

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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30-045-28997

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

070 FARMINGTON, NM

1a. Type of Work DRILL	5. Lease Number NM-03493
1b. Type of Well GAS	6. If Indian, All. or Tribe
2. Operator <b>MERIDIAN OIL</b> 14538	7. Unit Agreement Name Huerfano Unit
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name Huerfano Unit 7139
	9. Well Number 501
4. Location of Well 1250' FNL, 1295' FEL Latitude 36° 28' 38", Longitude 107° 48' 28"	10. Field, Pool, Wildcat Basin Fruitland Coal
	11. Sec., Twn, Rge, Mer. A Sec 20, T-26-N, R-9-W NMMP
14. Distance in Miles from Nearest Town 5 miles to Huerfano Trading Post	12. County San Juan
	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 1250'	
16. Acres in Lease 1772.740	17. Acres Assigned to Well 320 N/2
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 2000'	
19. Proposed Depth 2315'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6398' GR	22. Approx. Date Work will Start 4th quarter 1993
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u>[Signature]</u> Regional Drilling Engineer	Date 9/17/93

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

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

Archaeological Report will be submitted  
Threatened and Endangered Species Report submitted 09-15-93  
NOTE: This format is issued in lieu of U.S. BLM Form 3160-3

APPROVED  
AS AMENDED

OCT 27 1993  
DISTRICT MANAGER

School to Aspinwall  
District Office  
State Lease - 4 copies  
Fee Lease - 3 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

RECEIVED  
SLM  
Form C-102  
Revised 1-1-89

OIL CONSERVATION DIVISION

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

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070 FACILITY STATION, NM

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

DISTRICT II  
P.O. Drawer DD, Arama, 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 Huerfano Unit		Well No. 501	
Unit Letter A	Section 20	Township 26 North	Range 9 West	County NMNM San Juan	
Actual Footage Location of Well: 1250 feet from the North line and 1295 feet from the East line					
Ground level Elev. 6398'	Producing Formation Fruitland Coal		Pool Basin	Dedicated Acreage 320 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or Indian marks on the plat below.

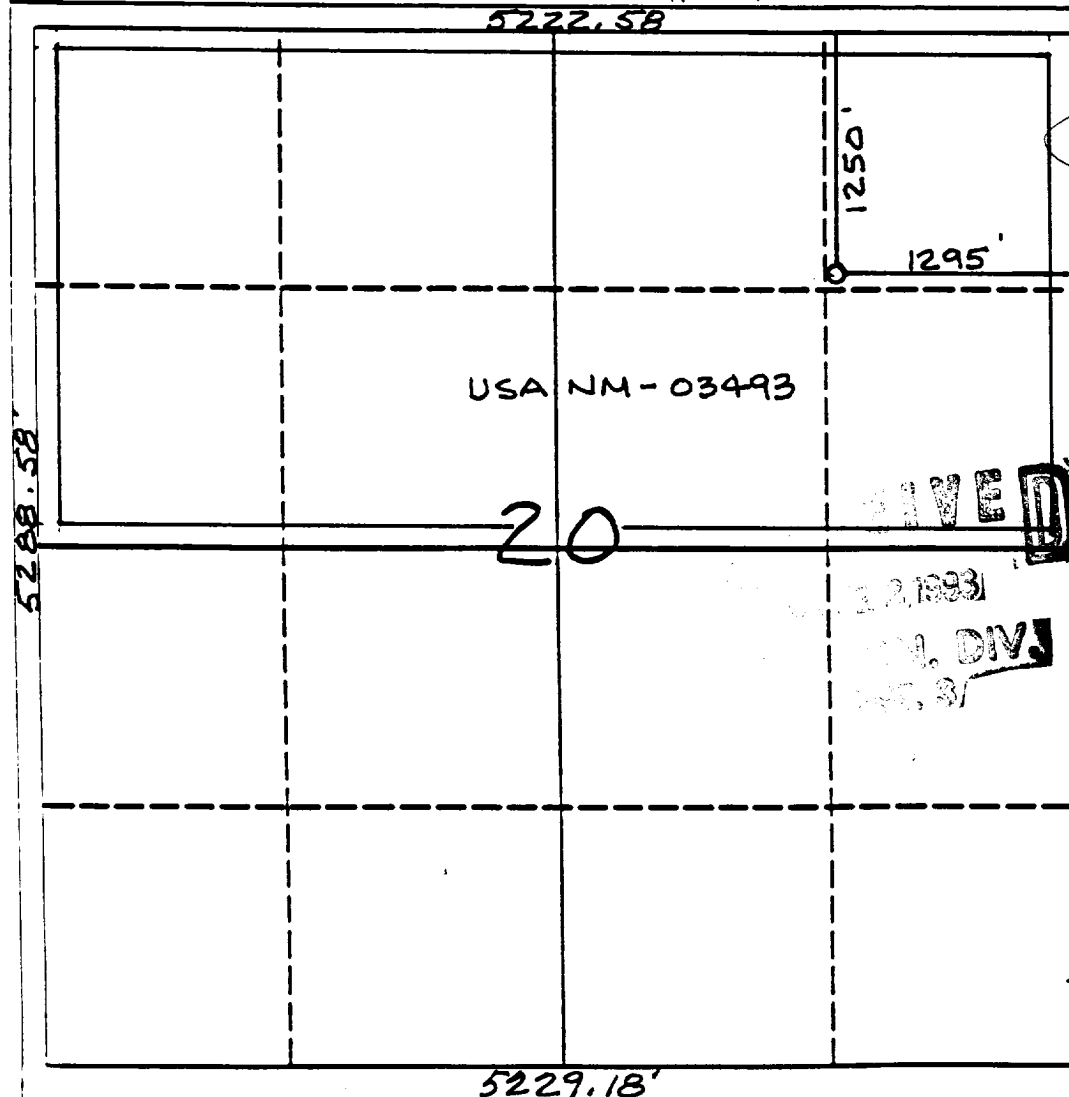
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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, 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 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  
9-15-93

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.

