

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

30-045-28719

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☐

GAS
WELL ☐

OTHER

SINGLE
ZONE ☒

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Meridian Oil Inc.

3. ADDRESS OF OPERATOR

PO Box 4289, Farmington, NM 87499

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*

At surface

150'FNL, 205'FWL

At proposed prod. zone 999'FSL, 2310'FWL

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

1 mile from San Juan Power Plant

16. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drig. unit line, if any)

105'

18. NO. OF ACRES IN LEASE

19. PROPOSED DEPTH

4164'TVD
8561'MD

17. NO. OF ACRES ASSIGNED/
TO THIS WELL

320

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

20. ROTARY OR CABLE TOOLS

rotary

21. ELEVATIONS (Show whether DF, ET, GR, etc.)

5396'GL

This action is subject to technical and
procedural review pursuant to 43 CFR 3165.3

23. PROPOSED CASING AND CEMENTING PROGRAM

22. APPROX. DATE WORK WILL START*

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH
see attached	operations plan		

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OIL CON. DIV.
DIST 3

92 JUL -7 PM 2:49
OIL CON. DIV. NM

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IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

[Signature]

TITLE

Regional Drlg. Engr.

DATE

7/2/92

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED
IS AMENDED

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

[Signature] R-9681

NMOCD

AREA MANAGER

*See Instructions On Reverse Side

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-182
Revised 1-1-89

OIL CONSERVATION DIVISION

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

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SANTA FE, N.M.

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

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

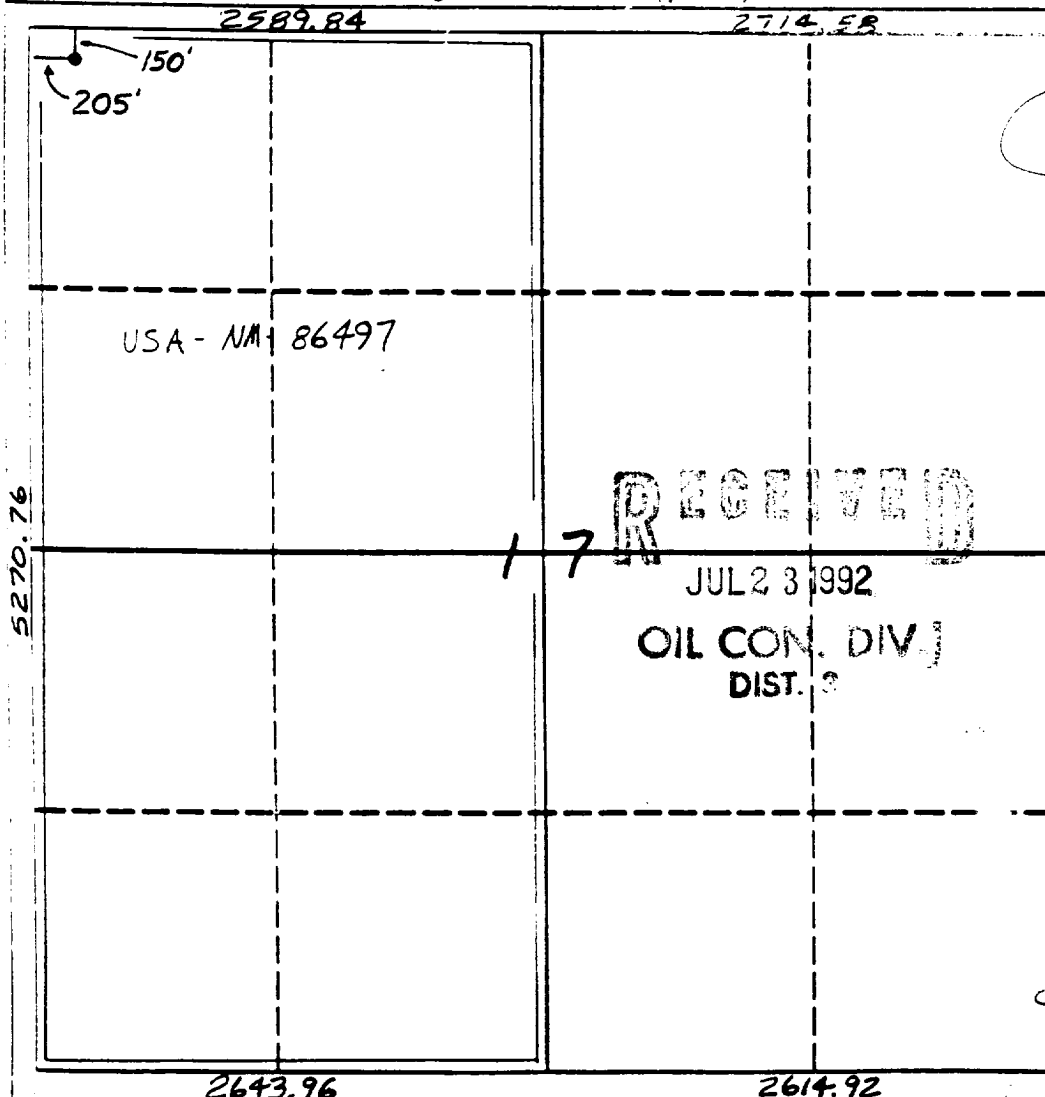
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator		Lease		Well No.	
Meridian Oil Inc.		Black Diamond 17		#1	
Unit Letter	Section	Township	Range	County	
D	17	30 North	15 West	NMNM San Juan	
Actual Footage Location of Well:					
150 feet from the North line and		205 feet from the West line			
Ground level Elev.	Producing Formation	Pool	Dedicated Acreage:		
5396'	Gallup	Horseshoe	320 Acres		

