

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL WELL ☐

GAS WELL ☒

OTHER ☐

2. NAME OF OPERATOR

MURCHISON OIL & GAS, INC.

3. ADDRESS AND TELEPHONE NO.

1100 MIRA VISTA BLVD., PLANO, TX. 75093-4698 (972) 931-0700

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*

At surface

660' FNL & 1040' FEL NE/NE (A)

At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

17 MILES SW OF CARLSBAD NM

10. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drilg. unit line, if any)

660'

10. NO. OF ACRES IN LEASE

159.86

17. NO. OF ACRES ASSIGNED TO THIS WELL

2nd WELL ON 640 AC.

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.

19. PROPOSED DEPTH

11650'

20. ROTARY OR CABLE TOOL

ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

3278' GR

22. APPROX. DATE WORK WILL START*

7/1/02

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8 K-55	68 #/FT	270'	300 SX - CIRCULATE
12 1/4"	9 5/8 N-80	36 #/FT	1850'	600 SX - CIRCULATE
8 3/4"	7 5/8 P-110	33&38 #/FT	8600'	800 SX-EST TOP @ 1200'
6 1/2"	5 1/2 P-110	17 #/FT	11650'	400 SX

IT IS PROPOSED TO DRILL THIS WELL TO A TD OF 11650' AND TEST THE MORROW FORMATION

THE BOP PROGRAM IS AS FOLLOWS:

- 1) ONE SET OF DRILL PIPE RAMS (5M)
- 2) ONE SET OF BLIND RAMS (5M)
- 3) ONE HYDRILL (3M)

**APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED**

Carlsbad Controlled Water Basin

NSL-4723

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

Michael S. Daugherty

TITLE VICE PRESIDENT OPERATIONS

DATE

4/3/02

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY

/S/ JOE G. LARA

TITLE

Acting
FIELD MANAGER

DATE

*See Instructions On Reverse Side

APPROVAL FOR 1 YEAR

RECEIVED
2002 APR -6 AM 11:22
BUREAU OF ENVIRONMENT
HOSNELL OFFICE

DISTRICT I
P.O. Box 1080, Hobbs, NM 88241-1080

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code 87280	Pool Name WHITE CITY PENN (GAS)
Property Code	Property Name RINGER	Well Number 4
OGRID No. 015363	Operator Name MURCHISON OIL & GAS, INC.	Elevation 3278'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	3	25-S	26-E		660	NORTH	1040	EAST	EDDY

Bottom Hole Location If Different From Surface

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

Dedicated Acres 640	Joint or Infill INFILL	Consolidation Code	Order No.
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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

LOT 4	LOT 3	LOT 2	LOT 1
40.32 AC	40.56 AC	40.61 AC	40.85 AC
<p>SPACING UNIT</p>			
<p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Michael S. Daugherty</i> Signature MICHAEL S. DAUGHERTY Printed Name VICE PRESIDENT OPERATIONS Title 4/11/02 Date</p> <p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>FEBRUARY 27, 2002</p> <p>Date Surveyed Signature & Seal of Professional Surveyor RONALD J. EIDSON Certificate No. 3239 GARY EIDSON 12641</p>			

State of New Mexico

DISTRICT I

P.O. Box 1980, Hobbs, NM 88241-1980

Energy, Minerals and Natural Resources Department

Form C-102

Revised February 10, 1994

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

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P.O. Box 2088

Santa Fe, New Mexico 87504-2088

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VIA FEDERAL EXPRESS

April 3, 2002

United States Department of the Interior
Bureau of Land Management
Roswell District Office
2909 West Second Street
Roswell, New Mexico 88201
Attn: Linda Askawik

**Re: Application for Permit to Drill
Murchison Oil & Gas, Inc.
Ringer Federal Com #4
Eddy County, New Mexico
Lease No. NM-19836**

Gentlemen:

Murchison Oil & Gas, Inc. "MOGI" respectfully requests permission to drill our Ringer Federal Com #4 located 660' FNL and 1040' FEL of Section 3, T25S, R26E, Eddy County, New Mexico, Federal Lease No. NM-19836. The proposed well will be drilled to a TD of approximately 11650' (TVD). The location and work area have been staked. It is approximately 17 miles South of Carlsbad, NM.

In accordance with requirements stipulated in Federal Onshore Oil and Gas Order No. 1 under 43 CFR 3162.1, our Application for Permission to Drill and supporting evidence is hereby submitted.

I. Application for Permit to Drill:

1. Form 3160-3, Application for Permit to Drill.
2. Form C-102 Location and Acreage Dedication Plat certified by Ronald J. Eidson Registered Land Surveyor No. 3239 in the State of New Mexico, dated 2/27/02.
3. The elevation of the unprepared ground is 3278 feet above sea level.
4. The geologic name of the surface formation is Permian Rustler.
5. Rotary drilling equipment will be utilized to drill the well to TD 11650' (TVD), and run casing. This equipment will then be rigged down and the well will be completed with a pulling unit.

6. Proposed total depth is 11650' TVD.
7. Estimated tops of important geologic markers. (KDB EST @ 3299')

Delaware Sand	1874' TVD
Cherry Canyon	2859' TVD
Bone Springs	5279' TVD
Wolfcamp	8367' TVD
Cisco Canyon	9862' TVD
Strawn	10032' TVD
Atoka	10098' TVD
Morrow Lime	10688' TVD
Morrow Clastics	10877' TVD

8. Estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered:

Primary Objective: Morrow 10877' TVD

Secondary Objectives: Atoka 10098' TVD

9. The proposed casing program is as follows:

Surface: 13-3/8" OD 48# H40 ST&C casing set at 270'

1st Intermediate: 9-5/8" OD 47# N80 ST&C casing from 0 to 1850'

2nd Intermediate: 7-5/8" OD 36# N80 LT&C casing from 0 to 8600'

Production Liner: 5-1/2" OD 17# P-110 Flush joint SJ2 threads from 8300' to 11650'

10. Casing setting depth and cementing program:

- A. 13-3/8" surface casing set at 270', or the top of the Rustler Anhydrite, in 17-1/2" hole. Circulate cement with 300sx 35:65 POZ/Class C with 6% gel + 2% CaCl₂ + 0.25 #/sx Cello-Seal and 200sx Class C with 2% CaCl₂.

If cement does not circulate, a temperature survey will be run to find the TOC and then finish cementing to surface through 1" using Class C with 2% CaCl₂.

- B. 9-5/8" 1st intermediate casing set at 1850' in 12 1/4" hole. Circulate cement with 600sx 50/50 POZ/Class C with 6% gel + 5% salt + 0.25 #/sx Cello-Seal and 300sx Class C with 2% CaCl₂.

If hole conditions dictate, a DV tool may be run to ensure that the intermediate string is cemented to surface.

If cement does not circulate, a temperature survey will be run to find the TOC and then finish cementing to surface through 1" using Class C with 2% CaCl₂.

- C. 7-5/8" 2nd Intermediate casing set at 8600'. Cement with 600 sx 50/50 POZ Class H cement with 0.5#/sx FL-25 + 0.2 #/sx CD-32 + 0.5 #/sx gilsonite followed by 200 sxs Class H neat.

Estimated top of cement is 1200'.

Note: Cement volumes may need to be adjusted to hole caliper.

11. Pressure Control Equipment

0' – 270'	None
270' – 8600'	13-3/8" 5000# ram type preventers with one set blind rams and one set pipe rams and a 3000# annular preventer.
8600' – 11650'	13-3/8" 5000# ram type preventers with one set blind rams and one set pipe rams and a 3000# annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head below 6000'. See attached Sketch of BOP Equipment.

A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

After setting the 7-5/8" casing, the blowout preventers and related control equipment shall be pressure tested to 5000 psi and 3000 psi respectively. Any equipment failing to test satisfactorily shall be repaired or replaced. Results of the BOP test will be recorded in the Driller's Log. The BOP's will be maintained ready for use until drilling operations are completed.

BOP drills will be conducted as necessary to assure that equipment is operational and each crew is properly trained to carry out emergency duties.

Accumulator shall maintain a pressure capacity reserve at all times to provide for the close-open-close sequence of the blind and pipe rams of the hydraulic preventers.

12. Mud Program:

0 – 270'	Fresh water/native mud. Wt. 8.7-9.2 ppg, vis 32-34 sec, Lime for pH control (9-10). Paper for seepage. Lost circulation may be encountered.
270' – 1850'	Fresh water 8.4 ppg, vis 28-29 sec. Add 10# brine as make-up to avoid excessive washouts in salt stringers. Caustic for pH control (10-10.5). Paper for seepage. Lost circulation may be encountered.
1850' – 8650'	Fresh water. Wt. 8.4 ppg, vis 28-29 sec, caustic for pH control (9-9.5). Paper for seepage.
8650' – 9900'	Cut brine. Wt. 9.2 – 9.4 ppg, vis 28-29 sec, caustic for pH control.
9900' – 11650'	Mud up with an XCD Polymer mud system with the following characteristics: Wt. 10.0 – 13.0 ppg, Vis 32-40 sec, WL 6-8cc.

Mud system monitoring equipment with derrick floor indicators and visual/audio alarms shall be installed and operative prior to drilling into the Wolfcamp formation. This equipment will remain in use until the production casing is run and cemented. Monitoring equipment shall consist of the following:

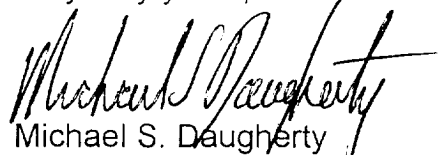
- 1) A recording pit level indicator.
- 2) A pit volume totalizer.
- 3) A flowline sensor.

13. Testing, Logging and Coring Program:

- A. Testing program: None.
- B. Mud logging program: Two man unit from 2100' to TD.
- C. Electric logging program: CNL/LDT/CAL/GR, DLL/CAL/GR.
- D. Coring program: Possible sidewall rotary cores.

