

S

OCD-ARTESIA

129

Boyle

PWT

ATS-08-167

Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

DEC 26 2007

OCD-ARTESIA

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

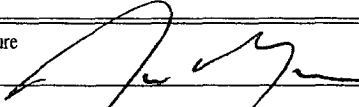
APPLICATION FOR PERMIT TO DRILL OR REENTER

| | | |
|--|--|--|
| 1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER | | 5. Lease Serial No. NMLC #067132 |
| 1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone | | 6. If Indian, Allottee or Tribe Name N/A |
| 2. Name of Operator Murchison Oil and Gas, Inc. | | 7. If Unit or CA Agreement, Name and No N/A |
| 3a. Address 1100 Mira Vista Blvd. Plano, TX 75093-4698 | 3b. Phone No. (include area code) 972-931-0700 | 8. Lease Name and Well No. Mustang Federal Com #2 36927 |
| 4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 2310' FSL & 660' FEL, Unit I At proposed prod zone NORTHDOX | | 9. API Well No. 30-015-36025 |
| 14. Distance in miles and direction from nearest town or post office* 7 Miles Southwest of Loco Hills, NM | 15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any) 660 | 10. Field and Pool, or Exploratory Turkey Track North Morrow |
| 16. No. of acres in lease 720 | 17. Spacing Unit dedicated to this well 320 | 11. Sec, T, R M. or Blk. and Survey or Area Section 21, T-18S, R29E |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. N/A | 19. Proposed Depth 11400' MD | 12. County or Parish Eddy |
| 20. BLM/BIA Bond No on file NM 2163 | 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3471' GL | 13. State NM |
| 22. Approximate date work will start* 01/01/2008 | | 23. Estimated duration 45 days |

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, shall be attached to this form:

- | | |
|--|--|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above) |
| 2. A Drilling Plan. | 5. Operator certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office) | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

| | | |
|--|--------------------------------------|--------------------|
| 25. Signature  | Name (Printed/Typed) Dwaine Moore | Date 10/17/2007 |
| Title Agent for Murchison Oil and Gas, Inc. | | |

| | | |
|--|---------------------------------------|---------------------------------|
| Approved by (Signature) Is/ Don Peterson | Name (Printed/Typed) Is/ Don Peterson | Date DEC 21 2007 |
| Title FIELD MANAGER | | Office CARLSBAD FIELD OFFICE |

Application approval does not warrant or certify that the applicant holds legal or equitable title to these rights in the subject lease which would entitle the applicant to conduct operations thereon
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on page 2)

Capitan Controlled Water Basin

NSL-5716

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

ATTACHMENT TO FORM 3160-3
Murchison Oil & Gas, Inc.
Mustang Federal Com# 2
SL 2310' FSL & 660' FEL, Unit I
Section 21, T18S, R29E
Eddy Co., NM

1. Proration Unit Spacing: 320

2. Ground Elevation: 3471'

3. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS

| | |
|-----------------------|---------------|
| Yates | 1025' TVD |
| Queen | 1977' TVD |
| Grayburg | 2331' TVD |
| San Andres | 2810' TVD |
| First Bone Spring SD | 6535' TVD |
| Second Bone Spring SD | 7816' TVD |
| Third Bone Spring SD | 8289' TVD |
| Wolfcamp | 8584' TVD |
| Cisco | 9629' TVD |
| Canyon | 9850' TVD |
| Strawn | 10076' TVD |
| Atoka | 10420' TVD |
| Atoka "Pay" | 10598' TVD |
| Morrow "A" | 10983' TVD |
| Morrow "C" | 11120' TVD |
| Morrow "D" | 11210' TVD |
| Base Penn. | 11252' TVD |
| Total Depth | 11400' |

4. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL, OR GAS

| | | |
|---------------------|--------|------------|
| Primary Objective | Morrow | 11077' TVD |
| Secondary Objective | Strawn | 10086' TVD |

5. CASING AND CEMENTING PROGRAM

| Casing Size | Hole Size | From To | Weight | Grade | Joint | Conditions |
|-------------|-----------|------------|--------|-------|-------|------------|
| 13.375" | 17.5" | 0' - 300' | 48.0# | H-40 | ST&C | New |
| 9.625" | 12.25" | 0' - 3000' | 40.0# | J-55 | ST&C | New |
| 5.5" | 8.50" | 0 - 11400' | 17.0# | N-80 | LT&C | New |

Equivalent or adequate grades and weights of casing may be substituted at time casing is run, depending on availability.

see
COR →

see
attachment →

see
COR

6 Casing Depth and Cementing Program:

13.375" Surface Casing - Cementing Program

Circulate cement w/ 350 sacks of Class C Yield 1.32 cement with additives. 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.

9.625" Intermediate Casing - Cementing Program

Circulate cement with 1000 sacks of Class C Yield 1.32 with additives. 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.

5.5" Production Casing - Cementing Program

Cement with 600 sacks of Class H Yield 1.06 with additives.

7. PRESSURE CONTROL EQUIPMENT

0 – 300'

None

300' – 3000'

13 3/8" 3000# ram type preventers with one set blind rams and one set pipe rams.

3000 – 11400'

11" 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.

See
COA

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 9 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.

