



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

September 6, 1996

Burlington Resources/Meridian Oil, Inc.
c/o Kellahin and Kellahin
Attention: W. Thomas Kellahin
P.O. Box 2265
Santa Fe, New Mexico 87504-2265

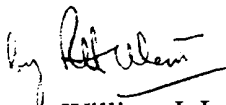
Administrative Order NSL-3704

Dear Mr. Kellahin:

Reference is made to an application from Ms. Peggy Bradfield with Burlington Resources/Meridian Oil, Inc. of Farmington, New Mexico dated August 16, 1996 and to your letter dated September 3, 1996, for approval to drill the proposed Ute Well No. 22 (API No. 30-045-29395) at an unorthodox gas well location in order to test the Barker Dome-Desert Creek Pool 2000 feet from the North line and 1925 feet from the East line (Unit G) of Section 17, Township 32 North, Range 14 West, NMPM, as projected into the unsurveyed Ute Mountain Indian Reservation, San Juan County, New Mexico. At this time the N/2 of said Section 17 shall be dedicated to said well to form a standard 320-acre gas spacing and proration unit for said pool pursuant to **Rule 2** of the "*Special Rules and Regulations for the Barker Dome-Desert Creek Pool*", as promulgated by Division Order No. R-46-A, dated February 13, 1995.

By authority granted me under the provisions of **Rule 5** of said special pool rules, the location of said Ute Com Well No. 22 is hereby approved.

Sincerely,

 Deputy Director
William J. LeMay
Director

WJL/MES/kv

cc: Oil Conservation Division - Aztec
U. S. Bureau of Land Management - Durango, Colorado

RECEIVED
SEP 11 1996
OIL CON. DIV.
DIST. 3

BURLINGTON RESOURCES

SAN JUAN DIVISION

August 16, 1996

Sent Federal Express

Mr. William LeMay
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: Ute #22
2000'FNL, 1925'FEL Section 17, T-32-N, R-14-W, San Juan County, New Mexico
API # 30-045-29395

Dear Mr. LeMay:

Burlington Resources is applying for administrative approval of a non-standard location for the above location in the Barker Dome Desert Creek formation. This application for the referenced location is due to terrain, the presence of archaeology, and at the request of the Ute Mountain Ute Tribe.

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 - Burlington Resources is the operator of the surrounding proration unit
4. 7.5 minute topographic map showing the orthodox windows, and enlargement of the map to define topographic features.

We appreciate your earliest consideration of this application.

Sincerely,



Peggy Bradfield
Regulatory/Compliance Administrator

encs.

RECEIVED
AUG 19 1996
OIL CON. DIV.
DIST. 3

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 I-22-IND-2772 Unit Reporting Number
1b.	Type of Well GAS	6. If Indian, All. or Tribe Ute Mountain Ute
2.	Operator MERIDIAN OIL	7. Unit Agreement Name
3.	Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name Ute 9. Well Number 22
4.	Location of Well 2000' FNL, 1925' FEL* resurveyed Latitude 36° 59' 24", Longitude 108° 19' 46"	10. Field, Pool, Wildcat Barker Dome Desert Creek 11. Sec., Twn, Rge, Mer. (NMPM) Sec 17, T-32-N, R-14-W API # 30-045-
14.	Distance in Miles from Nearest Town 11 miles to LaPlata	12. County San Juan 13. State NM
15.	Distance from Proposed Location to Nearest Property or Lease Line 1925'	
16.	Acres in Lease	17. Acres Assigned to Well 527 All Sec8; N/2 Sec 1
18.	Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 3500'	
19.	Proposed Depth 8365'	20. Rotary or Cable Tools Rotary
21.	Elevations (DF, FT, GR, Etc.) 6236'	22. Approx. Date Work will Start 3rd quarter 1996
23.	Proposed Casing and Cementing Program See Operations Plan attached	
24.	Authorized by:  (Regulatory/Compliance Administrator)	Date 5-28-96

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

Archaeological Report submitted by LaPlata Archaeological Consultants LAC 9359a&b
Threatened and Endangered Species Report submitted

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

RECEIVED
AUG 19 1996
OIL CON. DIV.
DIST. 3

District I
PO Box 1910, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Hondo Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Mineral & Natural Resources Department

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

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-045-		Pool Code 71560		Pool Name Barker Dome Desert Creek	
Property Code 7613		Property Name Ute			Well Number 22
OGRID No. 14538		Operator Name MERIDIAN OIL INC.			Elevation 6236'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
G	17	32 N	14 W		2000	North	1925	East	S.J.

¹¹ Bottom Hole Location if Different From Surface

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
¹² Dedicated Acres 527		¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.			

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

¹⁶		¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief Signature: <u>Peggy Bradfield</u> Printed Name: <u>Peggy Bradfield</u> Regulatory/Compliance Ad: Title: <u>5-28-96</u> Date: <u>5-28-96</u>	
<div style="border: 1px solid black; padding: 10px; text-align: center;">8 RECEIVED AUG 1 9 1996 OIL CON. DIV. DIST. 3</div>		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. 11-4-94 Date of Survey: <u>11-4-94</u> Signature and Seal of Professional Surveyor: <div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;">NEALE C. EDWARDS NEW MEXICO 8857 6857</div> Certificate Number: <u>17</u>	

May 10, 1996

OPERATIONS PLAN

Well Name: Ute #22
Location: 2000' FNL, 1925' FEL*resurveyed, Section 17, T-32-N, R-14-W
San Juan County, NM
Formation: Barker Dome Desert Creek
Elevation: 6236' GR

Formation:	Top	Bottom	Contents
Surface	Menefee	163'	
Point Lookout	163'	645'	fresh water
Mancos	645'	1658'	
8 5/8" surface casing	895'		+ 250' into Mancos
Niobrara	1658'	2320'	
Greenhorn	2320'	2400'	
Graneros	2400'	2446'	
Dakota	2446'	2714'	gas
Morrison	2714'	3213'	fresh water
Junction Creek	3213'	3579'	salt water
Summerville	3579'	3673'	
Todilto	3673'	3685'	
Entrada	3685'	3787'	salt water
Chinle	3787'	5256'	
Cutler	5256'	6845'	
Hermosa	6845'	7968'	
Ismay	7968'	8160'	gas (potentially 100-1580 ppm H ₂ S)
Desert Creek	8160'	8263'	gas (potentially 4-11,900 ppm H ₂ S)
Akah	8263'	8428'	
Upper Barker Creek	8428'		gas (potentially 0-12,000 ppm H ₂ S)
Total Depth	8365'		

Logging Program:

Mud logs - Niobrara to Total Depth

Wireline Logs - AIT, LDT-APS, DSSI, FMI - to Total Depth

Mud Program:

Interval	Type	Weight	Vis	Fluid Loss
0 - 90'	Air	N/A	N/A	N/A
90 - SCP	Spud	8.4-8.9	40	No Control
SCP-T. Ismay	Fresh Water	8.4-8.6	26-30	No Control
T. Ismay-TD	LSND/Dispersed	8.4-9.0	36-50	Less than 12

Casing Program: (all casing will be new)

Hole Size	Depth Interval	Csg. Size	Wt.	Grade
26"	0' - 90'	16"		Conductor
12 1/4"	0' - 895'	8 5/8"	24.0#	K-55 LT&C
7 7/8"	0' - 8365'	5 1/2"	17.0#	L-80 LT&C

Tubing Program: 0' - 8365' 2 7/8" tubing

Pressure Control Program:

12 1/4" hole - diversion only

7 7/8" hole - a 3000 psi WP casinghead will be installed on the surface casing. A 3000 psi WP annulus preventer, a 3000 psi WP double gate preventer equipped with blind and pipe rams, and a 3000 psi x 3000 psi WP drilling spool with kill and choke lines will be nipped up on the casinghead. The annulus preventer will be tested to 500 psi low, 1500 psi high w/test plug for 15 minutes. Pipe and blind rams, choke line, and manifold will be tested at 500 psi low and 3000 psi high with a test plug for 15 minutes. Casing will be tested to 2200 psi (75% burst) prior to drilling the shoe.

