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Form 3160-3  
(June 2015)

FORM APPROVED  
OMB No. 1004-0137  
Expires: January 31, 2018

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

EMNRD-OCD ARTESIA

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. NMLC0030570A	
6. If Indian, Allottee or Tribe Name	
7. If Unit or CA Agreement, Name and No.	
8. Lease Name and Well No. STEVENS A 21 2014S	
9. API-Well No. 30 015 46684	
3a. Address Burnett Plaza - Suite 1500, 801 Cherry Street - Unit 9 Fort	3b. Phone No. (include area code) (817)583-8730
10. Field and Pool, or Exploratory CEDAR LAKE / GLORIETA YESO	
11. Sec., T. R. M. or Blk. and Survey or Area SEC 13 / T17S / R30E / NMP	
14. Distance in miles and direction from nearest town or post office*	
12. County or Parish EDDY	13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 330 feet	16. No. of acres in lease 200
17. Spacing Unit dedicated to this well 40	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 373 feet	19. Proposed Depth 6200 feet / 6209 feet
	20. BLM/BIA Bond No. in file FED: NMB000197
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3691 feet	22. Approximate date work will start* 11/30/2019
	23. Estimated duration 10 days
24. Attachments	

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- |                                                                                                                                                |                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 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 must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be requested by the BLM.            |

25. Signature (Electronic Submission)	Name (Printed/Typed) Leslie Garvis / Ph: (817)583-8730	Date 10/18/2019
Title Regulatory Coordinator		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 01/22/2020
Title Assistant Field Manager Lands & Minerals		
Office CARLSBAD		

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.

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.

**APPROVED WITH CONDITIONS**  
Approval Date: 01/22/2020

KS 2-10-20

**PECOS DISTRICT  
DRILLING CONDITIONS OF APPROVAL**

<b>OPERATOR'S NAME:</b>	<b>BURNETT OIL COMPANY INC</b>
<b>LEASE NO.:</b>	<b>NMLC0030570A</b>
<b>WELL NAME &amp; NO.:</b>	<b>STEVENS A 21</b>
<b>SURFACE HOLE FOOTAGE:</b>	<b>330'/S &amp; 1240'/W</b>
<b>BOTTOM HOLE FOOTAGE:</b>	<b>330'/S &amp; 1115'/W</b>
<b>LOCATION:</b>	<b>Section 13, T.17 S., R.30 E., NMPM</b>
<b>COUNTY:</b>	<b>Eddy County, New Mexico</b>

COA

H2S	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High
Variance	<input checked="" type="radio"/> None	<input type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input checked="" type="radio"/> Conventional	<input type="radio"/> Multibowl	<input type="radio"/> Both
Other	<input type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input type="checkbox"/> Fluid Filled	<input type="checkbox"/> Cement Squeeze	<input type="checkbox"/> Pilot Hole
Special Requirements	<input type="checkbox"/> Water Disposal	<input type="checkbox"/> COM	<input type="checkbox"/> Unit

**A. Hydrogen Sulfide**

1. A Hydrogen Sulfide (H2S) Drilling Plan shall be activated **500 feet** prior to drilling into the **Grayburg/San Andres/Queen** 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.

**B. CASING**

1. The **8 5/8** inch surface casing shall be set at approximately **425 feet** (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to

- include the lead cement)
- 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.
2. The minimum required fill of cement behind the 5-1/2 inch production casing is:
- Cement to surface. If cement does not circulate see B.1.a, c-d above.

### C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).
2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. 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.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
  - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

## GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

Chaves and Roosevelt Counties

Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.

During office hours call (575) 627-0272.

After office hours call (575)

Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,

(575) 361-2822

Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)

393-3612

1. 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.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall 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.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. 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.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

**B. 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. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
  - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the

plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

- b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. 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.
- g. 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. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