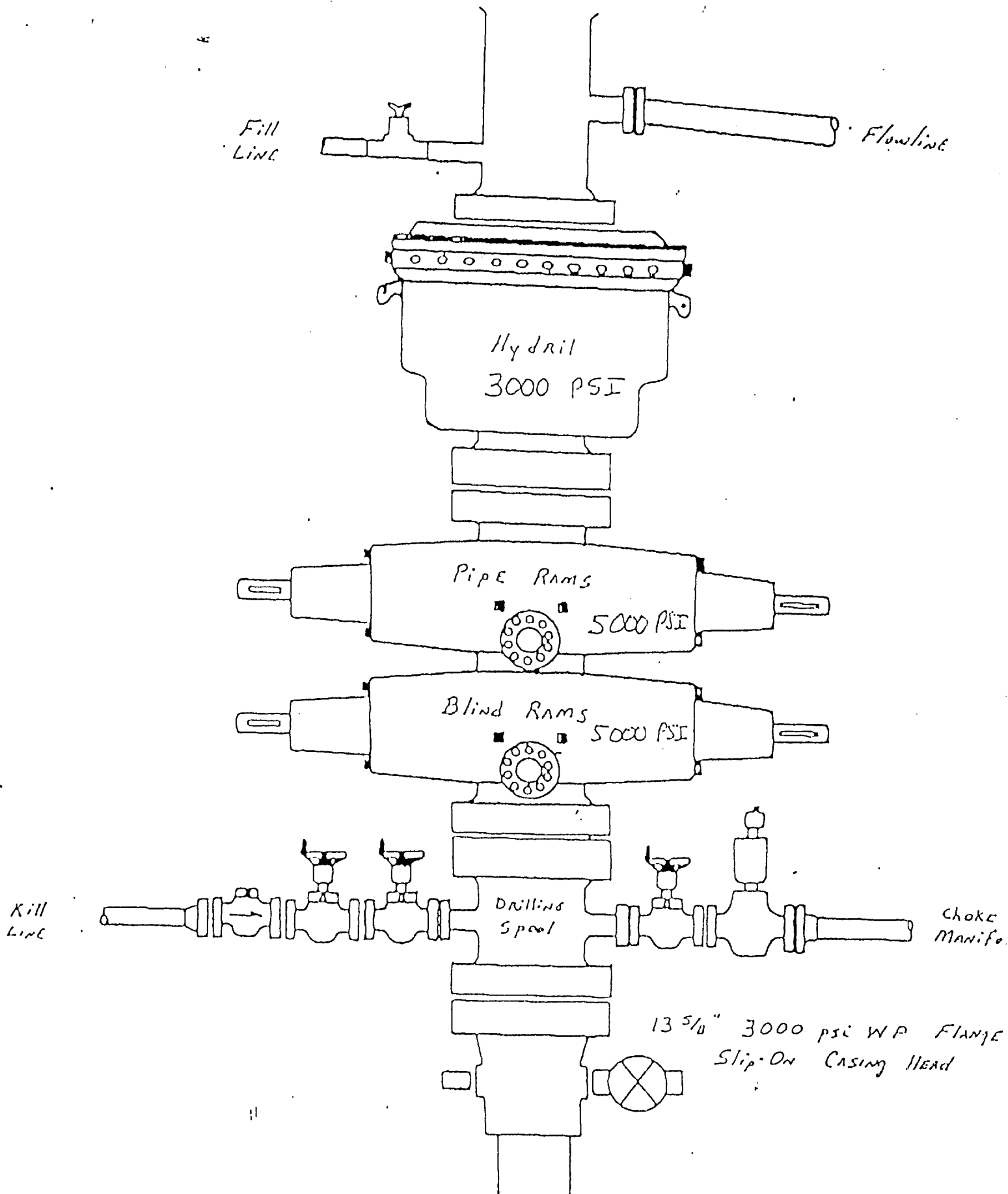
14. No abnormal temperatures, or H2S gas are anticipated. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely.
15. Anticipated starting date is July 1, 2002. It should take approximately 34 days to drill the well and another 10 days to complete.
16. A statement accepting responsibility for operations is attached.
17. The Multi-Point Surface Use & Operation Plan is attached.
18. If the Bureau of Land Management needs additional information to evaluate this application, please advise.