8-23-93

Date Surveyed  
Needle C. Edwards

Signature of State Professional Surveyor

9857

Carroll No.

6857

OPERATIONS PLAN

**Well Name:** Huerfano Unit #501  
**Location:** 1250'FNL, 1295'FEL, Section 20, T-26-N, R-9-W  
 San Juan County, New Mexico  
 Latitude 36° 28' 38", Longitude 107° 48' 28"  
**Formation:** Basin Fruitland Coal  
**Elevation:** 6398'GL

Formation:	Top	Bottom	Contents
Surface	Nacimiento	1181'	
Ojo Alamo	1181'	1276'	aquifer
Kirtland	1276'	1759'	
Fruitland	1759'	2016'	
Fruitland Coal Top	1837'	2015'	gas & salt water
Pictured Cliffs	2016'		
Total Depth	2315'		

**Logging Program:** Mud logs: 1750' to TD  
 Dens/Neut/GR; Dens/GR; Micro/GR/Numar MR: 1750' to TD  
 IND/SP/GR: to TD

**Mud Program:**

Interval	Type	Weight	Vis.	Fluid Loss
0- 200'	Spud	8.4-8.9	40-50	no control
200-2315'	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 - 2315'	4 1/2"	10.5#	K-55

**Tubing Program:**

0 - 2315'	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. Two centralizers run every 3rd joint to the base of the Ojo Alamo @ 1276'. Two turbolizing type centralizers - one below and one into the base of the Ojo Alamo @ 1276'. 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" 2000 psi xmas tree assembly.

September 17, 1993

**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 600psi/30 minutes.

4 1/2" production casing - Lead w/529 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 (1055 cu.ft. of slurry, 125% 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.

**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 600psi/30 min.

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

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

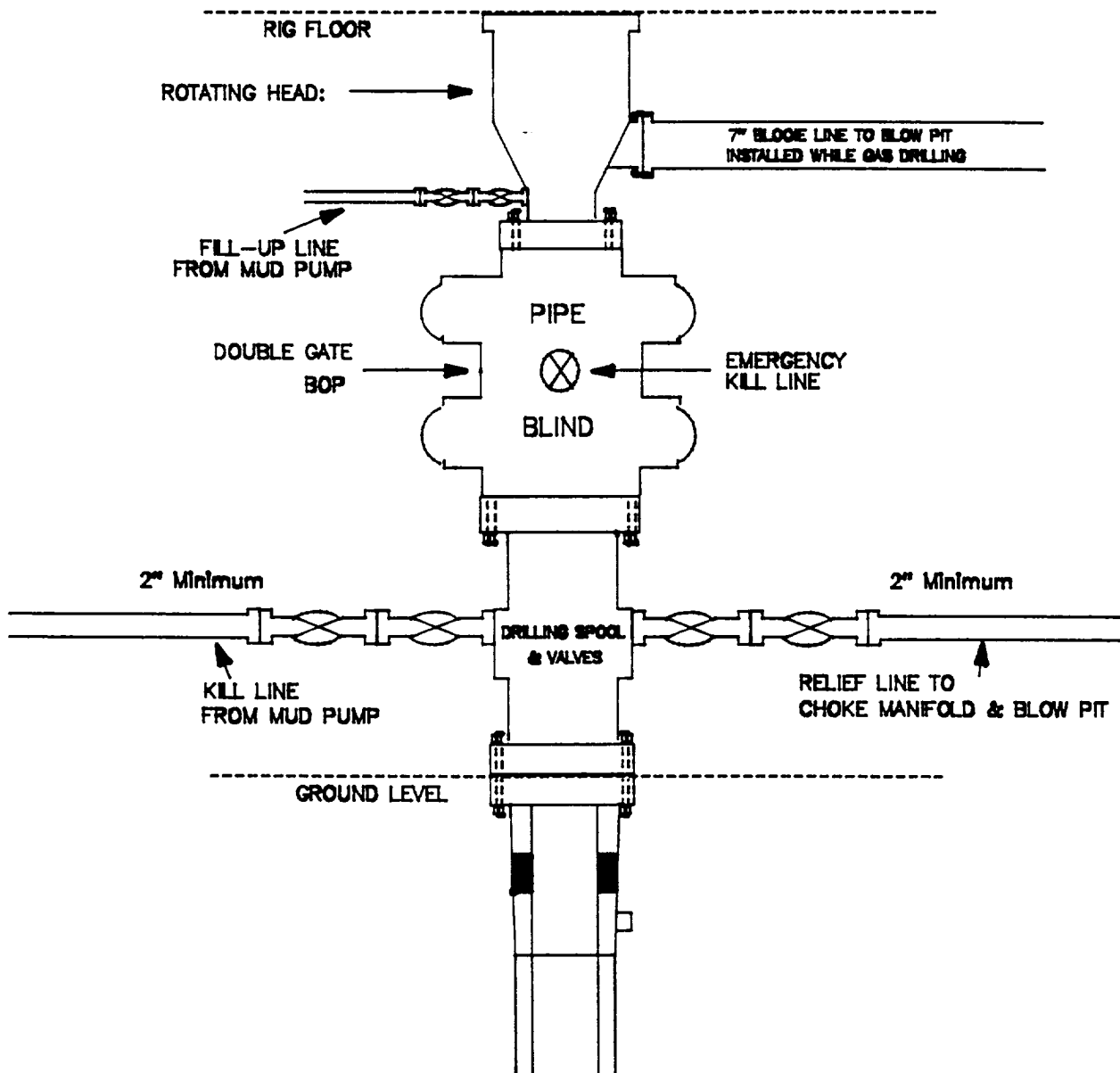
Pipe rams will be actuated to least once each day and blind rams actuated once each trip to test proper functioning. An upper kelly cock valve with handle and drill string safety valves to fit each drill string will be maintained and available on the rig floor.