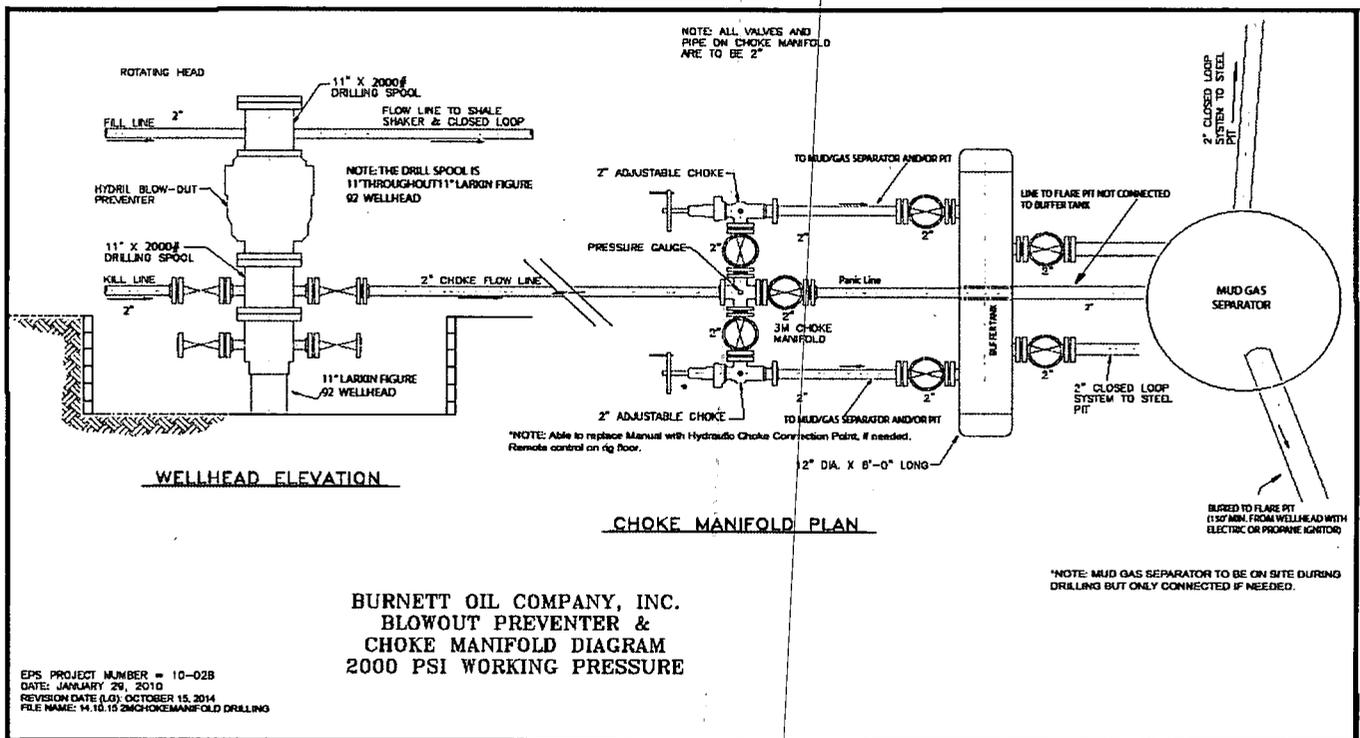
Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

**JJP01082020**





**PECOS DISTRICT  
SURFACE USE  
CONDITIONS OF APPROVAL**

**Burnett Oil Co Inc.  
Lease Number NMLC030570A  
Stevens A 21  
APD/Surface Flowline/Access Road**

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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
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- Road Section Diagram**
- 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 leaks 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.

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

## **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) 234-5909 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. TOPSOIL**

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

### **C. CLOSED LOOP SYSTEM**

Tanks are required for drilling operations: No Pits.

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

### **D. 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.

### **E. 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.

## **F. EXCLOSURE FENCING (CELLARS & PITS)**

### **Exclosure Fencing**

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

## **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 twenty-five (25) 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.

### **Ditching**

Ditching shall be required on both sides of the road.

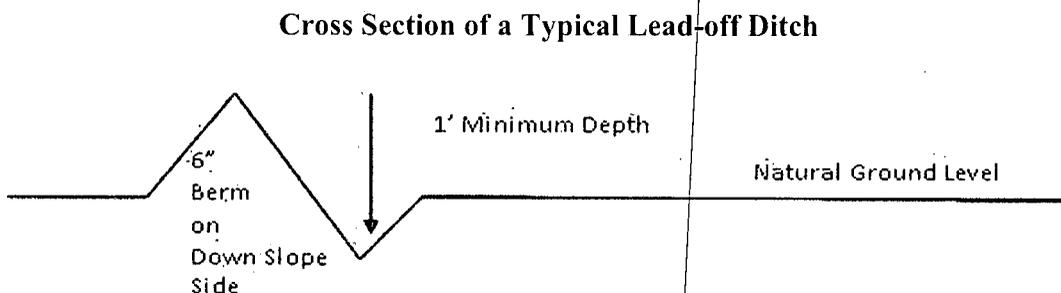
### **Turnouts**

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

### **Drainage**

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping 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.



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:

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

### **Cattle guards**

An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route 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 cattle guards that are in place and are utilized during lease operations.

### **Fence Requirement**

Where entry is granted 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 fences.

**Public Access**

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

- Construction Steps**
1. Salvage topsoil
  2. Construct road
  3. Redistribute topsoil
  4. Revegetate slopes

