

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

July 22, 1993

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

Meridian Oil, Inc.
Attention: Peggy Bradfield
P.O. Box 4289
Farmington, New Mexico 87499-4289

RECEIVED
JUL 29 1993
OIL CON. DIV.
DIST. 3

Administrative Order NSL-3285

Dear Ms. Bradfield:

Reference is made to your application dated June 30, 1993 for an unorthodox Blanco-Mesaverde gas well location on an existing 335.36-acre gas spacing and proration unit (GPU) for said Blanco-Mesaverde Pool (1.05 acreage factor) comprising Lots 2, 3, 4, 5, 10, 11, 12 and 13 (W/2 equivalent) of Section 15, Township 32 North, Range 7 West, NMPM, San Juan County, New Mexico. Said GPU presently has dedicated thereon the Allison Unit Well Nos. 16 and 16-A located in Units N and C, respectively, of said Section 15.

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:

**Allison Unit Well No. 16-R
995' FSL - 2335' FWL (Unit N)**

Further, Meridian is authorized to simultaneously dedicate Blanco-Mesaverde gas production on the subject GPU from the No. 16-R well with the two existing Well Nos. 16 and 16-A. Said wells and GPU will be subject to all existing rules, regulations, policies, and procedures applicable to prorated gas pools in Northwest New Mexico.

Sincerely,

William J. LeMay
Director

WJL/MES/amg

cc: Oil Conservation Division - Aztec
U. S. Bureau of Land Management - Farmington

MERIDIAN OIL

OIL CONSERVATION DIVISION
RECEIVED
JUN 21 12 05

June 30, 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. Allison Unit #16R
995'FSL, 2335'FWL Section 15, T-32-N, R-7-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 and to utilize the existing access road.

The following attachments are for your review:

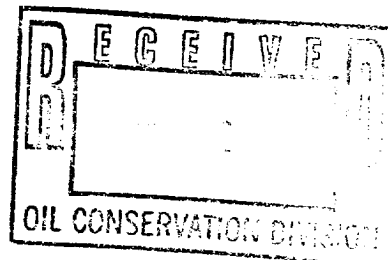
1. Application for Permit to Drill.
2. Completed C-102 at referenced location.
3. Offset operators/owners plat. Meridian Oil is the Operator of the Allison Unit.
4. 7.5 minute topographic map showing the orthodox windows for the west half dedication and enlargement of the map to define topographic features.
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-078459B |
| 1b. Type of Well GAS | 6. If Indian, All. or Tribe |
| | |
| 2. Operator MERIDIAN OIL | 7. Unit Agreement Name Allison Unit |
| | |
| 3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700 | 8. Farm or Lease Name Allison Unit 9. Well Number 16R |
| | |
| 4. Location of Well 995' FSL, 2335' FWL Latitude 36° 58' 45", Longitude 107° 33' 41" | 10. Field, Pool, Wildcat Blanco Mesa Verde 11. Sec., Twn, Rge, Mer. Sec 15, T-32-N, R-7-W NMPM |
| | |
| 14. Distance in Miles from Nearest Town 5 miles from Tiffany, CO | 12. County San Juan |
| | 13. State NM |
| | |
| 15. Distance from Proposed Location to Nearest Property or Lease Line 995' | |
| 16. Acres in Lease | 17. Acres Assigned to Well 335.36 W/2 |
| | |
| 18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 523' | |
| 19. Proposed Depth 6600' | 20. Rotary or Cable Tools Rotary |
| | |
| 21. Elevations (DF, FT, GR, Etc.) 6860' GR | 22. Approx. Date Work will Start 3rd quarter 1993 |
| | |
| 23. Proposed Casing and Cementing Program See Operations Plan attached | |
| | |
| 24. Authorized by: | |
| Regional Drilling Engineer | Date |

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

Archaeological Report submitted 5-26-93
Threatened and Endangered Species Report submitted 6-9-93
NOTE: This format is issued in lieu of U.S. BLM Form 3160-3

best to Appropriate
strict Office
the Lease - 4 corners
the Lease - 3 corners

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

ISTRICLI
O. Box 1980, Hobbs, NM 88240

ISTRICLI
O. Drawer DD, Artesia, NM 88210

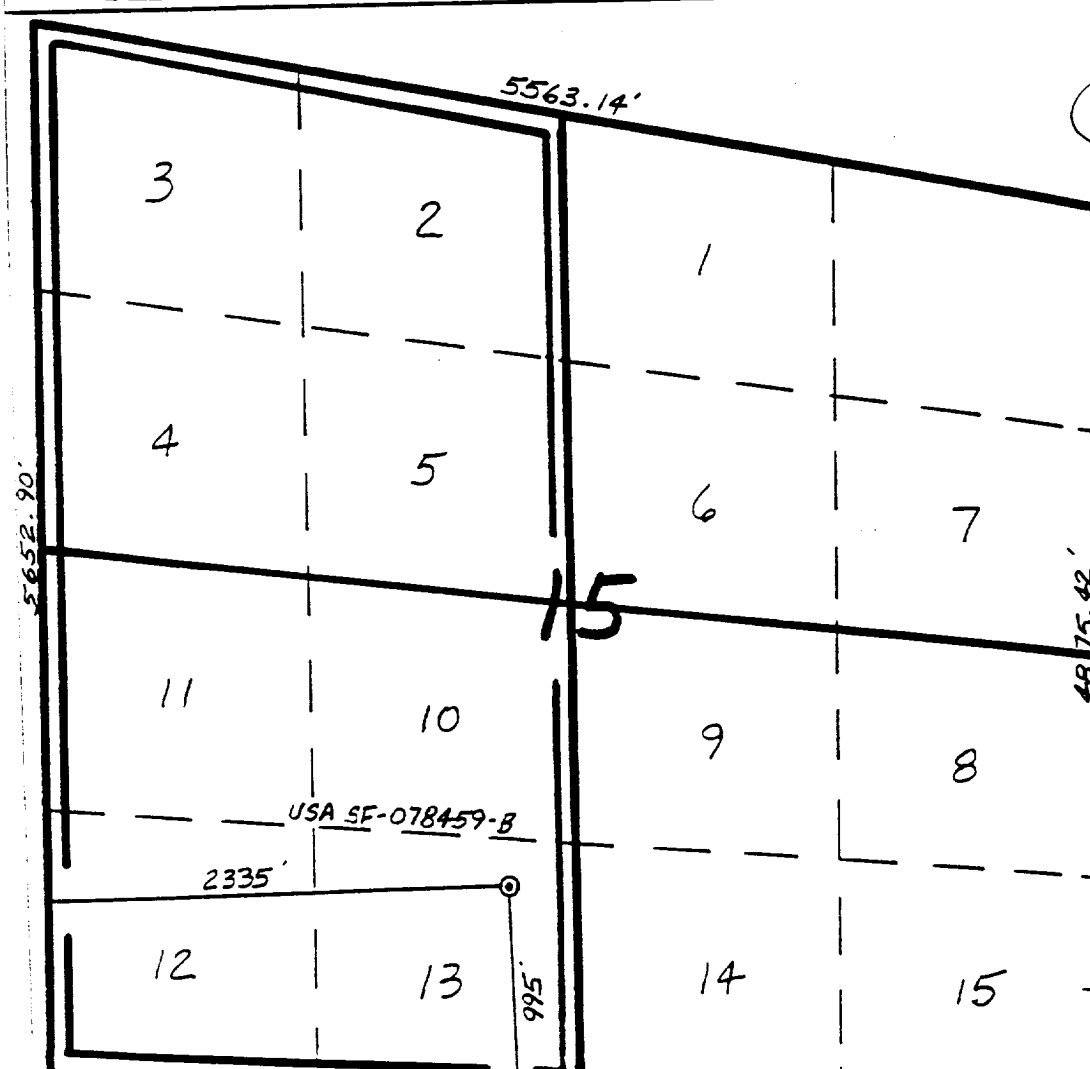
ISTRICLI
000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

