

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

20-045-28657-
APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
DRILL

1b. TYPE OF WELL
GAS

MAR 24 1992

OIL CON. DIV.

2. OPERATOR
MERIDIAN OIL INC.

DIST. 3

3. ADDRESS & PHONE NO. OF OPERATOR
P O BOX 4289
FARMINGTON, NM 87499

4. LOCATION OF WELL
1455' FSL 1550' FWL at surface
790' FSL, 790' FEL at proposed TD

5. LEASE NUMBER

SUR. SF-077950 BH. SF-079917

6. IF INDIAN, ALL. OR TRIBE NAME

7. UNIT AGREEMENT NAME
HUERFANO UNIT (HZ)

8. FARM OR LEASE NAME

HUERFANO UNIT (HZ) 7120

9. WELL NO.
306

10. FIELD, POOL, OR WILDCAT

ANGEL PEAK GALLUP Assoc.

11. SEC. T. R. M OR BLK.

K SEC. 35 T27N R10W NMPM

14. DISTANCE IN MILES FROM NEAREST TOWN
13 MI SO. OF BLOOMFILED

12. COUNTY
SAN JUAN

13. STATE
NM

15. DISTANCE FROM
PROPOSED LOCATION 1455'
TO NEAREST PROPERTY
OR LEASE LINE.

16. ACRES IN LEASE 17. ACRES ASSIGNED TO WELL
640.00

240

This section is subject to forfeiture and
proceeds shall be paid to BLM 3165.3
and appeal pursuant to 43 CFR 3165.4.

18. DISTANCE FROM
PROPOSED LOCATION
TO NEAREST WELL DR. 1500'
COMPL., OR APPLIED
FOR ON THIS LEASE.

19. PROPOSED DEPTH 20. ROTARY OR CABLE TOOLS
6250' TVD
9000' MD
ROTARY

21. ELEVATIONS (DF, FT, GR, ETC.)
6618' GL

22. APPROX. DATE WORK WILL START

23. PROPOSED CASING AND CEMENTING PROGRAM

*SEE OPERATIONS PLAN

24. AUTHORIZED BY: J. Caldwell
REG. DRILLING ENGR.

3/12/92
DATE

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

APPROVED
AS AMENDED

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

MAR 23 1992
AREA MANAGER

ARCH REPORT SUBMITTED 03/02/92

Hold C-104 For DD order

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, Artesia, NM 88210

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

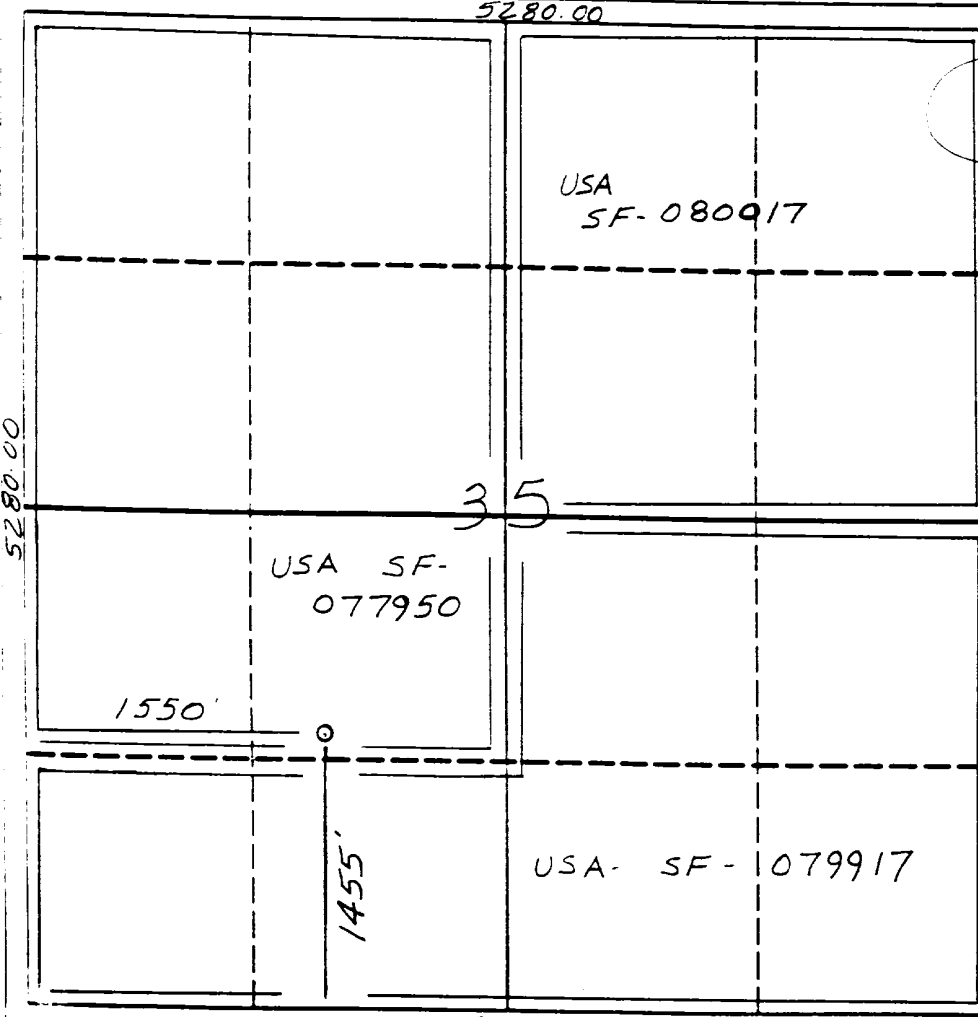
WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator Meridian Oil Inc.		Lease Huerfano Unit		Well No. 306
Unit Letter K	Section 35	Township 27 North	Range 10 West	County San Juan

Actual Footage Location of Well: 1455 feet from the South line and 1550 feet from the West line		Dedicated Acreage: 6618 Gallup <i>base</i> Angels Peak 640 Acres
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- Outline the acreage dedicated to the subject well by colored pencil or ballpoint marker 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 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

3-12-92

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.

2-14-92
Date Surveyed

NEEDS APPROVALS

Signature of Surveyor

Professional Surveyor

3357

6857

6857

6857

6857

6857

6857

**OPERATIONS PLAN
HUERFANO UNIT #306**

I. Location: 1455' FSL, 1550' FWL Sec. 35-T27N-R10W
San Juan County, New Mexico
Field: Angel's Peak Gallup
Elevation: 6618' Graded Ground Level

(Note: All depths are True Vertical unless otherwise noted.)

