

ATS-10-141

RA

UNITED STATES **OCD-ARTESIA**  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
**APPLICATION FOR PERMIT TO DRILL OR REENTER**

FORM APPROVED  
OMB No. 1004-0137  
Expires July 31, 2010 **EA 381**

5. Lease Serial No.  
**NMNM2748**

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.  
**GISSLER B #61**

9. API Well No.  
**30-015-37675**

10. Field and Pool, or Exploratory  
**LOCO HILLS GLORIETA YESO**

11. Sec., T., R., M., or Blk and Survey or Area  
**SEC 11, T17S, R30E**

12. County or Parish  
**EDDY CTY**

13. State  
**NEW MEXICO**

17. Spacing Unit dedicated to this well  
**40**

20. BLM/BIA Bond No. on file  
**NMB# 000197**

23. Estimated duration  
**18 Days to Drill**

1a. Type of Work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator  
**BURNETT OIL CO., INC.**

3a. Address  
**801 Cherry St. Unit 9 Fort Worth, Tx 76102**

3b. Phone No. (include area code)  
**(817) 332-5108**

4. Location of Well (Report location clearly and in accordance with any State requirements. \*)  
At surface **Unit K, 1486' FSL, 2300' FWL**  
At proposed prod. zone **SAME AS ABOVE**

14. Distance in miles and direction from nearest town or post office\*  
**Approx 6 miles East & North of Loco Hills, New Mexico**

15. Distance from proposed\* location to nearest property or lease line, ft.  
(Also to nearest drig. unit line, if any)  
**330'**

16. No. of Acres in lease  
**1240**

18. Distance from proposed location\* to nearest well, drilling, completed, applied for, on this lease, ft.  
**330'**

19. Proposed Depth  
**6100'**

21. Elevations (Show whether DF, KDB, RT, GL, etc.)  
**3717' GL**

22. Approximate date work will start\*  
**APRIL 15, 2010**

**RECEIVED**  
**MAR 08 2010**  
**NMOCD ARTESIA**

**24. Attachments**

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

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

25. Signature  
*Mark A. Jacoby*  
Name (Printed/Typed) **MARK JACOBY**  
Date **2/08/2010**

Title  
**ENGINEERING MANAGER**

Approved by (Signature) */s/ Don Peterson*  
Name (Printed/Typed)  
Date **MAR 08 2010**

Title  
**FIELD MANAGER**  
Office **CARLSBAD FIELD OFFICE**

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, 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.

(Continued on page 2)

\*(Instructions on page 2)

*MZ*

Roswell Controlled Water Basin

**SEE ATTACHED FOR  
CONDITIONS OF APPROVAL**

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an**  
**abandoned well. Use Form 3160-3 (APD) for such proposals.****SUBMIT IN TRIPLICATE - Other instructions on page 2**

## 1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

## 2. Name of Operator

BURNETT OIL CO., INC.

3a. Address **801 CHERRY STREET, SUITE 1500**  
**UNIT #9 FORT WORTH, TX. 76102-6881**3b. Phone No. (include area code)  
**(817) 332-5108**

## 4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

UNIT K, 1486' FSL, 2300' FWL, SEC 11, T17S, R30E- SURF &amp; BH

## 5. Lease Serial No.

NMNM 2748 ✓

## 6. If Indian, Allottee or Tribe Name

## 7. If Unit or CA/Agreement, Name and/or No.

## 8. Well Name and No.

GISSLER B #61 ✓

## 9. API Well No.

30-015-XXXXX S1

## 10. Field and Pool, or Exploratory Area

LOCO HILLS GLORIETA YESO

## 11. County or Parish, State

Eddy County, N.M.

## 12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

## TYPE OF SUBMISSION

## TYPE OF ACTION

- ☒ Notice of Intent  
☐ Subsequent Report  
☐ Final Abandonment Notice

- ☐ Acidize ☐ Deepen ☐ Production (Start/Resume)  
☐ Alter Casing ☐ Fracture Treat ☐ Reclamation  
☐ Casing Repair ☒ New Construction ☐ Recomplete  
☐ Change Plans ☐ Plug and Abandon ☐ Temporarily Abandon  
☐ Convert to Injection ☐ Plug Back ☐ Water Disposal

- ☐ Water Shut-Off  
☐ Well Integrity

☒ Other CHANGE TO  
APD

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

## ① REQUEST TO BLM TO FLIP THIS LOCATION.

We plan to pile this top soil on the SOUTHEAST side in 6' high rows as it is removed. We will fill the location with caliche soil. We plan to pile the fill dirt on the SOUTHWEST side and will use this fill dirt in the hole after the caliche soil is removed from this location. The top soil will be reused upon completion of this site.

② WE ARE ALSO SUBMITTING THE AMENDED RIG LAYOUT (NOTE BURIED FLARE LINE RUNNING SOUTHWEST FROM THE HOLE.) We will use this rig layout for all future SURFACE EXHIBIT D APD SUBMITTALS. This change also affects DRILLING EXHIBIT E1. Replacement is included.  
We also request ok to bury this flare line while drilling.② Flare remains inside Arch CLNC Area, buried Line is BMP - Recommen Approval

## 14. I hereby certify that the foregoing is true and correct.

Name (Printed/Typed)

MARK A. JACOBY

Title ENGINEERING MANAGER

Signature

Mark A Jacoby

Date

2/24/2010

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

## Approved by

Conditions of approval, if any, are attached. Approval of this notice 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.

Title

Date

Office

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)

## DISTRICT I

1625 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

Form C-102

Revised October 15, 2009

Submit one copy to appropriate  
District Office

## OIL CONSERVATION DIVISION

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

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

|                            |                                            |                                       |
|----------------------------|--------------------------------------------|---------------------------------------|
| API Number<br>30-015-37675 | Pool Code<br>96718                         | Pool Name<br>LOCO HILLS GLORIETA YESO |
| Property Code<br>002389    | Property Name<br>GISSLER "B"               | Well Number<br>61                     |
| OGRID No.<br>3080          | Operator Name<br>BURNETT OIL COMPANY, INC. | Elevation<br>3717'                    |

## Surface Location

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| K             | 11      | 17 S     | 30 E  |         | 1486          | SOUTH            | 2300          | 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>4.0 | 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 or has a right to drill this well at this 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.

*Mark A. Jacoby* 2/22/2010  
Signature Date

MARK A JACOBY

Printed Name

## 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.

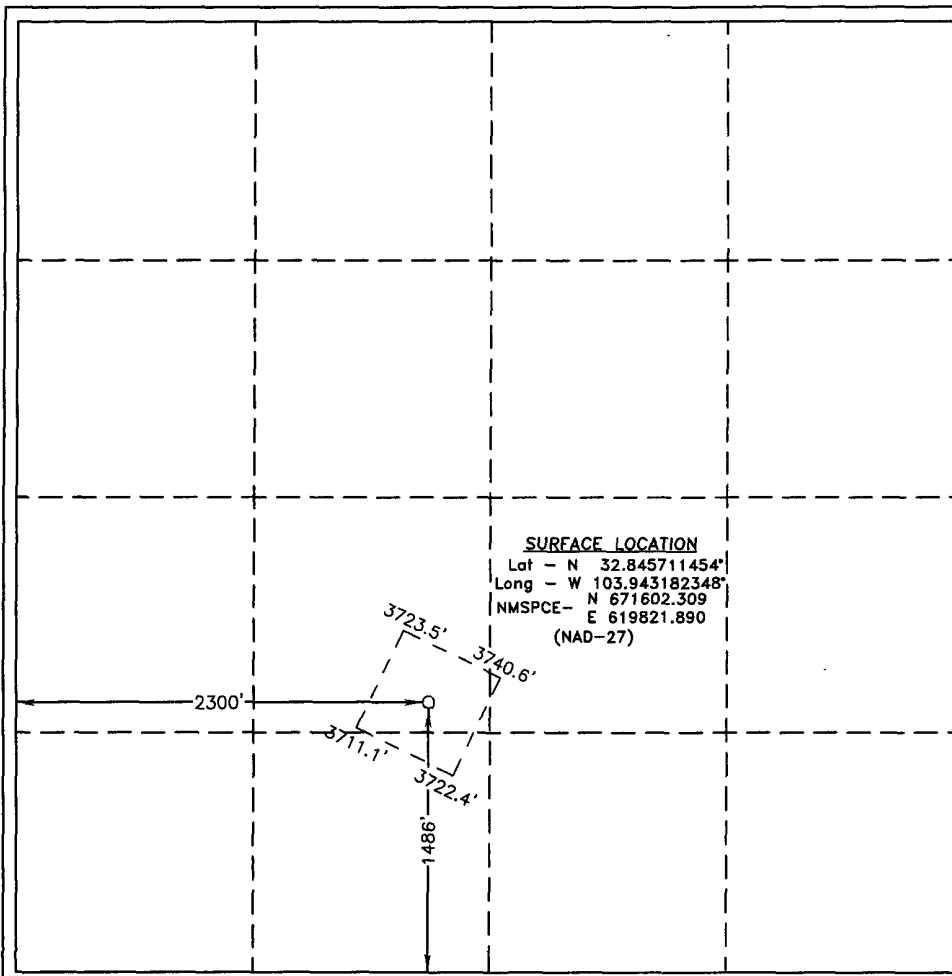
JANUARY 12 2010  
Date Surveyed  
Signature of Professional Surveyor  
7977  
Certificate No. 22082

