

# MERIDIAN OIL

May 5, 1993 *Rec. 5/6/93*

Sent Federal Express

Mr. William LeMay  
New Mexico Oil Conservation Division  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Meridian Oil Inc. Johnston Federal #7B  
1275'FNL, 810'FWL Section 7, T-31-N, R-9-W  
San Juan County, New Mexico

Dear Mr. LeMay:

Meridian Oil Inc. is applying for administrative approval of a non-standard location for the above location in the Mesa Verde formation.

This application for the referenced location is due to terrain as shown on the enclosed maps and this being a non-standard short section.

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. Meridian Oil is the operator of the surrounding proration unit.
4. 7.5 minute topographic map showing the orthodox windows for the north half dedication and enlargement of the map to define topographic features.
5. If the well were directionally drilled to a standard bottom hole location, the economics would be severely burdened due to the incremental directional drilling costs of \$200,000.

Sincerely,




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-078439
1b.	Type of Well GAS	6. If Indian, All. or Tribe
2.	Operator <b>MERIDIAN OIL</b>	7. Unit Agreement Name
3.	Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499  (505) 326-9700	8. Farm or Lease Name Johnston Federal  9. Well Number 7B
4.	Location of Well 1275' FNL, 810' FWL  Latitude 36° 54' 59", Longitude 107° 49' 16"	10. Field, Pool, Wildcat Blanco Mesa Verde  11. Sec., Twn, Rge, Mer. Sec 7, T-31-N, R-9-W NMPM
14.	Distance in Miles from Nearest Town 4 miles to Cedar Hill	12. County San Juan
		13. State NM
15.	Distance from Proposed Location to Nearest Property or Lease Line 810'	
16.	Acres in Lease	17. Acres Assigned to Well 266.77 N/2
18.	Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 65'	
19.	Proposed Depth 6177'	20. Rotary or Cable Tools Rotary
21.	Elevations (DF, FT, GR, Etc.) 6556' 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 <u>4/21/93</u>

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

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

Archaeological Report will be submitted  
Threatened and Endangered Species Report will be submitted

NOTE: This format is issued in lieu of U.S. BLM Form 3160-3

Submit to Appropriate  
District Office  
State Leases - 4 copies  
Fee Lease - 3 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised 1-1-89

OIL CONSERVATION DIVISION

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

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

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 Meridian Oil Inc.		Lease Johnston Federal		Well No. 7B
Unit Letter C	Section 7	Township 31 North	Range 9 West	County San Juan
Actual Footage Location of Well: 1275 feet from the North line and 810 feet from the West line				
Ground level Elev. 6556'	Producing Formation Mesa Verde	Pool Blanco	Dedicated Acreage: 266.77 Acres	

1. Outlines the acreage dedicated to the subject well by colored pencil or hatchure 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 \_\_\_\_\_  
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  
Peggy Bradfield

Position  
Regulatory Affairs

Company  
Meridian Oil Inc.

Date  
4-14-93

Date

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.

1-26-93

Date Surveyed

Signature *Neale C. Edwards*

Signature of Professional Surveyor

NEALE C. EDWARDS  
6857

6857

CERTIFICATE OF LAND SURVEY

Neale C. Edwards

April 21, 1993

OPERATIONS PLAN

Well Name: Johnston Federal #7B  
Location: 1275'FNL, 810'FWL Section 7, T-31-N, R-9-W  
 San Juan County, New Mexico  
 Latitude 36° 54' 59", Longitude 107° 49' 16"  
Formation: Blanco Mesa Verde  
Elevation: 6556'GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	1872'	
Ojo Alamo	1872'	1904'	aquifer
Kirtland	1904'	3003'	gas
Fruitland	3003'	3383'	gas
Pictured Cliffs	3383'	3625'	gas
Lewis	3625'	4156'	gas
Intermediate TD	3825'		
Chacra	4156'	4133'	gas
Mesa Verde	4930'		gas
Upper Cliff House	4930'	5224'	gas
Massive Cliff House	5224'	5285'	gas
Menefee	5285'	5627'	gas
Massive Point Lookout	5627'	5737'	gas
Lower Point Lookout	5737'		gas & oil
<b>Total Depth</b>	<b>6177'</b>		

Logging Program:

Openhole Wireline Logging -  
 Surface to Total Depth : GR/DIL  
 Intermediate TD to Total Depth : GR/LDT/CNL/DIL  
 Mud Logs/Coring/DST -  
 Mud logs - none  
 Coring - none  
 DST - none

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
200-3825'	Weighted	8.4-9.1	30-60	no control
3825-6177'	Gas/Mist	n/a	n/a	n/a

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' - 200'	9 5/8"	32.3#	H-40
8 3/4"	0' - 3825'	7"	20.0#	K-55
6 1/4"	3675' - 6177'	4 1/2"	10.5#	K-55

Tubing Program:

0' - 6177'      2 3/8"      4.7#      J-55

BOP Specifications, Wellhead and Tests:

**Surface to Intermediate 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.

**Intermediate TD to Total Depth -**

11" 2000 psi minimum double gate BOP stack (Reference Figure #1). After nipple-up prior to drilling out intermediate casing, rams and casing will be tested to 1500 psi for 30 minutes.

**Surface to Total Depth -**

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

**Completion Operations -**

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

**Wellhead -**

9 5/8" x 7" x 2 3/8" 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:**

9 5/8" surface casing - cement with 180 sx Class "B" cement with 1/4# flocele/sx and 3% calcium chloride (212 cu.ft. of slurry, 200% excess to circulate to surface). WOC 12 hrs. 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.

**7" intermediate casing -**

Lead w/664 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 (1293 cu.ft. of slurry, 125% excess to circulate to surface). WOC minimum of 12 hours before drilling out intermediate casing. If cement does not circulate to surface, a temperature log will be run after 8 hours to determine TOC. Test casing to 1500 psi for 30 minutes.

Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. Nine bowspring centralizers spaced every other joint off bottom, with three spaced every fourth joint to the base of the Ojo Alamo at 1904'. Two turbolating centralizers at the base of the Ojo Alamo at 1904'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

#### 4 1/2" Production Liner -

Cement to circulate liner top. Lead with 187 sx 50/50 Class "B" Poz with 2% gel, 0.6% fluid loss additive. Tail with 100 sx 50/50 Class "B" Poz with 2% gel, 0.6% fluid loss additive, 6.25#/sx gilsonite and 1/4#/sx cellophane flakes (450 cu.ft., 75% excess to circulate liner top). WOC a minimum of 18 hrs prior to completing.

Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. Bowspring centralizers spaced every other joint off bottom to top of the Mesa Verde or above. The liner hanger will have a rubber packoff.

- 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.

