

OCD-ARTESIA

ATS-12-522

EA-12-976

Form 3160-3  
(March 2012)FORM APPROVED  
OMB No 1004-0137  
Expires October 31, 2014UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM2748
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator Burnett Oil Co., Inc.		7. If Unit or CA Agreement, Name and No.
3a. Address Burnett Plaza - Suite 1500 801 Cherry St U 9 Fort Worth, Texas 76102		8. Lease Name and Well No. Gissler B 83 C23897
3b. Phone No. (include area code) 817-332-5108 x6326		9. API Well No. 30-015-40937 T05 7/3/2012
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface 470' FNL & 727' FWL, Unit D At proposed prod. zone 330' FNL & 330' FWL		10. Field and Pool, or Exploratory Loco Hills Glorieta Yeso C967187
14. Distance in miles and direction from nearest town or post office* Approximately 2 Miles North of Loco Hills, NM		11. Sec., T. R. M. or Blk. and Survey or Area Section 11, T. 17S, R. 30E
15. Distance from proposed* 470' location to nearest property or lease line, ft (Also to nearest drig. unit line, if any)	16. No. of acres in lease 1240	17. Spacing Unit dedicated to this well 40
18. Distance from proposed location* 187' to nearest well, drilling, completed, applied for, on this lease, ft	19. Proposed Depth TVD - 6100' MVD - 6138.24'	20. BLM/BIA Bond No. on file NM-B000197
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3735' GL	22. Approximate date work will start* 06/14/2012	23. Estimated duration 30 days

## 24. Attachments

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

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

25. Signature <i>Leslie M. Garvis</i>	Name (Printed/Typed) Leslie M. Garvis	Date 05/31/2012
Title Regulatory Coordinator		

Approved by (Signature) <b>Is/ Don Peterson</b>	Name (Printed/Typed)	Date <b>JUN 28 2012</b>
Title <b>FIELD MANAGER</b>		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.

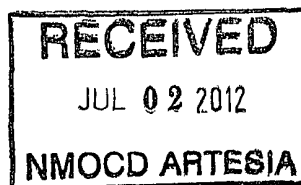
CARLSBAD FIELD OFFICE  
APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

\*(Instructions on page 2)

Roswell Controlled Water Basin

Approval Subject to General Requirements  
& Special Stipulations AttachedSEE ATTACHED FOR  
CONDITIONS OF APPROVAL



**BURNETT OIL Co., INC.**

**FINAL CERTIFICATION MEMO**

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road proposed herein; that I am familiar with the conditions that presently 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 Burnett Oil Co. Inc. is 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. Executed this 27 day of APRIL 2012.

Signed: Mark A Jacoby

Printed Name: Mark A. Jacoby

Position: Engineering Manager

Company: Burnett Oil Co., Inc.

Address: 801 Cherry Street, Suite 1500, Unit #9, Fort Worth, Texas 76108

Telephone: 817.332.5108

Email: [mjacob@burnettoil.com](mailto:mjacoby@burnettoil.com)

DISTRICT I  
1825 N. French Dr., Hobbs, NM 88240  
Phone (575) 393-6161 Fax: (575) 393-0720

DISTRICT II  
811 S. First St., Artesia, NM 88210  
Phone (575) 748-1263 Fax: (575) 748-0720

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone (505) 334-6176 Fax: (505) 334-6170

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised August 1, 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 <b>30-015-40437</b>	Pool Code <b>96718</b>	Pool Name <b>LOCO HILLS GLORIETA-YESO</b>
Property Code <b>2389</b>	Property Name <b>GISSLER "B"</b>	Well Number <b>83</b>
OGRD No. <b>03080</b>	Operator Name <b>BURNETT OIL COMPANY, INC.</b>	Elevation <b>3735'</b>

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	11	17 S	30 E		470	NORTH	727	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	11	17 S	30 E		330	NORTH	330	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			6138 6/28

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

<p><b>SURFACE LOCATION</b> Lat - N 32.854859074° Long - W 103.948297947° NMSPC- N 674924.534 E 618238.662 (NAD-27)</p> <p><b>PROPOSED BOTTOM HOLE LOCATION</b> Lat - N 32.855242104° Long - W 103.949590130° NMSPC- N 675062.440 E 617841.344 (NAD-27)</p>	<p><b>OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Leslie M. Garvis</i> 5-24-12 Signature Date Printed Name lgarvis@burnettoil.com Email Address</p> <p><b>SURVEYOR CERTIFICATION</b> 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>JANUARY 19, 2012 Date Surveyed Signature Professional Survey 7877 Certificate No. 25930 L. Jones 7977 BASIN SURVEYS 25930</p>
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## BURNETT OIL CO., INC.