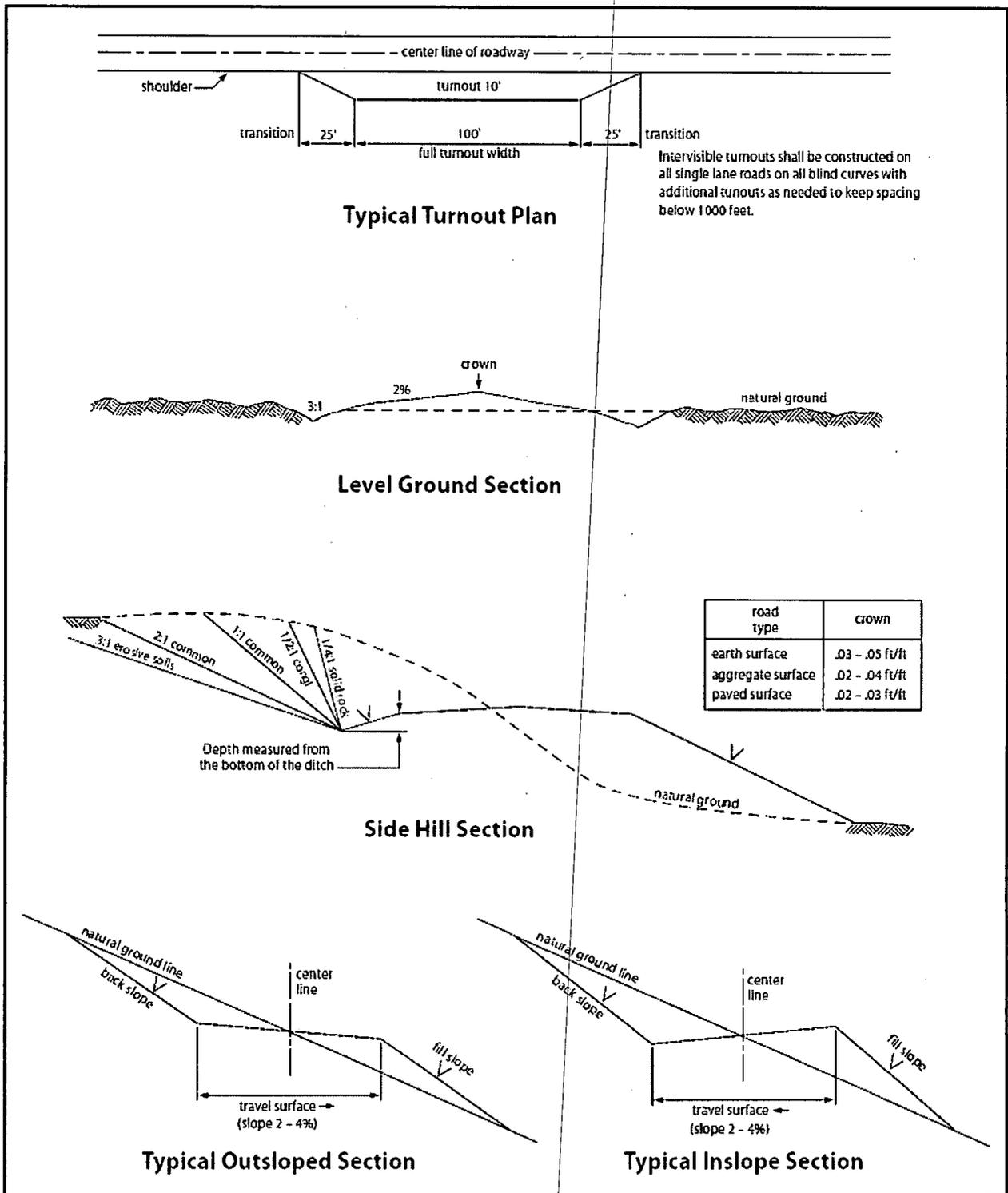


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## VII. 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.

#### **Exclosure Netting (Open-top Tanks)**

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

#### **Chemical and Fuel Secondary Containment and Exclosure Screening**

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

#### **Open-Vent Exhaust Stack Exclosures**

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

**Containment Structures**

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

**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** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

**B. PIPELINES****C. ELECTRIC LINES****VIII. 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).

## **IX. 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 2, for Sandy 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>
Sand dropseed ( <i>Sporobolus cryptandrus</i> )	1.0
Sand love grass ( <i>Eragrostis trichodes</i> )	1.0
Plains bristlegrass ( <i>Setaria macrostachya</i> )	2.0

\*Pounds of pure live seed:

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



U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

# Operator Certification Data Report

01/29/2020

## Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

**NAME:** Leslie Garvis

**Title:** Regulatory Coordinator

**Street Address:** Burnett Plaza - Suite 1500, 801 Cherry Street - Unit 9

**City:** Fort Worth

**State:** TX

**Phone:** (817)583-8730

**Email address:** lgarvis@burnettoil.com

**Signed on:** 10/18/2019

**Zip:** 76102

## Field Representative

**Representative Name:**

**Street Address:**

**City:**

**State:**

**Zip:**

**Phone:** (817)583-8730

**Email address:** lgarvis@burnettoil.com



APD ID: 10400049543

Submission Date: 10/18/2019

Highlighted data  
reflects the most  
recent changes

Operator Name: BURNETT OIL COMPANY INCORPORATED

Well Name: STEVENS A

Well Number: 21

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

**Section 1 - General**

APD ID: 10400049543

Tie to previous NOS? N

Submission Date: 10/18/2019

BLM Office: CARLSBAD

User: Leslie Garvis

Title: Regulatory Coordinator

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMLC0030570A

Lease Acres: 200

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? Y

Permitting Agent? NO

APD Operator: BURNETT OIL COMPANY INCORPORATED

Operator letter of designation:

**Operator Info**

Operator Organization Name: BURNETT OIL COMPANY INCORPORATED

Operator Address: Burnett Plaza - Suite 1500, 801 Cherry Street - Unit 9

Zip: 76102

Operator PO Box:

Operator City: Fort Worth

State: TX

Operator Phone: (817)583-8730

Operator Internet Address:

**Section 2 - Well Information**

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: STEVENS A

Well Number: 21

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: CEDAR LAKE

Pool Name: GLORIETA YESO

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Operator Name: BURNETT OIL COMPANY INCORPORATED

Well Name: STEVENS A

Well Number: 21

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Is the proposed well in a Helium production area? N Use Existing Well Pad? N New surface disturbance?