Completion - a 5000 psi WP tubinghead will be installed on the production casing. A 5000 psi WP double gate preventer equipped with blind and pipe rams and a 5000 psi drilling spool equipped with kill and choke lines will be nipped up on the tubinghead. One 7" blooie line will be nipped up above the BOP's. A rotating head will be nipped up on top of the blooie line. Pipe and blind rams, choke line, and manifold will be tested at 500 psi and 4000 psi against casing. Casing will be tested to 4000 psi prior to completing the well.

BOP systems will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blow out preventer controls will be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. All tests will be reported on the daily drilling report. Preventers will be tested before drilling casing cement plugs.

In the event that a kick is taken while drilling, the following procedure will be followed:

1. Pick up kelly and raise the tool joint above floor.
2. Shut down the mud pump.
3. Close the annular preventer.
4. Record standpipe pressure (SIDPP) after it stabilizes and pit gain.
5. Calculate Initial Circulating Pressure=Slow Circulating Pressure+ SIDPP.
6. Calculate kill mud weight required.
7. Complete kill sheet.
8. Decide whether to raise mud weight or drill under-balanced.

BOP Configuration:

26" conductor hole	-	0' - 90' - not applicable
12 1/4" surface hole	-	90' - 895' - diverter only
3000 psi system		
7 7/8" production hole	-	895' - 8365' - Figures #1 & #2

Operations Plan
Ute #22

Float Equipment:

Surface casing - guide shoe, float collar, centralizers every 4th joint.
Production casing - float shoe, float collar, centralizers every 4th joint.

Wellhead Equipment (sour gas service):

11" 3000 psi x 8 5/8" female thread casinghead
11" 3000 psi x 7 1/16" 5000 psi tubinghead
7 1/16" 5000 psi x 2 7/8" 5000 psi adapter
Tree assembly for single completion gas service.

Cementing:

16" conductor casing - Reddymix - grout to surface

8 5/8" surface casing - cement with 351 sx Class "B" 65/35 Pozmix with 0.25 pps flocele, 6% gel and 2% calcium chloride (12.4 ppg, 621 cu.ft. of slurry).
Tail with 100 sx Class "B" neat with 0.25 pps and 2% calcium chloride (15.6 ppg weight; 118 cu.ft. of slurry), 100% excess circulated to surface.

5 1/2" production - 1009 sx 50/50 Class "B" blended Silicalite, 3 pps gilsonite, 0.375 pps flocele (11.45 ppg, 2351 cu.ft. of slurry.) Tail with 310 sx Class "G" 50/50 Poz with 2% gel, 5 pps gilsonite, 0.25 pps flocele, and 0.4% Halad-344 (13.5 ppg, 410 cu.ft. of slurry), 100% excess circulated to surface.

Coring & Drill Stem Test Program: none planned.

Anticipated abnormal pressures or temperatures: none. Anticipated pressure is 3600 psi.

Date:

5/29/96

Drilling Engineer:

Frank Sidel

Anticipated potentially hazardous conditions:

1. H₂S is anticipated to exist from the Paradox (Ismay) formation to Total Depth.
2. Anticipated concentrations are estimated at 300 - 500 ppm.
3. All gasses encountered will be flared.
4. H₂S safety equipment will be operational at 1000' above Paradox (Ismay) formation.
5. H₂S safety equipment will be provided for all personnel on location at all times.
6. All personnel on location will be H₂S certified.
7. An H₂S trained professional will be on location at all pertinent times; i.e., DST's, cementing operations, under-balanced drilling, etc.
8. The toxicity of H₂S gas is as follows:

1 ppm = .0001% (1/10,000 of 1%)	Can smell.
10 ppm = .001% (1/1000 of 1%)	Allowable for 8 hrs. exposure
50 ppm = .005% (5/1000 of 1%)	NOTE: when H ₂ S concentration reaches 10 ppm on the rig floor, call for the safety trailer.
100 ppm = .01% (1/100 of 1%)	Kills smell rapidly. Burns eyes and throat.
500 ppm = .05% (5/100 of 1%)	Loses sense of reasoning and balance. Respiratory disturbances in 2-15 min. Needs prompt artificial resuscitation.
700 ppm = .07% (7/100 of 1%)	Will become unconscious quickly. Breathing will stop and death will result if not rescued promptly.
1,000 ppm = .10% (1/10 of 1%)	Unconscious at once. PERMANENT BRAIN DAMAGE MAY RESULT UNLESS RESCUED PROMPTLY.

H₂S Drilling Operations Plan

1. Training Program - Meridian Oil will ensure all personnel have been properly H₂S trained as per API RP 49 prior to three days or 1000 feet prior to penetrating the Pennsylvanian. An initial training session and weekly H₂S and well control drills for all personnel in each working crew will be conducted. Each training session and drill will be recorded on the drillers log. Two briefing areas will be designated and located at least 150 feet from the wellbore. One such briefing area will be upwind of the well at all times. A contract safety company will be designated and identified to all personnel on-site as responsible for on-site safety and training programs.
2. Protective Equipment - Meridian Oil will ensure respiratory protection equipment program is implemented as per ANSI 2.88.2-1980. Proper breathing apparatus will be readily accessible for all essential personnel, meaning one working breathing apparatus including a five minute escape-type SCBA for the derrickman, available for all essential personnel. The following additional safety equipment will be available for use:
 - a. Effective means of communication when using breathing apparatus.
 - b. A flare gun and flares to ignite well.
 - c. A telephone, radio, mobile phone or other device that provides communication from a safe area, where practical.
3. H₂S Detection and Monitoring Equipment
 - a. Drilling - will be three sensing points (shale shaker, rig floor, bell nipple) with rapid response sensors capable of sensing a minimum of 10 ppm of H₂S, in ambient air, which automatically activates visible and audible alarms at levels or threshold limits of 10 and 15 ppm, respectively.