II. Geology:

A. Formation Tops			
Nacimiento	Surface	Menefee	3899'
Ojo Alamo	1307'	Point Lookout	4689'
Fruitland	2007'	Mancos	4964'
Top Coal	2114'	Kgl	5762'
Base Coal	2268'	Tocito	6127'
Pictured Cliffs	2273'	Gallup	6200'
Lewis	2337'		
Mesa Verde	3876'	Total Depth	6250' TVD 9000' MD

B. Logging Program: Mud logs from 2000' to TD.
IEL/SP/GR: 5781' (KOP) to Surface.

C. Mud Program:				
<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Visc.</u>	<u>Fl.Loss</u>
0 - 200'	Spud	8.4 - 8.9	40-50	no control
200 - 6330' MD	Non-dispersed	8.4 - 9.5	30-60	no control

III. Drilling:

A. Surface / Intermediate Hole: Drill to surface casing point of 200' and set 9 5/8" casing. Mud drill from 200' to Intermediate Total Depth. The well will be drilled vertically to a kick off point depth of 5781'. At this point the well will deviate at 17.0 degrees / 100 feet to 80 degrees (167 degrees Azimuth.) At (6112' TVD, 6250' MD) 7" - 23.0# N-80 casing will be set (see Figures #1, #2, and #3).

<u>TVD</u>	<u>MD</u>	<u>Vertical</u>	<u>Hole</u>	<u>Notes:</u>
		<u>Section</u>	<u>Size</u>	
200'	200'	0'	12 1/4"	9 5/8" casing set
5781'	5781'	0'	8 1/2"	Kick off point
6112'	6250'	276'	8 1/2"	7" casing set

B. Production Hole: Drill out cement / shoe of 7" casing, unload hole with air/mist. Drill (with air) holding 80 degrees to the top of the Tocito sandstone at a depth of 6128' TVD (6330' MD). Build angle to 90 degrees in the Tocito sand and hold at 90 degrees to total depth. Run 4 1/2" perforated and plugged liner

**OPERATIONS PLAN
HUERFANO UNIT #306**

from 6050' MD to 9000' MD (see Figures #1, #2, and #3).

<u>TVD</u>	<u>MD</u>	<u>Vertical Section</u>	<u>Hole Size</u>	<u>Notes:</u>
6120'	6300'	325'	6 1/8"	Begin gas drilling
6140'	9000'	3453'	6 1/8"	Run 4 1/2" liner

IV. Materials:

A. Casing Program:

<u>Hole size (inches)</u>	<u>Measured Depth (Ft)</u>	<u>Casing Size (in)</u>	<u>Weight (lbs/ft)</u>	<u>Grade</u>
12 1/4"	200'	9 5/8"	40.0	K-55
8 1/2"	4000'	7"	20.0	K-55
8 1/2"	5800'	7"	23.0	K-55
8 1/2"	6250'	7"	23.0	N-80
6 1/8"	(6050'-9000')	4 1/2"	10.5	K-55

B. Casing Equipment:

1. 9 5/8" Surface Casing - Sawtooth guide shoe.
2. 7" Intermediate Casing - Cement nose guide shoe on bottom, float collar one joint off bottom, cementing stage tool set at 2437'. Centralizers spaced as follows: (46) spaced every other joint from bottom, (1) at joint below stage tool, (15) spaced every fourth joint above stage tool to surface. Two (2) turbolizing type centralizers - one below and one into the Ojo Alamo @ 1307'.
3. 4 1/2" Production Liner - 7" x 4 1/2" liner hanger, guide shoe.

- C. Tubing: 6700' of 2 3/8", 4.7#, J-55, 8rd EUE tubing with a seating nipple one joint off bottom and an expendable check valve on bottom.

- D. Wellhead Equipment: 9 5/8" x 7" x 2 3/8" -11" (3000psi) wellhead assembly.

V. Cementing

- A. 9 5/8" Surface Casing: Use 106 sacks of Class 'B' cement with 1/4# / sack Flocele and 3% Calcium Chloride (125 cu. feet of slurry, 100% excess to circulate to surface.) Wait on cement 12 hours. Test casing to 500 psi.
- B. 7" Intermediate Casing:
 1. First Stage - Lead with 411 sacks of 65/35 Class 'B' poz with 6% gel and 2% calcium chloride. Tail in with 100 sacks of Class 'B' with 2% calcium chloride (845 cu. feet of slurry, 75% excess to cover stage tool at 2437'.)
 2. Second Stage - Lead with 282 sacks of 65/35 Class 'B' poz

**OPERATIONS PLAN
HUERFANO UNIT #306**

with 6% gel and 2% calcium chloride. Tail in with 100 sacks of Class 'B' with 2% calcium chloride (618 cu. feet of slurry, 100% excess to circulate to surface.) Wait on cement 12 hours. Test casing to 1500 psi.

- C. 4 1/2" Production Liner - Liner set at 6050'. Pre-perforated and plugged from 6050' MD to 9000' MD.

VI. BOP and Tests:

- A. Surface to Intermediate TD - 9 5/8", 2000 psi double gate BOP stack (Reference Figure #4.) Prior to drilling out surface casing, test rams to 500psi for 30 minutes.
- B. Intermediate TD to TD - 6" nominal, 2000 psi (minimum) double gate BOP stack (Reference Figure #5.) Prior to drilling out Intermediate casing, test rams to 1500psi (minimum) for 30 minutes.
- C. Completion Operations - 6" nominal, 2000psi (minimum) double gate BOP stack as above (Reference Figure #5.)
- D. From Surface to TD - Choke Manifold (Reference Figure #6.)
- E. Pipe Rams will be actuated at least once each day and blind rams will be actuated once each trip to test proper functioning. A kelly cock valve and drill string safety valves to fit each drill string will be maintained and available on the rig floor.