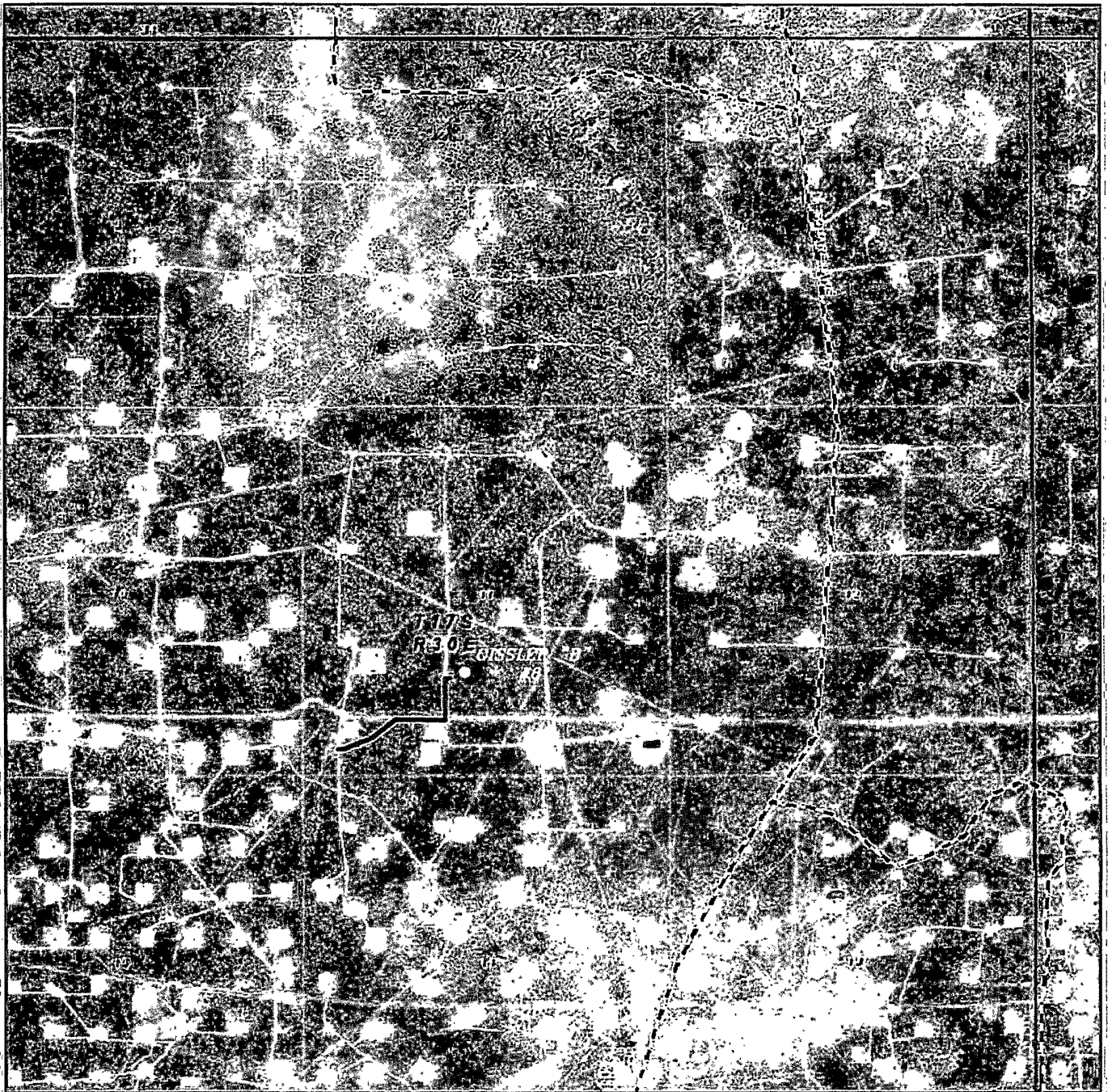
Certificate No. 22082

BASIN SURVEYS

## SURFACE LOCATION

Lat - N 32.845711454°  
Long - W 103.943182348°  
NMSPC- N 671602.309  
E 619821.890  
(NAD-27)





**GISSLER "B" #61**

Located 1486' FSL and 2300' FWL

Section 11, Township 17 South, Range 30 East,  
N.M.P.M., Eddy County, New Mexico.

GISSLER B #61  
SURFACE EXHIBIT A1

**basin  
surveys**

focused on excellence  
in the oilfield

P.O. Box 1736  
1120 N. West County Rd.  
Hobbs, New Mexico 88241  
(575) 395-7816 - Office  
(575) 392-2296 - Fax  
basinsurveys.com

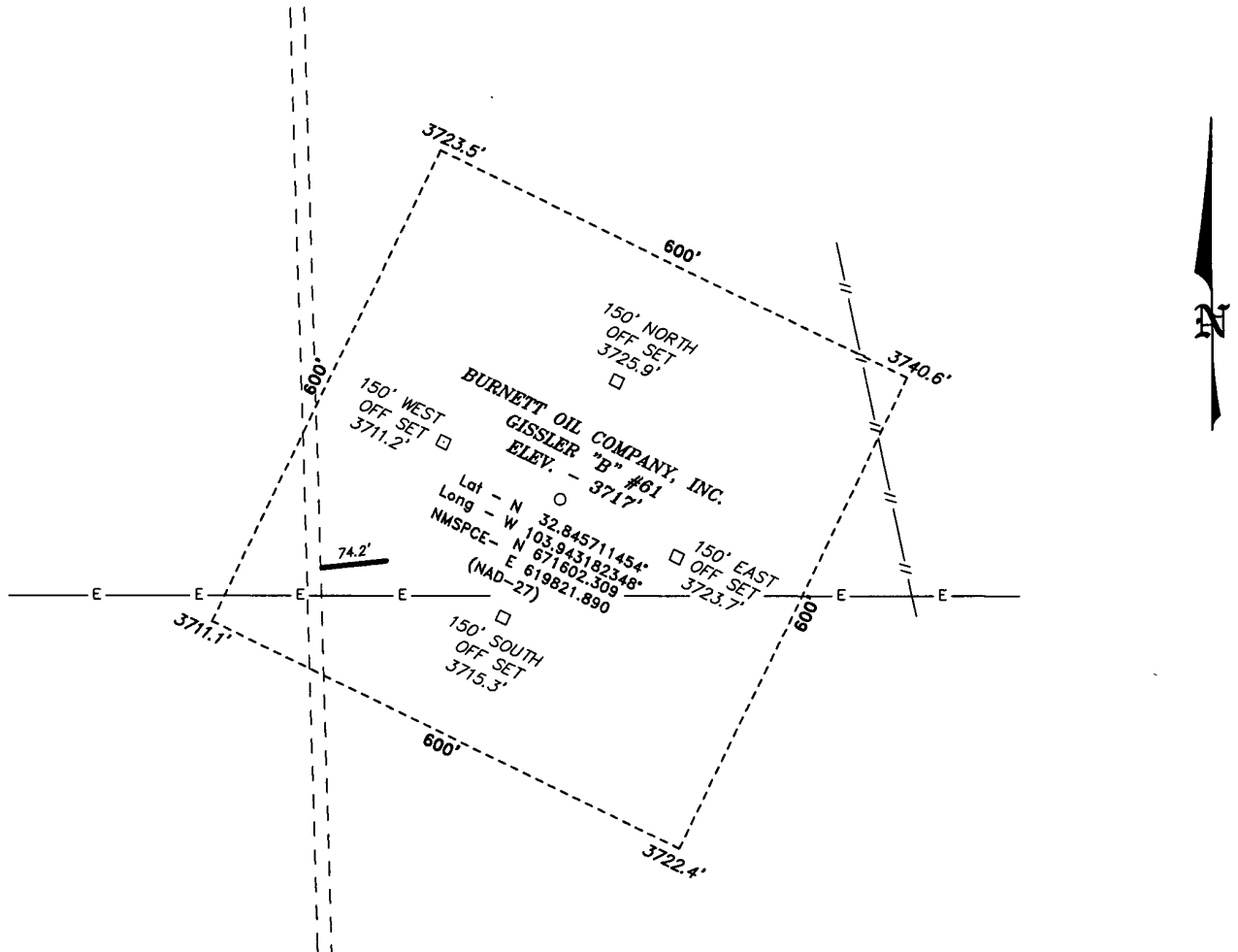
W.O. Number: JMS: 22065

Scale: 1" = 2000'

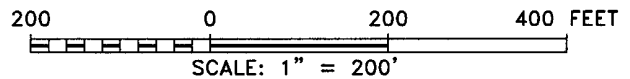
YELLOW TINT - USA LAND  
BLUE TINT - STATE LAND  
NATURAL COLOR - FEE LAND

**BURNETT OIL  
COMPANY, INC.**

SECTION 11, TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



GISSLER B #61  
SURFACE EXHIBIT A2



Directions to Location:

FROM THE JUNCTION OF SQUARE LAND AND SKELLY,  
GO NORTH ON SQUARE LANE FOR 0.6 MILES TO  
LEASE ROAD, ON LEASE ROAD GO WEST 1.2 MILES  
TO LEASE ROAD, ON LEASE ROAD GO SOUTH 0.6  
MILES TO PROPOSED LEASE ROAD.