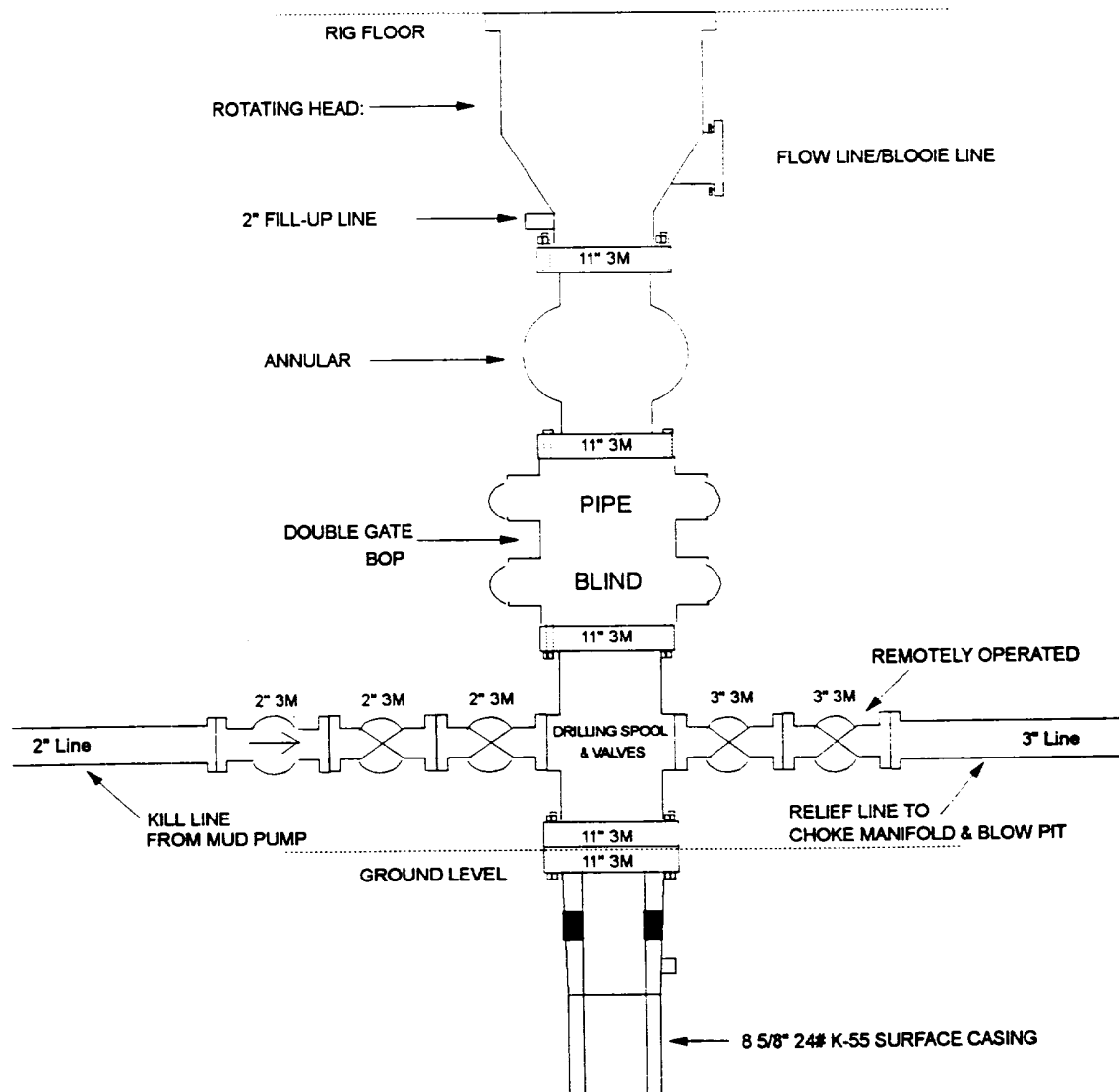
Completion - same as above except sensors will be located at the rig floor, cellar, and shale shaker or circulating tank.

Workover - will have one sensor operational as close to the wellbore as possible.
 - b. All tests on H₂S monitoring system will be recorded on drillers log.
4. Visible Warning System
 - a. Wind direction indicators (drilling (2); completion/workover (1)) will be located at separate elevations with one indicator clearly visible at all times from principle working areas. The wind indicator will be clearly visible from the briefing areas or additional indicators will be installed at such areas.
 - b. Operation Danger or Caution signs will be displayed along all controlled accesses to the site. each sign will be painted high visibility red, black, and white or yellow with black lettering. Signs will be large enough to be read by all persons entering the wellsite and be placed a minimum of 200 feet but no more than 500 feet from the wellsite.

- c. The sign(s) will read "DANGER - POISON GAS - HYDROGEN SULFIDE" and in smaller lettering, "Do not approach if red flag is flying".
 - d. When H₂S is detected in excess of 10 ppm, red flag(s) will be displayed and visible to all personnel approaching the location under normal lighting and weather conditions.
5. Warning System Response - H₂S detected above 10 ppm will initiate all non-essential personnel to be moved to a safe area and all essential personnel to don breathing apparatus.

MERIDIAN OIL INC.

Drilling Rig Surface Casing BOP Configuration 3,000 psi System

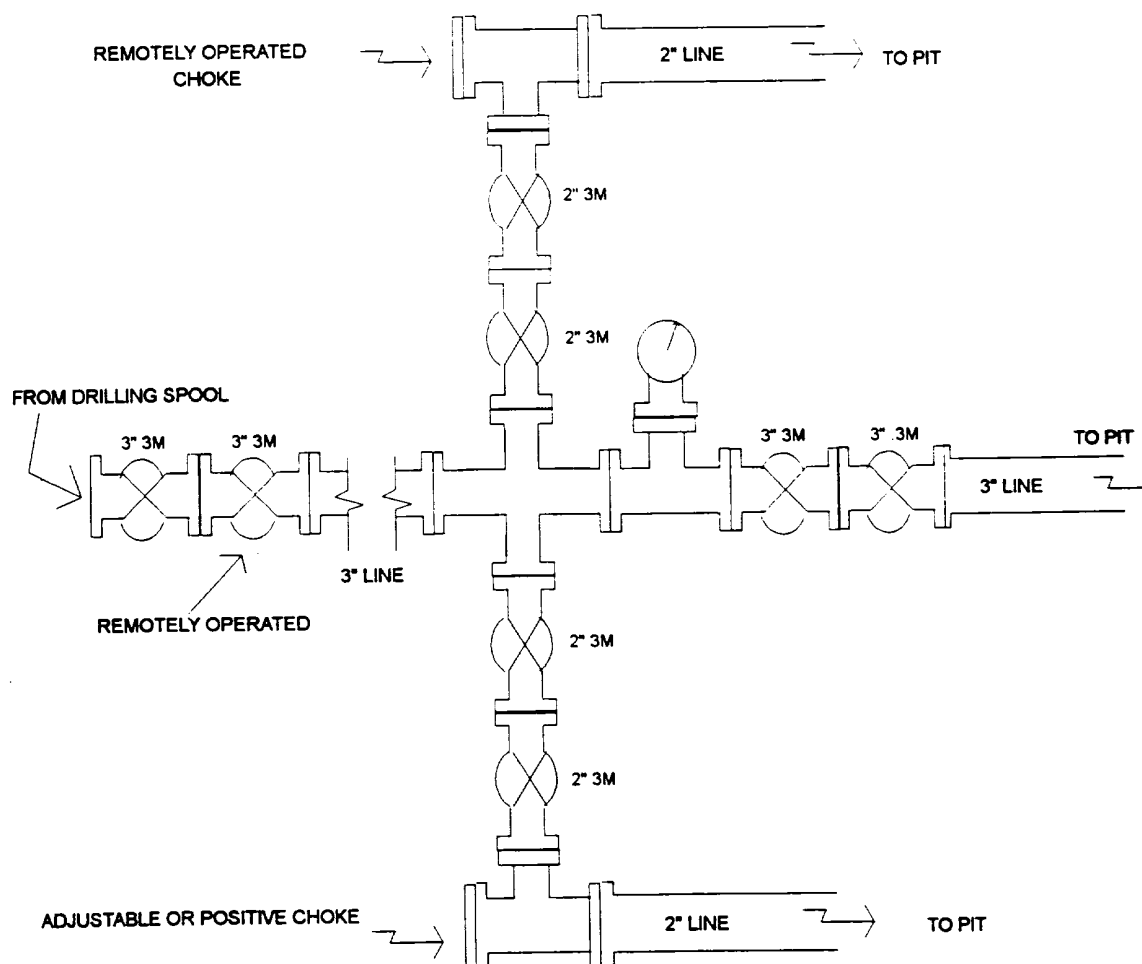


BOP installation from Surface Casing Point to Total Depth. 11" Bore (10" Nominal), 3,000psi working pressure double gate BOP to be equipped with blind and pipe rams. A 3,000psi Annular preventer to be installed on top of rams. A rotating head on the top of Annular preventer. All BOP equipment is 3,000psi working pressure.

Figure #1

MERIDIAN OIL INC.