Very truly yours,

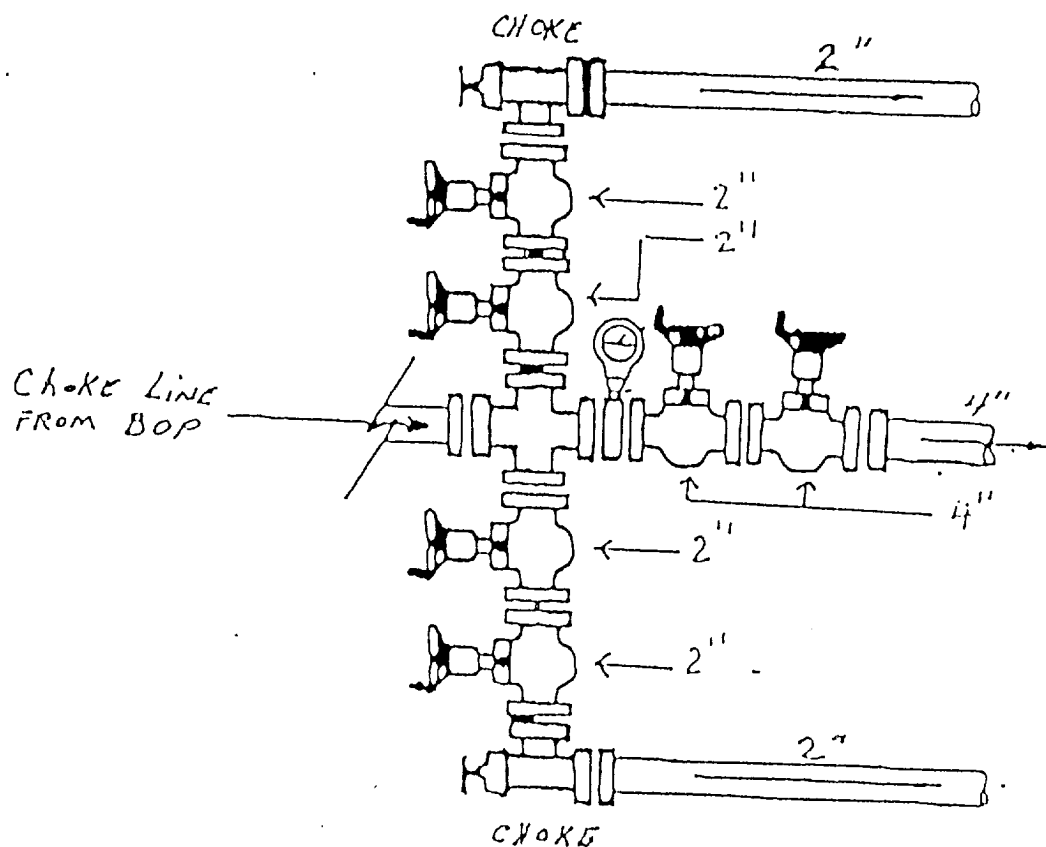

Michael S. Daugherty
Vice President, Operations

MSD/cb/RingerFdCm#1-BLM-APTD

Attachments



MURCHISON OIL & GAS, INC.
 RINGER FEDERAL COM #4
 660' FNL & 1040' FEL NE/NE(A)
 EDDY CO., NM.



MURCHISON OIL & GAS, INC.
 RINGER FEDERAL COM #4
 660' FNL & 1040' FEL NE/NE(A)
 EDDY CO., NM.

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

MURCHISON OIL & GAS, INC.
RINGER FEDERAL COM #4
EDDY COUNTY, NEW MEXICO
LEASE NO. NM-19836

This plan is submitted with the Application for Permit to Drill the above described well. The purpose of the plan is to identify the location of the proposed well, the proposed construction activities and operations plan, the magnitude of necessary surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operation so that a complete appraisal may be made of the environmental effects associated with the operation.

The well, and work area have been staked by a registered New Mexico land surveyor. Mesa Field Services have been engaged to make an archaeological reconnaissance of the work area. Their findings concerning cultural resources will be reported to the Bureau of Land Management.

1. Existing Roads

A copy of a USGS "Red Lake, New Mexico" Topographic map is attached showing the proposed location. The well location is spotted on this map, which also shows the existing road system.

2. Planned Access Road

- A. An existing lease access road off of US Highway 62/180 will be used to gain access to location. The attached vicinity map "Highlights" access route. About 230' feet of new lease road will have to be constructed.
- B. Surfacing material: Six inches of caliche and water, compacted and graded.
- C. Maximum Grade: Less than 3%
- D. Turnouts: None needed.
- E. Drainage Design: N/A.
- F. Culverts: None needed.
- G. Cuts and Fills: Leveling the location will require minimal cuts or fills.

- H. Gates or Cattleguards: None required.
- 3. Existing wells within a one mile radius of the proposed development well are shown on the attached map.
- 4. Location of Existing and/or Proposed Facilities
 - A. If the well is productive, production facilities will be constructed on the well pad. The facility will consist of a stack pack, one 300 bbl oil tank and one 300 bbl fiberglass water tank. All permanent above ground facilities will be painted in accordance with the BLM's painting guidelines simulating the color of sandstone brown.
 - B. All site security guidelines identified in 43 CFR 3162.7 regulations will be adhered to and a site security plan will be submitted for the Ringer Federal Com #4 tank battery. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed.
- 5. Location and Type of Water Supply

Fresh water and brine water will be used to drill this well. It will be purchased from a supply in or near Carlsbad and transported to the well site.
- 6. Source of Construction Materials

Caliche for surfacing the well pad will be obtained from a Federal pit located in Eddy County, New Mexico.
- 7. Method of Handling Waste Disposal
 - A. Drill Cuttings will be disposed of in drilling pits.
 - B. Drilling fluids will be allowed to evaporate in the drilling pits until pits are dry.
 - C. Water produced during tests will be disposed of in the drilling pits. Oil produced during tests will be stored in test tanks until sold.
 - D. Current laws and regulations pertaining to the disposal of human waste will be complied with.