Type of Well Pad: SINGLE WELL

Multiple Well Pad Name:

Number:

Well Class: DIRECTIONAL

Number of Legs: 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town:

Distance to nearest well: 373 FT

Distance to lease line: 330 FT

Reservoir well spacing assigned acres Measurement: 40 Acres

Well plat: STEVENS\_A\_21\_Combined\_20191016132112.pdf

Well work start Date: 11/30/2019

Duration: 10 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number:

Reference Datum: GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL Leg #1	330	FSL	1240	FW L	17S	30E	13	Aliquot SWS W	32.828138	-103.929949	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMLC0 030570 A	3691	0	0	Y
KOP Leg #1	330	FSL	1240	FW L	17S	30E	13	Aliquot SWS W	32.828138	-103.929949	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMLC0 030570 A	3691	0	0	Y
PPP Leg #1-1	330	FSL	1240	FW L	17S	30E	13	Aliquot SWS W	32.828138	-103.929949	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMLC0 030570 A	3691	0	0	Y

Operator Name: BURNETT OIL COMPANY INCORPORATED

Well Name: STEVENS A

Well Number: 21

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
EXIT Leg #1	330	FSL	111 5	FW L	17S	30E	13	Aliquot SWS W	32.82813 9	- 103.9303 56	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMLCO 030570 A	- 250 9	620 9	620 0	Y
BHL Leg #1	330	FSL	111 5	FW L	17S	30E	13	Aliquot SWS W	32.82813 9	- 103.9303 56	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMLCO 030570 A	- 250 9	620 9	620 0	Y



<b>APD ID:</b> 10400049543	<b>Submission Date:</b> 10/18/2019	Highlighted data reflects the most recent changes <a href="#">Show Final Text</a>
<b>Operator Name:</b> BURNETT OIL COMPANY INCORPORATED		
<b>Well Name:</b> STEVENS A	<b>Well Number:</b> 21	
<b>Well Type:</b> OIL WELL	<b>Well Work Type:</b> Drill	

**Section 1 - Geologic Formations**

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
564101	RUSTLER	3485	225	225	ANHYDRITE, SHALE	NONE	N
564102	SALADO	3065	420	420	SALT	NONE	N
564103	BASE OF SALT	2315	1170	1170	ANHYDRITE	NONE	N
564104	YATES	2135	1350	1350	ANHYDRITE, SHALE	NONE	N
564105	SEVEN RIVERS	1835	1650	1650	ANHYDRITE, DOLOMITE	OIL	N
565688	QUEEN	1240	2245	2245	ANHYDRITE, SANDSTONE	OIL	N
565689	GRAYBURG	845	2640	2640	DOLOMITE	OIL	N
565690	GLORIETA	-975	4460	4460	SANDSTONE, SHALE	NATURAL GAS, OIL	Y
565691	YESO	-1070	4555	4555	DOLOMITE	NATURAL GAS, OIL	Y

**Section 2 - Blowout Prevention**

**Pressure Rating (PSI):** 2M                      **Rating Depth:** 8000

**Equipment:** The blowout prevention equipment (BOPE) will consist of a 2000 PSI Hydril Unit (annular) with hydraulic closing equipment. The 8-5/8 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. Burnett is requesting to keep the Mud/Gas Separator on location but only connect if/when needed.

**Requesting Variance?** NO

**Variance request:**

**Testing Procedure:** The equipment will comply with Onshore Order #2 and will be tested to 50% of rated working pressure (RWP), and maintained for at least ten (10) minutes.

**Choke Diagram Attachment:**

2MBOP\_\_\_ChokeManifold\_Drilling\_20191018084547.pdf

**BOP Diagram Attachment:**

Operator Name: BURNETT OIL COMPANY INCORPORATED

Well Name: STEVENS A

Well Number: 21

2MBOP\_\_\_ChokeManifold\_Drilling\_20191018084547.pdf

2MBOP\_\_\_ChokeManifold\_Drilling\_20191018084647.pdf

### Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated-casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF	
1	CONDUCTOR	20	14.0	NEW	API	N	0	90	0	90	3691	3601	90	OTHER	0	N/A							
2	SURFACE	12.25	8.625	NEW	API	N	0	520	0	520	3691	3171	520	J-55	24	ST&C	1.125	1	DRY	1.8	DRY	1.8	
3	PRODUCTION	7.875	5.5	NEW	API	N	0	6209	0	6200	3691	-2509	6209	J-55	17	LT&C	1.125	1	DRY	1.8	DRY	1.8	

#### Casing Attachments

Casing ID: 1 String Type: CONDUCTOR

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Operator Name: BURNETT OIL COMPANY INCORPORATED

Well Name: STEVENS A

Well Number: 21

### Casing Attachments

Casing ID: 2 String Type: SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing\_Assumption\_20191018125615.pdf

Casing ID: 3 String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing\_Assumption\_20191018125720.pdf

### Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
CONDUCTOR	Lead		0	90	0	0	0	0	0	Contractor Discretion	0
SURFACE	Lead		0	520	330	1.34	14.8	442	100	C+2% PF1 (Calcium Chloride)	PF424 (Water Gelling Agent)
PRODUCTION	Lead	2600	0	6209	260	2.11	12.5	548	30	35/65 P/C	+5% PF 44 (BWOW)(Salt)+6%

Operator Name: BURNETT OIL COMPANY INCORPORATED

Well Name: STEVENS A

Well Number: 21

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
											Gel) +0.2%PF153 (Anti Settling). +0.3% PF13 (Retarder) +0.1 25#/sx PF29(Celloflake) +3#/sx PF42 (Kolseal) +0.4#/sx PF45 (Defoamer).
PRODUCTION	Tail		0	6209	330	1.33	14.8	4.8	30	Class C	+0.3%PF13 (Retarder)
PRODUCTION	Lead		0	6209	340	2.11	12.5	717	140	35/65 P/C	+ 5% PF44 (BWOW)(Salt) +6% PF20 (Bentonite Gel)+0.2% PF153 (Anti Settling) +0.125#/sxPF29Celloflake) +3#/sxPF42 (Kolseal)+0.4#/sx PF45
PRODUCTION	Tail		0	6209	200	1.32				C Neat	N/A

### Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: The necessary mud products for weight addition and fluid loss will be on location at all times.

Describe the mud monitoring system utilized: Pason equipment will be used to monitor the mud system.

### Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	520	OTHER : Fresh Water	8.6	9.5							

**Operator Name:** BURNETT OIL COMPANY INCORPORATED

**Well Name:** STEVENS A

**Well Number:** 21

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
520	6209	OTHER : Brine Water	8.6	10							

### Section 6 - Test, Logging, Coring

**List of production tests including testing procedures, equipment and safety measures:**

Any drill stem tests will be based on geological sample shows and planned before spudding. The open hole electrical logging program will be: Total depth to 1000: Dual Laterolog-Micro Laterolog with Compensated Neutron, Spectral Density log with Spectral Gamma Ray and Caliper. Total depth to Surface: Compensated Neutron with Spectral Gamma Ray. Additional testing will be done after setting the 5-1/2 production casing. The specific Intervals will be based on log evaluation, geological sample shows and/or drill stem tests.

**List of open and cased hole logs run in the well:**

CALIPER,CNL/FDC,DUAL LATERAL LOG/MICRO-SPHERICALLY FOCUSED,GAMMA RAY LOG,

**Coring operation description for the well:**

Coring program will be planned and submitted on a well by well basis.

### Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 2763

**Anticipated Surface Pressure:** 1399

**Anticipated Bottom Hole Temperature(F):** 105

**Anticipated abnormal pressures, temperatures, or potential geologic hazards?** NO

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards attachment:**

**Hydrogen Sulfide drilling operations plan required?** YES

**Hydrogen sulfide drilling operations plan:**

H2S\_Plan\_20191018130837.pdf

H2S\_Contingency\_Plan\_20191018130849.pdf

Emergency\_Contact\_List\_20191018130858.pdf

**Operator Name:** BURNETT OIL COMPANY INCORPORATED

**Well Name:** STEVENS A

**Well Number:** 21

### **Section 8 - Other Information**

**Proposed horizontal/directional/multi-lateral plan submission:**

2018.9.6\_Stevens\_A\_21\_Plot\_20191018095246.pdf

**Other proposed operations facets description:**

**Other proposed operations facets attachment:**

2018.9.24\_Stevens\_A\_21\_Drill\_Plan\_\_5.5in\_20191018131505.pdf

**Other Variance attachment:**



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

This plan was developed in accordance with 43 CFR 3162.3-1, section III.C, Onshore Oil and Gas Operations Order No. 6.

Based on our area testing H<sub>2</sub>S 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.

### A. Training

#### 1. Training of Personnel

**All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in accordance with 43 CFR 3162.3-1, section III.C.3.a. Training will be given in the following areas prior to commencing drilling operations on each well:**

- a. The hazards and characteristics of Hydrogen Sulfide (H<sub>2</sub>S).
- b. The proper use and maintenance of personal protective equipment and life support systems.
- c. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures and the prevailing wind.
- d. The proper techniques for first aid and rescue procedures.
- e. **ATTACHED HYDROGEN SULFIDE (H<sub>2</sub>S) CONTINGENCY PLAN DRILLING EXHIBIT L.**
- f. **ATTACHED EMERGENCY CALL LIST FOR ANY ON SITE EMERGENCY DRILLING EXHIBIT M.**

#### 2. Training of Supervisory Personnel

**In addition to the training above, supervisory personnel will also 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.)

#### 3. Initial and Ongoing Training

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.

## **B. H2S Drilling Operations Plan**

1. Well Control Equipment
  - a. Flare line(s) and means of ignition
  - b. Remote control choke
  - c. Flare gun/flares
  - d. Mud-gas separator
  
2. **Protective equipment for essential personnel:**
  - a. Mark II Surviveair (or equivalent) 30 minute units located in the dog house and at the primary briefing area (to be determined.)
  - b. Means of communication when using protective breathing apparatus.
  
