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UNITED STATES

MAY 21 2009

DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

HOBBSOCD

**GENERAL NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an**  
**abandoned well. Use Form 3160-3 (APD) for such proposals.**

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

5. Lease Serial No.

NM ~~0444620~~ 0177517

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2.

1. Type of Well

☒ Oil Well☐ Gas Well☐ Other

2. Name of Operator

CANO PETRO OF NEW MEXICO

3a. Address

801 CHERRY STR UNIT 25, SUITE 3200, FORT WORTH TX 76102

3b. Phone No. (include area code)

817-698-0900

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

1438' FSL & 1348' FWL  
Sec 14, T 08S, R 30E

7. If Unit of CA/Agreement, Name and/or No.

CATO SAN ANDRES UNIT

8. Well Name and No.

CSAU 594

9. API Well No.

NEW WELL

3D-005-29124

10. Field and Pool or Exploratory Area

CATO SAN ANDRES FIELD

11. Country or Parish, State

CHAVES CO.

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other correct APD
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

The attached revised Exhibit E, Location Diagram and Exhibit C, Diagram of Per On Site Inspection, demonstrates the proposed access road of 260.5' on the southwest corner of the drilling pad. Access road stated 150'. The precise length is 260.5'. It also demonstrates an accurate diagram of that signifies a closed loop system on the NW side of the drilling pad. See revised attachments

14. I hereby certify that the foregoing is true and correct.  
 Name (Printed/Typed)

Cindy Chavez

Title Regulatory Coordinator

Signature

Cindy Chavez

Date 03/06/2009

KS

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

/s/ Angel Mayes

Title

Assistant Field Manager,  
Lands And Minerals

MAY 18 2009

Office

ROSWELL FIELD OFFICE

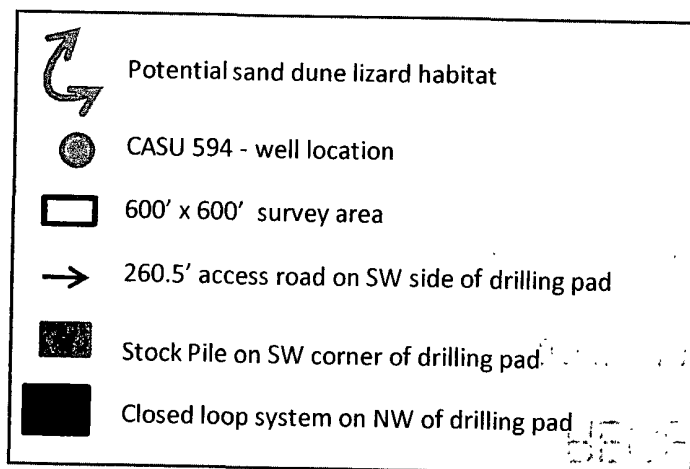
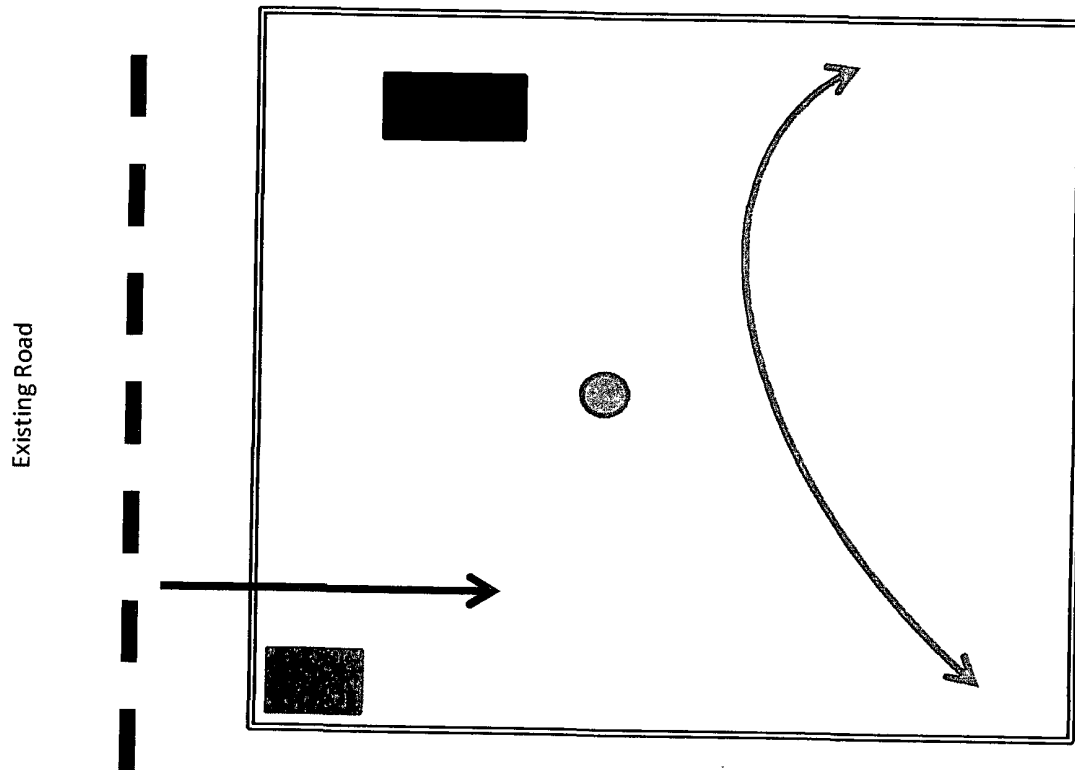
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