**Additional information:**

- \* The Fruitland Coal formation will be completed.
- \* Anticipated pore pressure for the Fruitland is 300 psi.
- \* This gas is dedicated.
- \* The North half of the section is dedicated to this well.
- \* 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



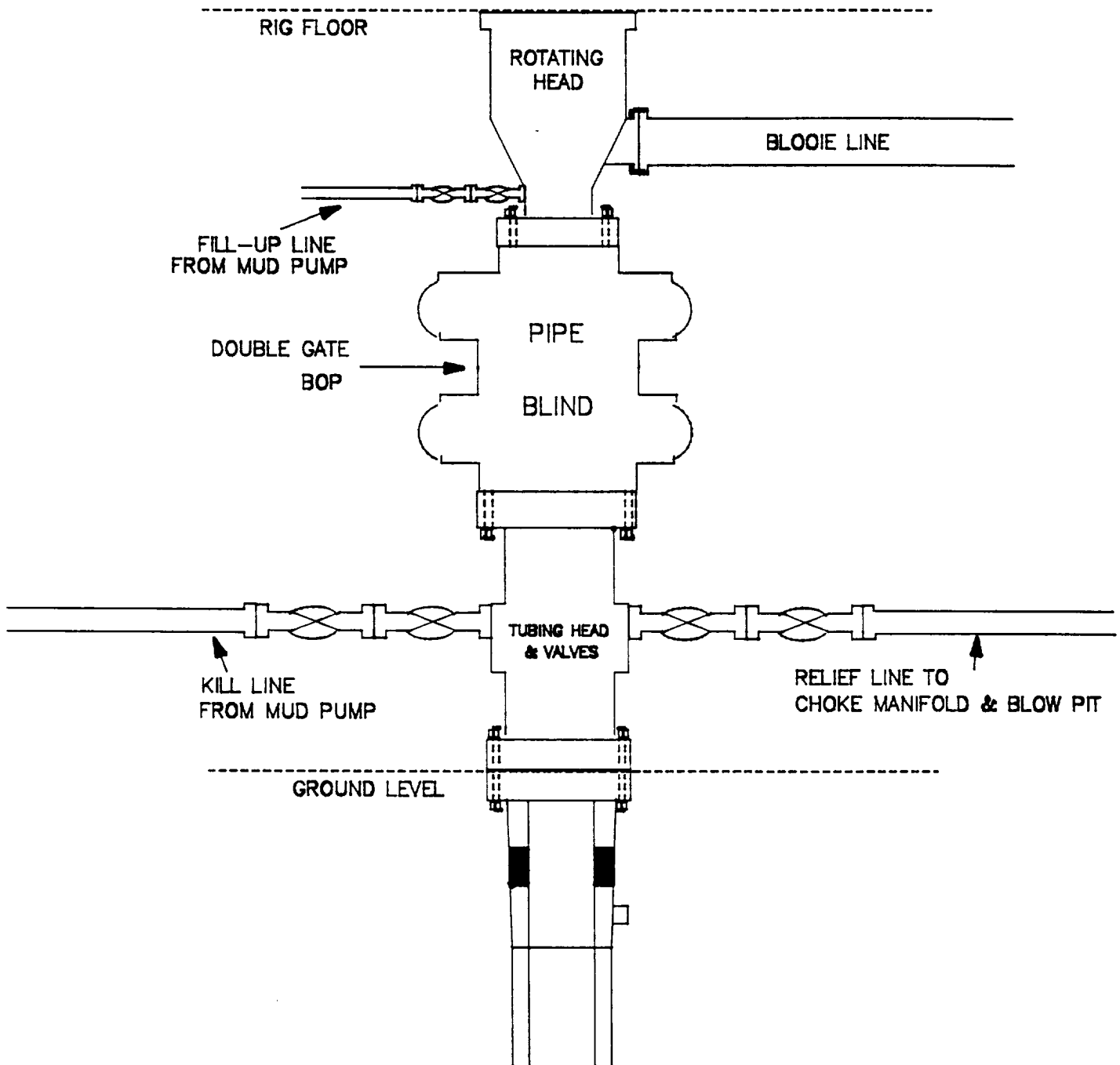
11" Bore, 2000psi minimum working pressure double gate BOP to be equipped with blind and pipe rams. A Schaffer Type 50 or equivalent rotating head to be installed on the top of the BOP. All equipment is 2000psi working pressure/or greater.