### MASTER DEVELOPMENT PLAN ALL VERTICAL LOCO HILLS & CEDAR LAKE GLORIETA YESO WELLS

#### 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	297'	
c. Salt	492'	
d. Base Salt	1290'	
e. Yates	1450'	
f. Seven Rivers	1604'	Oil
g. Queen	2222'	Oil
h. Grayburg	2670'	Oil
i. San Andres	2985'	Oil
j. Glorieta	4460'	Oil
k. Yeso	4580'	Oil
l. Total Depth	Refer to APD	

No other formations are expected to yield oil, gas or fresh water in measurable volumes. Deepest water is expected to be above 400'. We will set 10-3/4" casing @ approx. +/- 490' in the Anhydrite, above the salt and circulate cement to surface.

We will isolate the oil zones by running 7" casing to total depth and circulating cement to surface.

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

(MW = 10 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	24"	0'-90'	20"	Contractor Discretion			---	---	---
Surface	14-3/4"	0' - 490'	10-3/4"	32.75#	ST & C	H40	1.125	1.00	1.80
Production	8-3/4"	0' - TD	7"	23.00#	LT & C	J55	*1.125	1.00	1.80

**MASTER DEVELOPMENT PLAN  
ALL VERTICAL LOCO HILLS & CEDAR LAKE GLORIETA YESO WELLS**

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

b. Surface Casing Info

The proposed casing setting depth is 490' based on the attached cross sections which show the estimated top of the rustler and top of salt (**Exhibits G & H**). 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 ~~has~~ <sup>have</sup> drilled many wells in this area and ~~is~~ <sup>are</sup> able to easily identify the hard streak on the top of the salt.

**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. **10-3/4" Surface Cement** to surface Lead with 150 sx Class C thix. cement + 10#/sk Cal-Seal 60 (Accelerator), +10#/sx LCM, 1% CaCl, 0.125#/sk Poly-E-Flake (LC), 14.2 ppg, 1.67 CF/Sk Yield. Tail with 250 sks Class C cement + 2% CaCl. 14.2 ppg, 1.35 CF/Sx yield. **TOC Surface. Excess cement 100%.**

*See COR*  
If cement does not circulate to surface, BLM will be notified of same, plus the plans to bring the cement to surface so BLM may witness tagging and cementing. The plan to bring the cement to surface will be to run 1" and tag top of cement at 0°, 90°, 180° and 270°. If DV Tool moves then cement will be adjusted accordingly. If surface pressures when circulating indicate cement is low in the annulus, data will be reviewed with BLM representative for recommendation on whether temperature survey or 1" is used to determine TOC

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

b. **7" Production Casing**

**Stage 1 Cement:** 550 sks VERSACEM – C (50:50 Poz (Fly Ash):Class C cement + 2% Bentonite) + 0.4% LAP-1 (FLC) + 0.3 % CFR-3 (Disp) + .025 lb/sk D-Air 5000 + 3 lb/sx Kol-Seal (LC) + 0.125 lb/sk Poly-E-Flake (LC) . 14.2 ppg, Yield 1.28 CF/Sx. **DV @ approx. 2600'. 30% excess cement.**

**Stage 2 Cement:** Lead with 525 sks/ ECONOCEM (35:65) Poz (Fly Ash):Class C cement + 6% Bentonite) + .125 lbs/sx Poly-E-Flake (LC) + 2% CaCl, , 12.7 ppg, Yield 1.87 CF/Sx. Tail with 100 sx Class C + 2% CaCl. 14.8 ppg, Yield 1.62 CF/sx, TOC Surface. 140% excess cement.

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 **Exhibits J & K** will consist of a 2000 PSI Hydril Unit (annular) with hydraulic closing equipment. The equipment will comply with Onshore

**MASTER DEVELOPMENT PLAN  
ALL VERTICAL LOCO HILLS & CEDAR LAKE GLORIETA YESO WELLS**

Order #2 and will be tested to 50% of rated working pressure (RWP), and maintained for at least ten (10) minutes. The 10-3/4" drilling head will be installed on the surface casing and in use continuously until total depth is reached. An independent testing company will be used for the testing. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold having 2000 PSI WP rating.

