

RECEIVED

JAN 30 2012

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

N.M. OIL CONSERVATION DIVISION  
811 S. FIRST STREET  
ARTESIA, NM 88210

APPROVED  
Oil No 1004-0137  
Expires March 31, 2007

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a Type of work	<input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER	5 Lease Serial No	NM-108040
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	N/A
2 Name of Operator	JALAPENO CORPORATION	7 If Unit or CA Agreement, Name and No	N/A
3a Address	P.O. BOX 1608 ALBUQUERQUE, NM 87103-1608	8 Lease Name and Well No.	CROOKED BILL FEDERAL #1 [37053]
3b Phone No (include area code)	505-242-2050	9 API Well No	30-005-64156 [65015]
4 Location of Well (Report location clearly and in accordance with any State requirements *)	At surface 430' FSL & 330' FWL At proposed prod zone Same	10 Field and Pool, or Exploratory	WOLF LAKE S.A.; South
11 Sec., T, R M or Blk and Survey or Area	Sec. 6, T-9S, R-28E	12 County or Parish	Chaves County
13 State	NM	14 Distance in miles and direction from nearest town or post office*	approximately 32 miles from Roswell
15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drng unit line, if any)	330' from lease line & 330' from unit line	16 No. of acres in lease	1436.6
17 Spacing Unit dedicated to this well	Unit M; 40 acres	18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	no wells on this lease
19 Proposed Depth	2,450	20. BLM/BIA Bond No on file	B 002462
21 Elevations (Show whether DF, KDB, RT, GL, etc)	3892' GL	22 Approximate date work will start*	**
23 Estimated duration	90 days	24. Attachments	ROSWELL CONTROLLED WATER BASIN

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

- |   |   |
|---|---|
| 1 Well plat certified by a registered surveyor.   | 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 shall be filed with the appropriate Forest Service Office) | 6. Such other site specific information and/or plans as may be required by the authorized officer |

25 Signature <i>Harvey E. Yates, Jr.</i>	Name (Printed/Typed) Harvey E. Yates, Jr.	Date 11/9/11
Title President		

Approved by (Signature) <i>AS/ Angel Mayes</i>	Name (Printed/Typed) ANGEL MAYES	Date JAN 27 2012
Title Assistant Field Manager, Lands And Minerals	Office ROSWELL FIELD OFFICE	APPROVED FOR 2 YEARS

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

Title 18 USC Section 1001 and Title 43 USC 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) \*\* Approximately 90 days after APD approval by BLM and OCD, subject to rig availability.

DECLARED WATER BASIN

CEMENT BEHIND THE 85'  
CASING MUST BE CIRCULATED

WITNESS

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS ATTACHED

DISTRICT I  
1625 N Franch Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax (575) 393-0720  
DISTRICT II  
811 S First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax (575) 748-9720  
DISTRICT III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone (505) 334-6178 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 & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

30-005-64156		Pool Code 65075	Pool Name WOLF LAKE SAN ANDRES; South
Property Code 39053	Property Name CROOKED BILL FEDERAL		Well Number 1
GRID No 26307	Operator Name JALAPENO CORPORATION		Elevation 3892'

Surface Location

UL or lot No	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
7/M	6	9-S	28-E		430	SOUTH	330	WEST	CHAVES

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

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

LOT 4	LOT 3	LOT 2	LOT 1
39.08 AC.	39.94 AC	39.90 AC.	39.86 AC.
LOT 5			
	<p>GEODETIC COORDINATES NAD 27 NME</p> <p>SURFACE LOCATION Y=929773.1 N X=560039.0 E LAT.=33.555761° N LONG.=104.136256° W</p>		
39.19 AC			
LOT 6			
39.25 AC			
LOT 7			
39.32 AC.			

3892.1'

3893.1'

3890.5'

3889.5'

600'

600'

DETAIL

330'

430'

**OPERATOR CERTIFICATION**

I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division

*Harry Gale* 11/9/11  
Signature Date

Printed Name

E-mail 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 supervision, and that the same is true and correct to the best of my belief

OCTOBER 7, 2011

Date of Survey

Signature & Seal of Professional Surveyor:

*GARY G. EIDSON* 11/03/11

Certificate Number 12641

Professional Surveyor Gary G. Eidson 12641

Ronald J. Eidson 3239

AF JWSC W.O 11 11 2125

**Jalapeño Corporation**  
**CROOKED BILL FEDERAL #1**  
**430 FSL & 330 FWL**  
**SECTION 6, T. 9-S, R. 28-E**  
**CHAVES COUNTY, NEW MEXICO**

**APPLICATION FOR PERMIT TO DRILL**

**1. PLATS**

Attached is an original Plat signed by Harvey E. Yates, Jr., president of Jalapeno Corporation and by Donald Eidson of John West Surveying Company.

**2. SURFACE USE PLAN OF OPERATIONS**

(See pages 2-8)

**3. OPERATING CERTIFICATION**

(See page 8)

**4. DRILLING PLAN**

(See page 9)

**5. DRILLING AND OPERATIONS PROGRAM**

(See pages 9-11).

