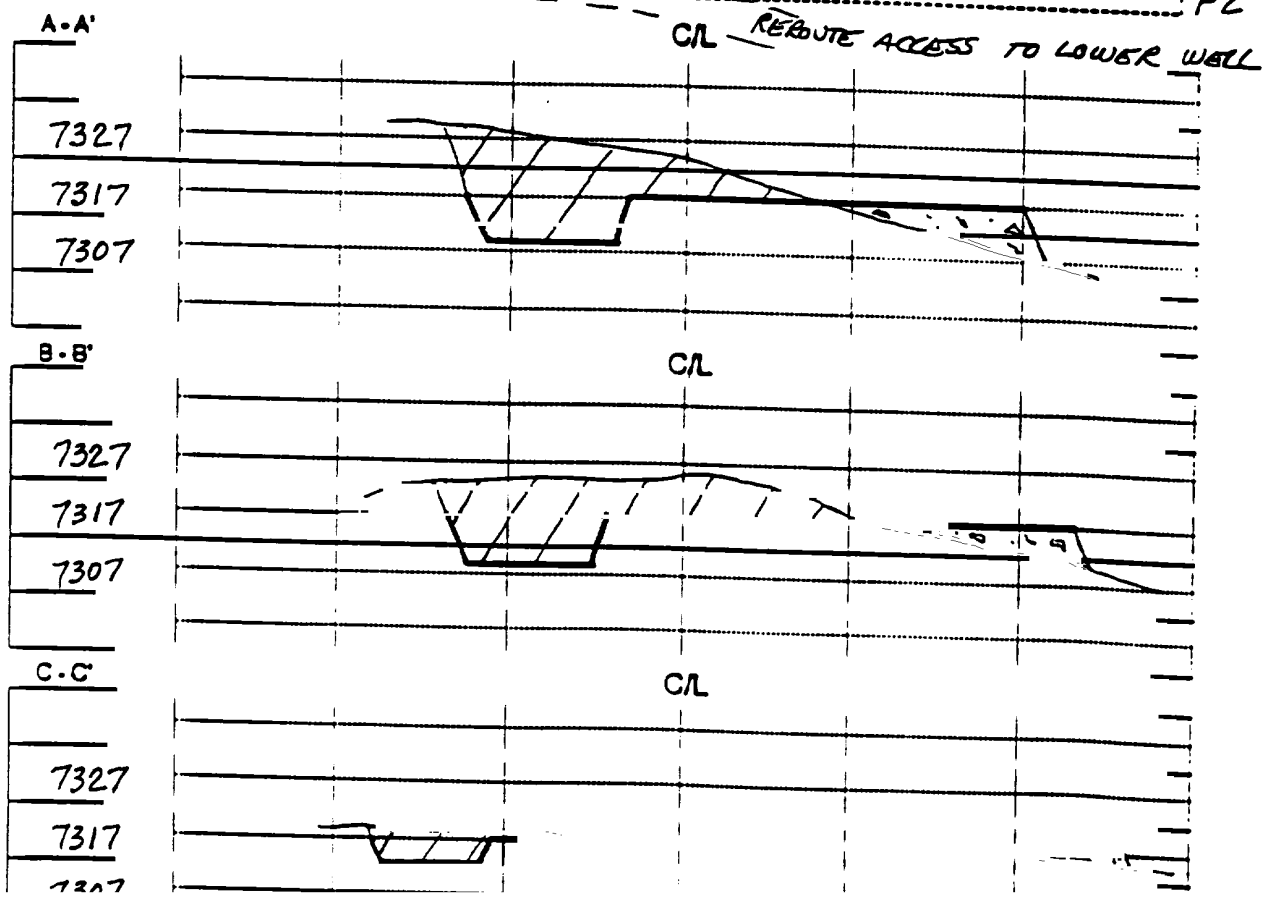