| | | | | | |
|---|-----------------------------------|-----------------------|------------------------------------|-----------------|----------|
| Operator Meridian Oil Inc. | | Lease Allison Unit | | Well No. 16R | |
| Tract Letter N | Section 15 | Township 32 North | Range 7 West | County NMFM | San Juan |
| Actual Footage Location of Well: 995 feet from the South line and 2335 feet from the West line | | | | | |
| Ground level Elev. 6860' | Producing Formation Mesa Verde | Pool Blanco | Dedicated Acreage: 335.36 Acres | | |

- Outline the acreage dedicated to the subject well by colored pencil or hectare marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?
☒ Yes ☐ No If answer is "yes" type of consolidation unitization
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, force-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

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

Signature
Peggy Bradfield

Printed Name
Regulatory Affairs

Position
Meridian Oil Inc.

Company
6-28-93

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. 4-23-93

Date Surveyed

Signature of Surveyor
Professional Surveyor

NEW MEXICO
6857
6857
Neale Edwards

June 28, 1993

OPERATIONS PLAN

Well Name: Allison Unit #16R
Location: 995'FSL, 2335'FWL Section 15, T-32-N, R-7-W
 San Juan County, New Mexico
 Latitude 36° 58' 45", Longitude 107° 33' 41"
Formation: Blanco Mesa Verde
Elevation: 6860'GL

| <u>Formation Tops:</u> | <u>Top</u> | <u>Bottom</u> | <u>Contents</u> |
|------------------------|--------------|---------------|-----------------|
| Surface | San Jose | 2607' | |
| Ojo Alamo | 2607' | 2665' | aquifer |
| Kirtland | 2665' | 3315' | |
| Fruitland | 3315' | 3619' | gas |
| Pictured Cliffs | 3619' | 3835' | gas |
| Lewis | 3835' | 4615' | |
| Intermediate TD | 4035' | | |
| Chacra | 4615' | 5438' | gas |
| Mesa Verde | 5438' | | gas |
| Massive Cliff House | 5438' | 5806' | gas |
| Menefee | 5806' | 6044' | gas |
| Massive Point Lookout | 6044' | | gas |
| Total Depth | 6600' | | |

Logging Program:

Openhole Wireline Logging -
 Surface to Intermediate TD : DIL/LDT/CNL/NGT/ML/FMS
 Intermediate TD to Total Depth : DIL/LDT/CNL/Temp
 Mud Logs/Coring/DST -
 Mud logs - 4035' to Total Depth
 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 |
| 200-4035' | Weighted | 8.4-9.1 | 30-60 | no control |
| 4035-6600' | 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>Csq. Size</u> | <u>Wt.</u> | <u>Grade</u> |
|------------------|-----------------------|------------------|------------|--------------|
| 12 1/4" | 0' - 200' | 9 5/8" | 32.3# | H-40 |
| 8 3/4" | 0' - 4035' | 7" | 20.0# | K-55 |
| | 7" stage tool @ 2800' | | | |
| 6 1/4" | 3885' - 6600' | 4 1/2" | 10.5# | K-55 |

Tubing Program:

0' - 6600' 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.
- BOP pit level drill will be conducted weekly for each drilling crew.
- All BOP tests and drills will be recorded in 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 -

First stage - lead w/185 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 (445 cu.ft. of slurry, 100% excess to circulate to stage tool @ 2800'.)

Second stage - Lead w/445 sx 65/35 Class "B" poz w/6% gel, 2% calcium chloride, 5# gilsonite/sx and 1/4# flocele/sx. Tail w/50 sx Class "B" w/2% calcium chloride (840 cu.ft. of slurry, 100% 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 2665'. Two turbolating centralizers at the base of the Ojo Alamo at 2665'. 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 225 sx 65/35 Class "B" poz w/6% gel, 2% calcium chloride, 5# gilsonite/sx and 1/4# flocele/sx. Tail with 100 sx Class "B" w/2% calcium chloride (513 cu.ft., 100% 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.

