

472 *form*  
E-05-38

N.M. Oil Cons. DIV-Dist. 2  
1301 W. Grand Avenue  
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

Form approved.  
Budget Bureau No. 1004-0136  
Expires August 31, 1985

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL WELL ☒

GAS WELL ☐

OTHER

SINGLE ZONE ☒

MULTIPLE ZONE ☐

2. NAME OF OPERATOR

BURNETT OIL CO., INC

3. ADDRESS OF OPERATOR

801 CHERRY STREET, SUITE 1500, FORT WORTH, TEXAS 76102

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

At surface

UNIT F, 1650' FNL, 1650' FWL

At proposed prod. zone

SAME AS SURFACE

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

APPROXIMATELY 6 MILES EAST OF LOCO HILLS, NEW MEXICO

15. DISTANCE FROM PROPOSED\*

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

330'

16. NO. OF ACRES IN LEASE

240

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

40

18. DISTANCE FROM PROPOSED LOCATION\*  
TO NEAREST WELL, DRILLING, COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT.

330'

19. PROPOSED DEPTH

5400'

20. ROTARY OR CABLE TOOLS

ROTARY

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

3697 GR

22. APPROX. DATE WORK WILL START\*

April 15, 2005

23.

PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE                                                    | SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT           |
|-----------------------------------------------------------------|----------------|-----------------|---------------|------------------------------|
| 14 7/8"                                                         | 9 5/8"         | 32.30#          | 5390'         | +/-400 Sks(Circ. to Surface) |
| 8 3/4"                                                          | 7"             | 23#             |               | +/-1500 Sks in 2 Stages      |
| (If water flows are encountered<br>cementing program may vary.) |                |                 |               |                              |

A 14 7/8" hole will be drilled to Rustler Anhydrite. We will set 9 5/8" casing @ this depth & cement to surface. After a 18 hour cement wait, casing & BOP will be tested before drill out of the shoe. An 8 3/4" hole will be drilled to approx. 5400' to effectively test the Cedar Lake Yeso interval. The 7" casing will be run and set @ TD and cemented to 600' above highest potential producing horizon( approx. 2100'.) We will perforate and treat productive intervals as recommended by service company.

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

*Controlled Water Basin*

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, 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

*Stirling Landry*

TITLE

PETROLEUM ENGINEER

DATE

7/17/2005

(This space for Federal or State office use)

PERMIT NO.

/s/ Tony J. Herrell

APPROVAL DATE

TITLE

FIELD MANAGER

DATE

MAR 21 2005

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

APPROVAL FOR 1 YEAR

\*See Instructions On Reverse Side



## DRILLING PLAN

BURNETT OIL CO., INC.  
LEASE NO. NMNM 074939  
GISSLER B LEASE, WELL NO. 36  
UNIT LETTER F  
1650' FNL, 1650' FWL  
SECTION 14, TOWNSHIP 17 SOUTH, RANGE 30 EAST  
EDDY COUNTY, NEW MEXICO

### (A) DRILLING PROGRAM

#### (1) Estimated tops of geologic markers:

Alluvium.....Surface  
Anhydrite.....275'  
Salt.....505'  
Base Salt.....1295'  
Yates.....1387'  
Seven Rivers.....1723'  
Grayburg.....2708'  
San Andres.....3030'  
Glorieta.....4330'

#### (2) Estimated depths of producing formations:

Fresh water.....None  
Saltwater flows..(?)\*  
Oil and Gas.....1387'\*\*, 2708'\*\*

\* As waterflows, if any, are encountered, their depth will be recorded, and drilling will continue to total depth. Multiple stage cementers will be placed in the production casing string to enable us to confine the waterflows to their respective depths by cementing.

\*\* Oil and gas bearing zones, if any, will be determined by log analysis, and will be confined by cementing; subsequently perforated, stimulated and produced in a conventional manner.