Drilling Rig Choke Manifold Configuration 3000 psi System



Choke manifold installation from surface Casing Point to Total Depth. 3,000psi working pressure equipment with two chokes.

Figure #2

MERIDIAN OIL

Ute #22

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 Indian Affairs right-of-way has been applied for as shown on Map No. 1.
2. 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 4400' 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 Barker Canyon Water Well located in SE Section 20, T-32-N, R-14-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. Reserve pits will be lined as needed with either 12 mil bio-degradable plastic liner or a bentonite 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 - Ute Mountain Ute Tribe.
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.


Regulatory/Compliance Administrator 5-28-96
Date

pb

MERIDIAN OIL INC.

UTE #22

T 32 N, R 14 W

4400' New Construction

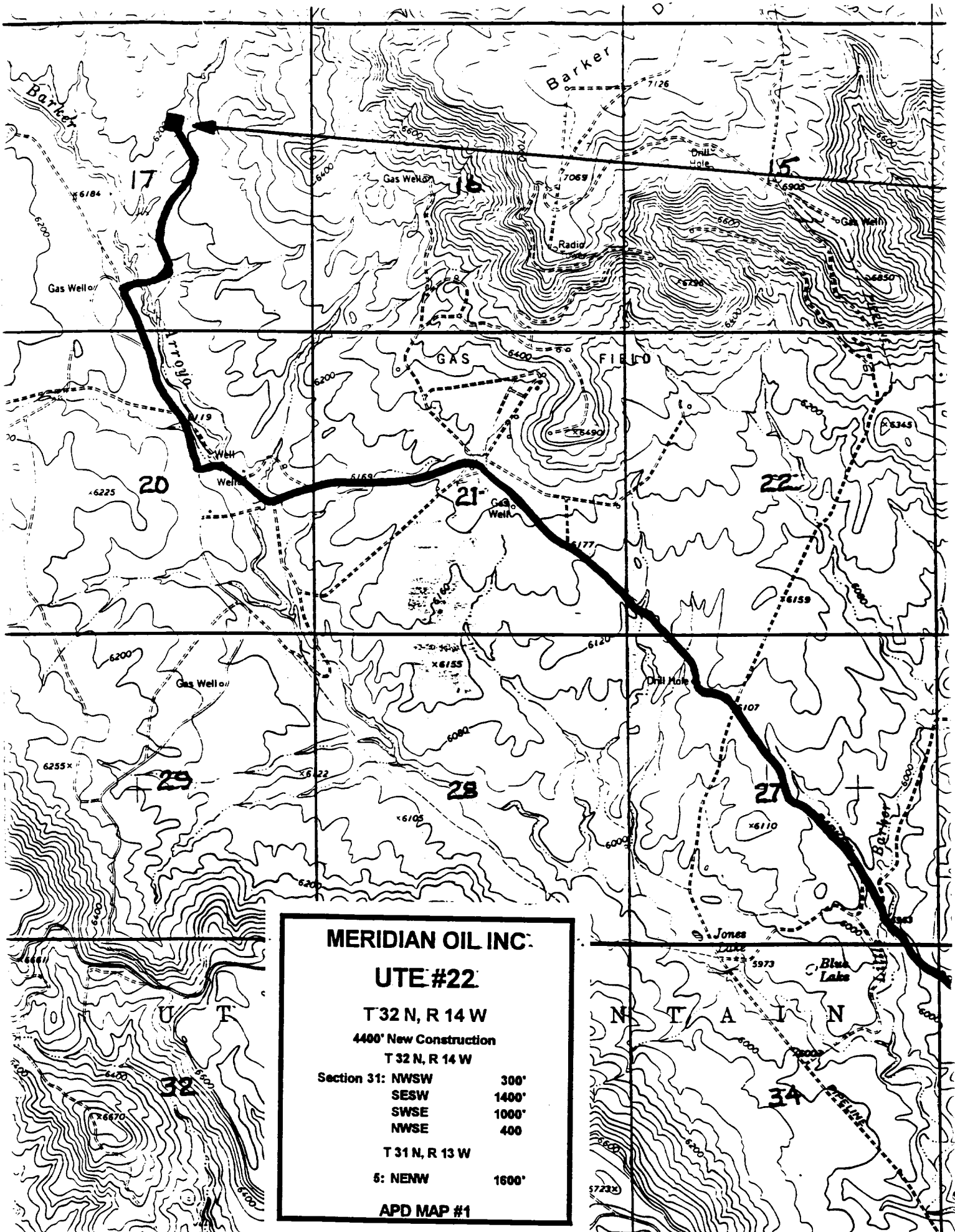
T 32 N, R 14 W

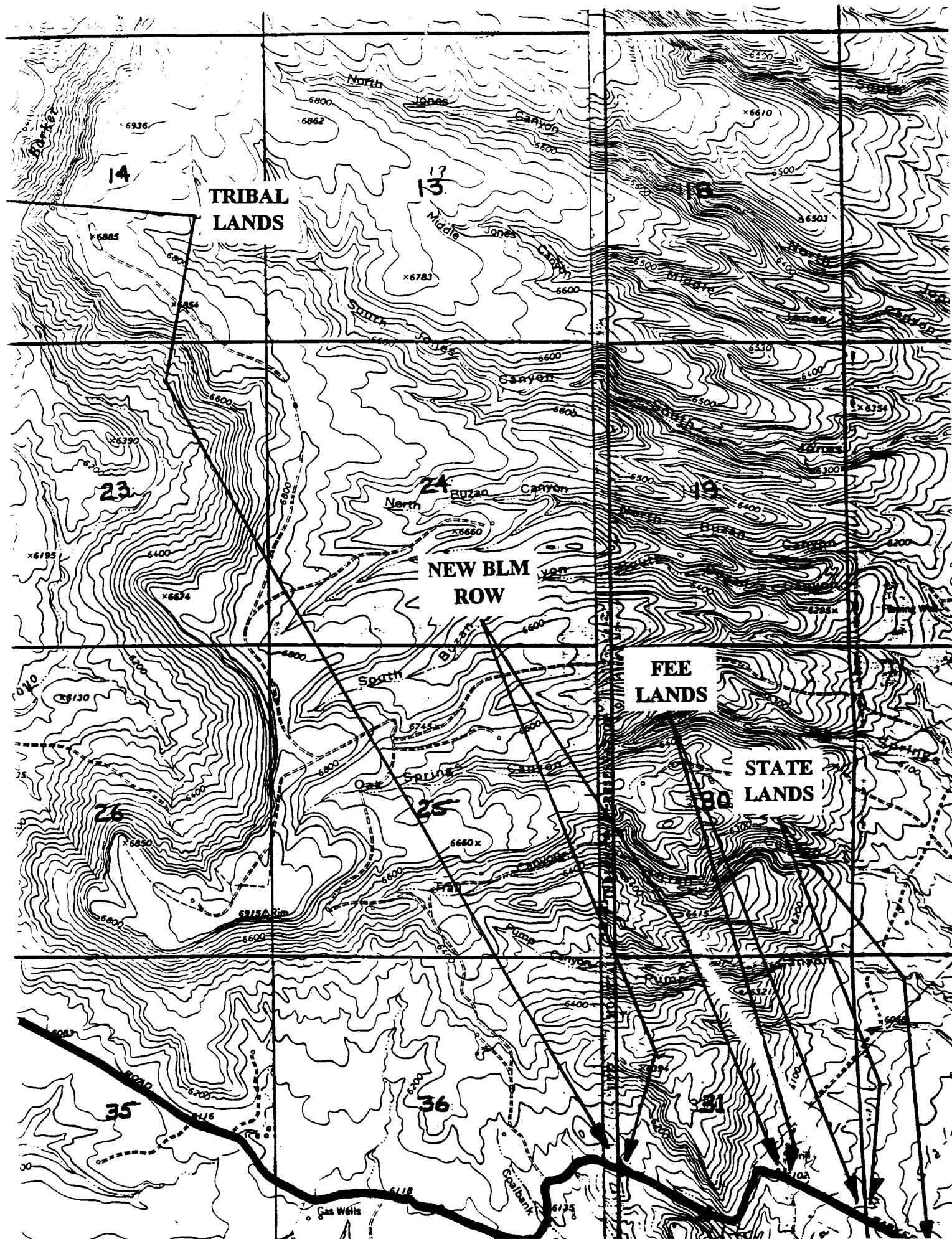
Section 31: NWSW	300'
SESW	1400'
SWSE	1000'
NWSE	400