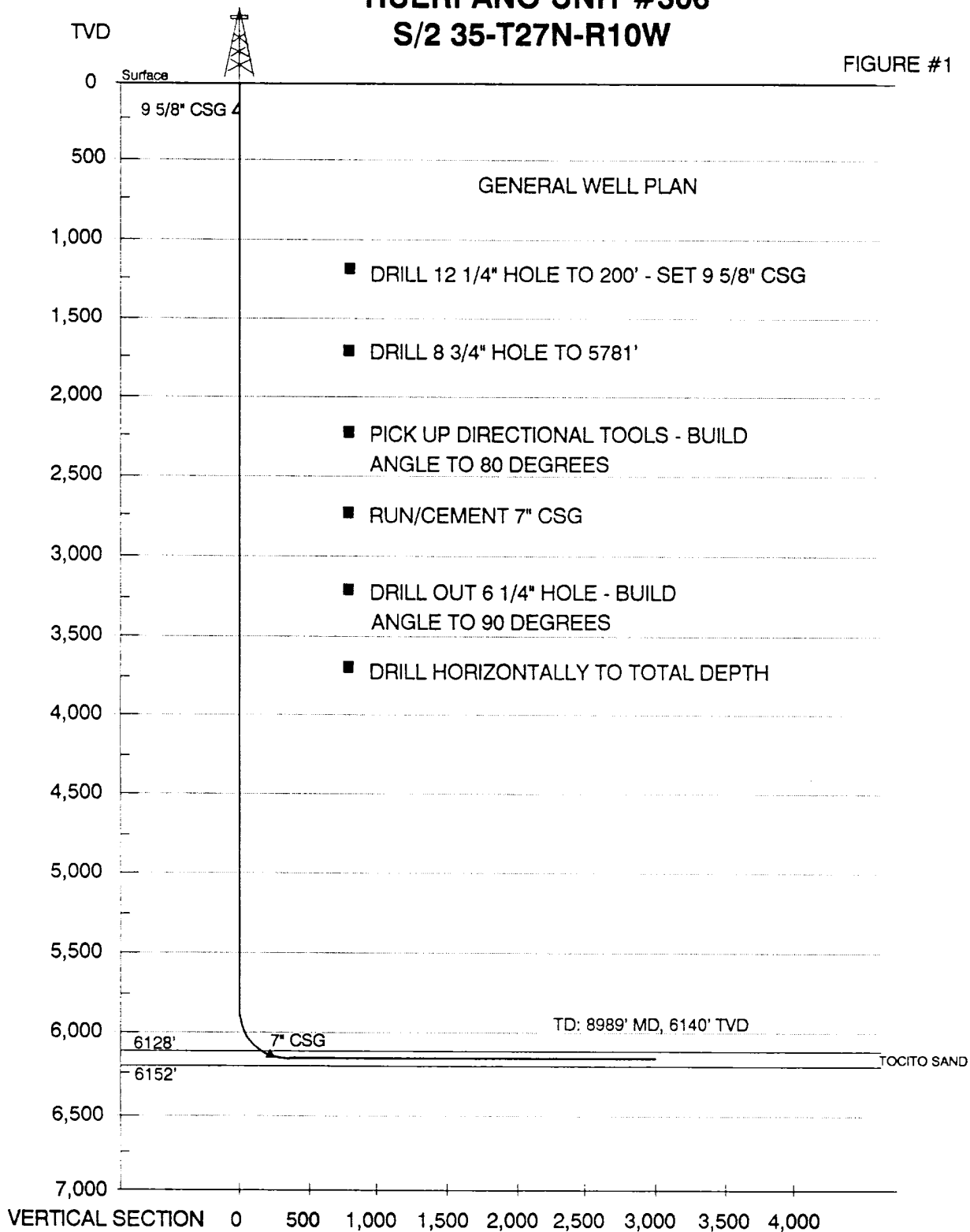
VII. Additional Information

- * This gas is dedicated.
- * Section 35, T27N-R10W is dedicated.
- * New casing will be utilized.
- * Pipe movement (reciprocation) will be done if hole conditions permit.
- * No abnormal pressure zones are expected.