#### Special Drilling Operations (Gas/Mist Drilling):

The following equipment will be operational while gas/mist drilling:

- An anchored blooie line will be utilized to discharge all cuttings and circulating medium to the blow pit a minimum of 100' from the wellhead.
- The blooie line will be equipped with an automatic igniter or pilot light.
- Compressors will be located a minimum of 100' from the wellhead in the opposite direction from the blooie line.
- Engines will have spark arresters or water cooled exhaust.
- Deduster equipment will be utilized.
- The rotating head will be properly lubricated and maintained.
- A float valve will be utilized above the bit.
- Mud circulating equipment, water, and mud materials will be sufficient to maintain control of the well.

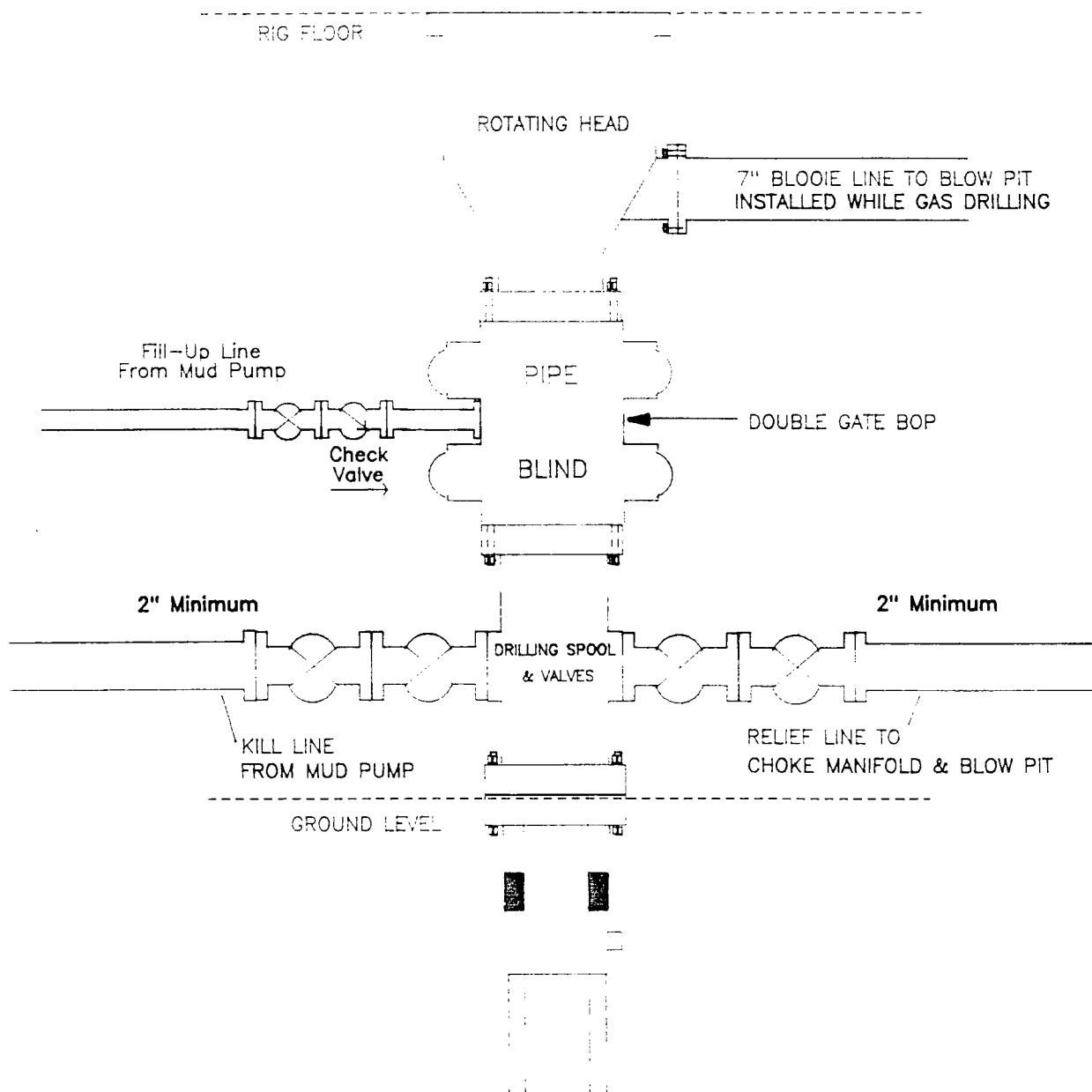
#### Additional Information:

- The Mesa Verde formation will be completed.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:

Fruitland Coal	1000 psi
Mesa Verde	700 psi
- 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 North half of Section 7 is dedicated to this well.
- This gas is dedicated.

