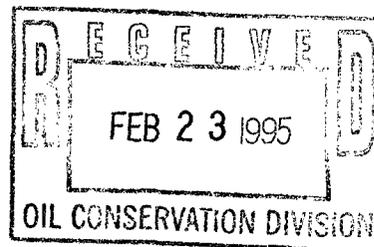


MERIDIAN OIL



February 21, 1995

Sent Federal Express

Mr. William LeMay
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87504

Re: Meridian Oil Inc. Canyon Largo Unit #447
1510'FNL, 1615'FEL Section 24, T-25-N, R-7-W - Rio Arriba County, New Mexico
API # 30-039-25480

Dear Mr. LeMay:

Meridian Oil Inc. is applying for administrative approval of a non-standard location for the above location in the Devils Fork Gallup Associated formation. This location would extend the Devils Fork Gallup Associated Pool. This application for the referenced location is to utilize an unused existing well pad, thereby not creating any further surface disturbance in the grazing lands at the request of the grazing permittee and the Bureau of Land Management. This location is also for archaeological considerations.

This well will be drilled and dually completed as a Devils Fork Gallup Associated and Basin Dakota well. This location is orthodox for the Basin Dakota formation.

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.
4. 7.5 minute topographic map showing the orthodox windows for the Gallup, and enlargement of the map to define topographic features.

Meridian Oil is the operator of the Canyon Largo Unit. It is planned to drill this well early in the second quarter of 1995. Therefore, your prompt consideration of this request is greatly appreciated.

Sincerely,

A handwritten signature in cursive script that reads "Peggy Bradfield".

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	5. Lease Number SF-078879 Unit Reporting Number SF-078879
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 447
4. Location of Well 1510' FNL, 1615' FEL Latitude 36° 23' 17", Longitude 107° 31' 19"	10. Field, Pool, Wildcat Devils Fork Gallup/ Basin Dakota 11. Sec., Twn, Rge, Mer. (NMPM) Sec 24, T-25-N, R-6-W API # 30-039- 7
14. Distance in Miles from Nearest Town 24 miles south of Blanco, NM	12. County Rio Arriba
15. Distance from Proposed Location to Nearest Property or Lease Line 1510'	13. State NM
16. Acres in Lease	17. Acres Assigned to Well 320 E/2
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 100'	
19. Proposed Depth 7330'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6915' GR	22. Approx. Date Work will Start 2nd quarter 1995
23. Proposed Casing and Cementing Program See Operations Plan attached This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4	DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"
24. Authorized by: <u>[Signature]</u> Regional Drilling Engineer	Date <u>1/10/95</u>

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

Archaeological Report submitted by Arboles Contract Archaeology Technical Report #664 dated 11-24-94
Threatened and Endangered Species Report submitted by Ecosphere dated 10-25-94
NOTE: This format is issued in lieu of U.S. BLM Form 3160-

OPERATOR

**APPROVED
AS AMENDED**

JAN 13 1995

[Signature]
DISTRICT MANAGER

District I
 PO Box 1980, Hobbs, NM 88241-1980
 District II
 PO Drawer DD, Artesia, NM 88211-0719
 District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV
 PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
 Energy, Minerals & Natural Resources Department

Form C-10
 Revised February 21, 1995
 Instructions on back
 Submit to Appropriate District Office
 State Lease - 4 Copies
 Fee Lease - 3 Copies

OIL CONSERVATION DIVISION
 PO Box 2088
 Santa Fe, NM 87504-2088

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number		Pool Code	Pool Name	
		17610/71599	Devils Fork Gallup/Basin Dakota	
Property Code	Property Name		Well Number	
6886	Canyon Largo		447	
OGRID No.	Operator Name		Elevation	
14538	MERIDIAN OIL INC.		6915'	

10 Surface Location

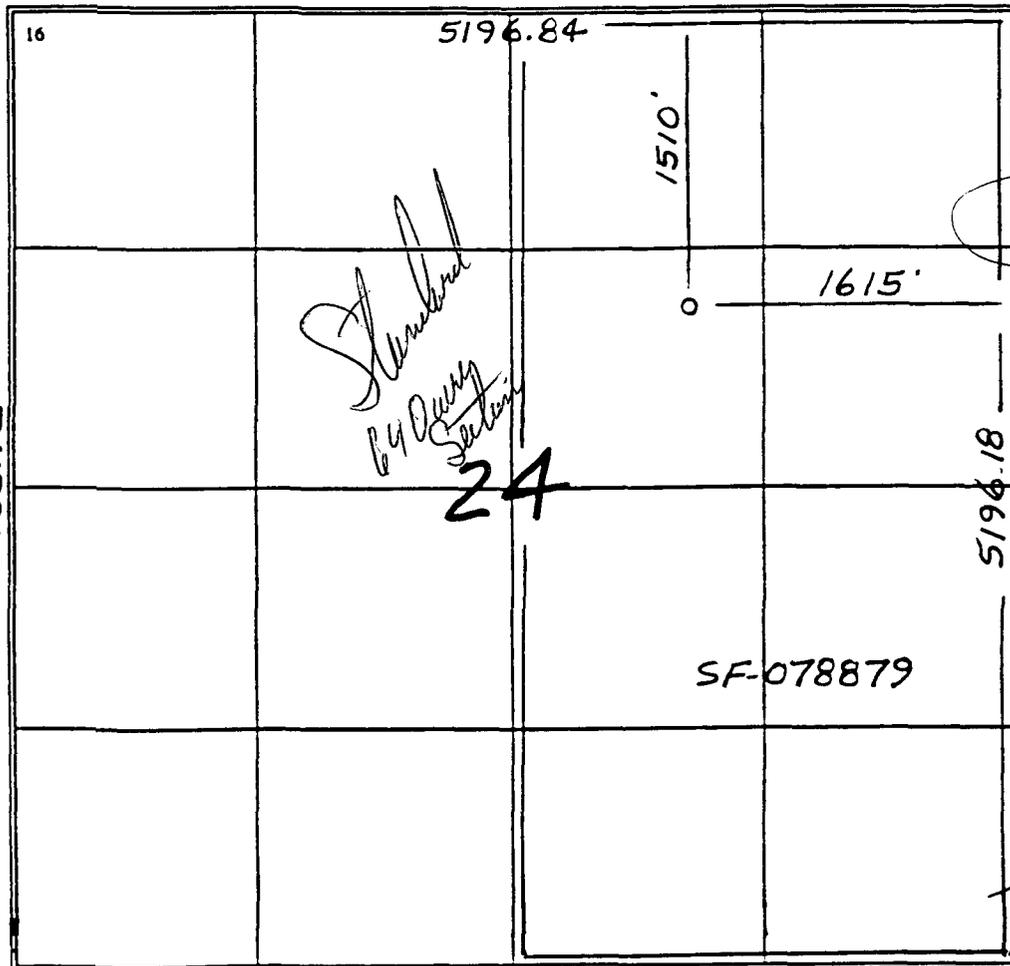
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	24	25 N	7 W		1510	North	1615	East	R.A.

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
E/320			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



17 OPERATOR CERTIFICATION

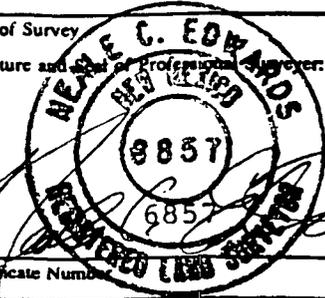
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Peggy Bradfield
 Signature
 Peggy Bradfield
 Printed Name
 Regulatory Affairs
 Title
 1-8-95
 Date

18 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 belief.

10-4-94
 Date of Survey
 Signature and Seal of Professional Surveyor



Certificate Number

OPERATIONS PLAN

Well Name: Canyon Largo Unit #447
Location: 1510'EML, 1615'FEL Section 24, T-25-N, R-7-W
 Rio Arriba County, New Mexico
 Latitude 36° 23' 17", Longitude 107° 31' 19"
Formation: Devils Fork Gallup/Basin Dakota
Elevation: 6915'GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	Nacimiento	2005'	
Ojo Alamo	2005'	2185'	aquifer
Kirtland	2185'	2505'	
Fruitland	2505'	2737'	gas
Pictured Cliffs	2737'	2885'	gas
Lewis	2885'	3555'	
Chacra	3555'	4250'	
Massive Cliff House	4250'	4335'	
Menefee	4335'	4970'	
Massive Pt. Lookout	4970'	5240'	gas
Mancos	5240'	6060'	
Gallup	6060'	6930'	gas & oil
Greenhorn	6930'	6980'	gas & oil
Graneros	6980'	7015'	
Dakota	7015'	7235'	gas
Burro Canyon/Encinal	7235'	7320'	gas
Morrison	7320'		salt water
Total Depth		7330'	

Logging Program:

Mud Logs/Coring/DST -
 Mud logs - 6000' to TD.
 Coring - none
 DST - none
 Electric logs - DIL/SP/GR; Density/Neut/GR; Microlog-GR;

Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
0- 320'	Spud	8.4-8.9	40-50	no control
320-7330'	LSND	8.4-9.1	30-60	no control

Pit levels will be visually monitored to detect gain or loss of fluid control.