HUERFANO UNIT #306

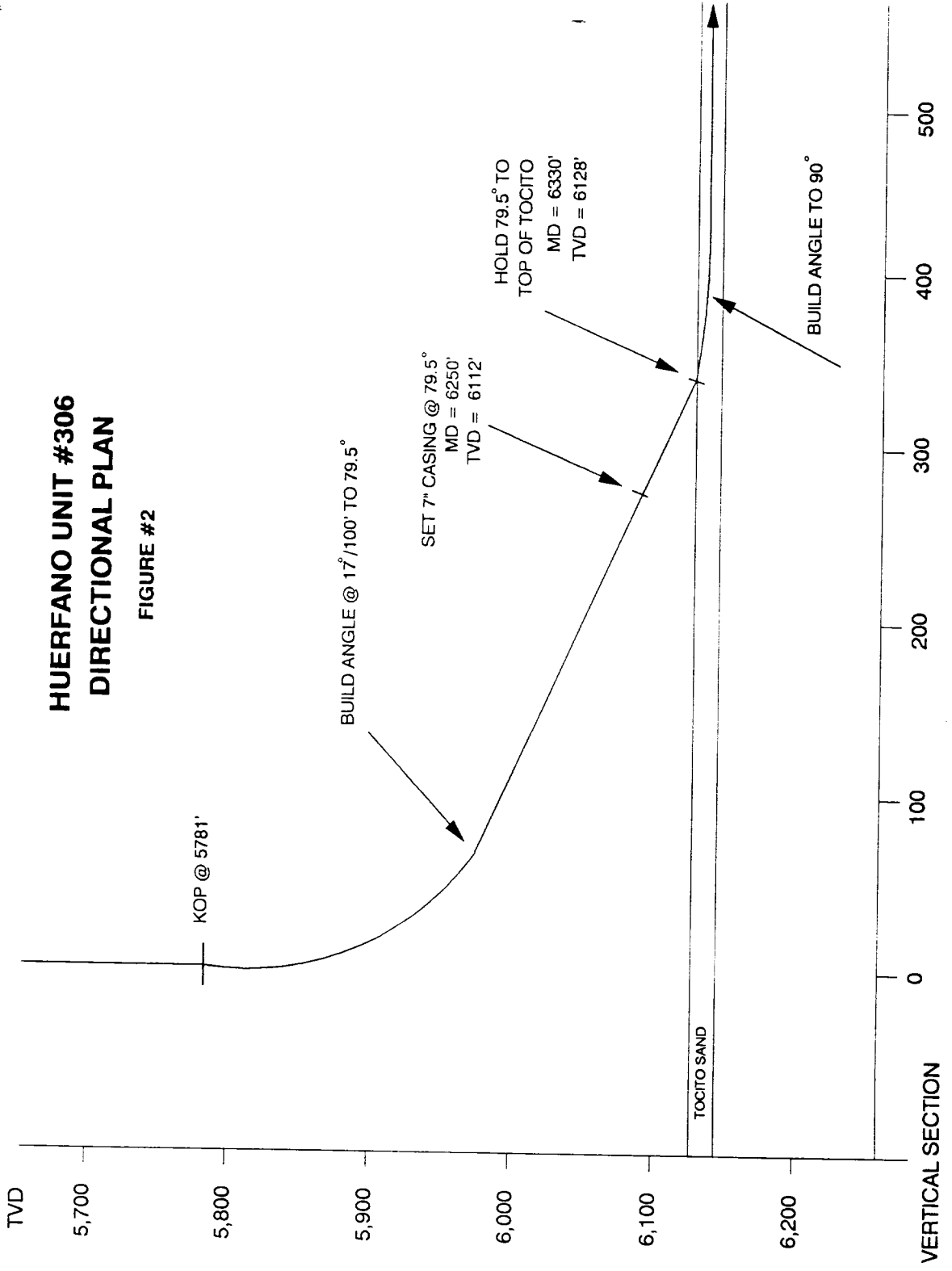
S/2 35-T27N-R10W

FIGURE #1



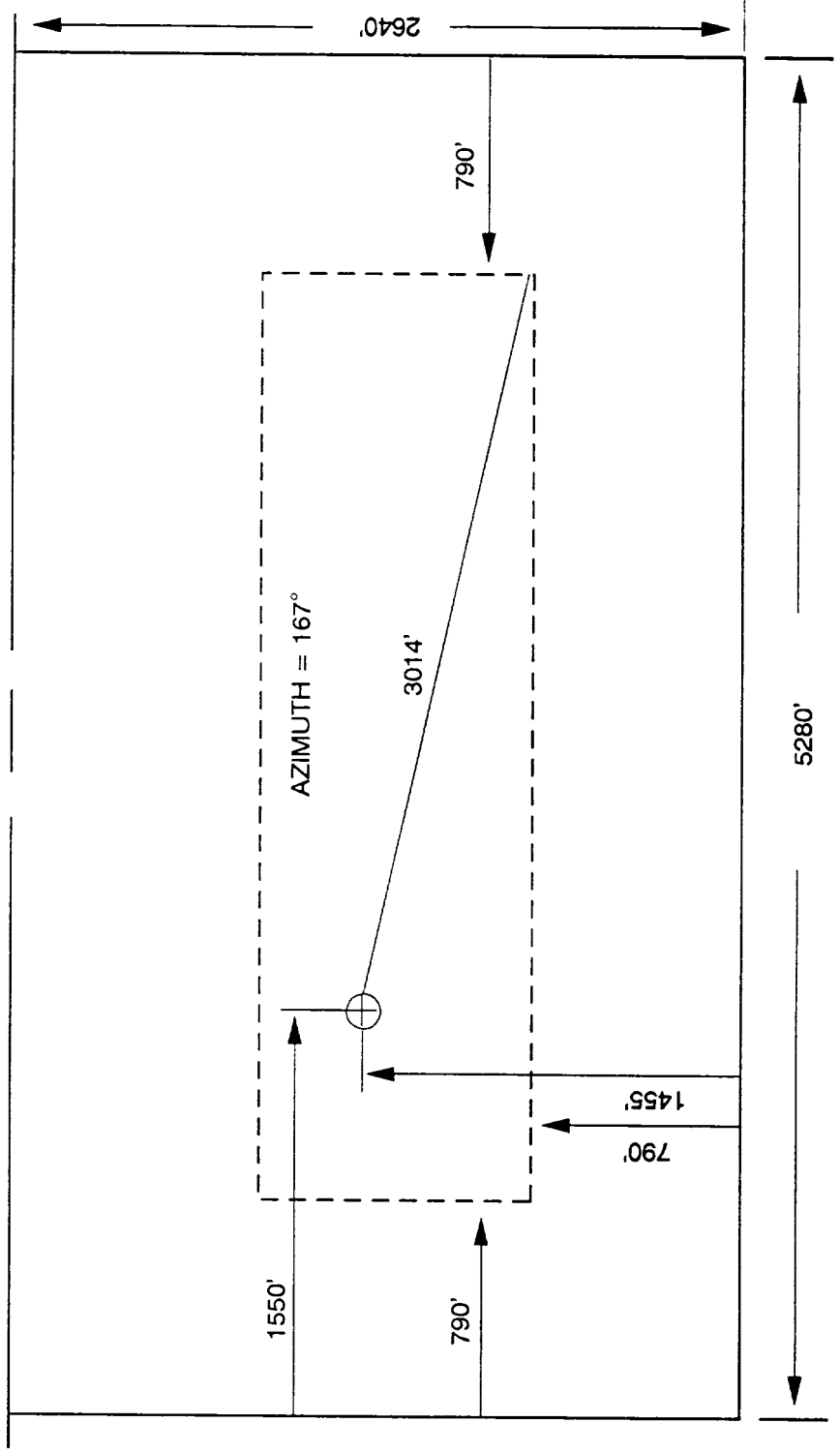
HUERFANO UNIT #306 DIRECTIONAL PLAN

FIGURE #2

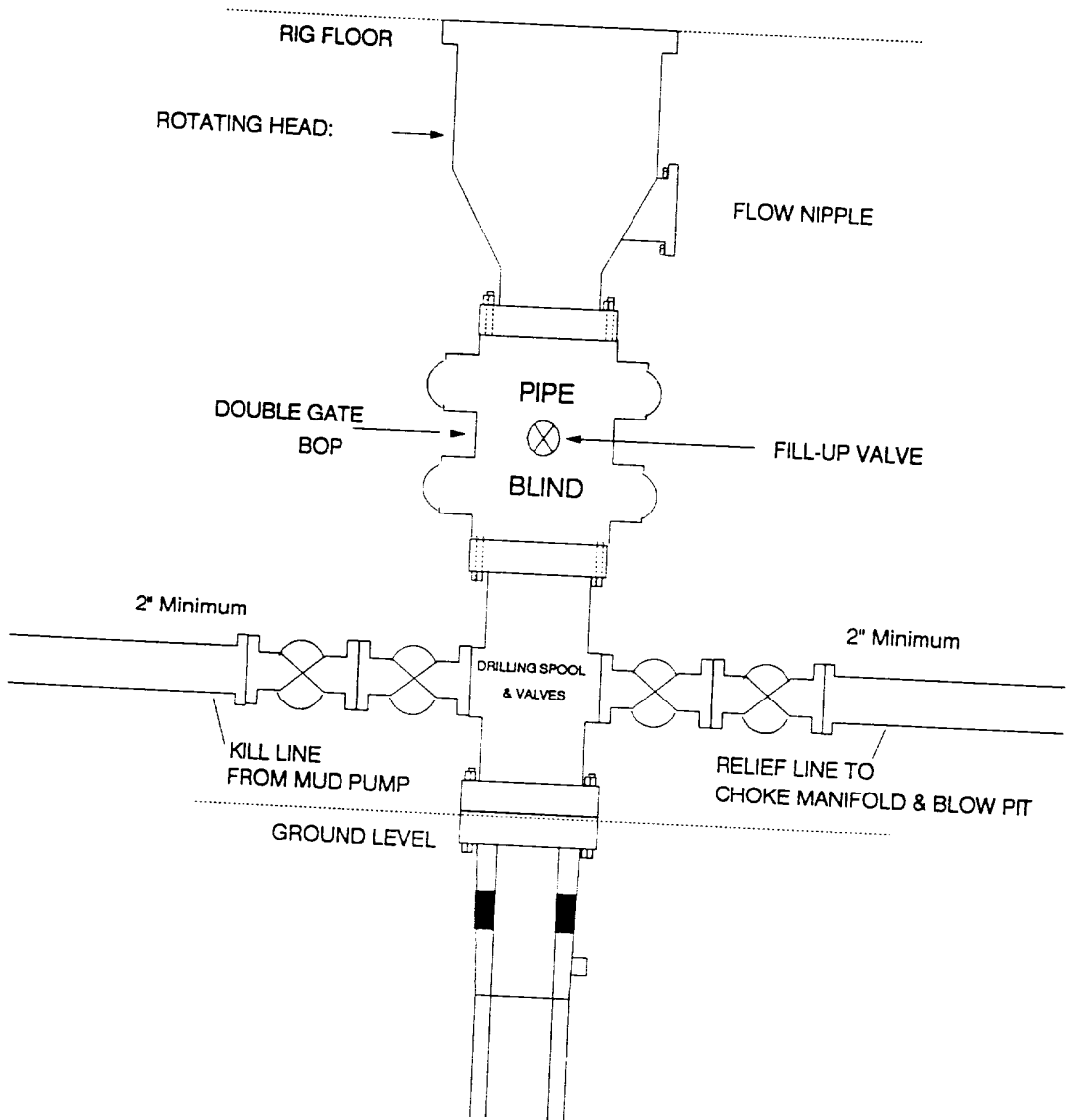


HUERFANO UNIT #306
S/2 35-T27N-R10W

FIGURE #3



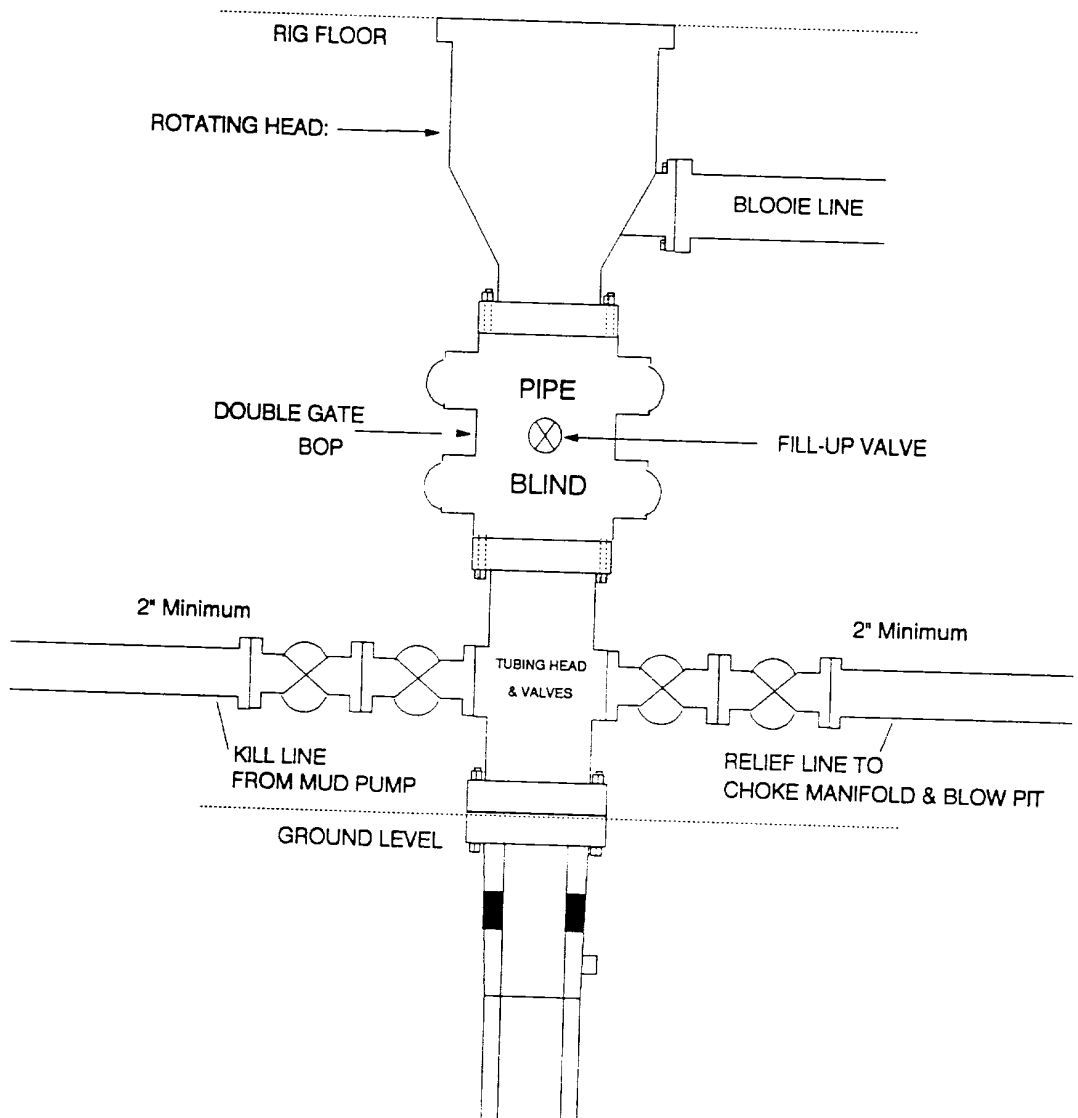
MERIDIAN OIL INC.
SURFACE TO INTERMEDIATE TD