**6. BOND**

Jalapeno Corporation's Bond is B002462.

**7. HYDROGEN SULFIDE DRILLING OPERATIONS PLAN**

(See page 11)

**8. EXHIBITS**

Exhibit #1 – Typical 2,000 psi Pressure System Schematic

Exhibit #2 – Well Site Diagram

Exhibit #3 – Vicinity Map

Exhibit #4 – Directions to Location Map

Exhibit #5 – Location Verification Map

Exhibit #6 – Topography Map

**Jalapeño Corporation**  
**CROOKED BILL FEDERAL #1**  
**430 FSL & 330 FWL**  
**SECTION 6, T. 9-S, R. 28-E**  
**CHAVES COUNTY, NEW MEXICO**

**DRILLING PLAN**

This well will be drilled with an Air Rotary Rig to a depth of approximately 2400 feet. 8 5/8" surface casing will be run to 400 feet and will be set using the rig (see casing information below). We will use air in order to obtain better samples than could be obtained by using mud. If the well is completed, 5 1/2" inch casing will be run and cemented.

We anticipate encountering a fresh water bearing sand somewhere between 308 feet and encountering the top of the Yates at approximately 495 feet and encountering the top of the San Andres at approximately 1675 feet. We anticipate possible oil shows in the San Andres. If we encounter hydrocarbons in sufficient quantity, we will run 5 1/2" casing and cement it to 500 feet above the estimated top perforation. Treatment of the producing zone(s) will be determined after samples and logs are examined, but likely the zones will be given an acid wash treatment.

**DRILLING AND OPERATIONS PROGRAM**

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Jalapeno Corporation submits the following ten items of pertinent information in accordance with U.S. Minerals Management Service requirements.

**1. GEOLOGICAL NAME OF THE SURFACE FORMATION:**

Quaternary fill

**2. ESTIMATED TOPS OF GEOLOGIC MARKERS:**

Yates	495'
Queen	1140'
Grayburg	1238'
San Andres	1675'
Slaughter	2191'

**3. ESTIMATED DEPTH AT WHICH WATER, OIL OR GAS ARE EXPECTED:**

Water	308' approx.
Oil & Gas-Yates	495'
Queen	1140'
San Andres	2275' (P1 zone of Slaughter)

**4. PROPOSED CASING & CEMENT PROGRAMS:**

This well will be drilled using an air Rotary Rig. The production casing will be cemented from TD to only 400 or 500 feet above the top of the P1. The reason is that production likely will come from fractures. Our experience is that if the cement is run to surface its weight pushes the cement into the productive fractures greatly diminishing the likelihood of a successful well.

**Jalapeño Corporation**  
**CROOKED BILL FEDERAL #1**  
**430 FSL & 330 FWL**  
**SECTION 6, T. 9-S, R. 28-E**  
**CHAVES COUNTY, NEW MEXICO**

(See information related to production casing and it's cementing below).

**Proposed Casing and Cement Program**

	Hole Size	Casing Size	Casing weight/foot	Setting Depth	Grade	Sacks of Cement	Estimated TOC
<b>Surface</b> →	<b>12 1/4</b>	<b>8 5/8</b>	<b>24#</b>	<b>400'</b>	<b>J-55</b>	<b>250 SX</b>	<b>Surface</b>
<b>Production</b> →	<b>7 7/8</b>	<b>5 1/2</b>	<b>15.5#</b>	<b>2,400'</b>	<b>J-55</b>	<b>275 SX</b>	<b>1,900'</b>

**5. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:**

During the surface drilling, the hole will be drilled with fresh water and fresh water foam (1gal/1000 gal H2O). If the hole starts sluffing, approximately one gallon of Polymer will be added. During the reverse circulation drilling, fresh water with 4% KCL and liquid Polymer (MF-55) will be used. (Loss circulation material and starch will be on location in case we encounter a loss circulation zone.) Fresh water for drilling and completion will be hauled to location over road shown from a private commercial source.

**6. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:**

All BOP and related equipment will comply with well control requirements as described in Onshore Order No. 2. Minimum working pressure of the blowout preventer and related equipment (BOPE) will be 2000 psi. The BOP will be installed and operational before drilling below the 8 5/8" surface casing and will be tested as described in Onshore Order No. 2. (See Exhibit #1).

The results of the test will be reported to the appropriate BLM office. Testing fluid will be water. No drilling mud will be used in testing. Testing will be done in a safe workman like manner and hard line connections will be required. If this BOP fails to test satisfactorily, it will be repaired or replaced.

**7. AUXILIARY FACILITIES:**

None Required.

**8. TESTING, LOGGING AND CORING PROGRAM:**

The electric logging program will consist of Gamma Ray, CNL Densilog, and Dual Laterolog. Gamma Ray will be run from TD to the surface casing. Other logs will be run from TD to the top of the fluid in the hole.

We plan no DST's.

