

OCD-ARTESIA

FORM APPROVED
OMB No 1004-0137
Expires July 31, 2010

ATS-10-143 AM
EA10-490

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

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 L, 2310' FSL, 330' 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.

330'

(Also to nearest drig. unit line, if any)

16 No. of Acres in lease

80

17 Spacing Unit dedicated to this well

40

18 Distance from proposed location*

to nearest well, drilling, completed,
applied for, on this lease, ft.

330'

19 Proposed Depth

6100'

20 BLM/BIA Bond No. on file

NMB# 000197

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

3758' GL

22 Approximate date work will start*

MARCH 15, 2010

23 Estimated duration

18 Days to Drill

24. Attachments

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

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

25. Signature

Mark Jacoby

Name (Printed/Typed)

MARK JACOBY

Date

2/07/2010

Title

ENGINEERING MANAGER

Approved by (Signature)

/s/ James Stovall

Name (Printed/Typed)

Date

MAR 25 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)

Roswell Controlled Water Basin

**Witness Surface &
Intermediate Casing**

**Approval Subject to General Requirements
& Special Stipulations Attached**

m2
**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

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	5. Lease Serial No. NMLC074939
2. Name of Operator BURNETT OIL CO., INC.	6. If Indian, Allottee or Tribe Name
3a. Address: 601 CHERRY STREET, SUITE 1500 UNIT #9 FORT WORTH, TX. 76102-6881	7. If Unit or CA/Agreement, Name and/or No.
3b. Phone No. (include area code) (817) 332-5108	8. Well Name and No. GISSLER B #59
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) UNIT L. 2317' FSL. 559' FWL. SEC 12. T17S. R30E- SURF & BH	9. API Well No. 30-015-XXXXX S1
	10. Field and Pool, or Exploratory Area CEDAR LAKE 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	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	LOCATION SPOT AND FLIP LOCATION
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

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 recomplete 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 recompletion 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.)

TO AMEND THE FINAL LOCATION FOR THIS GISSLER B#59 APD. BLM REQUIRED THE LOCATION SPOT TO BE UNIT L, 2317' FSL, 559' FWL, SECTION 12, T17S, R30E. THIS WAS DONE DUE TO SAND DUNES AND THREE ARCH SITES IN THE AREA.

AN ORIGINAL AND SIX COPIES OF THE NEW BASIN PLATS ARE INCLUDED WITH THIS FILING.

WE HAVE ALSO INCLUDED A REVISED RIG PLAT (DRILLING EXHIBIT D) AND REVISED BOP DRAWING (DRILLING EXHIBIT E1.) Please note we will have to bury the flare line as shown on the rig plat.

REQUEST TO BLM TO FLIP THIS LOCATION.

We plan to pile this top soil on the north 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 east 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.

14. I hereby certify that the foregoing is true and correct.	
Name (Printed/Typed) MARK A. JACOBY	Title ENGINEERING MANAGER
Signature: <i>Mark A. Jacoby</i>	Date: 3/2/2010
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
Approved by /s/ James Stovall	Title FIELD MANAGER
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.	Date MAR 25 2010
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.	Office CARLSBAD FIELD OFFICE
(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 30-015-37733	Pool Code 96831	Pool Name CEDAR LAKE GLORIETA YESO
Property Code 002389	Property Name GISSLER "B"	Well Number 59
OGRID No. 03080	Operator Name BURNETT OIL COMPANY, INC.	Elevation 3753'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	12	17 S	30 E		2317	SOUTH	559	WEST	EDDY

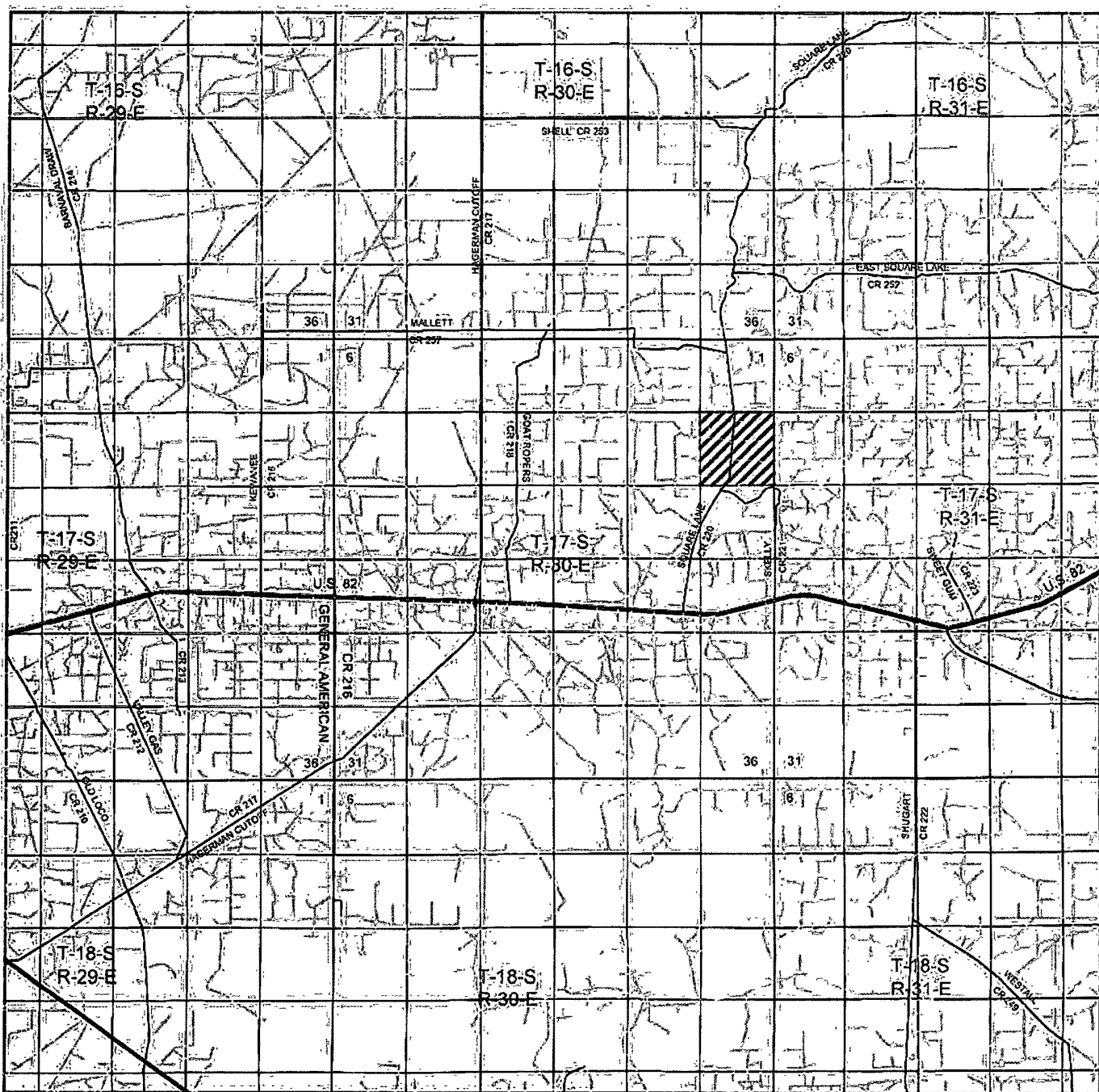
Bottom Hole Location If Different From Surface

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

Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	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. 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. Date Surveyed Signature Seal of Professional Surveyor
	Certificate No. Gary L. Jones 7977
	BASIN SURVEYS



GISSLER "B" #59

Located 2317' FSL and 559' FWL

Section 12, Township 17 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.