#### (3) Blowout Preventer Specifications:

A 2000 PSI Hydril unit with hydraulic closing equipment. (See Exhibit E schematic). The preventer will be tested before drilling out below surface pipe setting depth. The exact description of the preventer and related equipment will depend on the successful contractor, who has not yet been selected. No high pressure hydrocarbon zones are anticipated.

#### (4) Supplementary drilling equipment information:

Not available at this time.

(5) Supplementary casing program information:

- a. Surface casing: Surface casing will consist of new 9-5/8" OD 32.30# H40 OR 36# J-55 ST&C R3 pipe and will be run into a 14-7/8" hole with notched Texas Pattern shoe on bottom, insert float valve in first collar, Two(2) centralizers around shoe joint and first collar. Bottom three (3) joints will be thread locked. Setting depth will be +/- 475' in the Rustler Anhydrite, depending on where a suitable casing seat can be found. Cement will be circulated back to the surface. Initial cement volume will be calculated to be 100% excess of the calculated annular volume between the 9-5/8" casing and the hole. **If circulation of cement to the surface is not achieved due to lost circulation, we would like permission (without having to call BLM) to fill this annular space using sufficient rat hole mix to bring cement to surface per BLM specification.** Eighteen (18) hours WOC will be allowed as per NMOCD. Casing will be tested to 1000 PSI before drilling out.
  - b. Production casing: Production casing will consist of new 7" OD 23# J55 R3 8rd LT&C pipe being run to total depth with float shoe on bottom, float collar in first collar, centralizers throughout intervals and above and below any multiple stage cementers, and be cemented with sufficient volume to bring top of cement 600' above the top of the highest potential producing horizon. If water flow is encountered, we will cement from TD back to the stage cementer, open stage cementer, cement from stage cementer with sufficient volume of Class C or equivalent to bring cement up to at least 600' above the highest potential producing horizon, then balancing hydrostatic weight of the cement by adjusting the flow of water to surface through the 7" casing, enabling the 2nd stage of cement to set up. Casing will be shut in after twelve (12) hours. If there is no flow of water to surface around the 7" casing, we will cement the water flow proper through the stage cementer with +/- 900 sacks. In case the 2nd stage is not successful in shutting off any annular flow, we will repeat the 2nd stage until successful. After drilling out and testing the casing to 2000 PSI, a cement bond log will be run to evaluate the cement job.
- (6) Mud program: Native mud (red beds and shale) will be used to total depth. The surface hole will be drilled with fresh water and lost circulation materials as needed. The remaining hole will be drilled with brine water with necessary additives.
- (7) Logging program: If no water flow(s) are encountered, we will run Neutron Litho density-DLL logs. If water flow(s) are encountered, no open hole logging will be attempted, and after casing is set, cased hole GR/CN logs will be run. No other testing or coring is anticipated.

- (8) Abnormal pressures or hazards: No abnormal pressures or potential hazards are anticipated. The maximum anticipated bottom hole pressure is 1000#. The maximum anticipated bottom hole temperature is 91°F.
- (9) Other facets of the operation to be pointed out:  
None.

#### **(B) HYDROGEN SULFIDE DRILLING PROGRAM**

##### (1) Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

- a. The hazards and characteristics of Hydrogen Sulfide (H<sub>2</sub>S).
- b. The proper use and maintenance of personal protective equipment and life support systems.
- c. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures and prevailing wind.
- d. The proper techniques for first aid and rescue procedures.

##### In addition, supervisory personnel will be trained in the following areas:

- a. The effects of H<sub>2</sub>S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
- b. Corrective action and shut-in procedures when drilling or reworking a well, blowout prevention and well control procedures.
- c. The contents and requirements of the H<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan (if applicable.)

There will be an initial training session just prior to encountering a known or probable H<sub>2</sub>S zone (within 3 days or 500 feet) and weekly H<sub>2</sub>S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan (if applicable). This plan shall be available at the wellsite. All personnel will be required to carry documentation that they have received the proper training.