# MERIDIAN OIL INC.

## Mesaverde Well BOP Configuration

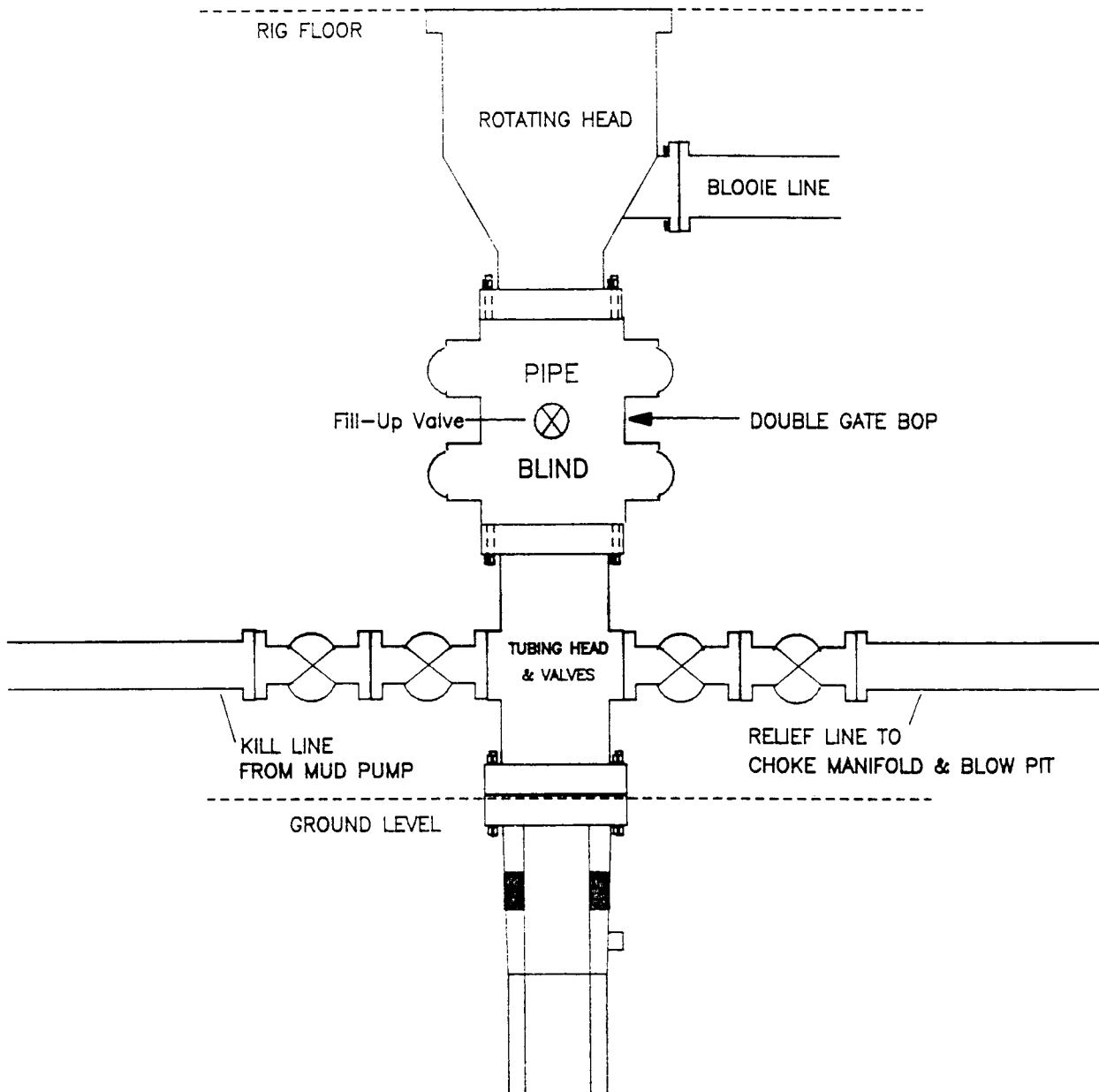


Minimum BOP installation for a Mesaverde well from Surface to Total Depth. 11" Bore, 2000psi minimum working pressure double gate BOP to be equipped with blind and pipe rams. A Schaffer Type 50 or equivalent rotating head to be installed on the top of the BOP. All equipment is 2000psi working pressure or greater.

Figure #1

# MERIDIAN OIL INC.

## Mesaverde Well — Completion Rig BOP Configuration

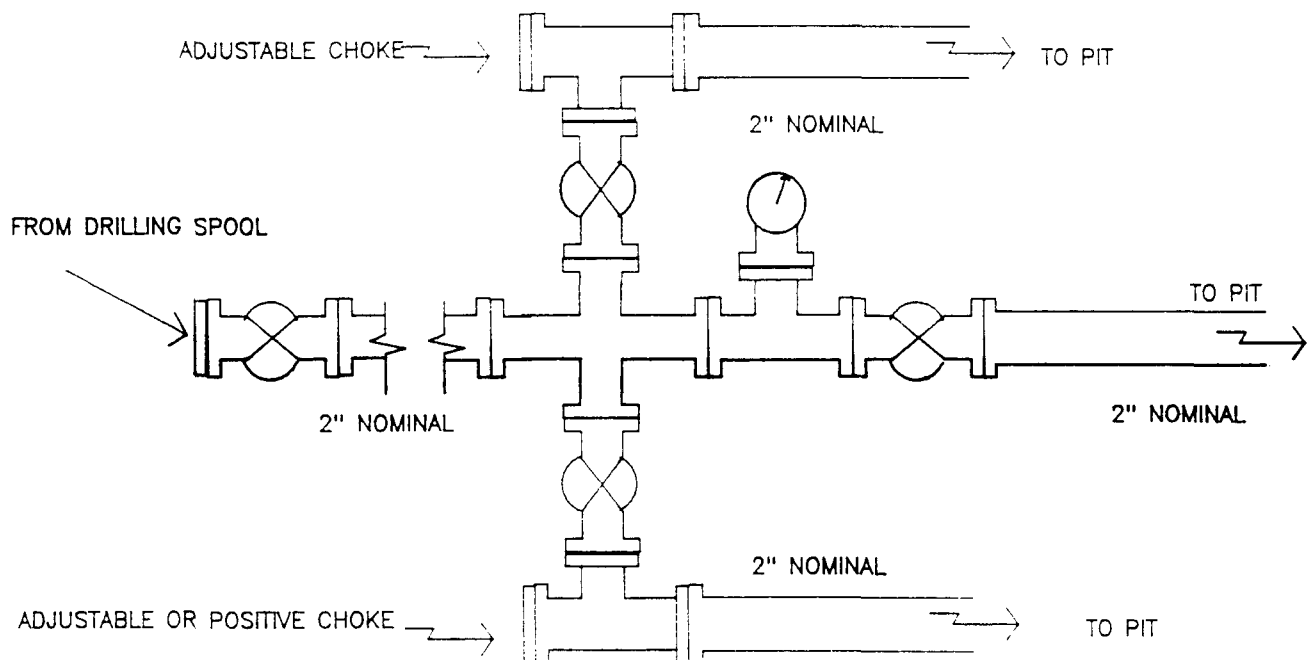


Minimum BOP installation for Completion Operations. 7 1/16" Bore (6" Nominal), 3000psi minimum working pressure double gate BOP to be equipped with blind and pipe rams.