Figure #1

# MERIDIAN OIL INC.

BOP Configuration

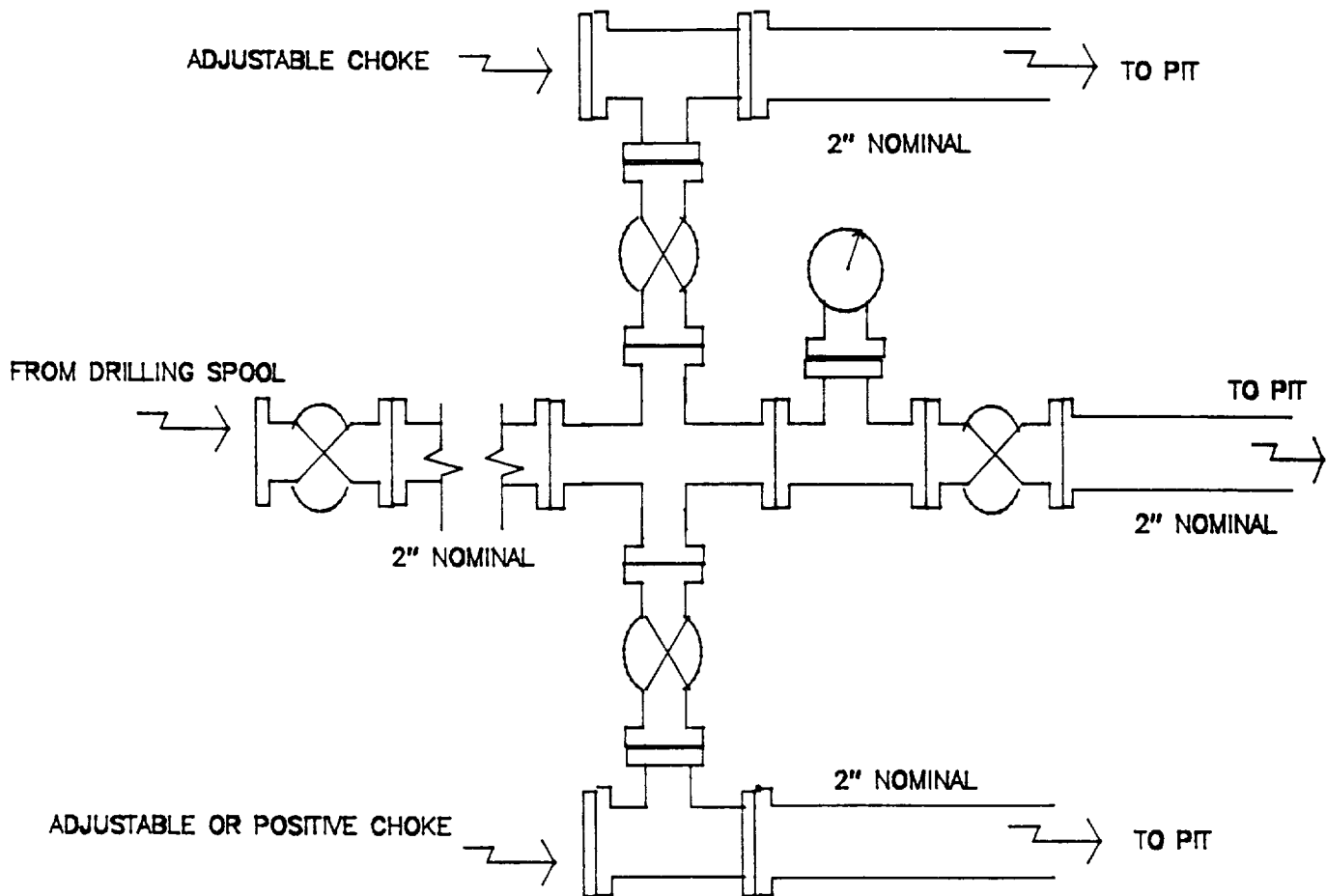
2M psi SYSTEM



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