(2) H2S SAFETY EQUIPMENT AND SYSTEMS

Note: all H2S safety equipment and systems will be installed, tested and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H2S.

a. Well Control Equipment:

1. Choke manifold with a minimum of one remote-controlled choke.
2. The Hydril BOP will accommodate all pipe sizes with a properly sized closing unit.

b. Protective equipment for essential personnel:

1. Mark II Surviveair (or equivalent) 30 minute units located in the dog house and at the primary briefing area(to be determined.)

c. H2S detection and monitoring equipment:

1. Three(3) portable H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 PPM are reached.

d. Visual warning systems:

1. Wind direction indicators will be positioned for maximum visibility.
2. Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at reasonable distance from the immediate location. Bilingual signs will be used when appropriate.

e. Mud program:

1. The mud program has been designed to minimize the volume of H2S circulated to the surface. Proper mud weight, safe drilling practices and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.

f. Metallurgy:

1. All drill strings, casings, tubing, wellheads, Hydril BOPS, drilling spools, kill lines, choke manifold, valves and lines will be suitable for H2S service.
2. All elastomers used for packing and seals shall be H2S trim.

g. Communication:

1. Cellular Telephone and/or 2-way radio will be provided at wellsite.
2. Landline telephone is located in field office.

h. Well testing:

1. Drill stem testing or coring may be done in this well bore. Completion testing, if required, will be conducted under the same Applicable H2S guidelines that were used in drilling.

(C) SURFACE USE PROGRAM

- (1) Existing roads: Exhibits A, B and C show maps of the general area. From Loco Hills, New Mexico, go east on U.S. Highway 82 approximately 3 miles. Turn north on County road 220 (Square Lake) and go approximately 1.2 mile to caliche road. Turn west to caliche road and go 1.5 miles to lease road, turn left and follow to the Gissler B #36 location.
- (2) Access roads to be constructed: No additional access road will be required from the lease road.
- (3) Location of existing wells: See Exhibit A.
- (4) Location of existing or proposed production facilities:  
See Exhibit A for location of existing Gissler B3-3 production facility on the lease. We propose to above ground commingle this Cedar Lake, Yeso production with the approved existing Yeso & Grayburg production by laying approximately 2550' of new flowline from this well pad to the existing flowline ROW to the Gissler B #3-3 Tank Battery. We will apply for an amended ROW for the portion of the line that crosses the lease line.
- (5) Location and type of water supply: All water to be used in drilling the well will be brine or fresh water trucked from Loco Hills, New Mexico or fresh or produced water furnished by our waterflood facilities.

- (6) Construction materials: Construction material will be caliche which may be available at the proposed location. If not available on location or road, caliche will be hauled from nearest approved caliche pit.
- (7) Methods of handling waste disposal: Drill cuttings will be disposed of in the lined reserve drilling pit. Auxiliary emergency water containment pits may be necessitated by large volume water flows and these pits, which will hold only water, will not be lined. All drilling fluids will be allowed to evaporate after drilling is completed, at which time pits will be back filled, leveled and reseeded. Trash, waste paper, garbage and junk will be placed in a portable screened trash container on location. All trash and debris will be transported to an authorized disposal station within 30 days following completion activities. Oil and/or water produced during testing operations will be stored in steel tanks until either sold or disposed of through one of our approved disposal methods.
- (8) Ancillary Facilities: There are no planned ancillary facilities.
- (9) Well site layout: Exhibit D shows the relative location and dimensions of the drilling pad and related components. Only minor differences, if any, in length and/or width of the drilling pad are anticipated, depending on which drilling contractor is selected to drill the well. Only minor leveling of the drilling site is anticipated.
- (10) Plans for restoration of the surface:
  - (a) After drilling and successful completion operations are finished, all equipment and other materials not required for normal production operations will be removed. Pits will be backfilled, leveled and re-seeded. Well site will be left in a neat condition.
  - (b) Any unguarded pits containing fluid will be fenced until backfilled.
  - (c) After abandonment of the well, surface restoration will be in accordance with regulations of the SMA. Pits will be backfilled and location will be cleaned. The pit area, well pad and all unneeded access roads will be ripped to promote revegetation. Rehabilitation should be accomplished within 90 days after abandonment.
- (11) Surface ownership: All lands are Federal.