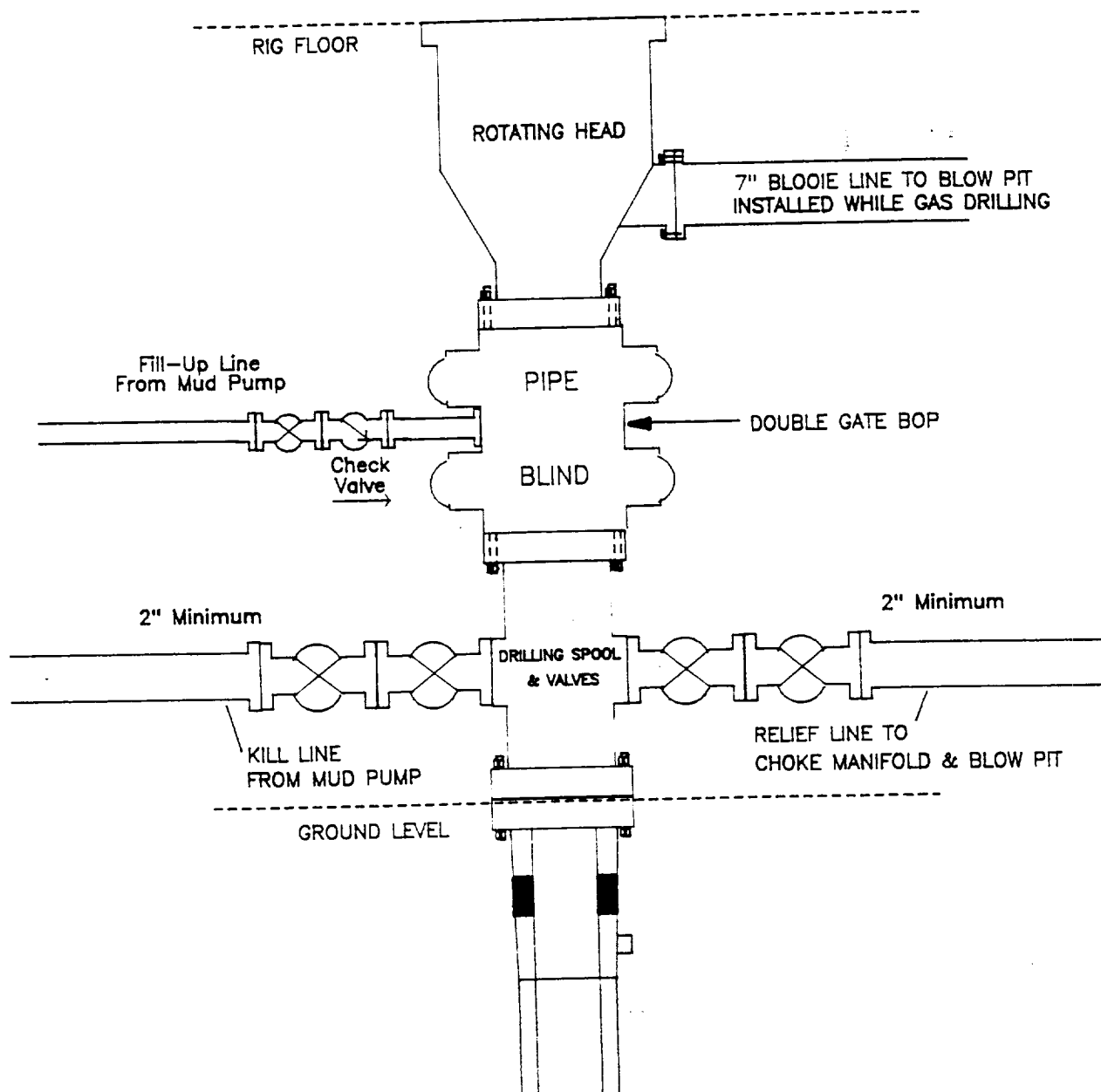
Special Drilling Operations (Gas/Mist Drilling):

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.

MERIDIAN OIL INC.