GISSLER B #59

SURFACE EXHIBIT A

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

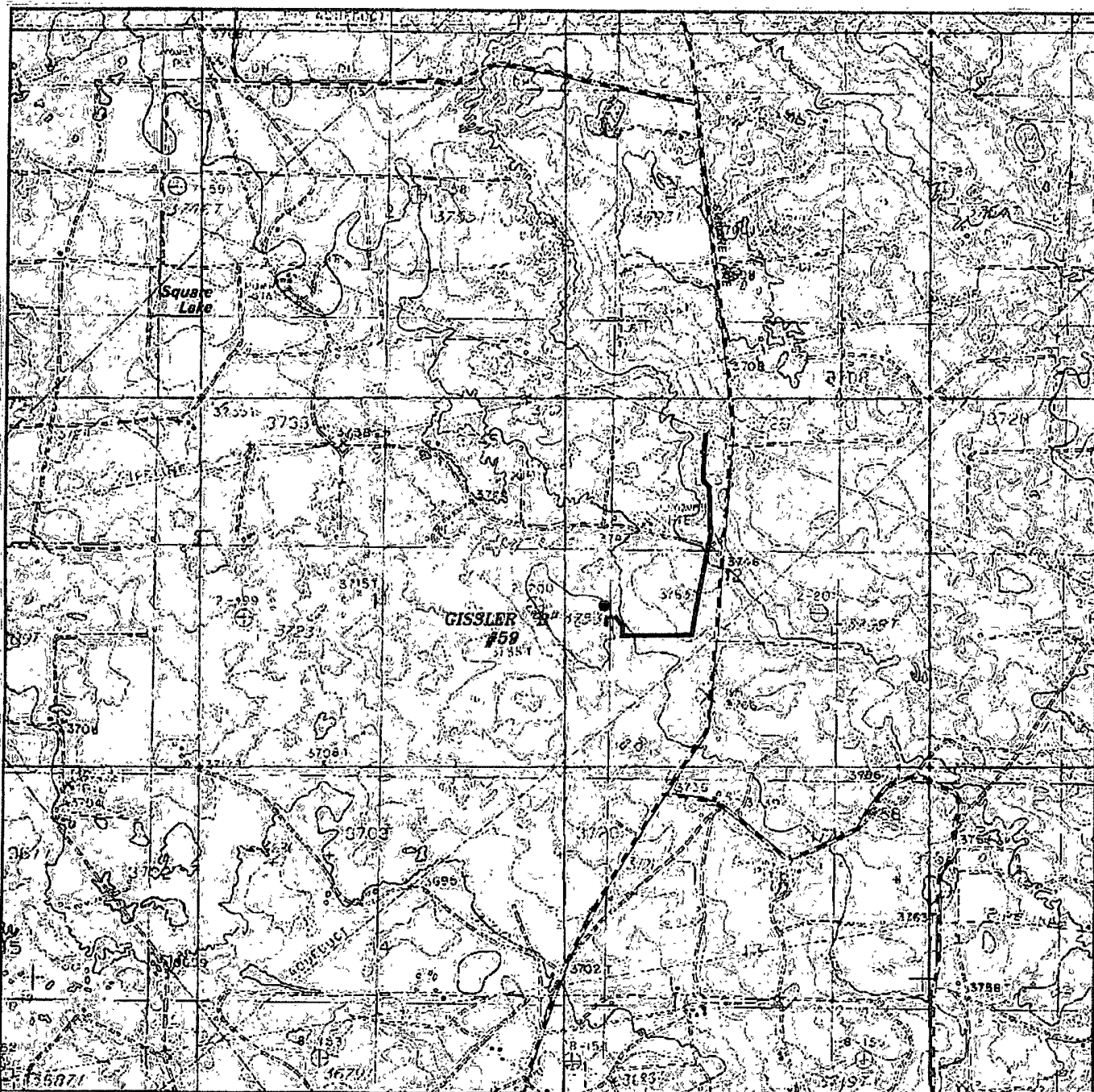
W.O. Number: JMS 22380

Survey Date: 02-16-2010

Scale: 1" = 2 Miles

Date: 02-19-2010

BURNETT OIL
COMPANY, INC.



GISSLER "B" #59

Located 2317' FSL and 559' FWL

Section 12, Township 17 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.

