ATS-08-157

Form 3160-3
(August 2007)

OCD-ARTESIA

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OCD-ARTESIA

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER	5 Lease Serial No. **NMLC 029338A**
	6 If Indian, Allottee or Tribe Name
	7 If Unit or CA Agreement, Name and No.
1b Type of Well ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone	8. Lease Name and Well No. **GISSLER A #31**
2 Name of Operator **BURNETT OIL CO., INC.**	9. API Well No **30-015-36035**
3a Address **801 Cherry ST. Unit #9 Fort Worth,** / 3b. Phone No. *(include area code)* **(817) 332-5108**	10. Field and Pool, or Exploratory **LOCO HILLS, Glorieta-Yeso**
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface **Unit O, 790' FSL, 2380' FEL** At proposed prod. zone **SAME AS ABOVE**	11 Sec., T., R., M., or Blk. and Survey or Area **SEC 14, T17S, R30E**
14. Distance in miles and direction from nearest town or post office* **Approx 6 miles East & North of Loco Hills, New Mexico**	12. County or Parish **EDDY CTY** / 13 State **NEW MEXICO**

Roswell Controlled Water Basin
UNORTHODOX LOCATION

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) **790'**	16. No. of Acres in lease **120**	17. Spacing Unit dedicated to this well **40**
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft **90'**	19. Proposed Depth **6000'**	20. BLM/BIA Bond No. on file **NMB# 000197**
21 Elevations (Show whether DF, KDB, RT, GL, etc.) **3690' GL**	22. Approximate date work will start* **December 16, 2007**	23 Estimated duration **25 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.
2. A Drilling Plan
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above)
5. Operator certification.
6. Such other site specific information and/or plans as may be required by the BLM.

25 Signature	Name *(Printed/Typed)*	Date
Maria Jacoby	**MARK JACOBY**	10/22/2007
Title **ENGINEERING MANAGER**		
Approved by *(Signature)* /s/ Don Peterson	Name *(Printed/Typed)* /s/ Don Peterson	Date DEC 17 2007
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)

SEE ATTACHED FOR CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

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MASTER DRILLING PLAN
BURNETT OIL CO., INC.
ALL VERTICAL CEDAR LAKE / LOCO HILLS PADDOCK WELLS
FEDERAL LEASE # LC029338A, LC029339A, LC030570A, LC055264, LC055958, NM2746, NM2747
FEDERAL LEASE # NM2748 & NM074939
Section 11, 12, 13, 14, 23, 24 & 25, Township 17 South, Range 30 East, Eddy County, N.M.

ACTUAL WELL LOCATION WILL BE ON THE SUBMITTED 3160-3 AND SURFACE USE PLAN

1. **Geological Name of Surface Formation**
   a. Alluvium.....Surface

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	6000'	

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 the surface.

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

Hole Size	Interval	OD Csg	Weight	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
14-3/4"	0'-380'	10-3/4"	32.75#	ST&C	H40	1.125	1.00	1.80
8-3/4"	0'-6000'	7"	23.00#	LT&C	J55	1.125	1.00	1.80

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

   a. 10-3/4" Surface — Cement to surface Lead with 150 sks Class C cement +10% A-10, + 10#/sk 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/Sk yield. TOC Surface.

   b. 7" Production — **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. 1.27 CF/Sk Yield . **DV @ approx. 2600'**
   Stage 2 Cement: Lead with1800 sks (35:65) Poz (Fly Ash): Class C cement + 6% Bentonite + 5 lbs/sk LCM-1 + 0.125 lbs/sk Cello Flake + .01 gps FP-6L + 5% Sodium Chloride, 1.89 CF/Sk Yield. Tail with 100 sks Class C cement + 1% CaCl + 0.01 gps FP-6L.14.8 ppg, 1.62 CF/Sk Yield, 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.

5. **Pressure Control Equipment:**
The blowout prevention equipment (BOPE) shown in Drilling Exhibit E will consist of a 2000 PSI Hydril Unit with hydraulic closing equipment. The equipment will comply with Onshore Order #2 and will be tested as described in this order. 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 (**Mann Welding)** will be used for the testing. All BOPE and associated equipment will be tested to 2000 PSI with the rig pump prior to drilling out the 10-3/4" casing shoe. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the BOP. 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**

Depth	Mud Wt	Visc	Fluid Loss	Type System
0'-380'	8.6–9.5			Fresh Water
381'-6000'	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. 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 equipment will be in operation after drilling out 10-3/4" casing shoe until 7" casing is cemented. The breathing equipment will be on location from drilling out the 10-3'4" casing shoe until total depth is reached.

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

b. The hazards and characteristics of Hydrogen Sulfide (H2S).

c. The proper use and maintenance of personal protective equipment and life support systems.

d. The proper use of H2S detectors, alarms, warning systems, briefing areas, evacuation procedures and the prevailing wind.

e. The proper techniques for first aid and rescue procedures.