Figure #2



**MERIDIAN OIL INC.**  
Mesaverde Well  
Choke Manifold Configuration



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

**Figure #3**

**MERIDIAN OIL**  
Johnston Federal #7B  
Multi-Point Surface Use Plan

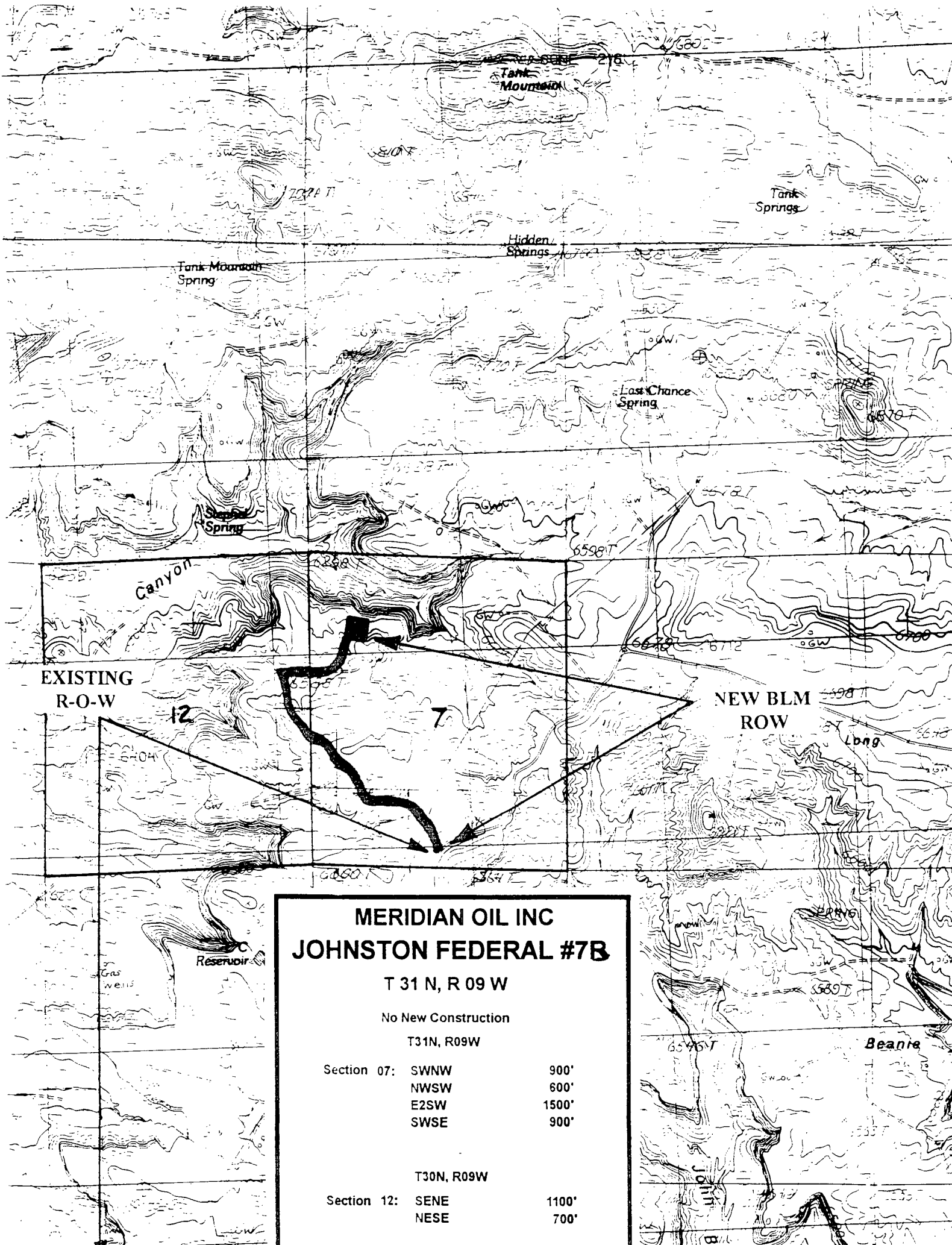
1. Existing Roads - Refer to Map No. 1. Existing roads used to access the proposed location will be properly maintained for the duration of the project. Bureau of Land Management right-of-way has been applied for as shown on Map No. 1.
2. Planned Access Road - Refer to Map No. 1. None required.
3. Location 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 Hart Canyon Water Well located in NW/4 Section 28, T-31-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