GISSLER B #59

DRILLING EXHIBIT A1

**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

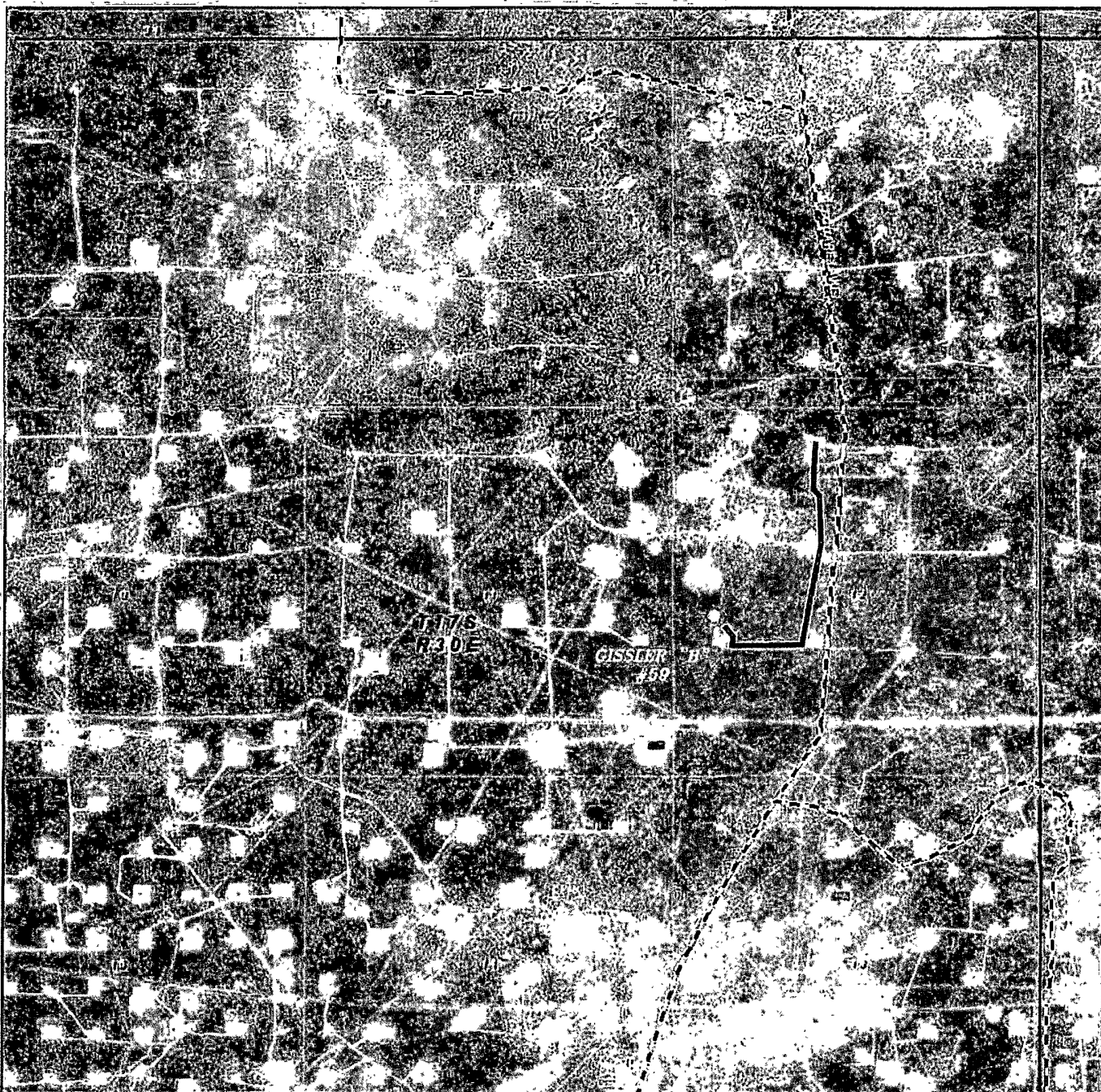
W.O. Number: JMS 22380

Survey Date: 02-16-2010

Scale: 1" = 2000'

Date: 02-19-2010

**BURNETT OIL
COMPANY, INC.**



GISSLER "B" #59

Located 2317' FSL and 559' FWL

Section 12, Township 17 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.

GISSLER B #59

DRILLING EXHIBIT A2

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

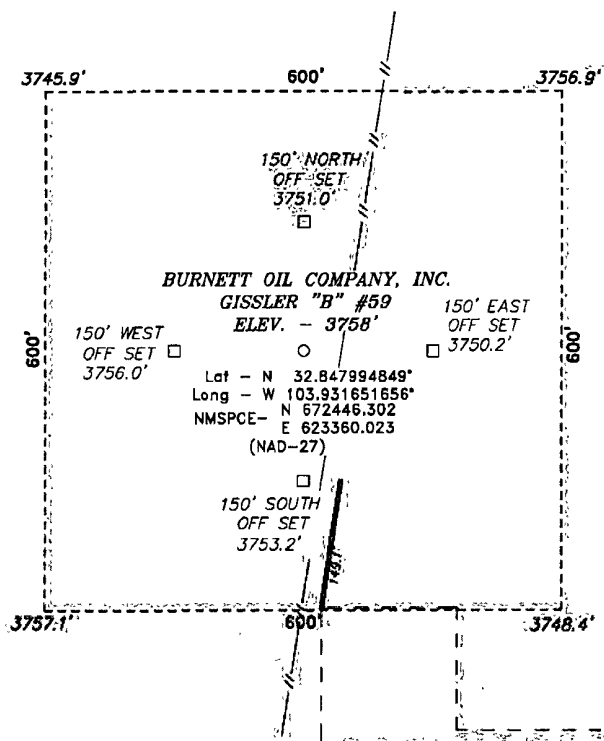
W.O. Number: JMS 22380

Scale: 1" = 2000'

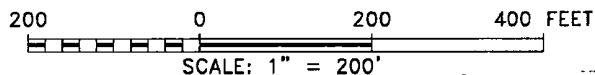
YELLOW TINT - USA LAND
BLUE TINT - STATE LAND
NATURAL COLOR - FEE LAND

BURNETT OIL
COMPANY, INC.

SECTION 12, TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



GISSLER B #59
DRILLING EXHIBIT C



Directions to Location:

FROM THE JUNCTION OF SQUARE LAND AND SKELLY,
GO NORTH ON SQUARE LANE FOR 0.4 MILES TO
LEASE ROAD, ON LEASE ROAD GO WEST 0.3 MILES
TO WELL PAD AND PROPOSED LEASE ROAD.

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

BURNETT OIL COMPANY, INC.