BOP Configuration



Minimum BOP installation for a typical Gallup 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 equivalent rotating head to be installed on the top of BOP. All equipment is 2000psi working pressure/or greater.

Figure #4

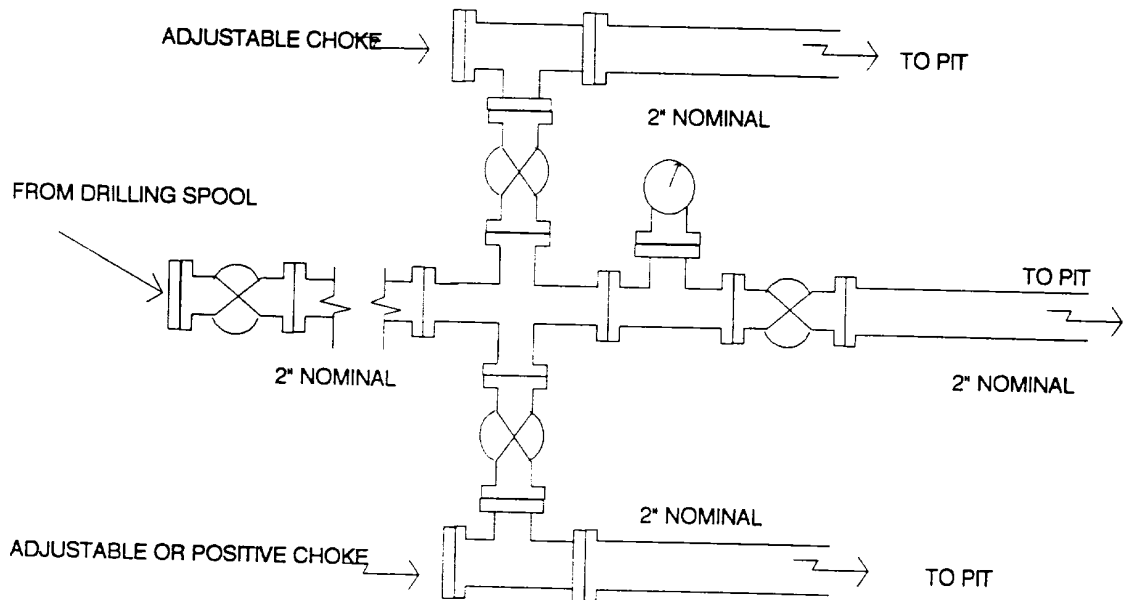
MERIDIAN OIL INC.
 INTERMEDIATE TO TD
 BOP Configuration