- (12) Other information: The topography of the area is relatively flat, with small hills and sand dunes. The soil is fine, deep sand underlain by caliche. Vegetation cover is generally sparse and consists of mesquite, yucca, oak shinners and sparse native grasses. Wildlife in the area is typical of that of semi-arid lands and includes coyotes, rabbits, rodents, reptiles, dove and quail. There are no ponds, streams or residences in the area. There is intermittent cattle grazing and hunting in the area; however, the principal land use is for oil and gas production. An archaeological clearance report will be sent to you by a BLM approved archaeological service.
- (13) Operator's representative: Our field representative responsible for compliance with the approved surface use and operations plan is:

Mr. Belton Mathews, District Supt.  
P.O. Box 188  
Loco Hills, New Mexico 88255  
Office phone: 505-677-2313  
Home phone: 505-677-2358  
Cellular phone: 505-746-7979

I hereby certify that I, or persons under my direct supervision have inspected the drill site and access route; that I am familiar with the conditions that currently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Burnett Oil Co., Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Date: 2/17/2005

By: Sterling P. Randolph

Sterling P. Randolph  
Petroleum Engineer

# State of New Mexico

## DISTRICT I

1625 N. FRENCH DR., HOBBBS, NM 88240

Energy, Minerals and Natural Resources Department

## DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 88210

## DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

## OIL CONSERVATION DIVISION

1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Form C-102

Revised JUNE 10, 2003

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

## DISTRICT IV

1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

|                                |                                             |                                        |
|--------------------------------|---------------------------------------------|----------------------------------------|
| API Number<br><b>30-015-</b>   | Pool Code<br><b>96718</b>                   | Pool Name<br><b>Loco Hills Paddock</b> |
| Property Code<br><b>002389</b> | Property Name<br><b>GISSLER B</b>           | Well Number<br><b>36</b>               |
| OGRID No.<br><b>003080</b>     | Operator Name<br><b>BURNETT OIL COMPANY</b> | Elevation<br><b>3697'</b>              |

### Surface Location

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| F             | 14      | 17-S     | 30-E  |         | 1650          | NORTH            | 1650          | WEST           | EDDY   |