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.

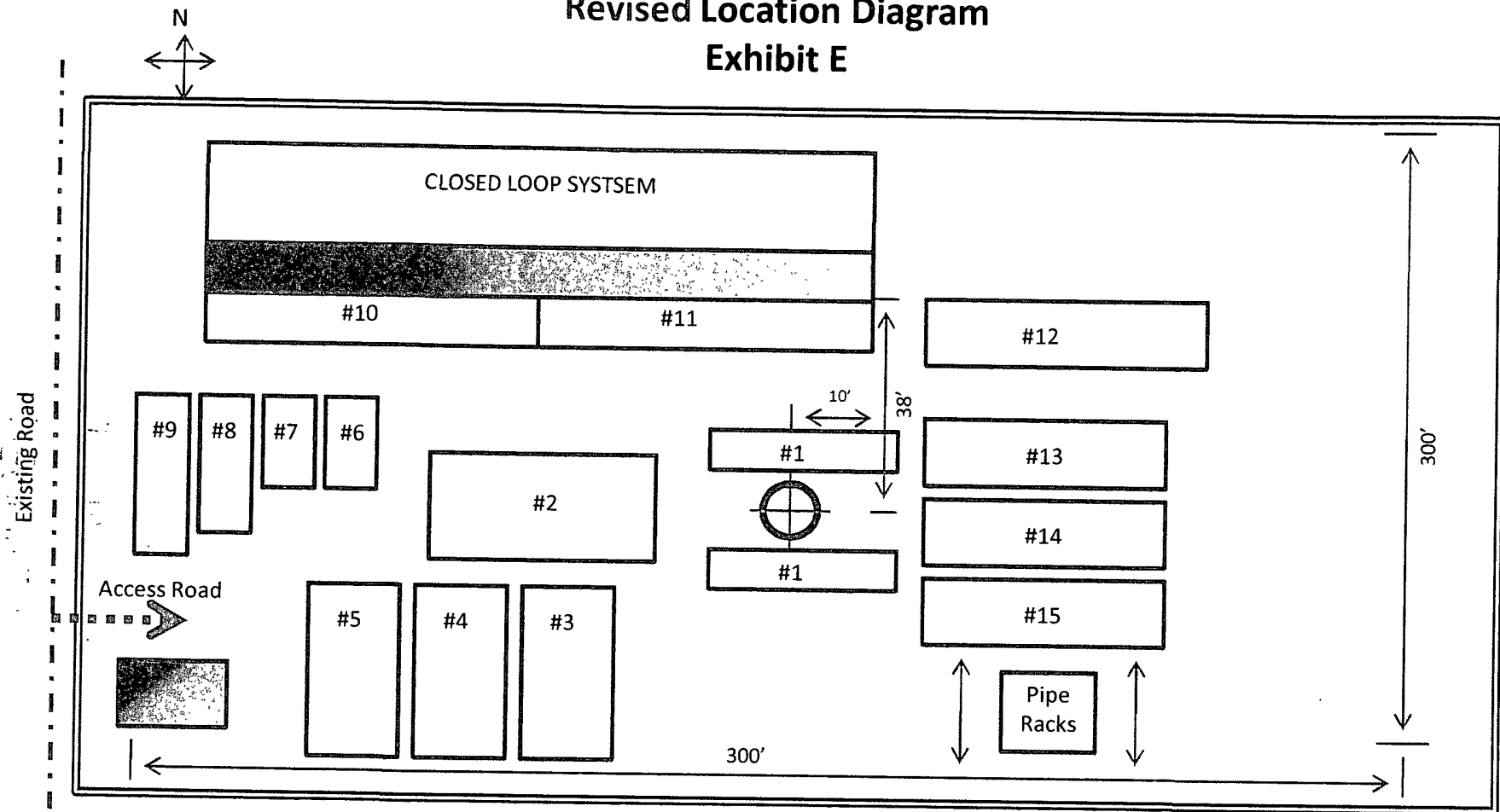
(Instructions on page 2)






# Revised Diagram Per On Site Inspection

## Exhibit C



# Revised Location Diagram Exhibit E



-  CSAU 594 -Well Location
-  600' x 600' Survey Area
-  Stock Pile on SW corner of drilling pad
-  Closed loop system on NW of drilling pad
-  260.5' Access Road on SW of drilling pad

#1 Sub-base	#9 Water Tank—300 bbls
#2 Mud Bolt	#10 Steel Pit #1
#3 Doghouse	#11 Steel Pit #2
#4 Wash Down Tank	#12 Hull Trailer
#5 Light Plant House	#13 Pipe Basket
#6 Mud Pump #2	#14 Collar Basket
#7 Mud Pump #1	#15 Pipe Basket
#8 Mud Pre-mix	

# EXHIBIT A

## PECOS DISTRICT - RFO CONDITIONS OF APPROVAL

OPERATORS NAME: CANO Petro of New Mexico, Inc.  
LEASE NO.: NM-0177517  
WELL NAME & NO: CSAU Federal #594  
SURFACE HOLE FOOTAGE: 1438' FSL & 1348' FWL  
LOCATION: Section 14, T. 8 S., R. 30 E., NMPM  
COUNTY: Chaves County, New Mexico

### 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.

### I. 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).

### II. 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.

### III. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations (access road and/or well pad). Weed control shall be required on the disturbed land where noxious weeds exist, which includes the road, pad, 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.

### IV. CONSTRUCTION

#### A. NOTIFICATION:

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Roswell Field Office at (505) 627-0247 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 Application for Permit to Drill and Conditions of Approval on the well site and they shall be made available upon request by the Authorized Officer.

#### B. TOPSOIL:

The operator shall stockpile the topsoil on the southwest corner of the well pad. The topsoil to be stripped is approximately 6 inches in depth. The topsoil shall be stockpiled adjacent to the constructed well pad within the area surveyed for cultural resources. The topsoil shall be used for interim and final reclamation of the constructed pad and shall not to be used as materials for earthen berms.

#### C. CLOSED LOOP SYSTEM: No reserve pit shall be used.

The operator shall use a **Closed Loop System** instead of a reserve pit. The operator shall properly dispose of drilling contents at an authorized disposal site.

#### D. FEDERAL MINERAL MATERIALS PIT:

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Roswell Field Office at (505) 627-0236.

#### 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 need.

#### **F. ON LEASE ACCESS ROADS:**

##### **Road Egress and Ingress**

The access road shall be constructed to access the southwest corner of the well pad.

##### **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 thirty (30) 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.

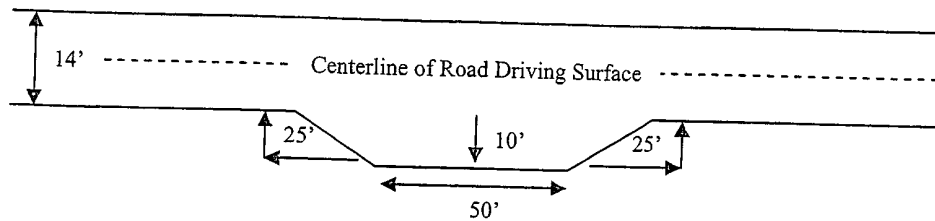
##### **Crowning**

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:

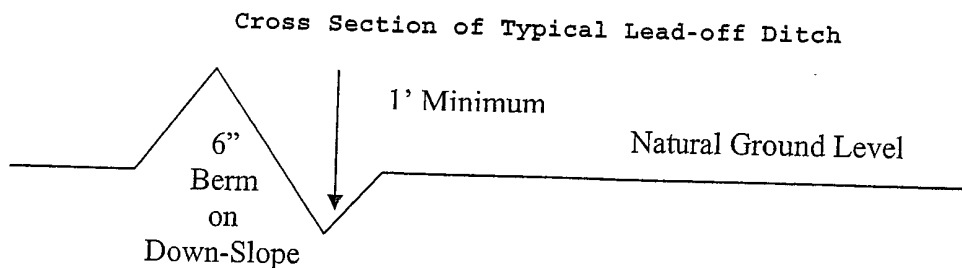
## Standard Turnout – Plan View



### Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.



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

### Formula For Spacing Interval of Lead-off Ditches

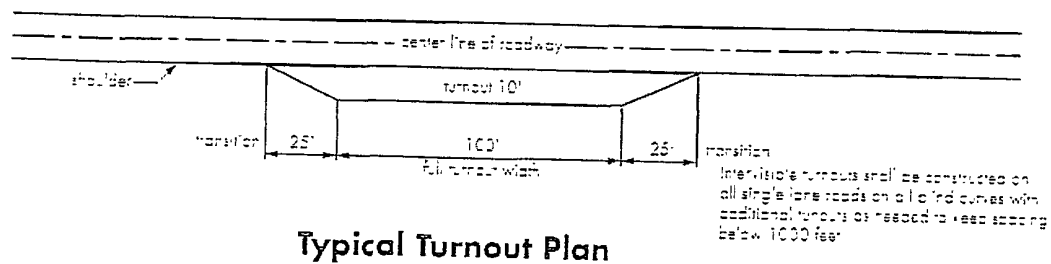
Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

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

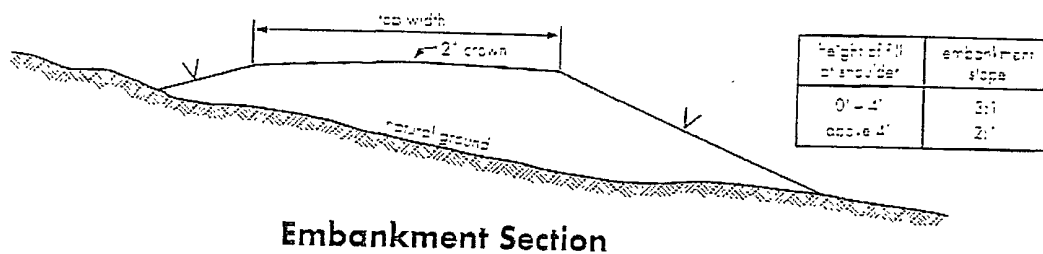
### Public Access

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

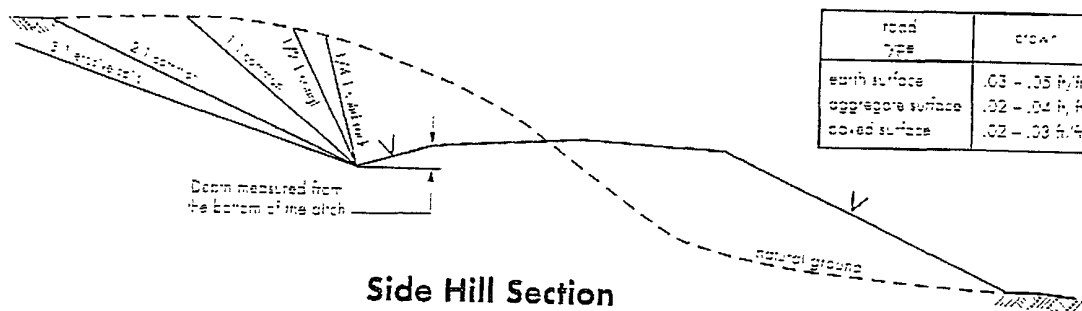
Figure 1 – Cross Sections and Plans For Typical Road Sections



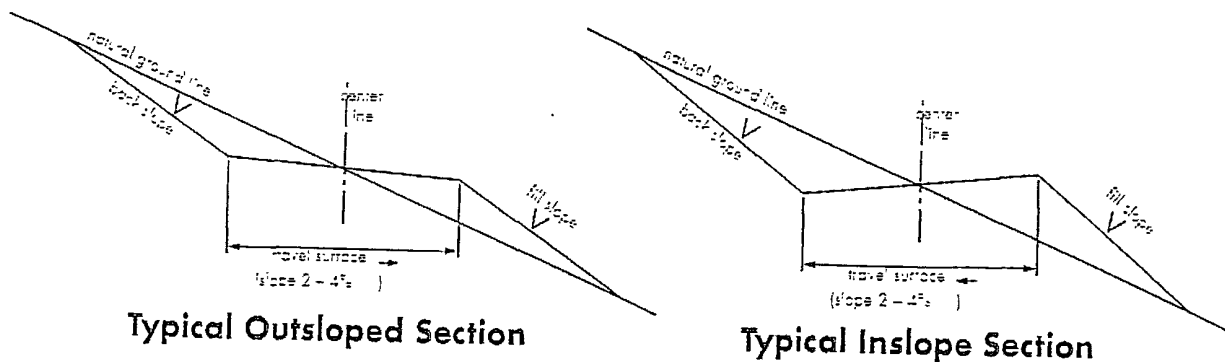
Typical Turnout Plan



Embankment Section



Side Hill Section



Typical Outsloped Section

Typical Inslope Section



## **V. DRILLING**

### **A. DRILLING OPERATIONS REQUIREMENTS**

1. Call the Roswell Field Office, 2909 West Second St., Roswell, NM 88201. During office hours call (575) 627-0205 or after office hours call (575) 910-6024. Engineer on call during office hours call (575) 627-0275 or after office hours call (575) 626-5749.
2. The BLM is to be notified a minimum of 24 hours in advance for a representative to witness:
  - a. Spudding well
  - b. Setting and/or Cementing of all casing strings

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

#### **BOPE Tests**

3. 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.
4. Include the API Number assigned to well by NMOCD on the subsequent report of setting the first casing string.
5. The operator will accurately measure the drilling rate in ft/min to set the base of the usable water protection casing string(s) opposite competent rock. The record of the drilling rate along with the caliper-gamma ray-neutron well log run to surface will be submitted to this office as well as all other logs run on the borehole 30 days from completion
6. Air, air-mist or fresh water and non toxic drilling mud shall be used to drill to the base of the usable water protection casing string(s). Any polymers used will be water based and non-toxic.
7. The operator intends to use a closed loop system and this will reduce the risk of contamination to the ground water. In the event of a leak or the tanks are breached a containment structure around the tanks should minimize contamination.