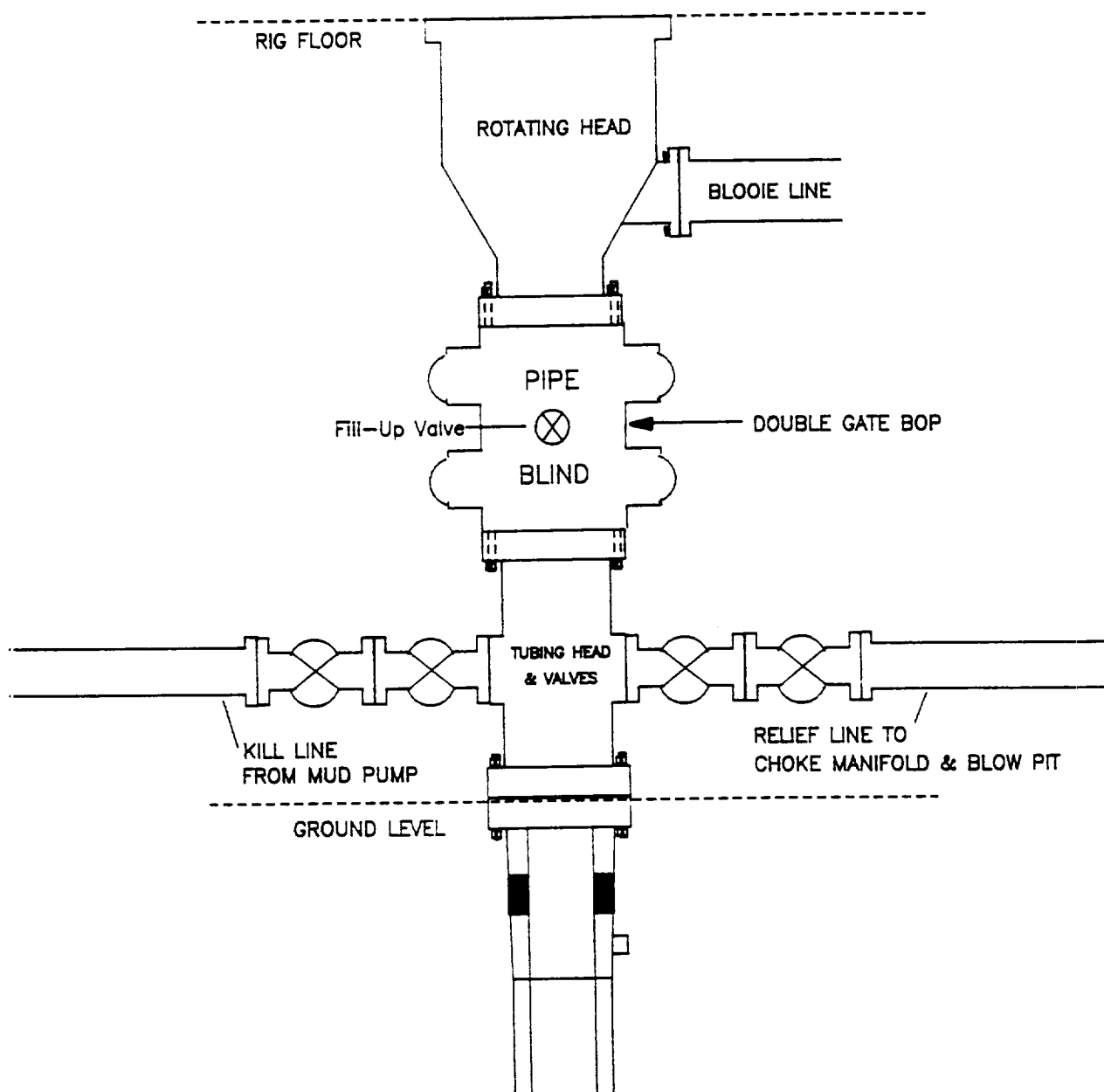
Mesaverde Well BOP Configuration



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

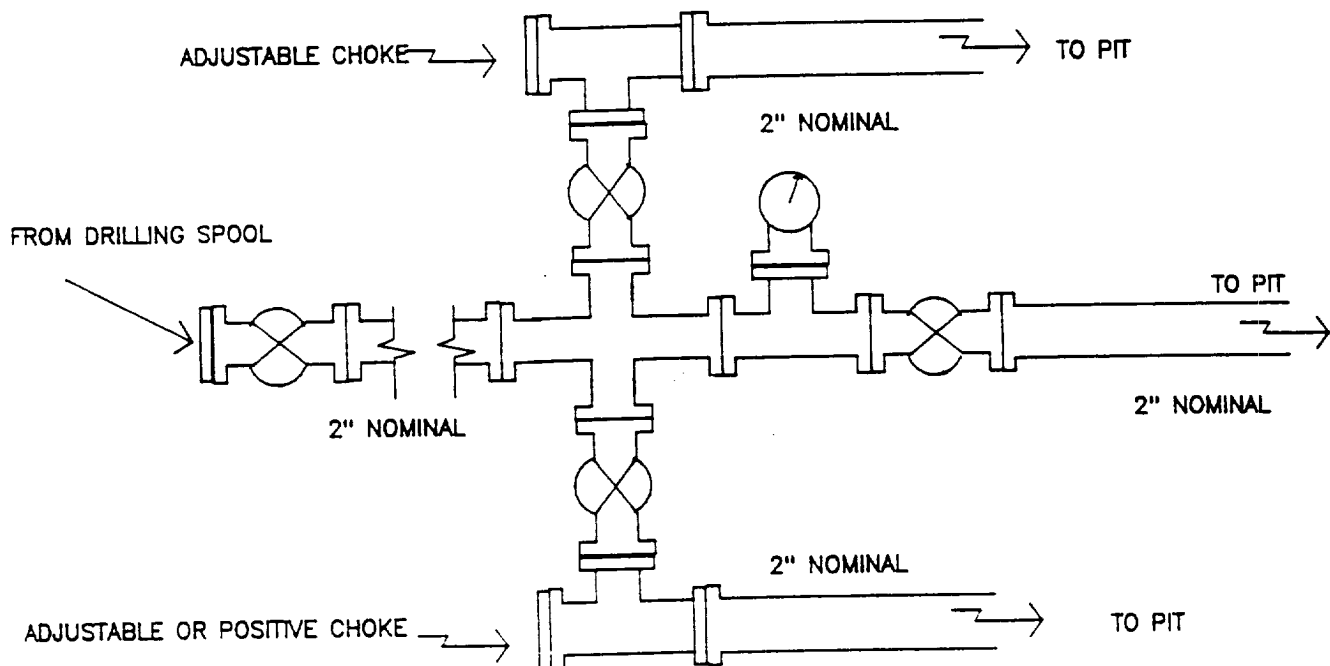
MERIDIAN OIL INC.
Mesaverde Well – Completion Rig
BOP Configuration



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

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 West half of Section 15 is dedicated to this well.
- This gas is dedicated.

MERIDIAN OIL
Allison Unit #16R
Multi-Point Surface Use Plan