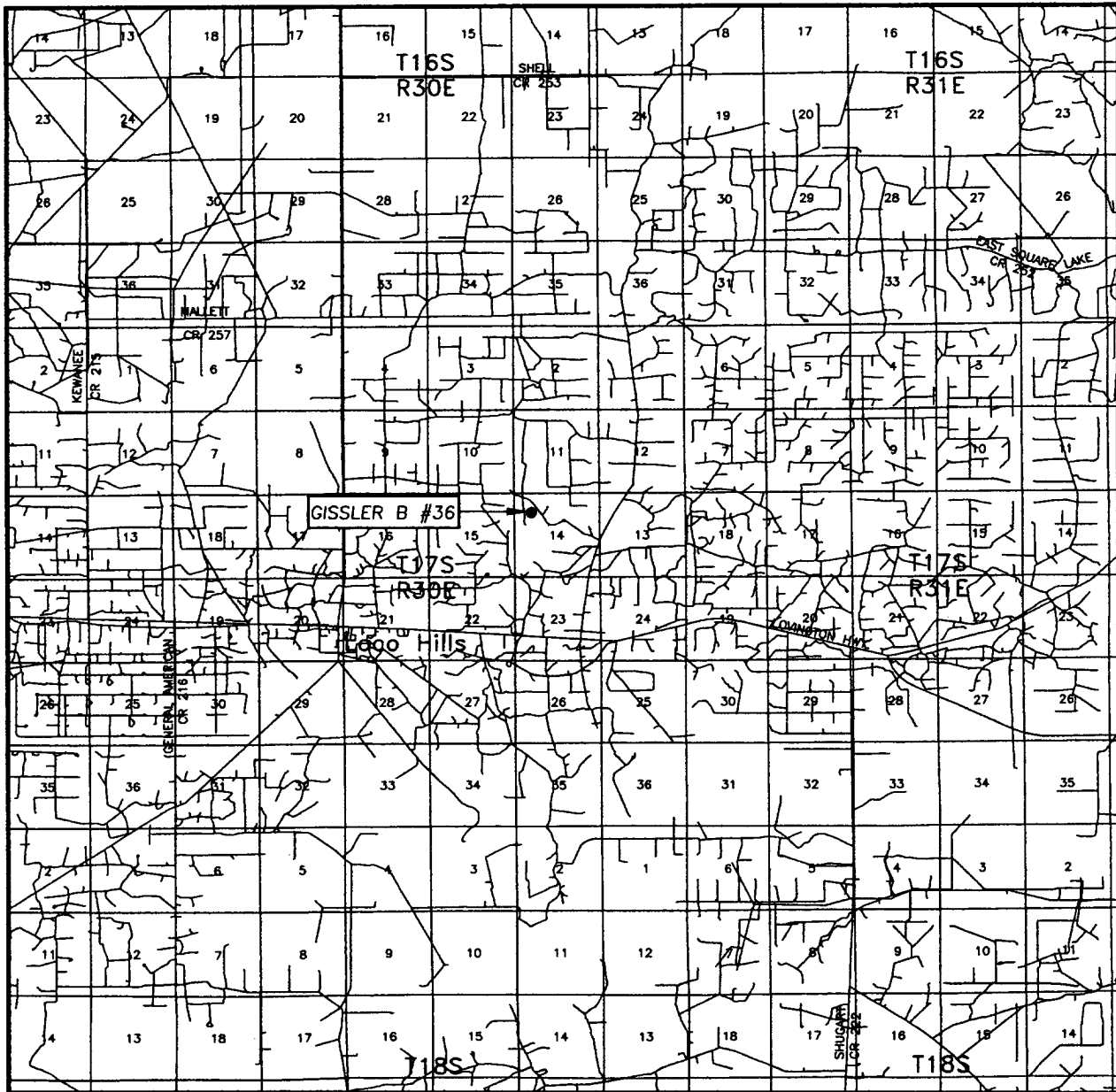
### Bottom Hole Location If Different From Surface

| UL or lot No.                | Section | Township        | Range | Lot Idn            | Feet from the | North/South line | Feet from the | East/West line | County |
|------------------------------|---------|-----------------|-------|--------------------|---------------|------------------|---------------|----------------|--------|
|                              |         |                 |       |                    |               |                  |               |                |        |
| Dedicated Acres<br><b>4c</b> |         | 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

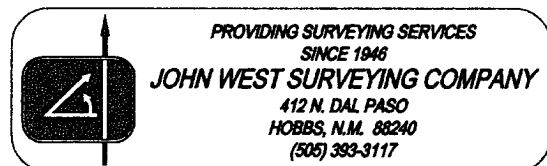
|                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>GEODETIC COORDINATES<br/>NAD 27 NME</p> <p>Y=668464.7 N<br/>X=619182.1 E</p> <p>LAT.=32°50'13.54" N<br/>LONG.=103°56'43.09" W</p> | <h3>OPERATOR CERTIFICATION</h3> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Sterling Randolph</i><br/>Signature</p> <p><b>STERLING RANDOLPH</b><br/>Printed Name</p> <p><b>PETROLEUM ENGINEER</b><br/>Title</p> <p><b>2/17/2005</b><br/>Date</p> <h3>SURVEYOR CERTIFICATION</h3> <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><b>JANUARY 13, 2005</b><br/>Date Surveyed</p> <p><b>LA</b><br/>Signature &amp; Seal of Professional Surveyor</p> <p><i>Gary Bidson</i><br/>Professional Surveyor</p> <p><b>05.11.0037</b><br/>Certificate No.</p> <p><b>GARY BIDSON</b><br/>12841</p> |
|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

