



### ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING GOVERNOR

ANITA LOCKWOOD CABINET SECRETARY

May 27, 1993

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87504 (505) 827-5800

Maridia - Ol

Meridian Oil, Inc.
Attention: Peggy Bradfield
P.O. Box 4289

P.O. Box 4289

Farmington, New Mexico 87499-4289

JUN 3 1993

OIL CON. DIV

Administrative Order NSL-3243

Dear Ms. Bradfield:

By the authority granted me under the provisions of Rule 2(d) of the Special Rules and Regulations for the Blanco-Mesaverde Pool, as promulgated by Division Order No. R-8170, as amended, the following described well to be drilled at an unorthodox gas well location is hereby approved:

1600' FNL - 710' FEL (Unit H)

Further, Meridian is authorized to simultaneously dedicate Blanco-Mesaverde gas production on the subject GPU from the No. 4-R well with the two existing Well Nos. 4 and 4-A. Said wells and GPU will be subject to all exsisting rules, regulations, policies, and procedures applicabe to prorated gas pools in Northwest New Mexico.

Sincerely,

William J. LeMay

Director

cc:

WJL/MES/amg

Oil Conservation Division - Aztec

U. S. Bureau of Land Management - Farmington



STATE OF NEW MEXICO

# ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION AZTEC DISTRICT OFFICE

EY CAPRUTHERS GOVERNOR 19XX) NIQ DHAZOS NOAD AZTEC, NEW MEXICO 07410 (505) 334-0170

Date: 5-28-93	
	ather: Mike Stagner
Oil Conservation Division P.O. Box 2088 Santa Fe, NH 87504-2088	
Re: Proposed NC Proposed DNC Proposed NSL Proposed SWD Proposed WFX Proposed PMX	·
Gentlemen:	4.13 03
I have examined the application	
for the Moudian Od Frac. Operator	S. J. 32-9 Chist # 48
Operator	Lease & Well No.
H-12-3/W-/OW and my re	
Africore	
Yours truly,	
Sine Braily	

### MERIDIAN OIL

May 11, 1993

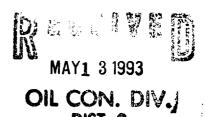
Sent Federal Express

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

Re:

Meridian Oil Inc. San Juan 32-9 Unit #4R 1600'FNL, 710'FEL Section 12, T-31-N, R-10-W San Juan County, New Mexico

Dear Mr. LeMay:



Meridian Oil Inc. is applying for administrative approval of a non-standard location and non-standard proration unit for the above location in the Mesa Verde formation. This application for the referenced location is due to terrain and at the request of the Bureau of Land Management for the access road. Section 12 is a short section; therefore, the east half of the section as dedicated to this well contains 276.36 acres.

The following attachments are for your review:

- Application for Permit to Drill.
- Completed C-102 at referenced location.
- 3. Offset operators/owners plat and affadavit of notification.
- 4. 7.5 minute topographic map showing the orthodox windows for the east 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.

A copy of this application is being submitted to all offset owners/ operators by certified mail with a request that they furnish you with a Waiver of Objection, and return one copy to this office.

_	Sincerely,  MARICA  Peggy Bradfield  Regulatory/Compliance Representative
	encs.
	<u>WAIVER</u>
	Koch Exploration hereby waives objection to Meridian Oil Inc.'s application for a non-standard
	location and non-standard proration unit for their San Juan 32-9 Unit #4R as proposed.
	By: Date:
	xc: Koch Exploration, PO Box 2256, Wichita, KS 67201

