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State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised August 13, 2011

Submit one copy to appropriate
District Office

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-43537	Pool Code 96831	Pool Name CEDAR LAKE GLORIETA YESO
Property Code 20767	Property Name JACKSON A	Well Number 58
GRID No. 03080	Operator Name BURNETT OIL COMPANY, INC.	Elevation 3755

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	FEET from the	SOUTH/SOUTH LINE	FEET from the	East/EAST LINE	County
1	13	17 S	30 E		2390	SOUTH	330	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	FEET from the	SOUTH/SOUTH LINE	FEET from the	East/EAST LINE	County
Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.						

**NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION**

N: 870128.3 E: 822808.5 NAD 27	N: 870135.4 E: 823447.9 NAD 27	N: 870142.3 E: 826087.5 NAD 27	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or undivided mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the Division.</p> <p>Signature <i>Leslie Garvis</i> Date 9/29/14</p> <p>Printed Name Leslie Garvis</p> <p>Email Address lgarvis@burnettoil.com</p>
<p>SURFACE LOCATION</p> <p>Lat - N 32.833586 Long - W 103.917370 NMSPCE - N 687250.2 E 627768.7 (NAD-27)</p>			
N: 864848.4 E: 822825.7 NAD 27	<p>SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief.</p> <p>DATE SURVEYED OCTOBER 01, 2014</p> <p>Signature <i>[Signature]</i> Professional Surveyor</p> <p>Certified by <i>[Signature]</i> 7977</p> <p>0' 500' 1000' 1500' 2000'</p> <p>SCALE: 1" = 1000'</p> <p>WD Num.: 30858</p>		N: 864861.6 E: 828104.3 NAD 27

RWP 1-25-19



DRILLING PLAN
Jackson A 58
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. Anhydrite	324'	
c. Salt	507'	
d. Base Salt	1236'	
e. Yates	1403'	
f. Seven Rivers	1696'	Oil
g. Queen	2305'	Oil
h. Grayburg	2708'	Oil
i. San Andres	3041'	Oil
j. Glorieta	4499'	Oil
k. Yeso	4593'	Oil
l. Total Depth	Refer to Form 3160-3	

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' <i>450'</i>	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 PF29Celloflake) +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 2715#. 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.

**PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	BURNETT OIL COMPANY INC
LEASE NO.:	NMLC029339A
WELL NAME & NO.:	JACKSON A 58
SURFACE HOLE FOOTAGE:	2390'/S & 330'/E
BOTTOM HOLE FOOTAGE	VERTICAL WELL
LOCATION:	T-17S, R-30E, S13. NMPM
COUNTY:	EDDY, NM

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	
Other	<input type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP

All other previous conditions of approval still apply.

A. CASING

1. The **8-5/8** inch surface casing shall be set at approximately **480** feet (a minimum of 25 feet 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:
 - a. Cement to surface. If cement does not circulate see A.1.a, c-d above.

DR 1/15/2019