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 #5

MERIDIAN OIL INC.
Typical Gallup Well
Choke Manifold Configuration



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

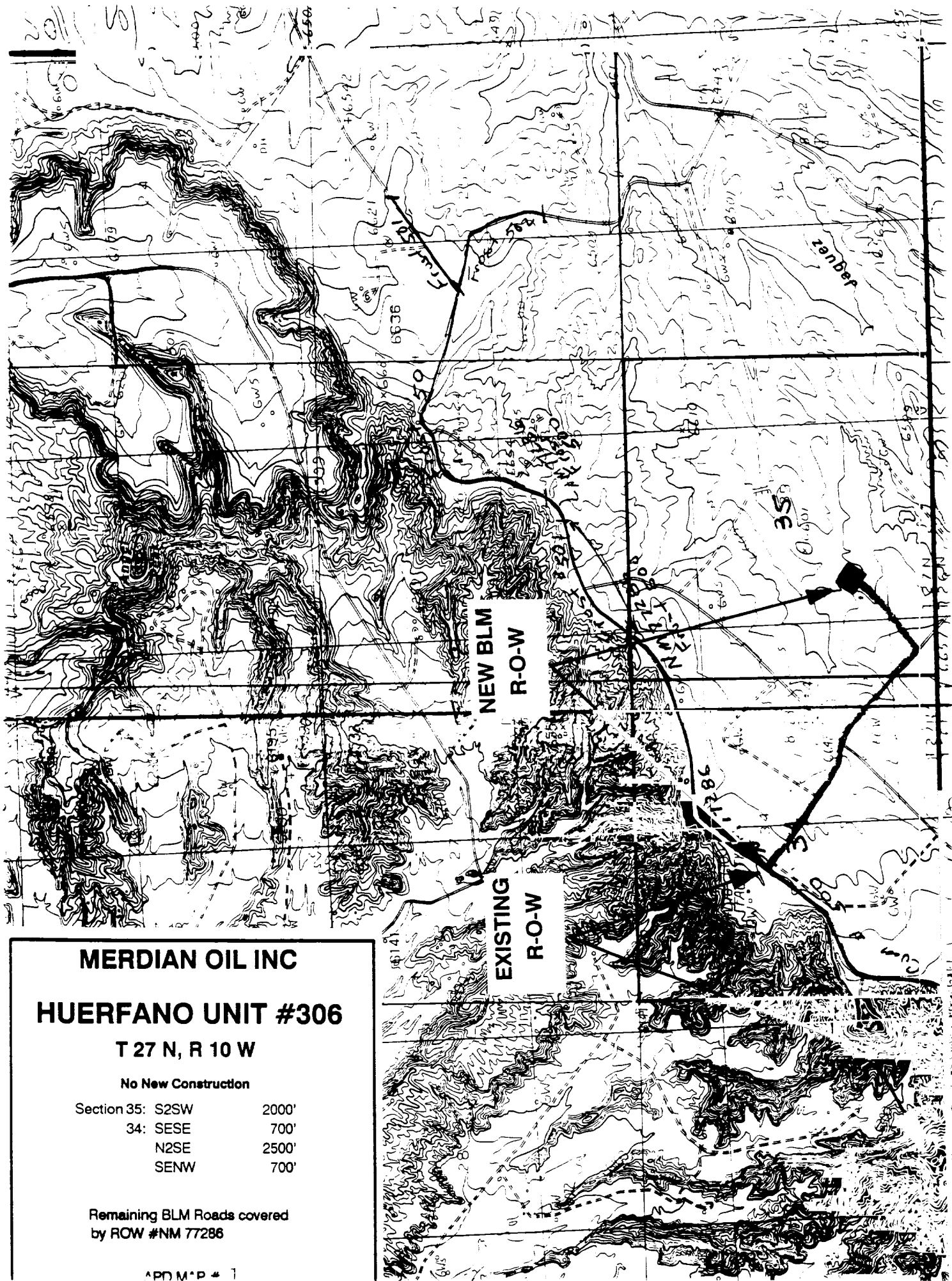
Figure #6

Multi-Point Surface Use Plan
Meridian Oil Inc.
Huerfano Unit No. 306

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 Huerfano Water Well #1 located in SE/4 Section 13, 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 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 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.