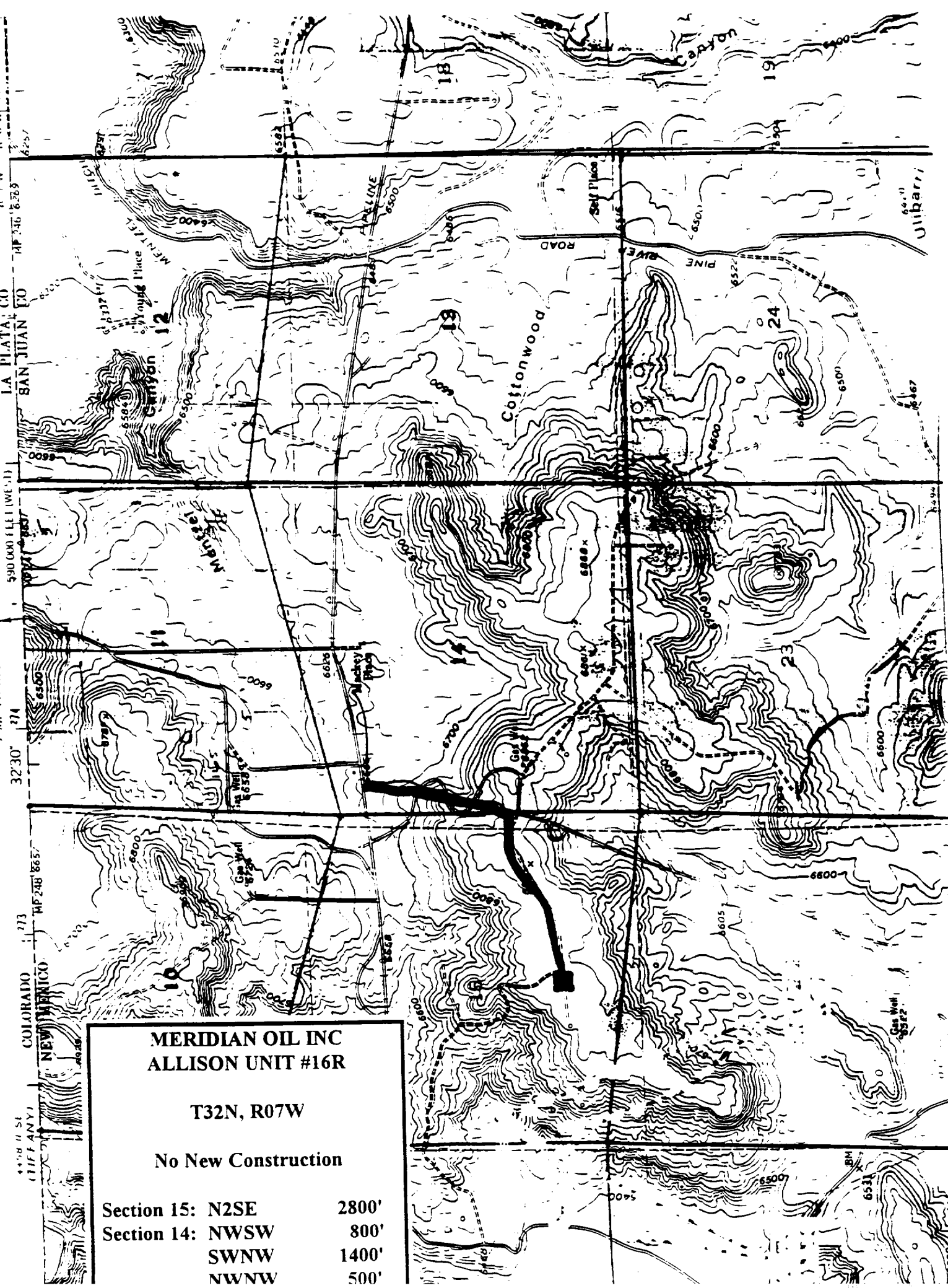
1. Existing Roads - Refer to Map No. 1. Existing roads used to access the proposed location will be properly maintained for the duration of the project. Bureau of Land Management right-of-way has been applied for as shown on Map No. 1.
2. Planned Access Road - Refer to Map No. 1. None required.
3. Location 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 Menzel Ditch located NW Section 7, T-32-N, R-6-W.
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