# VICINITY MAP



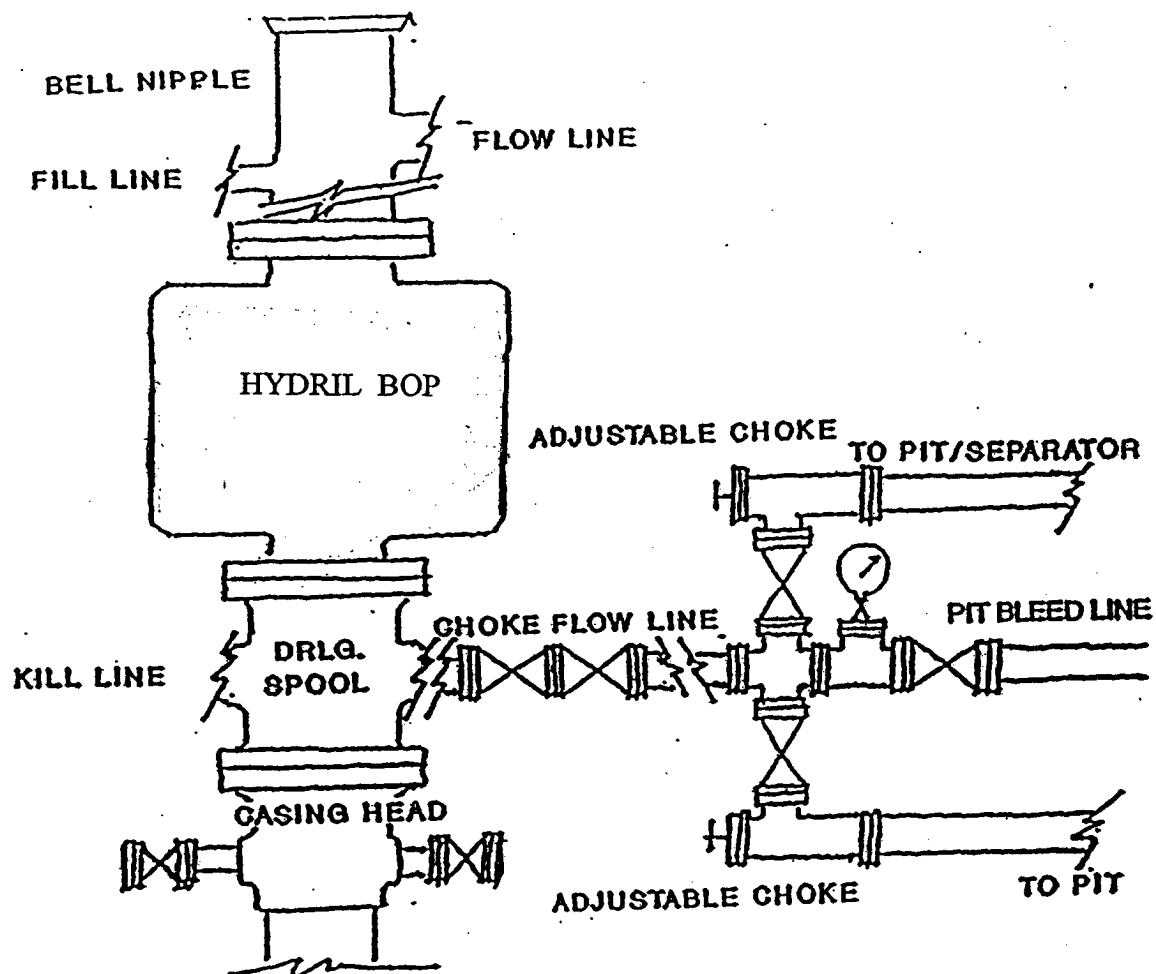
SCALE: 1" = 2 MILES

SEC. 14 TWP. 17-S RGE. 30-E  
 SURVEY N.M.P.M.  
 COUNTY EDDY  
 DESCRIPTION 1650' FNL & 1650' FWL  
 ELEVATION 3697'  
 OPERATOR BURNETT OIL COMPANY  
 LEASE GISSLER B