- E. Trash, waste paper, garbage and junk will be collected in steel trash bins and removed after drilling and completion operations are completed. All waste material will be contained to prevent scattering by the wind.
 - F. All trash and debris will be removed from the wellsite within 30 days after finishing drilling and/or completion operations.
- 8. Ancillary Facilities
 - A. None needed.
- 9. Wellsite Layout
 - A. The location and dimensions of the well pad, mud pits, reserve pit and location of major rig components are shown on the attached well site layout sketch. If Patterson Drilling Company Rig #78 is not utilized a comparable rig will be substituted. The V-door will be to the east and the pits to the north.
 - B. Leveling of the wellsite will be required with minimal cuts or fills anticipated.
 - C. The reserve pit will be plastic lined.
 - D. The pad and pit area have been staked and flagged.
- 10. Plans for Restoration of the Surface
 - A. After completion of drilling and/or completion operations, all equipment and other materials not needed for operations will be removed. Pits will be filled and location cleaned of all trash and junk to leave the well site in as aesthetically pleasing condition as possible.
 - B. Any unguarded pits containing fluids will be fenced until they are filled.
 - C. After abandonment of the well, surface restoration will be in accordance with the land owner. This will be accomplished as expeditiously as possible. Barring unforeseen problems, all pits will be filled and leveled within 90 days after abandonment.

11. Other Information

- A. Topography: The location is a flat plain. Ground Level elevation is 3278 feet.
- B. Soil: Sandy clay loams.
- C. Flora and Fauna: The vegetative cover is generally sparse consisting of mesquite, yucca, shinnery oak, sandsage and perennial native range grasses. Wildlife in the area is also sparse consisting of coyotes, rabbits, rodents, reptiles, dove and quail.
- D. Ponds and Streams: Black River Stream is 1200' to the north west.
- E. Residences and Other Structures: There are no occupied dwellings within a 1 mile radius of the location.
- F. Archaeological, Historical and Cultural Sites: Mesa Field Services have been engaged to make an archaeological reconnaissance of the work area.
- G. Land Use: Cattle ranching.
- H. Surface Ownership: The surface is public land leased by Margaret Marquart, P.O. Box 8, White City, New Mexico 88268. They will be notified of our intention to drill prior to any activity.

Upon completion of the well, any plastic material used to line the pits or sumps will be cut off below ground level as far as possible and disposed of before the pits are covered. All unattended pits containing liquid will be fenced and the liquid portion allowed to evaporate before the pits are broken and backfilled.

All waste associated with the drilling operation will be contained in steel bins and removed. All garbage and debris left on site will be removed within 30 days of the final completion. The well site, if a producer, will be maintained and kept clean of all trash and litter which detracts from the surrounding environment. Equipment will be maintained in accordance with good operating practice.

After the wellsite is cleaned and pits and sumps backfilled, any obstruction to the natural drainage will be corrected by ditching or terracing. All disturbed areas, including any access road no longer needed, will be ripped. Those areas will be reseeded with grass if, in the opinion of the land owner, it is required.

12. Operator's Representatives

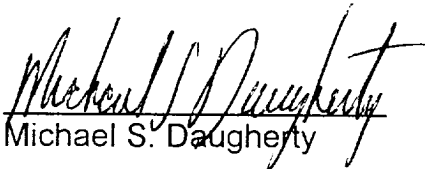
The Field representatives responsible for assuring compliance with the approved surface use and operations plan are as follows:

Michael S. Daugherty
1100 Mira Vista Blvd.
Plano, TX. 75093-4698
Office Phone: (972) 931-0700
Home Phone: (972) 618-0792

Randy Ford
201 W. Wall, Ste. 600
Wall Tower East
Midland, TX. 79701
Office Phone: (915) 682-0440
Cell Phone: (915) 559-2222

13. Certification

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 MOGI and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.


Michael S. Daugherty

4/3/02
Date

Vice President, Operations
Murchison Oil & Gas, Inc.

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Roswell Field Office
2909 West Second Street
Roswell, New Mexico 88201-1287

Statement Accepting Responsibility for Operations

Operator Name: MURCHISON OIL & GAS, INC.
Street or Box: 1100 MIRA VISTA BLVD.
City, State: PLANO, TX.
Zip Code: 75093-4698

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

Lease No.: NM-19836

Legal Description of Land: E/2 of E/2
SECTION 3, T25S, R26E

Formation (s) (if applicable): FROM THE SURFACE DOWN TO 11650'