- Outline the acreage dedicated to the subject well by colored pencil or lacquer 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 _____
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.

Signature
Peggy Bradfield

Printed Name
Regulatory Affairs

Position
Meridian Oil Inc.

Company

Date
7-1-92

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.

Date Surveyed
5-7-92

Signature
C. EDWARDS

Professional Surveyor
6857

License No. 6857

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**OPERATIONS PLAN
BLACK DIAMOND 17 No. 1**

I. **Location:** 150' FNL, 205' FWL Sec. 17-T30N-R15W
San Juan County, New Mexico
Field: Horseshoe Gallup
Elevation: 5396' Graded Ground Elevation

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

II. Geology:

A. Formation Tops

Pictured Cliffs	Surface	Menefee	1637'
Lewis	345'	Point Lookout	2773'
Mesaverde	995'	Mancos	2980'
		Gallup	3806'
		Total Depth	4164' TVD 8561' MD

B. Logging Program: Mudlogger from 3651' (KOP) to TD.
FMS/GR/DIL/CAL: 3651' (KOP) to Surface.

C. Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Visc.</u>	<u>Fluid Loss</u>
0-350'	Spud	8.3-8.8	30-45	No Control
350-3651' MD	Non-dispersed	8.3-8.5	28-30	No Control
3651-4318' MD	Non-dispersed	8.8-10.7	35-50	<10

III. Drilling:

A. Surface/Intermediate Hole: Drill to surface casing point of 350' and set 10-3/4" casing. Mud drill from 350' to Intermediate Total Depth of 4121' TVD (4318' MD). The well will be drilled vertically to a kick off point of 3651'. At this point the well will deviate at 12.0 degrees/100' to 80 degrees. Planned Azimuth is 153 degrees, but may be adjusted due to fracture identification log (FMS) data. At Intermediate TD of 4121' TVD (4318' MD), 7-5/8" 26.4# K55 casing will be run from 3651' (KOP) to Surface. 7-5/8" 29.7# N80 casing will be set from 4318' MD to 3651' (KOP) (See Figures #1,#2,#3).

<u>TVD</u>	<u>MD</u>	<u>Vertical Section</u>	<u>Hole Size</u>	<u>Notes:</u>
350'	350'	0'	14-3/4"	10-3/4" casing set
3651'	3651'	0'	9-7/8"	7-5/8" 26.4# K55 set KOP to Surface
4121'	4318'	395'	9-7/8"	7-5/8" 29.7# N80 set Int. Td to KOP

B. Production Hole: Drill out cement/shoe of 7-5/8" casing, unload hole with air/mist. Drill with air/mist building at 2 degrees/100' to 90 degrees in Target Pay at 4164' TVD (4730' MD). Hold 90 degrees to Total Depth of 8561' MD. Run 4-1/2" liner from 3651' (KOP) to TD of 8561' MD. 1500' of the liner will be pre-perforated and plugged. The exact intervals of the perforations will be determined from geologic and mudlogging data (See Figures #1,#2,#3).