3. **H2S detection and monitoring equipment:**
  - a. 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.
  - b. An H2S Safety compliance set up is on location during all operations.
  - c. We will monitor and start fans at 1- ppm or less, an increase over 10 ppm results in the shutdown and installation of the mud/gas separator.
  - d. Portable H2S and SO2 monitor(s).
  
4. **Visual warning systems:**
  - a. Wind direction indicators will be positioned for maximum visibility.
  - b. 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.
  
5. **Mud program:**
  - a. 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.
  
6. **Metallurgy:**
  - a. All drill strings, casings, tubing, wellheads, Hydril BOPS, drilling spools, kill lines, choke manifold, valves and lines will be suitable for H2S service.
  - b. All elastomers used for packing and seals shall be H2S trim.

**7. Communication:**

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



BURNETT OIL CO., INC.

## EXHIBIT L - HYDROGEN SULFIDE (H2S) CONTINGENCY PLAN

### A. Emergency Procedures

In the event of a release of gas containing H2S, the first responder(s) must

1. Isolate the area and prevent entry by other persons into the 100 PPM ROE. Assumed 100PPM ROE = 3000'.
2. Evacuate any public places encompassed by 100 PPM ROE.
3. Be equipped with H2S monitors and air packs in order to control release.
4. Use the "buddy system" to ensure no injuries occur during the response.
5. Take precautions to avoid personal injury during this operation.
6. Have received training in the following:
  - a. H2S detection
  - b. Measures for protection against this gas
  - c. Equipment used for protection and emergency response.

### B. Ignition of Gas Source

Should control of the well be considered lost and ignition considered, care will be taken to protect against exposure to Sulfur Dioxide (SO2). Intentional ignition will 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. Care will be taken to protect downwind whenever there is an ignition of gas.

### C. Characteristics of H2S and SO2

<u>Common Name</u>	<u>Chemical Formula</u>	<u>Specific Gravity</u>	<u>Threshold Limit</u>	<u>Hazardous Limit</u>	<u>Lethal Concentration</u>
Hydrogen Sulfide	H2S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO2	2.21 Air = 1	2 ppm	NA	1000 ppm

**D. Contacting Authorities**

Burnett Oil Co., Inc. personnel will liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD will be notified of the release as soon as possible but no later than four (4) hours after the incident. 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 attached. Burnett's response must be in coordination with the State of New Mexico's Hazardous Materials Emergency Response Plan.

Directions to the site are as follows:

Burnett Office  
87 Square Lake Road (CR #220)  
Loco Hills, NM 88255

Loco Hills, New Mexico (2 miles East of Loco Hills on US Hwy 82 to C #220. Then North on CR #220 approximately one (1) mile to office.



BURNETT OIL CO., INC.

**EXHIBIT M - EMERGENCY NOTIFICATION LIST**

**BURNETT CONTACTS**

<b>Burnett's New Mexico Office</b>	<b>817.332.5108 x202</b>
87 Square Lake Road (CR #220) Loco Hills, New Mexico 88255	
<b>Directions: Loco Hills, NM – 2 miles east of Loco Hills on US Hwy 82 to CR#220. Then North on CR #220 approximately one (1) mile to office.</b>	
<b>Burnett Oil Home Office</b>	<b>817.332.5108</b>
Burnett Plaza – Suite 1500   801 Cherry Street – Unit #9  Fort Worth, Texas 76102	
Walter Glasgow	<b>Office - 817.583.8871</b>
VP of Operations – Permian Basin/New Mexico	<b>Cell - 817.343.5567</b>
Tyler Deans	<b>Office – 575.677.2313</b>
Engineering Manager	<b>Cell – 432.553.4699</b>
Leslie Garvis	<b>Office – 817.583.8730</b>
Regulatory & Government Affairs Manager	<b>Cell – 713.819.4371</b>

**SHERIFF/POLICE CONTACTS**

Eddy County Sheriff	911 or 575.677.2313
New Mexico State Police	575.746.2701

**FIRE DEPARTMENT**

Loco Hills Fire Department (VOLUNTEER ONLY)	911 or 575.677.2349
For Medical and Fire (Artesia)	575.746.2701

**AIR AMBULANCE**

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

**FEDERAL AND STATE**

US Bureau of Land Management (Carlsbad)	575.361.2822	575.234.5972
New Mexico Oil Conservation Division (Artesia)		575.748.1283
New Mexico Emergency Response Commission (24 hour)		575.827.9126
Local Emergency Planning Operation Center (Artesia)		505.842.4949
National Emergency Response Center (Washington, DC)		800.424.8802

**OTHER IMPORTANT NUMBERS**

Boots & Coots IWC	800.256.9688
Cudd Pressure Control	432.570.5300
Halliburton Services	575.746.2757
BJ Service	575.746.2293

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

Burnett Oil Company, INC  
 Project: Eddy County, NM (NAD83)  
 Site: Sec 13-T17S-R30E  
 Well: Stevens A 21  
 Wellbore: Wellbore #1  
 Plan: Plan #1 (Stevens A 21/Wellbore #1)