8. MUD PROGRAM

- 0 – 300' Fresh water / native mud. Wt. 8.4 to 8.6 ppg, vis 32-34 sec, Lime for pH control. Paper for seepage. Lost circulation may be encountered.
- 300 – 3000' 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. Paper for seepage. Lost circulation may be encountered.
- 3000 – 8500' Fresh water. Wt. 8.4 ppg, vis 28-29 sec, caustic for pH control. Paper for seepage.
- 8500' – 10400' Cut brine. Wt. 9.2 – 9.4 ppg, vis 28-29 sec, caustic for pH control
- 10400' – 11400' Mud up with XCD Polymer mud system with the following characteristics: WT. 10.0, 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:

- A recording pit level indicator.
- A pit volume totalizer.
- A flowline sensor.

9. TESTING, LOGGING AND CORING PROGRAM

Testing program: Schlumberger- MAXIS 500 (Platform Express)- Call one of the following two (2) days in advance to put the job on "will call" and eight (8) hours notice prior to logging giving desire time for truck to be on location:

ROSWELL, NEW MEXICO DISTRICT 505-622-9080

Or

Bruce Robertson
432-894-2136 (mobile)
432-571-4631 (office).

Mud logging program. Two man unit from 3000' to TD.

Electric logging program: CNL/LDT/CAL/GR, DLL/CAL/GR.

Coring program: Possible sidewall rotary cores.

10. 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.
11. Anticipated starting date is January 1, 2008. It should take approximately 40 – 45 days to drill the well and another 10 days to complete.
12. A statement accepting responsibility for operations is attached.
13. The Multi-Point Surface Use & Operation Plan is attached.
14. If the Bureau of Land Management needs additional information to evaluate this application, please advise.

Mustang Federal #2

Amendment December 3, 2007

Anticipated Bottom Hole Pressure is 4000psi (maximum)

Top of cement for production casing is expected to be 9500' which is 500' above our current anticipated secondary objective (Strawn). Cement top may be adjusted upward pending determination of additional up hole potential to achieve a top of cement that is 500' above the uppermost hydrocarbon productive interval.

Mustang Federal Com #2 Casing Desing/Safety Factors

| Casing Size | Hole Size | From | To | Weight | Grade | Type Conn | Condition |
|-------------|-----------|-------|--------|--------|-------|-----------|-----------|
| 13.375" | 17.500" | 0' | 300' | 48.0# | H-40 | ST&C | New |
| 9.625" | 12.250" | 0' | 3000' | 40.0# | J-55 | ST&C | New |
| 5.500" | 8.500" | 0' | 9500' | 17.0# | N-80 | LT&C | New |
| 5.500" | 8.500" | 9500' | 11400' | 17.0# | S-95 | LT&C | New |

| Casing Size | Burst Rating, psi | Safety Factor | Collapse Rating, psi | Safety Factor | Tension Rating, 1000 lbs | Safety Factor |
|-------------|-------------------|---------------|----------------------|---------------|--------------------------|---------------|
| 13.375" | 1730 | 6.2 | 740 | 3.2 | 322 | 26.4 |
| 9.625" | 3950 | 1.3 | 2570 | 4.3 | 452 | 4.4 |
| 5.500" | 7740 | 1.9 | 6290 | 1.2 | 348 | 2.1 |
| 5.500" | 9190 | 2.3 | 8580 | 1.2 | 392 | >30 |

**SURFACE USE AND OPERATIONS PLAN FOR
DRILLING, COMPLETION, AND PRODUCING**

**Murchison Oil & Gas, Inc.
Mustang Federal Com #2
SL: 2310 FSL & 660' FEL, Unit I
Section 21, T-18-S, R-29-E
Eddy County, New Mexico**

LOCATED

7 miles Southwest of Loco Hills, NM

OIL & GAS LEASE

NMLC # 0067132

BOND COVERAGE

Personal Statewide Bond #NM 2163

POOL

Turkey Track N. Morrow

OIL & GAS RECORD LESSEE

Denton Oil Co., P.O. Box 1252, Artesia, NM 88210

SURFACE OWNER

John R. Gray, LLC, P.O. Box 1182, Artesia, NM 88230, 575-746-6501

A surface use agreement has been made with John R. Gray, LLC and Murchison Oil & Gas, Inc.

MINERAL OWNER

Bureau of Land Management

EXHIBITS

- | | |
|----------|---|
| A. | Well Location & Acreage Dedication Map |
| B. | Area Road Map |
| C. | Vicinity Oil & Gas Map |
| D. | Topographic & Location Verification Map |
| E | Well Pad Layout Map |
| F-1, F-3 | Proposed Lease Road and Layout Map |
| G | Cut and Fill |
| H. | Drilling Rig Layout |
| I. | BOPE Schematic |
| J. | Choke Manifold Schematic |

This well will be drilled to a depth of approximately 11400' MD.

EXISTING ROADS

- A. Exhibit A is a portion of a section map showing the location of the proposed well as staked.
- B. Exhibit B is a map showing existing roads in the vicinity of the proposed well site.
- C. Directions to well location- From mile maker 18 of State highway 360 go Southeast 0.4 miles to proposed leased road.

ACCESS ROADS

Length and Width

1104.8' long and 20' wide shown in Exhibit F-1 to F-3. Exhibit F-3 is included in reference to an application for permit to construct an access or median opening on public right of way.

Surface Material

Existing

Maximum Grade

Less than three percent

Turnouts

None needed

Drainage Design

N/A

Culverts

None needed

Gates and Cattle Guards

None required

LOCATION OF EXISITING WELLS

Existing wells within a one mile radius are shown in Exhibit C.

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 Mustang Federal Com #2 tank battery. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed.