#### **UNITED STATES** DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

	APPLICATION FOR PERMIT TO DRILL, DEE	PEN, OR PLUG BACK
1a. 1b.	Type of Work DRILL Type of Well GAS MAY1 3 1993	5. Lease Number SF-078389A 6. If Indian, All. or Tribe
2.	MERIDIAN OIL OIL CON. DIV.	7. Unit Agreement Name San Juan 32-9 Unit
3.	Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name San Juan 32-9 Unit 9. Well Number 4R
4.	Location of Well 1600'FNL, 710'FEL  Latitude 36° 54' 56", Longitude 107° 49' 45'	10. Field, Pool, Wildcat  Blanco Mesa Verde  11. Sec., Twn, Rge, Mer.  Sec 12, T-31-N, R-10-W  NMPM
14.	Distance in Miles from Nearest Town 4 miels from Cedar Hill, NM	12. County 13. State San Juan NM
15.	Distance from Proposed Location to Nearest Property or Lea	se Line
16.	Acres in Lease	17. Acres Assigned to Well 276.36 E/2
18.	Distance from Proposed Location to Nearest Well, Drlg, Com	ipl, or Applied for on this Lease
19.	Proposed Depth 6158'	20. Rotary or Cable Tools Rotary
21.	Elevations (DF, FT, GR, Etc.) 6535 '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
PERM	IIT NO APPROVAL	_ DATE
APPR	OVED BY TITLE	

Submit to Appropriate
District Office
State Loans - 4 comes
Fee Loans - 3 comes

# State of New Mexico Energy, Minerals and Natural Resources Department

Ferm C-102 Reviews 1-1-89

DISTRICT | P.O. Box 1980, Hobbs, NM 12240 OIL CONSERVATION DIVISION
P.O. Box 2088

DISTRICT II P.O. DIEWE DD. Ariona, NM \$8210 Sama Fe, New Mexico 87504-2088

DISTRICT III 1000 Rio Brasso Rd., Ames, NM 87410

# WELL LOCATION AND ACREAGE DEDICATION PLAT

Open	<del></del>	Ali D	stances must be from the qual	r boundance of the s	lecton	
Unix	Meri Second	dian Oil Inc.	S	an Juán 32-	-9 Unit	Well No.
Actor	H Former Language of V	12 31	North 10	West	Compy Sa	n Juan
1	600 feet fro	Month	110 and 710		feet from the Eas	t :
	6535'	Mesa Verde	Pool Bla	inco		276.36
	2. If more than on		i. custime each and identify the co			
	United to the last		is dedicated to the well, here the			Toyay).
-	Yes If sooner is "no" to this form of soccess	No If i	namen is "yes" type of ecceptible Places which have ectedly been o	unitiza	ation	
	No allowable will	to the part to the real sense of	il unimone have been economicate area, has been approved by the C			M. or otherweek
			75.12	Xvana.		
645.28	4 	3 <b>E!VEM</b>	2	/600′	contained have best of my and	TOR CERTIFICATION  corrily that the information  in a run and complete to the  readge and belief.  Bradfield
24	MAY]	3 1993 DN. DIV.) ST. ?	7 USA SF-078389-A	710°	Regulat Meridia Company	ory Affairs
8.22	/2	//	10	9	I hereby certi on this plat actual survey supervison, a correct to th	YOR CERTIFICATION  by that the well location shown  was piotted from field notes of  made by me or under my  and that the same is true and  a best of my thomsedge and  2-11-92  C. ED to
201	/3	       <i> 4</i> 	15	16	New Signature	9357)

#### OPERATIONS PLAN

Well Name: San Juan 32-9 Unit #4R

1600'FNL, 710'FEL Section 12, T-31-N, R-10-W Location:

San Juan County, New Mexico

Latitude 36° 54' 56", Longitude 107° 49' 45"

Formation: Blanco Mesa Verde

Elevation: 6535'GL

Formation Tops:	Тор	Bottom	Contents
Surface Ojo Alamo Kirtland Fruitland Pictured Cliffs Lewis Intermediate TD Chacra Mesa Verde Massive Cliff House Menefee Massive Point Lookout Lower Point Lookout Total Depth	San Jose 1850' 1882' 2968' 3353' 3603' 3800' 4118' 4900' 5268' 5608'	1850' 1882' 2968' 3353' 3603' 4118' 4900' 5268' 5608' 5711'	aquifer gas
Tocar Debru	6158'		

#### Logging Program:

Openhole Wireline Logging -

Surface to TD

Surface to TD : CNL/GR Intermediate TD to Total Depth : DIL/LDT/Temp

Mud Logs/Coring/DST -Mud logs - none

Coring - none

DST none

#### Mud Program:

Interval	Type	Weight	Vis.	Fluid Loss
0- 200'	Spud	8.4-8.9	40-50	no control
200-3800'	Weighted	8.4-9.1	30-60	no control
3800-6158'	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>	Depth Interval	Csg.Size	Wt.	Grade
12 1/4"	0' - 200'	9 5/8"	$\frac{32.3}{32.3}$ #	<u> </u>
8 3/4"		, -		
	0' - 3800'	7 <b>''</b>	20.0#	K-55
6 1/4"	3650' - 6158'	4 1/2"	10.5#	K-55