JWC:pb

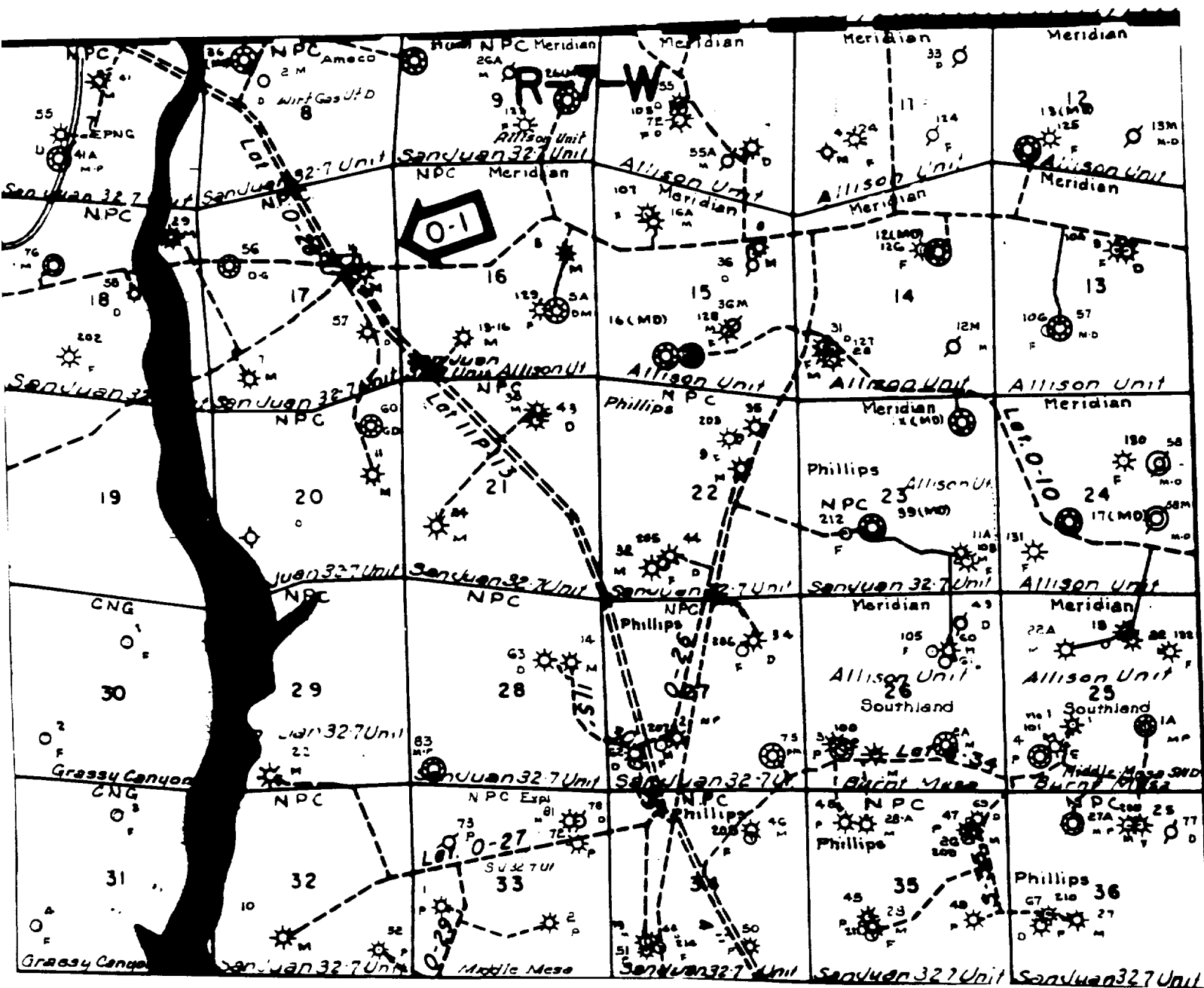


**MERIDIAN OIL INC
ALLISON UNIT #16R**

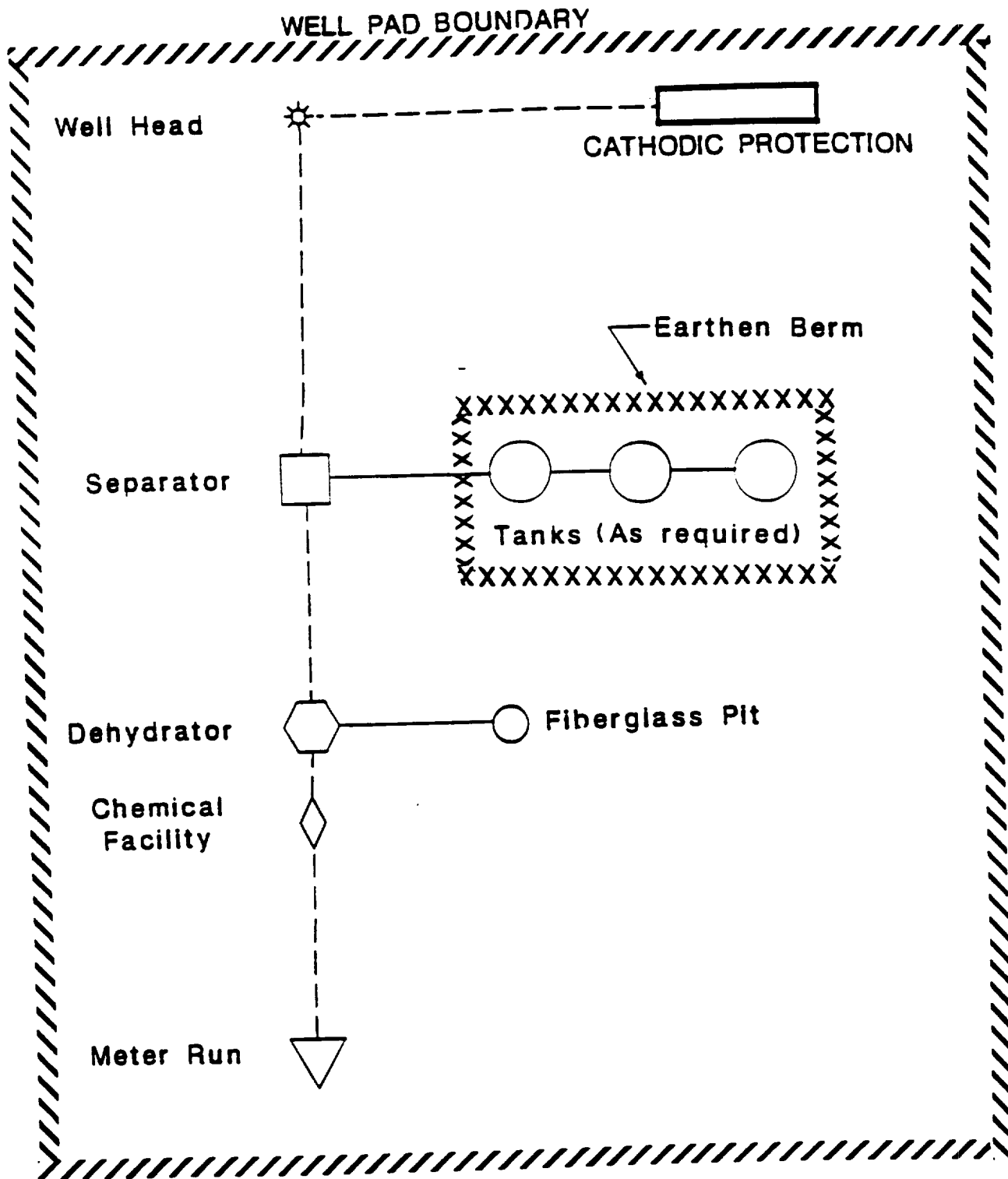
T32N, R07W

No New Construction

| | |
|------------------|-------|
| Section 15: N2SE | 2800' |
| Section 14: NWSW | 800' |
| SWNW | 1400' |
| NWNW | 500' |