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 and audible sirens when H2S levels of 20 PPM are reached.

c. Visual warning systems:

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

d. Mud program:

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

e. Communication:

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

a. Any drill stem tests will be based on geological sample shows.
b. The open hole electrical logging program will be:
   1. Total depth to 1000': Dual Laterolog-Micro Laterolog wit SP and GR. Compensated Neutron-Z Density log with Gamma Ray and Caliper.
   2. Total depth to Surface: Compensated Neutron with Gamma Ray.
   3. No coring program is planned.
   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 bottom hole 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. The 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.

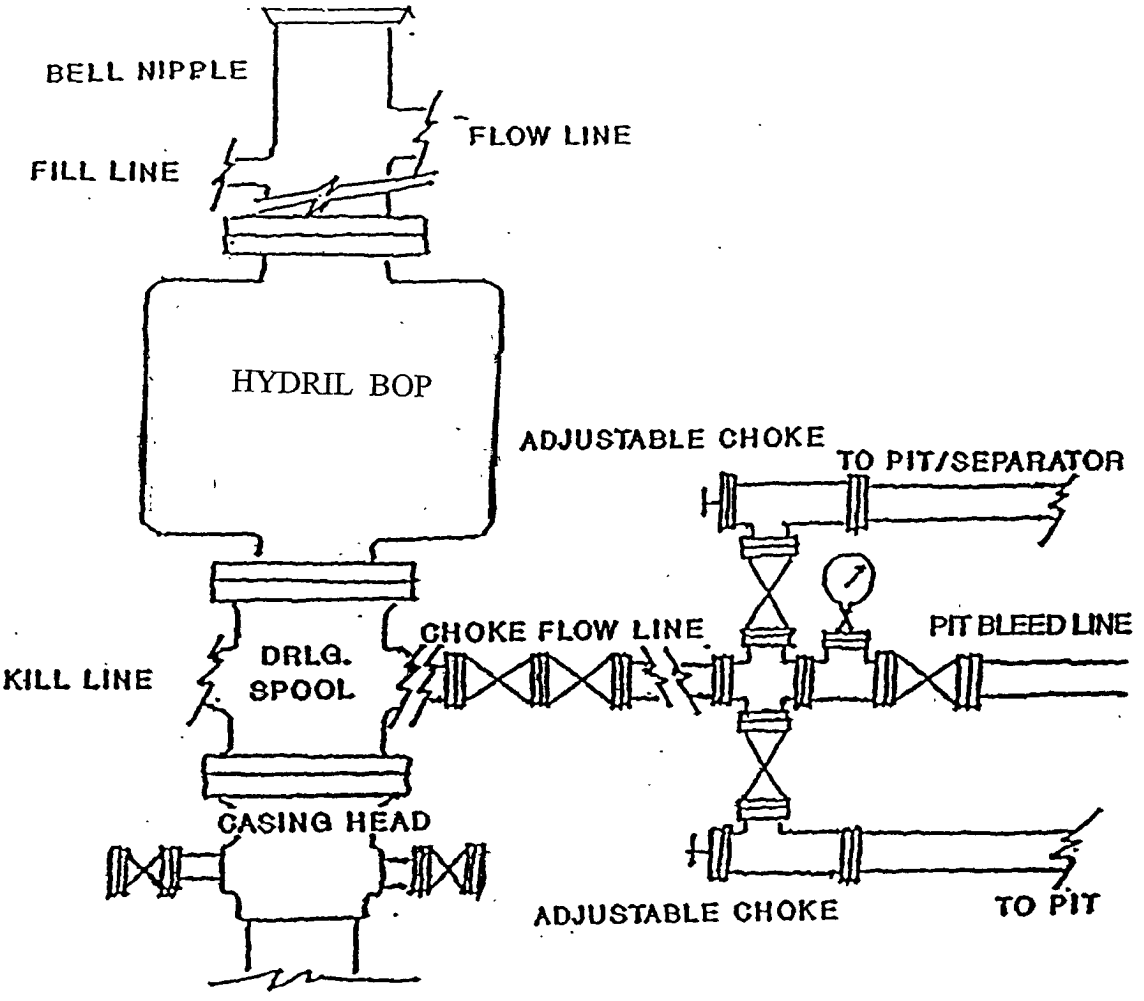
12. Operator's representative on the site:

Burnett Oil Co., Inc. field representative responsible for compliance with the approved drilling and operations plan is

Mr. Belton Mathews, District Supt.
P.O. Box 188
Loco Hills, New Mexico 88255
Office phone: 505-677-2313
Home phone: 505-746-8647
Cellular phone: 505-703-9601

Date: 11/14/2007

By Mark A Jacoby
Mark A. Jacoby
Engineering Manager



BURNETT OIL CO., INC.