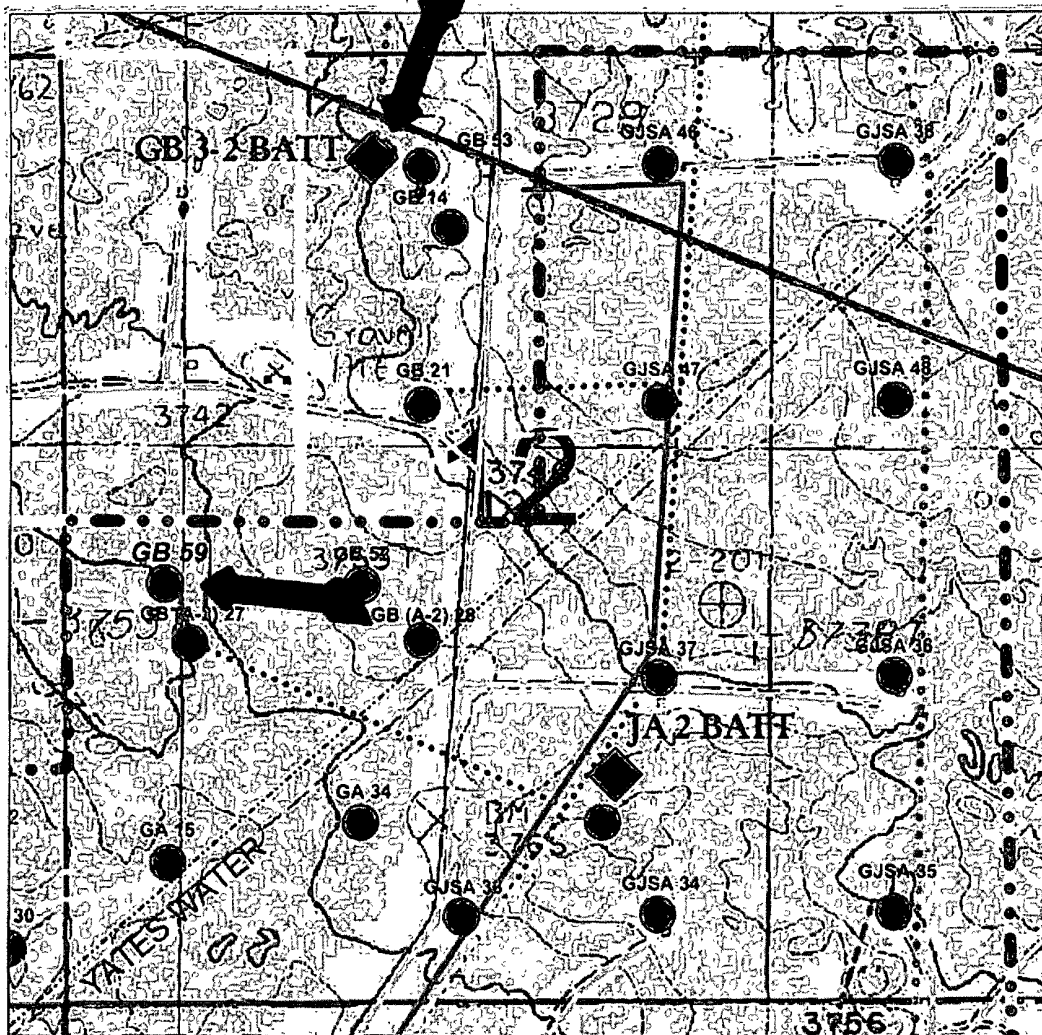
REF: GISSLER-"B" #59 / WELL PAD TOPO

THE GISSLER "B" #59 LOCATED 2317'
FROM THE SOUTH LINE AND 559' FROM THE WEST LINE OF
SECTION 12, TOWNSHIP 17 SOUTH, RANGE 30 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

W.O. Number: 22380 Drawn By: J. SMALL

Date: 02-19-2010 Disk: JMS 22380

Survey Date: 02-16-2010 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 B59 Proposed Well Location
 (Map Reflects Burnett Operated Wells Only)
 Eddy County, New Mexico

Author:
 C Keeton, Eng Tech

Date:
 February 24, 2010

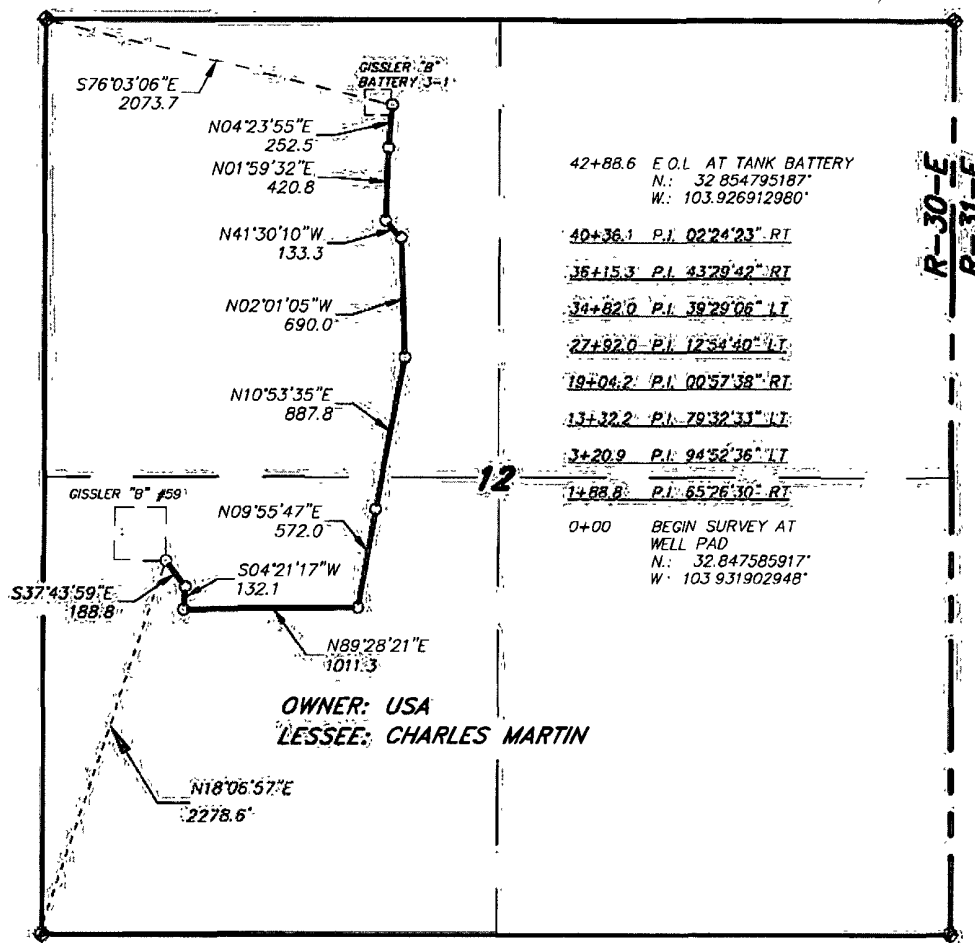
Scale:
 1" = 1,000'

GISSLER B #59
 SURFACE EXHIBIT B

Gissler B59

T17S, R30E, Sect 12, Unit L, NM074939
 2317' FSL, 559' FWL, GB 3-2 Battery
 Lat/Long: 32.847994, -103.931651

SECTION 12, TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



LEGAL DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE, LOCATED IN SECTION 12, 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 12 = 4288.6 FEET = 259.92 RODS = 0.81 MILES = 2.95 ACRES

GISSLER B #59
DRILLING EXHIBIT C1

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

GARY L. JONES
No: 7977
No: 5074

1000 0 1000 2000 FEET

BURNETT OIL COMPANY, INC.