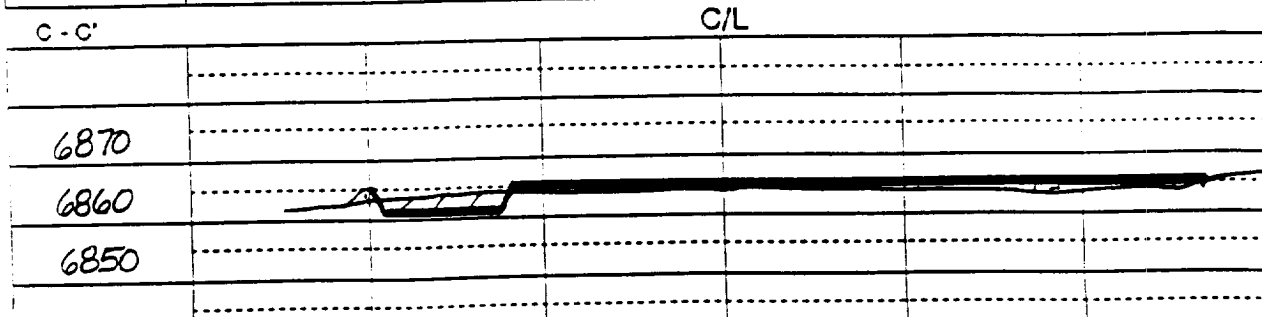
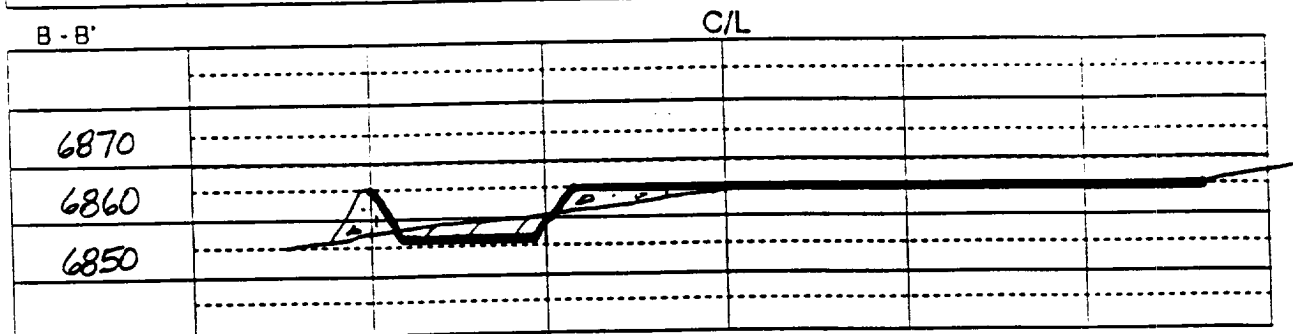
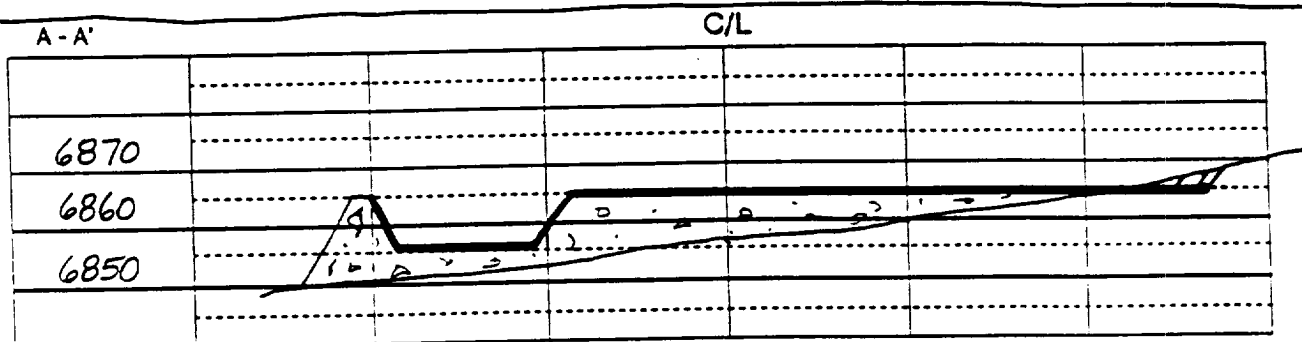
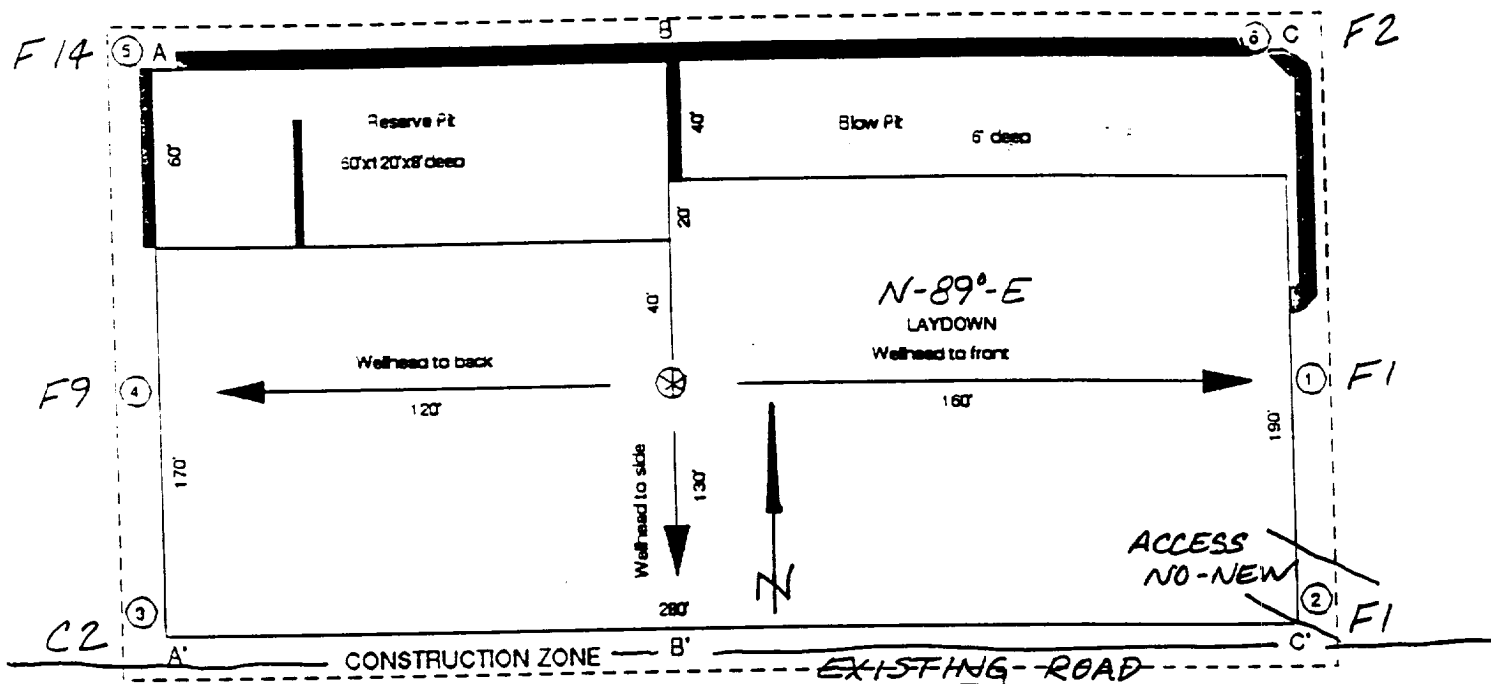
MERIDIAN OIL INC.
 Pipeline Map
 T-32-N, R-07-W
 San Juan County, New Mexico
 Allison Unit #16R
 Map #1A



PLAT #1

MERIDIAN OIL
 ANTICIPATED
 PRODUCTION FACILITIES
 FOR A
 MESA VERDE WELL

Name: MOI ALLISON UNIT * 16R
Footage: 995' FSL 2335' FWL
Sec 15 T- 32 N.R- 7 W NMPM
Co. SAN JUAN St. N.M.
Elevation: 6860' Date: 4-23-93



Send to Appropriate
District Office
the Lease - 4 copies
the 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

STRICTLY
O. Box 1980, Hobbs, NM 88240

STRICTLY
O. Drawer DD, Arama, NM 88210

STRICTLY
100 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 Allison Unit | | Well No. 16R | |
| Jan Later N | Section 15 | Township 32 North | Range 7 West | County NMNM | San Juan |
| Actual Footage Location of Well: 995 feet from the South line and 2335 feet from the West line | | | | | |
| Ground level Elev. 6860' | Producing Formation Mesa Verde | | Pool Blanco | Dedicated Acreage 335.36 Acres | |