4/21/93  
Date

JWC:pb



EXISTING  
R-O-W

12

7

NEW BLM  
ROW

**MERIDIAN OIL INC  
JOHNSTON FEDERAL #7B**

T 31 N, R 09 W

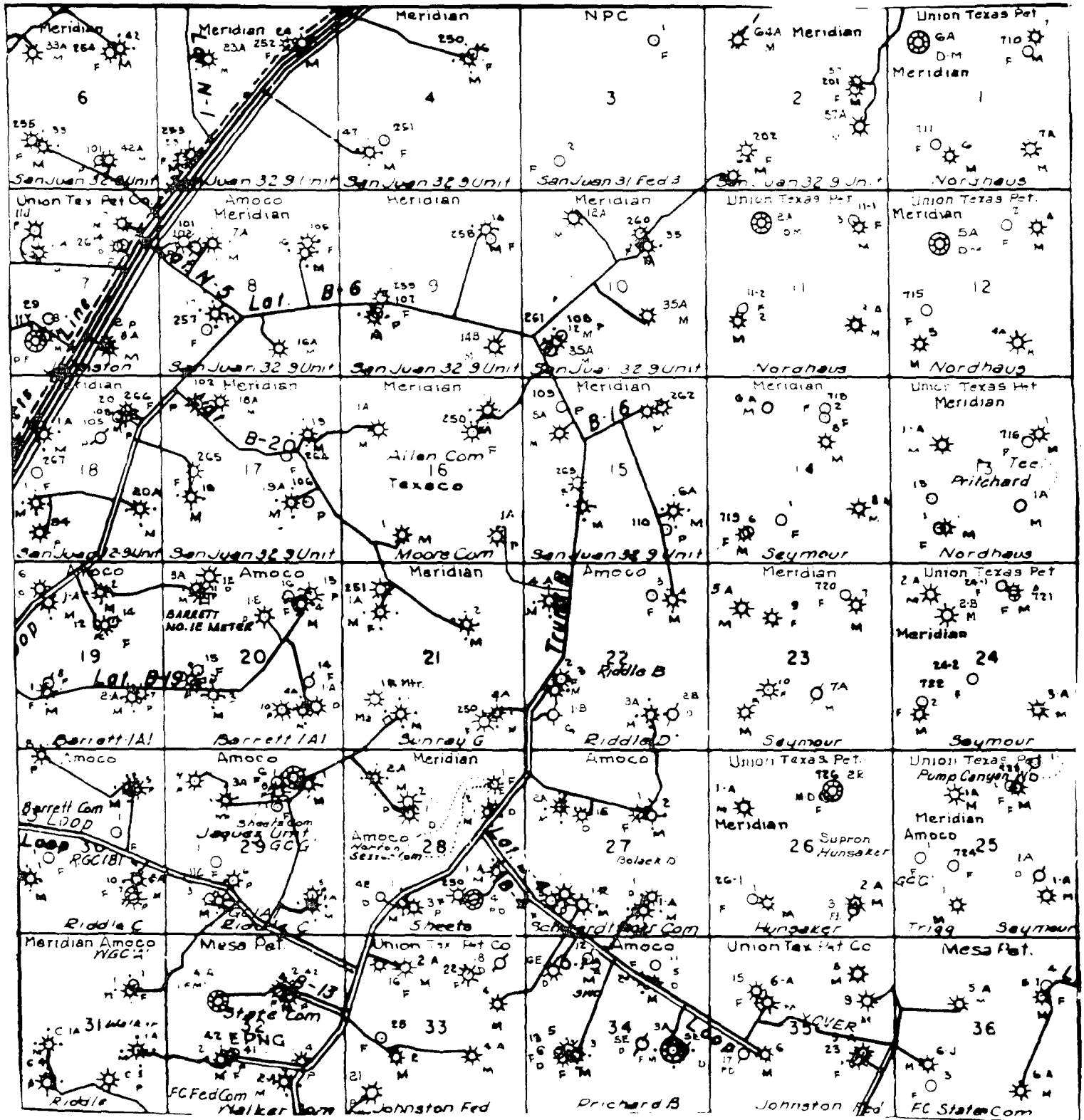
No New Construction

T31N, R09W

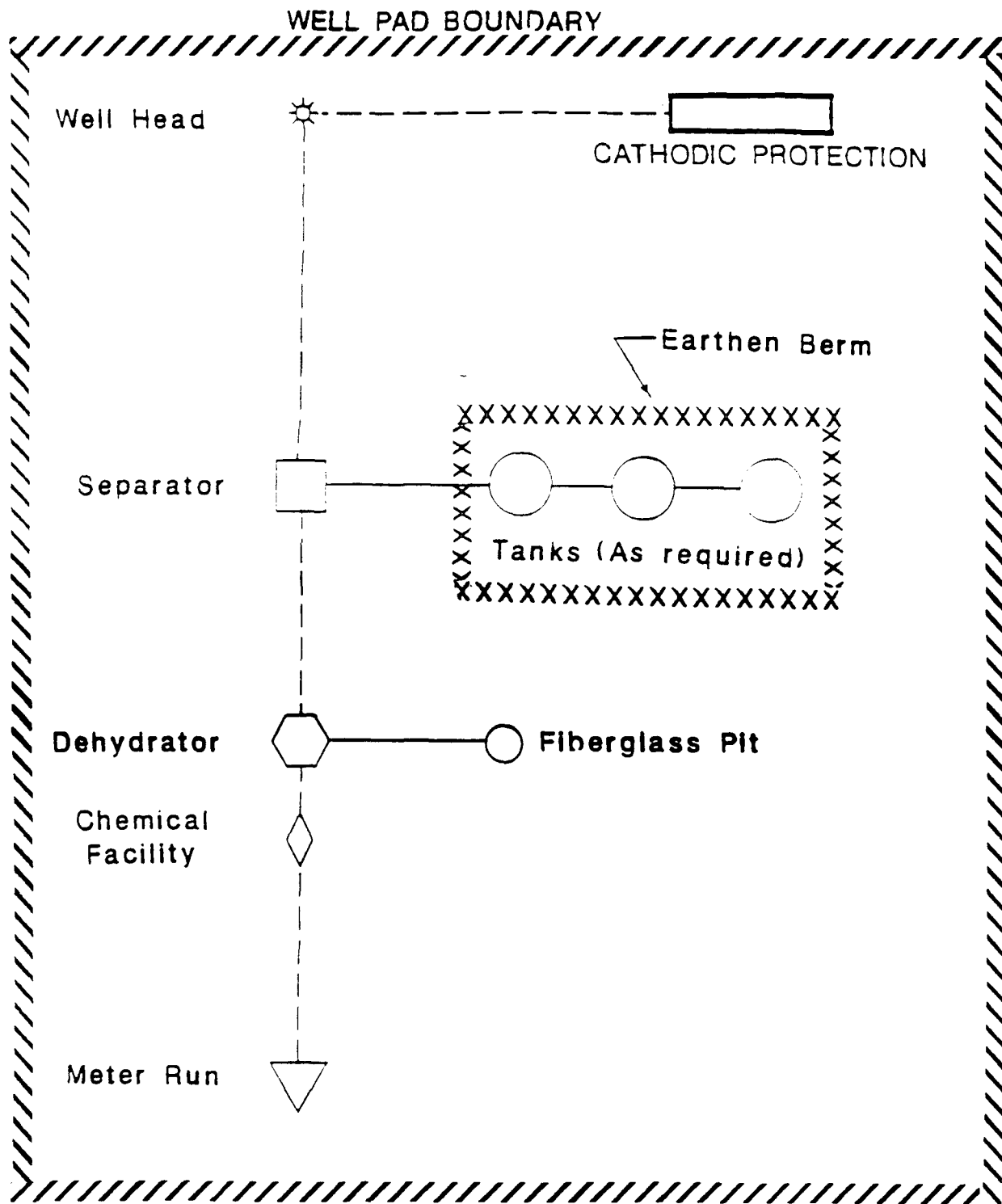
Section 07:	SWNW	900'
	NWSW	600'
	E2SW	1500'
	SWSE	900'

T30N, R09W

Section 12:	SENE	1100'
	NESE	700'



MERIDIAN OIL INC.  
 Pipeline Map  
 T-31-N, R-09-W  
 San Juan County, New Mexico  
 Johnston Federal #7B  
 Map #1A



**PLAT #1**

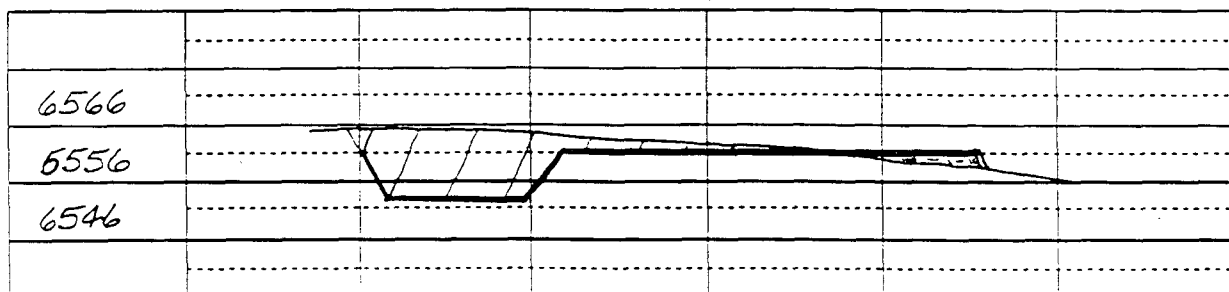
**MERIDIAN OIL**

ANTICIPATED  
PRODUCTION FACILITIES  
FOR A  
MESA VERDE WELL

Name: MOI JOHNSTON FEDERAL #78  
Footage: 1275 FNL 810 FNL  
Sec 7 T- 31 N.R- 9 W NMPM  
Co. SAN JUAN St. NM  
Elevation: 6556' Date: 1-26-93

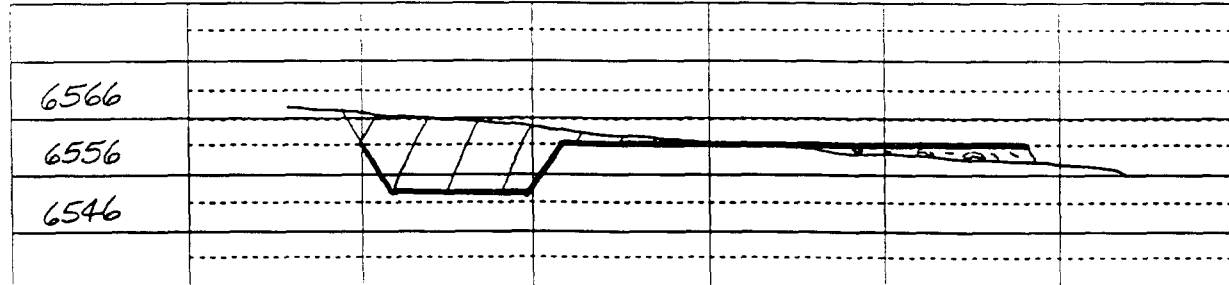


C/L



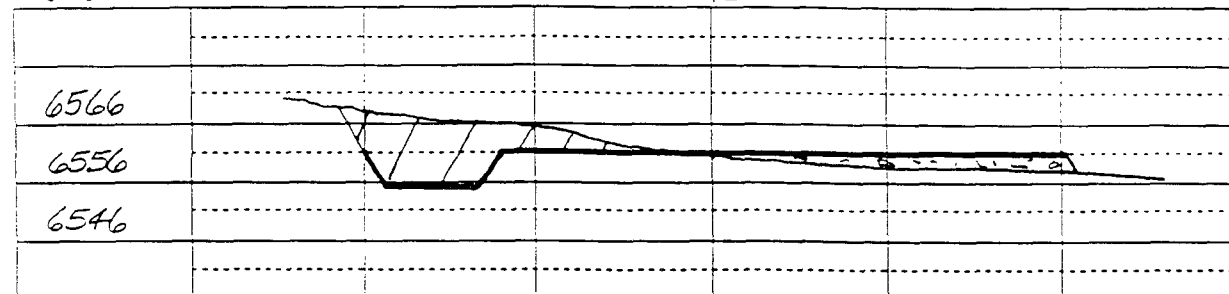
B - B'

C/L



C - C'

C/L



**Figure #4**

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-102  
Revised 1-1-89

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 Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

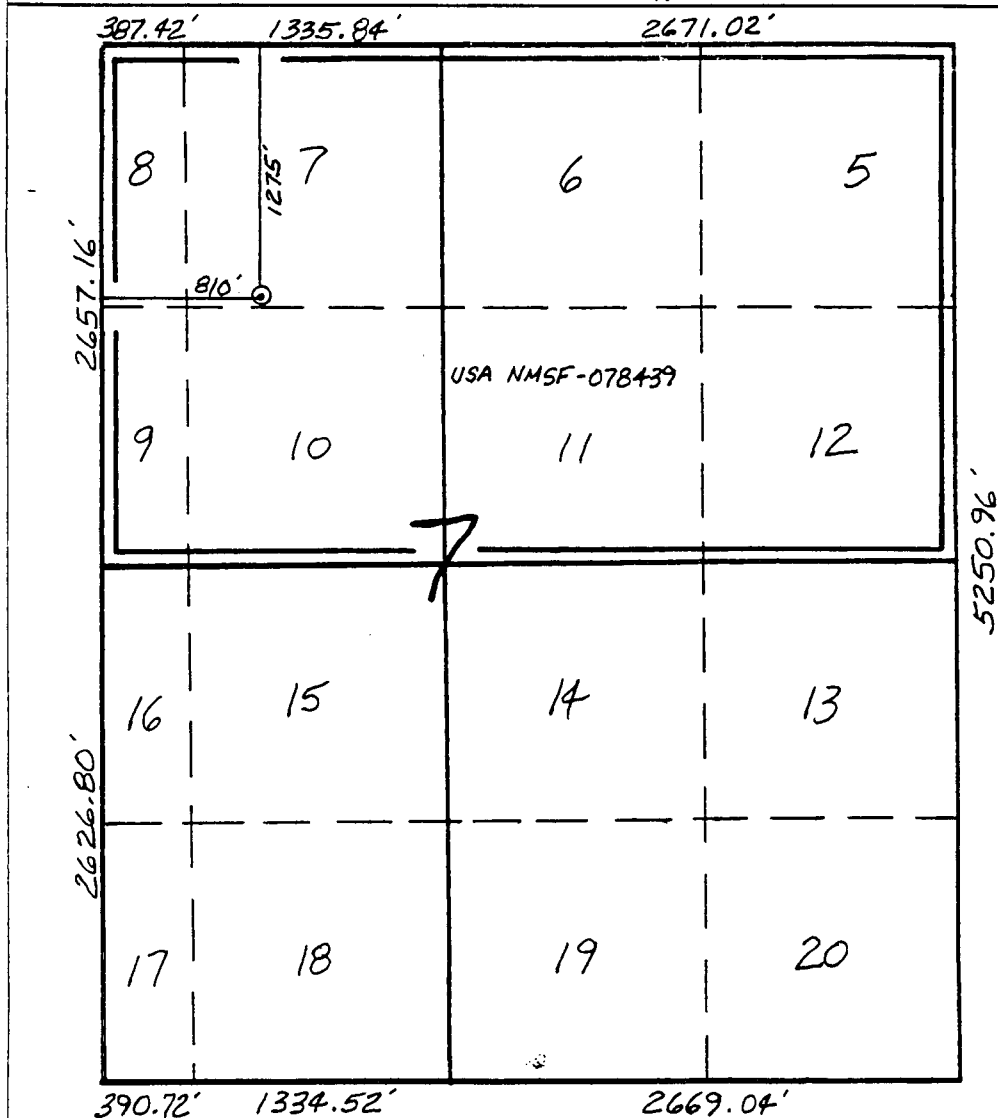
All Distances must be from the outer boundaries of the section

Operator Meridian Oil Inc.			Lease Johnston Federal		Well No. 7B
Unit Letter C	Section 7	Township 31 North	Range 9 West	County San Juan	
Actual Footage Location of Well: 1275 feet from the North line and 810 feet from the West line					
Ground level Elev. 6556'	Producing Formation Mesa Verde		Pool Blanco	Dedicated Acreage: 266.77 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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 \_\_\_\_\_

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.

*Peggy Bradfield*  
Signature

Peggy Bradfield  
Printed Name

Regulatory Affairs  
Position

Meridian Oil Inc.  
Company

5-5-93

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.