REF: PROPOSED FLOWLINE TO THE GISSLER "B" #59

A FLOWLINE CROSSING USA LAND IN
SECTION 12, TOWNSHIP 17 SOUTH, RANGE 30 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

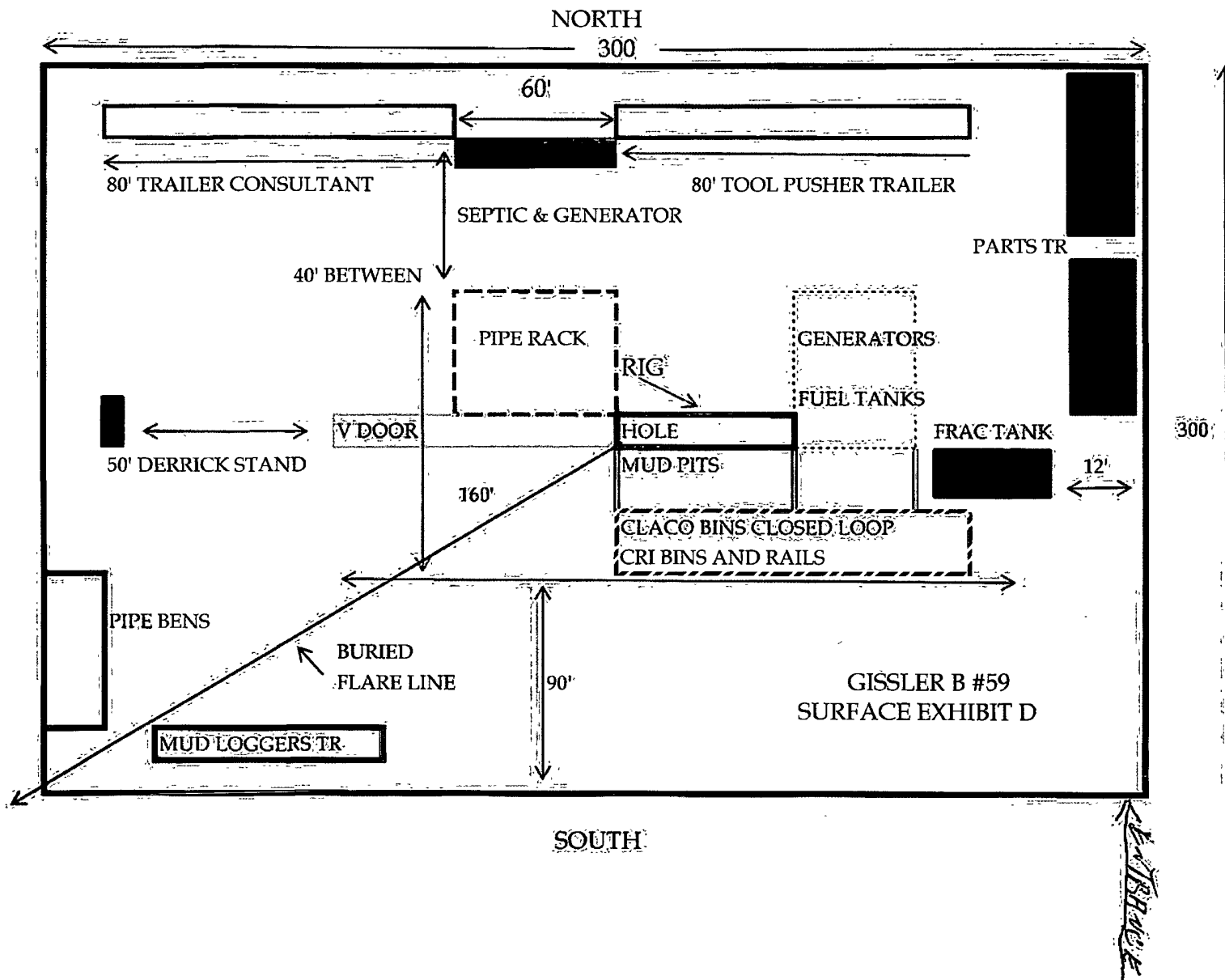
BASIN SURVEYS P.O. BOX 1786-HOBBS, NEW MEXICO

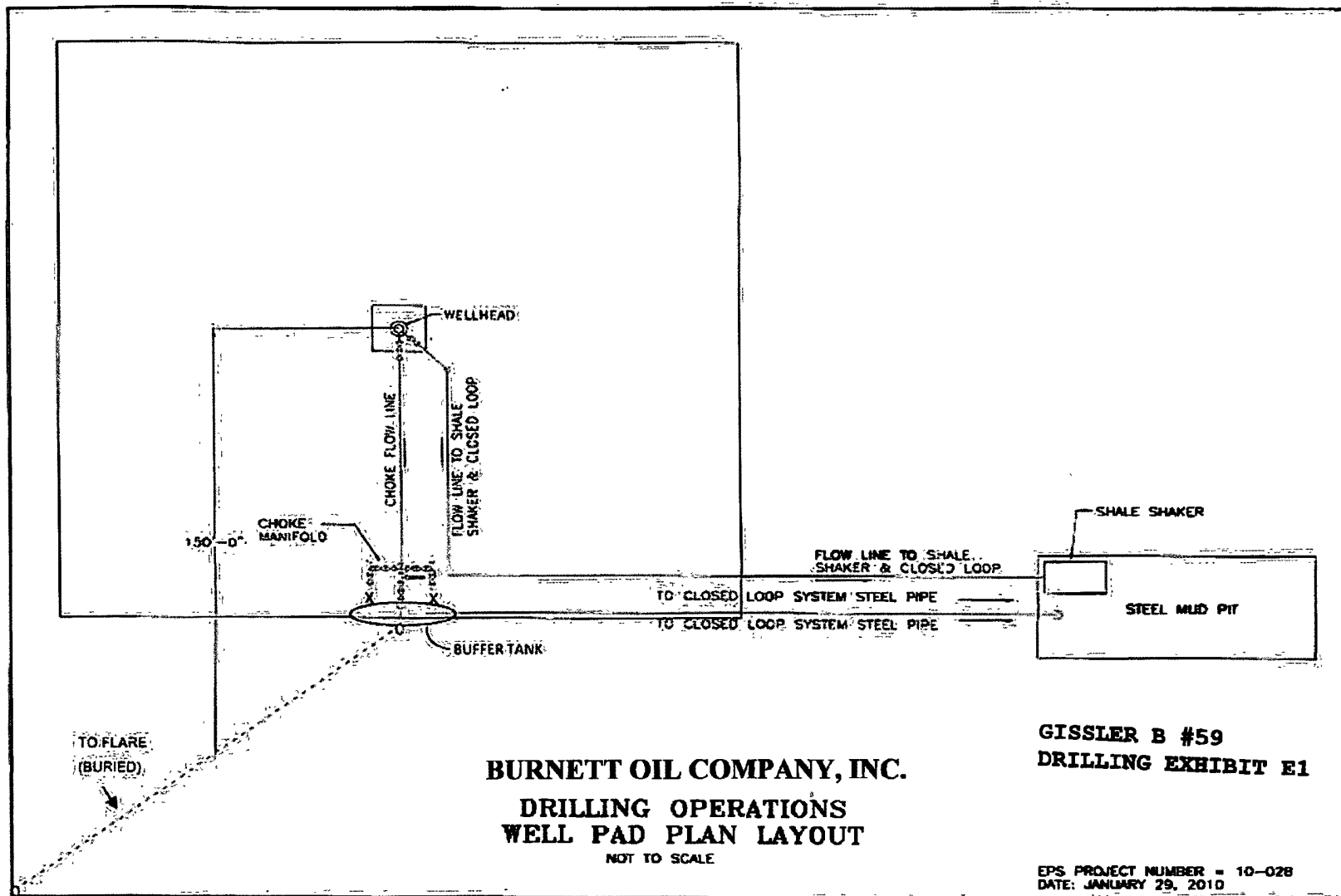
W.O. Number: 22380 Drawn By: J. M. SMALL