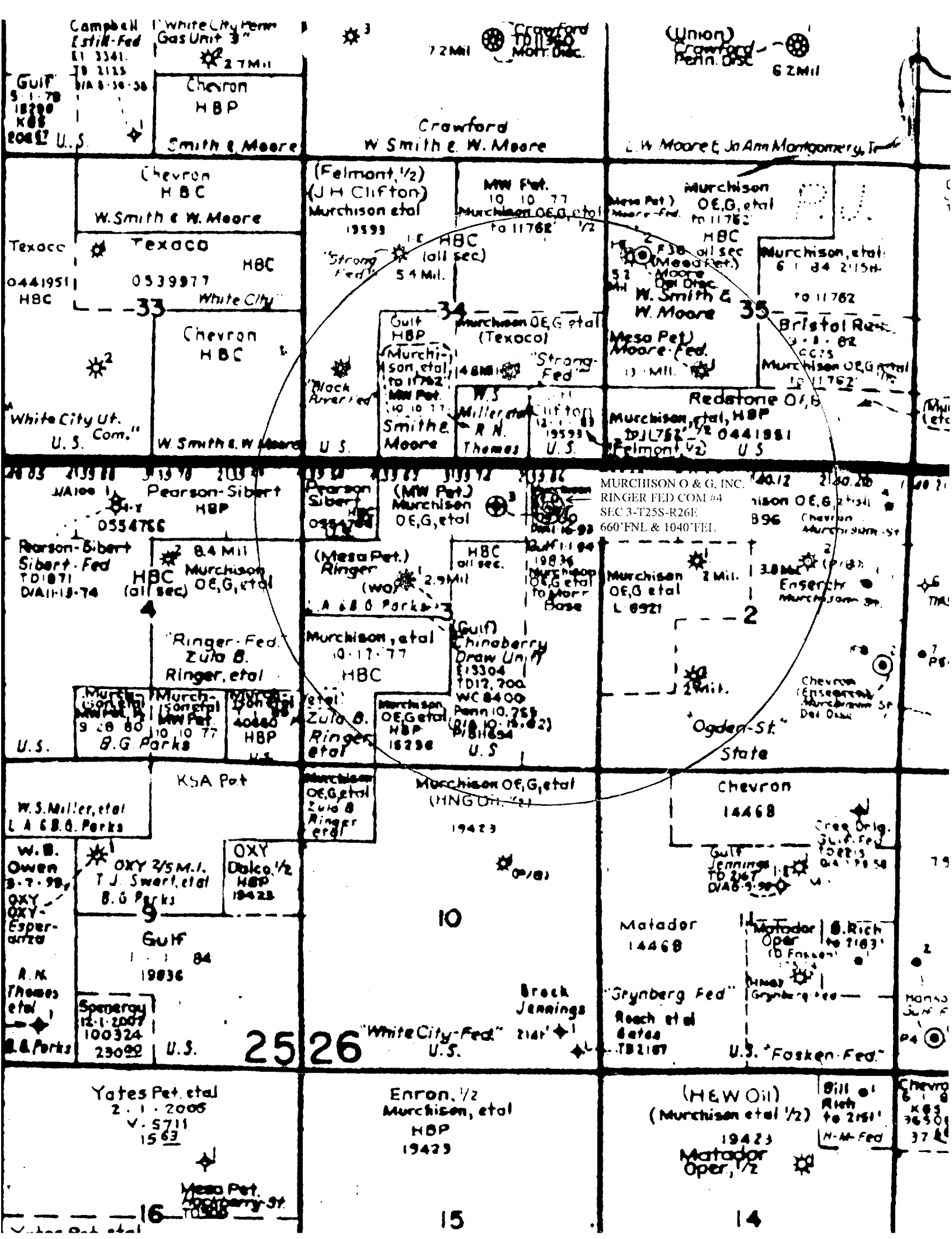
Bond Coverage (State if individually bonded or another's bond):
PERSONAL STATEWIDE BOND

BLM Bond File No.: NM2683

Authorized Signature: 
MURCHISON OIL & GAS, INC.

Title: MICHAEL S. DAUGHERTY
VICE PRESIDENT OPERATIONS

Date: 4/3/02



9-22-00

Patterson Drilling Company

Rig #78

7,000' - 13,000'

DRAWWORKS

Brewster N-75, 800 HP
Brake: Parkersburg 40" Double Hydromatic
1 1/8" Drilling Line - Crown-o-matic

ENGINES

Two D353 Caterpillar engines, 410 HP each

DERRICK

Ideal 132', 400,000# capacity

SUBSTRUCTURE

Ideal 20', 540,000 setback capacity
KB -22', Rotary Clearance 17.2

MUD PUMPS

Pump #1: Ideco MM700 w/Cat 3508
Pump #2: Ideco MM700 w/Cat 379

DRILL STRING

12,000' 4-1/2" Drill Pipe
Other sizes of drill pipe and drill collars are available

BLOWOUT PREVENTERS

3000# - 5000# working pressure as required

MUD SYSTEM

Two steel pits plus slug pit, 600 bbl volume, fluid roller agitators, one 5" x 6" centrifugal powered by one Detroit diesel, vibrator shale shaker, 48" x 60", two-cone Harrisburg desander

MUD HOUSE

8 x 30 Storage

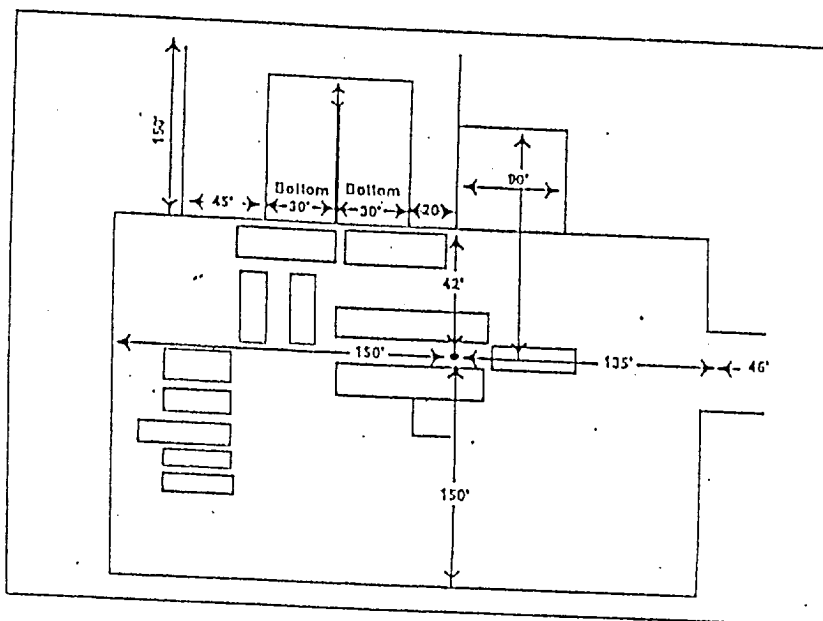
COMMUNICATIONS

24 hour direct cellular telephone

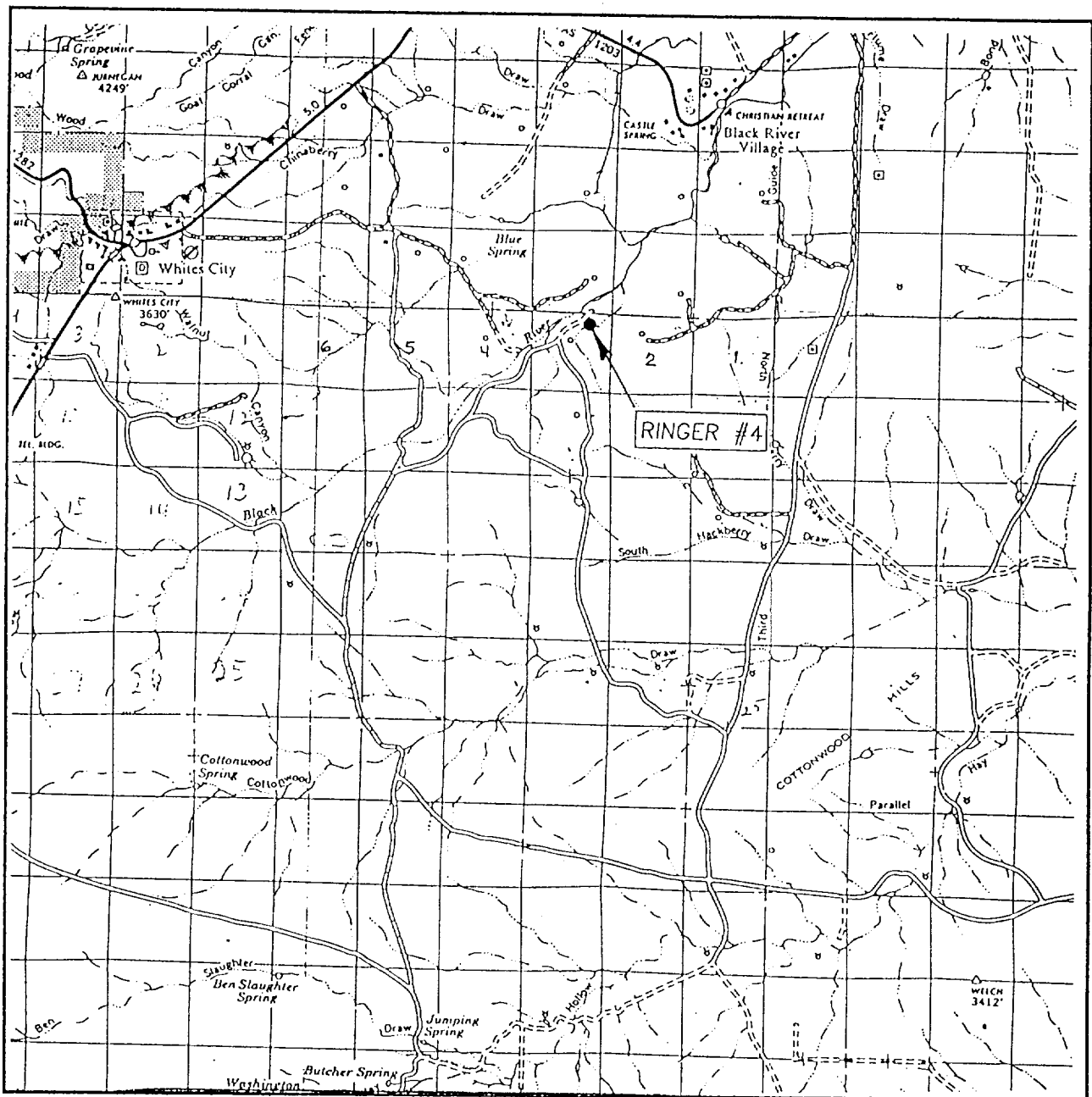
OTHER EQUIPMENT

Blocks. Ideco 250 Ton
Hook. Utilized
Swivel. Emsco LB300
Rotary Table. Ideco 23"
Shale Shaker. Brandt Double
Electrical Power. Two 3406 Cat w/320 kW generators
Fresh Water Storage. Two 500 bbl tanks
Housing.
Kelly. 5 1/4 Hex, 41' Long

"Hole Requirements will dictate actual Reserve Pit size (TOOLPUSHER SHOULD BE CONSULTED)"



VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 3 TWP. 25-S RGE. 26-E

SURVEY N.M.P.M.