1-26-93

Date Surveyed

*Neale C. Edwards*  
Signature

Seal of Professional Surveyor

NEW MEXICO

6857

6857

CERTIFIED LAND SURVEYOR

Neale C. Edwards



# MERIDIAN OIL INC.

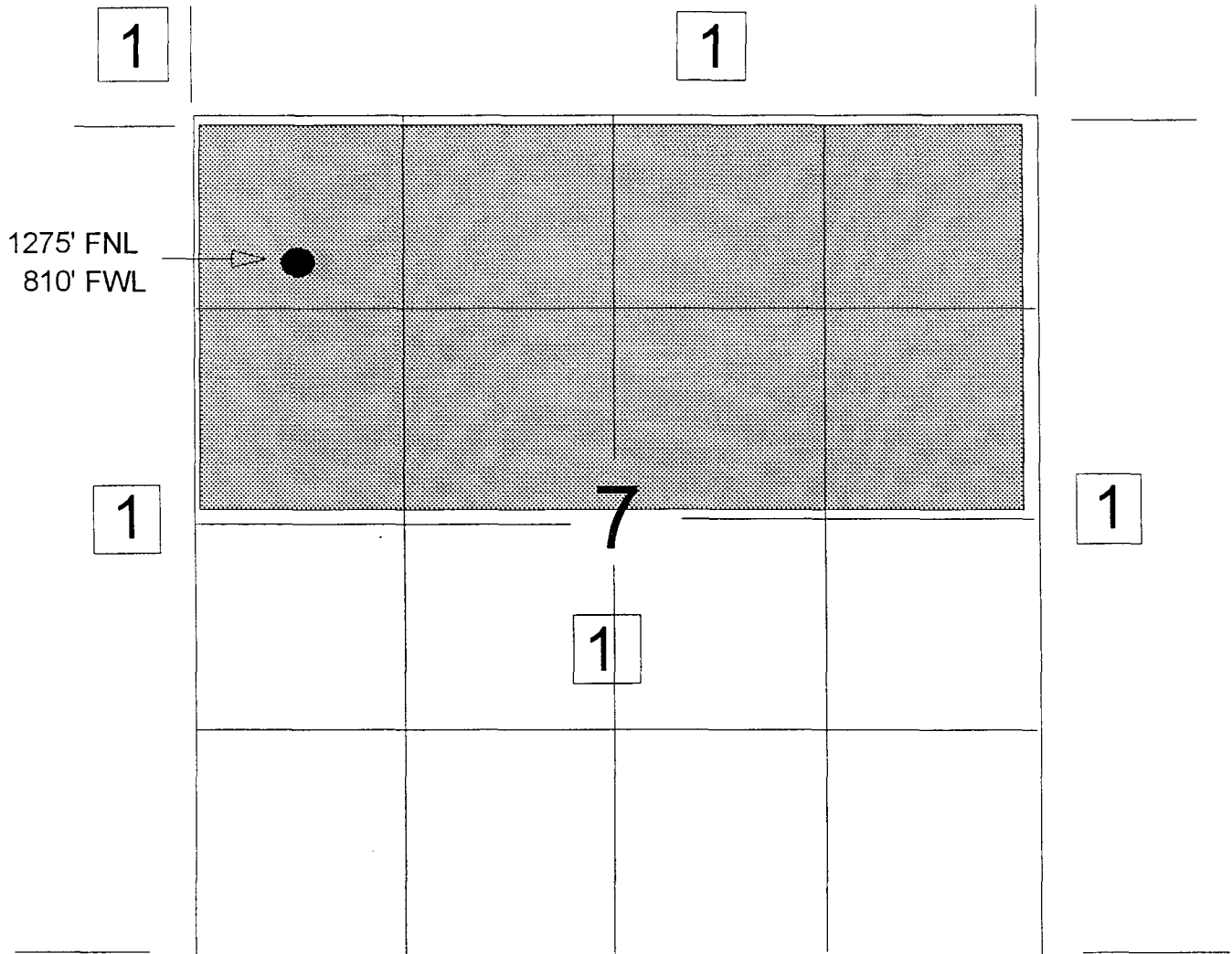
OFFSET OPERATOR/OWNER PLAT

JOHNSTON FEDERAL #7B

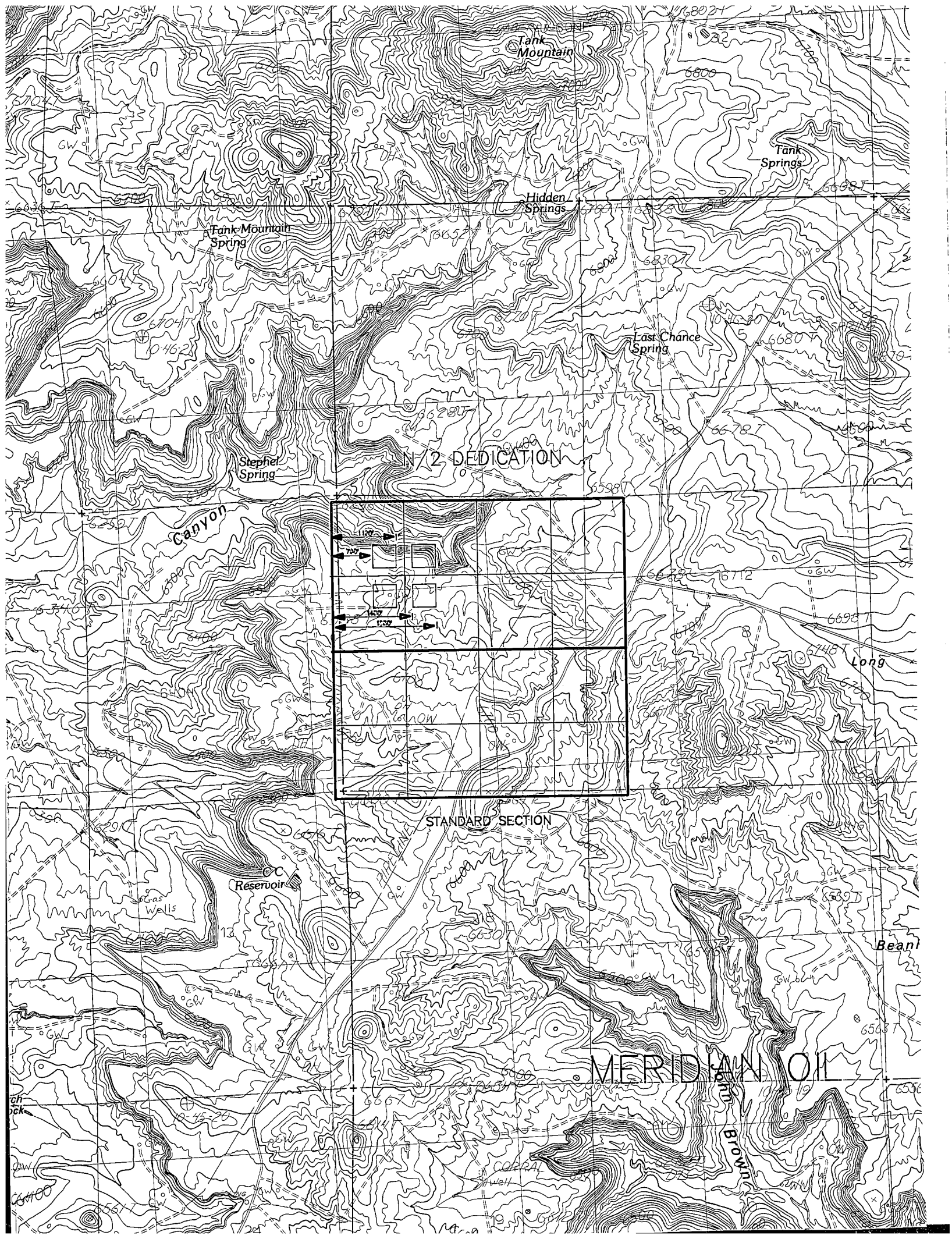
Unorthodox Well Location

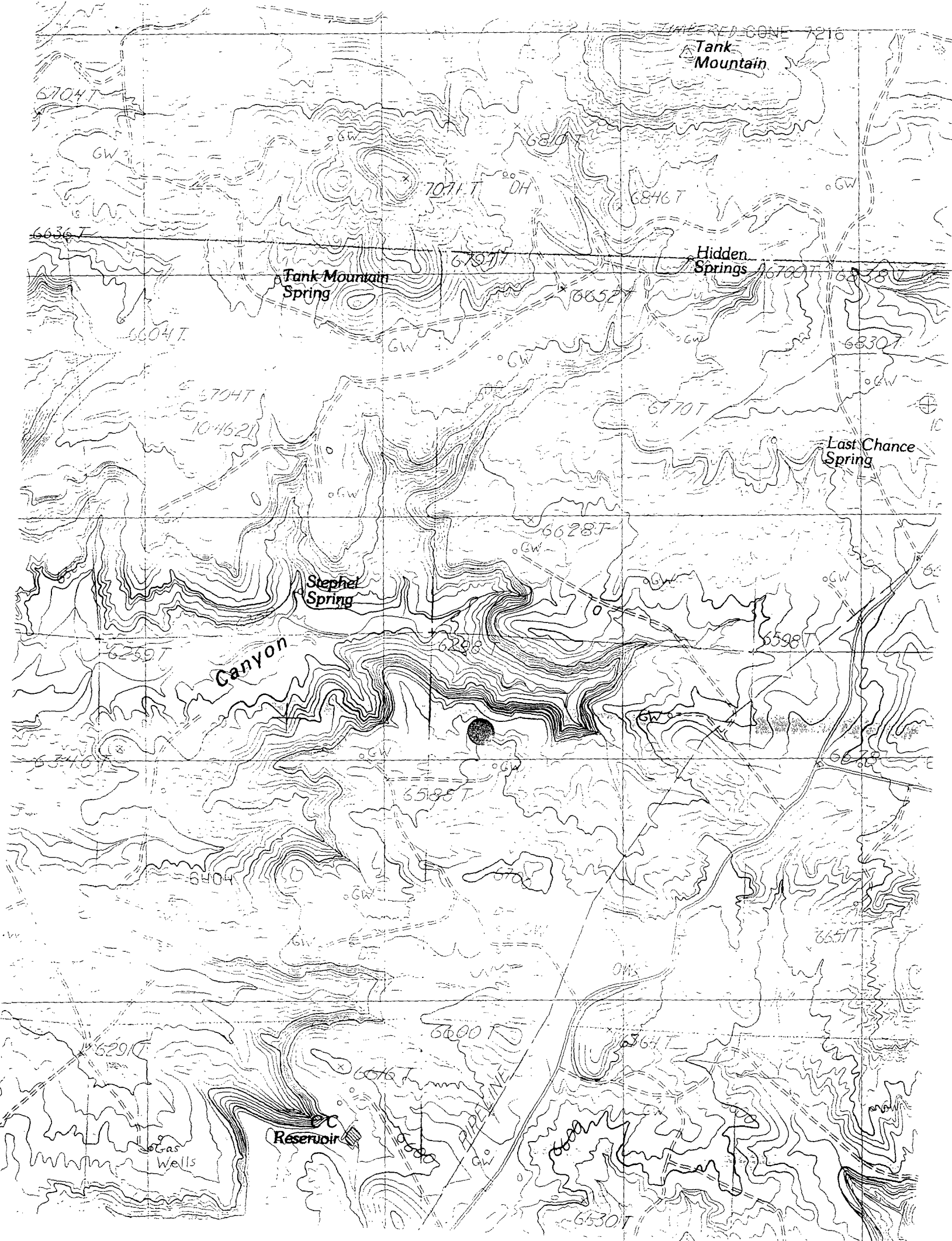
NW NW Section 7

Township 31 North, Range 9 West



1) Meridian Oil Inc., Operator, 3535 East 30th St., P.O. Box 4289, Farmington, New Mexico  
87499-4289







OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

August 6, 1958

C  
O  
P  
Y  
  
Anderson-Pritchard Oil Corporation  
Charles F. White, Attorney  
Liberty Bank Building  
Oklahoma City, Oklahoma

Administrative Order NWU-284

Gentlemen:

Reference is made to your application for approval of a 263.25-acre non-standard gas proration unit in the Blance Mesaverde Gas Pool consisting of the following acreage:

TOWNSHIP 31 NORTH, RANGE 9 WEST, NMPH  
Section 7: N/2

It is understood that this unit is to be dedicated to your Johnston-Federal Well No. 7, located 990 feet from the North line and 990 feet from the East line of said Section 7.