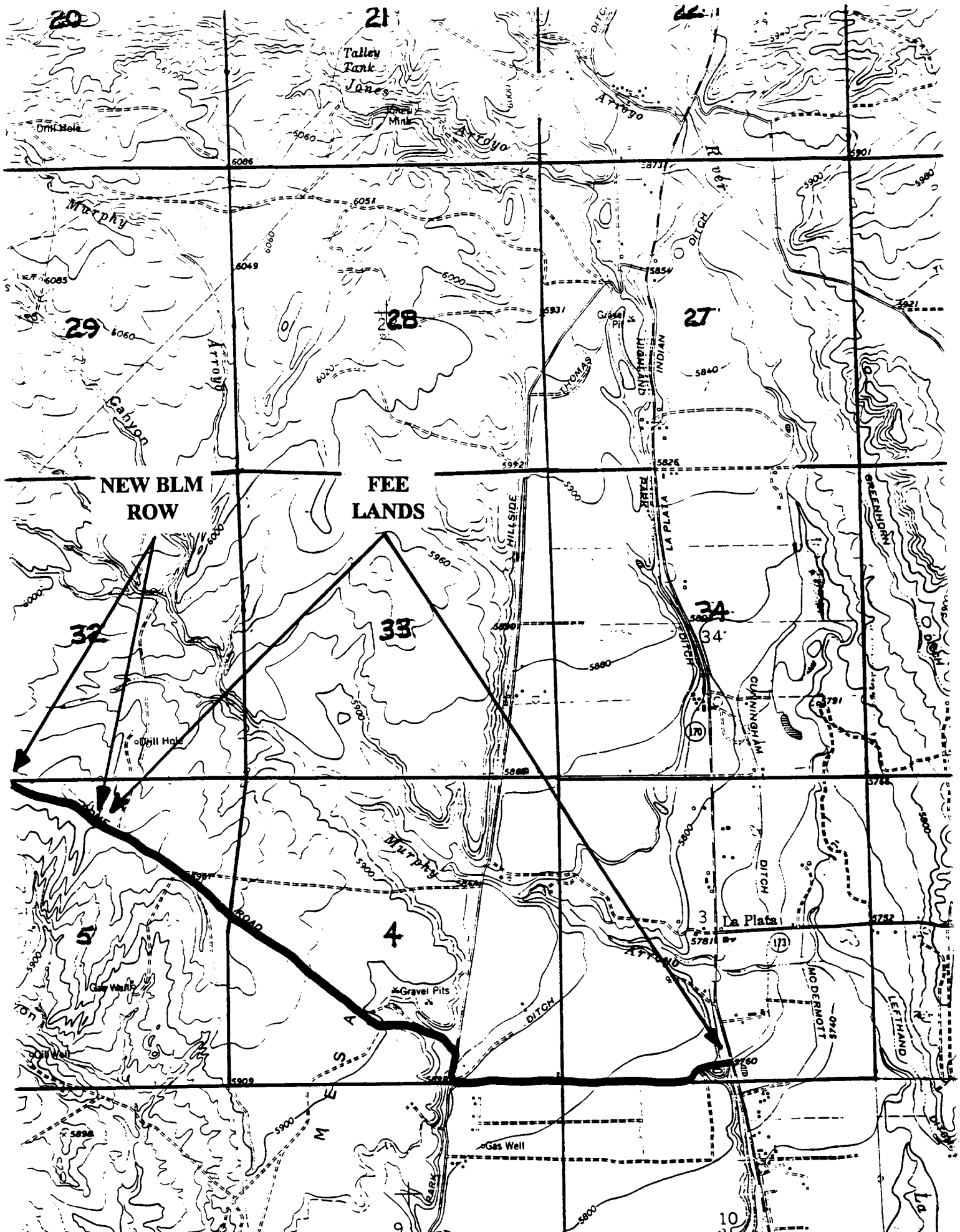
T 31 N, R 13 W

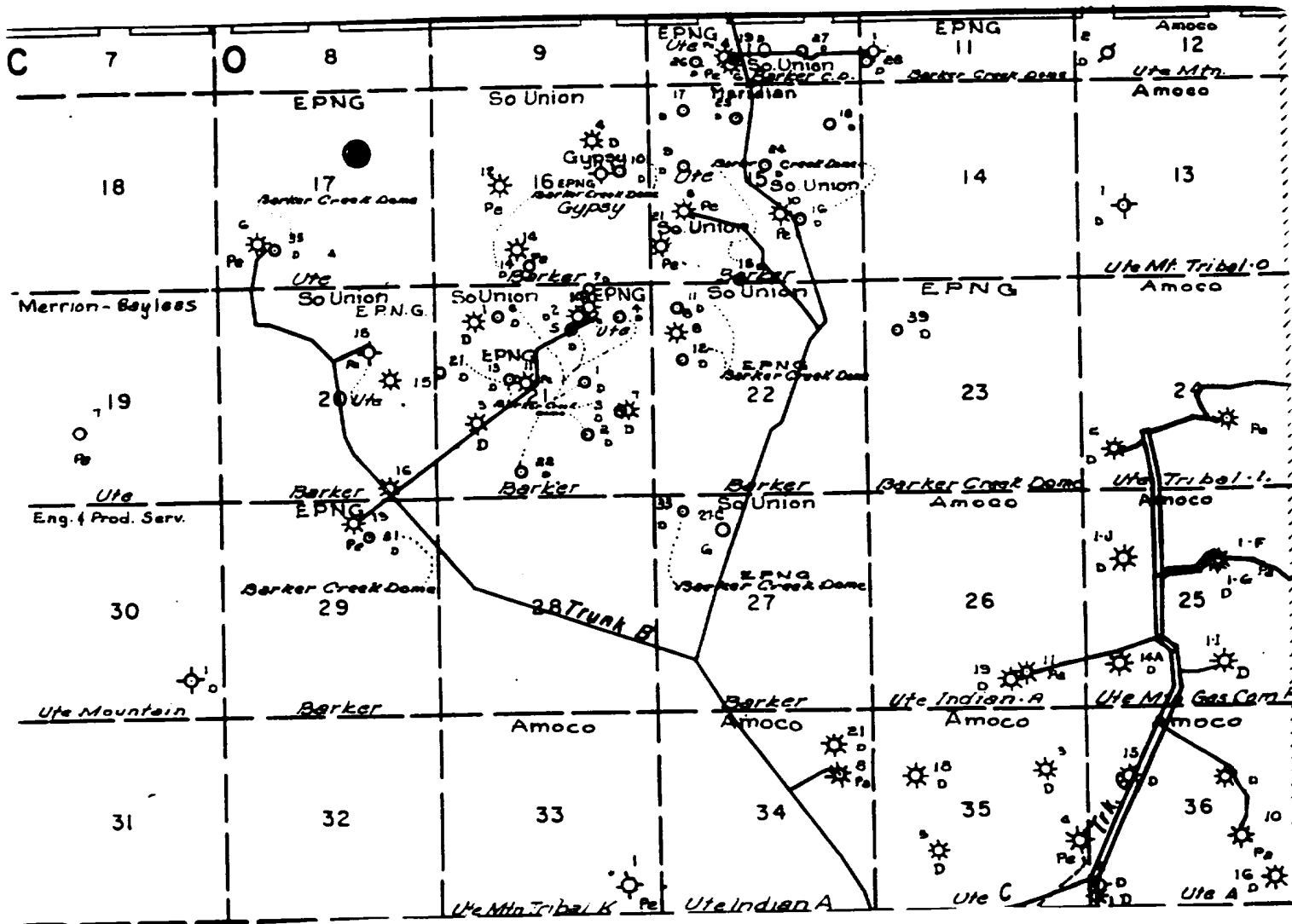
5: NENW 1600'