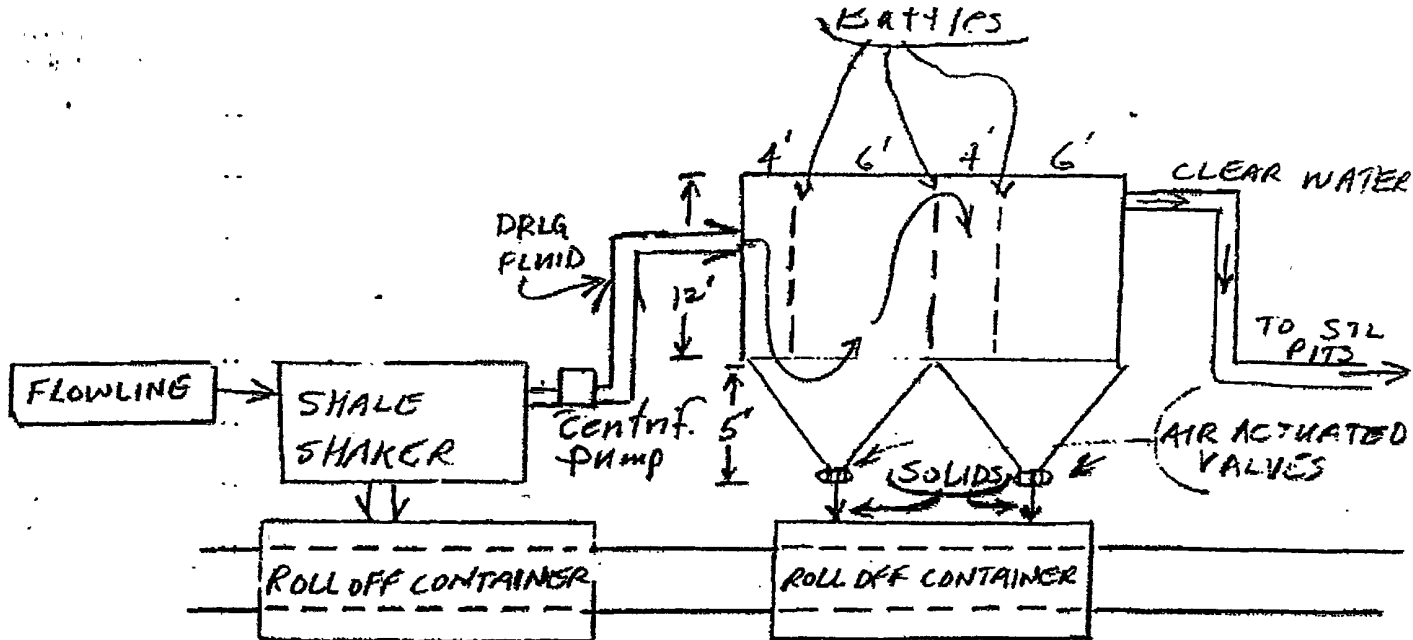
Date: 02-19-2010 Disk: JMS 22380

Survey Date: 02-16-2010 Sheet 1 of 1 Sheets

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







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.)

GISSLER B #59
SURFACE EXHIBIT D1



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 #59
DRILLING EXHIBIT A



HYDROGEN SULFIDE (H₂S) CONTINGENCY PLAN

ASSUMED 100 PPM ROE = 3000'

Emergency Procedures

In the event of a release of gas containing H₂S, 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 H₂S 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. H₂S 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 (SO₂.) 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 H₂S and SO₂

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H ₂ S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO ₂	2.21 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 #59)**

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

BURNETT OIL CO., INC.

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



**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> <u>Size</u>	<u>Interval</u>	<u>OD Csg</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>	<u>Collapse</u> <u>Design</u> <u>Factor</u>	<u>Burst</u> <u>Design</u> <u>Factor</u>	<u>Tension</u> <u>Design</u> <u>Factor</u>
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(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

* 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.

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 H₂S 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 H₂S 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 H₂S zone (within 3 days or 500 feet) and weekly H₂S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H₂S 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. H₂S detection and monitoring equipment:

1. Three (3) portable H₂S monitors positioned on location for best coverage and response. These units have warning lights at 10 PPM and warning lights and audible sirens when H₂S levels of 15 PPM is reached. A digital display inside the doghouse shows current H₂S levels at all three (3) locations.
2. An H₂S 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 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.

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 H₂S service.
2. All elastomers used for packing and seals shall be H₂S 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 H₂S 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 off lease Tank Battery facility on the Ajoining Federal Lease NMNM2748.

- a. This battery is on an adjoining federal lease and will be an above ground commingled Grayburg/ Square lake/Cedar Lake Yeso production facility. **The necessary NMOCD approval will be requested.**
- 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. **A Federal R-O-W will be requested for that portion of the line that is off NMNM 074939.**

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

Sample Format for Notice of Staking

ATS-10-143

(Not to be used in place of Application for Permit to Drill Form 3160-3)

1. Oil Well ☒ Gas Well _____ Other (Specify) _____	
2. Name, Address, and Telephone of Operator BURNETT OIL CO., INC 801 CHERRY STREET UNIT #9, FORT WORTH, TX 76102 (817) 332-5108	
3. Name and Telephone of Specific Contact Person MR BELTON MATHEWS (575) 677-2313 OFFICE (575) 703-9601 CELL	
4. Surface Location of Well Attach: (a) Sketch showing road entry onto pad, pad dimensions, and reserve pit (b) Topographical or other acceptable map showing location, access road, and lease boundaries	
4a. A map (e.g., a USGS 7-1/2" Quadrangle) of the area including the proposed well location and access road PROPOSED UNIT L, 2310' FSL, 330' FWL	
5. Lease Number NMNM074939	11. Section, Township, Range, Meridian; or Block and Survey; or Area SEC. 12, T17S, R30E
6. If Indian, Allottee or Tribe Name	12. County, Parish, or Borough EDDY COUNTY
7. Unit Agreement Name	13. State NEW MEXICO
8. Well Name and Number GISSLER B #59	14. Name and Depth of Formation Objective(s) CEDAR LAKE GLORIETA YESO, APPROX 4800'
9. American Petroleum Institute Well Number (if available) NOT YET KNOWN	15. Estimated Well Depth APPROX 6100'
10. Field Name or Wildcat CEDAR LAKE GLORIETA YESO	16. For directional or horizontal wells, anticipated bottom hole location, if known N/A
17. Additional Information (as appropriate; include surface owner's name, address and, if known, telephone) SURFACE IS FEDERAL. WILL REQUIRE R-O-W TO OFF LEASE GISSLER B3-2 BATTERY	