Casing Program:

<u>Hole Size</u>	<u>Depth Interval</u>	<u>Csg. Size</u>	<u>Wt.</u>	<u>Grade</u>
12 1/4"	0' - 320'	8 5/8"	24.0#	K-55
7 7/8"	0' - 7330'	5 1/2"	17.0#	K-55

Tubing Program:

0' - 7330'	1 1/2"	2.9#	N-80 EUE
0' - 6060'	1 1/2"	2.76#	J-55 IJ

BOP Specifications, Wellhead and Tests:**Surface to TD -**

11" 2000 psi minimum double gate BOP stack (Reference Figure #1). After nipple-up prior to drilling out surface casing, rams and casing will be tested to 600 psi for 30 minutes.

2" nominal, 2000 psi minimum choke manifold (Reference Figure #3).

Completion Operations -

6" 2000 psi double gate BOP stack (Reference Figure #2). After nipple-up prior to completion, pipe rams and casing top will be tested to 3000 psi for 15 minutes.

Surface to Total Depth -

2" nominal, 2000 psi minimum choke manifold (Reference Figure #3).

Wellhead -

8 5/8" x 5 1/2" x 1 1/2" dual x 3000 psi tree assembly.

General -

- Pipe rams will be actuated once each day and blind rams will be actuated once each trip to test proper functioning.
- An upper kelly cock valve with handle available and drill string valves to fit each drill string will be available on the rig floors at all times.
- A BOP pit level drill will be conducted weekly for each drilling crew.
- All of the BOP tests and drills will be recorded in the daily drilling reports.
- Blind and pipe rams will be equipped with extension hand wheels.

Cementing:

8 5/8" surface casing -

Cement to surface w/336 sx Class "B" cement w/3% calcium chloride and 1/4#/sx cellophane flakes (396 cu.ft. of slurry, 200% excess to circulate to surface.) WOC 12 hours prior to drilling out surface casing. Test casing to 600 psi for 30 minutes.

Saw tooth guide shoe on bottom. Bowspring centralizers will be run in accordance with Onshore Order #2.

Production Casing - 5 1/2"

First Stage: Cement to circulate to stage tool @ 5240'. Lead w/310 sx 65/35 Class "B" Pozmix w/6% gel, 2% calcium chloride, and 1/4#/sx cellophane flakes. Tail w/100 sx Class "B" cement w/2% calcium chloride. WOC 4 hours prior to pumping second stage. (Slurry volume: 634 cu.ft. Excess slurry 75%.)

Second Stage: Cement to circulate to stage tool @ 2405'. Lead w/438 sx 65/35 Class "B" Pozmix w/6% gel, 2% calcium chloride, and 1/4#/sx cellophane flakes. Tail w/100 sx Class "B" cement w/2% calcium chloride. WOC a minimum of 18 hours prior to cleanout. (Slurry volume: 860 cu.ft. Excess slurry: 75%.)

Third Stage: Cement to circulate to surface. Cement w/423 sx 65/35 Class "B" Pozmix w/6% gel, 2% calcium chloride, and 1/4#/sx cellophane flakes. Tail w/100 sx Class "B" cement w/2% calcium chloride. WOC a minimum of 18 hours prior to cleanout. (Slurry volume: 833 cu.ft. Excess slurry: 100%.)

Float shoe on bottom. Three centralizers run every other joint above shoe. Thirty-three centralizers - one every 4th joint to the base of the Ojo Alamo @ 2185'. Two turbolizing type centralizers - one below and one into the base of the Ojo Alamo @ 2185'. Standard centralizers thereafter every fourth joint up to the base of the surface pipe.

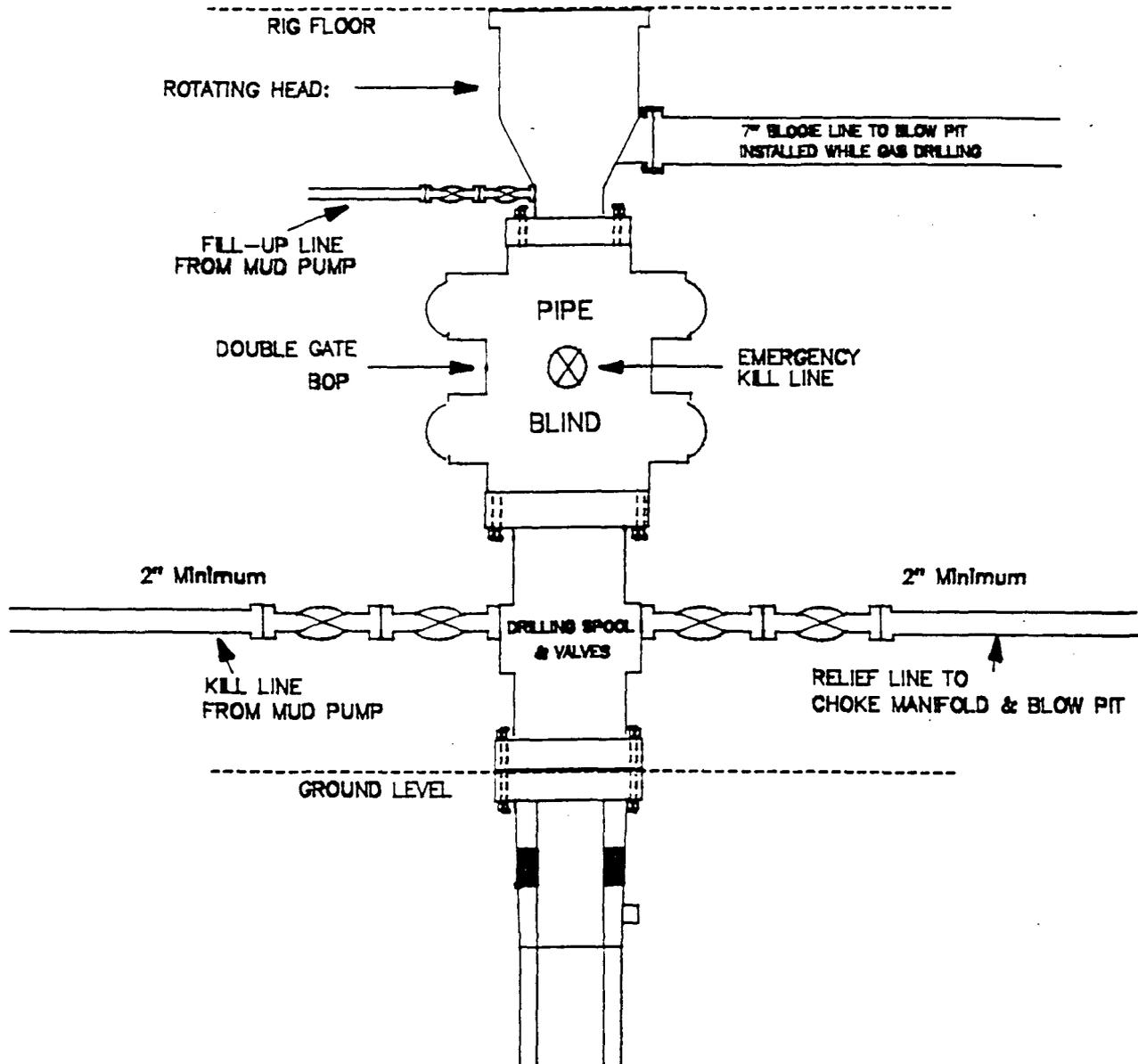
- If hole conditions permit, an adequate water spacer will be pumped ahead of each cement job to prevent cement/ mud contamination or cement hydration.
- The pipe will be rotated and/or reciprocated, if hole conditions permit.

Additional Information:

- The Gallup and Dakota formations will be dually completed.
- No abnormal temperatures or hazards are anticipated.
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered below the top of the Pictured Cliffs.
- The east half of the Section is dedicated to this well.
- This gas is dedicated.
- New casing will be utilized.
- Anticipated pore pressure for Pictured Cliffs and Fruitland Coal is 300 psi.
- Pipe movement (either rotation or reciprocation) will be done if hole conditions permit.