**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 7" 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>
0' - 490'	8.6 - 9.5			Fresh Water
490' - TD' MD	10.0 max			Brine Water

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

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

- a. Any drill stem tests will be based on geological sample shows and planned before spudding.
- b. The 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 subsequent to setting the 7" production casing. The specific Intervals will be based on log evaluation, geological sample shows and drill stem tests.

**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 drilled wells surrounding this well.

There is known H2S in this area. Refer to the attached H2S plan for details.

**MASTER DEVELOPMENT PLAN  
ALL VERTICAL LOCO HILLS & CEDAR LAKE GLORIETA YESO WELLS**

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

Road and location construction will begin after BLM has approved the APD and has approved the start of the location work. Anticipated spud date will be as soon as the location building work has been completed and the drilling rig is available to move to the location. Move in and drilling is expected to take approximately 14 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.

# EXHIBIT I ARCHER Planning Report

Company: BURNETT OIL CO INC	Date: 04/26/2012	Time: 19:43 28	Page: 1
Field: Eddy County, NM	Co-ordinate(NE) Reference: Well B83, Grid North		
Site: Gissler "B" 83	Vertical (TVD) Reference: SITE 0.0		
Well: B83	Section (VS) Reference: Well (0.00N,0.00E,289.14Azi)		
Wellpath: Original Hole	Plan: Plan #1		

Field: Eddy County, NM

Map System: US State Plane Coordinate System 1927  
Geo Datum: NAD27 (Clarke 1866)  
Sys Datum: Mean Sea Level

Map Zone: New Mexico, Eastern Zone  
Coordinate System: Well Centre  
Geomagnetic Model: IGRF2010

Site: Gissler "B" 83

Site Position:	Northing:	674924.53 ft	Latitude:	32 51 17 493 N
From: Map	Easting:	618238.66 ft	Longitude:	103 56 53.873 W
Position Uncertainty:	0.00 ft		North Reference:	Grid
Ground Level:	3735.00 ft		Grid Convergence:	0.21 deg

Well: B83

Slot Name:

Well Position:	+N/-S	0.00 ft	Northing:	674924 53 ft
	+E/-W	0.00 ft	Easting :	618238 66 ft
Position Uncertainty:	0.00 ft		Latitude:	32 51 17.493 N
			Longitude:	103 56 53.873 W

Wellpath: Original Hole

Current Datum:	SITE	Height	0.00 ft	Drilled From:	Surface
Magnetic Data:	04/26/2012			Tie-on Depth:	0.00 ft
Field Strength:	48894 nT			Above System Datum:	Mean Sea Level
Vertical Section:	Depth From (TVD)	+N/-S		Declination:	7.70 deg
	ft	ft		Mag Dip Angle:	60.68 deg
				+E/-W	Direction
				ft	deg
	0.00	0.00		0.00	289.14

Plan: Plan #1

Date Composed: 04/26/2012  
Version: 1  
Tied-to: From Surface

Principal: No

## Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	289.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3568.55	0.00	289.14	3568.55	0.00	0.00	0.00	0.00	0.00	0.00	
4301.89	11.00	289.14	4297.39	23.01	-66.30	1.50	1.50	0.00	289.14	
6138.24	11.00	289.14	6100.00	137.91	-397.32	0.00	0.00	0.00	0.00	PBHL

## Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
3568.55	0.00	289.14	3568.55	0.00	0.00	0.00	0.00	0.00	0.00	
3600.00	0.47	289.14	3600.00	0.04	-0.12	0.13	1.50	1.50	0.00	
3700.00	1.97	289.14	3699.97	0.74	-2.14	2.26	1.50	1.50	0.00	
3800.00	3.47	289.14	3799.86	2.30	-6.62	7.01	1.50	1.50	0.00	
3900.00	4.97	289.14	3899.58	4.71	-13.58	14.37	1.50	1.50	0.00	
4000.00	6.47	289.14	3999.08	7.98	-22.99	24.34	1.50	1.50	0.00	
4100.00	7.97	289.14	4098.29	12.10	-34.87	36.91	1.50	1.50	0.00	
4200.00	9.47	289.14	4197.13	17.08	-49.19	52.07	1.50	1.50	0.00	
4301.89	11.00	289.14	4297.39	23.01	-66.30	70.18	1.50	1.50	0.00	
4400.00	11.00	289.14	4393.70	29.15	-83.98	88.90	0.00	0.00	0.00	
4500.00	11.00	289.14	4491.86	35.41	-102.01	107.98	0.00	0.00	0.00	
4600.00	11.00	289.14	4590.03	41.66	-120.04	127.06	0.00	0.00	0.00	
4700.00	11.00	289.14	4688.19	47.92	-138.06	146.14	0.00	0.00	0.00	
4800.00	11.00	289.14	4786.35	54.18	-156.09	165.22	0.00	0.00	0.00	
4900.00	11.00	289.14	4884.51	60.43	-174.11	184.30	0.00	0.00	0.00	
5000.00	11.00	289.14	4982.68	66.69	-192.14	203.39	0.00	0.00	0.00	
5100.00	11.00	289.14	5080.84	72.95	-210.17	222.47	0.00	0.00	0.00	