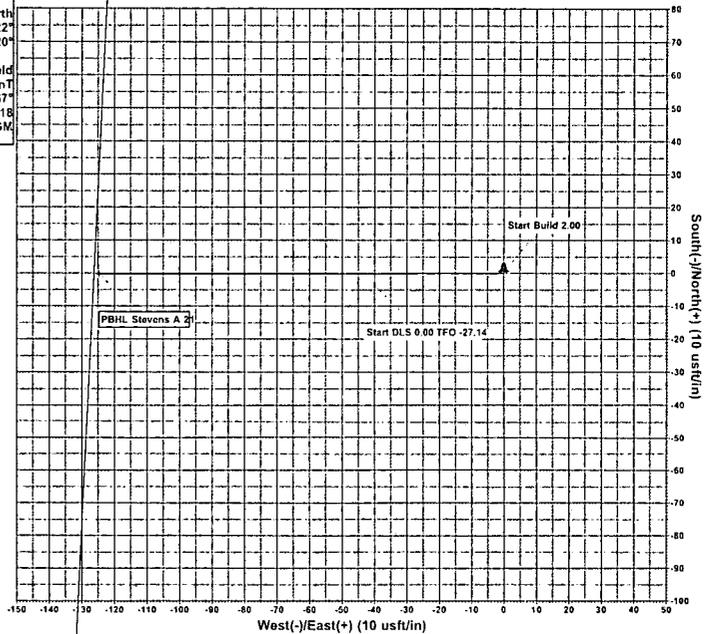
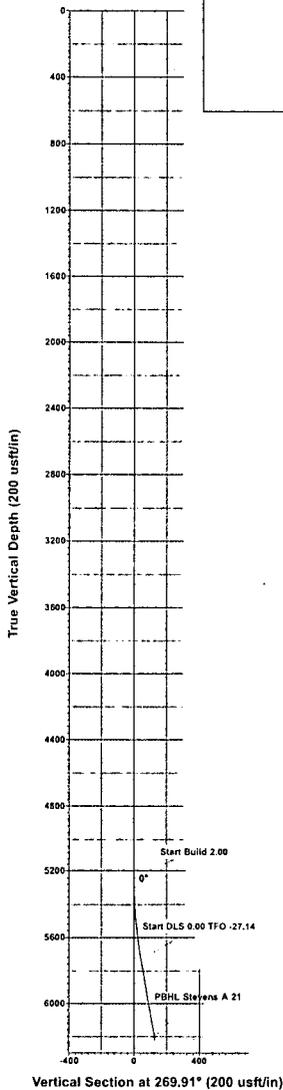
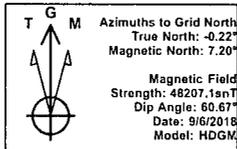
WELL DETAILS: Stevens A 21  
 Ground Elevation: 3691.00  
 RKB Elevation: KB @ 3692.00usft  
 Rig Name:

Northing 665245.90 Easting 665245.20 Latitude 32.82814 Longitude -103.92995

Planned Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5242.20	0.00	0.00	5242.20	0.00	0.00	0.00	0.00	0.00
3	5742.20	10.00	269.91	5739.67	-0.07	-43.52	2.00	269.91	43.52
4	6209.64	10.00	269.90	6200.00	-0.20	-124.70	0.00	-27.13	124.70

PROJECT DETAILS: Eddy County, NM (NAD83)  
 Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: New Mexico Eastern Zone  
 System Datum: Mean Sea Level  
 Local North: Grid





**DRILLING PLAN**  
**Stevens A 21**  
**SHL: 330' FSL, 1240' FWL, Sec. 13, Unit M, T17S, R30E**  
**BHL: 330' FSL, 1115' FWL, Sec. 13, Unit M, T17S, R30E**  
**VERTICAL CEDAR LAKE GLORIETA YESO WELL**

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

<u>Geological Name</u>	<u>Estimate Top</u>	<u>Anticipated Fresh Water, Oil or Gas</u>
a. Alluvium	Surface	Fresh Water, Sand
b. Rustler	225'	
c. Salado	420'	
d. Base Salt	1170'	
e. Yates	1350'	
f. Seven Rivers	1650'	Oil
g. Queen	2245'	Oil
h. Grayburg	2640'	Oil
i. Glorieta	4460'	Oil
j. Yeso	4555'	Oil

No other formations are expected to yield oil, gas or fresh water in measurable volumes. We will set 8-5/8" casing @ approx. 520' in the Anhydrite, above the salt and circulate cement to surface.

The oil zones will be isolated by running 5-1/2" casing to total depth and circulating cement to surface.

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

(MW = 10.2 PPG IN DESIGN FACTOR CALCULATIONS.)

a. **Design Safety Factors:**

<u>Type</u>	<u>Hole Size</u>	<u>Interval</u>	<u>OD Csg</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>	<u>Collapse Design Factor</u>	<u>Burst Design Factor</u>	<u>Tension Design Factor</u>
Conductor		0'-90'	14"	Contractor Discretion			---	---	---
Surface	12-1/4"	0' - +/- 520'	8-5/8"	24.00#	ST & C	J55	1.125	1.00	1.80
Production	7-7/8"	0' - TD	5-1/2"	17.00#	LT & C	J55	1.125	1.00	1.80

**DRILLING PLAN  
VERTICAL LOCO HILLS GLORIETA YESO WELL**

**b. Surface Casing Info**

The proposed casing setting depth is +/- 520' based on cross sections which show the estimated top of the rustler and top of salt. Drilling times will be plotted to find the hard section just above the salt. A mud logger will be on location to evaluate drill and cutting samples as long as circulation is maintained. If salt is penetrated, it will be obvious by the sudden increase in water salinity and surface casing will then be set above the top of salt. Our highly experienced drilling personnel have drilled many wells in this area and are able to easily identify the hard streak on the top of the salt.