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

**BURNETT OIL COMPANY, INC.**

REF: GISSLER "B" #61 / WELL PAD TOPO

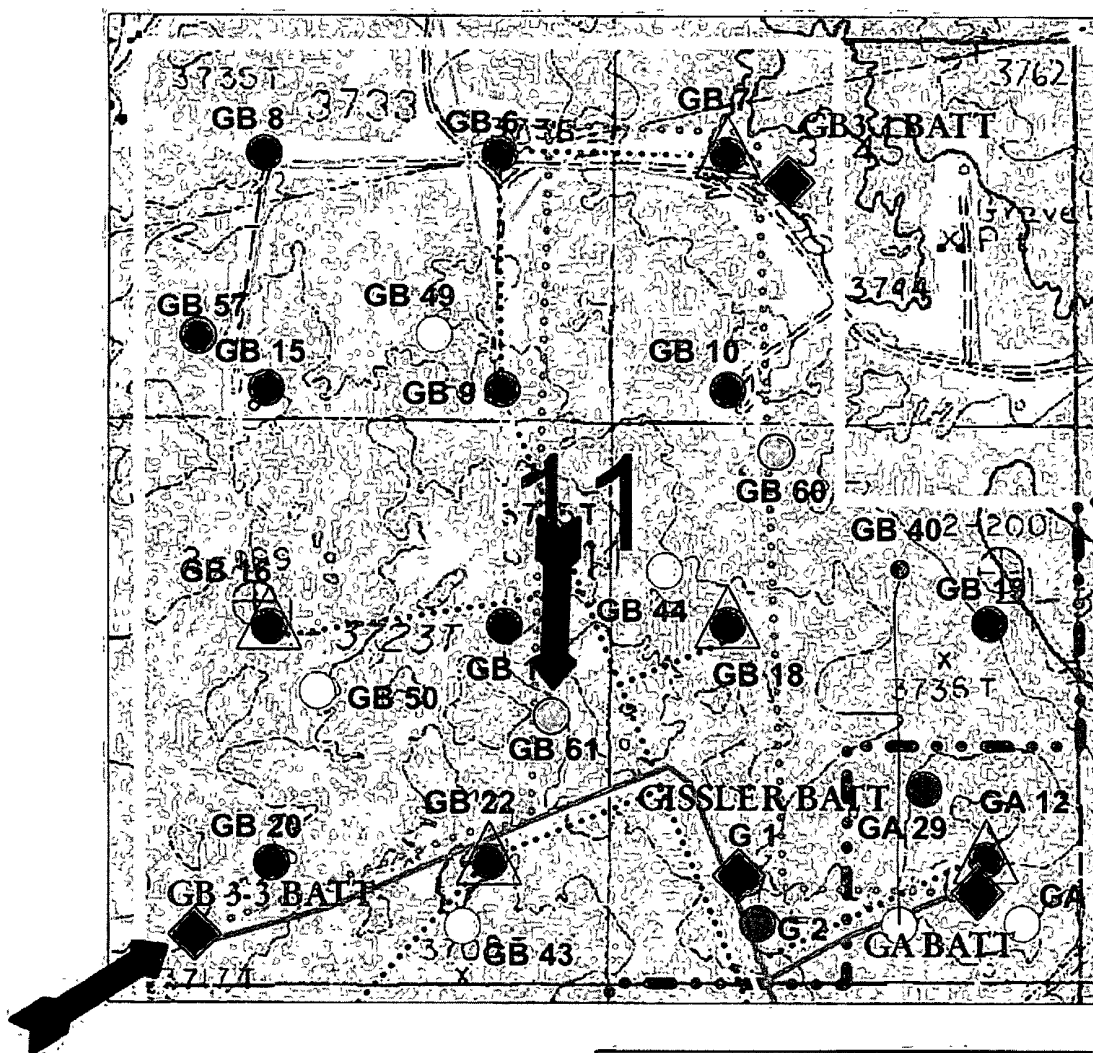
THE GISSLER "B" #61 LOCATED 1486'

FROM THE SOUTH LINE AND 2300' FROM THE WEST LINE OF  
SECTION 11, TOWNSHIP 17 SOUTH, RANGE 30 EAST,  
N.M.P.M., EDDY COUNTY, NEW MEXICO.

W.O. Number: 22065 Drawn By: J. SMALL

Date: 01-13-2010 Disk: JMS 22065

Survey Date: 01-12-2010 Sheet 1 of 1 Sheets



### Well Names

GA = Gissler A  
 GB = Gissler B  
 SA = Stevens A  
 SB = Stevens B  
 GJSA = Grayburg Jackson San Andres  
 JA = Jackson A  
 JB = Jackson B

Burnett Oil Co., Inc.  
 6666

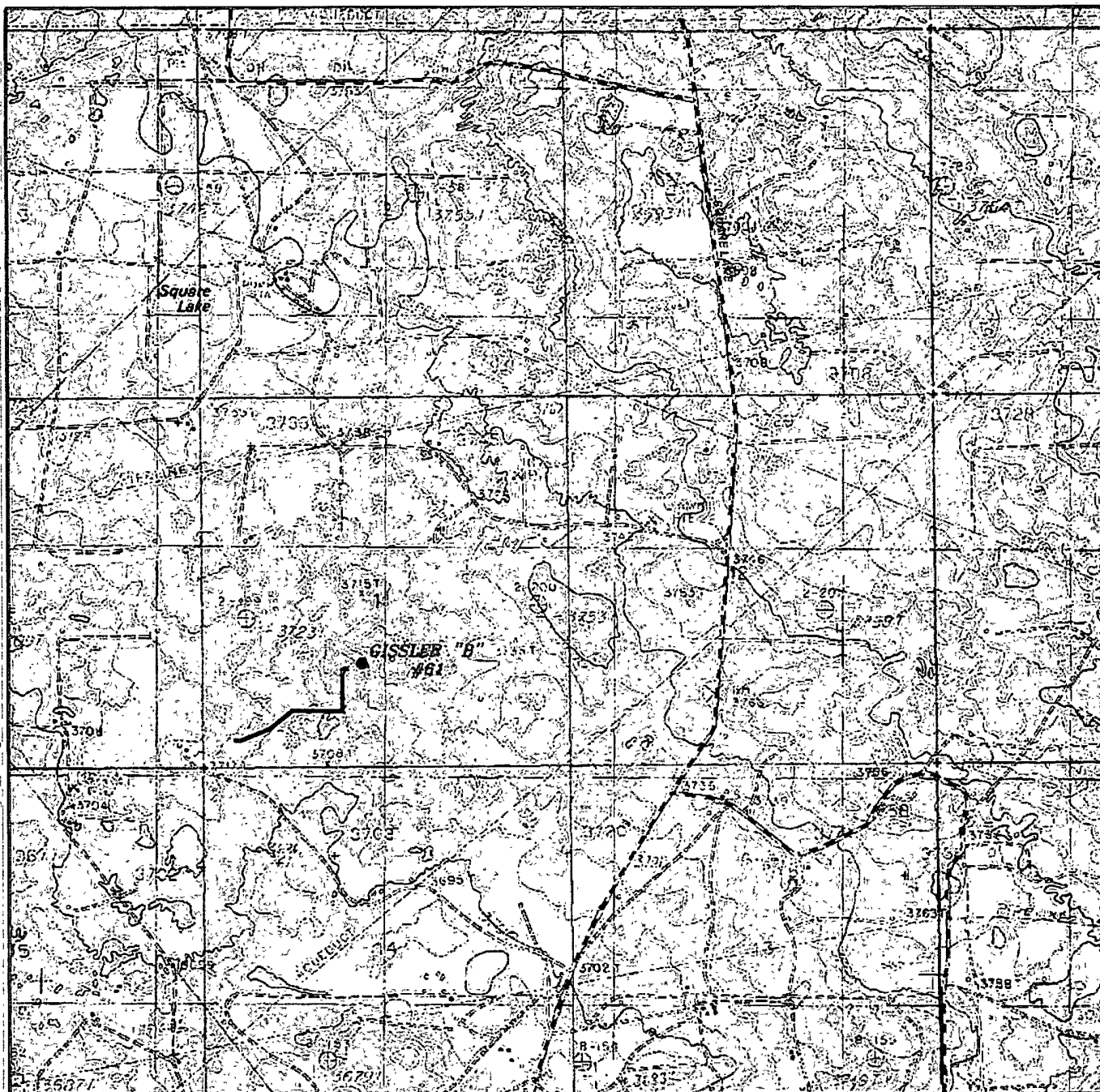
Gissler B61 Proposed Well Location  
 (Map Reflects Burnett Operated Wells Only)  
 Eddy County, New Mexico

|                                  |                            |
|----------------------------------|----------------------------|
| Author:<br>C. Keston, Eng. Tech. | Date:<br>December 10, 2009 |
| Scale:<br>1" = 1,000'            |                            |

GISSLER B #61  
 SURFACE EXHIBIT B

### Gissler B61

T17S, R30E, Sect 11, Unit J, NM2748  
 1486' FSL, 2300' FWL, GB 3-3 Battery  
 Lat/Long: 32.845711, -103.943182



**GISSLER "B" #61**

Located 1486' FSL and 2300' FWL

Section 11, Township 17 South, Range 30 East,  
N.M.P.M., Eddy County, New Mexico.

GISSLER B #61  
SURFACE EXHIBIT C

**basin**  
**surveys**

focused on excellence  
in the oilfield

P.O. Box 1786  
1120 N. West County Rd.  
Hobbs, New Mexico 88241  
(575) 393-7316 - Office  
(575) 392-2206 - Fax  
basinsurveys.com

W.O. Number: JMS 22065

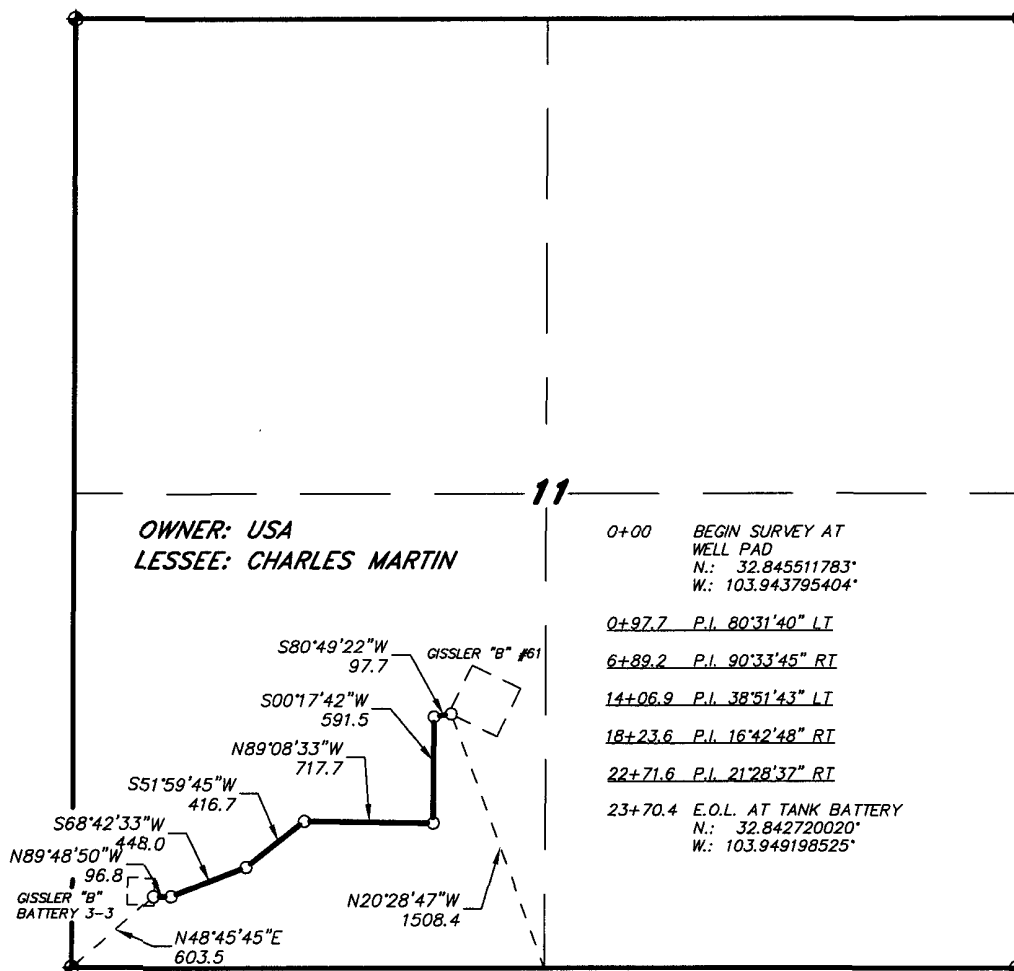
Survey Date: 01-12-2010

Scale: 1" = 2000'