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

DRILLING EXHIBIT E

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SURFACE USE PLAN OF OPERATIONS
BURNETT OIL CO., INC.
Gissler A Well No. 31, Lease No. NMLC 029338A
Surface Location Unit O, 790' FSL, 2380' FEL
Section 14, Township 17 South, Range 30 East, Eddy County, N. M.

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 John West Surveying Company.
   b. All roads into the location are shown on Vicinity Map (Exhibit A.)
   c. Directions to the location: from the intersection of US Hwy #82 and County Road (CR) #220 go North on CR #220 approx 1.1 mile. Turn left, go west approx 0.2 mile, turn left approx 300' past Lease CTB. Go South approx 0.1 mile to Gissler A #28 well site. Follow proposed road on South side of pad approx 408' to this well site.

2. **New or Reconstructed Access Roads:**
   a. The well site layout, Form C-102 and Exhibit A1 and A2 show the existing Gissler A #28 well pad. The new access road will extend from the South side of this Gissler A #28 approx 408' to this Gissler A #31 well pad. No turn outs are planned.
   b. The maximum width of this road will be 15'. It will be crowned and made of 6" of rolled and compacted caliche. All construction requirements of the road stipulations will be followed.
   c. All construction material will be native caliche. It may be available at the proposed location. If not available on location or road, caliche will be hauled from nearest BLM approved caliche pit.
   d. No cattle guards, grates or fence cuts will be required.

3. **Location of existing wells:**
   a. See the attached 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 Exhibit B for location of **existing** commingled approved Gissler A2 Tank Battery facility on this Federal lease.
   a. The well site will require electricity for the prime mover. We will contact Central Valley Electric Cooperative, Inc. 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 electric installation will be done in accordance with all existing state and federal regulations.
   b. We propose to lay approx**. 2000' of new 3" PVC flowline** from the new Gissler A Loco Hills Paddock well to this Gissler A2 Tank Battery header. This flowline will be laid above ground along existing road on this Federal lease. (See Exhibit B and C plat.) All production in this battery is allocated based on periodic individual well test.

5. **Location and Type of Water Supply:**
   All water to be used in drilling the well will be brine or fresh water transported by truck over existing or above proposed lease road from Loco Hills, New Mexico or fresh 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 accord with the drilling stipulations for this well.

7. **Methods of Handling Waste Disposal:**
a. Drill cuttings will be disposed of in the lined reserve drilling pit. Auxiliary lined emergency water containment pits may also be necessitated by large volume water flows. All drilling fluids will be allowed to evaporate after completion of drilling. After proper disposal of contents, pits will be back filled, leveled and re-seeded per BLM site stipulations.
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 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 lined reserve pit until well is turned to the lease tank battery. All pit contents 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:**
a. 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.
b. All pits will be in accordance with the stipulations for this well. Pit liner will be 6 mils thick polyethylene and will extend over the dike and be anchored in place. Reserve pit will be fenced until empty.

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. Pits liners will be buried or hauled away. Pits will be backfilled, leveled and re-seeded in accord with the BLM well stipulations.
b. Any unguarded pits containing fluid will be fence until backfilled.
c. 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 use 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.

14. Operator's Representative:

Burnett Oil Co., Inc. field representative responsible for compliance with the approved surface use and operations plan is:

Mr. Belton Mathews, District Supt.
P.O. Box 188
Loco Hills, New Mexico 88255
Office phone: 505-677-2313
Home phone: 505-746-8647
Cellular phone: 505-703-9601

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

Date: 10/22/2007

By Mark A. Jacoby
Mark A. Jacoby
Engineering Manager

VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

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

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

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

1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Grayburg** formation. **Measurements between 500-2000 ppm in the gas stream.**

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.

B. CASING

1. The **10-3/4** inch surface casing shall be set **a minimum of 25 feet into the Rustler Anhydrite and above the salt at approximately 380** feet and cemented to the surface.

   a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

   b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement).

   c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

   d. If cement falls back, remedial action will be done prior to drilling out that string.

Possible lost circulation in the Grayburg and San Andres formations.
Possible water flows in the Salado and Artesia Groups.

2. The minimum required fill of cement behind the **7** inch production casing is:

   ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **First stage to circulate.**

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

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. The appropriate BLM office shall be notified a minimum of 2 hours in advance for a representative to witness the tests.

   a. **The tests shall be done by an independent service company.**

   b. The results of the test shall be reported to the appropriate BLM office.

   c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

   d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

D. DRILL STEM TEST

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

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

WWI 120707

JAN 11 2008
OCD-ARTESIA

January 8, 2008

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

Re: H2S Rule 118 Contingency Plan.
Gissler A #31, Unit O, 790' FSL, 2380' FEL
SEC. 14, T17S, R30E- Eddy County, New Mexico

Dear Mr. Arrant:

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

Please contact our Mr. Mark Jacoby or the undersigned if you require additional information.

Yours truly,

James H. Arline

James H. Arline
Materials Coordinator

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

BURNETT OIL CO., INC.

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