#### Tubing Program:

0' - 6158' 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/579 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 (1143 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. Seven bowspring centralizers spaced every other joint off bottom, with three spaced every fourth joint to the base of the Ojo Alamo at 1882'. Two turbolating centralizers at the base of the Ojo Alamo at 1882'. 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 325 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 (693 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:

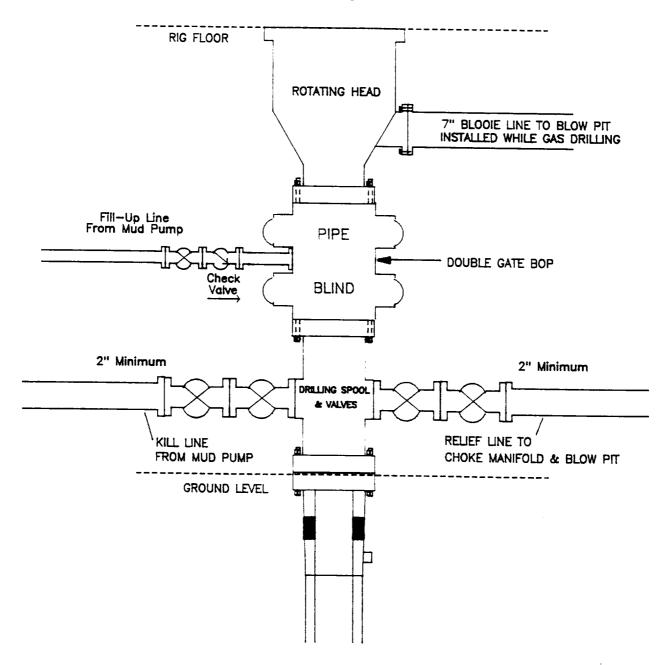
- The Mesa Verde formation will be completed.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:

Fruitland Coal 1400 psi Pictured Cliffs 600 psi Mesa Verde 500 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 East half of Section 12 is dedicated to this well.
- This gas is dedicated.

### MERIDIAN OIL INC.

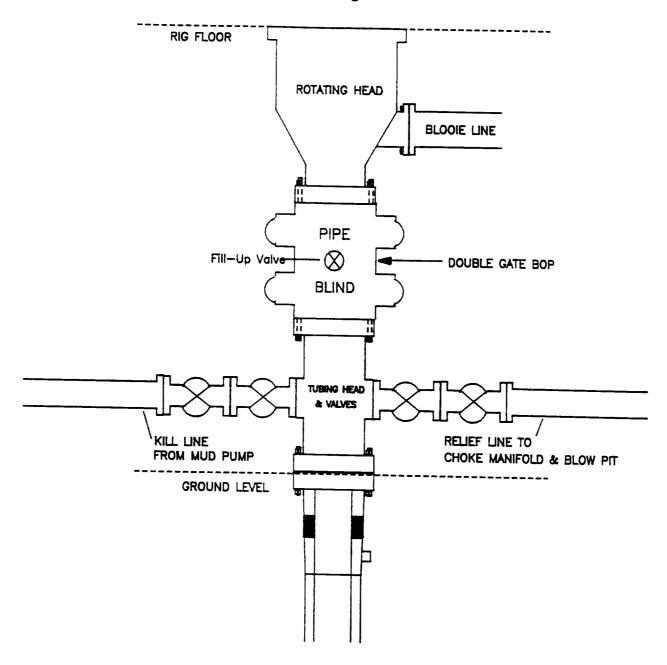
Mesaverde Well BOP Configuration



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.