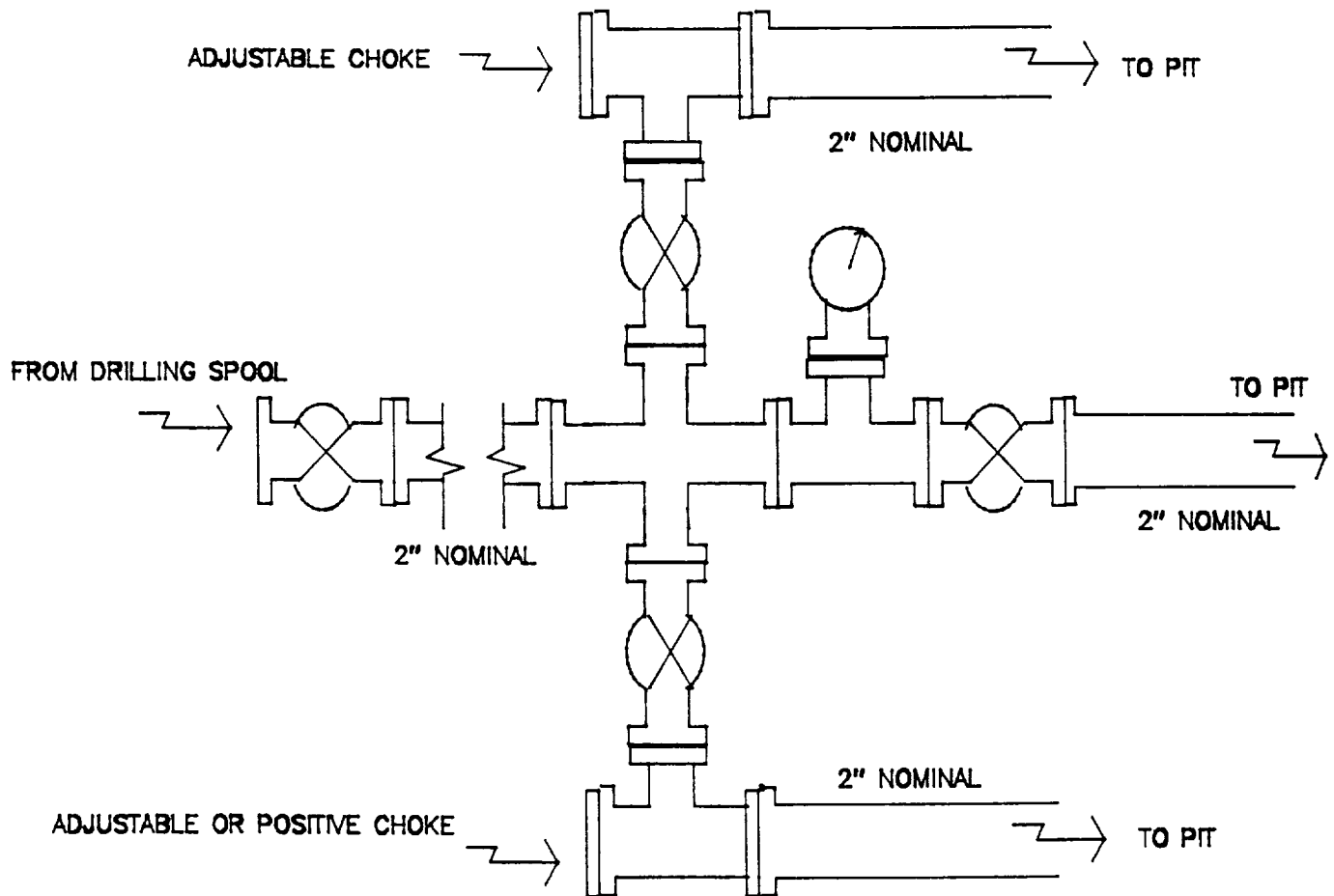
**MERIDIAN OIL INC.**  
**Choke Manifold Configuration**  
**2M psi SYSTEM**