APD MAP #1





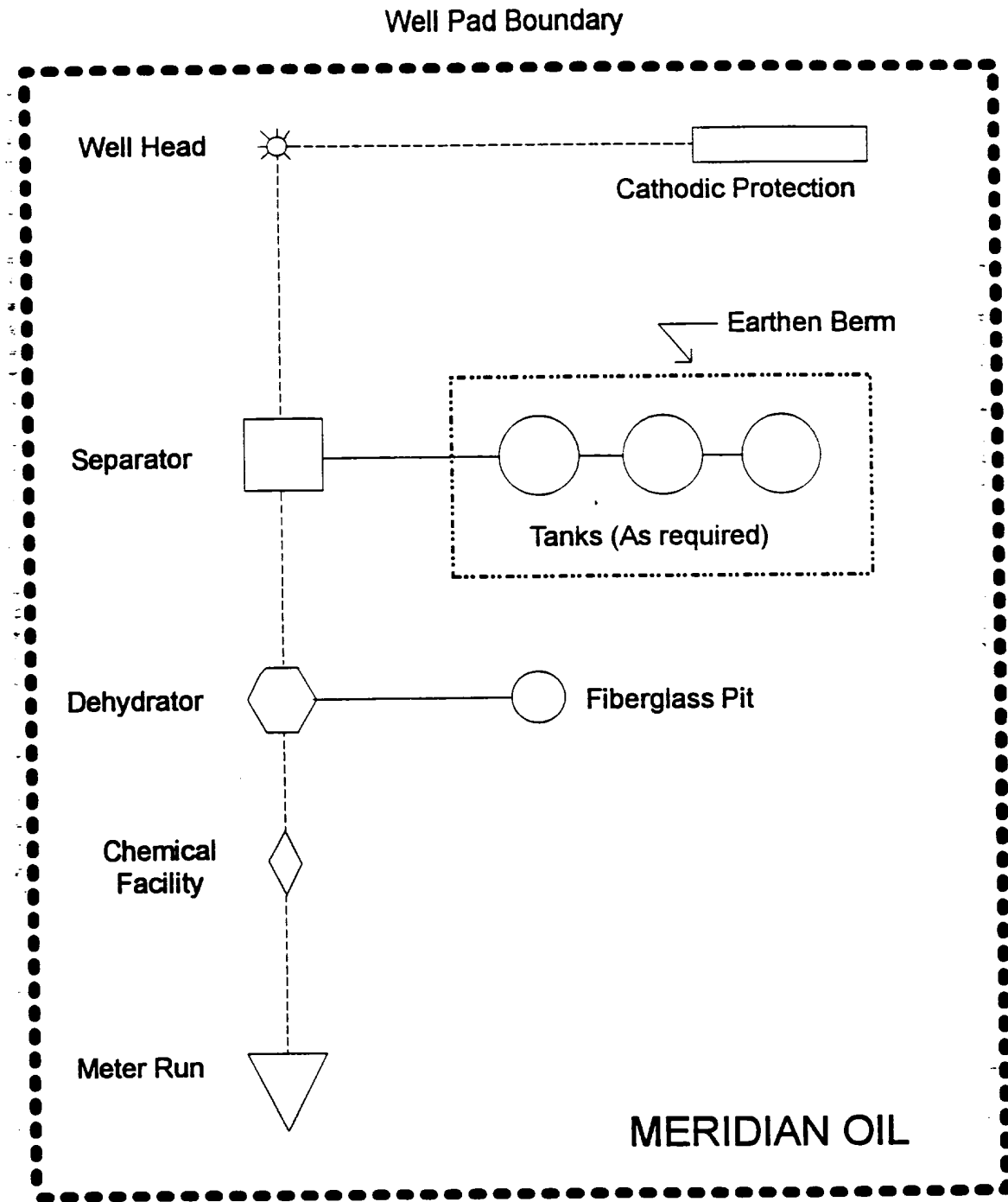




MERIDIAN OIL INC.
 Pipeline Map
 T-32-N, R-14-W
 San Juan County, New Mexico

Ute #22
 MAP #1A

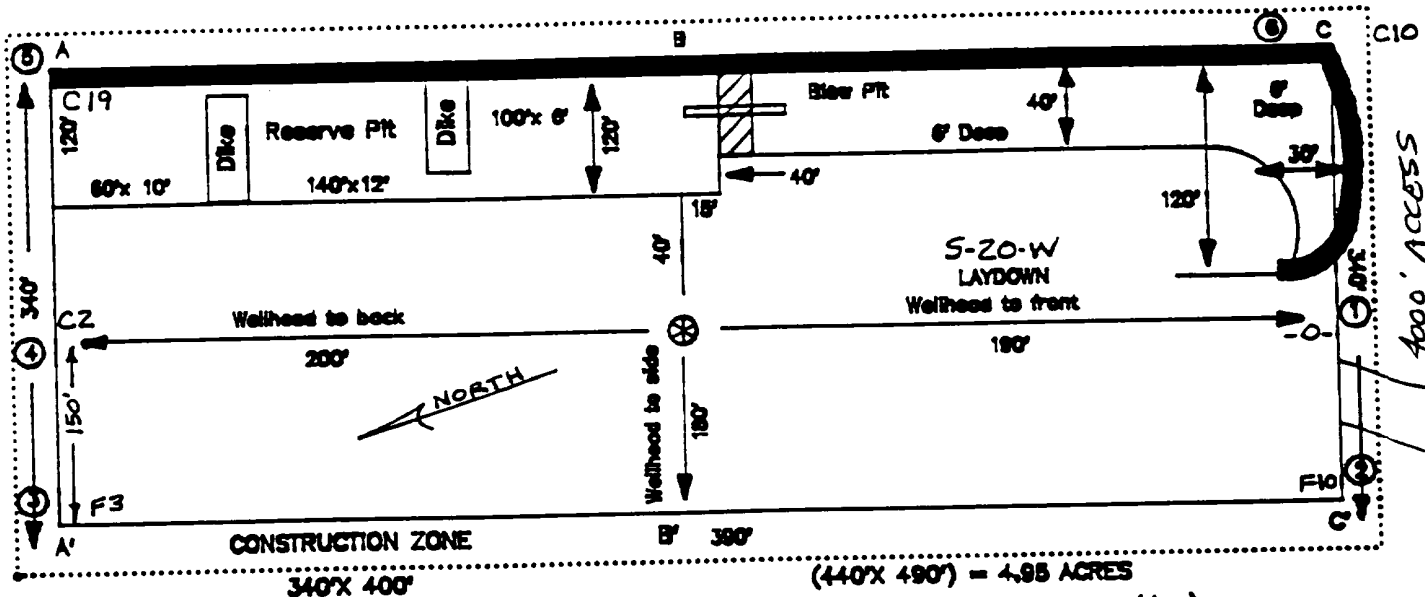
3/91 adw/mjb



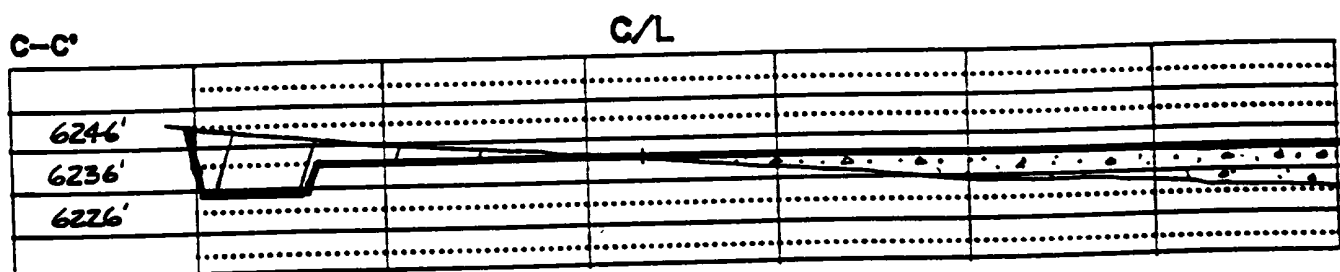
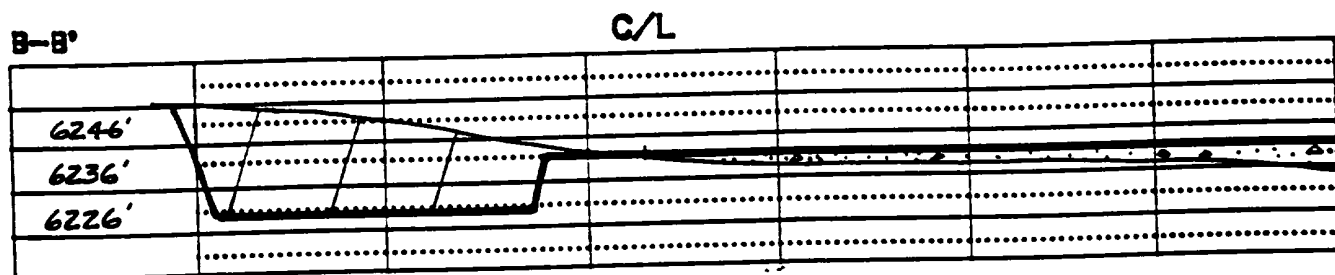
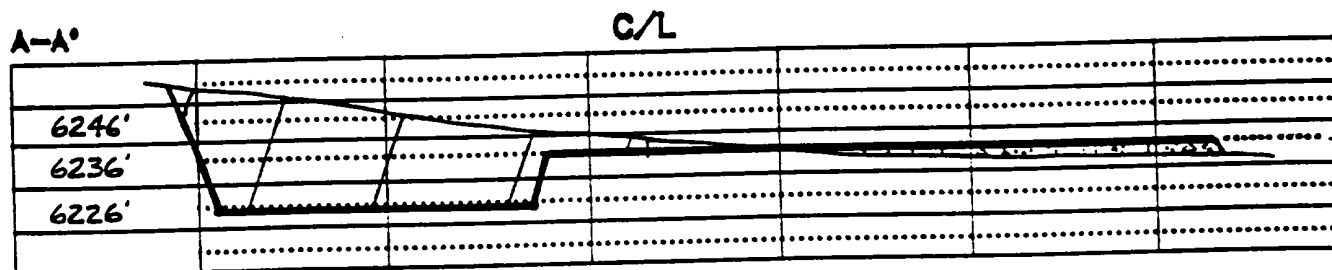
ANTICIPATED