 3/12/12
Regional Drilling Engineer



MERIDIAN OIL INC

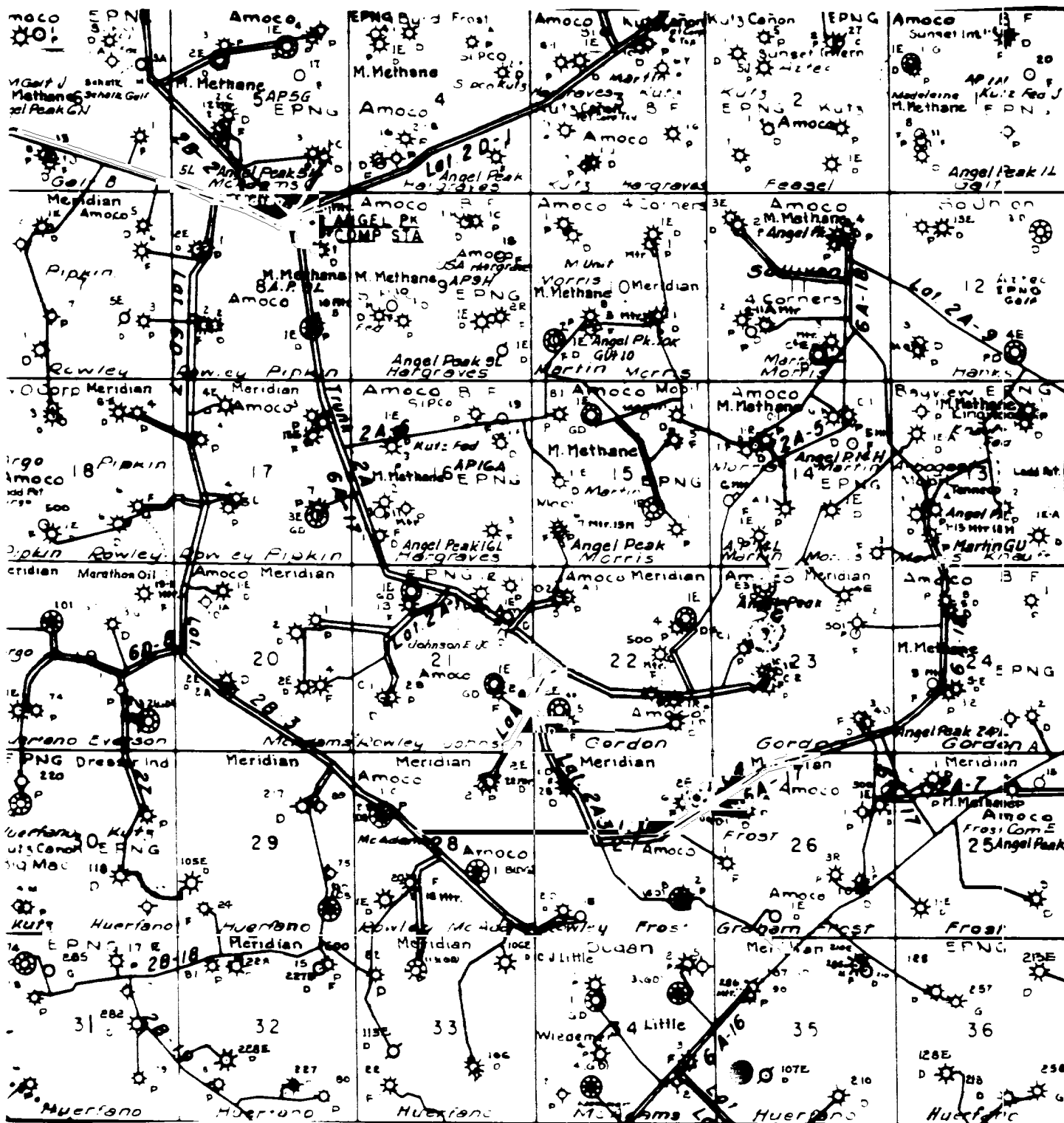
HUERFANO UNIT #306

T 27 N, R 10 W

No New Construction

Section 35: S2SW	2000'
34: SESE	700'
N2SE	2500'
SESW	700'

Remaining BLM Roads covered
by ROW #NM 77286



MERIDIAN OIL INC.
ANTICIPATED PRODUCTION FACILITIES
FOR A GALLUP WELL

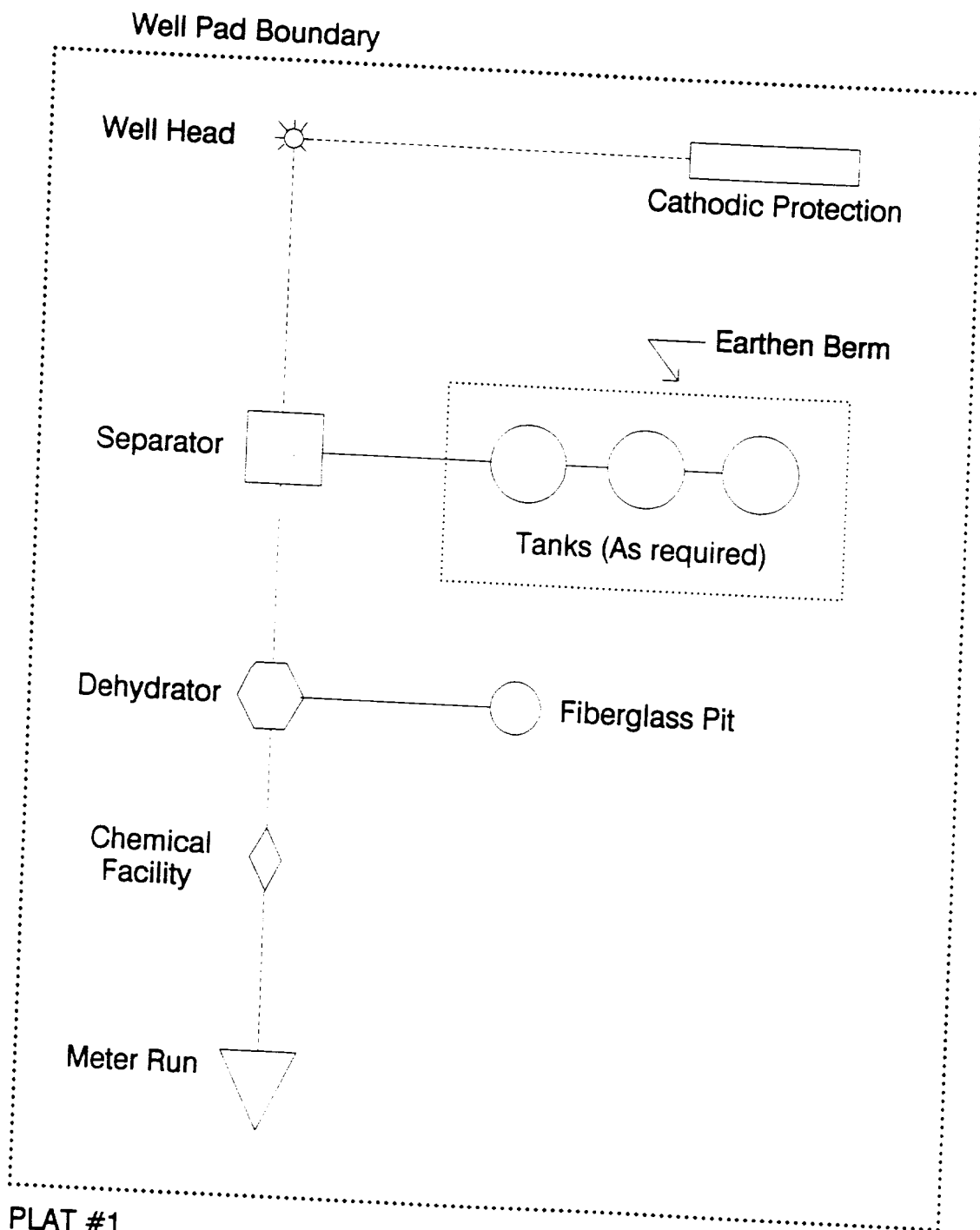


FIGURE #4 7

MERIDIAN OIL

Plat 4

Name: HUERFANO UNIT #306
 Footage: 1455 FSL 1550 FWL
 Sec 35 T. 27 N.R. 10 W NMPM
 Co. SAN JUAN St. N.M.
 Elevation: 6619' Date: 2-1-92