**Jalapeño Corporation**  
**CROOKED BILL FEDERAL #1**  
**430 FSL & 330 FWL**  
**SECTION 6, T. 9-S, R. 28-E**  
**CHAVES COUNTY, NEW MEXICO**

**9. ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES AND POTENTIAL HAZARDS:**

No abnormal pressures are anticipated.

**10. ANTICIPATED STARTING DATE:**

We anticipate starting drilling as soon as we obtain approval of the Application to Drill by the BLM & OCD, subject also to rig availability. It is anticipated that dirt work on the road and location would start within 2 weeks after APD approval.

**HYDROGEN SULFIDE DRILLING OPERATIONS PLAN**

In accordance with the rules and procedures detailed in OCD Rule 118, it has been determined that the H<sub>2</sub>S level present at the above-mentioned location likely will not exceed 100 ppm, nor do we expect it to exceed that level on the location during drilling operations. However, during drilling the following protective measures shall be implemented by the operator to address this issue:

- The drill crew and pumper shall be issued gas masks which are appropriate for escape in the event of discharge.
- The rig utilized in this operation shall be oriented so the prevailing wind would carry away from the rig floor any discharge, and when practical, location of tank batteries will also be so situated.
- Signage shall be placed onsite which alerts the public to the possible presence of Hydrogen Sulfide gas.
- A directional wind indicator shall be placed on site.
- The drill site shall have a gas detection device, Industrial Scientific Model iTX Monitor Model LEL, placed near the pit downwind from the borehold. The detector will have an alarm sufficient in sound level to alert the crew to the presence of gas.
- The drill crew will have a cell phone.

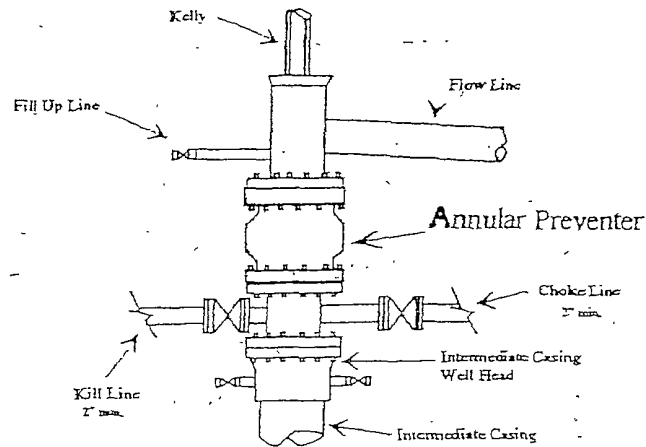
The following site conditions have been noted which affect the application of hazard mitigation in this circumstance:

- The site is not proximate to any public road. The closest public road is approximately 4 miles west (Ponderosa Road) of the location.

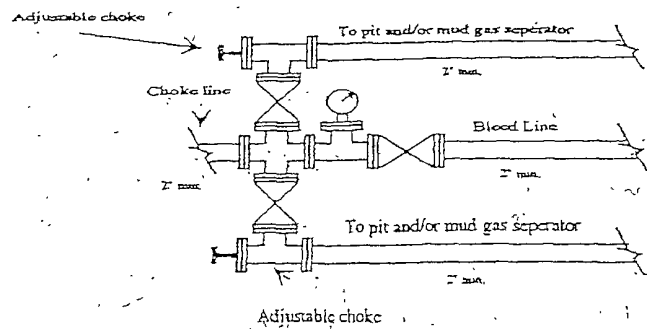
# JALAPENO CORPORATION

## CROOKED BILL FEDERAL #1

2,000 psi Pressure System  
Schematic

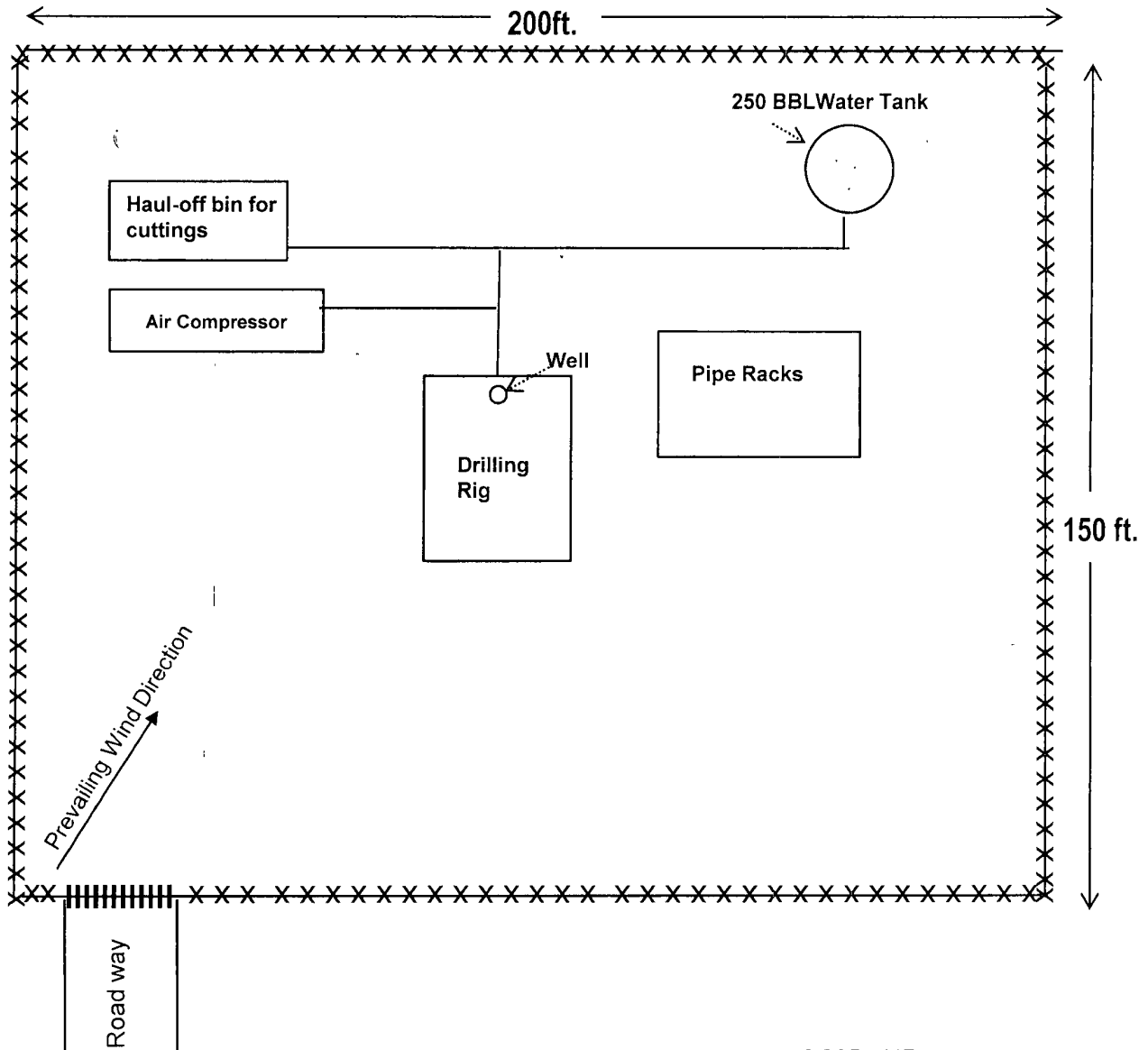
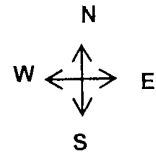


Typical 2,000 psi choke manifold assembly with at least these minimum features



# EXHIBIT #2

## JALAPENO CORPORATION CROOKED BILL FEDERAL #1



### LEGEND

- xxx Fence
- ||||| Cattle guard

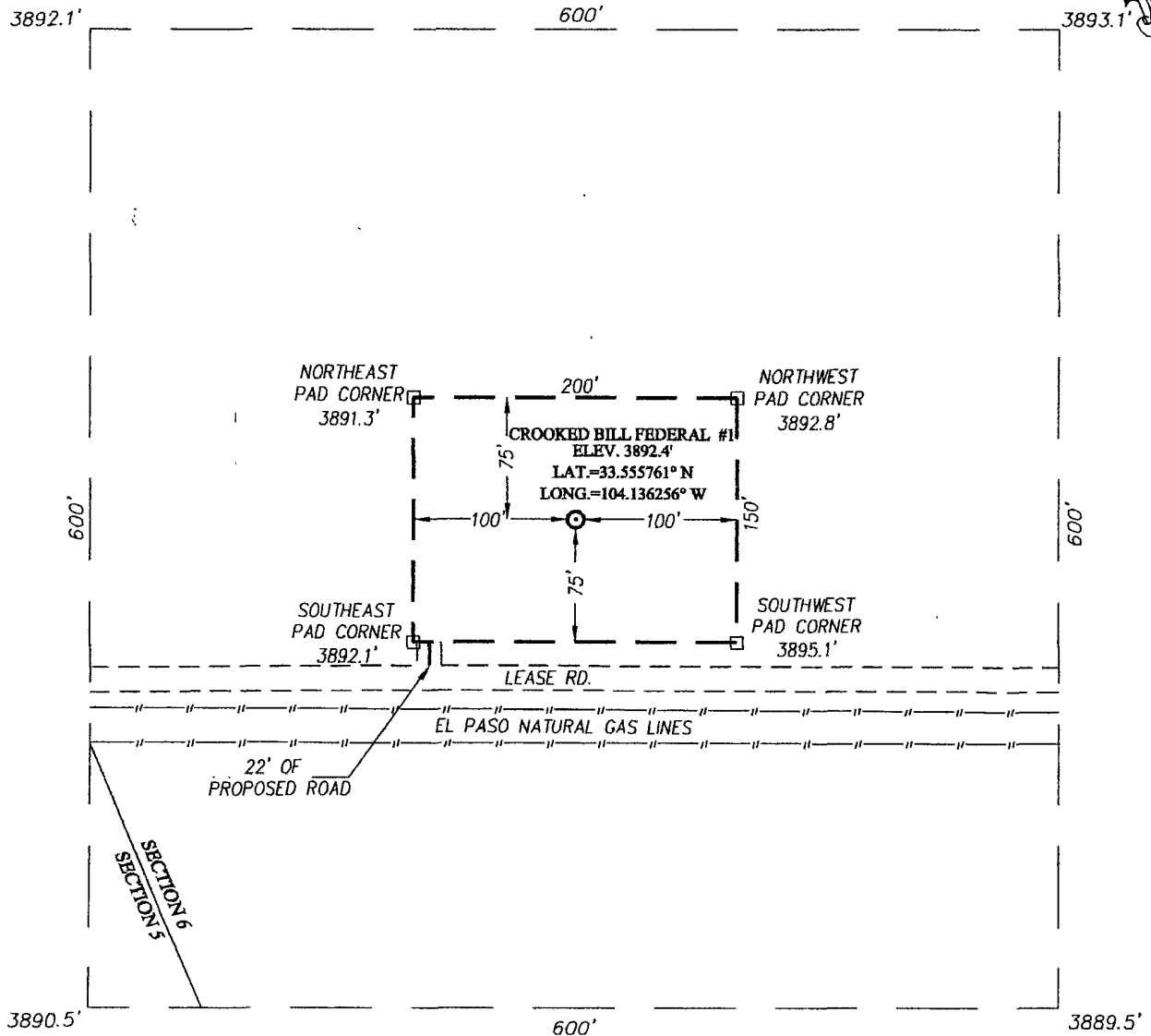
SEC. 6 TWP. 09S RGE. 28E  
 COUNTY CHAVES STATE NEW MEXICO  
 DESCRIPTION 430FSL & 330FWL  
 ELEVATION 3892  
 LEASE NM 108040  
 U.S.G.S TOPOGRAPHIC MAP



## SECTION 6, TOWNSHIP 9 SOUTH, RANGE 28 EAST, N.M.P.M.

EDDY COUNTY

NEW MEXICO

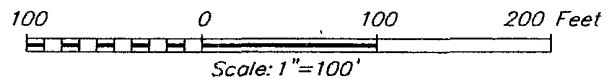


## DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF U.S. HIGHWAY #380 AND PONDEROSA ROAD; GO NORTH ON PONDEROSA ROAD FOR APPROX. 10.4 MILES. TURN RIGHT AT LEASE ROAD (EL PASO PIPELINE ROAD) AND GO SOUTHEAST APPROX. 3.9 MILES. THIS LOCATION IS NORTH OF THE ROAD APPROX. 100 FEET.



PROVIDING SURVEYING SERVICES  
SINCE 1946  
**JOHN WEST SURVEYING COMPANY**  
412 N DAL PASO  
HOBBS, N.M. 88240  
(575) 393-3117

**JALAPENO CORPORATION**

CROOKED BILL FEDERAL #1 WELL  
LOCATED 430 FEET FROM THE SOUTH LINE  
AND 330 FEET FROM THE WEST LINE OF SECTION 6,  
TOWNSHIP 9 SOUTH, RANGE 28 EAST, N.M.P.M.,  
CHAVES COUNTY, NEW MEXICO

Survey Date: 10/07/11

Sheet 1 of 1 Sheets

W.O. Number: 11.11.2125

Dr. By: AF

Rev 1:

Date: 10/31/11

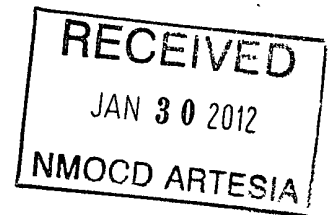
Rel. W.O.:

11112125

Scale: 1"=100'

**EXHIBIT B**  
**PECOS DISTRICT – Roswell Field Office**  
**CONDITIONS OF APPROVAL**

January 27, 2012



OPERATORS NAME: **Jalapeno Corporation**  
LEASE NO.: **NM-108040**  
WELL NAME & NO: **Crooked Bill Federal #1**  
SURFACE HOLE FOOTAGE: **430 FSL & 330 FWL**  
LOCATION: **Section 6, T. 9 S., R. 28 E.**  
COUNTY: **Chaves**  
STATE: **New Mexico**

**GENERAL PROVISIONS**

The approval of these 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.

If, during any phase of the construction, operation, maintenance, or termination of the authorization, any oil or other pollutant should be discharged, impacting Federal land, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of the operator, regardless of fault. Upon failure of the operator to control, dispose of, or clean up such discharge on or affecting Federal land, or to repair all damages to Federal land resulting therefrom, the authorized officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the operator. Such action by the authorized officer shall not relieve the holder of any liability or responsibility.

As stated in 43 CFR 3162.3-2, at no time does the issuance of this APD imply permission to conduct any associated activities off the approved pad area. All surface disturbing activities associated with the drilling of these wells will be restricted to the approved areas

**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 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.

## **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 topsoil will be stripped to approximately 6 inches in depth within the area designated for construction of the well pad. The operator shall stockpile the stripped topsoil in shallow rows adjacent to the constructed well pad. The topsoil will be used for interim and final reclamation of the surface disturbance created by the construction of the well pad. The topsoil will not be used to construct the containment structure or earthen dike that is constructed and maintained on the outside boundaries of the production tanks.

### **C. CLOSED LOOP SYSTEMS:** No reserve pit will be used.

Steel tanks are required for drilling operations: No Pits Allowed.

The operator shall properly dispose of drilling contents at an authorized disposal site.

#### **D. FEDERAL MINERAL MATERIALS PIT:**

Caliche will be obtained from a State of New Mexico pit leased by Jalapeño Corporation, located in Lot 1 of Section 3, T. 9 S., R. 27 E., Chaves County. However, if Caliche is obtained from a federal pit, payment shall be made to the BLM prior to removal of any federal mineral materials. 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 will 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 on lease access road shall be constructed to access the Southwest corner of the Crooked Bill Federal No. 1 well pad, and on the Northwest corner of the Crony Federal No. 1 well pad.

##### **Road Width**

The access road to each well 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 will 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

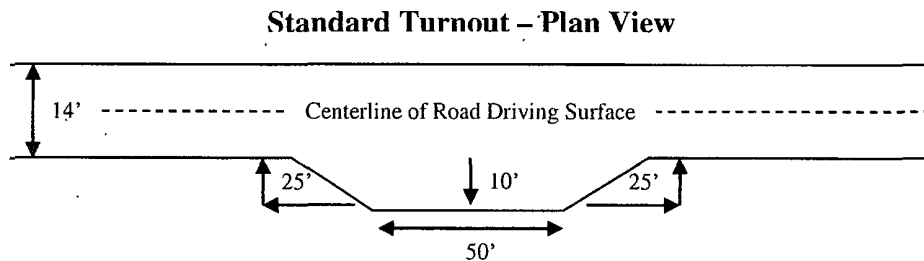
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

## Ditching

Ditching shall be required on both sides of the road.

## Turnouts

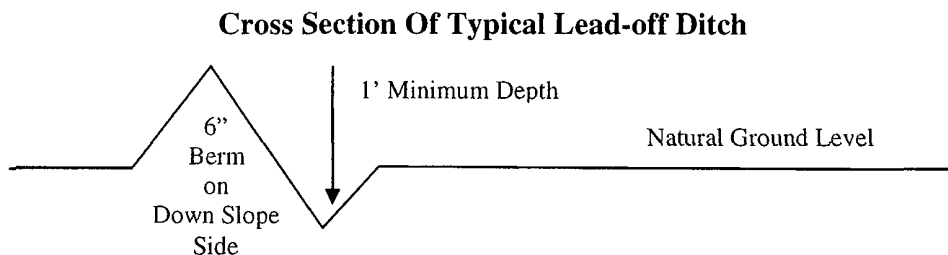
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



## Drainage

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

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

### **Culvert Installations**

Appropriately sized culvert(s) shall be installed at any 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. Gates or cattleguards on public lands will not be locked or closed to public use unless closure is specifically determined to be necessary and is authorized in writing by the authorized officer.

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

### **Fence Requirement**

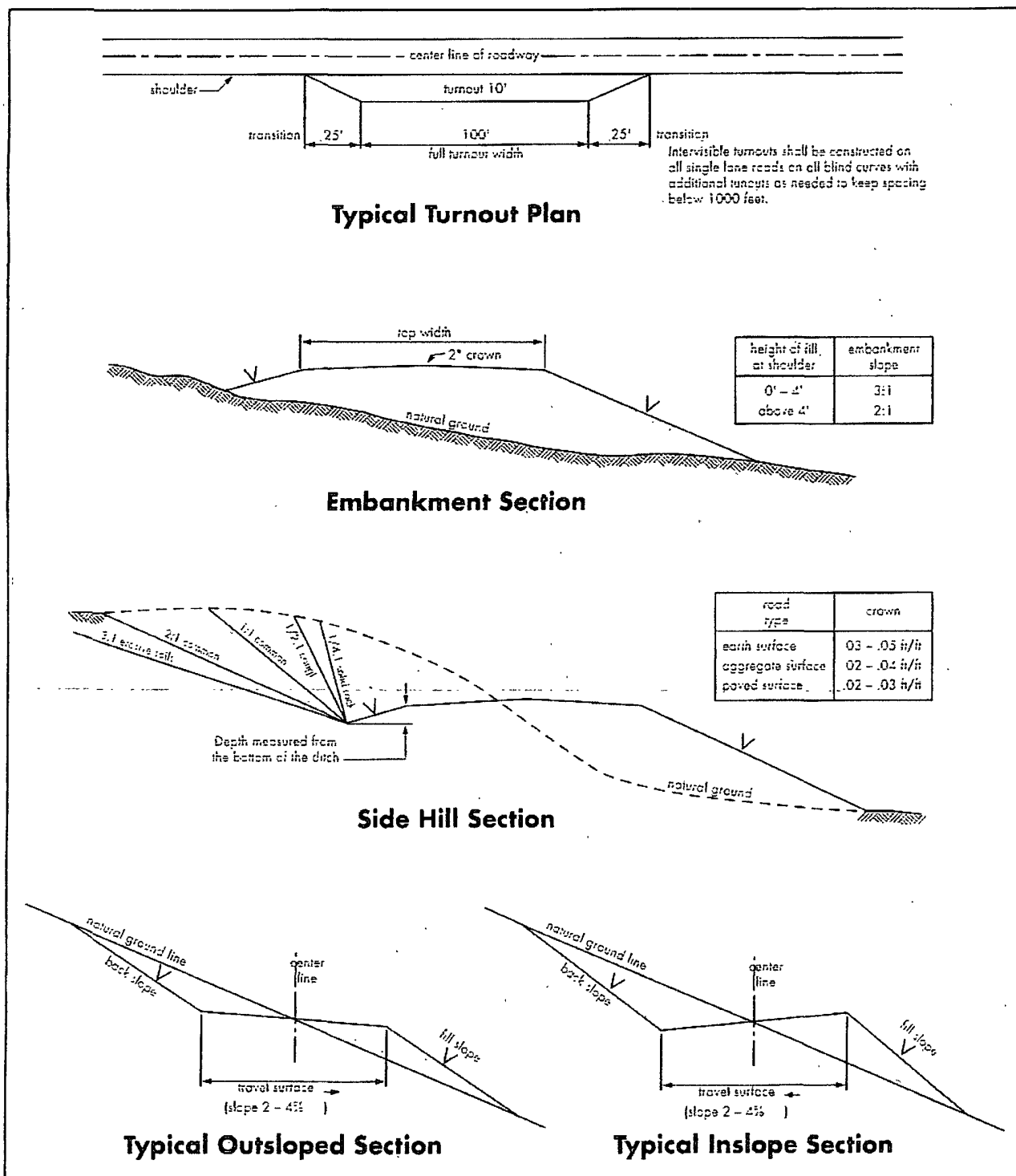
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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

### **Public Access**

Public access along this road will not be restricted by the holder without specific written approval being granted by the authorized officer. Gates or cattleguards on public lands will not be locked or closed to public use unless closure is specifically determined to be necessary and is authorized in writing by the authorized officer.

**Figure 1 – Cross Sections and Plans For Typical Road Sections**



## 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) 420-2832. 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
  - c. BOPE Tests

A follow-up report on Form 3160-5 confirming the date and time of the actual spud shall be submitted to this office within 5 working days from the date of spud.

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. Fresh water and fresh water foam will 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.

### B. CASING

1. The **8-5/8** inch usable water protection casing string(s) shall be set in any competent bed (15' to 25') at an approximate minimum depth of 400 ft. and cemented to the surface.
  - a. If cement does not circulate to the surface, the Roswell Field 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 to tie back 500 feet above the top of the uppermost perforation in the pay zone.** If cement does not circulate to the surface, 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.

4. All casing shall be new or reconditioned and tested casing and meet API standards for new casing. The use of reconditioned and tested casing shall be subject to approval by the authorized officer. Approval will be contingent upon the wall thickness of any casing being verified to be at least 87-1/2 per cent of the nominal wall thickness of new casing.

### **C. PRESSURE CONTROL:**

1. Before drilling below the 8-5/8 inch surface casing shoe, the blowout preventer assembly shall consist of a minimum of One Annular Preventer or Two Ram-Type Preventers and a Kelly Cock/Stabbing Valve.

2. Before drilling below the 8-5/8 inch surface casing shoe, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **2000** psi.

3. The BOPE shall be installed before drilling below the 8-5/8 inch surface casing and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

a. The BLM Roswell Field office shall be notified a minimum of 24 hours in advance for a representative to witness the tests.

b. The tests shall be done by an independent service company.

c. 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. 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 at 2909 West Second Street, Roswell, New Mexico 88201.

e. 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.

f. Testing must be done in a safe workman like manner. Hard line connections shall be required.

#### **D. MUD PROGRAM REQUIREMENTS:**

The drilling operations of this well will be conducted in accordance with the Onshore Oil and Gas Order No. 2 as provided in 43 CFR 3164.1. This includes well control equipment and its testing, mud system and associated equipment, and the casing and cementing.

- a. Sufficient quantities of mud materials shall be maintained at the well site, at all times, for the purpose of assuring well control.
- b. A mud test shall be performed at least every 24 hours after mudding up to determine, as applicable density, viscosity, gel strength, filtration, and PH.
- c. Visual mud monitoring equipment shall be in place to detect volume changes indicating loss or gain of circulating fluid volume.

#### **E. SPECIAL STIPULATION:**

If frac ponds are necessary submit for approval a right-of-way application or sundry notice (Form 3160-5) to the BLM, Roswell Field Office 2909 West Second, Roswell, NM 88201. If frac pond is located on private/State surface and support the enhanced production of federal minerals BLM approval is necessary.

The frac pond will only be authorized to contain freshwater and testing of water quality is required. Additives are not allowed without consent of the authorized officer. If at any time the water in the frac pond becomes polluted with salts or other contaminants, use of the frac pond will cease and desist, and all liquids will be removed from the frac pond and disposed of properly. Mineral materials extracted during construction of the frac pond will be stored on-location and/or used for constructing the frac pond.

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#### **VI. PRODUCTION**

##### **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, Slate Grey (Standard Environmental Color Chart June 2008).

### **VRM Facility Requirement**

Low-profile tanks not greater than eight-feet-high shall be used.

## **VII. 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. Earthwork for interim and final reclamation must be completed within 6 months of well completion or well plugging (weather permitting). The operator shall contact the BLM 48 hours prior to conducting interim reclamation. A Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, is also required prior to conducting reclamation activities.

During reclamation, the removal of caliche is important to increasing the success of re-vegetating the site. Removed caliche may be used in road repairs, fire walls or for building other roads and locations. 100% of all topsoil salvaged during the construction of the well will be redistributed over the reclaimed area. Once completed the operator is required to: notify the Roswell Field Office three days before reseeding is to take place, reseed the location with the BLM approved seed mix listed below, submit a seed label to the BLM on Sundry Notices and Reports on Wells (Notice of Intent) Form 3160-5, once reseeding is completed.

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.

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 MIX FOR

### RPD

Roswell fine sand, 2-25% slope

Jalmar fine sand, 0-2% slope

### FMA

Faskin, loamy fine sand, 0-2% slope

Malmstrom loamy fine sand, 0-2% slope

Sandy Plains CP-2 Ecological Site

Sand Hills CP-2 Ecological Site

<u>Common Name and Preferred Variety</u>	<u>Scientific Name</u>	<u>Pounds of Pure Live Seed Per Acre</u>
Sand bluestem,	( <i>Andropogon hallii</i> )	0.5
Little bluestem var. Pastura	( <i>Schizachyrium scoparium</i> )	0.5
Sideoats grama, var. Vaughn or El Reno	( <i>Bouteloua curtipendula</i> )	1.5
Sand dropseed	( <i>Sporobolus cryptandrus</i> )	0.5
Spike dropseed	( <i>Sporobolus contractus</i> )	0.5
Mesa dropseed	( <i>Sporobolus flexuosus</i> )	0.5
Plains bristlegrass	( <i>Setaria macrostachya</i> )	2.0
Desert or Scarlet Globemallow	( <i>Sphaeralcea ambigua</i> ) or ( <i>S. coccinea</i> )	0.5
Buckwheat	( <i>Eriogonum spp.</i> )	1.5
TOTAL POUNDS PURE LIVE SEED PER ACRE		8.00

If one species is not available

Increase ALL others proportionately, No less than six (6) species with the minimum of one (1) forb.

No less than 8.0 pounds per acre shall be applied.

APPROVED: /s/ Douglas J. Burger

District Manager, Pecos District

## **C. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS**

### **VIII. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS**

- a) Upon abandonment of the well and/or when the access road is no longer in service, a Notice of Intent for Final Abandonment with the proposed surface restoration procedure must be submitted for approval.
- b) 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 and a copy of the release is to be submitted upon abandonment.
- c) Upon abandonment of the well, all casing shall be cut-off at the base of the cellar or 3-feet below final restored ground level (whichever is deeper). A 4-inch pipe, 10 feet in length, shall be installed 4 feet above ground and embedded in cement. The following information shall be permanently inscribed on the dry hole marker: Well name and number, the name of the operator, the lease serial number, the surveyed location (the quarter-quarter section, section, township and range or other authorized survey designation acceptable to the authorized officer; such as metes and bounds).
- d) d. Surface Reclamation must be completed within 6 months of well plugging. If the operator proposes to modify the plans for surface reclamation approved on the APD, the operator must attach these modifications to the Subsequent Report of Plug and Abandon using Sundry Notices and Reports on Wells, Form 3160-5.

### **IX. PIPELINE PROTECTION REQUIREMENT**

Precautionary measures shall be taken by the operator during construction of the access road to protect existing pipelines that the access road will cross over. An earthen berm; 2 feet high by 3 feet wide and 14 feet across the access road travelway (2' X 3' X 14'), shall be constructed over existing pipelines. The operator shall be held responsible for any damage to existing pipelines. If the pipeline is ruptured and/or damaged the operator shall immediately cease construction operations and repair the pipeline. The operator shall be held liable for any unsafe construction operations that threaten human life and/or cause the destruction of equipment.

### **X. WILDLIFE**

Netting storage tanks and installation of cones on separator stacks would alleviate losses of wildlife species. Interim reclamation and final rehabilitation through revegetation would return to wildlife to previous levels.