# EXHIBIT I ARCHER

# Planning Report

**Company:** BURNETT OIL CO. INC.  
**Field:** Eddy County, NM  
**Site:** Gissler "B" 83  
**Well:** B83  
**Wellpath:** Original Hole

Date: 04/26/2012 Time: 19:43 28  
Co-ordinate(NE) Reference: Well: B83, Grid North  
Vertical (TVD) Reference: SITE 0.0  
Section (VS) Reference: Well (0.00N,0.00E,289.14Azi)  
Plan: Plan #1

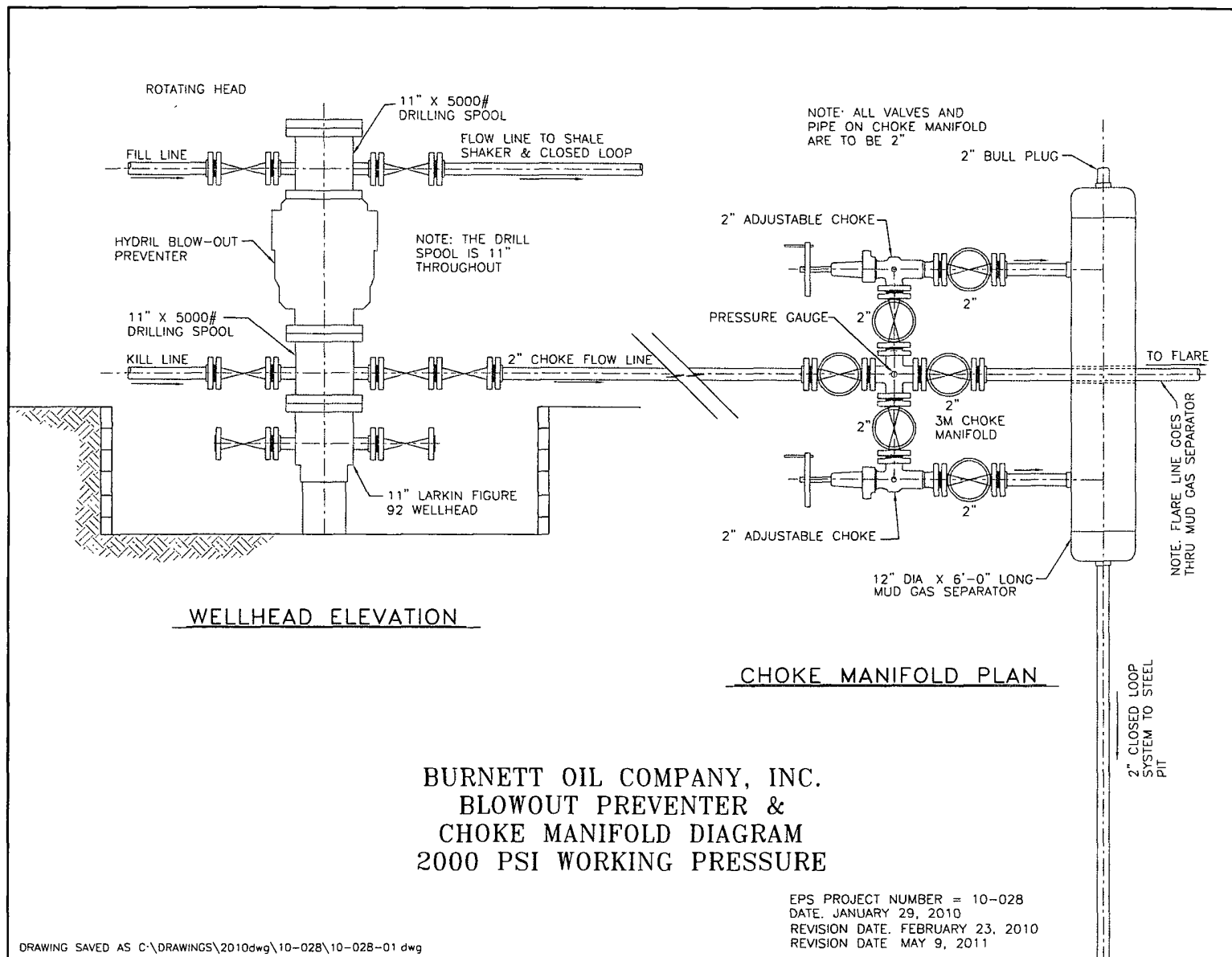
Page: 2

## Survey

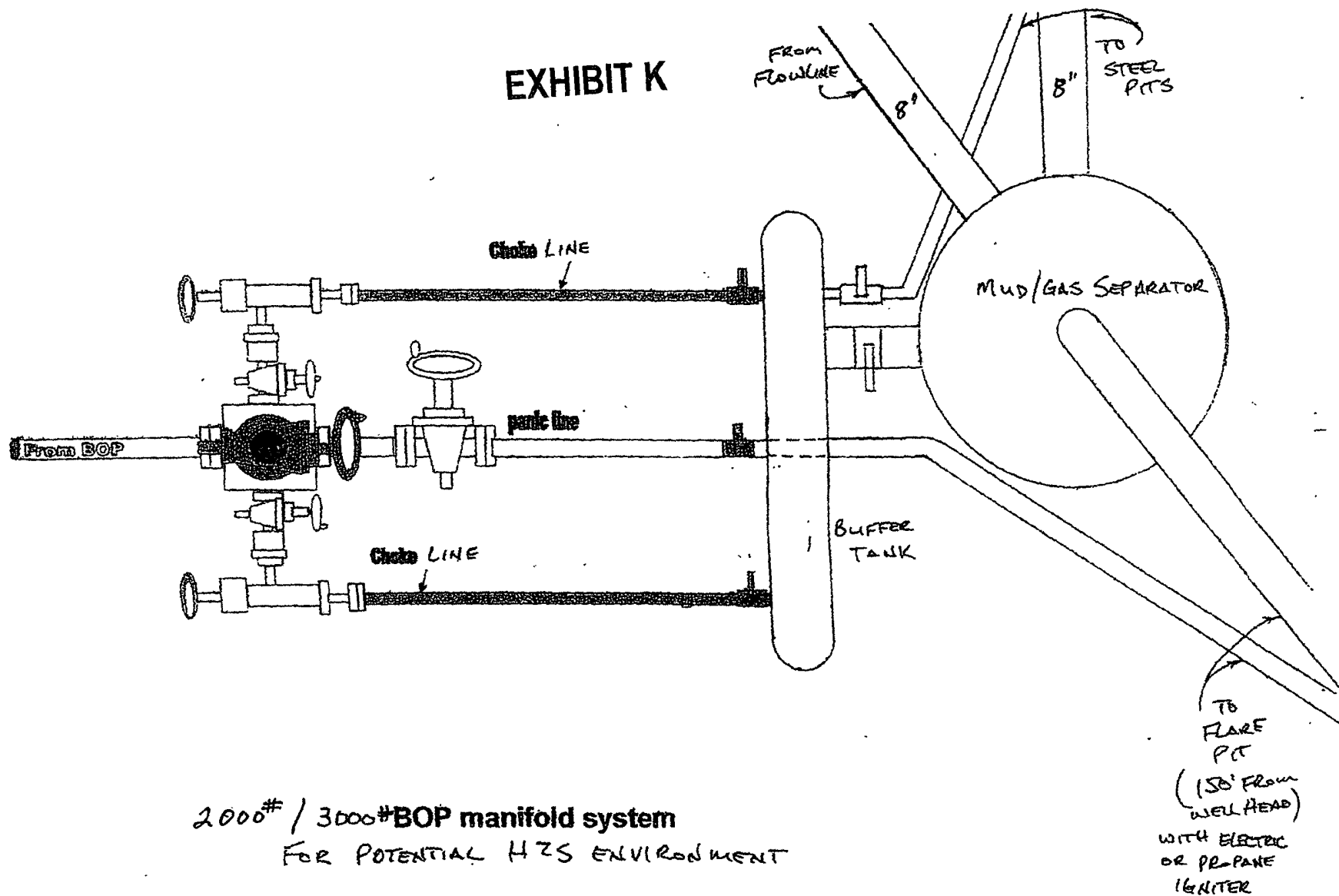
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
5200.00	11.00	289.14	5179.00	79.20	-228.19	241.55	0.00	0.00	0.00	
5300.00	11.00	289.14	5277.17	85.46	-246.22	260.63	0.00	0.00	0.00	
5400.00	11.00	289.14	5375.33	91.72	-264.24	279.71	0.00	0.00	0.00	
5500.00	11.00	289.14	5473.49	97.97	-282.27	298.79	0.00	0.00	0.00	
5600.00	11.00	289.14	5571.65	104.23	-300.30	317.87	0.00	0.00	0.00	
5700.00	11.00	289.14	5669.82	110.49	-318.32	336.95	0.00	0.00	0.00	
5800.00	11.00	289.14	5767.98	116.74	-336.35	356.03	0.00	0.00	0.00	
5900.00	11.00	289.14	5866.14	123.00	-354.37	375.11	0.00	0.00	0.00	
6000.00	11.00	289.14	5964.30	129.26	-372.40	394.19	0.00	0.00	0.00	
6100.00	11.00	289.14	6062.47	135.51	-390.43	413.27	0.00	0.00	0.00	
6138.24	11.00	289.14	6100.00	137.91	-397.32	420.57	0.00	0.00	0.00	PBHL

## Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	Latitude			Longitude				
								Deg	Min	Sec	Deg	Min	Sec		
Surface			0.00	0.00	0.00	674924.53	618238.66	32	51	17.493	N	103	56	53.873	W
PBHL -Plan hit target			6100.00	137.91	-397.32	675062.44	617841.34	32	51	18.872	N	103	56	58.524	W



# EXHIBIT K

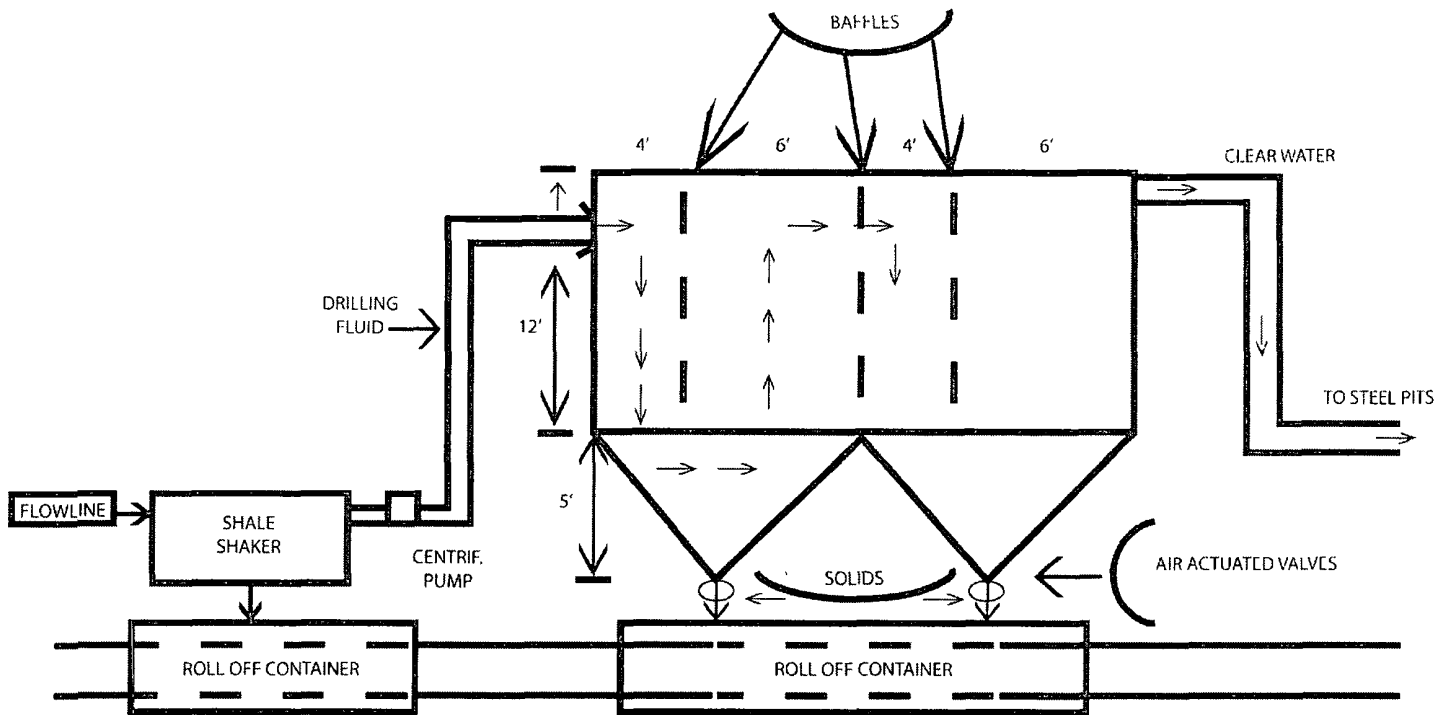


2000# / 3000# BOP manifold system  
FOR POTENTIAL H<sub>2</sub>S ENVIRONMENT



BURNETT OIL CO., INC.

## EXHIBIT L



### OPERATIONS & MAINTENANCE

Drilling Fluids from the wellbore will go through the flow line across the shale shaker. Solids will drop into roll off containers with baffles as drawn above. Baffles slow fluid velocity to allow solids to fall down through 6" air actuated valves into roll off containers. Clean water goes back out to the drilling fluid steel pits. Solids and any leftover liquid will be hauled to disposal.

### INSPECTION

The closed loop equipment will be inspected daily by each tour and any necessary maintenance performed. Any leak in the system will be repaired and/or contained immediately. OCD will be notified within 48 hours. Remediation process started.

### CLOSURE PLAN

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



## BURNETT OIL Co., INC.

### 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 O**
- f. **ATTACHED EMERGENCY CALL LIST FOR ANY ON SITE EMERGENCY DRILLING EXHIBIT P.**

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

#### A. Emergency Procedures

In the event of a release of gas containing H<sub>2</sub>S, 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 H<sub>2</sub>S 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. H<sub>2</sub>S 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 (SO<sub>2</sub>). 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 H<sub>2</sub>S and SO<sub>2</sub>

<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	H <sub>2</sub> S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO <sub>2</sub>	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 P - EMERGENCY NOTIFICATION LIST

#### BURNETT CONTACTS

**Burnett's New Mexico Office** 575.677.2313  
87 Square Lake Road (CR #220) Loco Hills, New Mexico 88255  
**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.**

**Belton Mathews – BOCI District Superintendent (NM)** Cell - 575.703.9601

**Burnett Oil Home Office** 817.332.5108  
Burnett Plaza – Suite 1500 | 801 Cherry Street – Unit #9| Fort Worth, Texas 76102