GISSLER B #36  
 EXHIBIT C



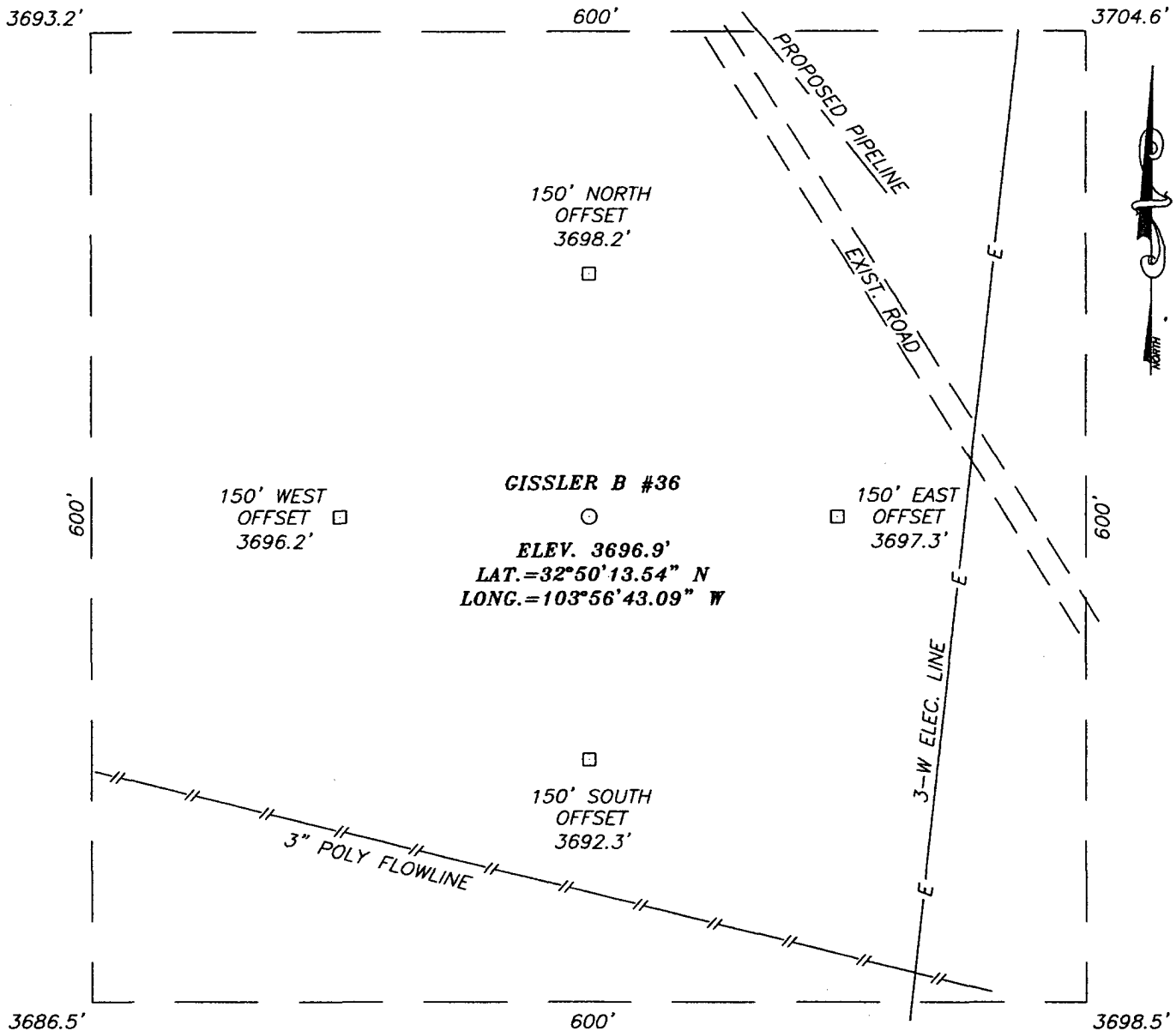


**BURNETT OIL CO., INC.**

**BLOWOUT PREVENTER &  
CHOKE MANIFOLD DIAGRAM  
2000 PSI WORKING PRESSURE  
SERIES 600 FLANGES**

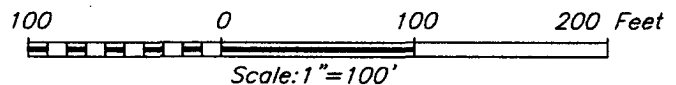
GISSLER B #36  
EXHIBIT E

**SECTION 14, TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M.,**  
 EDDY COUNTY, NEW MEXICO



**DIRECTIONS TO LOCATION**

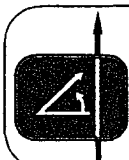
FROM THE INTERSECTION OF ST. HWY. #83 & CO. RD. #220 (SQUARE LAKE RD) GO NORTH ON CO. RD. #220 APPROX. 1.0 MILES. TURN LEFT AND GO NORTHWEST 0.8 MILES. THIS WELL IS 200' WEST OF ROAD.



**BURNETT OIL COMPANY**

GISSLER B #36 WELL  
 LOCATED 1650 FEET FROM THE NORTH LINE  
 AND 1650 FEET FROM THE WEST LINE OF SECTION 14,  
 TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M.,  
 EDDY COUNTY, NEW MEXICO.

|                         |            |                     |                |
|-------------------------|------------|---------------------|----------------|
| Survey Date: 1/13/05    |            | Sheet 1 of 1 Sheets |                |