MERIDIAN OIL INC.
BOP Configuration
2M psi SYSTEM

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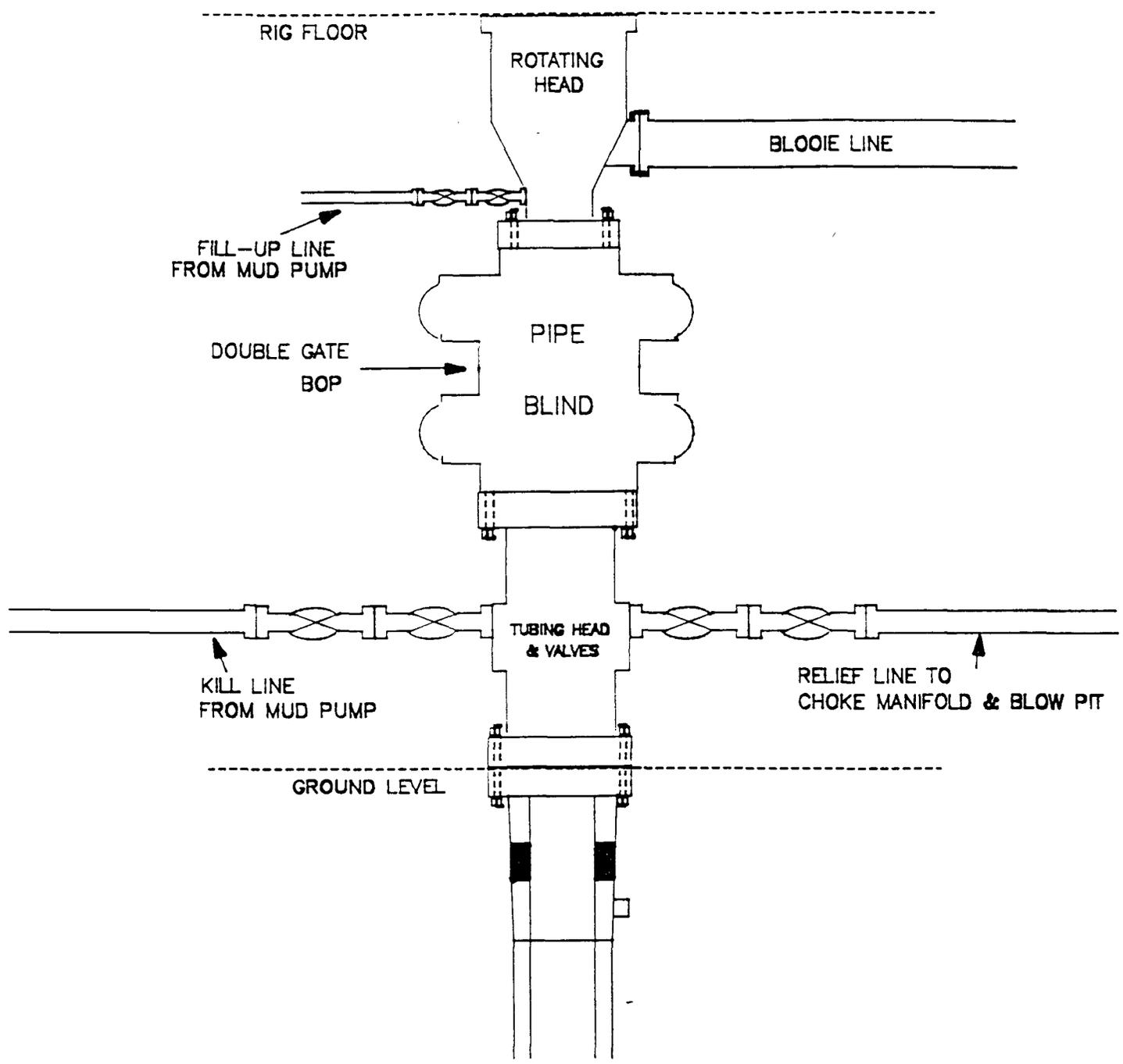


11" Bore, 2000psi minimum working pressure double gate BOP to be equipped with blind and pipe rams. A Schaffer Type 50 or equivalent rotating head to be installed on the top of the BOP. All equipment is 2000psi working pressure/or greater.

Figure #1

MERIDIAN OIL INC.
BOP Configuration
2M psi SYSTEM

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070



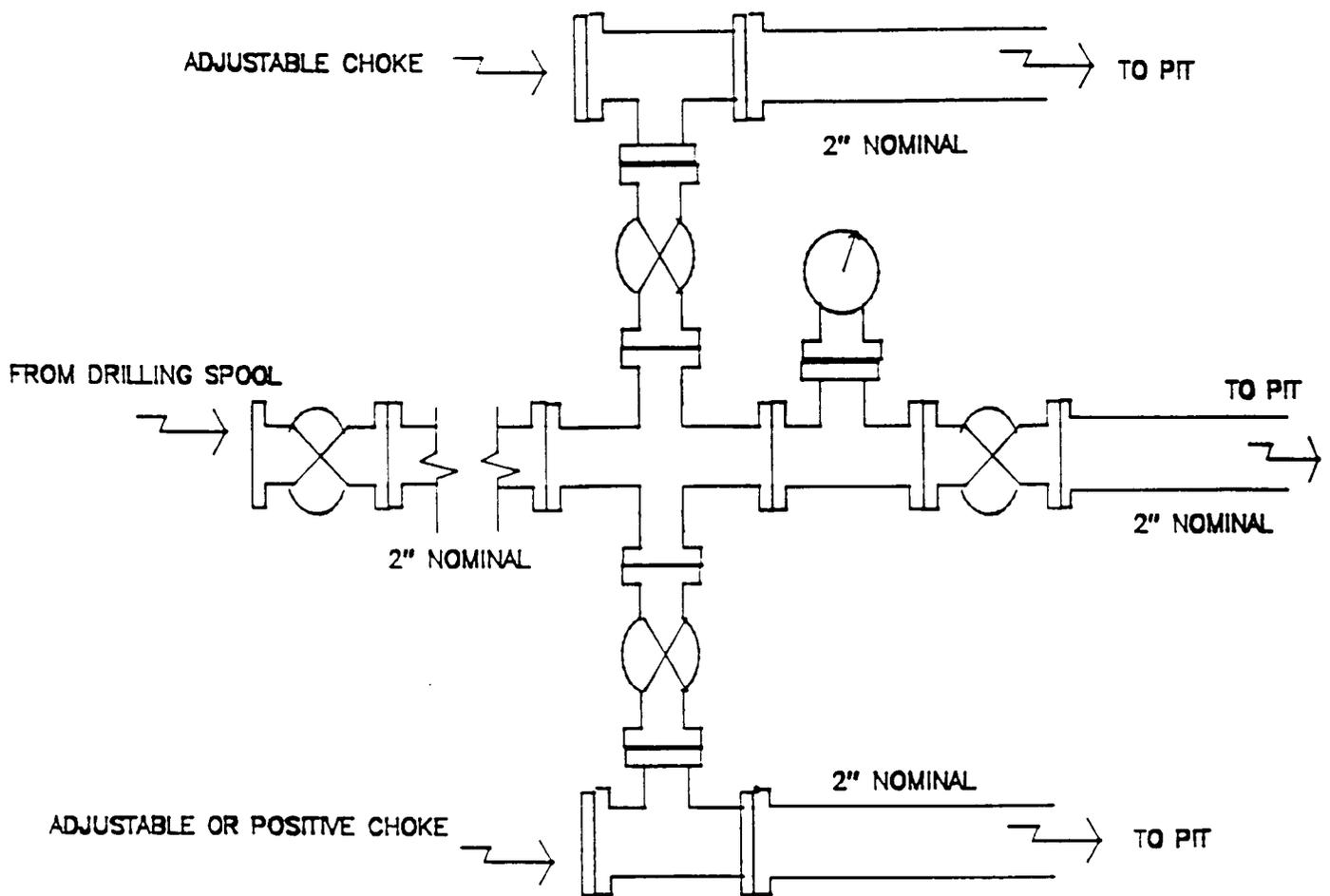
Minimum BOP installation for Completion operations. 7 1/16" Bore (6" Nominal), 3000psi minimum working pressure double gate BOP to be equipped with blind and pipe rams.

Figure #2

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MERIDIAN OIL INC.
Choke Manifold Configuration
2M psi SYSTEM

070 FIELD OFFICE, HMI



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

Figure #3

MERIDIAN OIL
Canyon Largo Unit #447
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 Superior Water Hole #1 located NW Section 4, T-25-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.

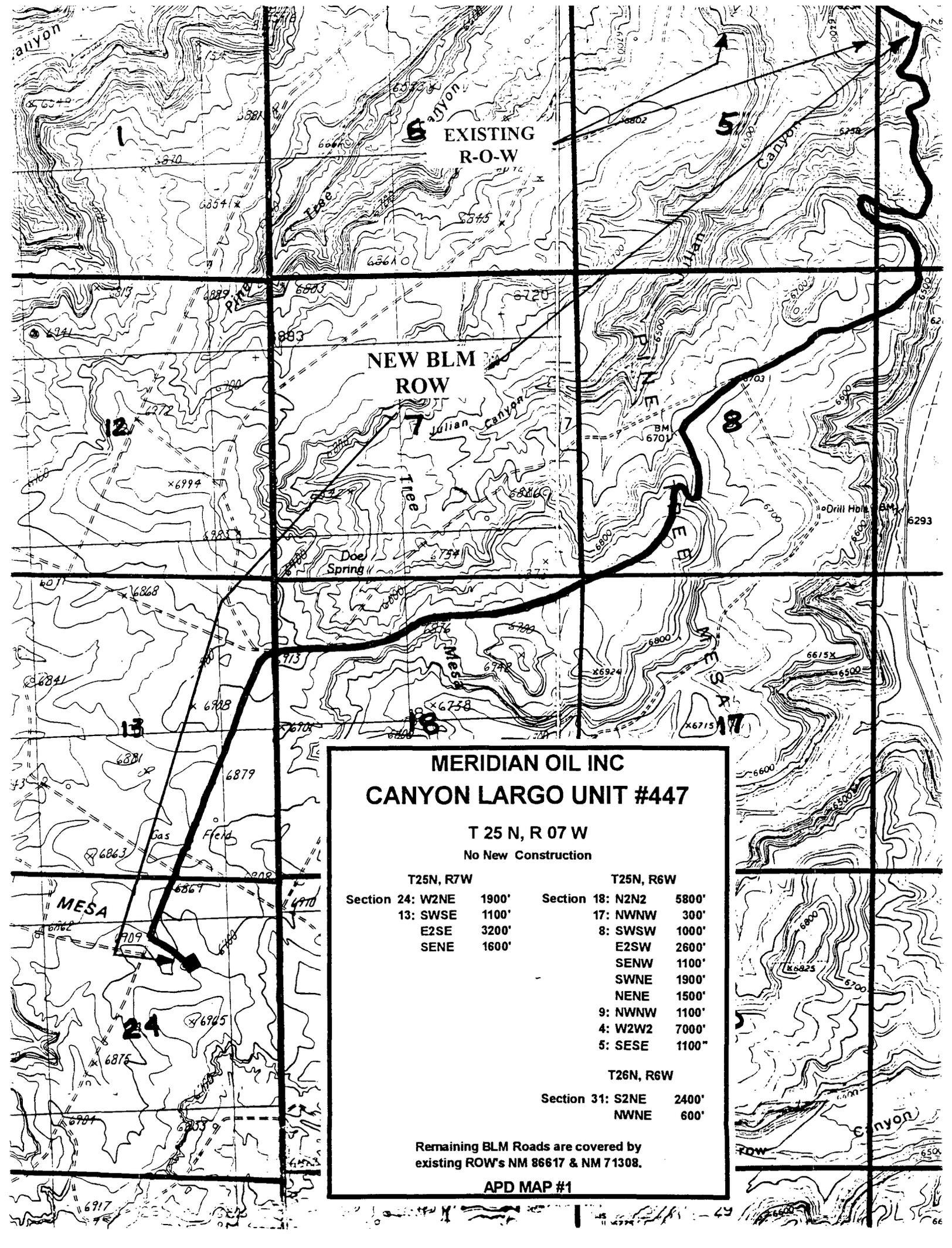
10. Plans for Restoration of the Surface - After completion of the proposed project, the location will be cleaned and leveled. The location will be left in such a condition that will enable reseeding operations to be carried out. Seed mixture as designated by the responsible government agency will be 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

1/10/95
Date

JWC:pb



**MERIDIAN OIL INC
CANYON LARGO UNIT #447**

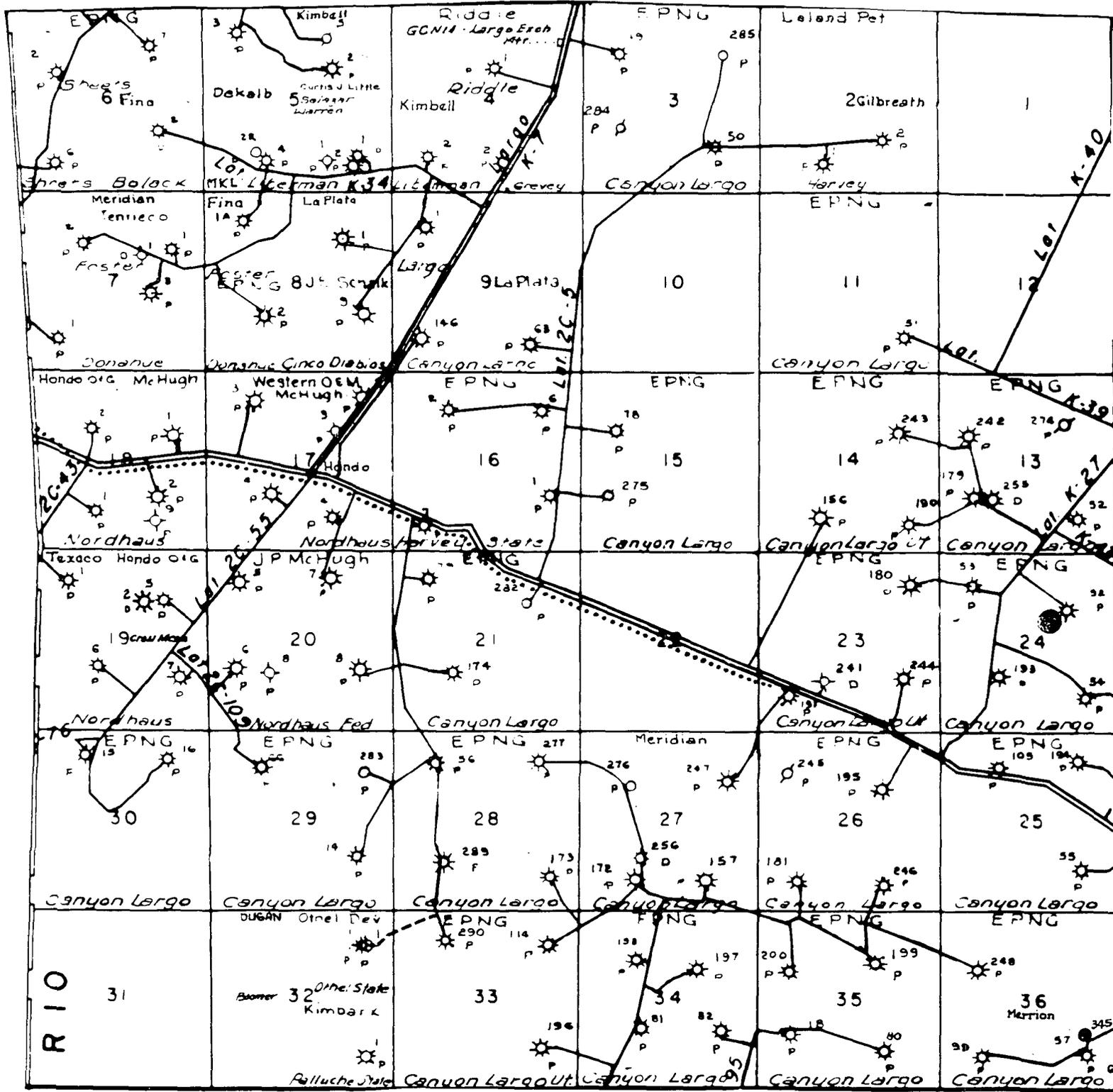
T 25 N, R 07 W
No New Construction

T25N, R7W		T25N, R6W	
Section 24: W2NE	1900'	Section 18: N2N2	5800'
13: SWSE	1100'	17: NWNW	300'
E2SE	3200'	8: SWSW	1000'
SENE	1600'	E2SW	2600'
		SENW	1100'
		SWNE	1900'
		NENE	1500'
		9: NWNW	1100'
		4: W2W2	7000'
		5: SESE	1100"

T26N, R6W	
Section 31: S2NE	2400'
NWNE	600'

Remaining BLM Roads are covered by existing ROW's NM 86617 & NM 71308.

APD MAP #1

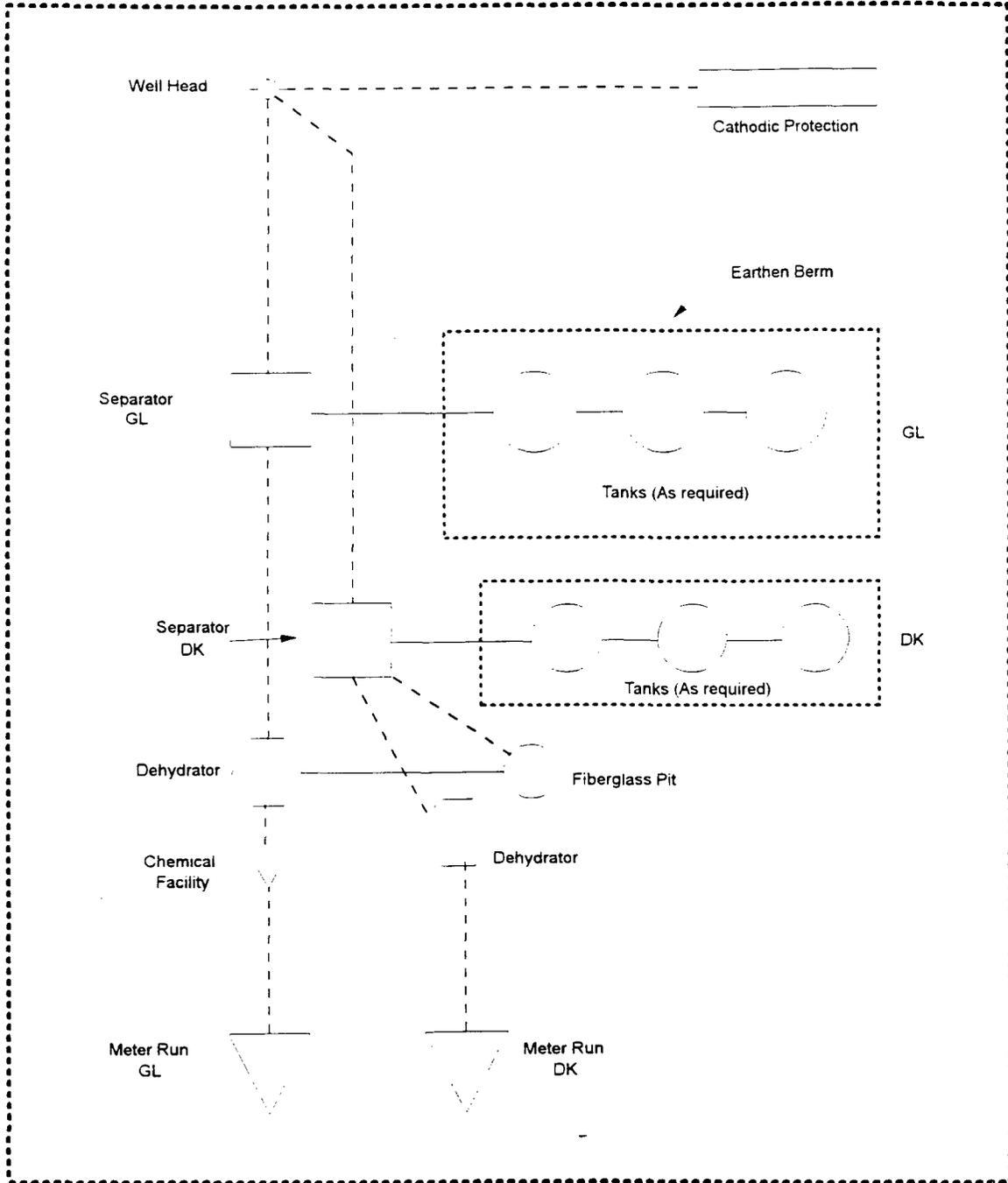


MERIDIAN OIL INC.
 Pipeline Map
 T-25-N, R-07-W
 Rio Arriba County, New Mexico
 Canyon Largo Unit #447
 Map #1A

MERIDIAN OIL INC.

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Well Pad Boundary



ANTICIPATED PRODUCTION FACILITIES
FOR A GALLUP/DAKOTA
DUAL WELL

MERIDIAN OIL

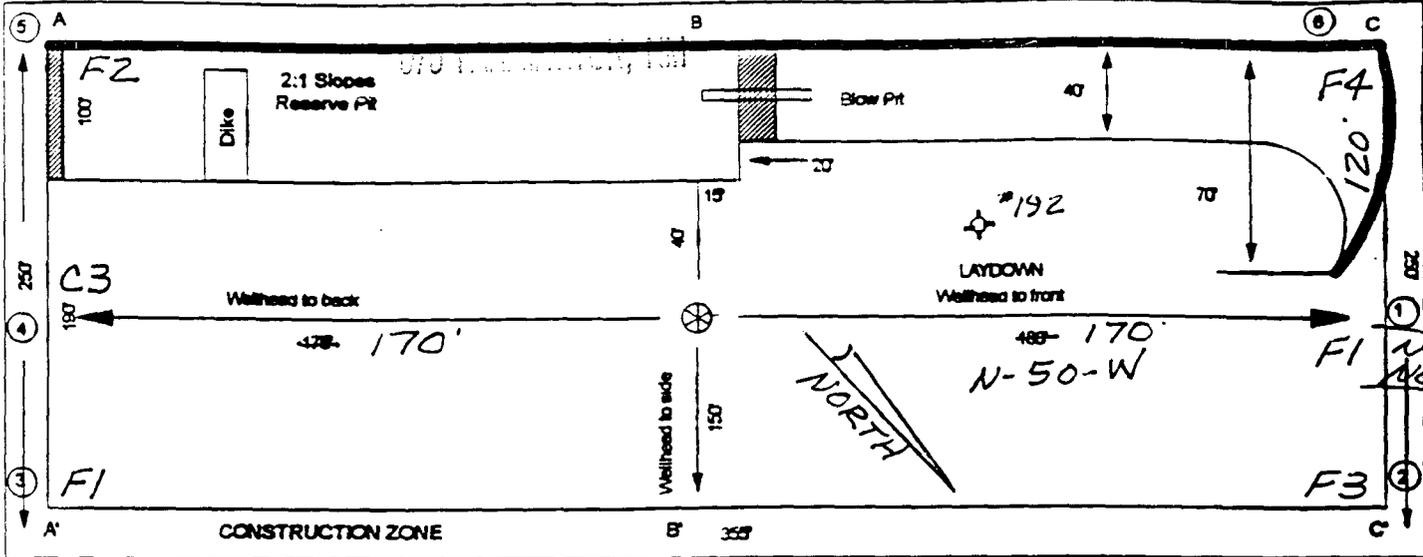
PLAT #2

FC HIGH POTENTIAL

ALL MV / ALL DK

NAME: CANYON LARGE UNIT #447
 FOOTAGE: 1510' FNL 1615' FEL
 SEC 24 TWN 25 N.R. 7 W NMPM
 CO: R.A. ST: N.M.
 ELEVATION: 6915' DATE: 10-4-94

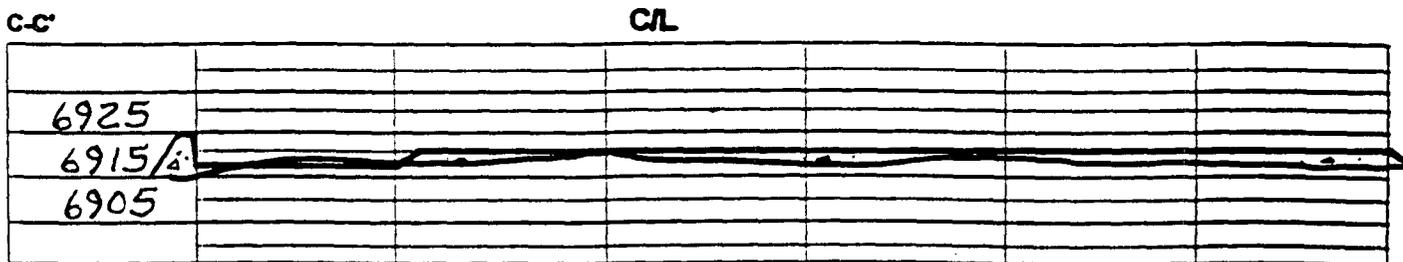
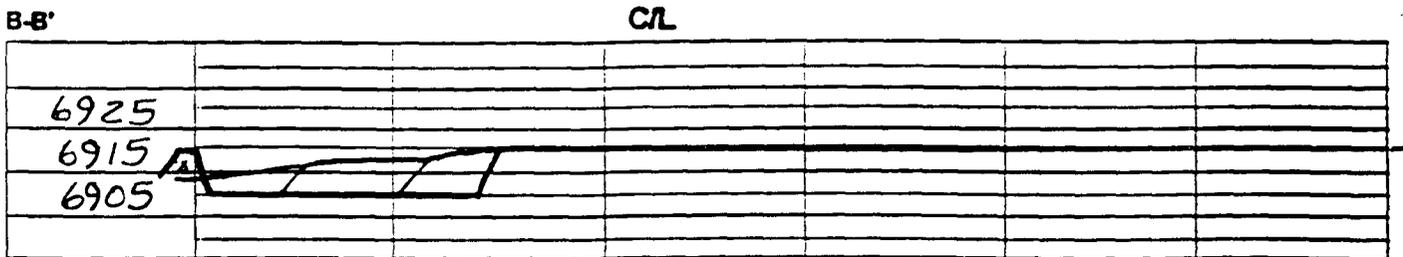
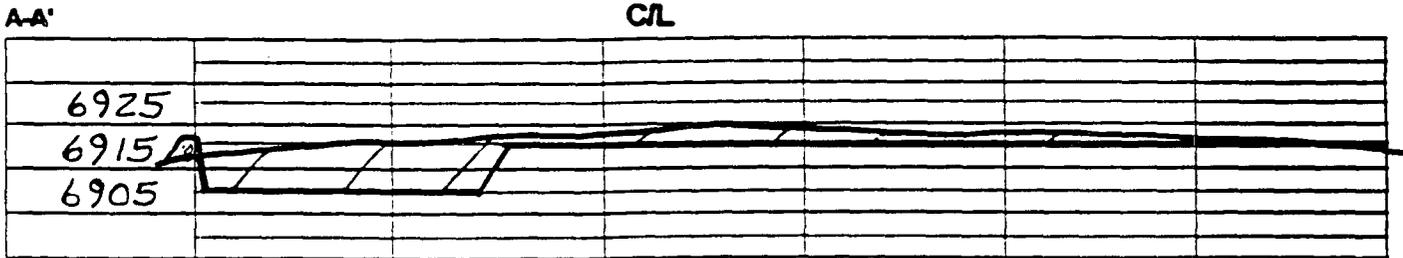
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290'X355' (390'X455') = 4.07 ACRES

Reserve Pit Dike : to be 6" above Deep side; (overflow - 3' wide and 1' above shallow side.)

Blow Pit : overflow pipe halfway between top and bottom and extend over plastic liner and into blow pit.



Note: Contractor should call One-Call for location of any marked or unmarked buried pipelines or cables on well pad and/or access road at least 2 working days prior to construction.

OPERATOR

BLM CONDITIONS OF APPROVAL

Operator Meridian Oil Inc. Well Name 447 Canyon Largo Unit

Legal Location 1510' FNL/1615' FEL T. 25 N. R. 7 W. Sec. 24

Lease Number SF-078879 Field Inspection Date 10/11/94

The following stipulations will apply to this well unless a particular Surface Managing Agency or private surface owner has supplied to BLM and the operator a contradictory environmental stipulation. The failure of the operator to comply with these requirements may result in the assessment of liquidated damages or penalties pursuant to 43 CFR 3163.3 or 3163.4. A copy of these stipulations shall be present on location during construction, drilling and reclamation activity.

An agreement between operator and fee landowner will take precedence over BLM surface stipulations unless 1) the BLM determines that the operator's actions will affect adjacent Federal or Indian surface (43 CFR Part 3160), or 2) the operator does not maintain the well area and lease premises in a workmanlike manner with due regard for safety, conservation and appearance (43 CFR Part 3162.7-4), or 3) no such agreement exists (43 CFR Part 3160), or 4) in the event of well abandonment, minimal Federal restoration requirements will be required (43 CFR Part 3162.7-2).

1. Prior to construction, remove the P&A monument. Reattach after the well is completed and the reserve pit is closed and recontoured.
2. The reserve pit will be one-half in cut. The pit walls will be walked down and compacted with equipment.
3. The final cut slope shall not exceed a 3:1 ratio. The final fill slope shall not exceed a 3:1 ratio. To obtain this ratio, pits and slopes shall be backsloped into the pad upon completion of drilling and prior to setting production equipment. Construction slopes can be much steeper during drilling, but will be contoured to the above final slopes upon reclamation.
4. Paint color gray. Seed Mix # 1
 Pure Live Seed (PLS) = Germination X Purity. Recommended Seed Mixture (PLS) for BLM administered lands is for the hand seeding rate. For drilled seed, the PLS rate may be cut in half.

Seed Mixture Number 1:

Crested Wheatgrass (<u>Agropyron desertorum</u>)	2 lbs.
Smooth Brome (<u>Bromus inermis</u>)	1 lb.
Fourwing Saltbush (dewinged)(<u>Atriplex canescens</u>)	1 lb.
Nomad Alfalfa (<u>Medicago sitiva</u>)	2 lbs.
Indian Ricegrass (<u>Oryzopsis hymenoides</u>)	1 lb.
Western Wheatgrass (<u>Agropyron smithii</u>)	2 lbs.

I. LOCATION AND ACCESS ROAD

1. Well area and lease premises will be maintained in a workmanlike manner with due regard to safety, conservation and appearance. All liquid waste, completion fluids and drilling products associated with oil and gas operations will be contained and then buried in place, or removed and deposited in an approved disposal site.

2. Surface disturbance and vehicular traffic will be limited to the approved location and approved access road.

3. Mud pits and blow pits will be constructed so as not to leak, break, or allow discharge of liquids or produced solids. At least half of the capacity of reserve pit must be in cut. The top of the outside wall of reserve pit should be smoothed-off with a minimum of one blade of width. The pit should have adequate capacity to maintain 2 feet of free board. Pits are not to be located in natural drainages. Pit walls are to be "walked down" by a crawler-type tractor following construction and prior to usage. Any plastic material used to line pits must be removed to below-ground level before pits are covered. The final grade of reserve pit (after reclamation) shall allow for drainage away from the pit area.

4. All unguarded pits (reserve/production/blow pits) containing liquids will be fenced with woven wire. Drilling pits will be fenced on three sides and once the rig leaves location, the fourth side will be fenced. All fencing must be a legal fence in accordance with New Mexico State Law. Liquids in pits will be allowed to evaporate, or be properly disposed of, before pits are filled and recontoured. (This office will be notified 24 hours prior to fluid hauling). Under no circumstances will pits be cut and drained. Aeration of pit fluids must be confined within the pit area. Upon completion of the well the reserve pit will be covered with screening or netting and remained covered until the pit is reclaimed. All production pits 16 feet in diameter or larger will be covered with screening or netting.

5. No gravel or other related minerals from new or existing pits on Federal land will be used in construction of roads, well sites, etc., without prior approval from the Surface Managing Agency.

6. Berms or firewalls will be constructed around all storage facilities sufficient in size to contain the storage capacity of the tanks, or the combined capacity of tanks if a rupture could drain more than one tank. Berm walls will be compacted with appropriate equipment to assure proper construction.

7. All roads on public land must be maintained in good passable condition.

8. A proposed use of pesticide, herbicide or other possible hazardous chemical on BLM land shall be cleared for use prior to application.

II. CULTURAL RESOURCES (ARCHAEOLOGY)

1. **DISCOVERY OF CULTURAL RESOURCES IN THE ABSENCE OF MONITORING:**
If, in its operations, operator discovers any previously unidentified historic or prehistoric cultural

resources, then work in the vicinity of the discovery will be suspended and the discovery promptly reported to the BLM District Manager. BLM will then specify what action is to be taken. If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, the BLM will evaluate the significance of the discovery and consult with the State Historic Preservation Officer in accordance with 36 CFR Section 800.11. Minor recordation, stabilization, or data recovery may be performed by BLM or a permitted cultural resources consultant. If warranted, more extensive treatment by a permitted cultural resources consultant may be required of the operator prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any required treatment is completed. Failure to notify the BLM about a discovery may result in civil or criminal penalties in accordance with the Archeological Resources Protection Act of 1979 (as amended).

2. **DISCOVERY OF CULTURAL RESOURCES DURING MONITORING:** If monitoring confirms the presence of previously unidentified cultural resources, then work in the vicinity of the discovery will be suspended and the monitor will promptly report the discovery to the BLM District Manager. BLM will then specify what action is to be taken. If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, the BLM will evaluate the significance of the discovery and consult with the State Historic Preservation Officer in accordance with 36 CFR Section 800.11. Minor recordation, stabilization, or data recovery may be performed by BLM or a permitted cultural resources consultant. If warranted, more extensive treatment by a permitted cultural resources consultant may be required of the operator prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any required treatment is completed.

3. **DAMAGE TO SITES:** If, in its operations, operator damages, or is found to have damaged any previously documented or undocumented historic or prehistoric cultural resources, excluding "discoveries" as noted above, the operator agrees at his/her expense to have a permitted cultural resources consultant prepare and have executed a BLM approved data recovery plan. Damage to cultural resources may result in civil or criminal penalties in accordance with the Archeological Resources Protection Act of 1979 (as amended).

III. RESEEDING AND ABANDONMENT

1. All surface areas disturbed during drilling activities and not in use for production activities, will be reseeded the first July-September period after reserve pit has been filled in and/or location abandoned. For producing locations, this should occur in the first 12 months after drilling is completed.

2. After top soil has been placed on location, compacted areas of well pad will be plowed or ripped to a depth of 12" before reseeding. The surface should be left rough to help retain rain fall. All seeding is recommended to be done between July 1 and September 15. Seeding will be done with a disc-type drill with two boxes for various seed sizes. The drill rows will be eight to ten inches apart. Seed will be planted between 1/2 inch deep and 3/4 inch deep. The seeder will be followed with a drag, packer or roller to insure uniform coverage of seed, and adequate compaction. Drilling of the seed will be done on the contour where possible. Where slopes are too steep for contour drilling a "cyclone" hand-seeder or similar broadcast seeder will be used, after preparation of an

adequate seed-bed. Seed will then be covered to a depth described above by whatever means is practical. Mulching, excelsior netting and/or netting may be required on steep slopes.

3. After seeding, remaining rocks and vegetation (trees, brush, etc.) should be placed on the seeded areas using back hoes or rubber tired front-end loaders, so as not to detract from the natural appearance of the area.

4. If, in the opinion of surface management agency, seeding is unsuccessful, lessee/operator may be required to make subsequent seedings.

5. If, upon abandonment of wells, the retention of access road is not considered necessary for the management and multiple use of the natural resources, it will be ripped a minimum of 12" in depth. After ripping, water bars will be installed. All ripped surfaces are to be protected from vehicular travel by construction of a dead-end ditch and earthen barricade at the entrance to these ripped areas. (Reseeding of the affected areas may be required).

EXHIBIT A

PROJECT

Location(s) T. 25 N., R. 7 W., Sec. 24
T. N., R. W., Sec.

EA LOG NO. NM-070-95-24

Lease No. SF-078879
File Code 2800

ROAD RIGHT-OF-WAY STIPULATIONS

Project Access Road for Canyon Largo Unit #447
Applicant Meridian Oil Inc.
Address P.O. Box 4289, Farmington, NM 87499

BLM Office: Farmington District Office - Phone No.: (505) 599-8900

The following stipulations and/or mitigating measures will be implemented during (1) the various stages (if specified) of project development/operation and (2) up to 30 years after construction is completed for this project. If problems arise during or after field work is completed, the applicant/contractor(s) is required to promptly notify the Bureau's authorized representative. Consultation between the applicant/contractor(s) and the Bureau's authorized representative may result in additional field work being required of the applicant/contractor(s) to fully implement one or more of the following stipulations.

A. CONSTRUCTION AND MAINTENANCE

SPECIAL:

1. No construction or routine maintenance activities shall be performed when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of six inches deep, the soil shall be deemed too wet to adequately support construction equipment.
2. Crowning and ditching on both sides of the road is required. The crown shall have a grade of approximately two percent (i.e., two inch crown on a 14 foot wide road).
3. Drainage control shall be ensured over the entire road through the use of borrow ditches, drainage dips, outsloping, insloping, natural rolling topography, and/or turnout (lead-off) ditches. Every drainage dip shall drain water into an adjacent turnout ditch.

STANDARD:

1. The Holder shall conduct all activities associated with the construction, operation, and termination of the right-of-way within the authorized limits of the right-of-way.
2. A copy of these stipulations, including exhibits and the Plan(s) of Operation (if required), shall be on the project area and available to persons directing equipment operation.
3. Unless otherwise approved in writing by the Authorized Office, this road will be designed and constructed to conform with the BLM, New Mexico road construction/maintenance policy.
4. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be

immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The Holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the Holder.

5. Public access along this road will not be restricted by the Holder without specific written approval being granted by the Authorized Officer. Gates or cattleguards on the public land will not be locked or closed to public use unless specifically determined by the Authorized Officer.

6. Disposal of all liquid and solid waste produced during operation of this right-of-way shall be in an approved manner so it will not impact the air, soil, water, vegetation or animals.

7. Holder shall not violate applicable air and water quality standards or related facility siting standards established by or pursuant to applicable Federal and State law.

8. The Holder shall minimize disturbance to existing fences and other improvements on public land. The Holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The Holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence.

9. Unless otherwise approved in writing by the Authorized Officer, drainage dip location for grades over two (2) percent shall be determined by the formula:

$$\text{Spacing Interval} = \frac{400}{\text{road slope \%}} + 100'$$

Example: For a road with a four (4) percent slope.

$$\text{Spacing Interval} = \frac{400}{4\%} + 100' = 200 \text{ feet}$$

10. Unless otherwise approved in writing by the Authorized Officer, all turnout ditches shall be graded to drain water with a one (1) percent minimum to three (3) percent maximum ditch slope. The spacing interval for turnout ditches shall be determined according to the following table, but may be amended depending upon existing soil types and centerline road grade:

SPACING INTERVAL FOR TURNOUT DITCHES

<u>Percent Slope</u>	<u>Spacing Interval</u>
0 - 4%	150 - 350 feet
4 - 6%	125 - 250 feet
6 - 8%	100 - 200 feet
8 - 10%	75 - 150 feet

11. Construction sites shall be maintained in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes and equipment.

12. Maintain the road so that user traffic remains within the ROW and erosion is mitigated. Roads and road segments where serious erosional damage is occurring will be handled on a case-by-

case basis. "Flat blading" will be avoided where practical. The road(s) will be maintained so that over time a proper road prism and good drainage is achieved. Maintenance will include drainage dips, turnout ditches, crowning and/or out-sloping/in-sloping, low water crossings and vehicle turnouts. Cattleguards and culverts will be cleaned and repaired or replaced. Surfacing may be required.

13. Failure of the Holder to share maintenance costs in dollars, equipment, materials or manpower proportionate to the Holder's use with the other authorized users may be adequate grounds to terminate the right-of-way grant. The determination as to whether this has occurred and the decision to terminate shall rest with the Authorized Officer. Upon request, the Authorized Officer shall be provided with copies of any maintenance agreement entered into.

14. The Holder shall be responsible for weed control on disturbed areas within the limits of the right-of-way. The Holder is responsible for consultation with the Authorized Officer and/or local authorities for acceptable weed control methods within limits imposed in the grant stipulations.

15. Use of pesticides shall comply with the applicable Federal and State laws. Pesticides and herbicides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, Holder shall obtain from the Authorized Officer written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the Authorized Officer. Emergency use of pesticides shall be approved in writing by the Authorized Officer prior to use.

B. ABANDONMENT

1. Ninety days prior to termination of the ROW, the Holder shall contact the Authorized Officer to arrange a joint inspection of the ROW. This inspection will be held to agree to an acceptable termination (and rehabilitation) plan. This plan shall include, but is not limited to, removal of facilities, drainage structures, or surfacing material, recontouring, topsoiling, or seeding. The Authorized Officer must approve the plan in writing prior to the Holder's commencement of any termination actions.

C. GENERAL

1. After complying with all restoration stipulations, submit a "proof of restoration" letter if this road has been approved as a right-of-way. Proof of restoration letters shall be filed with the BLM, Farmington District, 1235 La Plata Highway, Farmington, NM 87401 not later than two (2) years after completion of construction.

2. The Holder of this right-of-way agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on this ROW (unless the release or threatened release is wholly unrelated to Holder's activity in this ROW). This agreement applies without regard to whether a release is caused by the Holder, their agent, or unrelated third parties.

3. The Holder(s) shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, Holder(s) shall comply with the Toxic Substances

Control Act of 1976, as amended (15 U.S.C. 2601, et seq.) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release of spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

4. The Holder of this right-of-way grant, or the Holder's successor in interest, shall comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.) and the regulations of the Secretary of the Interior issued pursuant thereto.

On behalf of Meridian Oil Inc., I have reviewed these stipulations and conditions and agree with them. (Operator please read stipulations, sign and return signature page to BLM.)

_____ for Meridian Oil Inc.

_____ Date

Jackie Neeleb
BLM Field Examiner

10/13/94
Date



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Farmington District Office
1235 La Plata Highway
Farmington, New Mexico 87401



IN REPLY REFER TO:
3162.3-1 (070)

Meridian Oil Inc.
#447 Canyon Largo unit
Santa Fe 078879
SW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 24, T. 25 N., R. 7 W.
Rio Arriba County, New Mexico

Above Data Required on Well Sign

GENERAL REQUIREMENTS FOR OIL AND GAS OPERATIONS ON FEDERAL AND INDIAN LEASES

In addition to those requirements set forth in the laws, regulations and Onshore Orders, these requirements apply generally to all oil and gas operations on Federal and Indian leases. They apply specifically to the above-described well. Special requirements that apply and are effective for this well, if any, are check-marked in Section VII of these General Requirements. The failure of the operator to comply with these requirements and the filing of required reports will result in strict enforcement of 43 CFR 3163.1 or 3163.2.

I. GENERAL

- A. Full compliance with all applicable laws, regulations, and Onshore Orders, with the approved Permit to Drill, and with the approved Surface Use and Operations Plan is required. Lessees and/or operators are fully accountable for the actions of their contractors and subcontractors.
- B. Each well shall have a well sign in legible condition from spud date to final abandonment. The sign should show the operator's name, lease serial number, or unit name, well number, location of the well, and whether lease is Tribal or allotted, (see 43 CFR 3162.6(b)).
- C. A complete copy of the approved Application for Permit to Drill, along with any conditions of approval, shall be available to authorized personnel at the drill site whenever active drilling operations are under way.
- D. For Wildcat wells only, a drilling operations progress report is to be submitted, to the BLM-District Office, weekly from the spud date until the well is completed and the Well Completion Report (Form 3160-4) is filed. The report should be on 8 1/2 x 11 inch paper, and each page should identify the well by; operator's name, well number, location and lease number.
- E. As soon as practical, notice is required of all blowouts, fires and accidents involving life-threatening injuries or loss of life. (See NTL-3A).

3. A cement evaluation log if cement is not circulated to surface.

III. DRILLER'S LOG

A. The following shall be entered in the daily driller's log: 1) Blowout preventer pressure tests, including test pressures and results, 2) Blowout preventer tests for proper functioning, 3) Blowout prevention drills conducted, 4) Casing run, including size, grade, weight, and depth set, 5) How pipe was cemented, including amount of cement, type, whether cement circulated to surface, location of cementing tools, etc., 6) Waiting on cement time for each casing string, 7) Casing pressure tests after cementing, including test pressure and results and 8) Estimated amounts of oil and gas recovered and/or produced during drillstem tests.

IV. GAS FLARING

A. Gas produced from this well may not be vented or flared beyond an initial, authorized test period of * days or 50 MMcf following its (completion) (recompletion), whichever first occurs, without the prior, written approval of the authorized officer. Should gas be vented or flared without approval beyond the test period authorized above, you may be directed to shut-in the well until the gas can be captured or approval to continue venting or flaring as uneconomic is granted, and you shall be required to compensate the lessor for that portion of the gas vented or flared without approval which is determined to have been avoidably lost.

* 30 days, unless a longer test period specifically is approved by the BLM-District office. The 30-day period begins when the casing is first perforated for cased holes, and when Total Depth (TD) is reached for open hole completion.

V. SAFETY

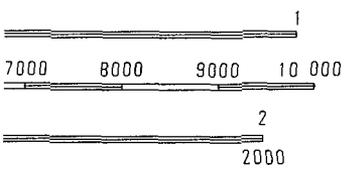
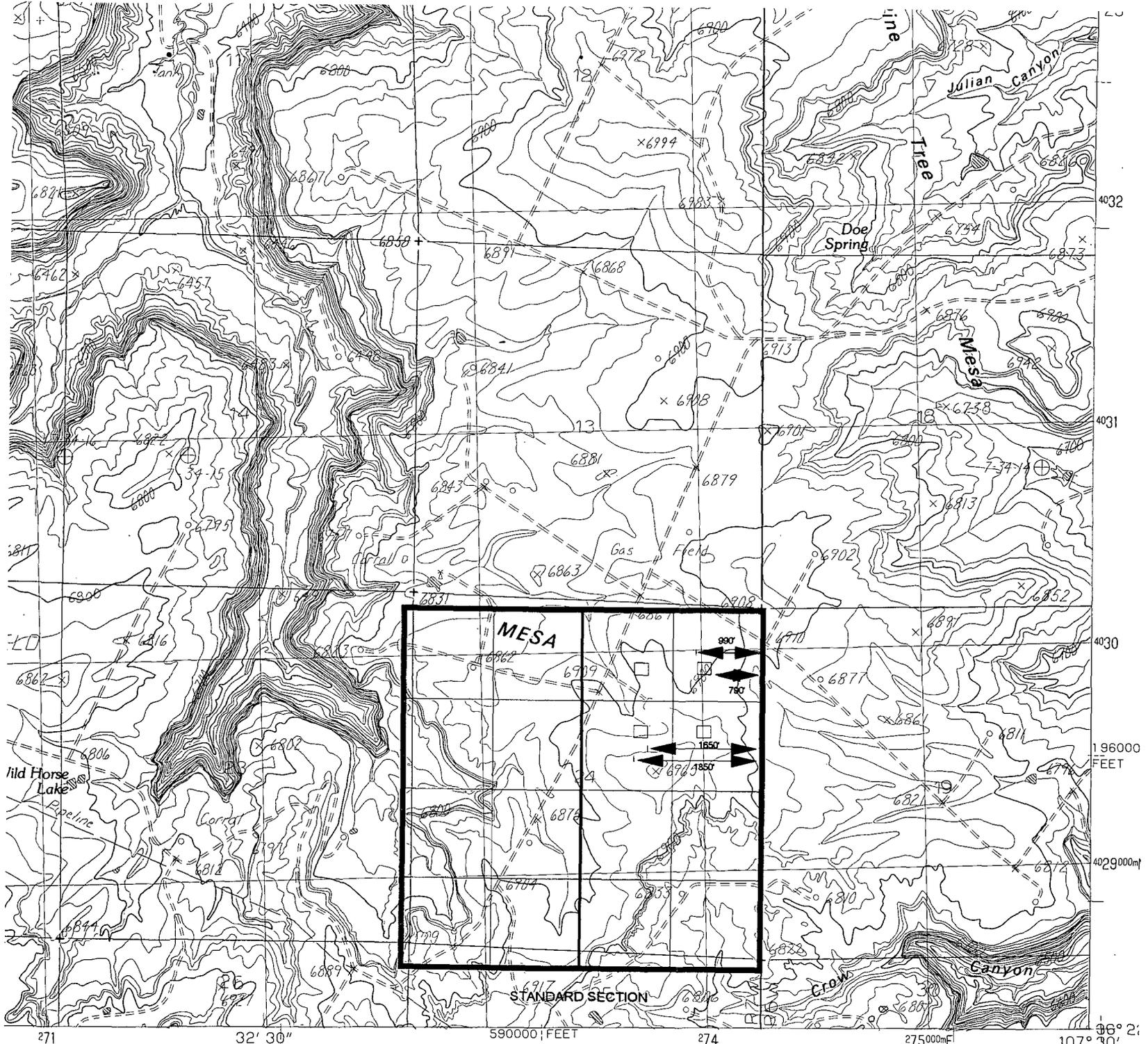
- A. All rig heating stoves are to be of the explosion-proof type.
- B. Rig safety lines are to be installed.
- C. Hard hats must be utilized.

VI. CHANGE OF PLANS OR ABANDONMENT

A. Any change of plans required in order to mitigate unanticipated conditions encountered during drilling operations, will require approval as set forth in Section I.F..

B. If the well is dry it is to be plugged in accord with 43 CFR 3162.3-4, approval of the proposed plugging program is required as set forth in Section I.F.. The report should show the total depth reached, the reason for plugging, and the proposed intervals, by depths, where cement plugs are to be placed, type of plugging mud, etc. A Subsequent Report of Abandonment is required as set forth in Section II.B.1.c..

C. Unless a well has been properly cased and cemented, or properly plugged, the drilling rig must not be moved from the drillsite without prior approval from the BLM-District Office.



QUADRANGLE LOCATION

INTERIOR GEOLOGICAL SURVEY, RESTON, VIRGINIA-1985

ROAD LEGEND

- Improved Road
- Unimproved Road
- Trail
- Interstate Route
- U.S. Route
- State Route

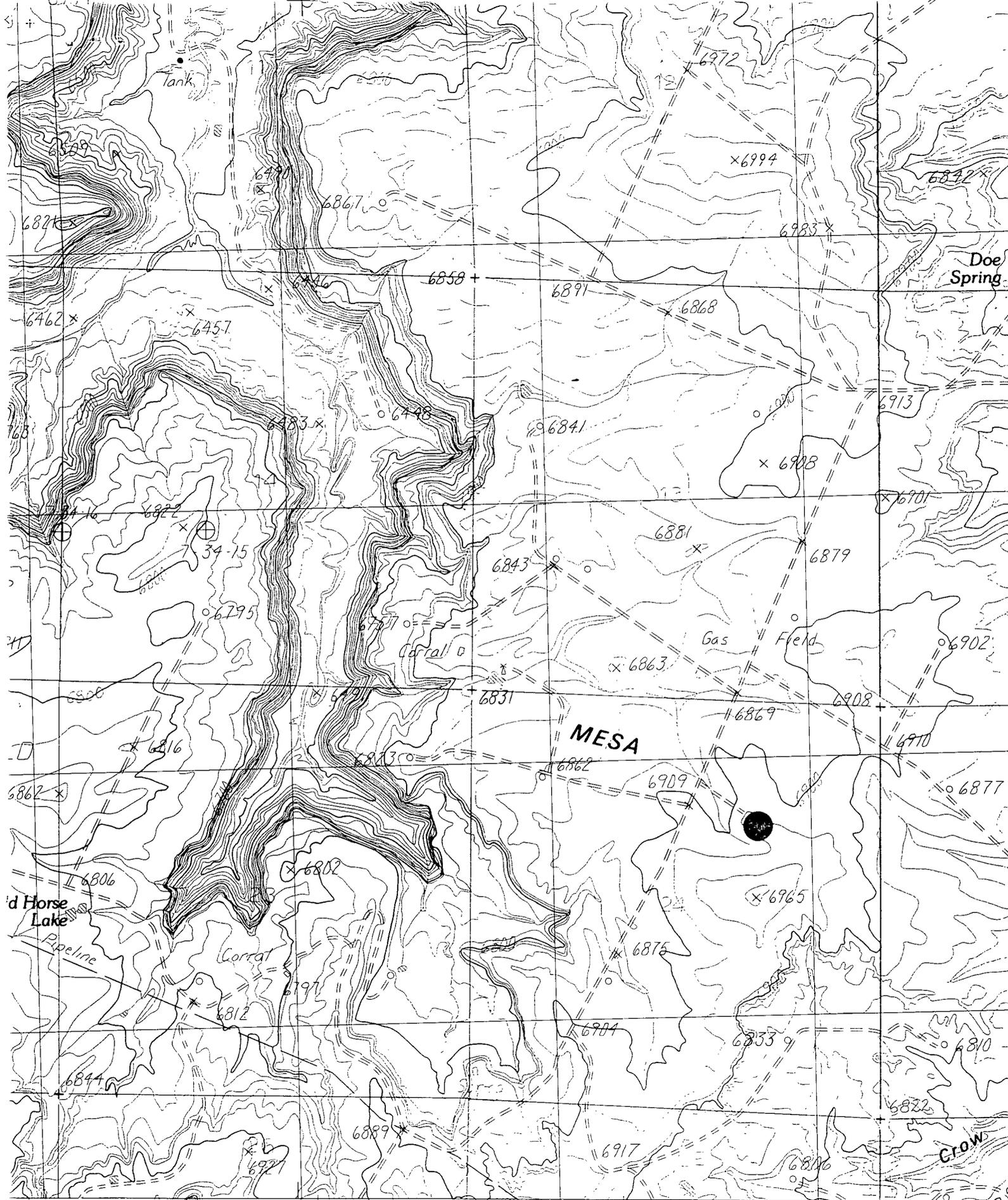
1	2	3	1 Fresno Canyon
			2 Gould Pass
			3 Santos Peak
4		5	4 Thompson Mesa
			5 Gonzales Mesa
			6 Crow Mesa West
6	7	8	7 Crow Mesa East
			8 Tafoya Canyon

ADJOINING 7.5' QUADRANGLE NAMES

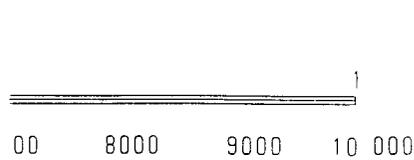
SMOUSE MESA, NEW MEXICO
MERIDIAN OIL
 PROVISIONAL EDITION 1985

STANDARDS
 LORADO 80225

36107-D5-TF-024



271 32' 30" 590000 FEET 274



NEW MEXICO

INTERIOR-GEO

Mike Stogner

From: Ernie Busch
To: Mike Stogner
Subject: MERIDIAN OIL INC (NSL)
Date: Fri, Feb 24, 1995 11:10AM
Priority: High

CANYON LARGO UNIT #447
1510' FNL; 1615' FEL
G-24-25N-07W
RECOMMEND: APPROVAL