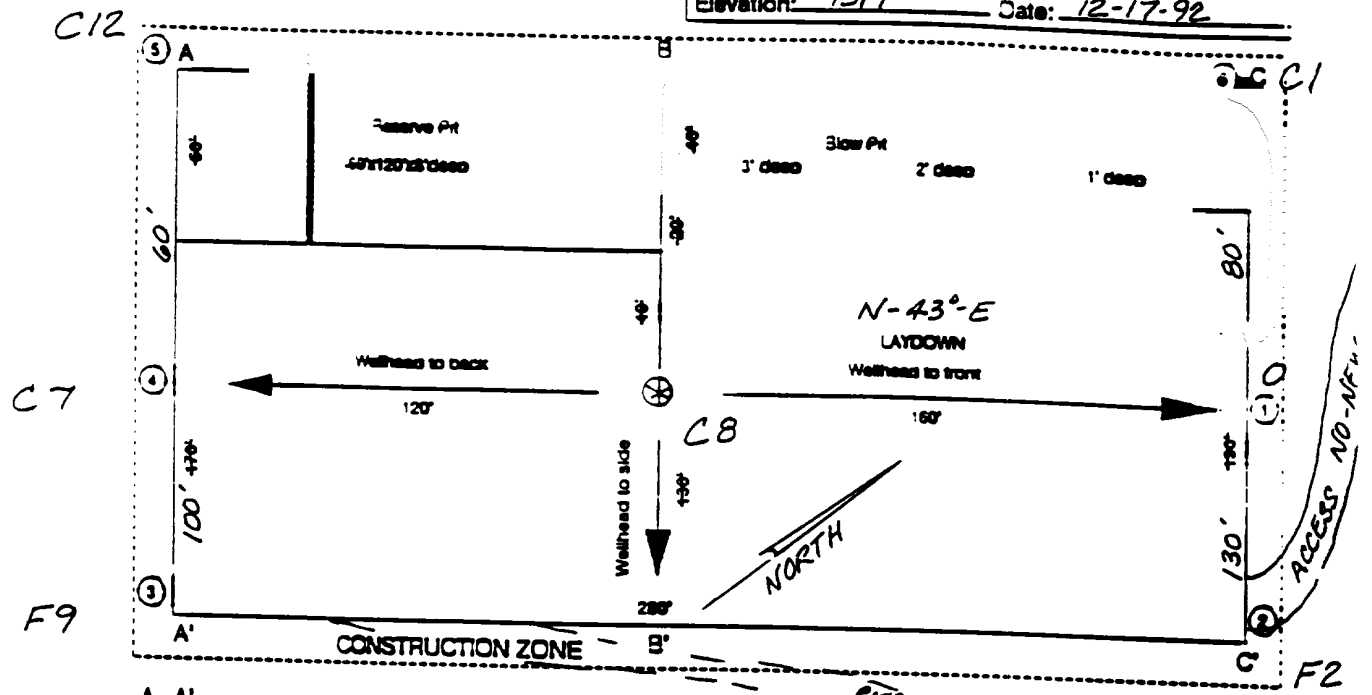


ANTICIPATED
PRODUCTION FACILITIES
FOR A
FRUITLAND COAL/PICTURED CLIFFS COMMINGLED WELL

MERIDIAN OIL

Plat 2

Name: MOI SAN JUAN 28-5 UNIT #232
 Footage: 1490 FSL 610 FWL
 Sec 24 28 N.R. 5 W NMPM
 Co. RIO AREIBA St. N.M.
 Elevation: 7317' Date: 12-17-92



Schedule Assessment
District Office
State Lands - 4 copies
Fee Lands - 3 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-182
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT:
P.O. Box 1980, Hobbs, NM 88240

DISTRICT:
P.O. Drawer 80, Artesia, NM 88210

DISTRICT:
1000 Rio Grande S.E., Alamosa, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

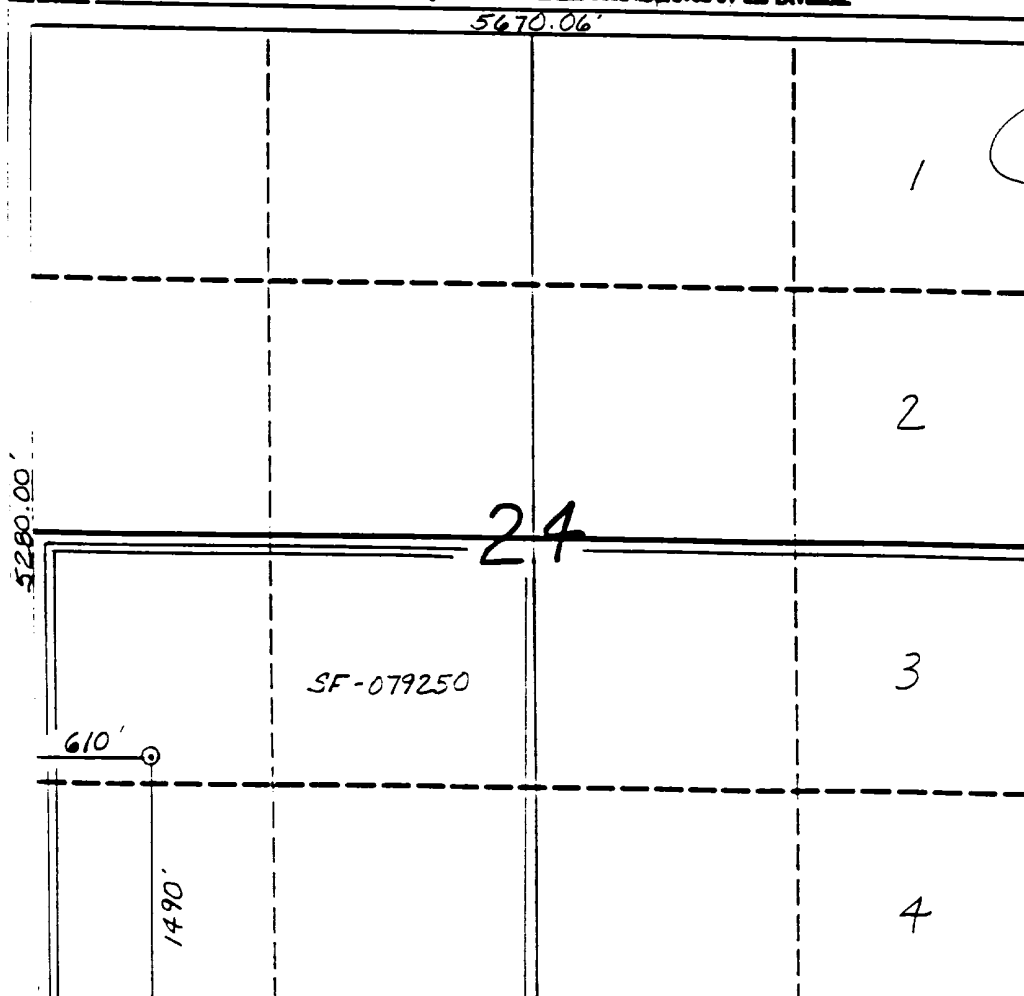
All Distances must be from the outer boundaries of the section

Operator		Lease		Well No.	
Meridian Oil Inc.		San Juan 28-5 Unit		232	
U.S. Letter	Section	Township	Range	County	
T	24	28 North	5 West	NMD	Rio Arriba
Actual Footage Location of Well:					
1490	feet from the	South	line and	610	feet from the West line
Ground level Elev.		Producing Formation		Dedicated Acreage	
7317'		Fruitland Coal/Pic. Cliffs		Basin/So. Blanco 344.45/160	

- Outline the acreage dedicated to the subject well by colored pencil or ink 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 names 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 their 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-consolidated 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

6-3-93

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. 12-17-92

Date Surveyed C. EDWARDS

NEALE W. EDWARDS

State of New Mexico
Professional Surveyor

3357

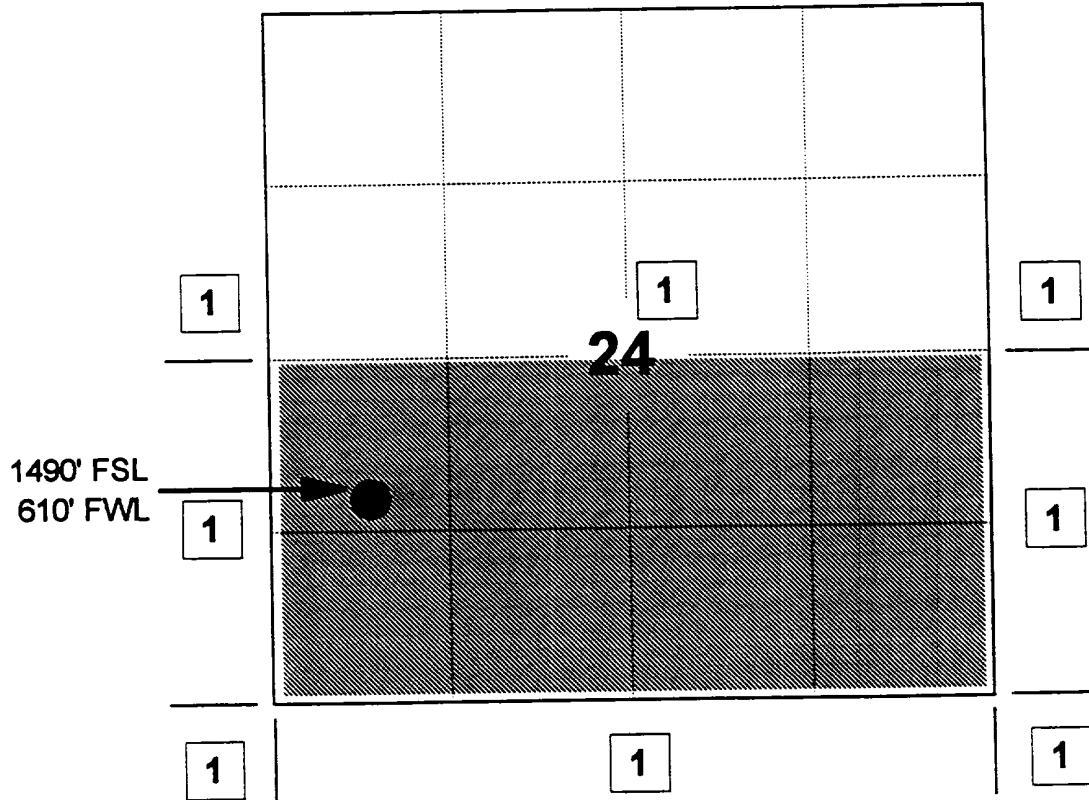
MERIDIAN OIL INC

SAN JUAN 28-5 UNIT #232

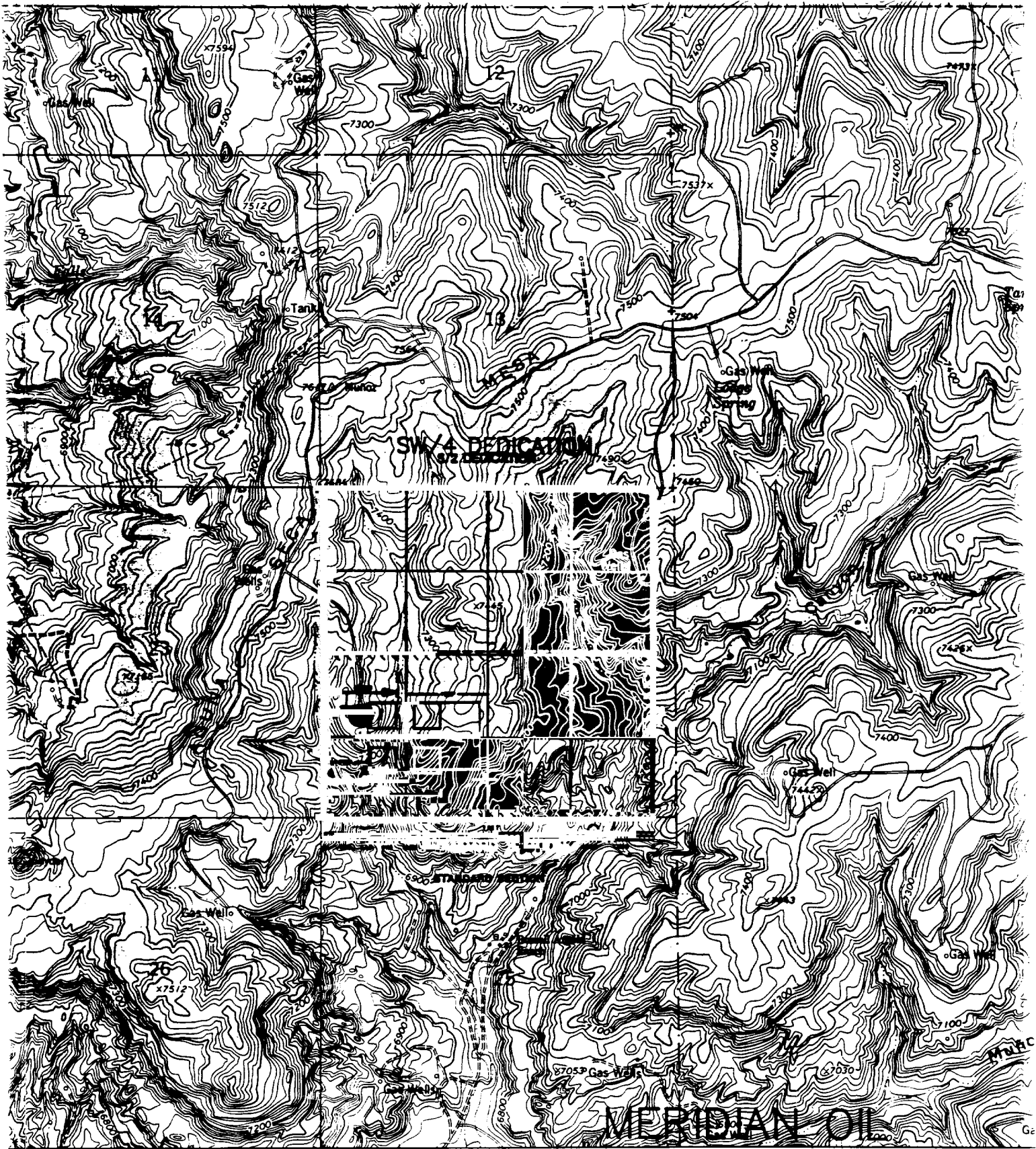
OFFSET OPERATOR \ OWNER PLAT

Fruitland Coal / Pictured Cliffs Formations Commingle

Township 28 North, Range 05 West

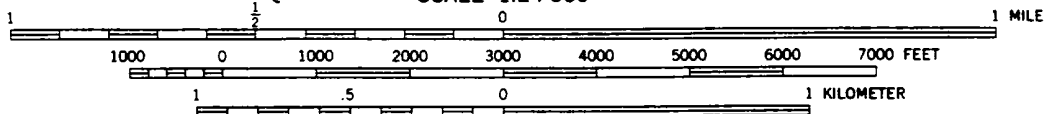


1) Meridian Oil Inc



20' 1292 (VIGAS CANYON) 4557 111 SE 294: R. 5 W. P. 4 W. 295 17' 30" 29

SCALE 1:24 000



CONTOUR INTERVAL 20 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

NFW MF:

