12-262

Form 3160-3
(August 2007)

OCD-ARTESIA

FORM APPROVED
OMB No 1004-0137
Expires July 31, 2010 EA 469

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No. NM-2748	
6. If Indian, Allotee or Tribe Name	
7 If Unit or CA Agreement, Name and No.	
8. Lease Name and Well No. GISSLER B #84 [2389]	
9 API Well No. 30-015-39954	
10. Field and Pool, or Exploratory Mar Loco; Glorieta-Yeso [97866]	
11. Sec., T. R. M. or Blk. and Survey or Area SECTION 11, T. 17 S., R. 30 E.	
12. County or Parish EDDY	13. State NM

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

2. Name of Operator BURNETT OIL COMPANY, INC.

3a. Address 801 CHERRY STREET, SUITE 1500 FORT WORTH TX. 76102

3b Phone No. *(include area code)* 817-332-5108 (MARK JACOBY)

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface 1180 FSL & 490 FWL

At proposed prod. zone SAME

UNORTHODOX LOCATION

14 Distance in miles and direction from nearest town or post office*
APPROXIMATELY 3 MILES NORTHEAST OF LOCO HILLS, NM

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line, if any) 490 FT.	16. No. of acres in lease 560	17. Spacing Unit dedicated to this well 40
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 600 FT.	19 Proposed Depth 6100 FT.	20 BLM/BIA Bond No. on file NMB-000197
21 Elevations (Show whether DF, KDB, RT, GL, etc.) 3723' GL	22. Approximate date work will start*	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.
2. A Drilling Plan.
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).
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 Barry W. Hunt	Name *(Printed/Typed)* BARRY W. HUNT	Date 1/9/12

Title
PERMIT AGENT FOR BURNETT OIL COMPANY, INC.

Approved by *(Signature)* /s/ Don Peterson	Name *(Printed/Typed)*	Date FEB 15 2012
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached. APPROVAL FOR TWO YEARS

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

(Continued on page 2)

*(Instructions on page 2)

Roswell Controlled Water Basin

Approval Subject to General Requirements & Special Stipulations Attached

Hold C-104 for NSL Apvl

RECEIVED
FEB 15 2012
NMOCD ARTESIA

SEE ATTACHED FOR CONDITIONS OF APPROVAL

The Burnett Oil Company, Inc. representatives responsible for ensuring compliance of the surface use plan are listed below:

Surface:
Barry W. Hunt – Permitting Agent
1403 Springs Farm Place
Carlsbad, NM 88220
(575) 885-1417 (Home)
(575) 361-4078 (Cell)

Drilling & Production:
Belton Matthews – Burnett Oil Company, Inc.
P.O. Box 188
Loco Hills, NM 88255
(575) 677-2313 (Office)
(575) 703-9601 (Cell)

CERTIFICATION

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 I, or Burnett Oil Company, Inc. 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. Executed this 9th day of January 2012.

Signed: Barry W. Hunt

Printed Name: Barry Hunt
Position: Agent for Burnett Oil Company, Inc.
Address: 1403 Springs Farm Place, Carlsbad, NM 88220
Telephone: (575) 361-4078
E-mail: specialtpermitting@gmail.com
Field Representative: Belton Matthews
Address: P. O. Box 188
Loco Hills, NM 88255
(575) 677-2313 (Office)
(575) 703-9601 (Cell)

BURNETT OIL CO., INC.

September 16, 2011

To Whom It May Concern:

Mr. Barry Hunt is employed by Burnett Oil Co., Inc. to sign as their agent for APD's and Right of Ways in the state of New Mexico and Texas.

If you have any questions please contact Mark Jacoby @817-332-5108.

Sincerely,

Mark Jacoby

Mark Jacoby
Burnett Oil. Co., Inc.
Engineering Manager

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

RECEIVED
FEB 15 2012
NMOCD ARTESIA

Form C-102
Revised July 16, 2010

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-39954	97866	Mat Loco; Glorieta-Yeso

Property Code	Property Name	Well Number
2389	GISSLER "B"	84

OGRID No.	Operator Name	Elevation
03080	BURNETT OIL COMPANY, INC.	3723'

Surface Location

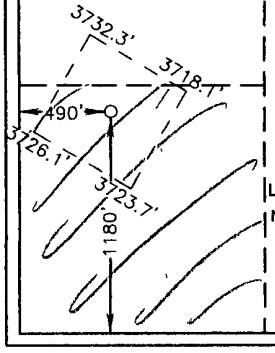
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	11	17 S	30 E		1180	SOUTH	490	WEST	EDDY

Bottom Hole Location If Different From Surface

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

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



SURFACE LOCATION
Lat - N 32.844869097°
Long - W 103.949074886°
NMSPCE- N 671289.218
E 618013.297
(NAD-27)

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Barry W. Hunt 1/9/12
Signature Date

Barry W. Hunt
Printed Name

Email Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

OCTOBER 5, 2011
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL SURVEYOR

Certificate No. Gary L. Jones 7977

BASIN SURVEYS 25365

DRILLING PLAN
BURNETT OIL CO., INC.
GISSLER B #84
VERTICAL LOCO HILLS GLORIETA YESO WELL
FEDERAL LEASE LC02748.
Section 11, Township 17 South, Range 30 East, Eddy County, New Mexico
(Location moved Non Standard due to dunes and Soapberry trees)

1. **Geological Name of Formation with Estimated Depth:**
   a. Alluvium.....Surface
   b. Anhydrite..... 390'
   c. Salt.....530'
   d. Base Salt.....1290'
   e. Yates.....1450'
   f. Seven Rivers..1604'
   g. Queen..... 2222'
   h. Grayburg..... 2670'
   i. San Andres.....2985'
   j. Glorieta.....4460'
   k. Yeso.....4580'

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. Yeso.....	4580'	Oil
g. Total Depth	6100'	

   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. +/- 400' in the Anhydrite, above the Salt and circulate cement to surface.
   We will isolate the oil zones by running 7" casing to total depth and circulating cement to surface.

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

Hole Size	Interval	OD Csg	Weight	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
(MW = 10 PPG IN DESIGN FACTOR CALCULATIONS.)								
See COA 14-3/4"	0'-~~400'~~ 310	10-3/4"	32.75#	ST&C	H40	1.125	1.00	1.80
8-3/4"	0'-6100'	7"	23.00#	LT&C	J55	* 1.125	1.00	1.80

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

4. **Cementing Program (Note Yields and DV Tool Depth if Multiple Stage.)**
   BLM WILL BE NOTIFIED TO HAVE THE OPTION TO WITNESS ALL CEMENTING AND TAG OPERATIONS.

   a. **10-3/4" Surface** Cement to surface Lead with 150 sx Class C cement +10% A-10, + 10#/sx LCM-1 1% CaCl, 0.01 gps FP-6L, 14.6 ppg, 1.67 CF/Sk Yield. Tail with 500 sks Class C cement + 2% CaCl + 0.01 gps FP-6L.14.8 ppg, 1.35 CF/Sx yield. **TOC Surface. Excess cement 100%.**

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 four positions 90°apart to verify cement depth. Appropriate cement volumes will be pumped through 1" to bring cement to surface.

See COA

b. **7" Production Casing**
Stage 1 Cement: 500 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.14.2 ppg, Yield 1.27 CF/Sx. **DV @ approx. 2600'. 30% excess cement**

Stage 2 Cement: Lead with 525 sks (35:65) Poz (Fly Ash): Class C cement + 6% Bentonite + 5 lbs/sx LCM-1 + 0.125 lbs/sx Cello Flake + .01 gps FP-6L + 5% Sodium Chloride,12.6 ppg **Yield 1.89 CF/Sx. Tail** with 100 sx Class C + 1% CaCl + 0.01 gps FP-6L.14.8 ppg, Yield 1.62 CF/Sx, **TOC Surface. 140% excess cement.**
The above cement volumes may be revised pending the caliper measurement from the open hole logs. **Casing design is to bring cement to the surface.**

5. **Pressure Control Equipment:**
The blowout prevention equipment (BOPE) shown in **Drilling Exhibit #1** will consist of a 2000 PSI Hydril Unit (annular) with hydraulic closing equipment. The equipment will comply with Onshore Order #2 and will be tested to 50% of rated working pressure (RWP), and maintained for at least 10 minutes. The 10-3/4" drilling head will be installed on the surface casing and in use continuously until total depth is reached. An independent testing company will be used for the testing. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold having 2000 PSI WP rating.

6. **Proposed Mud Circulation System**

Depth	Mud Wt	Visc	Fluid Loss	Type System
0'-~~400'~~ 310	8.6–9.5			Fresh Water
~~400'~~ – 6100'	10.0 max.			Brine Water

The necessary mud products for weight addition and fluid loss control will be on location at al 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 and breathing equipment will be installed and in operation at drilling depth of 1800' (which is more than 500' above top of Grayburg) until 7" casing is cemented. An H2S compliance package will be on all sites while drilling.

8. **Hydrogen Sulfide Plan and Training**:
Based on our area testing H2S at 100 PPM has a radius of 139' and does not get off our well sites. There are no schools, residences, churches, parks, public buildings, recreation area or public within 2+ miles of our area.

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on each well:

a. The hazards and characteristics of Hydrogen Sulfide (H2S).
b. The proper use and maintenance of personal protective equipment and life support systems.
c. The proper use of H2S 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 (H2S) CONTINGENCY PLAN.**
f. **ATTACHED EMERGENCY CALL LIST FOR ANY ON SITE EMERGENCY.**

In addition, supervisory personnel will be trained in the following areas:

a. The effects of H2S on metal components. If high tensile tubulars are to be used, personnel will be trained in special maintenance requirements.
b. Corrective action and shut-in procedures when drilling or reworking a well, blowout prevention and well control procedures.
c. The contents and requirements of the H2S Drilling Operations Plan and the Public Protection Plan (if applicable.)

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan and the Public Protection Plan (if applicable). This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

a. Protective equipment for essential personnel:

1. Mark II Surviveair (or equivalent) 30 minute units located in the dog house and at the primary briefing area (to be determined.)

b. H2S detection and monitoring equipment:

1. Three (3) portable H2S monitors positioned on location for best coverage and response. These units have warning lights at 10 PPM and warning lights and audible sirens when H2S levels of 15 PPM is reached. A digital display inside the doghouse shows current H2S levels at all three (3) locations.
2. An H2S Safety compliance set up is on location during all operations.
3. **We will monitor and start fans at 10 ppm or less, an increase over 10 ppm results in the shutdown and installation of the mud/gas separator.**

c. Visual warning systems:

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

d. Mud program:

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

e. Communication:

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

f. Metallurgy:

1. All drill strings, casings, tubing, wellheads, Hydril BOPS, drilling spools, kill lines, choke manifold, valves and lines will be suitable for H2S service.
2. All elastomers used for packing and seals shall be H2S trim.

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

a. Any drill stem tests will be based on geological sample shows and planned before spudding.
b. The openhole electrical logging program will be:
   1. Total depth to 1000': Dual Laterolog-Micro Laterolog with Compensated Neutron, Spectral

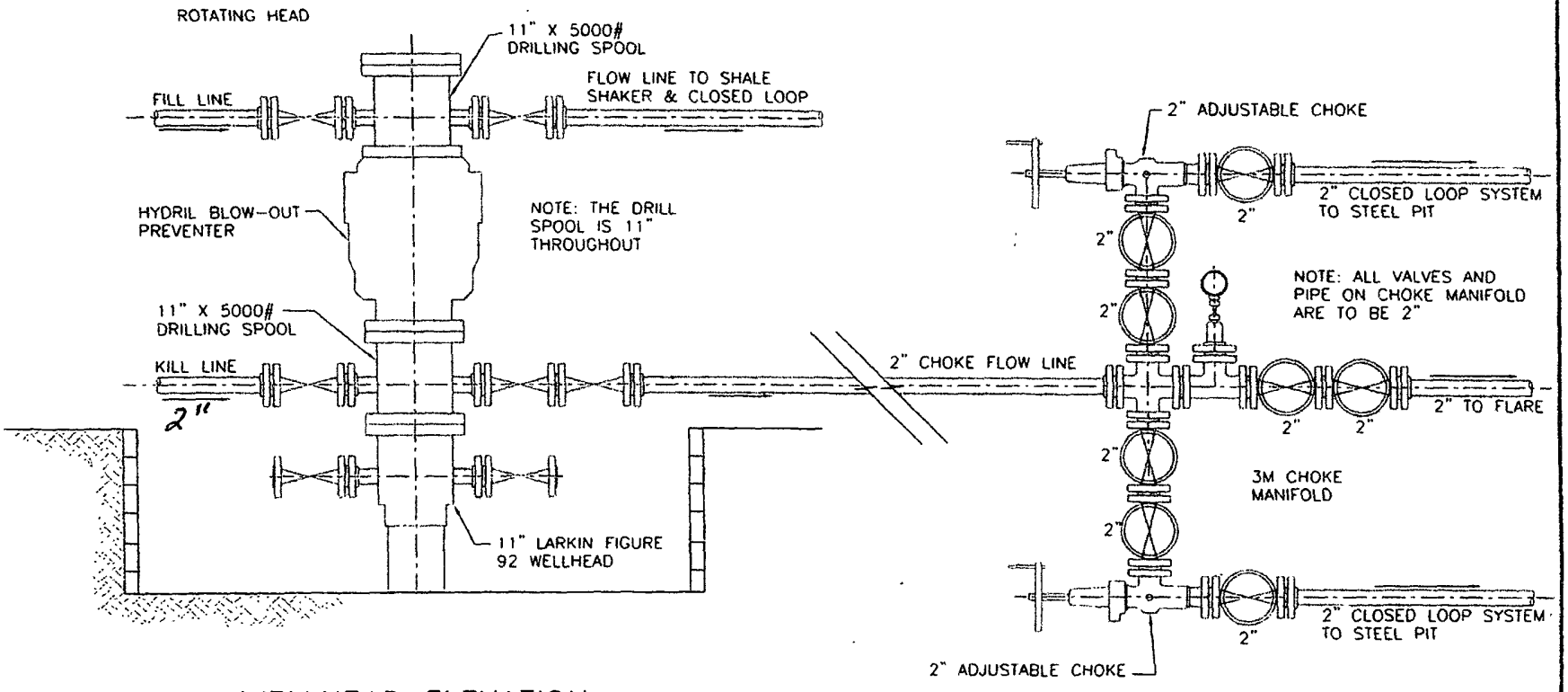
Density log with Spectral Gamma Ray and Caliper.
2. Total depth to Surface: Compensated Neutron with Gamma Ray.
3. Coring program will be planned and submitted on a well by well basis.
4. Additional testing will be done subsequent to setting the 7" production casing. The specific Intervals will be based on log evaluation, geological sample shows and drill stem tests.

10. Potential Hazards:

No abnormal pressures or temperatures are expected. There is known H2S in this area. The operator will comply with the provisions of Onshore Oil and Gas Order #6. No lost circulation is expected to occur. All personnel will be familiar with the safe operation of the equipment being used to drill this well. The maximum anticipated bottomhole pressure is 2715#. This is based upon the following formula of .445 x BH ft. estimate. The anticipated bottom hole temperature is 105°F. This is based upon logs of wells drilled surrounding this well.

11. Anticipated Start Date and Duration of Operation

Road and location construction will begin after BLM has approved the APD and has approved the start of the location work. Anticipated spud date will be as soon as the location building work has been completed and the drilling rig is available to move to the location. Move in and drilling is expected to take approx 25 days. If production casing is run, an additional 60 days would be required to complete the well and install the necessary surface equipment (pumping unit, electricity, flowline and storage facility) to place the well on production.



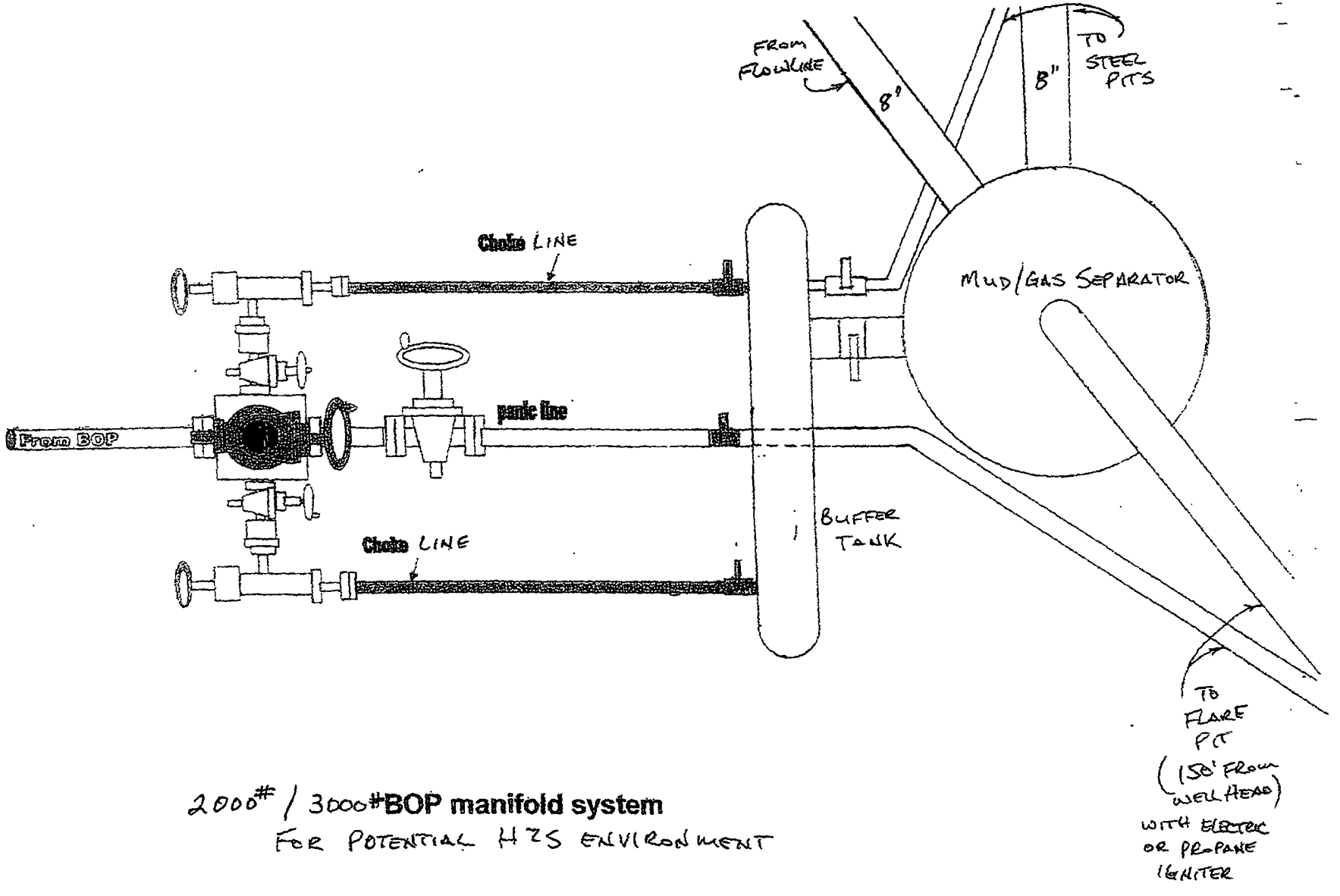
WELLHEAD ELEVATION

CHOKE MANIFOLD PLAN

BUNETT OIL COMPANY, INC.
BLOWOUT PREVENTER & CHOKE MANIFOLD DIAGRAM
2000 PSI WORKING PRESSURE

DRAWING SAVED AS C:\DRAWINGS\2010dwg\10-028\10-028-01.dwg

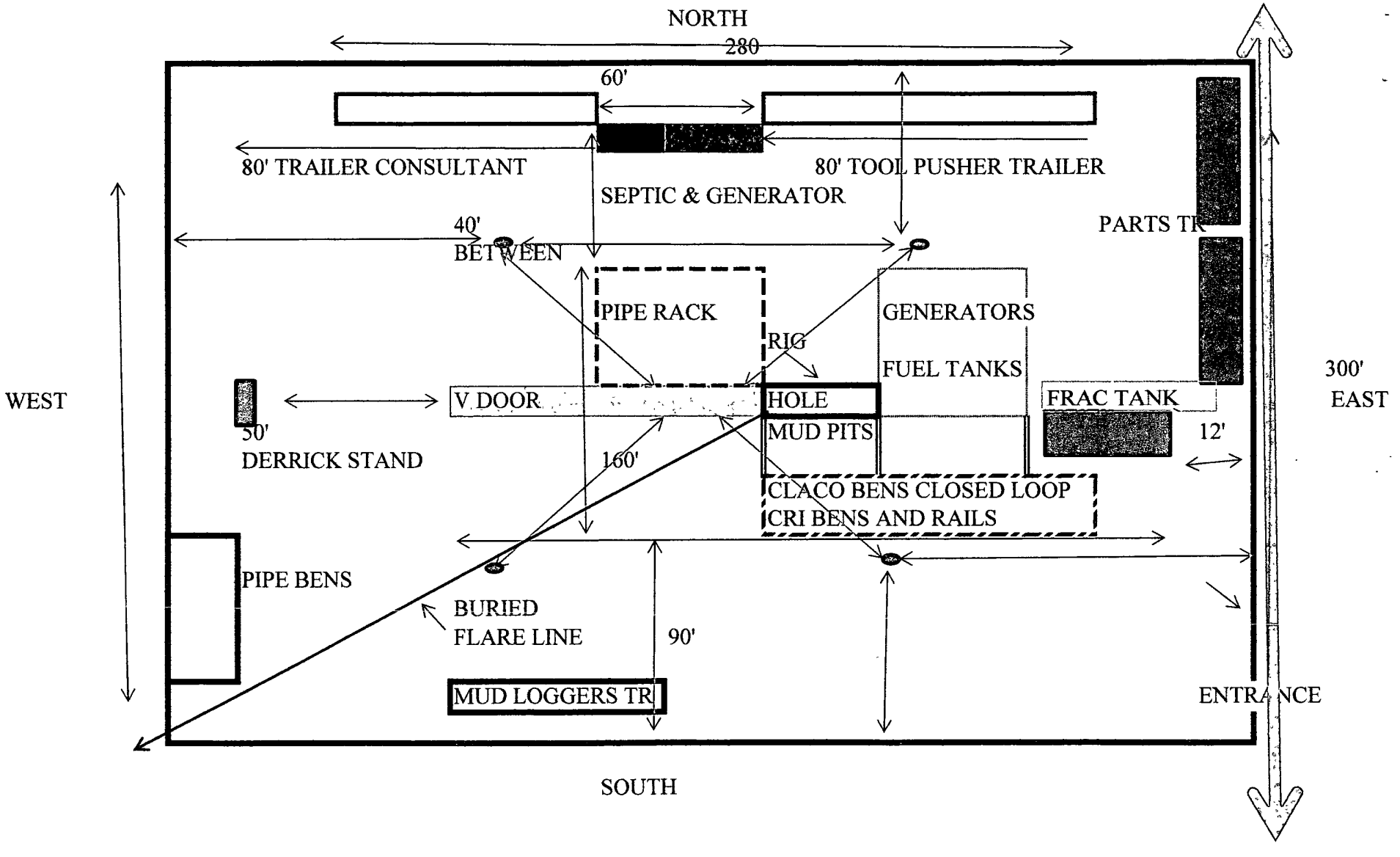
EPS PROJECT NUMBER = 10-028
DATE: JANUARY 29, 2010
REVISION DATE: FEBRUARY 23, 2010



2000# / 3000# **BOP manifold system**

FOR POTENTIAL H2S ENVIRONMENT

Exhibit D


NORTH
280
60'
80' TRAILER CONSULTANT
80' TOOL PUSHER TRAILER
SEPTIC & GENERATOR
PARTS TR
40'
BETWEEN
PIPE RACK
GENERATORS
RIG
FUEL TANKS
WEST
300'
EAST
V DOOR
HOLE
FRAC TANK
50'
DERRICK STAND
MUD PITS
12'
160'
CLACO BENS CLOSED LOOP
CRI BENS AND RAILS
PIPE BENS
BURIED
FLARE LINE
90'
MUD LOGGERS TR
ENTRANCE
SOUTH

HYDROGEN SULFIDE (H2S) CONTIGENCY PLAN

ASSUMED 100 PPM ROE = 3000'

Emergency Procedures

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

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

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO2.) Intentional ignition must be coordinated with the NMOCD and local officials. Additional the New Mexico State Police may become involved. NM State Police shall be the incident command on scene of any major release. Take care to protect downwind whenever there is an ignition of gas.

Characteristics of H2S and SO2

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

Contacting Authorities

Burnett Oil Co., Inc. personal must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind and direction, location of release, etc. **Be sure all is written down and ready to give to contact list (Drilling Exhibit A.) Directions to the site are below.** Burnett's response must be in coordination with the State of New Mexico's Hazardous Materials Emergency Response Plan.

Burnett Office 87 SQUARE LAKE ROAD (CR #220), Loco Hills, New Mexico 88255
(Loco Hills, New Mexico (2 MILES East of Loco Hills On US Hwy 82 TO C#220 Then North On CR# 220 Approx One Mile To Office

BURNETT OIL CO., INC.

DRILLING EXHIBIT

BURNETT OIL CO., INC. EMERGENCY NOTIFICATION LIST

Burnett's New Mexico Office		**(575) 677-2313**
Belton Mathews BOCI District Superintendent	**CELL**	**(575) 703-9601**
BURNETT OIL HOME OFFICE (817) 332-5108		
Mark Jacoby BOCI ENGINEERING MANAGER	CELL	(817) 312- 2751

EDDY COUNTY SHERIFF	**911**	**OR**	**(575) 746-9888**
NEW MEXICO STATE POLICE			(575) 746-2701

Loco Hills Fire Department (VOLUNTEER ONLY)	911 OR	(575) 677 2349
For Medical and Fire		(575) 746-2701 (ARTESIA)

Flight for Life Air Ambulance	(LUBBOCK)	(806) 743-9911
Aerocare Air Ambulance	(LUBBOCK)	(806) 747-8923
Med Flight Air Ambulance	(ALBUQ)	(505) 842-4433
S B Med Svc Air Ambulance	(ALBUQ)	(505) 842-4949

US Bureau of Land Management Carlsbad	(575) 361-2822	(575) 234-5972
New Mexico Oil Conversation Division	ARTESIA	(575) 748-1283
New Mexico Emergency Response Commission	24 HR	(575) 827-9126
New Mexico State Emergency Operation Center		(575) 476-9635
Local Emergency Planning Committee (Artesia)		(575) 746-2122
National Emergency Response Center (Washington, DC)		(800) 424-8802

Boots & Coots IWC	(800) 256-9688
Cudd Pressure Control	(432) 570-5300
Halliburton Svc	(575) 746-2757
B J Svc	(575) 746-2293

THIS MUST BE POSTED AT THE RIG WHILE ON LOCATION.

Burnett Office 87 SQUARE LAKE ROAD (CR #220), Loco Hills, New Mexico 88255
(Loco Hills, New Mexico (2 MILES East of Loco Hills On US Hwy 82 TO C#220 Then North On CR# 220 Approx One Mile To Office.).

H2S Briefing Areas & Alarm Locations

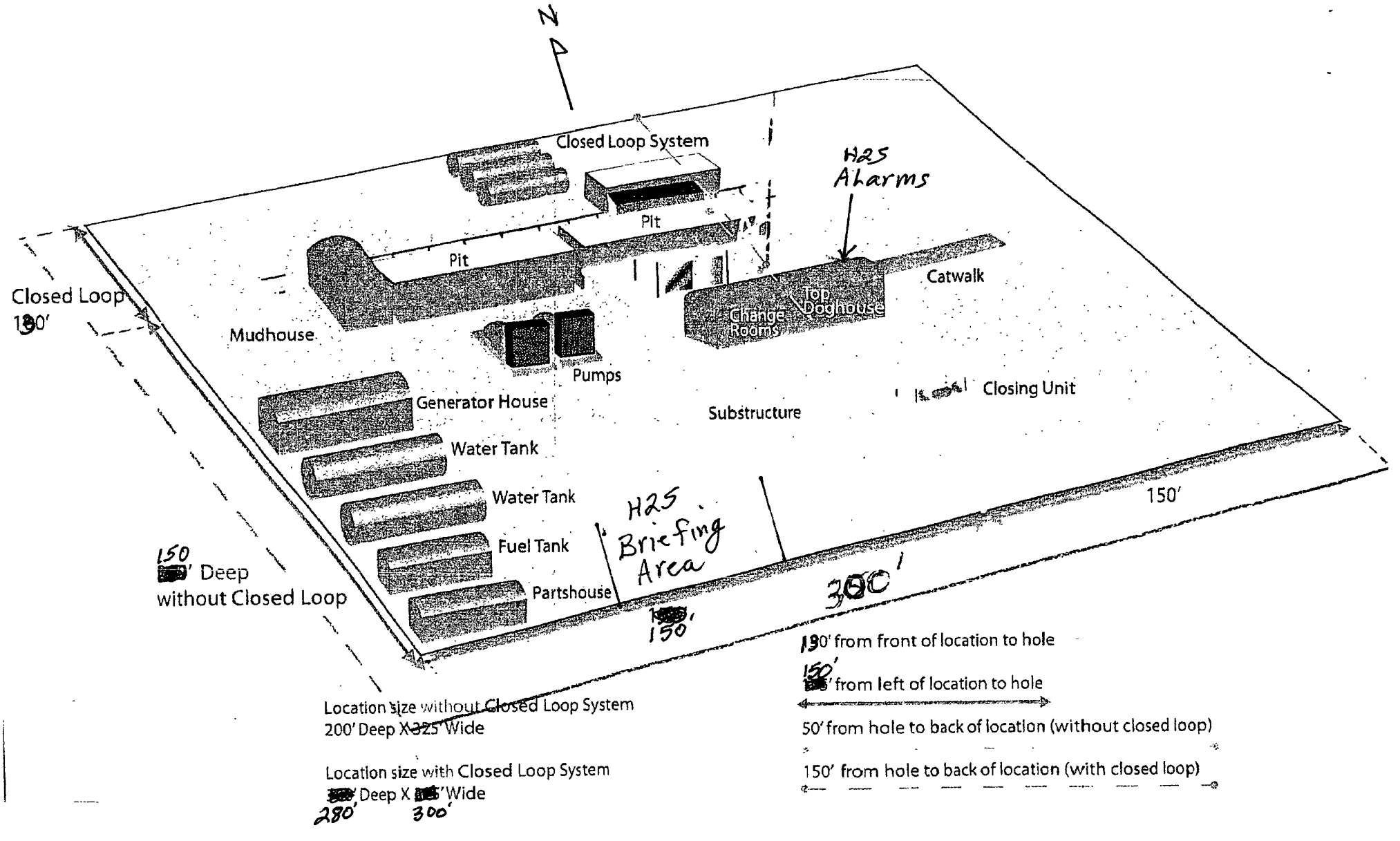
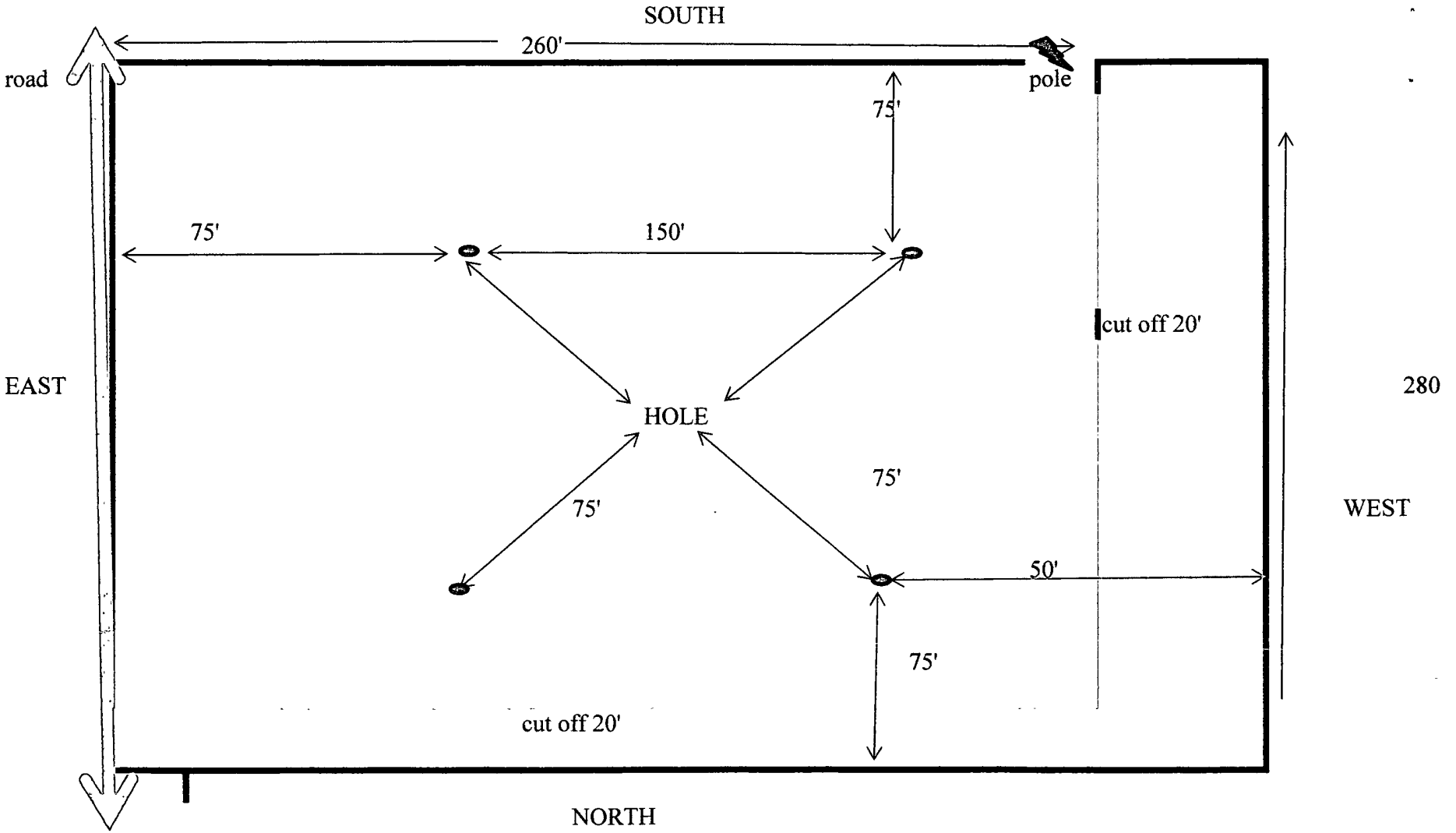


Exhibit E


SOUTH
260'
road
pole
75'
75'
150'
cut off 20'
EAST
280
HOLE
75'
75'
WEST
50'
75'
cut off 20'
NORTH

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Burnett Oil Company, Inc.
LEASE NO.:	NMNM2748
WELL NAME & NO.:	Gissler B 84
SURFACE HOLE FOOTAGE:	1180' FSL & 490' FWL
BOTTOM HOLE FOOTAGE	
LOCATION:	Section 11, T. 17 S., R. 30 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken:
Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

Pad Restrictions

Limit W. edge of pad to 120' from center.

Flag and Avoid Chinaberry trees in project area, especially West.

Avoid hillside North to maximum extent practical.

Pipeline Avoidance

Operator will exercise necessary care to avoid damaging pipelines in the area of operations.

New Mexico one-call is state law. ***Chap 62, Article 14 NMSA.***

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 4 inches in depth. The topsoil will be used 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 theCarlsbad 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. 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 (20) feet.

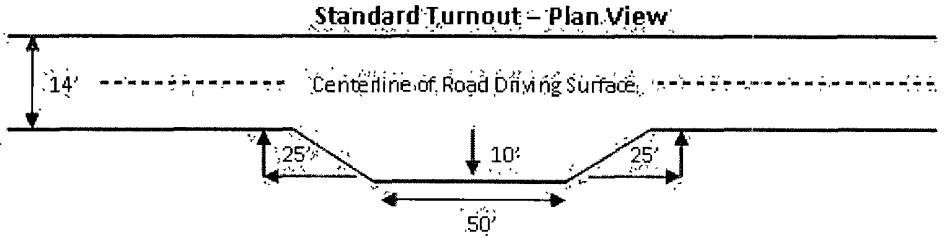
Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

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

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

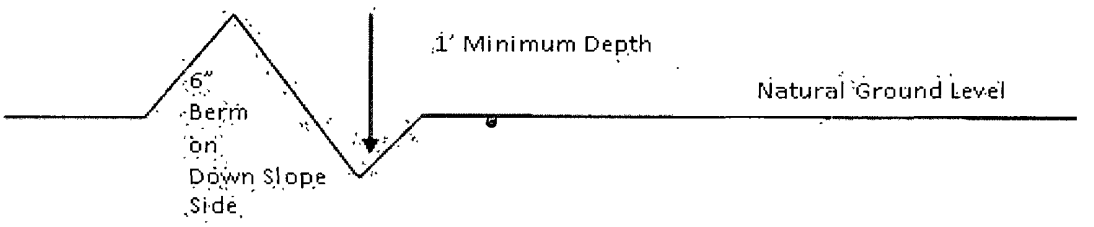
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



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

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

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

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

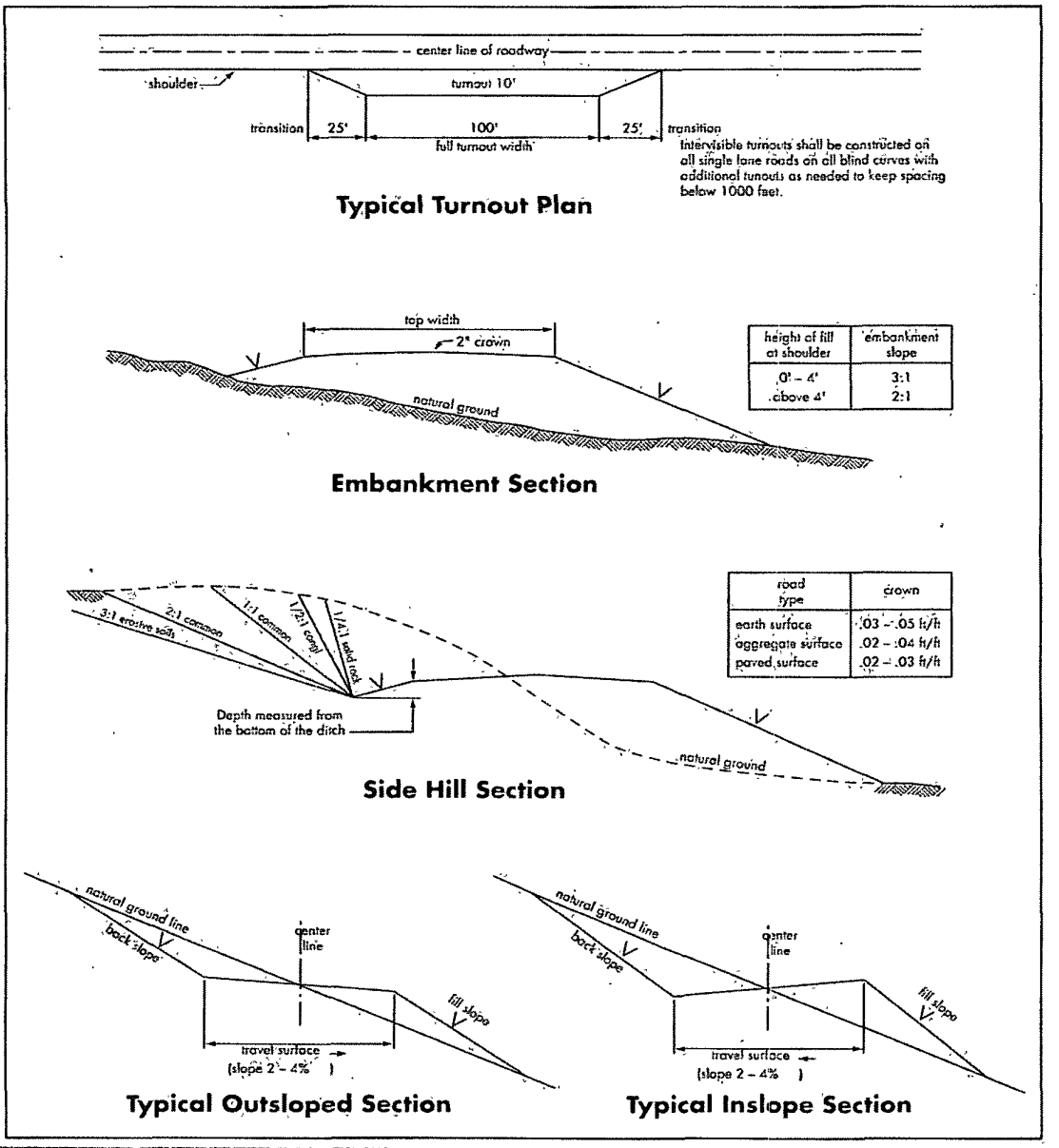
Fence Requirement

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

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

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

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

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

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

1. **Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is encountered in quantities greater than 10 PPM the well shall be shut in and a mud/gas separator and flare line must be extended pursuant to Onshore Oil and Gas Order #6. After detection, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes**

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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

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.**

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

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

1. The **10-3/4** inch surface casing shall be set **at approximately 310 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface.

    a. For the surface casing: If cement does not circulate to the surface, the appropriate BLM office shall be notified and a tag with 1" will be performed at four positions 90 degrees apart to verify cement depth. WOC for tag to be a minimum of 6 hours. BLM Petroleum Engineer Technician to witness tags. If depth is greater than 100' or water is standing in the annulus, remedial cementing will be done. If no water and TOC tag is less than 100', when 100% excess cement of the annulus volume was run on the primary job, ready-mix can be used to bring cement to surface.

    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

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

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

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

    a. First stage to DV tool:

    ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage. **Additional cement may be required – excess calculates to 19%.**

b. Second stage above DV tool:

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

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

C. PRESSURE CONTROL

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

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.

3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

   a. 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. 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 (18 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).

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

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

a. 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.

E. 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.

CRW 021012

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

Surface Pipeline COAs

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the

activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

a. Activities of the holder including, but not limited to construction, operation, maintenance, and
termination of the facility.

b. Activities of other parties including, but not limited to:

(1) Land clearing.
(2) Earth-disturbing and earth-moving work.
(3) Blasting.
(4) Vandalism and sabotage.

c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars ($1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of **25** feet.

6. (a) Where a polyline is laid along a County Road, the operator will lay that polyline ten (10)
feet out from the center of the ditch to prevent obstructing County Maintenance activities.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline will be "snaked" around hummocks and dunes rather then suspended across these features.

9. The pipeline shall be buried with a minimum of **24** inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

16. 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, powerline 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.

IX. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

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 for LPC Sand/Shinnery Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A

Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A
Four-winged Saltbush	5lbs/A

*Pounds of pure live seed:

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