<u>TVD</u>	<u>MD</u>	<u>Vertical Section</u>	<u>Hole Size</u>	<u>Notes:</u>
4121'	4318'	395'	6-1/2"	Begin air/mist drilling
4164'	8561'	4636'	6-1/2"	Run 4-1/2" Liner to KOP

IV. Materials:

A. Casing Program:

<u>Hole Size</u>	<u>MD</u>	<u>Casing Size</u>	<u>Weight (lbs/ft)</u>	<u>Grade</u>
14-3/4"	350'	10-3/4"	40.5	K55
9-7/8"	3651'	7-5/8"	26.4	K55
9-7/8"	4318'	7-5/8"	29.7	N80
6-1/2"	8561'	4-1/2"	10.5	K55

B. Casing Equipment:

1. 10-3/4" Surface Casing - Sawtooth guide shoe.
2. 7-5/8" Intermediate Casing- Cement nose guide shoe on bottom, float collar one joint off bottom, cementing stage tool set at 2900' Centralizers spaced as follows:

<u>MD</u>	<u># of Centralizers per Joint</u>
350-2900'	1
2900-2905'	Stage Tool
2905-3651'	1
3651-3851'	2
3851-4051'	3
4051-4151'	2
4151-4318'	4
	65 centralizers total

3. 4-1/2" Production Liner - 7-5/8" X 4-1/2" liner hanger, guide shoe.

C. Tubing: 4220' of 2-3/8" 4.7# J55 8rd EUE tubing with a seating nipple one joint off bottom and an expendable check valve on bottom.

D. Wellhead Equipment: 10-3/4" X 7-5/8" X 2-3/8" -11" 2000 psi wellhead assembly.

V. Cementing:

A. 10-3/4" Surface Casing: Use 350 sacks of Class G cement with 1/4# / sack cellophane flakes and 3% Calcium Chloride (413 cu. ft. of slurry, 100% excess to circulate to surface.) Wait on cement for 12 hours. Test casing to 500 psi.

B. 7-5/8" Intermediate Casing:

1. First Stage - Lead with 100 sacks Class G cement with 3% Extender, 1% Fluid Loss, and 1/4# / sack cellophane flakes. Tail with 175 sacks Class G cement. (514 cu. ft. of slurry, 75% excess to cover stage tool at 2900').

2. Second Stage - Lead with 285 sacks Class G cement with 3% Extender, 1% Fluid Loss, and 1/4# / sack cellophane flakes. Tail with 100 sacks Class G cement with 2% Calcium Chloride (1049 cu. ft. of slurry, 75% excess to circulate to surface). Wait on cement for 12 hours. Test casing to 1500 psi.

C. 4-1/2" Production Liner - Liner set at 3651' (KOP) to 8561'. 1500' of the liner will be pre-perforated and plugged. Exact intervals for perfed and plugged will be determined from geologic and mudlogging data.

VI. BOP and Tests:

A. Surface to Intermediate TD - 11", 3000 psi (minimum) double gate BOP stack (See Figure #4). Prior to drilling out surface casing, test rams to 500 psi for 30 minutes.

B. Intermediate TD to TD - 11" nominal, 3000 psi (minimum) double gate BOP stack . An annular blowout preventer will also be installed (See Figure #4). Prior to drilling out Intermediate casing, test rams to 1500 psi (minimum) for 30 minutes.

C. Completion Operations - 7-1/16" nominal, 3000 psi (minimum) double gate BOP stack as above (See Figure #5).

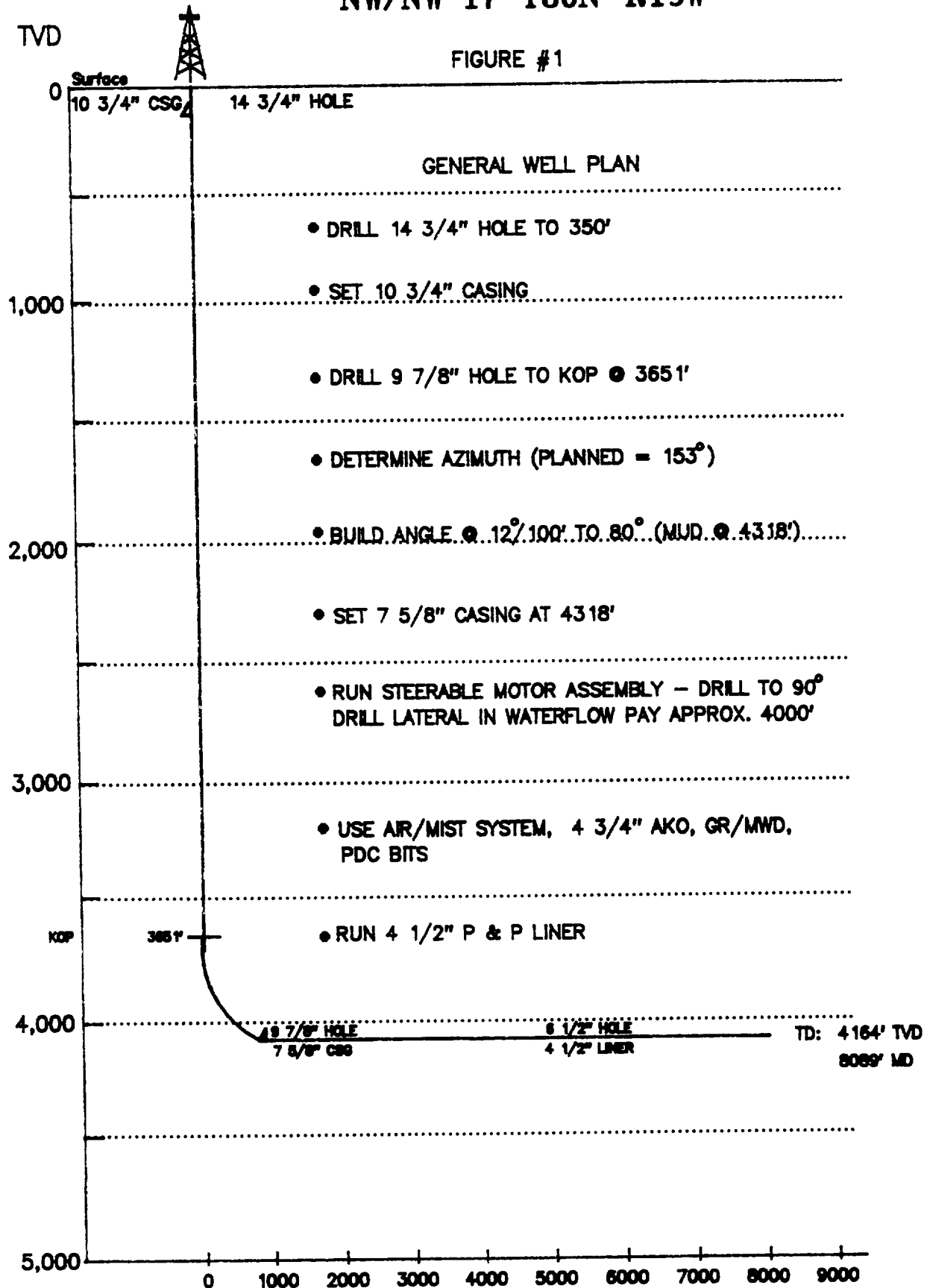
D. From Surface to TD - Choke Manifold (See Figure #6).

E. Pipe Rams will be actuated at least once each day and blind rams will be actuated once each trip to test for 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 oil and associated gas is dedicated.
- * W/2 Section 17, T30N-R15W is dedicated.
- * New casing will be used.
- * Pipe movement (reciprocation) will be done if hole conditions permit.
- * No abnormal pressure zones are expected.

BLACK DIAMOND FEDERAL #17-1 NW/NW 17-T30N-R15W



BLACK DIAMOND 17 #1 PROPOSED DIRECTIONAL WELL PLAN

TARGET TVD = 4 164' @ 90°
TOP POSSIBLE PRODUCTION TVD = 4 121'

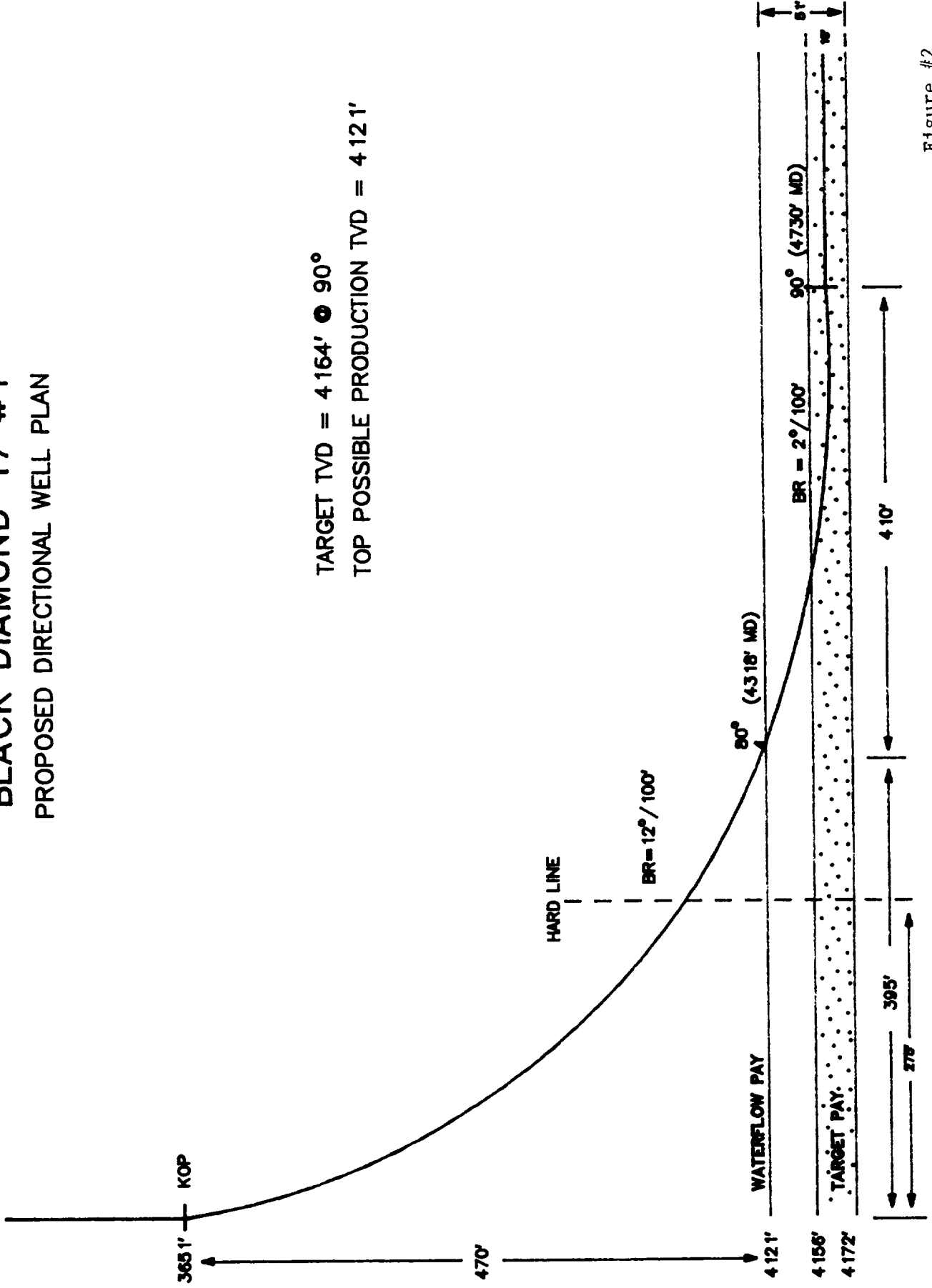


Figure #2

**MERIDIAN OIL
BLACK DIAMOND FEDERAL #17-1
PROPOSED PLAN VIEW
SEC. 17, T30N-R15W
SAN JUAN COUNTY, NEW MEXICO**

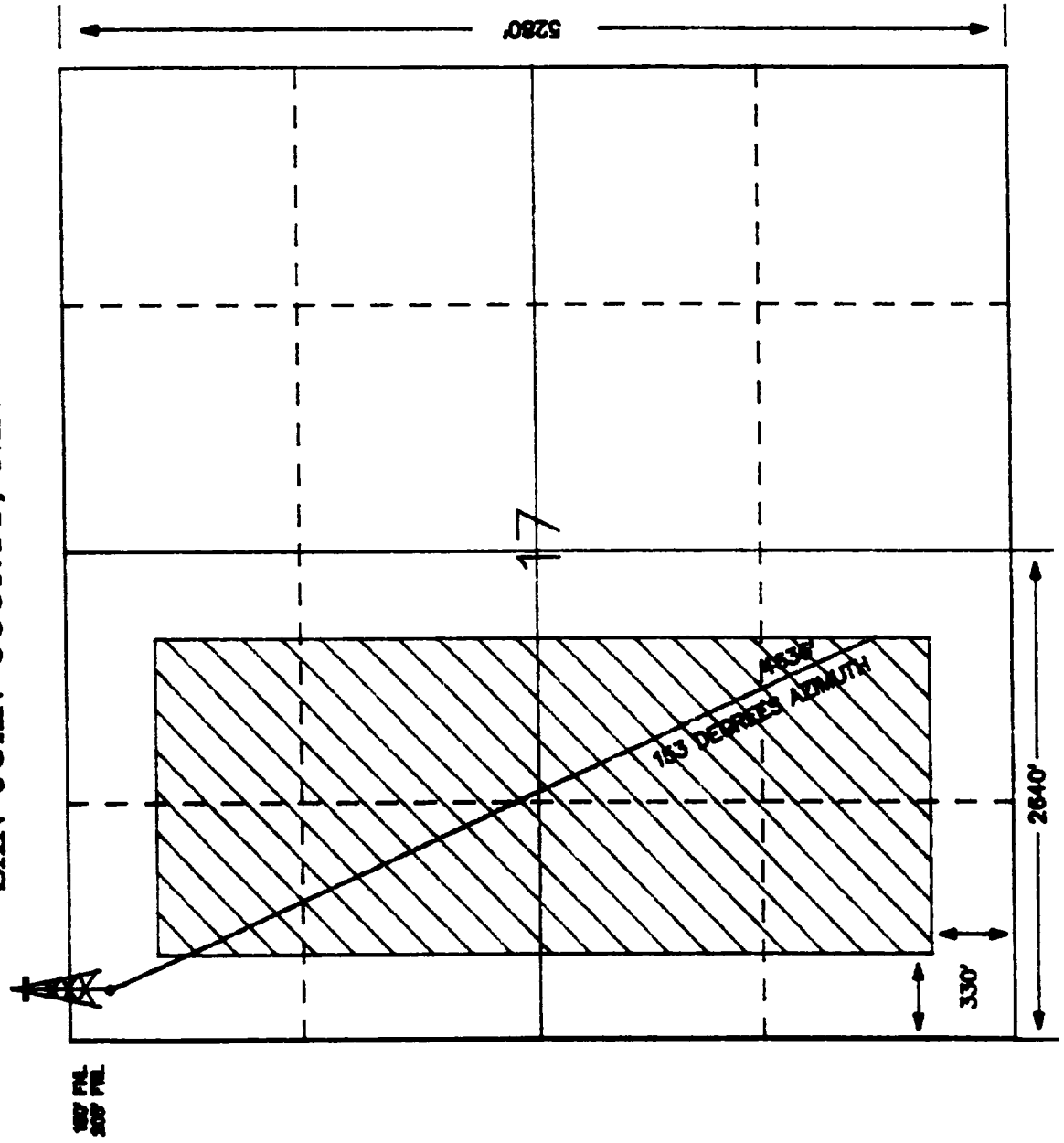
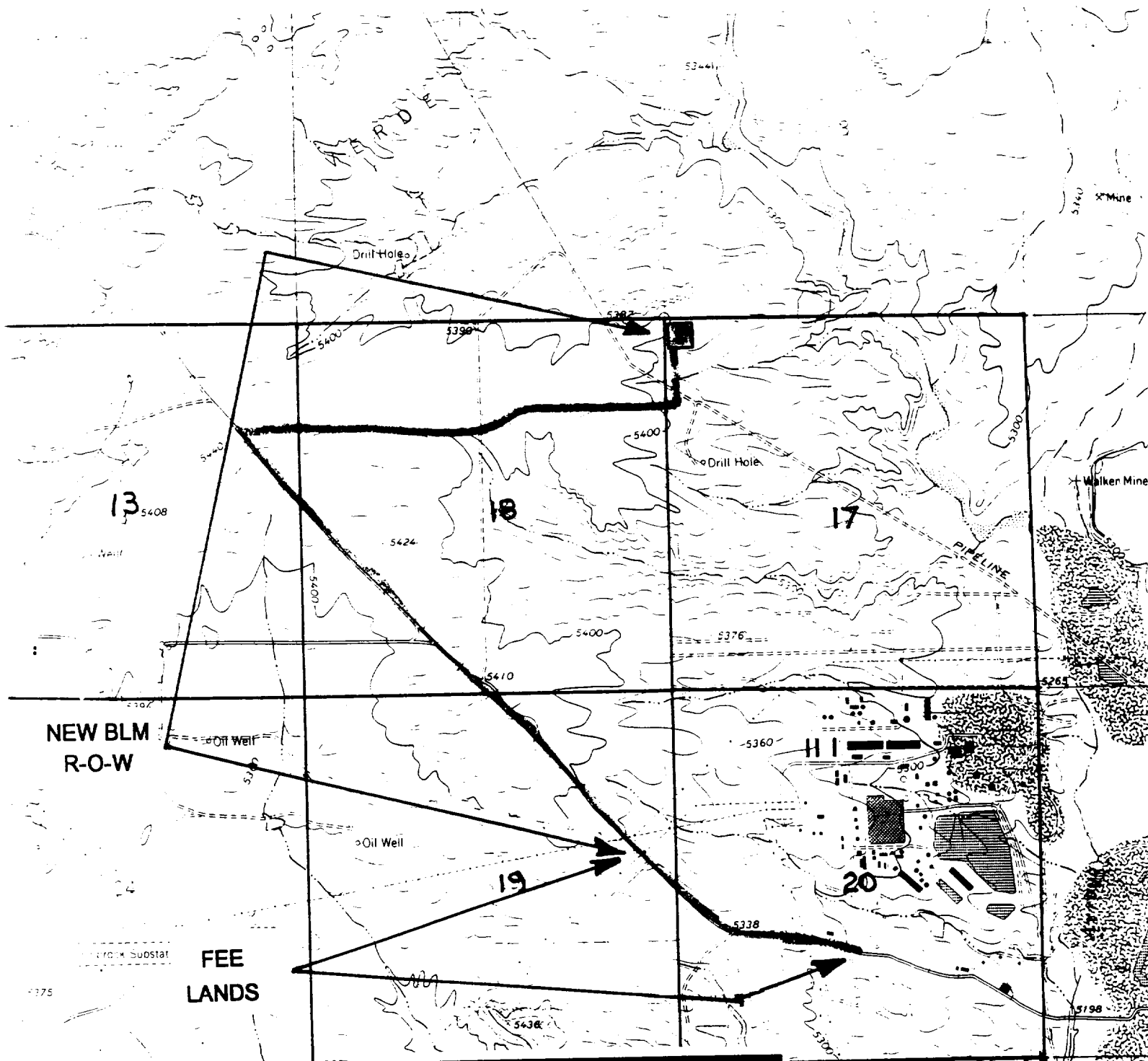


Figure #3



MERDIAN OIL INC **BLACK DIAMOND 17 #1**

T 30 N, R 15 W
1000' New Construction

T30N, R15W

Section 17: NWNW
 18: N2NE
 SWNE
 S2NW
 SESW
 NWSW
 19: SENE
 NWNE

1000'
 2100'
 500'
 2600'
 1900'
 1900'
 1800'
 1300'

T30N, R16W

13: SENE

2000'