| W.O. Number: 05.11.0037 |            | Dr By: LA           | Rev 1:N/A      |
| Date: 1/17/05           | Disk: CD#4 | 05110037            | Scale: 1"=100' |



PROVIDING SURVEYING SERVICES  
 SINCE 1946  
**JOHN WEST SURVEYING COMPANY**  
 412 N. DAL PASO  
 HOBBS, N.M. 88240  
 (505) 383-3117



February 18, 2005

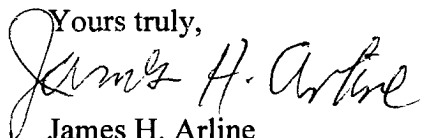
New Mexico Oil Conservation Division  
1301 Grand Avenue  
Artesia, New Mexico 88210  
Attn: Mr. Byran Arrant

Re: H2S Rule 118 Contingency Plan.  
Gissler B #36, Unit F, 1650' FNL, 1650' FWL  
SEC.14, T17S, R30E- Eddy County, New Mexico

Dear Mr. Arrant:

Please accept this letter as our notice we do not believe the referenced plan is required for the referenced well. We have calculated the hazard volume as follows: highest H2S quantity 10,000 PPM, and using a production rate of 255 MCFGPD the 100 PPM radius is 181' and the 500 PPM radius is 83'. This footage does not get off our well locations.

Please contact our Mr. Sterling Randolph or the undersigned if you require additional information.

Yours truly,  
  
James H. Arline  
Materials Coordinator