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

**Figure #3**

MERIDIAN OIL INC.  
Choke Manifold Configuration  
2M psi SYSTEM



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

Figure #3



**MERIDIAN OIL**  
Huerfano Unit #501  
Multi-Point Surface Use Plan

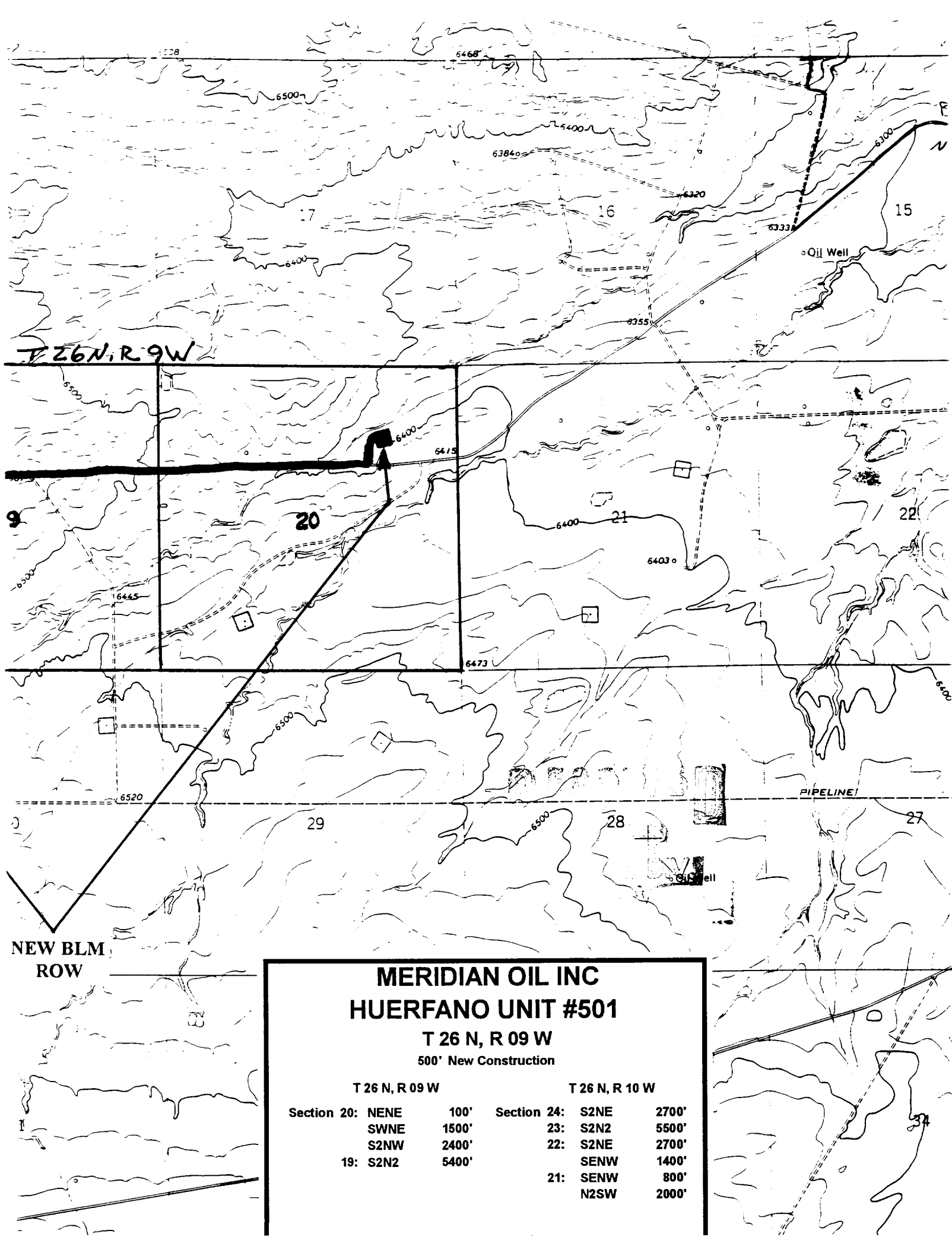
1. Existing Roads - Refer to Map No. 1. Existing roads used to access the proposed location will be properly maintained for the duration of the project. Bureau of Land Management right-of-way has been applied for as shown on Map No. 1.
2. Planned Access Road - Refer to Map No. 1. The required new access 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 500' 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 Huerfano Unit Water Well #2 located SE Section 25, T-26-N, R-10-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

9/17/93  
Date

JWC:pb



**MERIDIAN OIL INC  
HUERTANO UNIT #501**

**T 26 N, R 09 W**

**500' New Construction**

T 26 N, R 09 W		T 26 N, R 10 W	
Section 20:	NENE 100'	Section 24:	S2NE 2700'
	SWNE 1500'	23:	S2N2 5500'
	S2NW 2400'	22:	S2NE 2700'
19:	S2N2 5400'		SENW 1400'
		21:	SENW 800'
			N2SW 2000'