### **B. CASING**

1. The 8 5/8 inch usable water protection casing string(s) shall be set at approximately 500 feet opposite competent bedrock.

If bedrock is not competent in the interval, the operator may set usable water protection casing opposite any competent bedrock between 400 ft and 500 ft or continue to drill to the next thick competent bedding (i.e. 15 to 25 ft or greater) encountered and cemented to the surface.

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

- b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin or 500 pounds compression 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 compression strength, whichever is greater.
  - d. If cement falls back, remedial action 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 **sufficient tie back at least 200 feet into the 8-5/8 inch surface casing set at approximately 500 feet.** If cement does not circulate, a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
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 8-5/8 inch surface casing shoe shall be **2000 (2M)** psi.
  - a. The results of the test shall be reported to the BLM Roswell Field Office, 2909 West Second Street, Roswell, NM 88201.
  - b. Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
  - c. Testing must be done in a safe workman like manner. Hard line connections shall be required.
  - 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 BLM Roswell Field Office.
  - e. 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.

## **VI. PRODUCTION**

### **B. 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. The soil stockpile shall not be used for this purpose.

#### **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, Juniper Green, from the Standard Environmental Color Chart.

## **VII. INTERIM RECLAMATION**

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting 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.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used in road repairs, fire walls or for building other roads and locations. In addition, 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.

#### **SEED MIXTURE – Closed Loop System**

The operator should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions in the well pad should allow for remedial well operations, as well as, to provide a safe working area.

The disturbed areas shall be seeded as follows:

PECOS DISTRICT, BLM, SEED MIX FOR

Sandy Plains CP-2 Ecological Site, Sand Hills CP-2 Ecological Site, Deep Sand SD-3 Ecological Site

Common Name and Preferred Variety	Scientific Name	Pounds of Pure Live Seed Per Acre
Sand bluestem,	( <i>Andropogon hallii</i> )	0.50 lb.
Little bluestem	( <i>Schizachyrium scoparium</i> )	0.50 lb.
Sideoats grama,	( <i>Bouteloua curtipendula</i> )	1.50 lbs.
Sand dropseed	( <i>Sporobolus cryptandrus</i> )	0.50 lb.
Spike dropseed	( <i>S. contractus</i> )	0.50 lb.
Mesa dropseed	( <i>S. flexuosus</i> )	0.50 lb.
Plains bristlegrass	( <i>Setaria macrostachya</i> )	2.00 lbs.
Desert or Scarlet	( <i>Sphaeralcea ambigua</i> )	0.50 lb.
Globemallow or	( <i>S. coccinea</i> )	
Buckwheat	( <i>Eriogonum</i> spp.)	<u>1.50 lbs.</u>
TOTAL POUNDS PURE LIVE SEED (pls) PER ACRE		8.00 lbs.

CERTIFIED WEED FREE SEED. IF ONE SPECIES IS NOT AVAILABLE, INCREASE ALL OTHER PROPORTIONATELY. NO LESS THAN SIX (6) SPECIES WITH A MINIMUM OF ONE (1) FORB. NO LESS THAN 8.0 POUNDS PLS PER ACRE SHALL BE APPLIED.

### VIII. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the Private Surface Land Owner agreements.

LPC AREAS - All casing shall be cut-off at the base of the cellar or 3-feet below final restored ground level (whichever is deeper). The well bore shall then be covered with a metal plate at least ¼ inch thick and welded in place the well location and identity shall be permanently inscribed. A weep hole shall be left in the metal plate that is welded in place.



**EXHIBIT B**  
**CSAU #594**  
**NM-0177517**  
**1438' FSL & 1348' FWL**  
**SECTION 14, T. 8 S., R. 30 E.**  
**CHAVES COUNTY, NEW MEXICO**