1. Outline the acreage dedicated to the subject well by colored pencil or machine marks on the plat below.

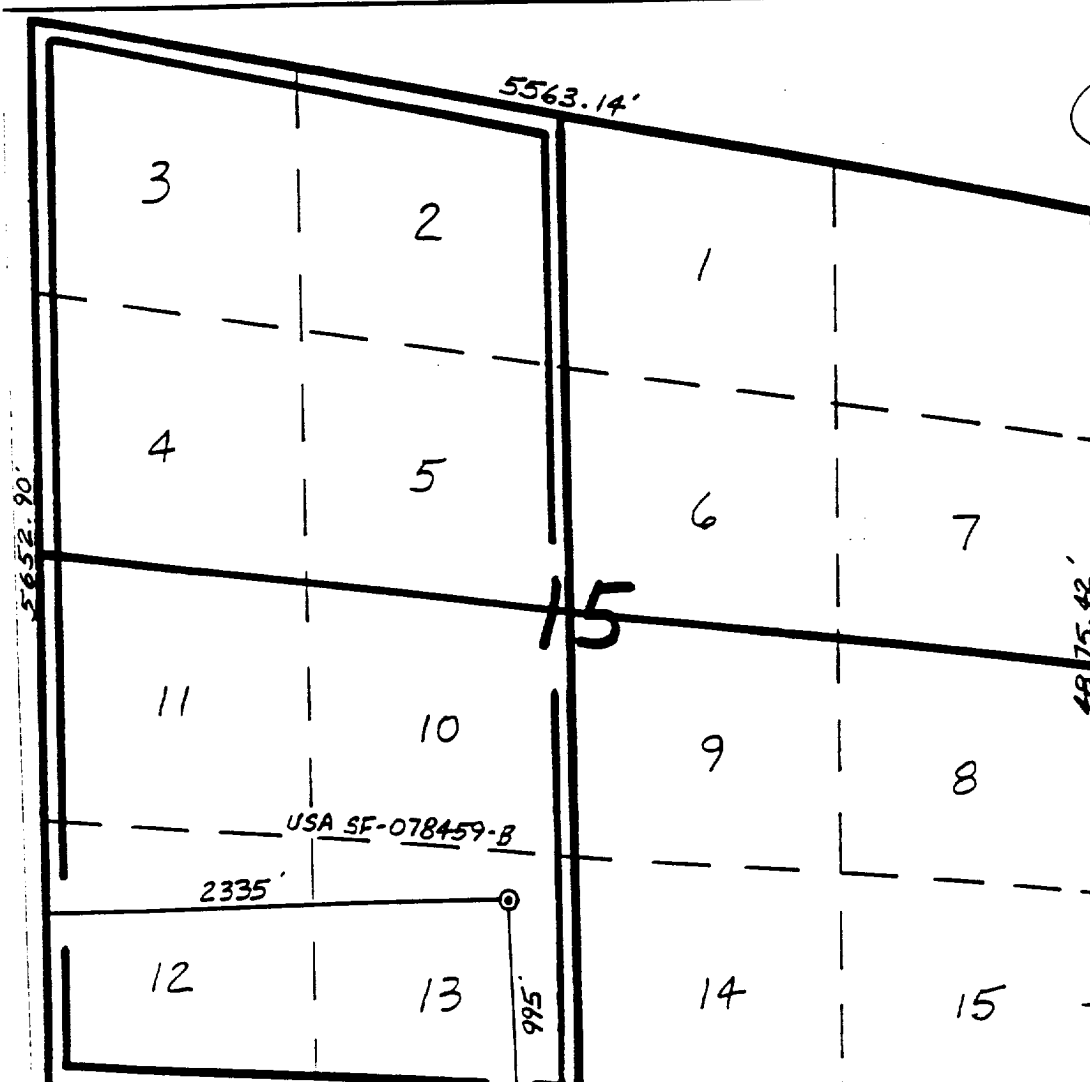
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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 unitization

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, force-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

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

Signature
Peggy Bradfield

Printed Name
Regulatory Affairs

Position
Meridian Oil Inc.

Company
6-28-93

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. 4-23-93

Date Surveyed

Signature
Professional Surveyor

NEELED LAND SURVEYORS

NEELED LAND SURVEYORS

NEELED LAND SURVEYORS

NEELED LAND SURVEYORS

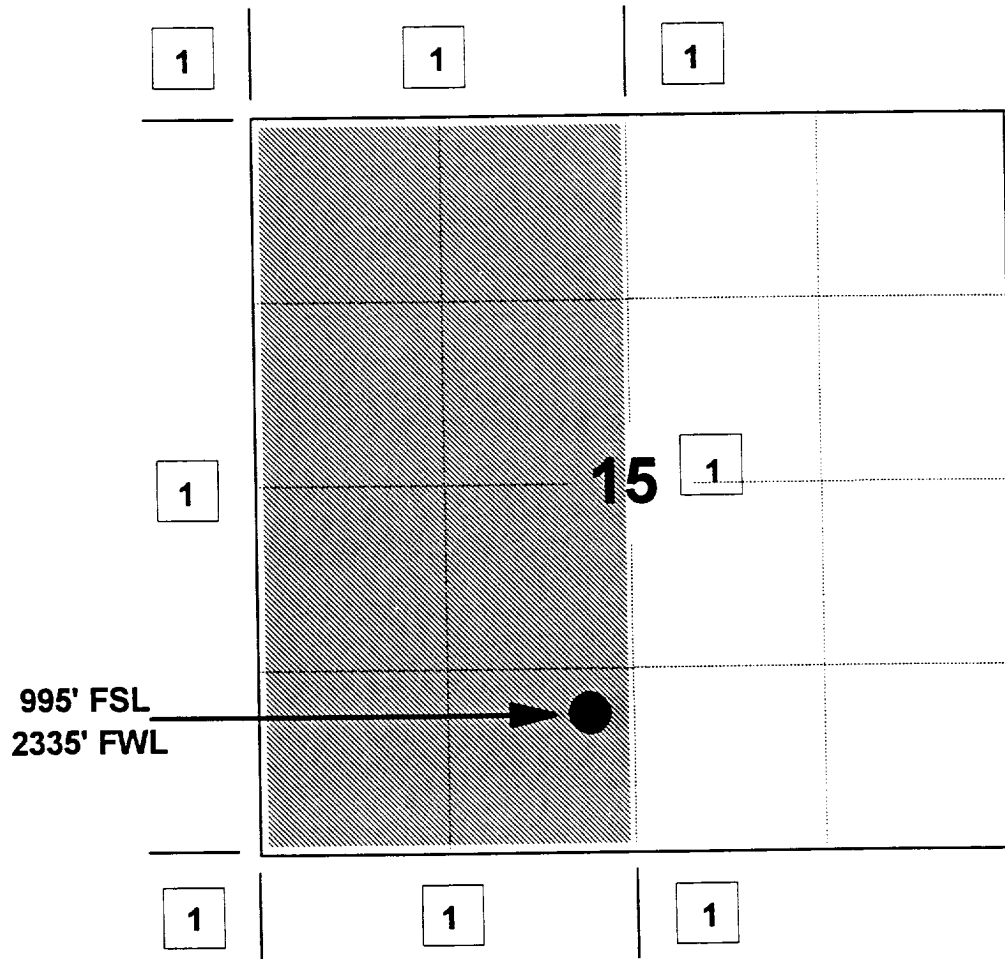
MERIDIAN OIL INC

ALLISON UNIT #16R

OFFSET OPERATOR \ OWNER PLAT

Unorhtodox Well Location

Township 32 North, Range 07 West



1) Meridian Oil Inc

32'30" 274

WSS-7-5537

COLORADO

273

MP 248 6657

NEW MEXICO