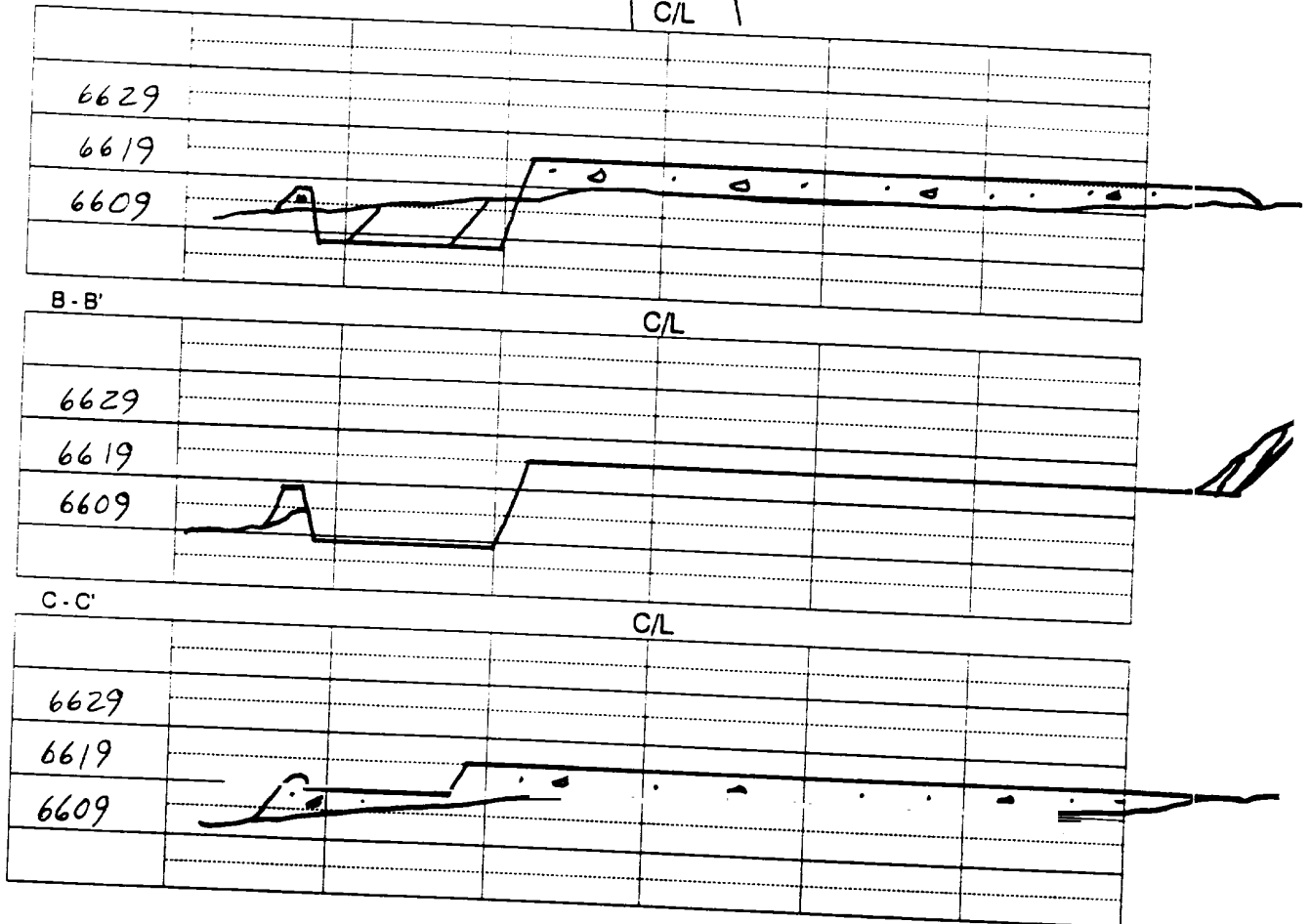
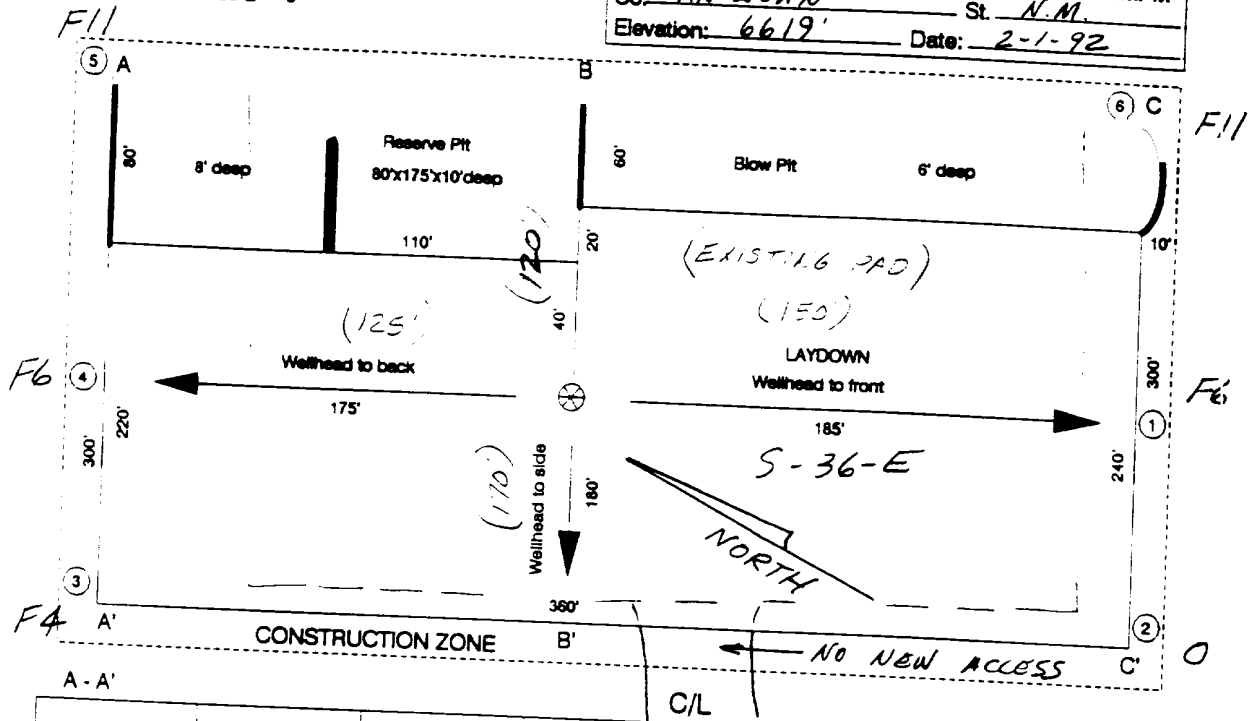


Figure #2 B