

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL	5. Lease Number SF-078885	
1b. Type of Well GAS	6. If Indian, All. or Tribe	
2. Operator MERIDIAN OIL	7. Unit Agreement Name Canyon Largo Unit	
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name Canyon Largo Unit 9. Well Number 388	
4. Location of Well 2040' FSL, 1625' FWL at surface 2640' FSL, 790' FEL at Total Depth Latitude 36° 25' 36", Longitude 107° 27' 29"	10. Field, Pool, Wildcat Blanco Mesa Verde 11. Sec., Twn, Rge, Mer. Sec 3, T-25-N, R-6-W NMPM	
14. Distance in Miles from Nearest Town 18 miles to Counselors Post, NM	12. County Rio Arriba	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 1625'	16. Acres in Lease 2403 20	17. Acres Assigned to Well 642.36
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 450'	19. Proposed Depth 5166' TVD 7927' MD	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6741' 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 6/1/93

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

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

APPROVED
AS AMENDED

JUN 15 1993

DISTRICT MANAGER

NMOCD

Schools to Agriculture
District Office
State Loans - 4 copies
Fee Loans - 3 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

RECEIVED
BLM Form C-182
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

93 JUN 10 PM 3:18

070 FARMINGTON, NM

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

DISTRICT II
P.O. Drawer 00, Arama, NM 88210

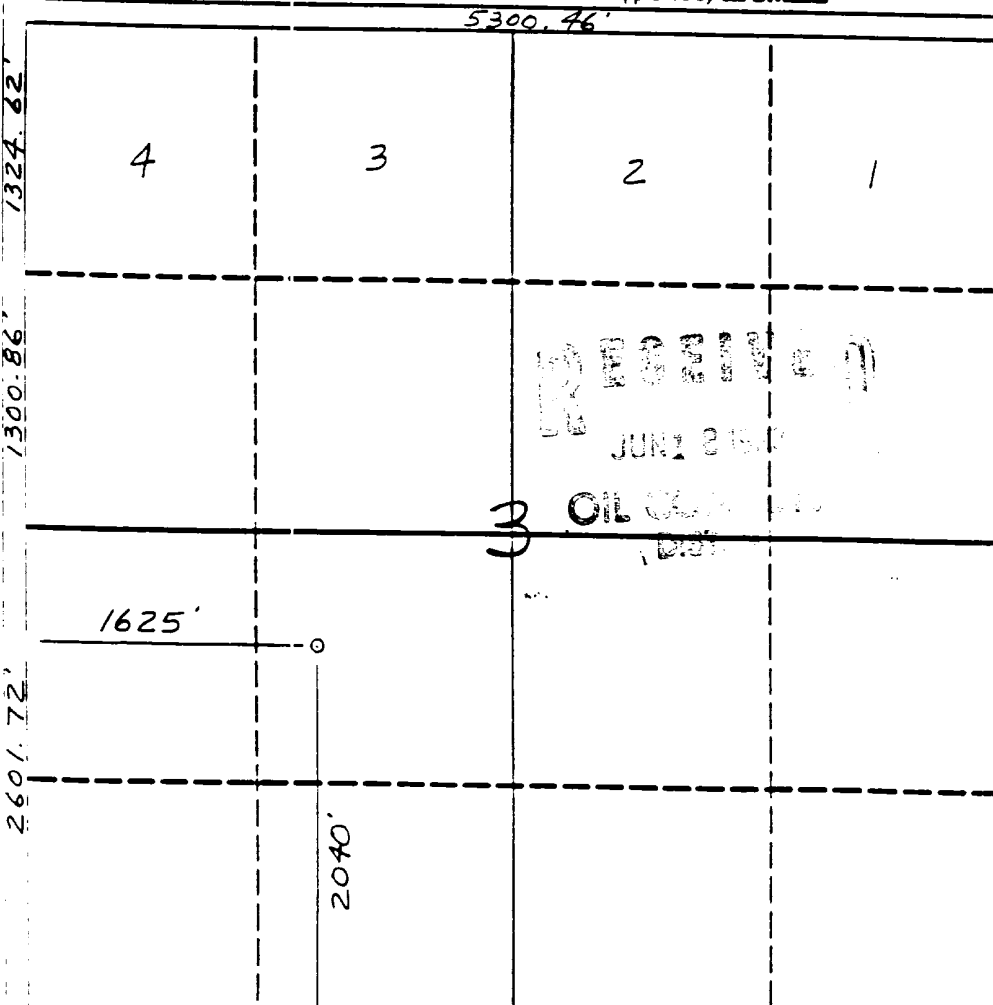
DISTRICT III
1000 Rio Arriba Rd., Alamo, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator Meridian Oil Inc.		Lease Canyon Largo Unit		Well No. 388
Unit Letter K	Section 3	Township 25 North	Range 6 West	County Rio Arriba
Actual Forage Location of Well: 2040 feet from the South line and 1625 feet from the West line				
Ground level Elev. 6741'		Forming Formation Mesa Verde	Pool Blanco EXT	Dedicated Acreage: 642.36 ⁵² Acres

- Outline the acreage dedicated to the subject well by colored pencil or inkline 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 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 allowable will be assigned to the well until all interests have been consolidated (by commutation, 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

5-27-93
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. 3-26-93

C. EDWARDS
Date Surveyed

Needle Creek
Name of Survey

Professional Surveyor
Signature of Surveyor

9857

June 3, 1993

OPERATIONS PLAN

Well Name: Canyon Largo Unit #388
Location: 2040'FSL, 1625'FWL, Section 3, T-25-N, R-6-W
 Rio Arriba County, New Mexico
 Latitude 36° 25' 36", Longitude 107° 27' 29"
Formation: Blanco Mesa Verde
Elevation: 6741'GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	2158'	
Ojo Alamo	2158'	2390'	aquifer
Kirtland	2390'	2615'	
Fruitland	2615'	2855'	gas
Pictured Cliffs	2855'	2900'	
Lewis	2900'	3712'	gas
Chacra	3712'	4515'	
Cliff House	4515'	4530'	aquifer
Menefee	4530'	5073'	
Point Lookout	5073'		gas
Total Depth	5166' TVD	7927' MD	

Logging Program: Mud log from 4500' to Total Depth
 MWD-GR from KOP to Total Depth

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- 7927' MD	Non-dispersed	8.4-9.0	30-60	no control

Drilling:

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 4707'. At this point the well will deviate at 15.0 degrees/100 feet to 84 degrees (80 degrees azimuth). At this point (5104' TVD, 5440' MD) 7", 23.0#, N-80/K-55 casing will be set (see wellbore schematic).

<u>TVD</u>	<u>MD</u>	<u>Vertical Section</u>	<u>Hole Size</u>	<u>Notes</u>
200'	200'	0'	12 1/4"	9 5/8" casing set
4707'	4707'	0'	8 3/4"	Kick off point
5104'	5440'	513'	8 3/4"	7" casing set

Production Hole:

Drill out cement/shoe of 7" casing, unload hole with air/mist. Drill (with air/mist) holding 84 degrees to a total depth of 5166' TVD (7927' MD). Run 4 1/2" perforated and plugged liner from 4800' MD to 7927' MD.

TVD	MD	Vertical Section	Hole Size	Notes
5104'	5440'	366'	8 3/4"	Begin air drilling
5166'	7927'	3000'	6 1/4"	Run 4 1/2" liner

Materials:

Casing Program:

Hole Size (inches)	Measured Depth (ft)	TVD (ft)	Casing Size (in)	Weight (lbs/ft)	Grade
12 1/4"	200'	200'	9 5/8"	32.3	H-40
8 3/4"	4707'	4707'	7"	23.0	K-55
8 3/4"	5440'	5104'	7"	23.0	N-80
6 1/4"	(4800-7927')	5166'	4 1/2"	10.5	K-55

Casing Equipment:

9 5/8" surface casing - sawtooth guide shoe.

7" intermediate casing - cement nose guide shoe on bottom, float collar one joint off bottom, cementing stage tool set at 3000'. Centralizers spaced as follows: (15) spaced every fourth joint from bottom, (1) at joint below stage tool, (19) spaced every fourth joint above stage tool to surface. Two turbolizing type centralizers, one below and one into the Ojo Alamo at 2158'.

4 1/2" production liner - 7" x 4 1/2" liner hanger, guide shoe.

Tubing:

7900' of 2 3/8", 4.7#, J-55 8rd EUE tubing with seating nipple one joint off bottom and an expendable check valve on bottom.

Wellhead Equipment:

9 5/8" x 7" x 2 3/8" - 11" (2000 psi) wellhead assembly.

Cementing:

9 5/8" surface casing - use 106 sx of Class "B" cement with 1/4#/sx flocculants and 3% calcium chloride (125 cu.ft. of slurry, 100% excess to circulate to surface). WOC 12 hrs. Test casing to 700 psi.

7" intermediate casing -

First stage - lead with 350 sx 65/35 Class "B" poz with 6% gel and 2% calcium chloride. Tail with 100 sx of Class "B" with 2% calcium chloride (738 cu.ft. of slurry, 100% excess to cover stage tool at 3000'.

7" intermediate casing (cont'd.) -

Second stage - lead with 780 sx 65/35 Class "B" poz with 6% gel and 2% calcium chloride. Tail with 100 sx of Class "B" with 2% calcium chloride (1498 cu.ft. of slurry, 100% excess to circulate to surface). WOC 12 hrs. Test casing to 1500 psi.

4 1/2" production liner - liner set at 4800'. Pre-perforated and plugged from 5440' MD to 7927' MD.

BOP and Tests

Surface to intermediate TD - 11", 2000 psi double gate BOP stack (Reference Figure #1). Prior to drilling out surface casing, test rams and casing to 700 psi for 30 minutes.

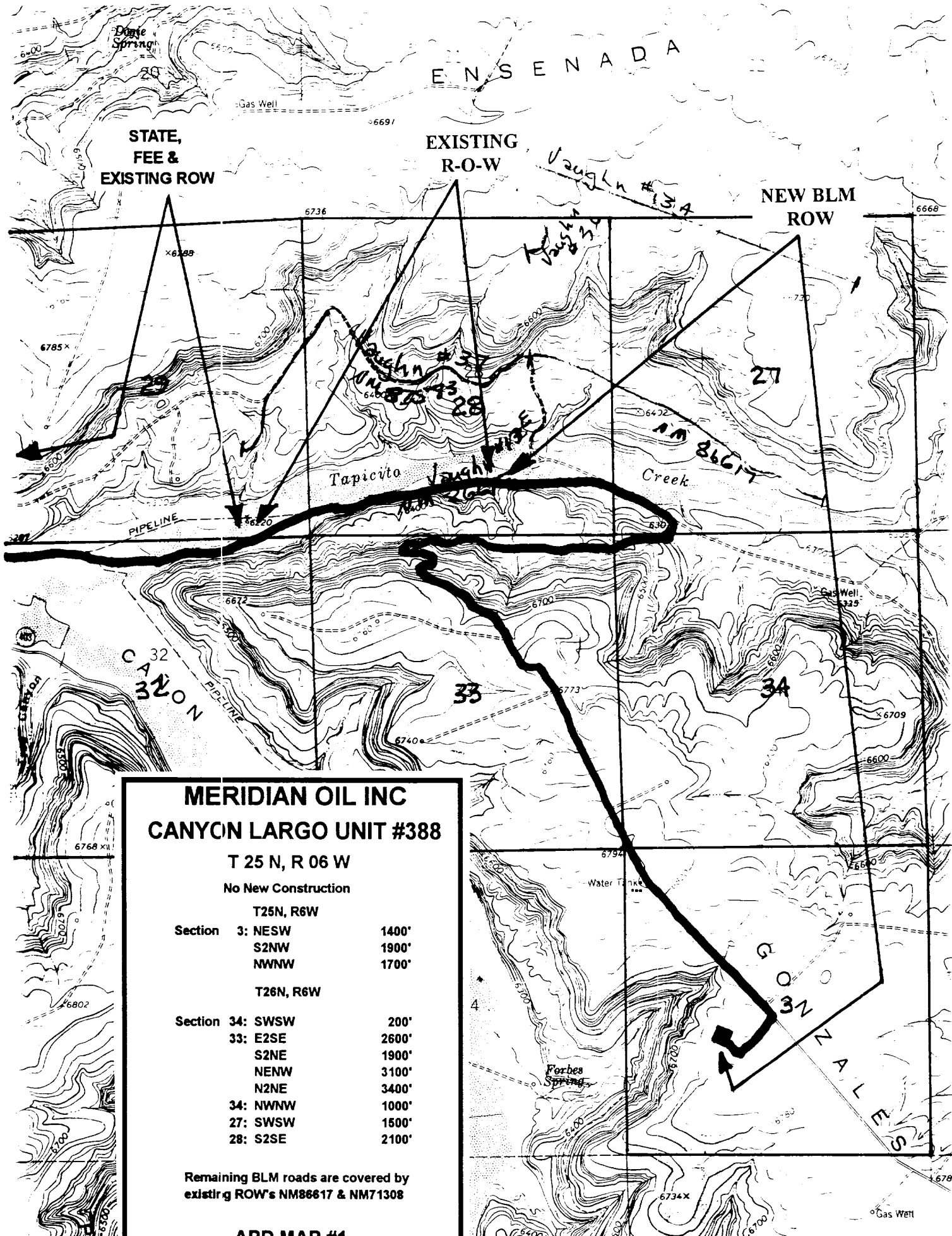
Intermediate TD to Total Depth - 10" nominal, 2000 psi (minimum) double gate BOP stack (Reference Figure #1). Prior to drilling out intermediate casing, test rams and casing to 1500 psi (minimum) for 30 minutes.

Surface to Total Depth - choke manifold (Reference Figure #2).

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.

Additional Information

- This gas is dedicated.
- Section 3 is dedicated to this well.
- New casing will be utilized.
- Pipe movement (reciprocation) will be done if hole conditions permit.
- No abnormal pressure zones are expected.



MERIDIAN OIL INC
CANYON LARGO UNIT #388

T 25 N, R 06 W

No New Construction

T25N, R6W

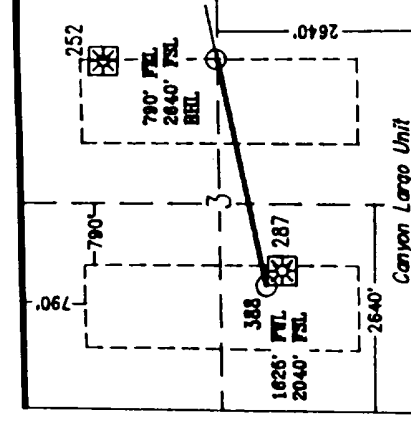
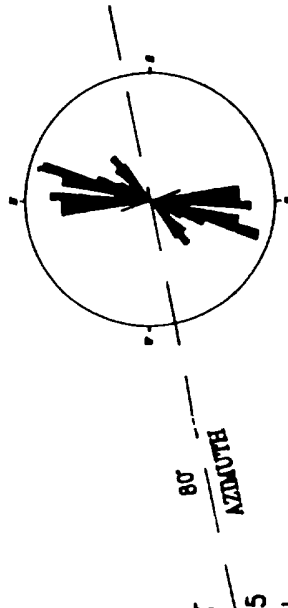
Section 3:	NESW	1400'
	S2NW	1900'
	NWNW	1700'

T26N, R6W

Section 34:	SWSW	200'
33:	E2SE	2600'
	S2NE	1900'
	NENW	3100'
	N2NE	3400'
34:	NWNW	1000'
27:	SWSW	1500'
28:	S2SE	2100'

Remaining BLM roads are covered by
existing ROW's NM86617 & NM71308

ADD MAP #4



MERIDIAN OIL

CANYON LARGO UNIT #388
HORIZONTAL POINT LOOKOUT WELL
Rio Arriba Co., New Mexico

AREA 3 TEAM
DVG, C. GROTH
3/29/93

EAST

WEST

CANYON LARGO UNIT #287
SW 3, T25N-R6W
Rio Arriba Co., N.M.

CANYON LARGO UNIT #287
SW 3, T25N-R6W
Rio Arriba Co., N.M.

[65' dip (1.1' over 3000 ft. vertical section)]