By authority granted me under the provisions of Rule 1 (b), Section 15 of the Special Rules and Regulations for the Blance Mesaverde Gas Pool, as set forth in Order H-128-D, you are hereby authorized to operate the above described acreage as a non-standard gas proration unit, with allowable to be assigned thereto in accordance with the pool rules, based upon the unit size of 263.25 acres.

Very truly yours,

A. L. PORTER, Jr.,  
Secretary-Director

ALP/CEP/eg

cc: Oil Conservation Commission - Astec  
Oil & Gas Engineering Committee - Hobbs



STATE OF NEW MEXICO  
**ENERGY AND MINERALS DEPARTMENT**  
 OIL CONSERVATION DIVISION  
 AZTEC DISTRICT OFFICE

10000 INDIAN ROAD  
 AZTEC, NEW MEXICO 87410  
 (505) 334-0170

JOSEF CAPRUTHERS  
 GOVERNOR

93 JUN 2 AM 8 52

Date: 5-23-93

*Attn: Mike Stegner*

Oil Conservation Division  
 P.O. Box 2000  
 Santa Fe, NM 87504-2000

Re: Proposed HC \_\_\_\_\_  
 Proposed DHC \_\_\_\_\_  
 Proposed NGL X \_\_\_\_\_  
 Proposed SWD \_\_\_\_\_  
 Proposed WFX \_\_\_\_\_  
 Proposed PMX \_\_\_\_\_

*NSL-3250*

Gentlemen:

I have examined the application dated 5-6-93  
 for the Mexican Oil Inc. Johnston Federal # 7B  
 Operator Lease & Well No.

C-7-31N-9W and my recommendations are as follows:  
 Unit, S-T-R

*Approve*

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Yours truly,

*Ernie Busch*