18. Signed

Note: When the Bureau of Land Management receives this Notice, the agency will schedule the staking and flag the access road before the onsite inspection and if required, as appropriate:

- (a) H₂S Potential
- (b) Cultural Resources (Archeology)
- (c) Federal Right-of-Way or State

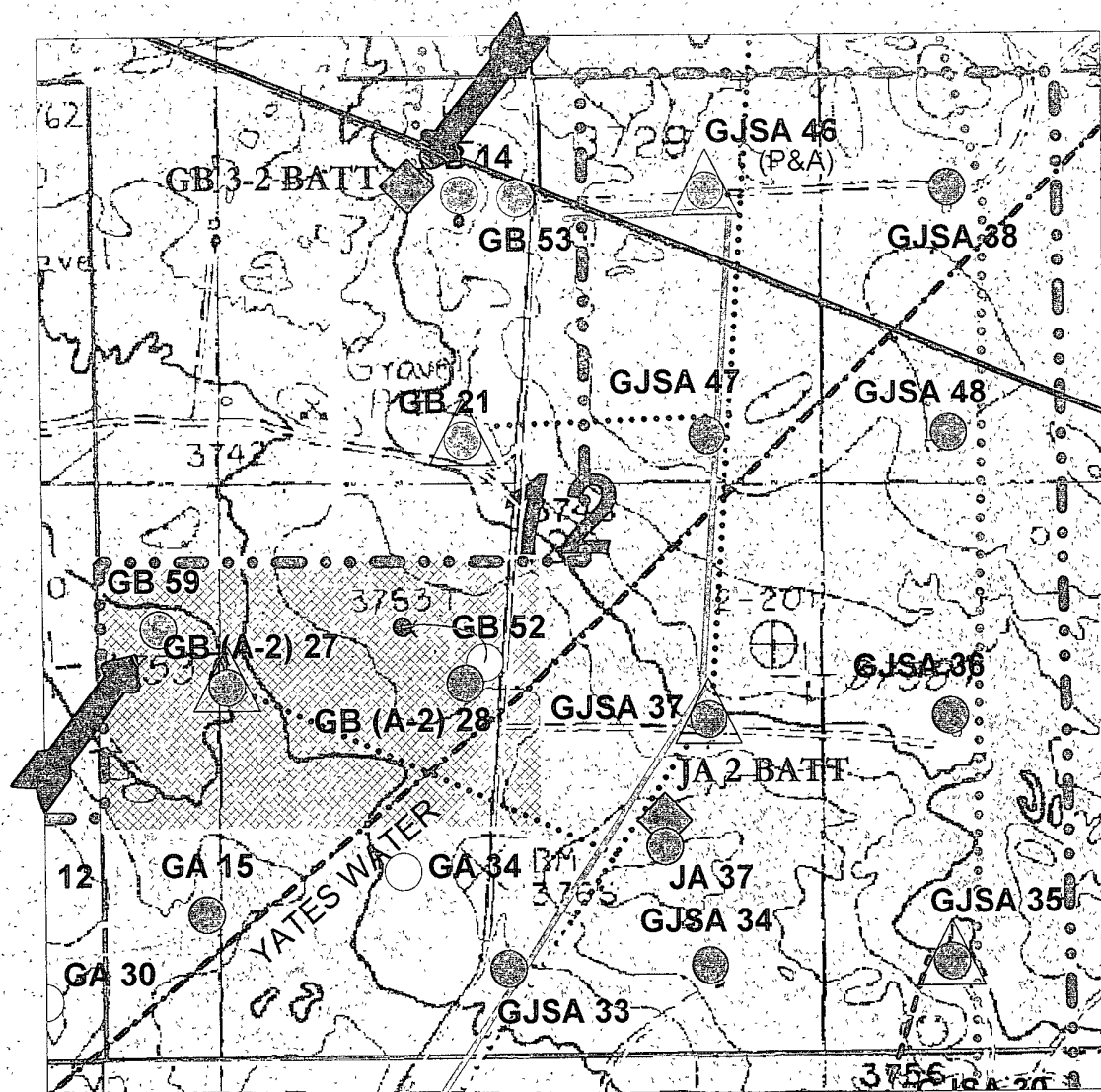
Randy Rust

ATS-10-143 APD: *GISSLER B59 NEPA-?*

APD LOCATION CHANGE

Initial & date if OK - return with one copy to Adjudication (LIE)

☐ Surface Specialist ☐ Geology ☒ Engineering
☐ Archeology ☐ Wildlife ☐ Cave/Karst
☐ Potash ☐ Recreation ☐ Hydrology ☐ GIS



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 B59 Proposed Well Location
 (Map Reflects Burnett Operated Wells Only)
 Eddy County, New Mexico

Author
 C Keeton Eng Tech

Date
 December 10 2009

Scale:
 1" = 1 000'

Gissler B59

T17S, R30E, Sect 12, Unit L, NM074939
 2310' FSL, 330' FWL, GB 3-2 Battery
 Lat/Long: 32.848029, -103.932454

RECEIVED
 BUREAU OF LAND MANAGEMENT
 OFFICE

NOV 17 AM 11:15

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BURNETT OIL CO., INC.
LEASE NO.:	NMLC074939
WELL NAME & NO.:	GISSLER B # 59
SURFACE HOLE FOOTAGE:	2317' FSL & 559' FWL
BOTTOM HOLE FOOTAGE	Same
LOCATION:	Section 12, 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 – Not Stipulated
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits – Operator Requesting to Flip location for caliche
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
 - H2S Requirements-Onshore Order #6
 - Logging Requirements
- ☒ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines – Surface Poly-line requested
 - 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, see Section X.

See attached stipulations for surface pipelines.

Operator shall separate top-soil from any other materials placed on location as a result of “flipping” to expose and/or extract caliche from underneath the well-pad location.

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: not stipulated

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

Operator shall separate top-soil from any other materials placed on location as a result of “flipping” surface materials to expose and/or extract caliche from underneath the well-pad location.

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.

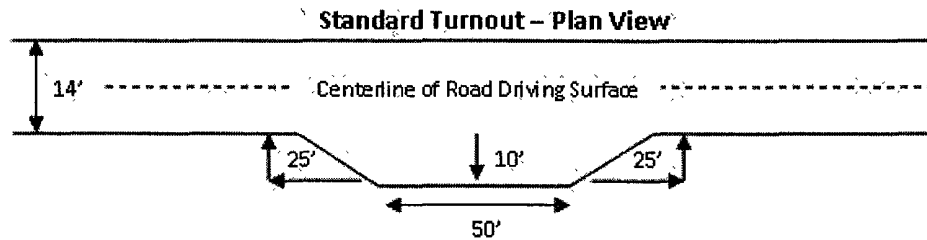
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing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

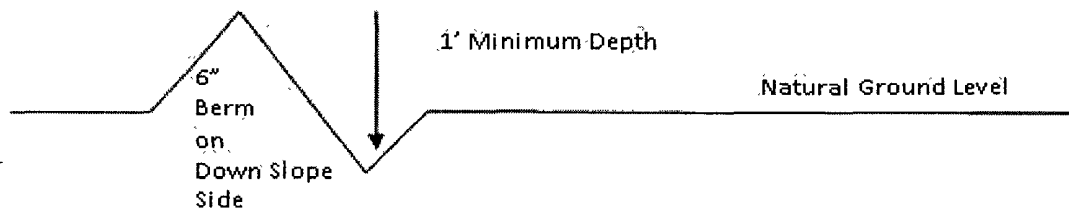


Drainage

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

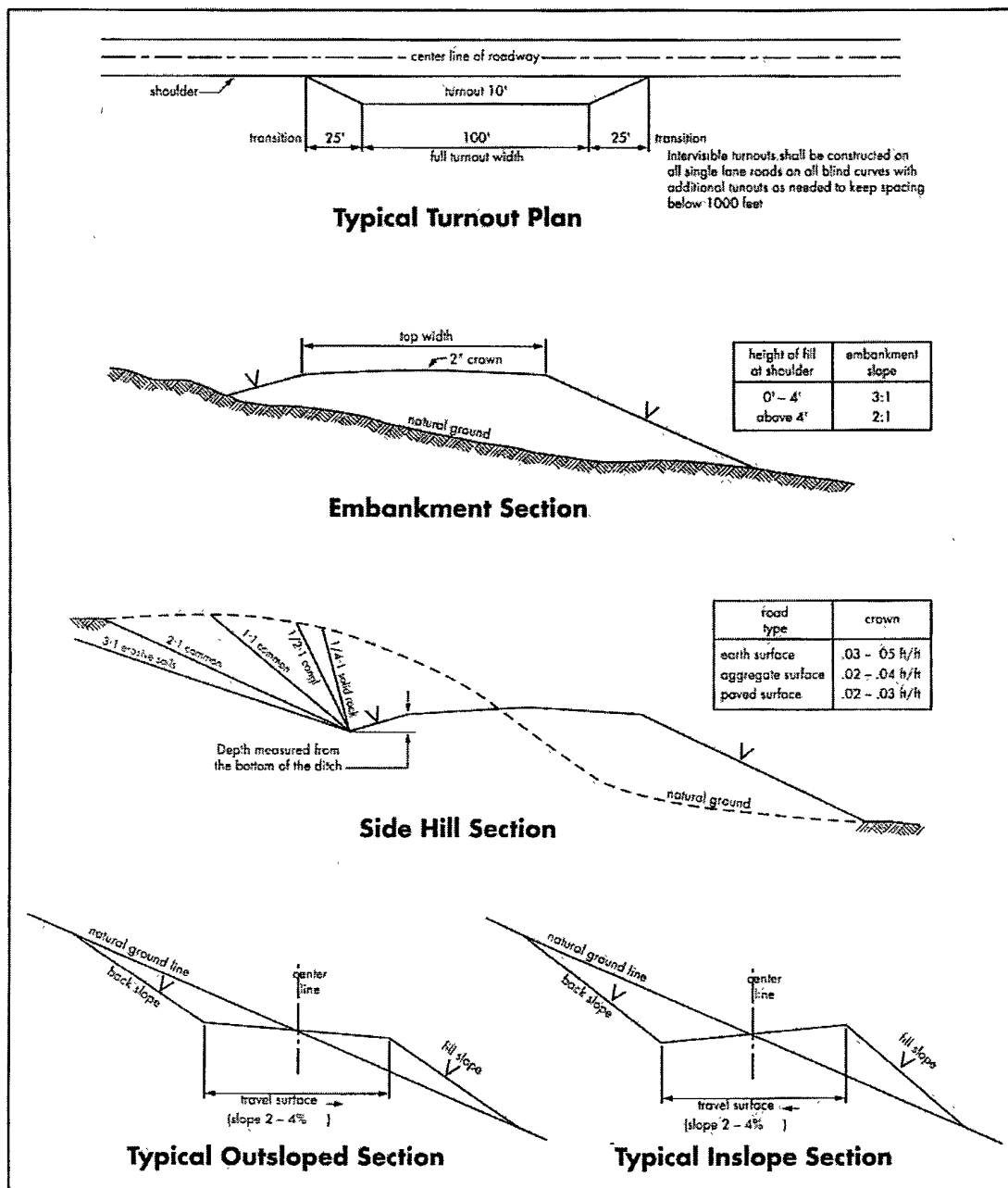
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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 (H₂S) 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

Methods for Handling Waste

B. PIPELINES – See stipulations

C. ELECTRIC LINES – Not applied for 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).

Requirements for ground level dry hole markers

Well Identification Markers

Conditions of Approval (COA)

The BLM Carlsbad Field Office (CFO) Conditions of Approval (COA) Requires that ground level dry hole markers be placed on well within the Lesser Prairie Chicken habitat area. The dry hole markers will be to the following specifications. The operator will construct the markers as follows:

1. An 8 inch X 8 inch steel plate 1/8 to 3/16 of an inch thick is to be placed on the old dry hole marker stand pipe 2 inches from ground level, in the Lesser Prairie Chicken habitat area.
2. Steel plate may be welded or bolted approximately 2 inches from ground level on the stand pipes. If plates are bolted to the stand pipe, the person installing the plate will be required to weld a pipe collar on the plate and place a minimum of two set screws/bolt on each collar. Aluminum data plates may be bolted with minimum 1/4 inch bolt and locking nuts or self tapping fine threaded screws. A minimum of one in each corner is to be installed on each plate.

3. An 8 inch x 8 inch aluminum plate, which is 12 gauge or .080 sign material (1/8 inch aluminum plate may be used in place of the .080 plate) with the required information for that well stamped or engraved in a minimum 3/8 inch tall letter or number.
4. The following information will be stamped or engraved on the 8 inch X 8 inch aluminum plate in the following order.
 - a. First row: Operators name
 - b. Second row: Well name and number
 - c. Third row: Legal location to include 1/4 1/4, Section, Township, and range. If the legal location cannot be placed on one row it can be split into two rows with the 1/4 1/4 (example: 1980 FNL 1980 FWL) being on the top row.
 - d. Fourth row: Lease Number and API number.
 - i. Example marker plate: (attached)

NMOCD Order No. R-12965 also required the operator to notify NMOCD when this type of dry hole marker is used. This can be done on the subsequent report of abandonment which is submitted to the BLM after the well is plugged. State that a ground level dry hole marker was installed as required in the COA's from the BLM.

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