5673

5505

6590

6500

15

14

13

6640

6600

T26N, R10W

6520

6589

22

23

24

19

6600

6660

6633

6600

PIPELINE

PIPELINE

6518

6600

27

6700

26

25

NEW BLM  
ROW

FEE  
LANDS

6575

6700

CON. L.  
DIST. 3

34

x6785

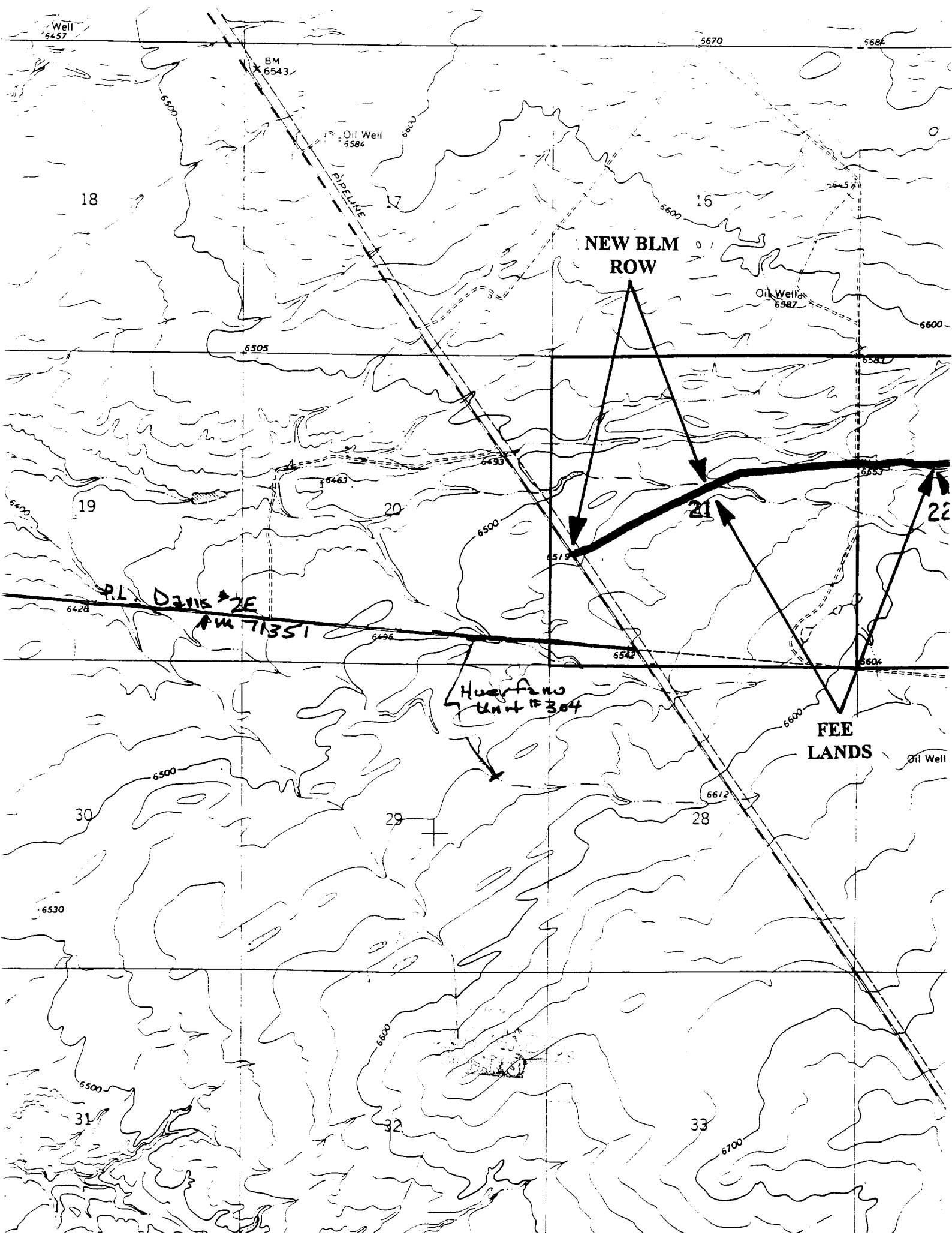
35

36

6700

6699

PIPELINE



Well  
6457

5670

5684

BM  
6543

Oil Well  
6584

PIPELINE

18

17

16

Oil Well  
6545

NEW BLM  
ROW

Oil Well  
6587

6505

6582

19

20

21

22

P.L. Davis #2E  
A.M. 71351

Huerfano  
Unit #304

FEE  
LANDS

Oil Well

30