**Mark Jacoby – BOCI Engineering Manager (TX)** Cell – 817-312-2751

#### 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

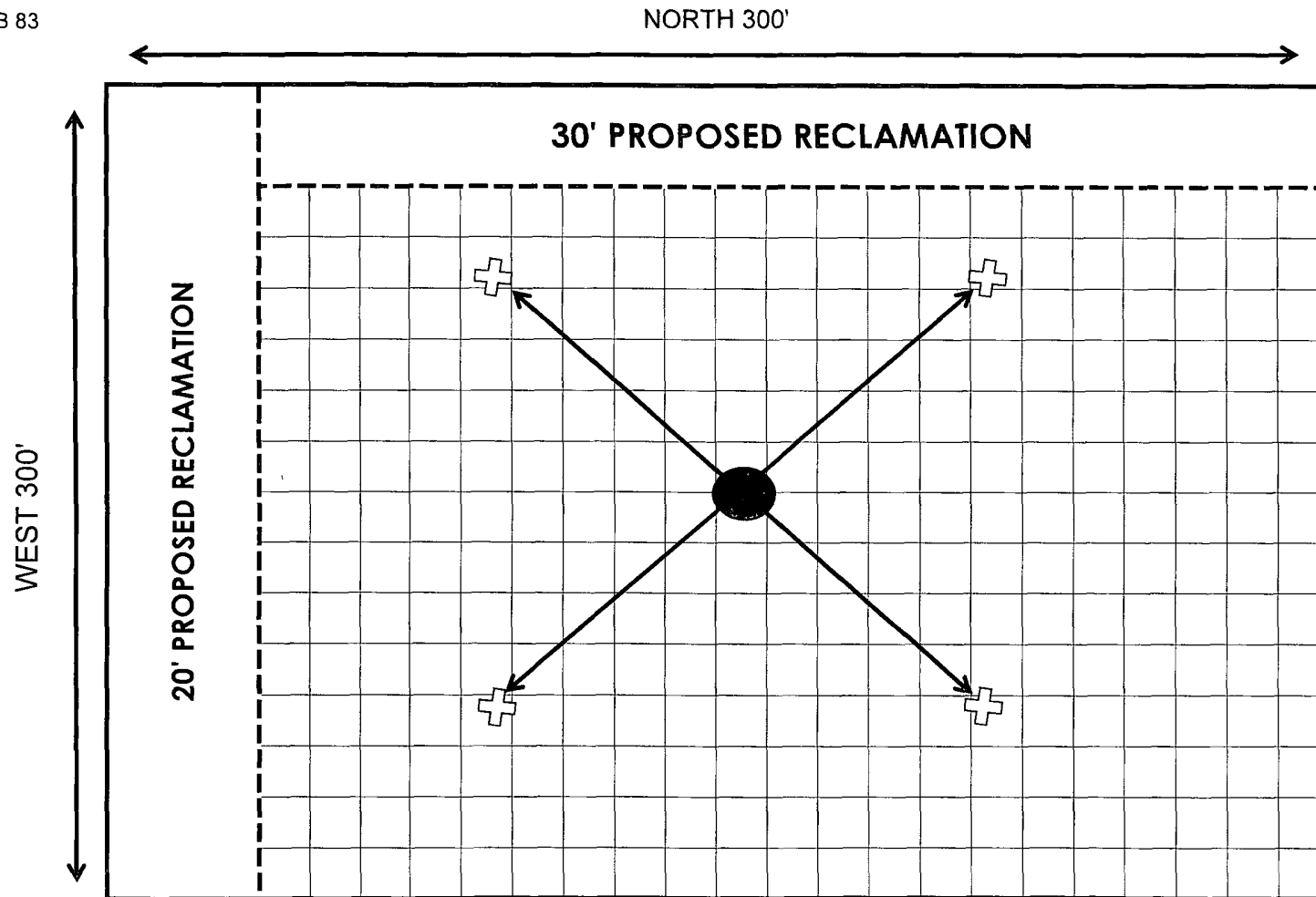
Boots & Coots IWC	800.256.9688
Cudd Pressure Control	432.570.5300
Halliburton Services	575.746.2757
BJ Service	575.746.2293

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

# EXHIBIT Q

BURNETT OIL CO., INC.  
INTERIM RECLAMATION PLAT

GISSLER B 83



 ANCHOR      75' FROM WELLHEAD TO ANCHORS  
 WELLHEAD

NOT TO SCALE

# PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Burnett Oil Co
LEASE NO.:	NM2748
WELL NAME & NO.:	83 Gissler B
SURFACE HOLE FOOTAGE:	470' FNL & 727' FWL
BOTTOM HOLE FOOTAGE	330' FNL & 330' FWL
LOCATION:	Section 11, T.17 S., R.30 E., NMPM
COUNTY:	Eddy County, New Mexico

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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.

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- ☐ **Archaeology, Paleontology, and Historical Sites**