PRODUCTION FACILITIES
FOR A
PARADOX WELL

BARKER DOME HORIZONTALS

NAME: MOI UTE #22
FOOTAGE: 2000' FNL 1925' FEL
SEC 17 TWN 32 N.R. 14 W NMPM
CO: SAN JUAN ST: N. M.
ELEVATION: 6236 DATE: 11-3-93



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



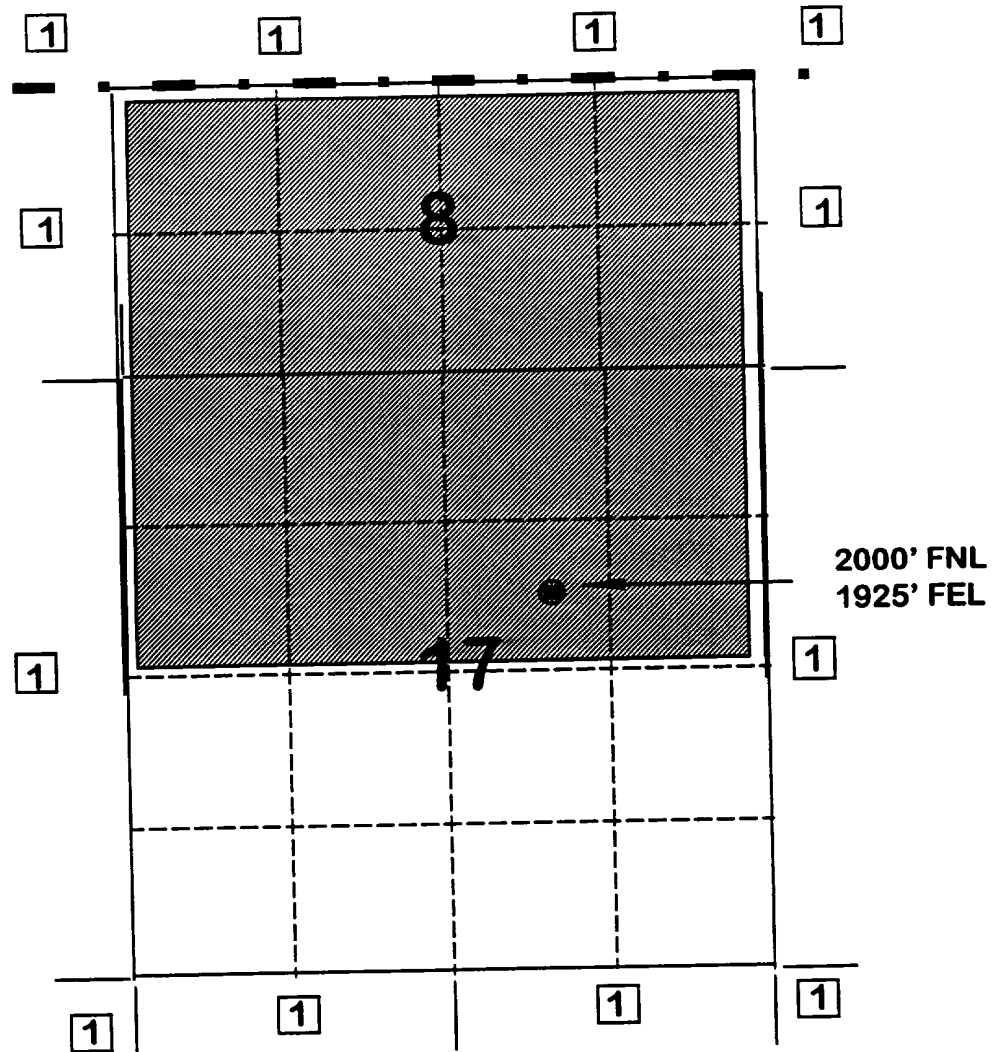
BURLINGTON RESOURCES OIL AND GAS COMPANY

UTE # 22

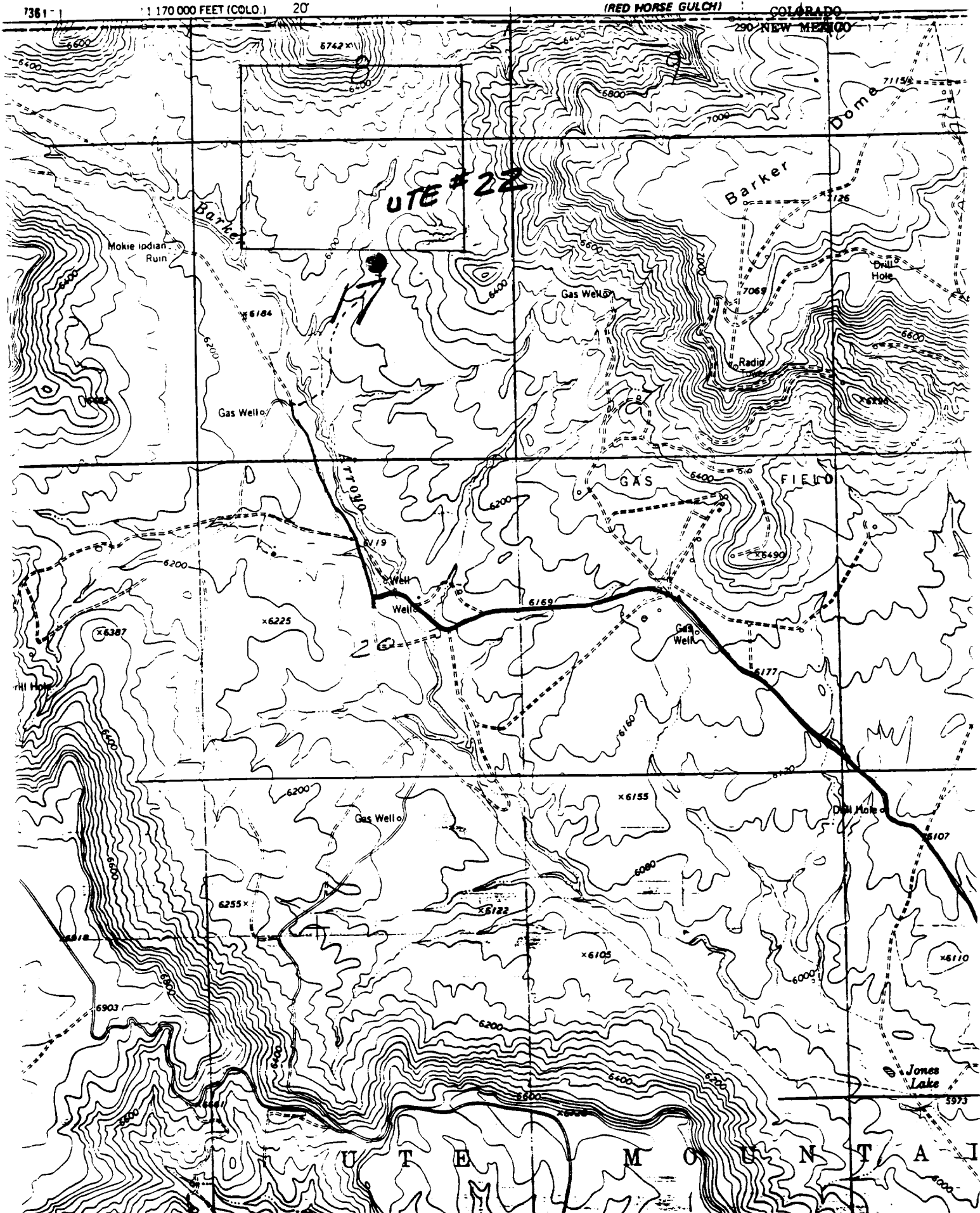
OFFSET OPERATOR \ OWNER PLAT

BARKER DOME DESERT CREEK WELL

Township 32 North, Range 14 West



1) Burlington Resources Oil and Gas Company Successor to Meridian Oil Inc.



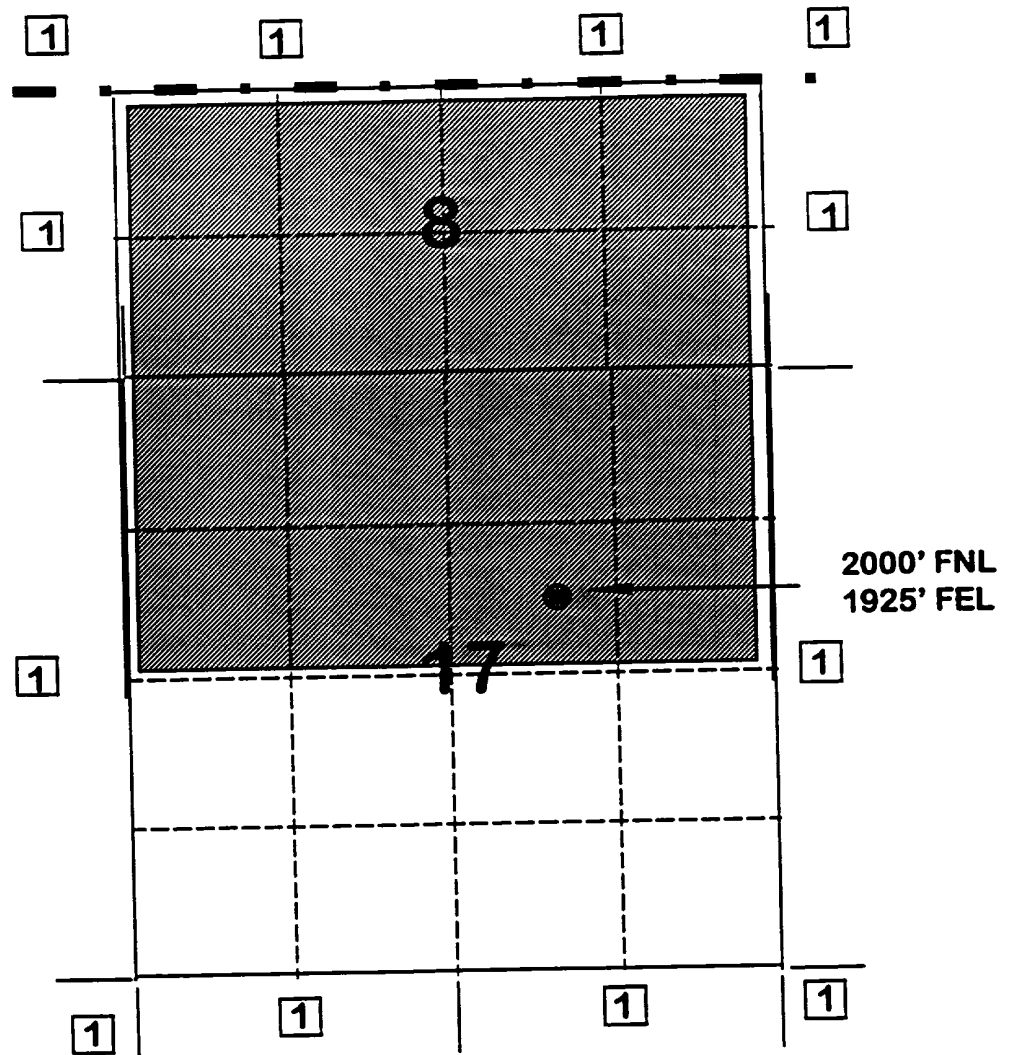
BURLINGTON RESOURCES OIL AND GAS COMPANY

UTE # 22

OFFSET OPERATOR \ OWNER PLAT

BARKER DOME DESERT CREEK WELL

Township 32 North, Range 14 West



1) Burlington Resources Oil and Gas Company Successor to Meridian Oil Inc.

290 NEW MEXICO