29

28

6530

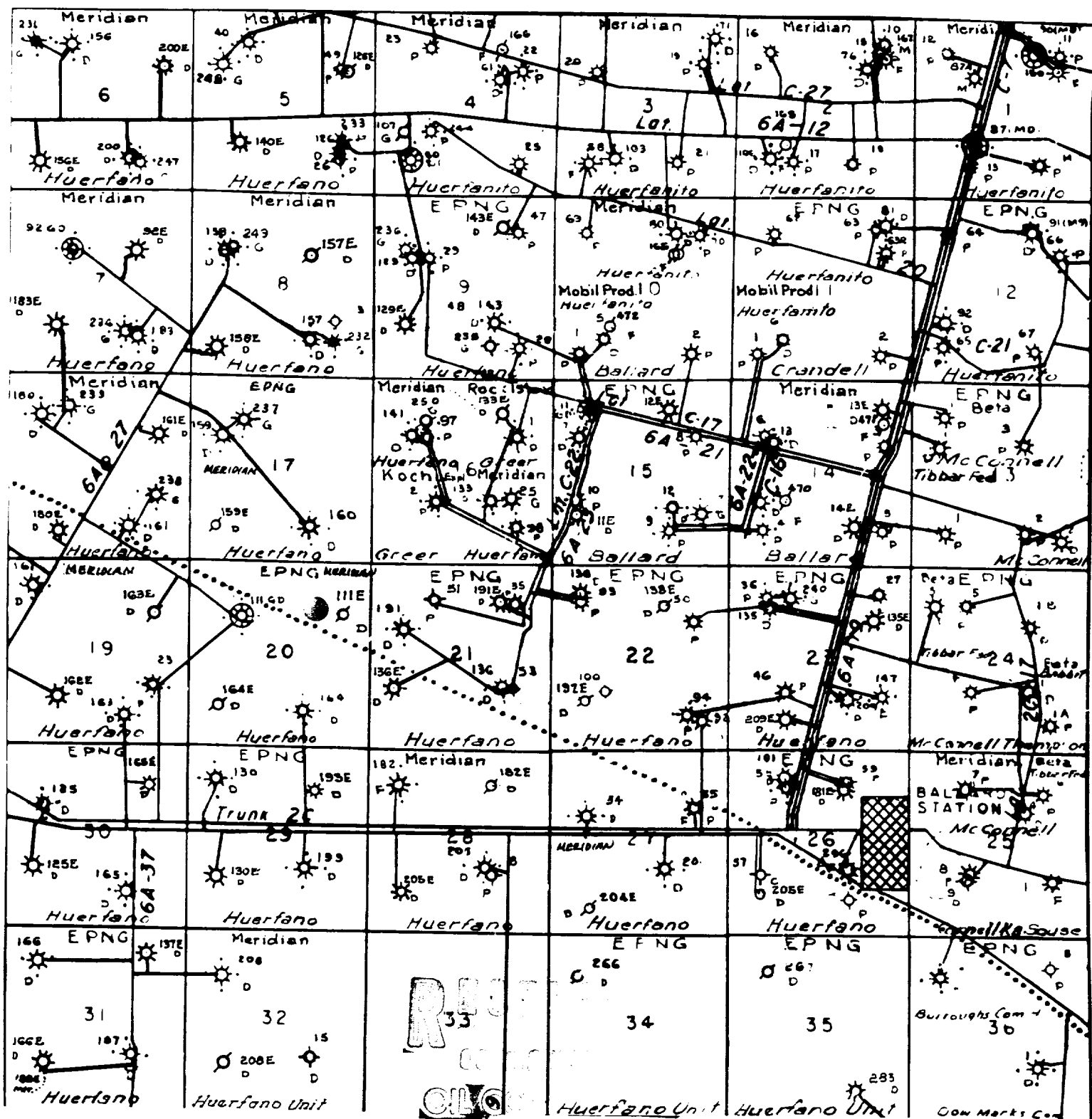
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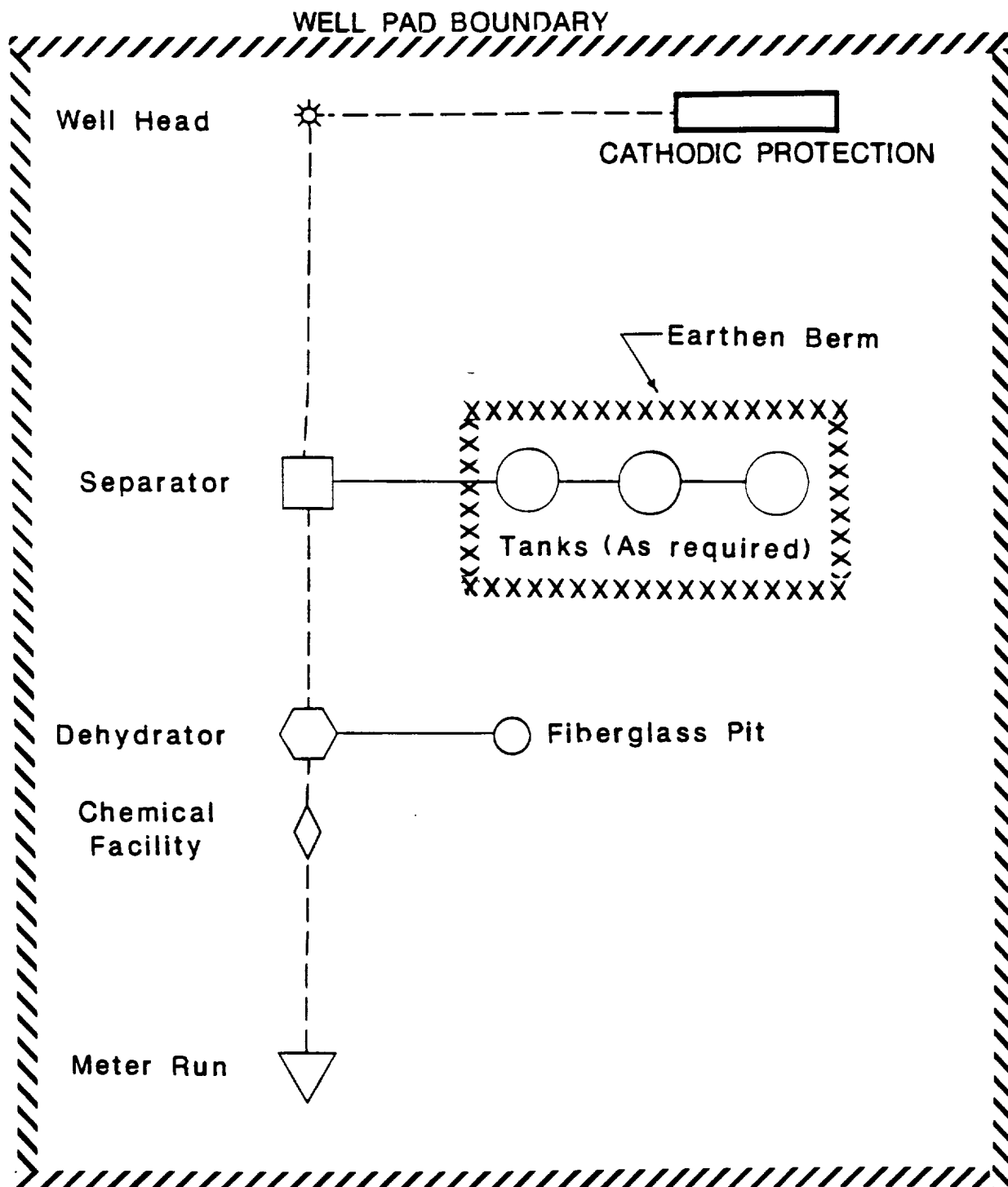
32

33

6700



MERIDIAN OIL INC.  
 Pipeline Map  
 T-26-N, R-09-W  
 Rio Arriba County, New Mexico  
 Huerfano Unit #501  
 Map #1A



**PLAT #1**

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

KFR 2/90

# MERIDIAN OIL

## Plat 2

Name: MOI HUEREANO UNIT #501  
 Footage: 1250 FNL 1295 FEL  
 Sec 20 T. 26 N.R. 9 W NMPM  
 Co. SAN JUAN SL NW  
 Elevation: 6398 Date: 8/23/93