**c. Production Casing Info**

Production casing will be set to TD with float shoe on bottom, float collar in first collar, centralizers throughout intervals and above and below a DV Tool set at +/-2600'. After drilling out and testing the casing to 2000 PSI, a cement bond log will be run to evaluate the cement job.

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

**BLM to be notified prior to all cementing and tag operations in order to observe the operation if desired.**

**a. 8-5/8" Surface Cement to surface**

- 330 sx C +2% PF1 (Calcium Chloride) + PF424 (Water Gelling Agent), mixed at 14.8 ppg, Yield 1.34 with 6.3 gal water per sack.
- **Excess cement 100%.**

**If cement does not circulate to surface, BLM will be notified of same, and advised of the plan to bring the cement to surface so BLM may witness tagging and cementing. When circulating cement, if surface pressures indicate cement is low in the annulus, temperature survey results will be reviewed with BLM representative to determine the remediation needed.**

**b. 5-1/2" Production Casing**

**Stage 1: Lead:** 260 sx 35/65 P/C +5 %PF44 (BWOW)(Salt )+6% PF20 (Bentonite Gel) +0.2% PF153 (Anti Settling) +0.3% PF13 (Retarder) +0.1 25#/sx PF29 (Celloflake) +3#/sx PF42 (Kolseal) +0.4#/sx PF45 (Defaomer), mixed at 12.5 ppg, Yield 2.11 with 11.364 gal water per sack.

**Tail:** 330 sx C +0.3%PF13 (Retarder), mixed at 14.8 ppg, Yield 1.33 with 6.298 gal water per sack.

**30% excess cement.**

**Stage 2: Lead:** 340 sx 35/65 P/C + 5% PF44 (BWOW)(Salt) +6% PF20 (Bentonite Gel) +0.2% PF153 (Anti Settling) +0.125#/sx PF29 Celloflake) +3#/sx PF42 (Kolseal) +0.4#/sx PF45 (Defaomer), mixed at 12.5 ppg, Yield 2.11 with 11.362 gal water per sack.

**Tail:** 200 sx C Neat, mixed at 14.8 ppg, Yield 1.32 with 6.3 gal water per sack.

**140% excess cement.**

**DRILLING PLAN  
VERTICAL LOCO HILLS GLORIETA YESO WELL**

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

**4. Pressure Control Equipment:**

The blowout prevention equipment (BOPE) shown in **Exhibit L** 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 ten (10) minutes. The 8-5/8" 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.

Burnett is requesting to keep the Mud/Gas Separator on location but only connect if/when needed.

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

- a. A Kelly cock will be in the drill string at all times.
- b. A full opening drill pipe stabbing valve with the appropriate connections on the rig floor at all times.
- c. 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 5-1/2" casing is cemented.
- d. An H2S compliance package will be on all sites while drilling.

**6. Proposed Mud Circulation System**

<u>Depth</u>	<u>Mud Wt</u>	<u>Visc</u>	<u>Fluid Loss</u>	<u>Type System</u>	<u>Max Volume</u>
0' - +/-520'	8.6 - 9.5			Fresh Water	
+/- 520' - 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.**

**Pason equipment will be used to monitor the mud system.**

**7. Logging, Coring and Testing program:**

- a. Any drill stem tests will be based on geological sample shows and planned before spudding.
- b. The open hole 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 Spectral Gamma Ray.
  3. Coring program will be planned and submitted on a well by well basis.
  4. Additional testing will be done after setting the 5-1/2" production casing. The specific intervals will be based on log evaluation, geological sample shows and/or drill stem tests.

**DRILLING PLAN**  
**VERTICAL LOCO HILLS GLORIETA YESO WELL**

**8. Potential Hazards:**

No abnormal pressures or temperatures are expected. Lost circulation is expected in the surface hole and not expected in production. Water flows can occur periodically at various depths in the production hole. All personnel will be familiar with the safe operation of the equipment being used to drill this well. The maximum anticipated bottom hole pressure is 2763#. This is based upon the following formula of  $.445 \times \text{BH ft. estimate}$ . The anticipated bottom hole temperature is 105°F. This is based upon logs of wells in this area.

There is known H2S in this area. In the event that it is necessary to follow the H2S plan, a remote choke will be installed as required in Onshore Order 6. Refer to the attached H2S plan for details.

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

Road and location construction will begin after BLM has approved the specific 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 approximately 11 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.

**10. Completion Procedure**

Upon completion of drilling operations, this well will be perforated and frac'd in multiple stages. Due to the completion process that Burnett utilizes, we do not anticipate any flowback. Upon completion of stimulation, the well will be put on production.