### MERIDIAN OIL INC.

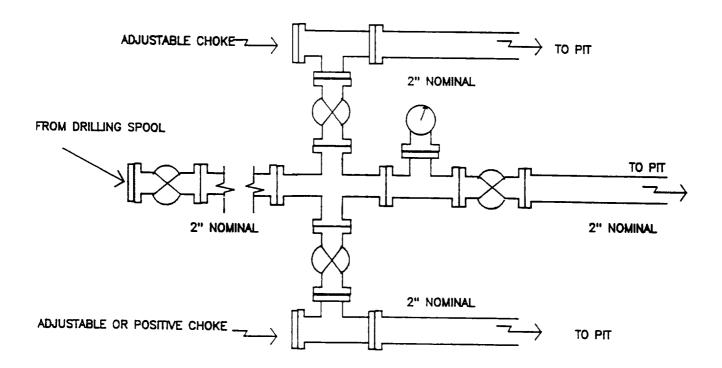
Mesaverde Well — Completion Rig BOP Configuration



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.

## 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.

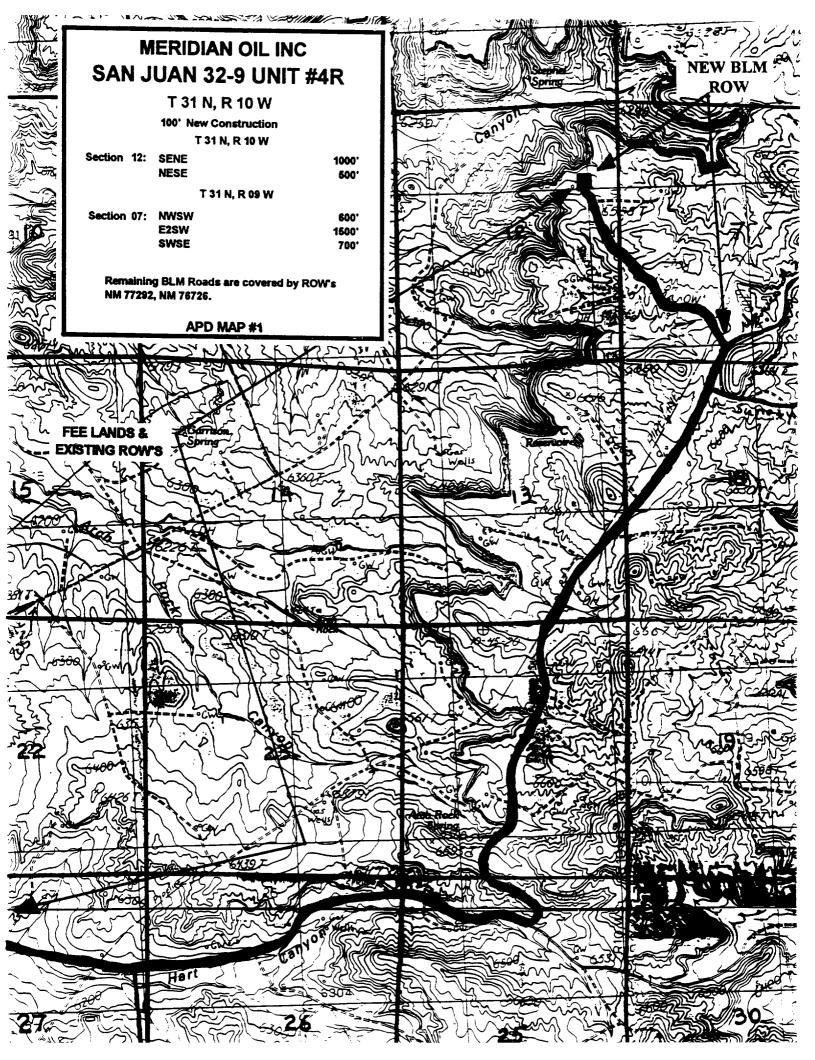


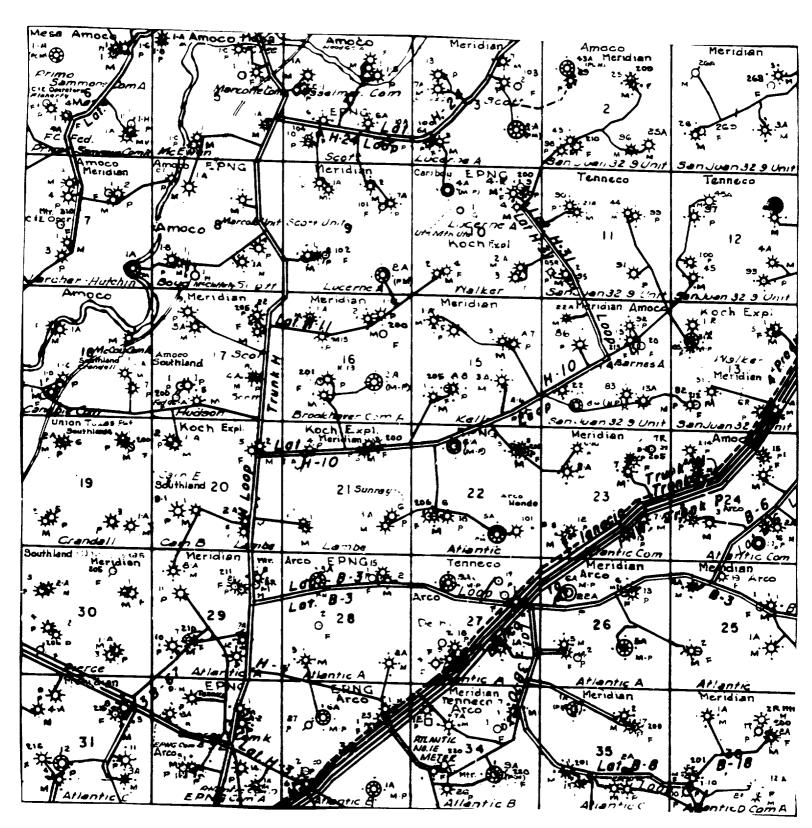
- 1. Existing Roads Refer to Map No. 1. Existing roads used to access the proposed location will be properly maintained for the duration of the project. Bureau of Land Management right-of-way has been applied for as shown on Map No. 1.
- Planned Access Road Refer to Map No. 1. The required new access road is shown on Map No. 1. The gradient, shoulder, crowning and other design elements will meet or exceed those specified by the responsible government agency. The new access road surface will not exceed twenty feet (20') in width. No additional turnarounds or turnouts will be required. Upon completion of the project, the access road will be adequately drained to control soil erosion. Approximately 100' of access road will be constructed. Pipelines are indicated on Map No. 1A.
- 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	Date
egional Drilling Engineer	Date

JWC:pb





MERIDIAN OIL INC.
Pipeline Map
T-31-N, R-10-W
San Juan County, New Mexico
San Juan 32-9 Unit #4R
Map #1A

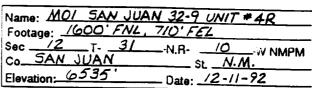
WELL PAD BOUNDARY Well Head CATHODIC PROTECTION Earthen Berm &xxxxxxxxxxxxxxxx Separator Tanks (As required) ፟፟፟፟፟፟፟፟፟፟፟XXXXXXXXXXXXXXX Dehydrator Fiberglass Pit Chemical Facility Meter Run 