Date: 01-13-2010

**BURNETT OIL**  
**COMPANY, INC.**

SECTION 11, TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



OWNER: USA  
LESSEE: CHARLES MARTIN

0+00 BEGIN SURVEY AT  
WELL PAD  
N.: 32.845511783°  
W.: 103.943795404°

0+97.7 P.I. 80°31'40" LT

6+89.2 P.I. 90°33'45" RT

14+06.9 P.I. 38°51'43" LT

18+23.6 P.I. 16°42'48" RT

22+71.6 P.I. 21°28'37" RT

23+70.4 E.O.L. AT TANK BATTERY  
N.: 32.842720020°  
W.: 103.949198525°

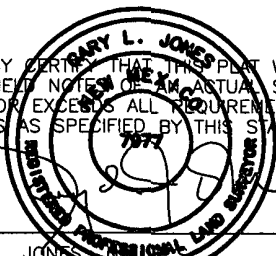
LEGAL DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE, LOCATED IN SECTION 11, TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

SECTION 11 = 2368.4 FEET = 143.54 RODS = 0.45 MILES = 1.63 ACRES

GISSLER B #61  
SURFACE EXHIBIT C1

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



GARY L. JONES No. 7977  
TEXAS P.L.S. No. 5074

**BASIN SURVEYS** P.O. BOX 1786—HOBBS, NEW MEXICO

W.O. Number: 22065 Drawn By: J. M. SMALL

Date: 01-13-2010 Disk: JMS 22065

1000 0 1000 2000 FEET

**BURNETT OIL COMPANY, INC.**

REF: PROPOSED FLOWLINE TO THE GISSLER "B" #61

A FLOWLINE CROSSING USA LAND IN  
SECTION 11, TOWNSHIP 17 SOUTH, RANGE 30 EAST,  
N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 01-12-2010 Sheet 1 of 1 Sheets



**MASTER DEVELOPMENT PLAN  
BURNETT OIL CO., INC.**

**ALL VERTICAL CEDAR LAKE YESO/ LOCO HILLS GLORIETA YESO WELLS**  
FEDERAL LEASE (NM) LC029338A, LC029339A, LC030570A, LC055264, LC055958, NM2746,  
NM2747, NM2748, NM 05067 & NM 074939.

Section 1, 8, 11, 12, 13, 14, 23, 24 & 25, Township 17 South, Range 30 East, Eddy County, New Mexico

**A: DRILLING PROGRAM**

**1. Geological Name of Formation with Estimated Depth:**

- a. Alluvium.....Surface
- b. Anhydrite..... 390'
- c. Salt.....530'
- d. Base Salt.....1290'
- e. Yates.....1450'

**2. Estimated tops of Geologic Markers & Depths of Anticipated Fresh Water, Oil or Gas:**

- a. Seven Rivers.....1604'      Oil
- b. Queen..... 2222'      Oil
- c. Grayburg..... 2670'      Oil
- d. San Andres..... 2985'      Oil
- e. Glorieta..... 4460'      Oil
- f. Total Depth      6100'

No other formations are expected to yield oil, gas or fresh water in measurable volumes. We will set 10-3/4" casing @ approx. +/- 400' in the Anhydrite, above the Salt and circulate cement to surface. We will isolate the oil zones by running 7" casing to total depth and circulating cement to surface.

**3. Casing Program: (ALL CASING WILL BE NEW API APPROVED MATERIAL.)**

| <u>Hole</u><br><u>Size</u> | <u>Interval</u> | <u>OD Csg</u> | <u>Weight</u> | <u>Collar</u> | <u>Grade</u> | <u>Collapse</u><br><u>Design</u><br><u>Factor</u> | <u>Burst</u><br><u>Design</u><br><u>Factor</u> | <u>Tension</u><br><u>Design</u><br><u>Factor</u> |
|----------------------------|-----------------|---------------|---------------|---------------|--------------|---------------------------------------------------|------------------------------------------------|--------------------------------------------------|
|----------------------------|-----------------|---------------|---------------|---------------|--------------|---------------------------------------------------|------------------------------------------------|--------------------------------------------------|

(MW = 10 PPG IN DESIGN FACTOR CALCULATIONS.)

|         |          |         |        |      |     |         |      |      |
|---------|----------|---------|--------|------|-----|---------|------|------|
| 14-3/4" | 0'-400'  | 10-3/4" | 32.75# | ST&C | H40 | 1.125   | 1.00 | 1.80 |
| 8-3/4"  | 0'-6100' | 7"      | 23.00# | LT&C | J55 | * 1.125 | 1.00 | 1.80 |

*See* **\* 500' of fresh water gradient (.433 psi/ft) fluid will be maintained inside casing to keep SF 1.125. If fluid is not at the surface, the fluid level inside 7" Casing will be determined by wireline to insure a 500' minimum of standing fluid.**

**4. Cementing Program (Note Yields and DV Tool Depth if Multiple Stage.)**

**BLM WILL BE NOTIFIED TO HAVE THE OPTION TO WITNESS ALL CEMENTING AND TAG OPERATIONS.**

- a. **10-3/4" Surface** Cement to surface Lead with 150 sx Class C cement +10% A-10, + 10#/sx LCM-1 1% CaCl, 0.01 gps FP-6L, 14.6 ppg, 1.67 CF/Sk Yield. Tail with 500 sks Class C cement + 2% CaCl + 0.01 gps FP-6L. 14.8 ppg, 1.35 CF/Sx yield. **TOC Surface.**

*See* **If cement does not circulate to surface, BLM will be notified of same, plus the plans to bring the cement to surface so BLM may witness tagging and cementing. The plan to bring the cement to surface will be to run 1" and tag top of cement at 0°, 90°, 180° and 270°.**

**Appropriate cement volumes will be pumped through 1" to bring cement to surface. In rare the situation where severe lost circulation may exist, BLM may be requested to approve the dumping pea gravel then cementing on top of it to the surface through 1".**

**b. 7" Production Casing**

**Stage 1 Cement:** 550 sks (50:50) Poz (Fly Ash): Class C cement + 2% Bentonite + 0.01 gps FP-6L + 0.3% FL-52A + 1.2% CD-32 + 5% Sodium Chloride. Yield 1.27 CF/Sx. DV @ approx. 2600'

**Stage 2 Cement:** Lead with 1800 sks (35:65) Poz (Fly Ash): Class C cement + 6% Bentonite + 5 lbs/sx LCM-1 + 0.125 lbs/sx Cello Flake + .01 gps FP-6L + 5% Sodium Chloride, Yield 1.89 CF/Sx. Tail with 100 sx Class C + 1% CaCl + 0.01 gps FP-6L. 14.8 ppg, Yield 1.62 CF/Sx, TOC Surface.

The above cement volumes may be revised pending the caliper measurement from the open hole logs. **Casing design is to bring all cement to the surface.**

~~In the event cement does not circulate to surface, the BLM will be notified. A temperature survey will be run. Cement will then be brought to surface by running 1" to tag top of cement and then cement through 1" to bring cement to surface. If top of cement is too deep for running 1", an alternate plan will be developed, including BLM in discussions, to bring cement to surface.~~

**5. Pressure Control Equipment:**

The blowout prevention equipment (BOPE) shown in **Drilling Exhibit E & E1** will consist of a 2000 PSI Hydril Unit (annular) with hydraulic closing equipment. The equipment will comply with Onshore Order #2 and will be tested to 50% of rated working pressure (RWP), and maintained for at least 10 minutes. The 10-3/4" drilling head will be installed on the surface casing and in use continuously until total depth is reached. An independent testing company will be used for the testing. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold having 2000 PSI WP rating.

**6. Proposed Mud Circulation System**

| <u>Depth</u>  | <u>Mud Wt</u> | <u>Visc</u> | <u>Fluid Loss</u> | <u>Type System</u> |
|---------------|---------------|-------------|-------------------|--------------------|
| 0'-400'       | 8.6-9.5       |             |                   | Fresh Water        |
| 400' - TD' MD | 10.0 max.     |             |                   | Brine Water        |

**The necessary mud products for weight addition and fluid loss control will be on location at all times.**

**7. Auxiliary Well Control and Monitoring Equipment:**

- A Kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve with the appropriate connections on the rig floor at all times.
- Hydrogen Sulfide detection and breathing equipment will be installed and in operation at drilling depth of 1800' (which is more than 500' above top of Grayburg) until 7" casing is cemented. An H2S compliance package will be on all sites while drilling.

**8. Hydrogen Sulfide Plan and Training:**

Based on our area testing H2S at 100 PPM has a radius of 139' and does not get off our well sites. There are no schools, residences, churches, parks, public buildings, recreation area or public within 2+ miles of our area.

**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 each well:**

- The hazards and characteristics of Hydrogen Sulfide (H2S).
- The proper use and maintenance of personal protective equipment and life support systems.
- The proper use of H2S detectors, alarms, warning systems, briefing areas, evacuation procedures and the prevailing wind.
- The proper techniques for first aid and rescue procedures.
- ATTACHED HYDROGEN SULFIDE (H2S) CONTINGENCY PLAN DRILLING EXHIBIT A**

**f. ATTACHED EMERGENCY CALL LIST FOR ANY ON SITE EMERGENCY DRILLING EXHIBIT B.**  
**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 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 well site. All personnel will be required to carry documentation that they have received the proper training.

**a. 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.)

**b. H<sub>2</sub>S detection and monitoring equipment:**

1. Three (3) portable H<sub>2</sub>S monitors positioned on location for best coverage and response. These units have warning lights at 10 PPM and warning lights and audible sirens when H<sub>2</sub>S levels of 15 PPM is reached. A digital display inside the doghouse shows current H<sub>2</sub>S levels at all three (3) locations.
2. An H<sub>2</sub>S Safety compliance set up is on location during all operations.

**c. Visual warning systems:**

1. Wind direction indicators will be positioned for maximum visibility.
2. Caution/Danger signs will 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.

**d. Mud program:**

The mud program has been designed to minimize the volume of H<sub>2</sub>S circulated to the surface. Proper mud weight, safe drilling practices and the use of H<sub>2</sub>S scavengers will minimize hazards when penetrating H<sub>2</sub>S bearing zones.

**e. Communication:**

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

**f. Metallurgy:**

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

**9. Logging, Coring and Testing program: See COA**

- a. Any drill stem tests will be based on geological sample shows and planned before spudding.
- b. The openhole electrical logging program will be:
  1. Total depth to 1000': Dual Laterolog-Micro Laterolog with Compensated Neutron, Spectral Density log with Spectral Gamma Ray and Caliper.
  2. Total depth to Surface: Compensated Neutron with Gamma Ray.
  3. Coring program will be planned and submitted on a well by well basis.
  4. Additional testing will be done subsequent to setting the 7" production casing. The specific

Intervals will be based on log evaluation, geological sample shows and drill stem tests.

**10. Potential Hazards:**

No abnormal pressures or temperatures are expected. There is known H<sub>2</sub>S in this area. The operator will comply with the provisions of Onshore Oil and Gas Order #6. No lost circulation is expected to occur. All personnel will be familiar with the safe operation of the equipment being used to drill this well. The maximum anticipated bottomhole pressure is 1000#. The maximum anticipated bottom hole temperature is 92°F.

**11. Anticipated Start Date and Duration of Operation**

Road and location construction will begin after BLM has approved the APD and has approved the start of the location work. Anticipated spud date will be as soon as the location building work has been completed and the drilling rig is available to move to the location. Move in and drilling is expected to take approx 25 days. If production casing is run, an additional 60 days would be required to complete the well and install the necessary surface equipment (pumping unit, electricity, flowline and storage facility) to place the well on production.

**B: SURFACE USE PROGRAM**

**1. EXISTING ROADS:**

- a. The well site and elevation plat for the proposed well are reflected on the well site layout; Form C-102. This well was staked by Basin Surveys or John West Survey.
- b. All roads into the location are shown on the Vicinity Map (Surface Exhibit A.)
- c. Directions to location: from intersection of US Hwy. #82 and Square Lake (CR 220) go north on CR 220 and follow Surface Exhibit A2 to the proposed well pad.

**2. New or Reconstructed Access Roads:**

- a. The well site layout, Form C-102 and Surface Exhibit A1 & A2 show the existing area. **Any additional required access road will be shown on Surface Exhibit A2 and Exhibit B.**
- b. All construction material will be native caliche. It may be available at the proposed location. If unavailable on location or road, caliche will be hauled from nearest BLM approved caliche pit.

**3. Location of existing wells:**

See attached Surface Exhibit B plat showing all wells within a ½ mile radius of the proposed well site.

**4. Location of existing and/or proposed production facilities:**

See Surface Exhibit B, C and C1 for the location of existing on lease Gissler B#3-2 Tank Battery facility on this Federal Lease NMNM2748.

- a. This battery is an existing above ground pool commingled Grayburg/Loco Hills Glorieta Yeso on lease production facility.
- b. The well site will require electricity for the prime mover. We will contact the electric cooperative to provide the electric power poles and the electric line from their nearest connection. The routing and pole placement will be provided in their ROW application. All electrical installation will be done in accordance with all existing state and federal regulations.
- c. All flowline from the new well pad site is on Federal leases. (See Surface Exhibit B, C and C1 plat.) The required flowline will be laid, above ground, along existing road and flowline routing. All flowline will be 3" or 4" poly pipe.

**5. Location and Type of Water Supply:**

All water to be used in drilling this well will be brine or fresh water transported by truck over existing and above proposed lease road from Loco Hills, New Mexico or produced water furnished from our existing waterflood facilities in the area. We may install a pump and lay a **temporary** 2" poly line on the lease from the battery to the rig for this drilling water.

**6. Construction Materials:**

All construction material for the roadway and drilling pad will be native caliche from the nearest BLM approved pit or from existing available deposits found on the location. All will be in accordance with the drilling stipulations for this well.

**7. Methods of Handling Waste Disposal:**

- a. Drill cuttings will be disposed of in a closed loop system using steel haul off tanks. All drilling fluids will be hauled off location to a contracted off lease disposal location.
- b. 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 off-lease disposal station within 30 days following the completion activities.
- c. A properly maintained Porto-john will be provided for the crews during drilling and completion operations. All will be removed after all completion operations have ended.
- d. Oil produced during testing will be put into steel storage tank for later sales.
- e. Water produced during testing operations will be put in the steel frac. tanks pit until well is turned to the lease tank battery. All produced water will be disposed of through one of our approved disposal methods.

**8. Ancillary Facilities:** There are no planned ancillary facilities for this well.

**9. Well Site Layout:**

Surface 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 surface Reclamation:**

- a. After drilling and successful completion operations are finished, all equipment and other materials not required for normal production operations will be removed.
- b. The pad size will be reduced to the amount required for normal operation of the producing well. This reduced portion will be restored to the BLM stipulations in section a.
- d. If a well is abandoned, the surface location and unneeded road will be restored according to BLM stipulations within 90 days of final abandon and sit re-seeded with BLM (B) seed mix.

**11. Surface ownership:**

All lands are owned by the U.S. Government and is administered by the Bureau of Land Management. The surface is multiple uses with the primary use of the region for the production of oil and gas and the grazing of livestock.

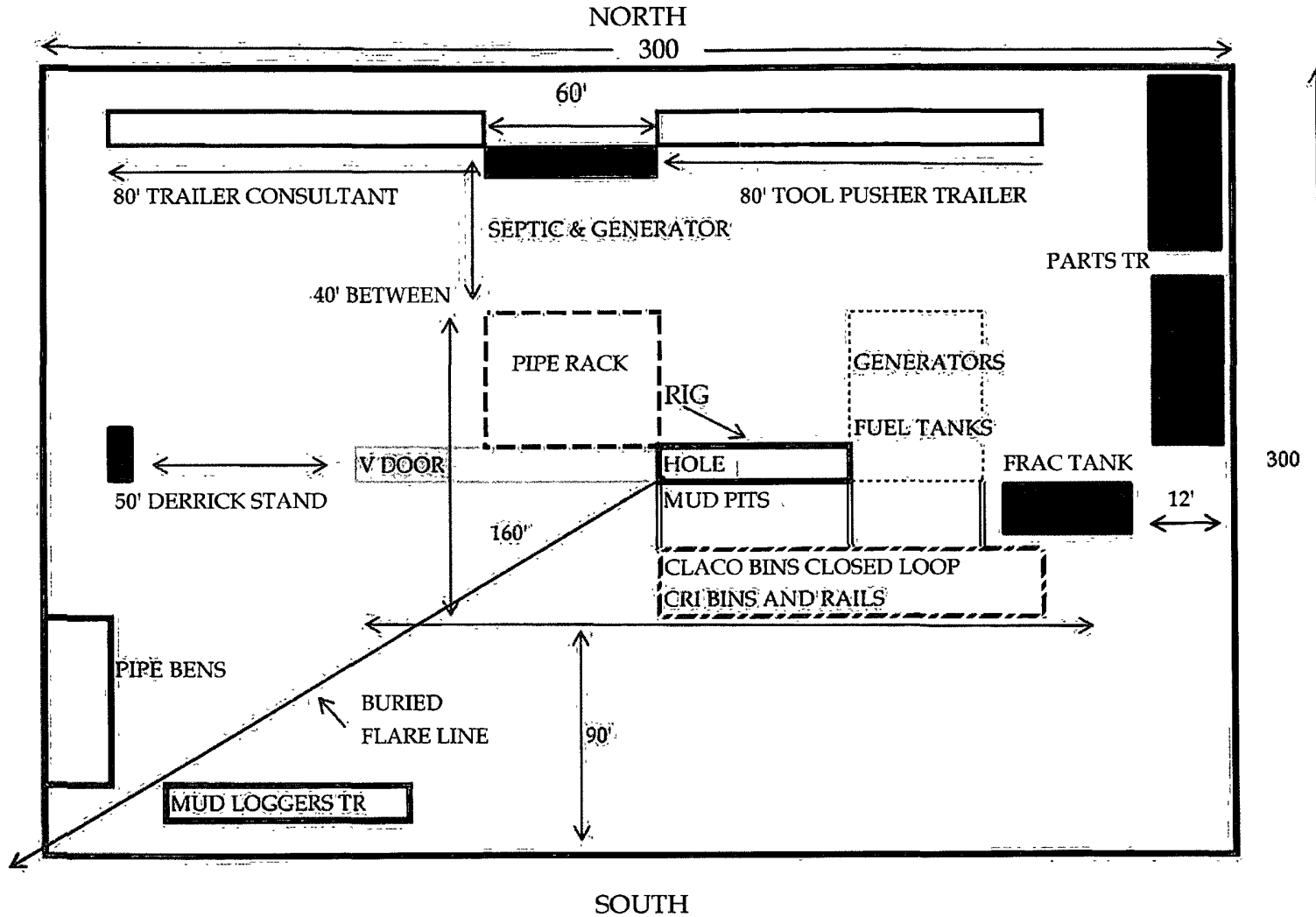
**12. Other information:**

- a. The area surrounding the well site is grassland. The area is relatively flat with small hills and sand dunes. The topsoil is fine, deep sand underlain by caliche. Vegetation cover is generally sparse and consists of mesquite, yucca, shinnery oak and sparse native grasses. Wildlife in the area includes deer, coyotes, rabbits, rodents, reptiles, dove and quail.
- b. No permanent or live water is found in the general proximity of this area.
- c. No dwellings are found within two (2) miles of this location.
- d. There is intermittent cattle grazing and hunting in the area; however, the principal land use is for oil and gas production.
- e. An archaeological clearance report from Boone Archaeological Services will be sent to the BLM office in Carlsbad, N.M.

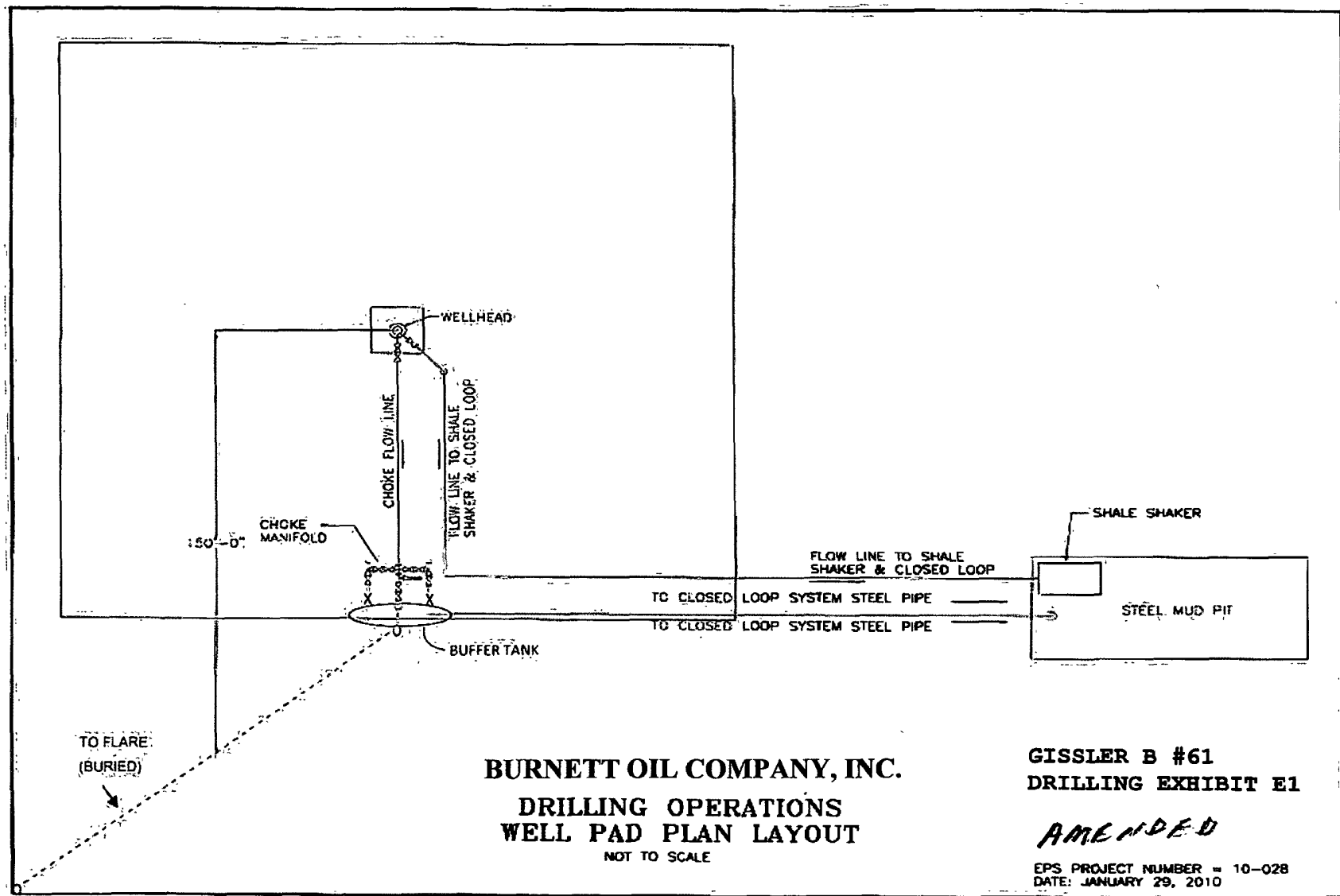
**13. Bond Coverage:**

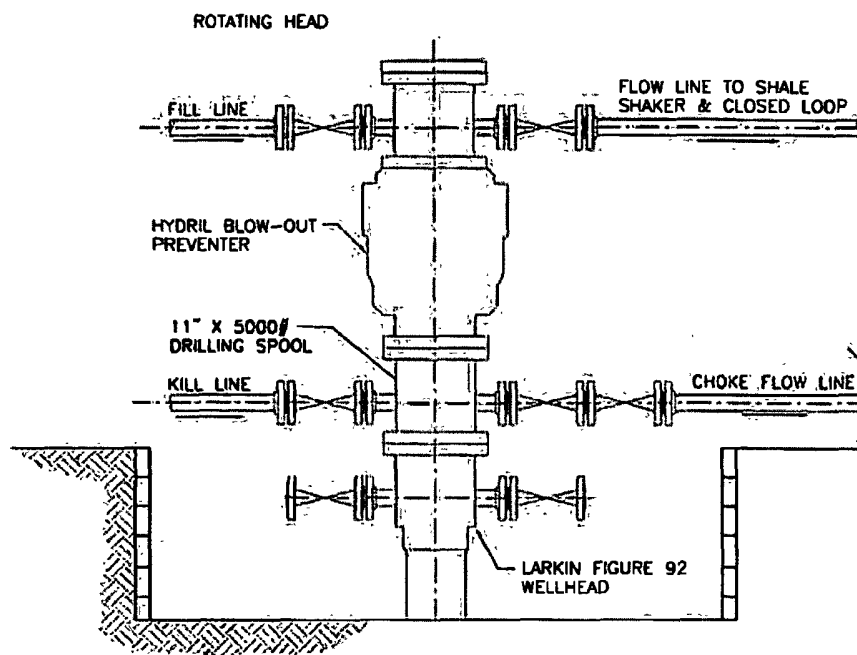
Current Bond is BLM Bond # NMB000197. The Surety Bond is #B000863. Both are effective May 21, 2004 and remain in place

# BURNETT OIL CO., INC. PLANNED DRILL SITE LAYOUT, UNITED RIG #5

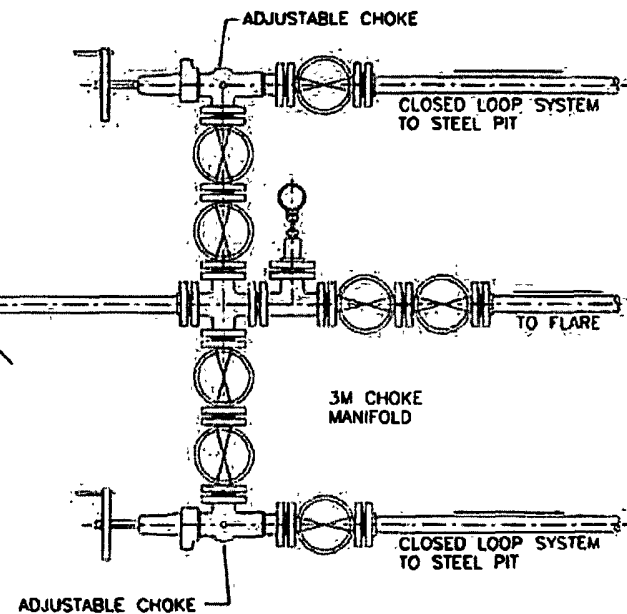


GISSLER B#61  
SURFACE EXHIBIT D  
AMENDED





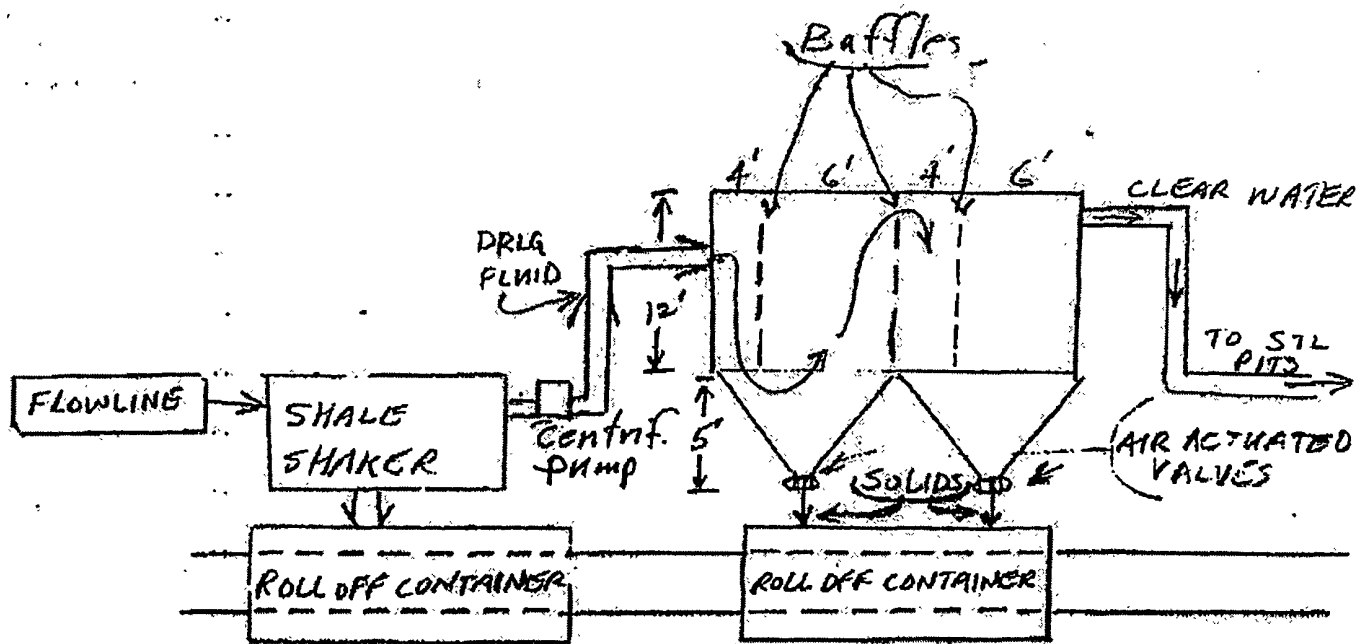
WELLHEAD ELEVATION



CHOKE MANIFOLD PLAN

BUNETT OIL COMPANY, INC.  
 BLOWOUT PREVENTER &  
 CHOKE MANIFOLD DIAGRAM  
 2000 PSI WORKING PRESSURE

GISSLER B #61  
 DRILLING EXHIBIT E



#### OPERATIONAL & MAINTENANCE

DRILLING FLUIDS FROM THE WELLBORE WILL GO THROUGH FLOWLINE ACROSS SHALE SHAKER. SOLIDS WILL DROP INTO ROLL-OFF CONTAINERS WITH BAFFLES AS DRAWN ABOVE. BAFFLES SLOW FLUID VELOCITY TO ALLOW SOLIDS TO FALL DOWN THROUGH 6" AIR ACTUATED VALVES INTO ROLL-OFF CONTAINERS. CLEAN WATER GOES OUT BACK TO THE DRILLING FLUID STEEL PITS. SOLIDS ARE HAULED TO DISPOSAL. ANY LEFTOVER LIQUID WILL BE HAULED TO DISPOSAL.

BURNETT OIL CO., INC.

#### Operations and Maintenance

Closed Loop equipment will be inspected daily by each tour and any necessary maintenance performed.

Any leak in system will be repaired and/or contained immediately.

OCD notified within 48 hours

Remediation process started

#### Closure Plan

During drilling operations all liquids, drilling fluids and cutting will be hauled off via CRO (Controlled Recovery Incorporated Permit: R-9166.)



## BURNETT OIL CO., INC. EMERGENCY NOTIFICATION LIST

**Burnett's New Mexico Office** (575) 677-2313  
**Belton Mathews BOCI District Superintendent** CELL (575) 703-9601  
BURNETT OIL HOME OFFICE (817) 332-5108  
Mark Jacoby BOCI ENGINEERING MANAGER CELL (817) 312- 2751

**EDDY COUNTY SHERIFF** 911 OR (575) 746-9888  
**NEW MEXICO STATE POLICE** (575) 746-2701

Loco Hills Fire Department (VOLUNTEER ONLY) 911 OR (575) 677 2349  
For Medical and Fire (575) 746-2701 (ARTESIA)

Flight for Life Air Ambulance (LUBBOCK) (806) 743-9911  
Aerocare Air Ambulance (LUBBOCK) (806) 747-8923  
Med Flight Air Ambulance (ALBUQ) (505) 842-4433  
S B Med Svc Air Ambulance (ALBUQ) (505) 842-4949

US Bureau of Land Management Carlsbad (575) 361-2822 (575) 234-5972  
New Mexico Oil Conversation Division ARTESIA (575) 748-1283  
New Mexico Emergency Response Commission 24 HR (575) 827-9126  
New Mexico State Emergency Operation Center (575) 476-9635  
Local Emergency Planning Committee (Artesia) (575) 746-2122  
National Emergency Response Center (Washington, DC) (800) 424-8802

Boots & Coots IWC (800) 256-9688  
Cudd Pressure Control (432) 570-5300  
Halliburton Svc (575) 746-2757  
B J Svc (575) 746-2293

**THIS MUST BE POSTED AT THE RIG WHILE ON LOCATION.**

**Burnett Office 87 SQUARE LAKE ROAD (CR #220), Loco Hills, New Mexico 88255**  
(Loco Hills, New Mexico (2 MILES East of Loco Hills On US Hwy 82 TO C#220 Then  
North On CR# 220 Approx One Mile To Office.).

**GISSLER B #61**  
**DRILLING EXHIBIT A**



## HYDROGEN SULFIDE (H<sub>2</sub>S) CONTINGENCY PLAN

ASSUMED 100 PPM ROE = 3000'

### Emergency Procedures

**In the event of a release of gas containing H<sub>2</sub>S, The first responder(s) must**

- \* Isolate the area and prevent entry by other persons into the 100 PPM ROE.
- \* Evacuate any public places encompassed by 100 PPM ROE.
- \* Be equipped with H<sub>2</sub>S monitors and air packs in order to control release.
- \* Use the "buddy system" to ensure no injuries occur during the response.
- \* Take precautions to avoid personal injury during this operation.
- \* Have received training in the following:
  1. H<sub>2</sub>S detection
  2. Measures for protection against this gas
  3. Equipment used for protection and emergency response.

### Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO<sub>2</sub>.) Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the New Mexico State Police may become involved. NM State Police shall be the incident command on scene of any major release. Take care to protect downwind whenever there is an ignition of gas.

### **Characteristics of H<sub>2</sub>S and SO<sub>2</sub>**

| Common Name      | Chemical Formula | Specific Gravity | Threshold Limit | Hazardous Limit | Lethal Concentration |
|------------------|------------------|------------------|-----------------|-----------------|----------------------|
| Hydrogen Sulfide | H <sub>2</sub> S | 1.189<br>Air = 1 | 10 ppm          | 100 ppm/hr      | 600 ppm              |
| Sulfur Dioxide   | SO <sub>2</sub>  | 2.21<br>Air = 1  | 2 ppm           | NA              | 1000 ppm             |

### **Contacting Authorities**

Burnett Oil Co., Inc. personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind and direction, location of release, etc. **Be sure all is written down and ready to give to contact list (Drilling Exhibit A.) Directions to the site are below.** Burnett's response must be in coordination with the State of New Mexico's Hazardous Materials Emergency Response Plan.

**Burnett Office 87 SQUARE LAKE ROAD (CR #220), Loco Hills, New Mexico 88255  
(Loco Hills, New Mexico (2 MILES East of Loco Hills On US Hwy 82 TO C#220 Then North On CR# 220 Approx One Mile To Office**

**BURNETT OIL CO., INC.**

**2/02/2010**

**DRILLING EXHIBIT B  
(GISSLER B #61)**

BURNETT PLAZA - SUITE 1500  
801 CHERRY STREET - UNIT #9

BURNETT OIL CO., INC.

FORT WORTH, TX 76102-6881  
(817) 332-5108



**BURNETT OIL CO., INC. OPERATOR CERTIFICATION  
ALL VERTICAL CEDAR LAKE YESO/ LOCO HILLS PADDOCK WELLS, GRAYBURG SAN  
ANDRES WELLS**

FEDERAL LEASE # LC029338A, LC029339A, LC030570A, LC055264, LC055958, NM2746,  
NM2747 NM2748, NM05067 & NM074939  
Section 1, 8, 11, 12, 13, 14, 23, 24 & 25, Township 17 South, Range 30 East, Eddy County, N.M

**Operator's Representative:**

Burnett Oil Co., Inc. 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: (575) 677-2313  
Home phone: (575) 746-8647  
Cellular phone: (575) 703-9601

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: 2/02/2010

By Mark A. Jacoby  
Mark A. Jacoby  
Engineering Manager

# PECOS DISTRICT CONDITIONS OF APPROVAL

|                       |                                     |
|-----------------------|-------------------------------------|
| OPERATOR'S NAME:      | BURNETTE OIL CO., INC.              |
| LEASE NO.:            | NMNM2748                            |
| WELL NAME & NO.:      | GISSLER B # 61                      |
| SURFACE HOLE FOOTAGE: | 1486' FSL & 2300' FWL               |
| BOTTOM HOLE FOOTAGE   | Same                                |
| LOCATION:             | Section 11, T. 17 S., R 30 E., NMPM |
| COUNTY:               | Eddy County, New Mexico             |

## TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
  - Lesser Prairie-Chicken Timing Stipulations
  - Ground-level Abandoned Well Marker
- ☒ **Construction**
  - Notification
  - V-Door Direction - SE
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads – **Berming Required**
  - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
  - H2S Requirements-Onshore Order #6
  - Logging Requirements
- ☐ **Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines
  - Electric Lines
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**

## **I. GENERAL PROVISIONS**

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

## **II. PERMIT EXPIRATION**

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

## **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

## **IV. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

## **V. SPECIAL REQUIREMENT(S)**

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

Berm the location on the North, East, and West edges.

V-Door SE. Well-pad is angled to avoid high ground to the South and West and to avoid a powerline.

## **VI. CONSTRUCTION**

### **A. NOTIFICATION**

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

**B. V-DOOR DIRECTION: SE.** Berm the location on the North East and West.

**C. TOPSOIL**

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 8 inches in depth. The topsoil will be used for interim and final reclamation.

#### **D. CLOSED LOOP SYSTEM**

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

#### **E. FEDERAL MINERAL MATERIALS PIT**

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

#### **F. WELL PAD SURFACING**

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

#### **G. ON LEASE ACCESS ROADS**

##### **Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

##### **Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future

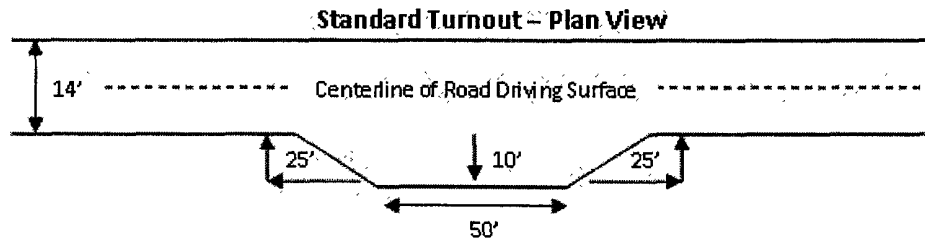
field development. The surfacing depth and type of material will be determined at the time of notification.