LOCATION AND TYPE OF WATER SUPPLY

It is not contemplated that a water well will be drilled. Water necessary for drilling will be purchased and hauled to the site over existing roads.

SOURCE OF CONSTRUCTION MATERIALS

Caliche for surfacing the well pad will be obtained from a Federal pit located in Eddy County, New Mexico.

METHODS OF HANDLING WASTE DISPOSAL

Drill Cuttings will be disposed of in drilling pits. A NMOCD Form C-144 Pit Permit has been sent to the NMOCD further describing reserve pit construction and location of ground water, waterways and water wells.

Drilling fluids will be allowed to evaporate in the drilling pits until the pits are dry.

Water produced during tests will be disposed of in the drilling pits. Oil produced during tests will be stored in test tanks until sold.

Current laws and regulations pertaining to the disposal of human waste will be complied with.

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.

All trash and debris will be removed from the well site within 30 days after finishing drilling and/or completion operations.

ANCILLARY FACILITIES

A lined frac pit may be required during completion to store 30K to 40K barrels of fresh water. This pit may be used for more than one well.

WELL SITE LAYOUT

Exhibit E shows the relative location and dimensions of the well pad, mud pits, reserve pit, and trash pit, and the location of major rig components. The V-door will be to the East and the reserve pit located to the North.

Leveling of the wellsite will be required with minimal cuts or fills anticipated.

The pad and pit area have been staked and flagged.

PLANS FOR RESTORATION OF THE SURFACE

After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. The well site will be cleaned of all trash and junk to leave the site in an as aesthetically pleasing condition as possible.

Any unguarded pits containing fluids will be fenced until they are filled.

After abandonment of the well, surface restoration will be in accordance with the land owner. This will be accomplished as expeditiously as possible.

OTHER INFORMATION

Topography

The land surface at the well site is rolling hills.

Soil

Topsoil at the well site is sandy clay loams.

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.

Ponds and Streams

There are no rivers, lakes, ponds, or streams in the area.

Residences and Other Structures

There are no residences within one mile of the proposed well site.

Archaeological, Historical, and Cultural sites

An Archaeological Consultant who is acceptable to the BLM will be engaged to make an archaeological reconnaissance of the work area.

Land Use

Grazing.

OPERATOR'S REPRESENTATIVES

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

Randy Ford
415 W. Wall Street, Suite 1700
Midland, TX 79701
Office Phone: (432) 682-0440
Cell Phone: (432) 559-2222

Exhibit "A"

DISTRICT I
1826 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

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

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | |
|---------------|---|--|
| API Number | Pool Code 86500 | Pool Name Turkey Track N. Morrow |
| Property Code | Property Name MUSTANG FEDERAL COM | Well Number 2 |
| OGRID No. | Operator Name MURCHISON OIL & GAS, INC. | Elevation 3471' |

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 | 21 | 18 S | 29 E | | 2310 | SOUTH | 660 | EAST | EDDY |

Bottom Hole Location If Different From Surface

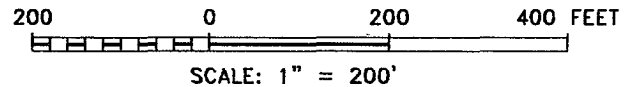
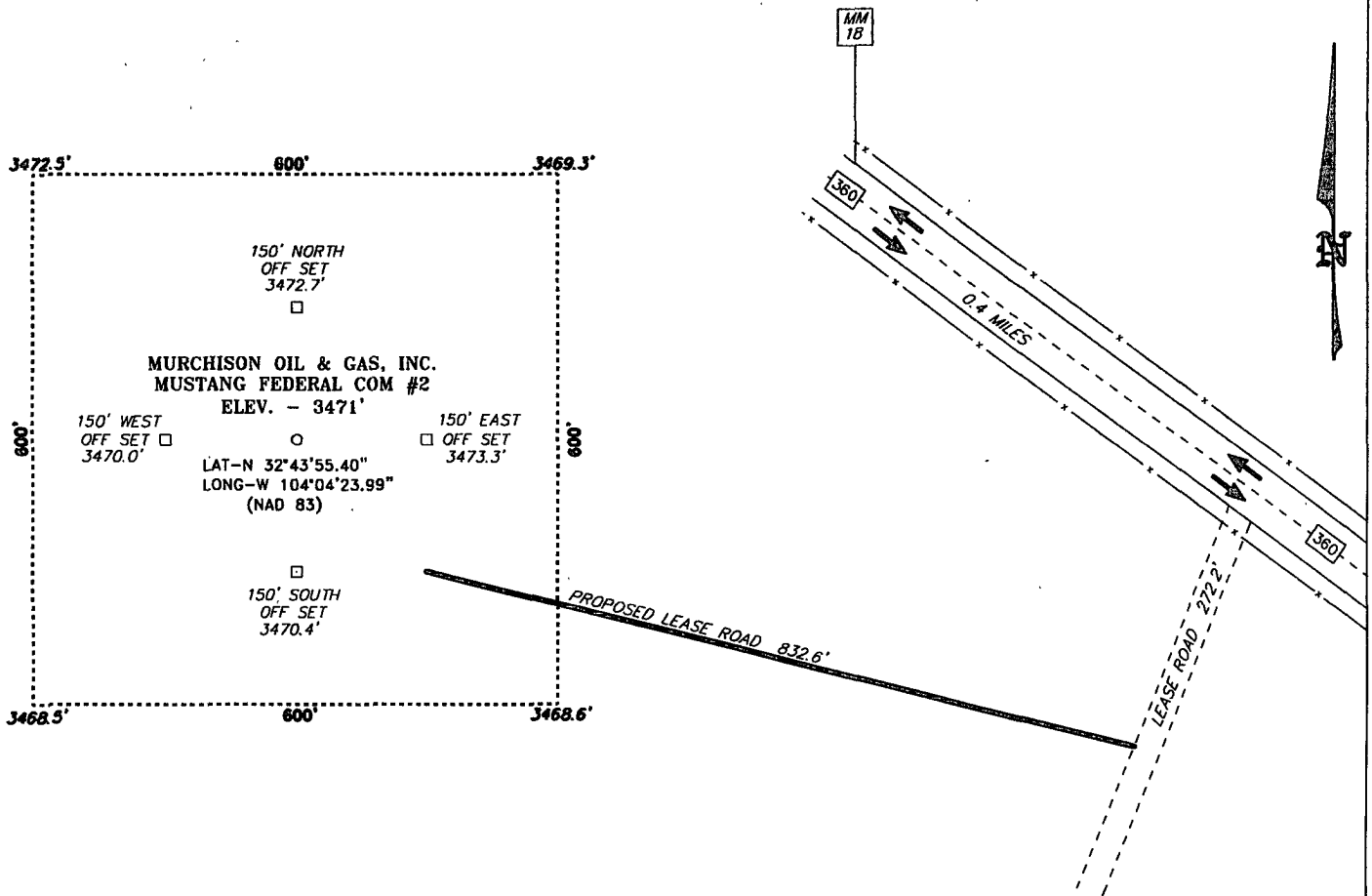
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|-------------------------------|-----------------|--------------------|-----------|---------|---------------|------------------|---------------|----------------|--------|
| | | | | | | | | | |
| Dedicated Acres 320 | Joint or Infill | Consolidation Code | 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

| | |
|--|---|
| | OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature: <i>[Signature]</i> Date: 10/17/07 Printed Name: Dwaine Moore Agent For Murchison Oil & Gas, Inc. |
| | 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. Date Surveyed: AUGUST 9, 2007 Signature & Seal: <i>[Signature]</i> Professional Surveyor: GARY L. JONES Certificate No. 7977 |
| | 320 acres |
| | BASIN SURVEYS |

Exhibit "E"

SECTION 21, TOWNSHIP 18 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



DIRECTIONS TO LOCATION:

FROM MILE MARKER 18 OF STATE HWY 360, GO
SOUTHEAST 0.4 MILES TO PROPOSED LEASE ROAD.

BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 18474 Drawn By: J. SMALL

Date: 08-27-2007 Disk: JMS 18474W

MURCHISON OIL & GAS, INC.

REF: MUSTANG FEDERAL COM #2 / Well Pad Topo

THE MUSTANG FEDERAL COM #2 LOCATED 2310' FROM

THE SOUTH LINE AND 660' FROM THE EAST LINE OF

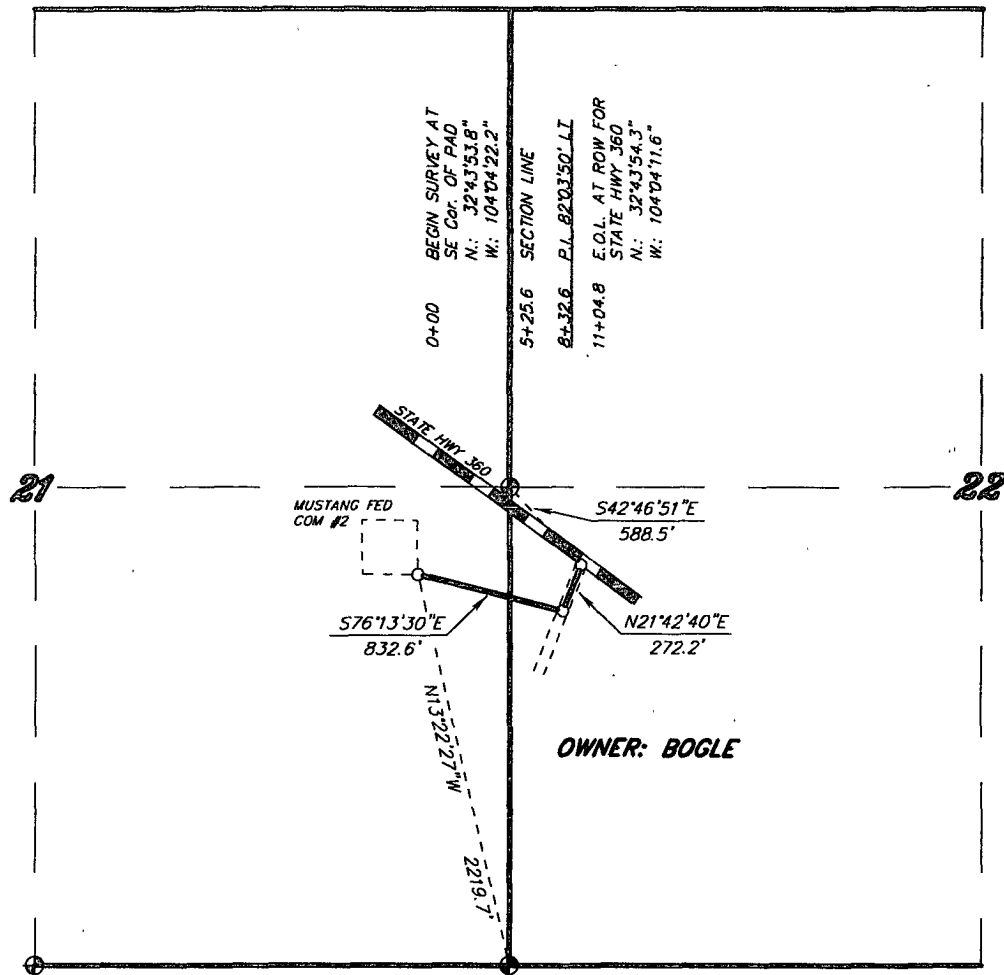
SECTION 21, TOWNSHIP 18 SOUTH, RANGE 29 EAST,

N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 08-24-2007 Sheet 1 of 1 Sheets

Exhibit "F-2"

SECTIONS 21&22, TOWNSHIP 18 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



LEGAL DESCRIPTION

A STRIP OF LAND 20.0 FEET WIDE, LOCATED IN SECTIONS 21&22, TOWNSHIP 18 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING 10.0 FEET LEFT AND RIGHT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY.

BEGINNING AT A POINT WHICH LIES N.13°22'27"W., 2219.7 FEET FROM THE SOUTHEAST CORNER OF SAID SECTION 21; THENCE S.76°13'30"E., 832.6 FEET; THENCE N.21°42'40"E., 272.2 FEET TO THE END OF THIS LINE WHICH LIES S.42°46'51"E., 588.5 FEET FROM THE WEST QUARTER CORNER OF SAID SECTION 22. SAID STRIP OF LAND BEING 1104.8 FEET OR 66.96 RODS IN LENGTH.

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF A PERSONAL SURVEY AND MEETS OR EXCEEDS THE REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED BY THIS STATE.

GARY L. JONES
TEXAS P.L.S.

No. 7977
No. 5074

BASIN SURVEYS P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 18474R

Drawn By: J. M. SMALL

Date: 09-25-2007

Disk: JMS 18474R

Survey Date: VARIES

Sheet 1 of 1 Sheets

1000 0 1000 2000 FEET

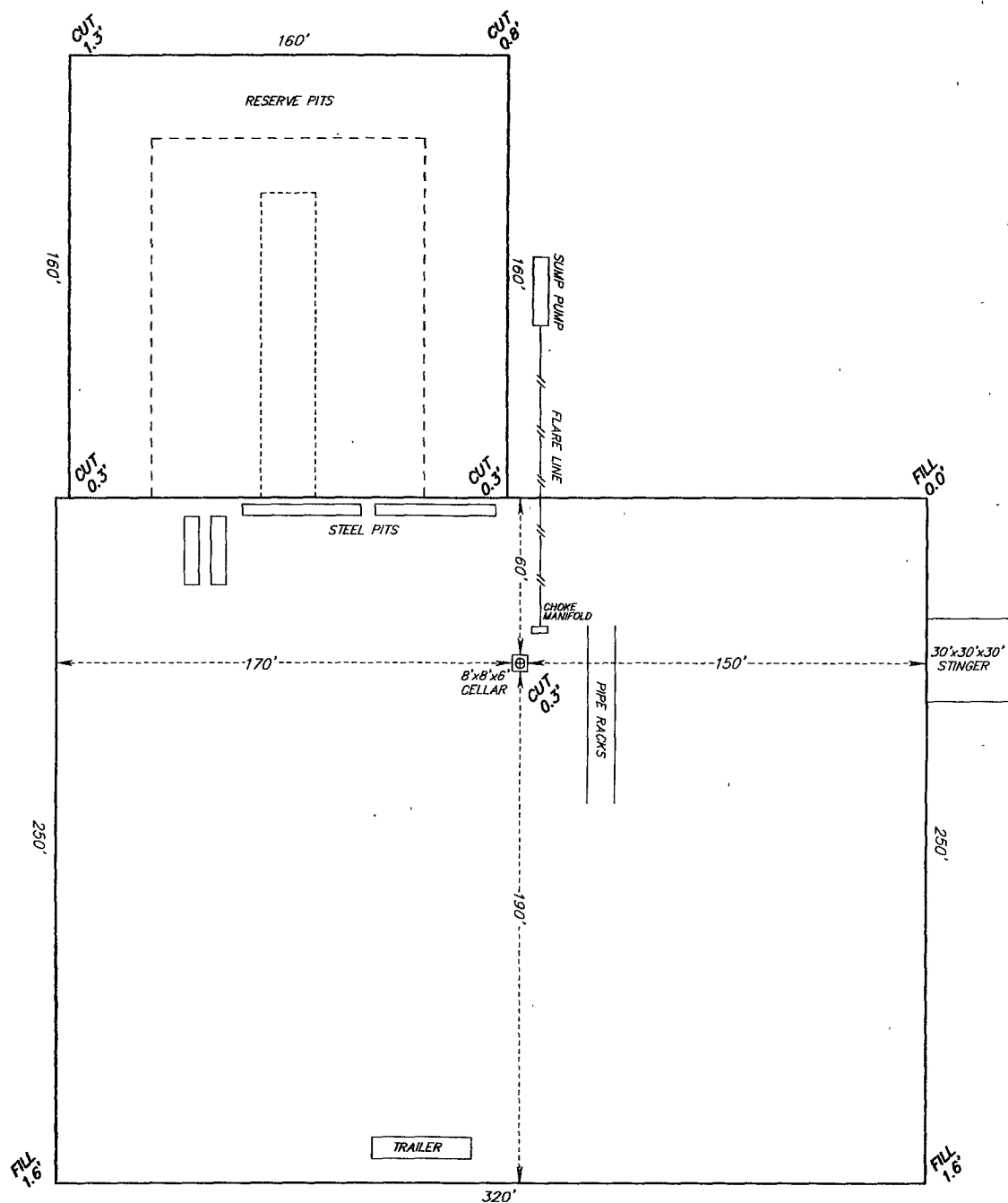
MURCHISON OIL & GAS, INC.

REF: PROPOSED ROAD TO THE MURCHISON-MUSTANG FEDERAL COM #2

A ROAD CROSSING FEE LAND IN
SECTIONS 21&22, TOWNSHIP 18 SOUTH, RANGE 29 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

Exhibit "G"

SECTION 21, TOWNSHIP 18 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



60 0 60 120 FEET
SCALE: 1" = 60'

BASIN SURVEYS P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 18474CF Drawn By: J. M. SMALL

Date: 08-27-2007 Disk: JMS 18474CF

MURCHISON OIL & GAS, INC.

REF: MUSTANG FEDERAL COM #2 / CUT AND FILL

THE MUSTANG FEDERAL COM #2 LOCATED 2310' FROM
THE SOUTH LINE AND 660' FROM THE EAST LINE OF
SECTION 21, TOWNSHIP 18 SOUTH, RANGE 29 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 08-24-2007 Sheet 1 of 1 Sheets

MURCHISON OIL & GAS, INC.

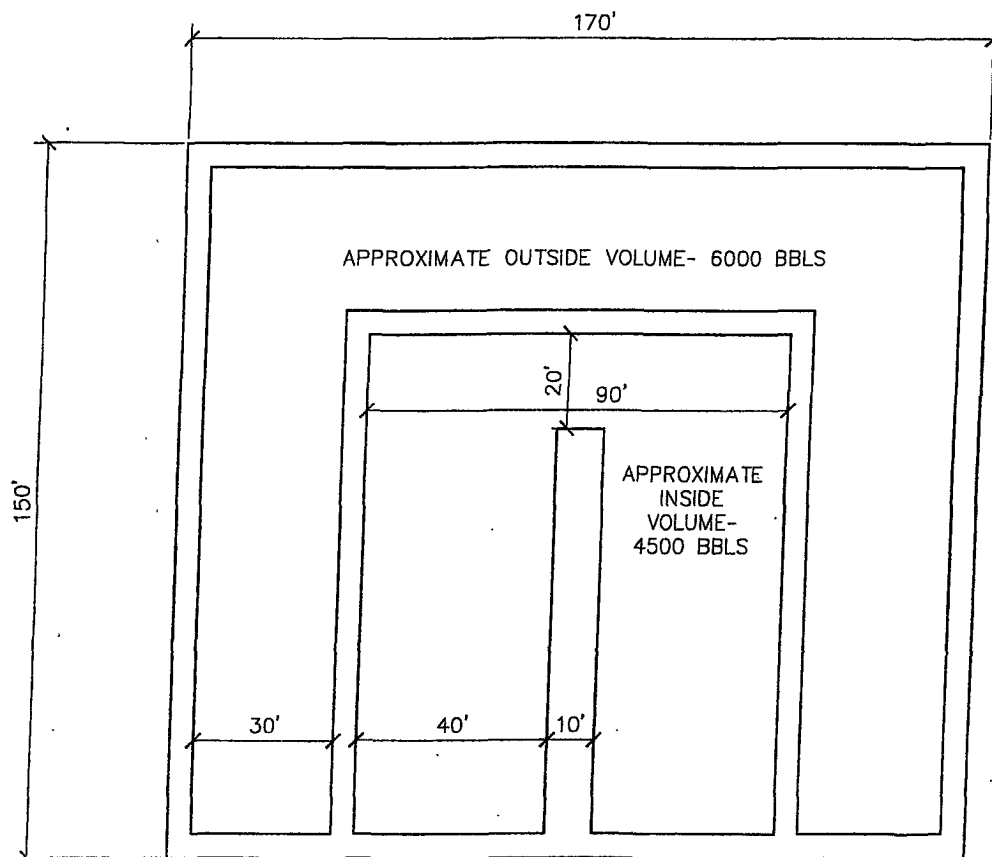
MUSTANG FED COM #2

SEC. 21, T18S, R29E

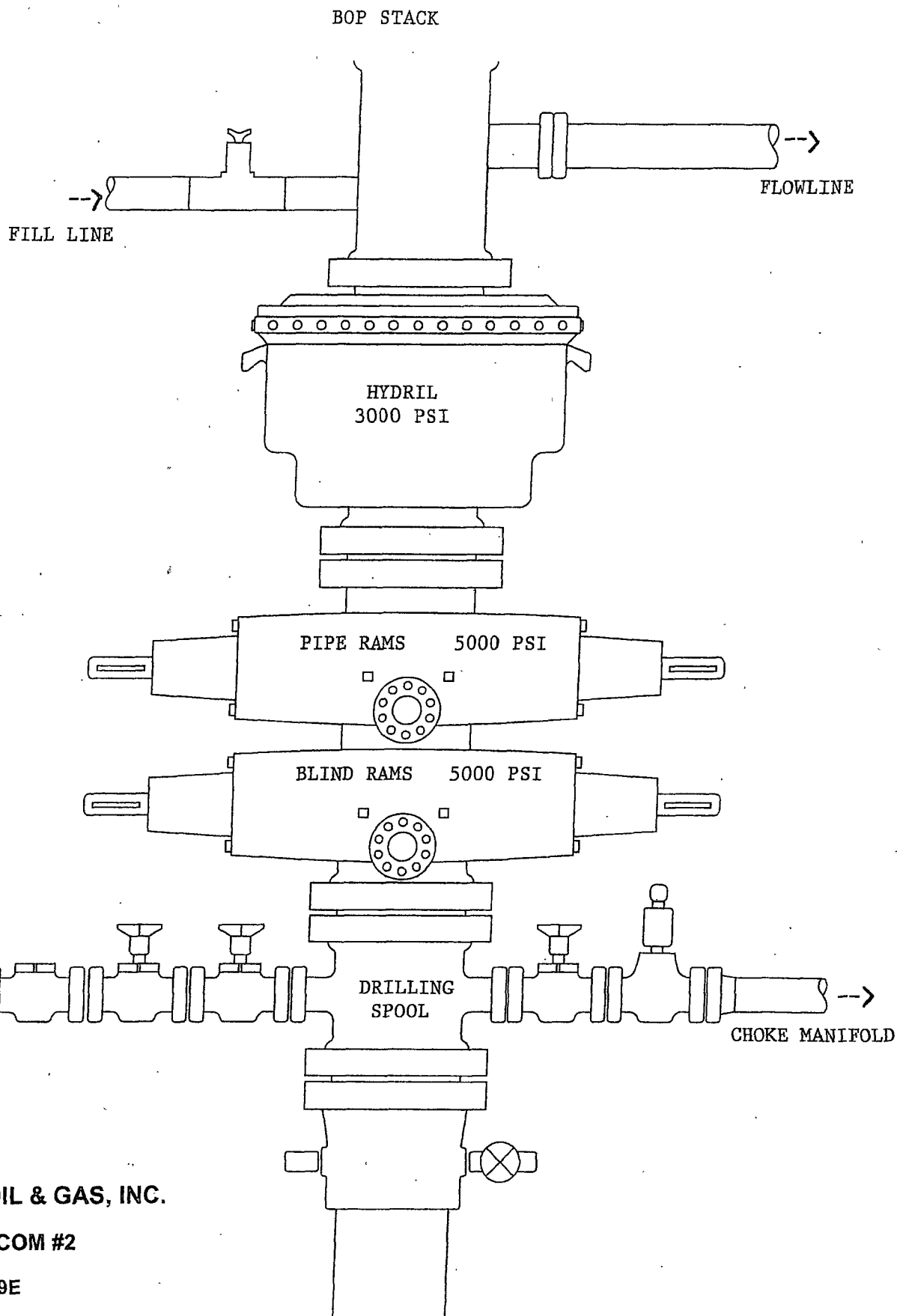
2310' FSL & 660' FEL

EDDY CO., NM.

PROPOSED RESERVE PIT DESIGN



SCALE
1" = 40' 0"



MURCHISON OIL & GAS, INC.

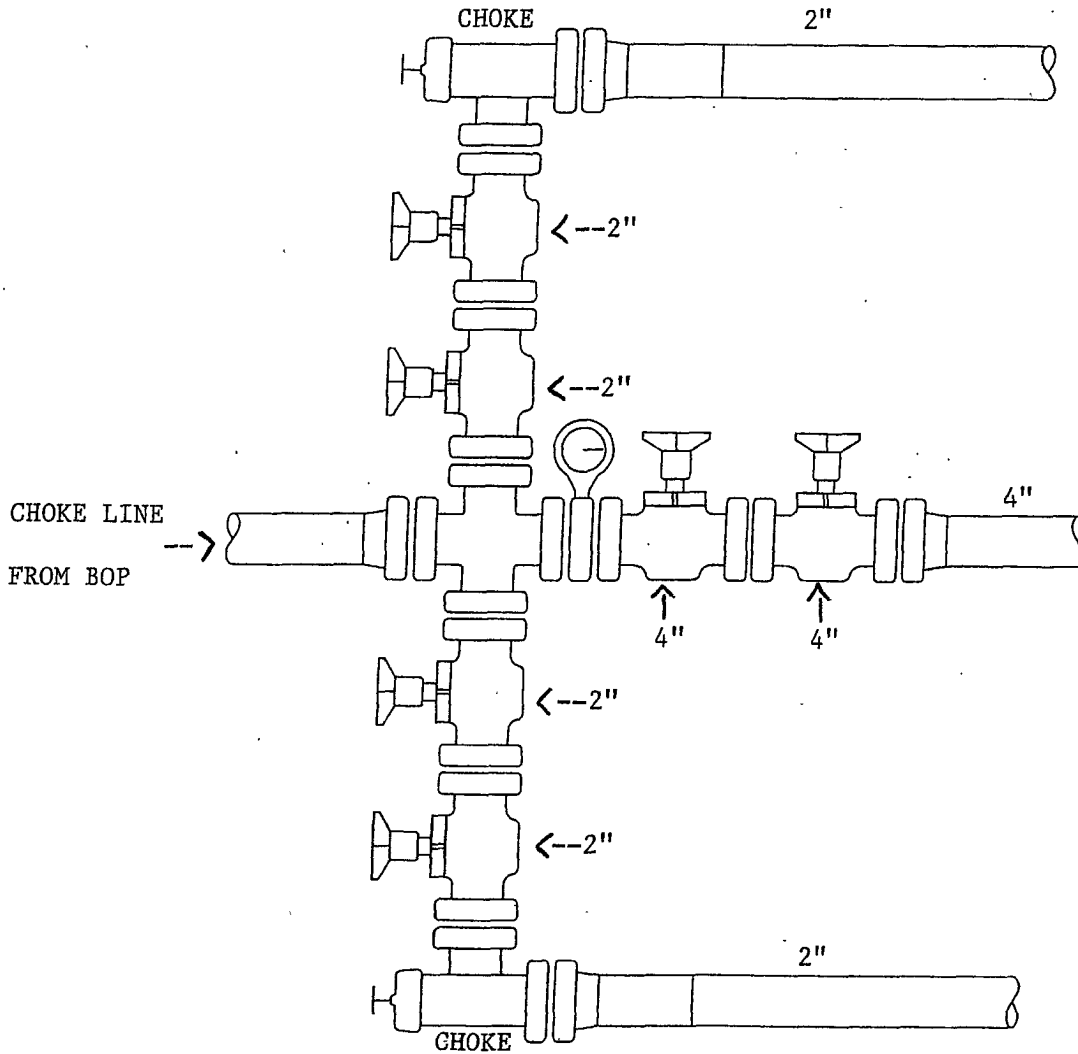
MUSTANG FED COM #2

SEC. 21, T18S, R29E

2310' FSL & 660' FEL

EDDY CO., NM.

CHOKE MANIFOLD



MURCHISON OIL & GAS, INC.

MUSTANG FED COM #2

SEC. 21, T18S, R29E

2310' FSL & 660' FEL

EDDY CO., NM.

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

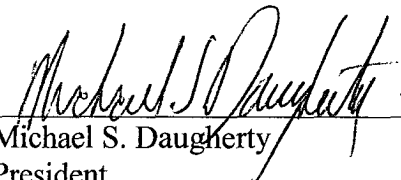
Murchison Oil & Gas, Inc.
1100 Mira Vista Blvd.
Plano, TX 75093-4698

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

| | |
|-------------------------------|---|
| Lease No: | NMLC # 0067132 |
| Legal Description of Land: | 2310' FSL & 660' FEL, Unit I Sec 21, T18S, R29E, Eddy County, NM |
| Formation(s) (if applicable): | Turkey Track N. Morrow |
| Bond Coverage: | \$25,000 |
| BLM Bond File No: | NM 2163 |

Date

11/7/07


Michael S. Daugherty
President
Murchison Oil & Gas, Inc.



3106 N. Big Spring St. Ste. 100
Midland, TX 79705
Tel: (432) 685-9158

October 29, 2007

Bureau of Land Management
620 East Greene Street
Carlsbad, NM 88220

To Whom It May Concern:

I am writing to request a waiver for the inclusion of an H2S Contingency Plan for the Mustang Federal Com #2. The current plan is to complete this well in the Turkey Track North Marrow and Murchison does not anticipate encountering any H2S bearing formations during drilling operations.

Sincerely,

A handwritten signature in cursive script that reads 'Heather Richardson'.

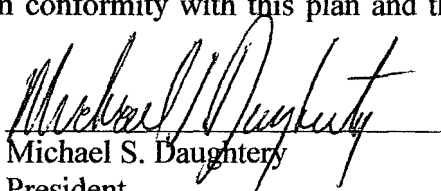
Heather Richardson
Regulatory Specialist
Gray Surface Specialties,
Agent for Murchison Oil & Gas, Inc.
432-685-9158
heather@graysurfacespecialties.com

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 preformed by Murchison Oil & Gas, Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Date

11/7/07


Michael S. Daughtery
President,
Murchison Oil & Gas, Inc.

VI. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 2 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings
- c. BOPE tests

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

1. **Hydrogen Sulfide has been reported as a hazard, but no measurements have been recorded. It is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide. If Hydrogen Sulfide is encountered, please report measurements to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

B. CASING

If casing changes are made to approved APD, submit sundry detailing change and cement changes prior to running casing.

1. The 13-3/8 inch surface casing shall be set **a minimum of 25 feet into the Rustler Anhydrite and above the salt at approximately 250-300 feet** and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

- b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement). **Please provide WOC times to inspector for cement slurries.**
- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial action will be done prior to drilling out that string.

Possible lost circulation in the Grayburg and San Andres formations.

Possible water flows in the Salado and Artesia Groups.

Possible high pressure gas bursts in the Wolfcamp and over pressure in the Pennsylvanian Section.

2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

☒ Cement to surface. If cement does not circulate see B.1.a-d above.
Please provide WOC times to inspector for cement slurries.

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:

☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. **Additional cement required.**
Please provide WOC times to inspector for cement slurries.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 9-5/8" intermediate casing shoe shall be **5000 (5M)** psi. **Annular preventer to be rated to 5M.**

4. The appropriate BLM office shall be notified a minimum of 2 hours in advance for a representative to witness the tests.
- a. The tests shall be done by an independent service company.
 - b. The results of the test shall be reported to the appropriate BLM office.
 - c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
 - d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.
 - e. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation **if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days**. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

Engineer on call phone (after hours): Carlsbad: (575) 706-2779

WWI 121907