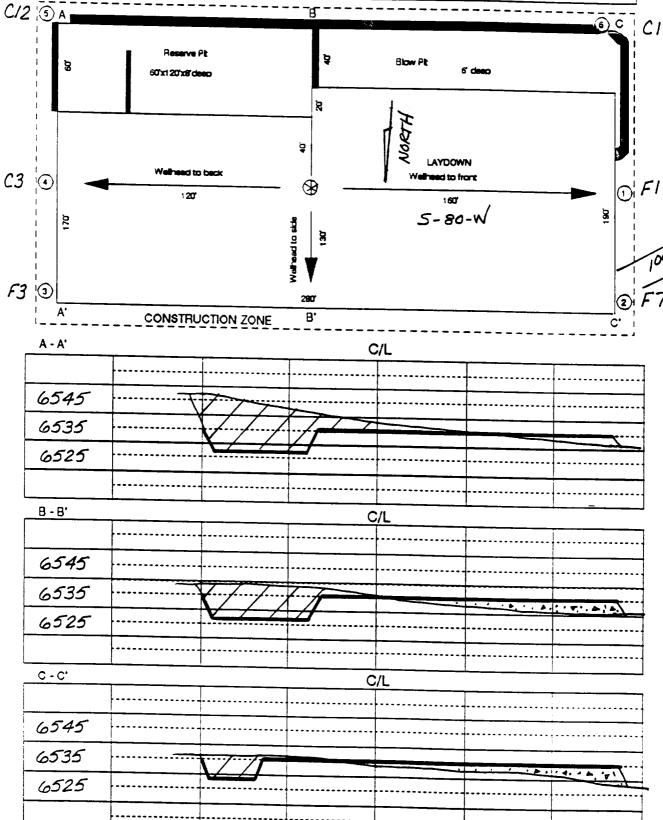
PLAT #1

# MERIDIAN OIL

ANTICIPATED
PRODUCTION FACILITIES
FOR A
MESA VERDE WELL

# MERIDIAN OIL Plat 5





School to Appropriate
District Office
State Large - 4 course
Fee Large - 3 capase

# State of New Mexico Energy, Minerals and Natural Resources Department

Form C-182 Rovens 1-1-89

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

## OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT II
P.O. Drawer DD. Artenn, NM 82210
DISTRICT III
1000 Rio Branco Rd. Alber, NM 87410

### WELL LOCATION AND ACREAGE DEDICATION PLAT

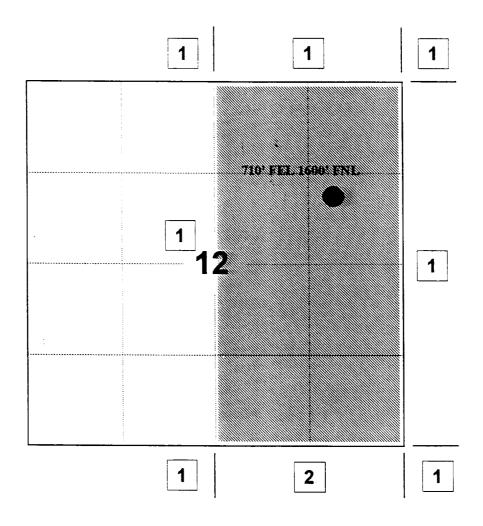
All Distances must be from the outer boundaries of the section Meridian Oil Inc. San Juan 32-9 Unit 4R Town 12 31 North 10 West San Juan Actual Former Learners of Well: 1600 North 710 feet from the المح محنا East Getting lave Earl feet from the line Car Formus 6535 Mesa Verde Blanco 276.36 1. Outline the acronge decimated to the subject well by colorest percet or technic marks on the pist below. 2. If more than one lease in declinated to the well, outline seek and identify the ownership thereof (both as to working statest and royalty). 3. If more than one tenns of different oversteip is declinated to the well, here the imment of all overste been constributed by communication If mover 'yes' type of essentiation unitization is and trust descriptions which have actually been constituted. (Use severe min of this form of morning. No allowable will be assegged to the well used all unarrate have been conscillated (by communication, unarrange, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division. OPERATOR CERTIFICATION hereby carries that the information 4 2 May Skallhie ed 1 ,000, Peggy Bradfield 9 Pristed Name Regulatory Affairs Meridian Oil Inc. 710' 5 6 8 5-11-92 USA SF-078389-A Deta SURVEYOR CERTIFICATION ! I hereby certify that the well location show on this plat was platted from field notes of actual surveys made by me or under mys 12 // 9 supervisor, and that the same is true and 10 correct to the best of my thomseles and 12-11-92 9 Sign 13 15 160 14

# **MERIDIAN OIL INC**

# SAN JUAN 32-9 UNIT #4R OFFSET OPERATOR \ OWNER PLAT

### **Non-Standard Location**

E/2 Section 12, T31N, R10W



1) Meridian Oil Inc, P.O. Box 4289, Farmington, New Mexico 87499-4289
2 ) Koch Exploration, P.O. Box 2256, Wichita, Kansas 67201

### MERIDIAN OIL

Re:

Meridian Oil Inc. San Juan 32-9 Unit #4R 1600'FNL, 710'FEL Section 12, T-31-N, R-10-W San Juan County, New Mayica

San Juan County, New Mexico

I hereby certify that the following offset operators/owners have been mailed notification of our application for non-standard location and non-standard proration unit to drill the referenced well.

Koch Exploration

PO Box 2256 Wichita, KS 67201

Peggy Á. Bradfield San Juan County State of New Mexico

My commission expires August 17, 1996