COUNTY EDDY

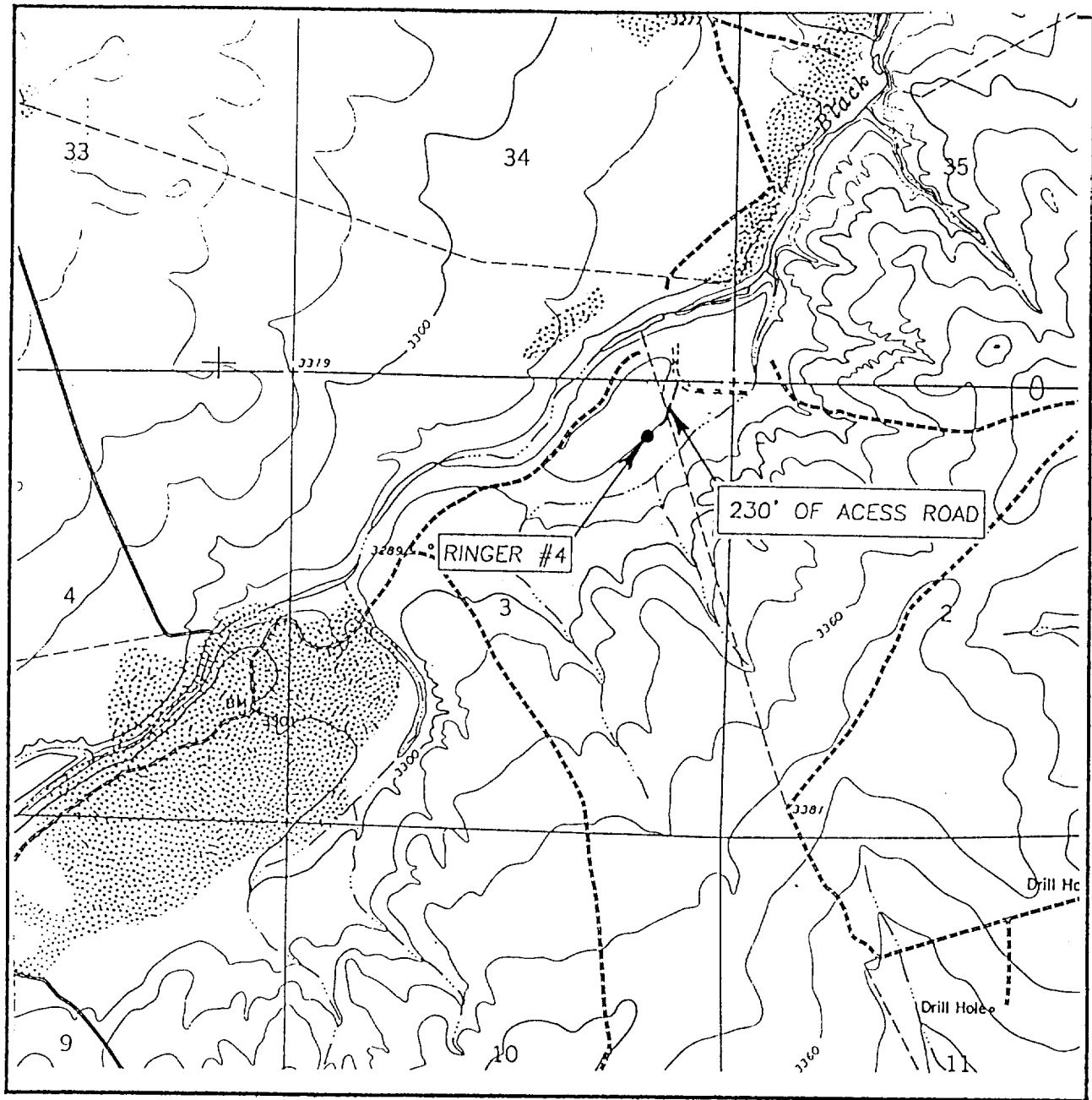
DESCRIPTION 660' FNL & 1040' FEL

ELEVATION 3278'

OPERATOR MURCHISON OIL & GAS INC.

LEASE RINGER

JOHN WEST SURVEYING
HOBBS, NEW MEXICO
(505) 393-3117



CONTOUR INTERVAL: 20'
BLACK RIVER VILLAGE, N.M.

U.S.G.S. TOPOGRAPHIC MAP
BLACK RIVER VILLAGE, N.M.

JOHN WEST SURVEYING
HOBBS, NEW MEXICO
(505) 393-3117