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# EXHIBIT G

30015364690000  
COG OPERATING LIMITED LIABILITY CORP  
ELECTRA FEDERAL 34

TD=6004  
Reference=KB  
Datum=3737  
Ground=3725

688 ft

30015372250000  
COG OPERATING LIMITED LIABILITY CORP  
ELECTRA FEDERAL 63

TD=5995  
Reference=KB  
Datum=3741  
Ground=3729

1113 ft

BOCI2012GB8300  
BURNETT OIL CO INC  
GISSLER B 83

TD=6100  
Reference=KB  
Datum=3747  
Ground=3735

30015393620000  
BURNETT OIL CO INC  
GISSLER B 73

TD=6140  
Reference=KB  
Datum=3746  
Ground=3734

Correlation	Depth	Resistivity	Porosity	Some
GR	MD	Res(MSFL)	RHN(NPH)	SPH
GR	api 150	0.2 ohmm 20000 30 decp -0.100 30 decp -0.1		
SR(WA)		Res(LLS)	XPH	SPH(DLO(WA))
100	50	0.2 ohmm 20000 30 decp -0.100 30 decp -0.10		
GRTH		Res(LLD)	PE	
0	api 150	0.2 ohmm 20000	b/e 20	
GRKT			DPHD	
0	api 150		0.30 decp -0.1	
Sandstone			NPHD	
			0.30 decp -0.1	
Shale			DPH	
			0.30 decp -0.10	
GRKT(WA)			NPOR(WA)	
0	150		10 -10	
Uranium			NPH	
			0.3 decp -0.1	
CALI				
5000	n 20			