### **Crowning**

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

### **Turnouts**

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

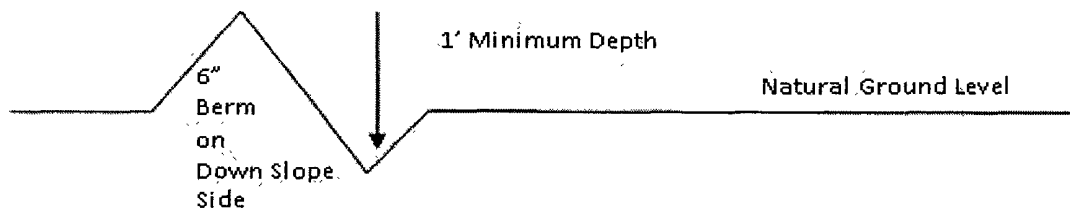


### **Drainage**

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outslowing and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

### **Cross Section of a Typical Lead-off Ditch**



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

### **Formula for Spacing Interval of Lead-off Ditches**

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

### **Culvert Installations**

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

### **Cattleguards**

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

### **Fence Requirement**

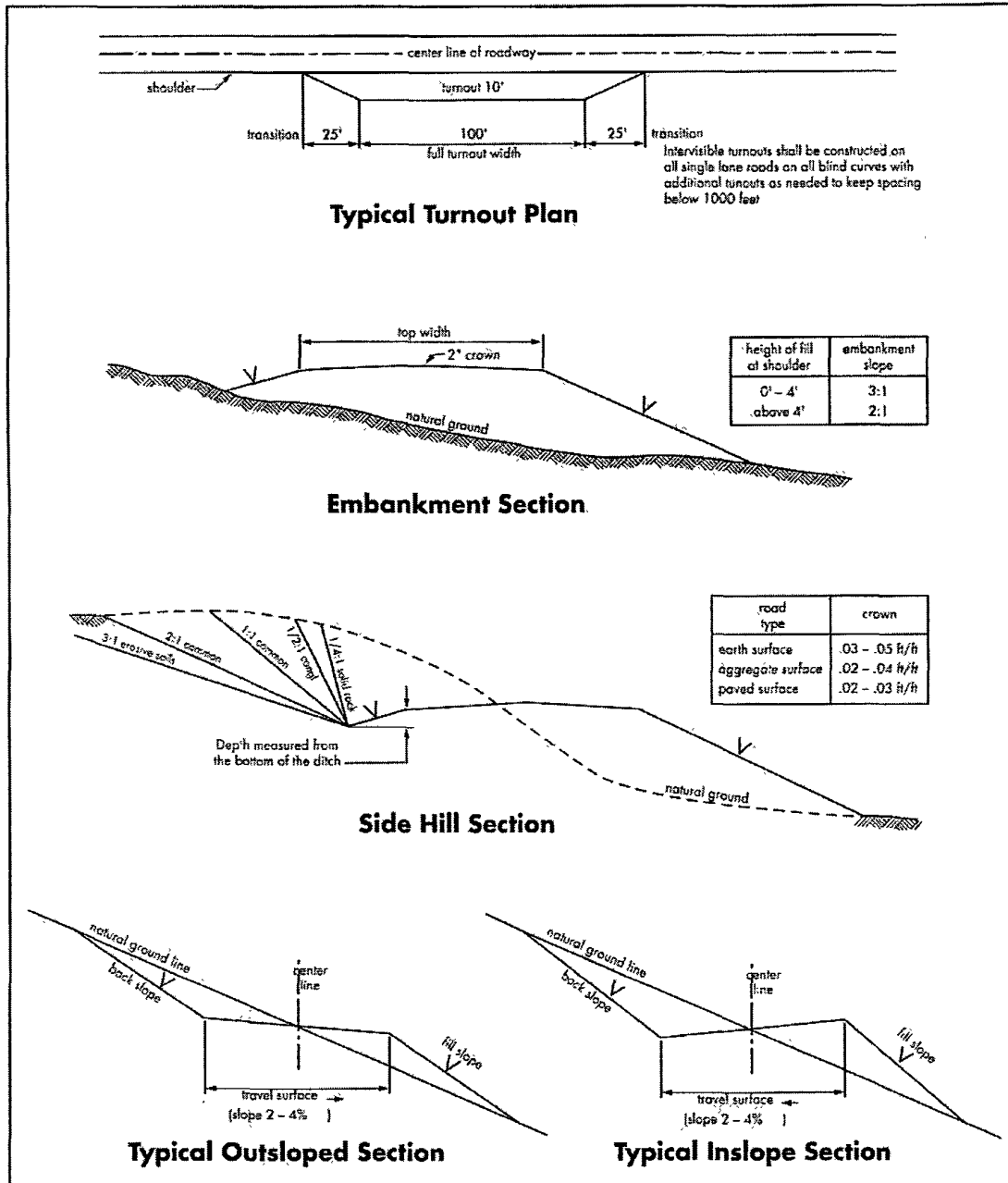
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

### **Public Access**

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

**Figure 1 – Cross Sections and Plans For Typical Road Sections**



## VII. DRILLING

### A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 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. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan should be activated 500 feet prior to drilling into the **Grayburg** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations 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. **The record of the drilling rate along with the CAL/GR/N well log run from TD to surface will be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

### B. CASING

**Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.**

**Centralizers required on surface casing per Onshore Order 2.III.B.1.f.**

**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 for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.**

**No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.**

**Possible water flows in the Salado and Artesia Groups.**

**Possible lost circulation in the Grayburg and San Andres Formations.**

1. The 10-3/4 inch surface casing shall be set **at approximately 400 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface.
  - a. For the surface casing: If cement does not circulate to the surface, the appropriate BLM office shall be notified and a tag with 1" will be performed at four positions 90 degrees apart to verify cement depth. BLM Petroleum Engineer Technician to witness tags. If depth is greater than 100' or water is standing in the annulus, remedial cementing will be done. If no water and TOC tag is less than 100', when 100% excess cement of the annulus volume was run on the primary job, ready-mix can be used to bring cement to surface.
  - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
  - 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 cementing will be done prior to drilling out that string.

**The 7 inch production casing must be kept liquid filled while running into hole to meet minimum BLM requirements for collapse.**

2. The minimum required fill of cement behind the 7 inch intermediate casing is:
  - a. First stage to DV tool, cement shall:
    - ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job.
  - b. Second stage above DV tool, cement shall:
    - ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

3. 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. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. Casing cut-off and BOP installation will not be initiated until the cement has had 4-6 hours of setup time in a water basin and 12 hours in the potash areas. This time will start after the cement plug is bumped. Testing the BOP/BOPE against a plug can commence after meeting the above conditions plus the BOP installation time.
  - b. The tests shall be done by an independent service company utilizing a test plug.
  - c. The results of the test shall be reported to the appropriate BLM office.
  - d. 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.**
  - e. 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.

#### **D. DRILL STEM TEST**

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

**CRW 030110**

## **VIII. PRODUCTION (POST DRILLING)**

### **A. WELL STRUCTURES & FACILITIES**

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

#### **Containment Structures**

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

#### **Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color  
Shale Green, Munsell Soil Color Chart # 5Y 4/2

### **B. PIPELINES – Surface Flowline Stipulations Attached.**

### **C. ELECTRIC LINES – Not requested in APD**

#### **SURFACE INSTALLED PIPELINE STIPULATIONS FOR CARLSBAD FIELD OFFICE, BLM**

A copy of the grant and attachments, including stipulations and map, will be on location during construction. BLM personnel may request to view a copy of your permit during construction to ensure compliance with all stipulations.

The holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer, BLM.

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, *et. seq.*) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized by this grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, *etc.*) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or

spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et. seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et. seq.*) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way). This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. \*\*2803/2883\*\*.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from fire or soil movement (including landslides and slumps as well as wind and water caused movement of particles) caused or substantially aggravated by any of the following within the right-of-way or permit area:

A. Activities of the holder, including but not limited to, construction, operation, maintenance, and termination of the facility.

B. Activities of other parties including but not limited to:

- (1). Land clearing.
- (2). Earth-disturbing and earth-moving work.
- (3). Blasting.
- (4). Vandalism and sabotage.

C. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction of in which the damage of injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from the negligent acts of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline or related facilities, any oil or other pollutant should be discharged from the pipeline or from containers or vehicles impacting Federal lands, the control and total removal, disposal, and cleanup of such oil or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages to Federal lands resulting there from, the Authorized Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area,

including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

6. The holder shall conduct all activities associated with the construction, operation, and termination of the right-of-way within the authorized right-of-way width of 30 feet.

**7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.**

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky or dune areas, the pipeline will be "snaked" around hummocks and dunes rather than suspended across these features.

9. The pipeline shall be buried a minimum of 36 inches under all roads, including "two-tracks" and trails. Burial will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of the construction, shall be returned to at least its former state, with no bumps, dips, or soft spots remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair impacted improvements to at least their former state. The holder shall contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence will be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder shall install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound management practices. Any earth work will require prior approval by the Authorized Officer.

12. Excluding the pipe, all above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color that simulates "Standard Environmental Colors" designated by the Rocky Mountain Five-State Interagency Committee. The color selected for this project is Shale Green, Munsell Soil Color Chart Number 5Y 4/2.

**13. The holder shall post signs designating the BLM serial number assigned to this right-of-way grant at the following locations: the points of origin and completion, or entry to and exit from public lands, of the right-of-way and at all major road crossings. These signs will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the term of the right-of-way.**

14. The holder shall not use the right-of-way as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the

holder. The holder shall take whatever steps are necessary to ensure that the right-of-way is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and the Authorized Officer will make any decision as to the proper mitigation measures after consulting with the holder.

16. The area will be kept free of the following plant species: Malta starthistle, African rue, Scotch thistle, and saltcedar.

**17. Special Stipulations:**

The project is identified as habitat for the lesser prairie chicken; therefore, all construction activities will be restricted to the hours of 9:00 am through 3:00 am for the period of March 15 through June 15. No construction should occur between 3:00 AM and 9:00 AM.

## **IX. INTERIM RECLAMATION**

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

## **X. FINAL ABANDONMENT & RECLAMATION**

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared; these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

## Seed Mixture for LPC Sand/Shinnery Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

| <u>Species</u>      | <u>lb/acre</u> |
|---------------------|----------------|
| Plains Bristlegrass | 5lbs/A         |
| Sand Bluestem       | 5lbs/A         |
| Little Bluestem     | 3lbs/A         |
| Big Bluestem        | 6lbs/A         |
| Plains Coreopsis    | 2lbs/A         |
| Sand Dropseed       | 1lbs/A         |

\*\*Four-winged Saltbush 5lbs/A

\* This can be used around well pads and other areas where caliche cannot be removed.

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed