

ATS-12-1054

RECEIVED

NOV 26 2012

Form 3160-3  
(August 2007)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

NMOCD ARTESIA

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

## APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input type="checkbox"/> DRILL <input checked="" type="checkbox"/> REENTER		5. Lease Serial No. NMLC-054908
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator FAIR OIL, LTD.		7. If Unit or CA Agreement, Name and No. N/A
3a. Address P. O. BOX 689 TYLER, TX 75710		8. Lease Name and Well No. FAIR 17 FEDERAL #1 <39555>
3b. Phone No. (include area code) 903 592-3811		9. API Well No. 30-015-28969
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 1792' FNL & 727' FWL At proposed prod. zone SAME		10. Field and Pool, or Exploratory CEDAR LAKE; GLORIETA-YESO
14. Distance in miles and direction from nearest town or post office* 5 AIR MILES ENE OF LOCO HILLS, NM		11. Sec., T. R. M. or Blk. and Survey or Area SWNW 17-17S-31E NMPM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 593'	16. No. of acres in lease 160	12. County or Parish EDDY
17. Spacing Unit dedicated to this well SWNW	13. State NM	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 411' (Hudson 8)	19. Proposed Depth 6,300'	20. BLM/BIA Bond No. on file NMB000733
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3,712' UNGRADED	22. Approximate date work will start* 09/01/2012	23. Estimated duration 10 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:

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

25. Signature	Name (Printed/Typed) BRIAN WOOD (505 466-8120)	Date 07/31/2012
---------------	---	--------------------

Title CONSULTANT	(FAX 505 466-9682)
---------------------	--------------------

Approved by (Signature)	Name (Printed/Typed)	Date NOV 20 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)

Accepted for record

NMOCD

Roswell Controlled Water Basin

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

DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240  
Phone (575) 393-6161 Fax: (575) 393-0720

DISTRICT II  
811 S. First St., Artesia, NM 88210  
Phone (575) 748-1263 Fax: (575) 748-8720

DISTRICT III  
1000 Rio Brazos Rd., 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 and Natural Resources Department

Form C-102  
Revised August 1, 2011

Submit one copy to appropriate  
District Office

OIL CONSERVATION DIVISION

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-28969	Pool Code 96831	Pool Name CEDAR LAKE; GLORIETA-YESO
Property Code 39555	Property Name FAIR "17" FEDERAL	Well Number 1
GRID No. 65531	Operator Name FAIR OIL, LTD.	Elevation 3712'

Surface Location

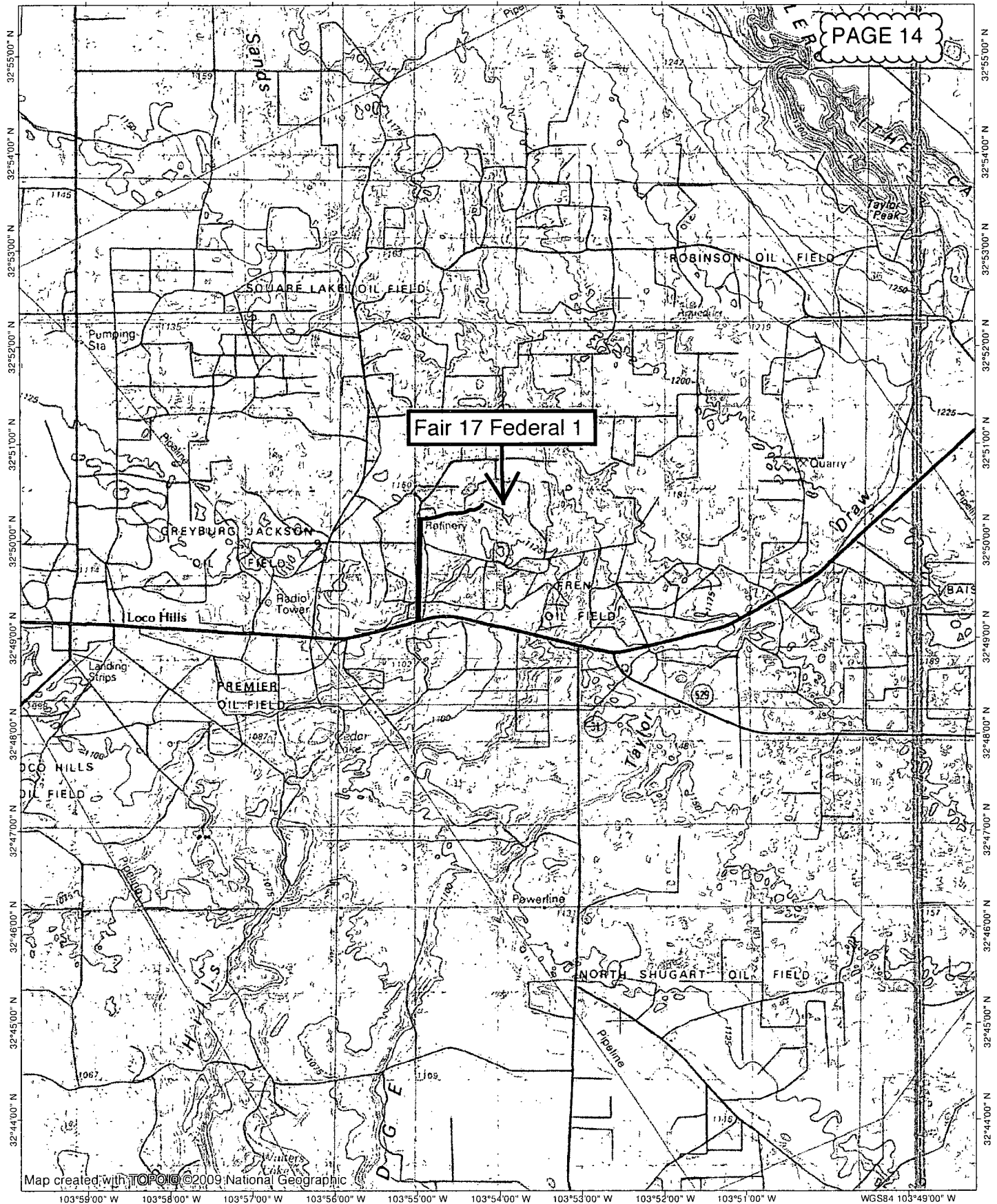
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Bottom Hole Location If Different From Surface

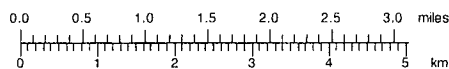
UL or lot No. E	Section 17	Township 17 S	Range 31 E	Lot Idn	Feet from the 1792	North/South line NORTH	Feet from the 727	East/West line WEST	County EDDY
Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.						

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

	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p>Signature  Date 7-29-12</p> <p>brian@permitswest.com</p> <p>Email Address</p>
	<p>SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>Date Surveyed  7977</p> <p>Signature &amp; Seal of Professional Surveyor </p> <p>Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYS 26363</p>



Map created with TOPO! ©2009 National Geographic



TN MN

7.5°

01/08/12

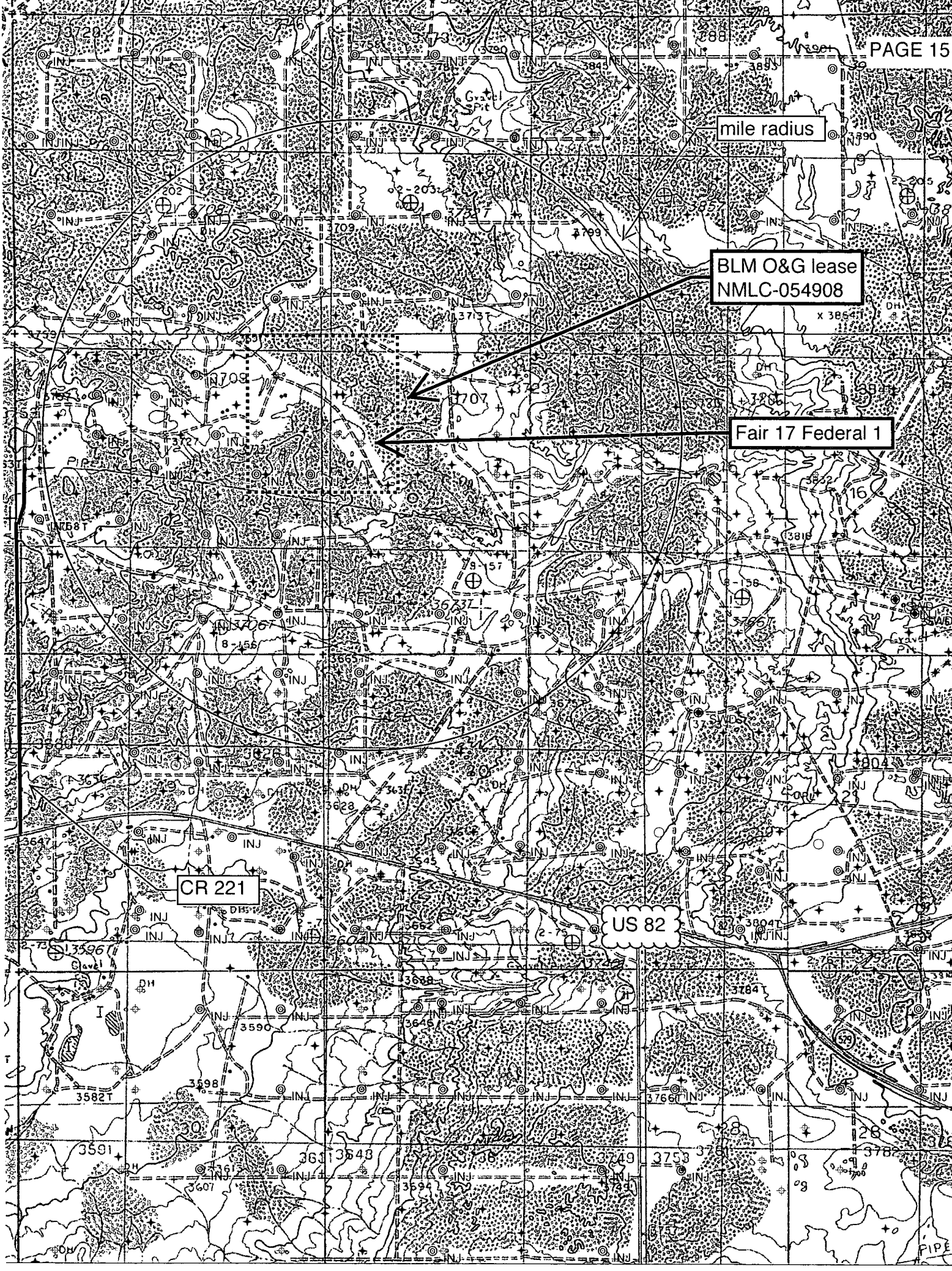
mile radius

BLM O&G lease  
NMLC-054908

Fair 17 Federal 1

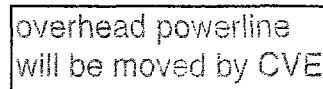
CR 221

US 82



## NEW MEXICO.

PAGE 17



Lat - N 32°50'12.66"  
Long - W 103°53'53.15"  
NMSPCE- N 668454.319  
E 675015.989  
(NAD-83)

FROM THE JUNCTION OF HWY 82 AND SKELLY, GO NORTH ON SKELLY FOR 1.1 MILES TO LEASE ROAD, ON LEASE ROAD GO EAST 0.1 MILES TO LEASE ROAD, ON LEASE ROAD GO NORTH 0.1 MILES TO A "T", GO EASTERLY 0.6 MILES TO A "Y", GO NORTHEAST 0.1 MILES THENCE NORTH TO A "T" GO EAST 0.6 MILES TO PROPOSED WELL LOCATION.

TN  
8181.2

REF: FAIR "17" FEDERAL #1 / WELL PAD VACINITY

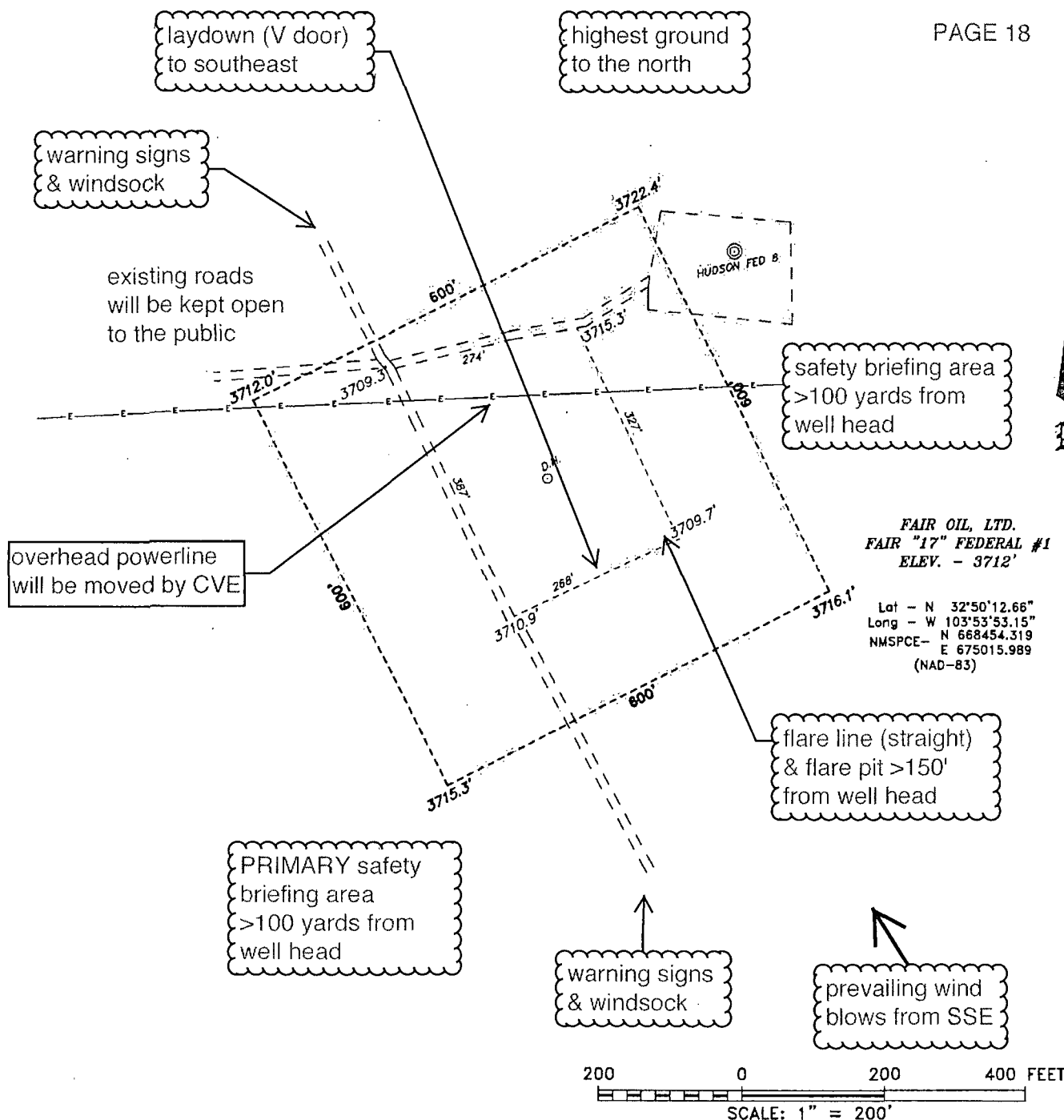
FROM THE NORTH LINE AND 727' FROM THE WEST LINE OF  
SECTION 17, TOWNSHIP 17 SOUTH, RANGE 31 EAST,  
N.M.P.M., EDDY COUNTY, NEW MEXICO.

W.O. Number: 26788	Drawn By: J. SMALL
--------------------	--------------------

Survey Date: 05-15-2012

SECTION 17, TOWNSHIP 17 SOUTH, RANGE 31 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.

PAGE 18



Directions to Location:

FROM THE JUNCTION OF HWY 82 AND SKELLY, GO NORTH ON SKELLY FOR 1.1 MILES TO LEASE ROAD, ON LEASE ROAD GO EAST 0.1 MILES TO LEASE ROAD, ON LEASE ROAD GO NORTH 0.1 MILES TO A "T", GO EASTERLY 0.6 MILES TO A "Y", GO NORTHEAST 0.1 MILES THENCE NORTH TO A "T" GO EAST 0.6 MILES TO PROPOSED WELL LOCATION.

**BASIN SURVEYS** P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 26788 Drawn By: J. SMALL

Date: 06-12-2012 Disk: JMS 26788

**FAIR OIL, LTD.**

REF: FAIR "17" FEDERAL #1 / WELL PAD VACINITY

THE FAIR "17" FEDERAL #1 LOCATED 1792'

FROM THE NORTH LINE AND 727' FROM THE WEST LINE OF

SECTION 17, TOWNSHIP 17 SOUTH, RANGE 31 EAST,

N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 05-15-2012

Fair Oil, Ltd.  
Fair 17 Federal 1  
1792' FNL & 727' FWL  
Sec. 17, T. 17 S., R. 31 E.  
Eddy County, New Mexico

PAGE 1

30-015-28969

Drilling Program

Will re-enter well that was spudded in 1996 and ultimately drilled to 12,321'. It was plugged and abandoned in 2008. Will drill out top 5 plugs, set a CIBP with 50 sacks of cement at 6,300', and then complete in the Paddock and Blinebry.

1. ESTIMATED TOPS

<u>Formation Name</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Elevation</u>
Quaternary sand	0'	10'	+3,712'
Rustler anhydrite	335'	345'	+3,377'
Salado salt top	520'	530'	+3,192'
bottom Salado	1,275'	1,285'	+2,437'
Yates	1,473'	1,483'	+2,239'
Seven Rivers	1,791'	1,801'	+1,921'
Queen	2,405'	2,415'	+1,307'
Grayburg	2,774'	2,784'	+938'
San Andres	3,103'	3,113'	+609'
Glorieta	4,547'	4,557'	-835'
Yeso anhydrite	4,670'	4,680'	-958'
Paddock	4,675'	4,685'	-963'
Blinebry	5,060'	5,070'	-1,348'
Tubb	6,077'	6,087'	-2,365'
Total Depth	6,300'	6,310'	-2,588'

2. NOTABLE ZONES

<u>Gas or Oil Zones</u>	<u>Water Zone</u>	<u>Mineral Zone</u>
Grayburg	none	anhydrite
San Andres		salt
Paddock		
Blinebry		

Fair Oil, Ltd.  
Fair 17 Federal 1  
1792' FNL & 727' FWL  
Sec. 17, T. 17 S., R. 31 E.  
Eddy County, New Mexico

PAGE 2

30-015-28969

Water zones are protected with casing and cement.

### 3. PRESSURE CONTROL (see PAGES 3-5)

A 2,000 psi BOP stack and manifold system will be used. A typical 2,000 system is shown on PAGE 3. If equipment changes, then a Sundry Notice will be filed. System will meet Onshore Orders 2 (BOP) and 6 (H<sub>2</sub>S) requirements.

BOP and choke manifold will be installed and pressure tested before drilling out of the surface casing. Subsequent pressure tests will be performed whenever the pressure seals are broken. BOP and manifold mechanical operating conditions will be checked daily. BOP will be tested at least once every 30 days.

*see COA*  
Ram type preventers and related pressure control equipment will be pressure tested to the working pressure of the stack if a test plug is used. If a plug is not used, then the stack will be tested to the rated working pressure of the stack or 70% of the minimum internal yield of the casing, whichever is less. Annular type preventers will be pressure tested to 50% of their working pressure. All casing strings will be pressure tested to 0.22 psi/foot or 1,500 psi, whichever is greater, not to exceed 70% of the internal yield.

A manual locking device (e. g., hand wheels) or automatic locking devices will be installed on the BOP stack. Remote controls capable of both opening and closing all preventers will be readily accessible to the driller.

Choke manifold and accumulator will meet or exceed BLM standards. BOP equipment will be tested after any repairs. Pipe and blind rams and annular preventer will be activated on each trip. Weekly BOP drills will be conducted with each crew. All tests, maintenance, and BOP drills will be recorded on the rig tower sheets.



Fair Oil, Ltd.  
Fair 17 Federal 1  
1792' FNL & 727' FWL  
Sec. 17, T. 17 S., R. 31 E.  
Eddy County, New Mexico

PAGE 6

30-015-28969

Auxiliary equipment will include:

- upper kelly cock, lower kelly cock will be installed while drilling
- inside BOP or stabbing valve with handle available on rig floor
- safety valve(s) and subs to fit all string connections in use

4. CASING & CEMENT (all casing was new when it was set in 1996 and 2001)

<u>Hole Size</u>	<u>O. D.</u>	<u>Weight (lb/ft)</u>	<u>Grade</u>	<u>Age</u>	<u>Connection</u>	<u>Set Depth</u>
17.5"	13.375"	48	H-40	New	S T & C	600'
12.25"	8.625"	24	S-80/J-55	New	L T & C	4,700'
7.875"	5.5"	17	S-95/P-110	New	no report	11,492'

Surface casing was cemented to the surface in 1996. Lead cement consisted of 350 sacks Halliburton light + 5 pounds per sack gilsonite + ½ pound per sack Flocele® + 3% CaCl<sub>2</sub> mixed at 1.88 cubic feet per sack and 12.8 pounds per gallon. Tailed with 200 sacks Class C + 2% CaCl<sub>2</sub>. No yield or weight was reported. Circulated 105 sacks to the pit. WOC = 18 hours. Casing was tested to 1,000 pounds for 30 minutes.

Intermediate casing was cemented in 1996 to 280' according to a temperature survey. Lead cement consisted of 1,550 sacks Howco lite + 5 pounds per sack gilsonite + ¼ pound per sack Flocele® mixed at 2.05 cubic feet per sack and 12.6 pounds per gallon. Tailed 250 sacks Class C + 2% CaCl<sub>2</sub>. No yield or weight was reported. WOC = 18 hours.

Due to disappointing Devonian results, the well was plugged and abandoned by Burns Operating in 1996. Ten plugs were set between 12,321 and the surface. Burns did not run production casing.

Fair Oil, Ltd.  
Fair 17 Federal 1  
1792' FNL & 727' FWL  
Sec. 17, T. 17 S., R. 31 E.  
Eddy County, New Mexico

PAGE 7

30-015-28969

Marbob re-entered the well in 2002 and drilled to 11,500' to test the Morrow. Production casing was set at 11,492'. First ~~stage~~ stage was cemented with 250 sacks Super H, of which 112 sacks circulated to the pit. Second stage was cemented with 400 sacks H/L. Tailed with 200 sacks Super H. No yield or weight was reported for either string. Temperature survey indicated TOC was at 2,500'. WOC = 18 hours. Casing was tested to 1,500 pounds. Marbob subsequently tested the Morrow, Atoka, Strawn, Cisco, and Wolfcamp over a three-year period.

Marbob plugged and abandoned the well in 2008. Plugging details are:

8187' - 7950': CIBP, plugging mud, & 30 sacks Class C

6830' - 6665': 25 sacks Class C

4750' - 4430': 25 sacks Class C

2612' - 2161': 25 sacks Class C

1380' - 1175': 35 sacks Class C

650' - 344': 70 sacks Class C

60' - GL: circulate 20 sacks to surface

See  
COA

##### 5. MUD PROGRAM

Ten-pound brine will be used.

---

##### 6. CORES, TESTS, & LOGS

No cores, drill stem tests, or logs are planned. Compensated neutron, laterolog micro-CFL, and borehole compensated sonic logs are on file with the NMOCD. Fair will run a cased hole gamma ray log to determine perforation locations.

Fair Oil, Ltd.  
Fair 17 Federal 1  
1792' FNL & 727' FWL  
Sec. 17, T. 17 S., R. 31 E.  
Eddy County, New Mexico

PAGE 8

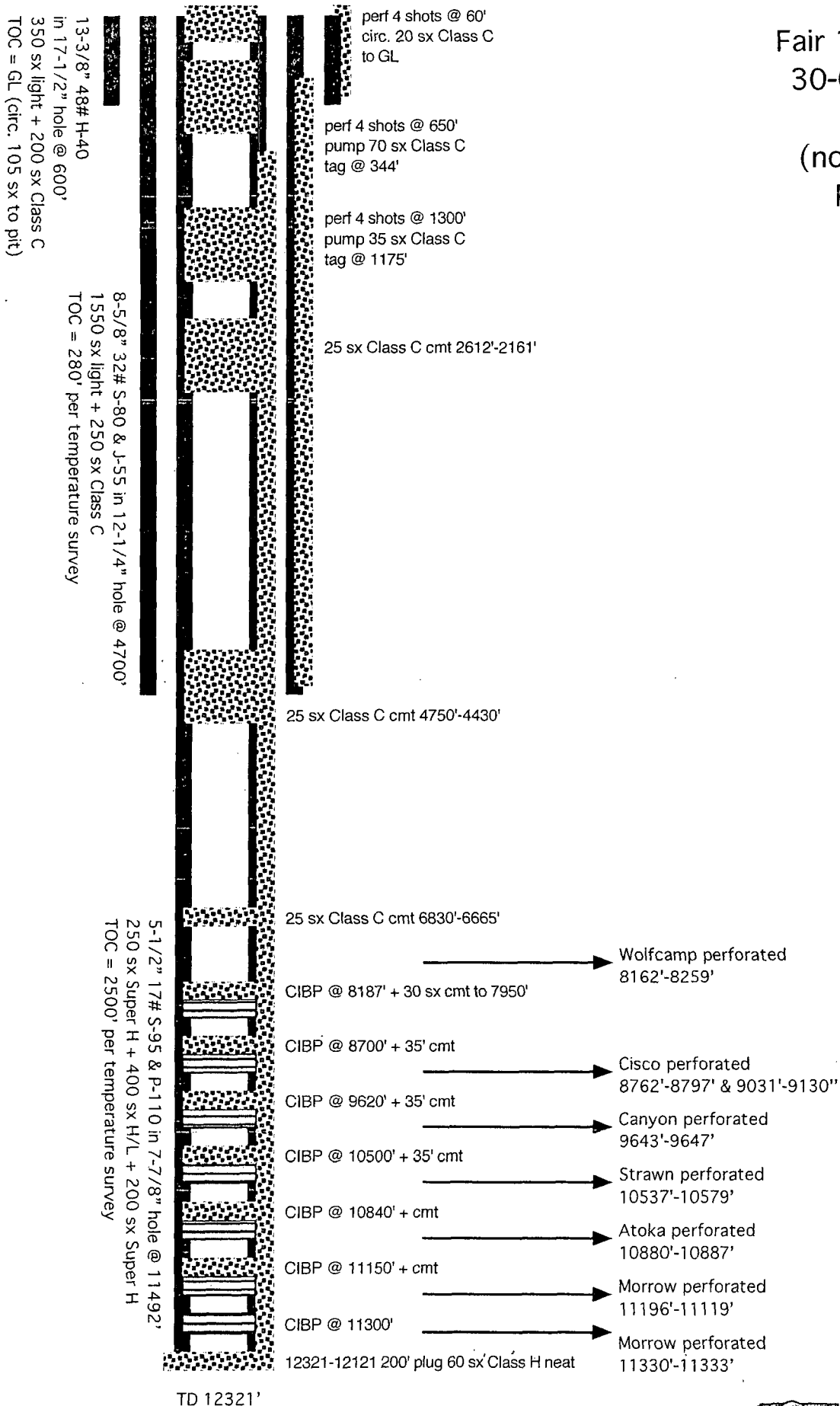
30-015-28969

7. DOWN HOLE CONDITIONS

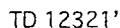
No abnormal pressures or temperatures are expected. Hydrogen sulfide is expected in the Grayburg. H2S monitoring equipment will be on the rig floor and air packs will be available before the Grayburg plug is drilled. An H2S drilling operations contingency plan is attached. Maximum expected bottom hole pressure will be  $\approx 2,709$  psi.

8. OTHER INFORMATION

The anticipated spud date is upon approval. It is expected it will take 3-5 days to drill and 3-5 days to complete the well.



~~PROPOSED~~  
(not to scale)  
Page 21

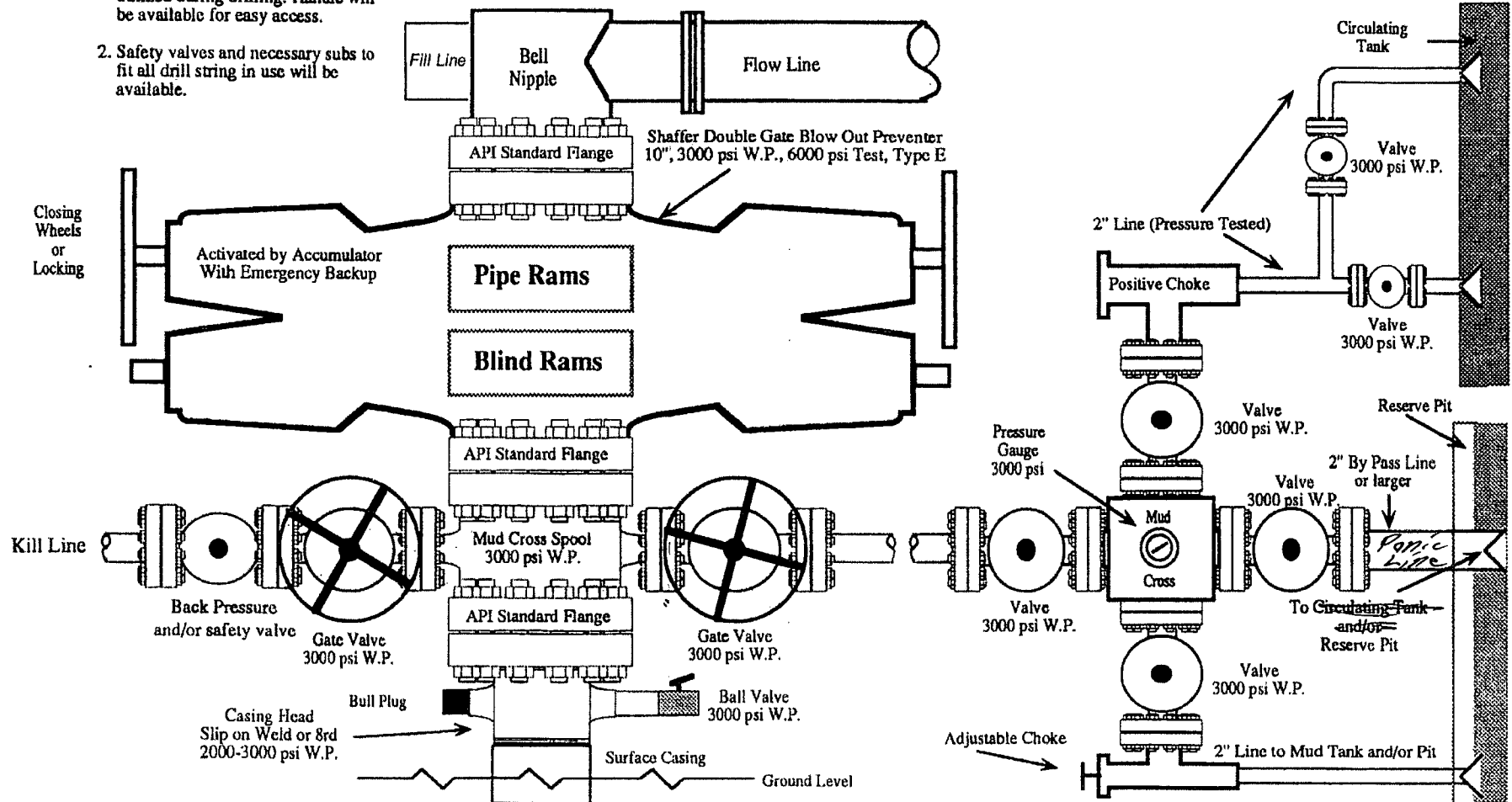


# 2,000 PSI BOP SYSTEM

PAGE 3

Note: 1. An upper Kelly cock valve will be utilized during drilling. Handle will be available for easy access.

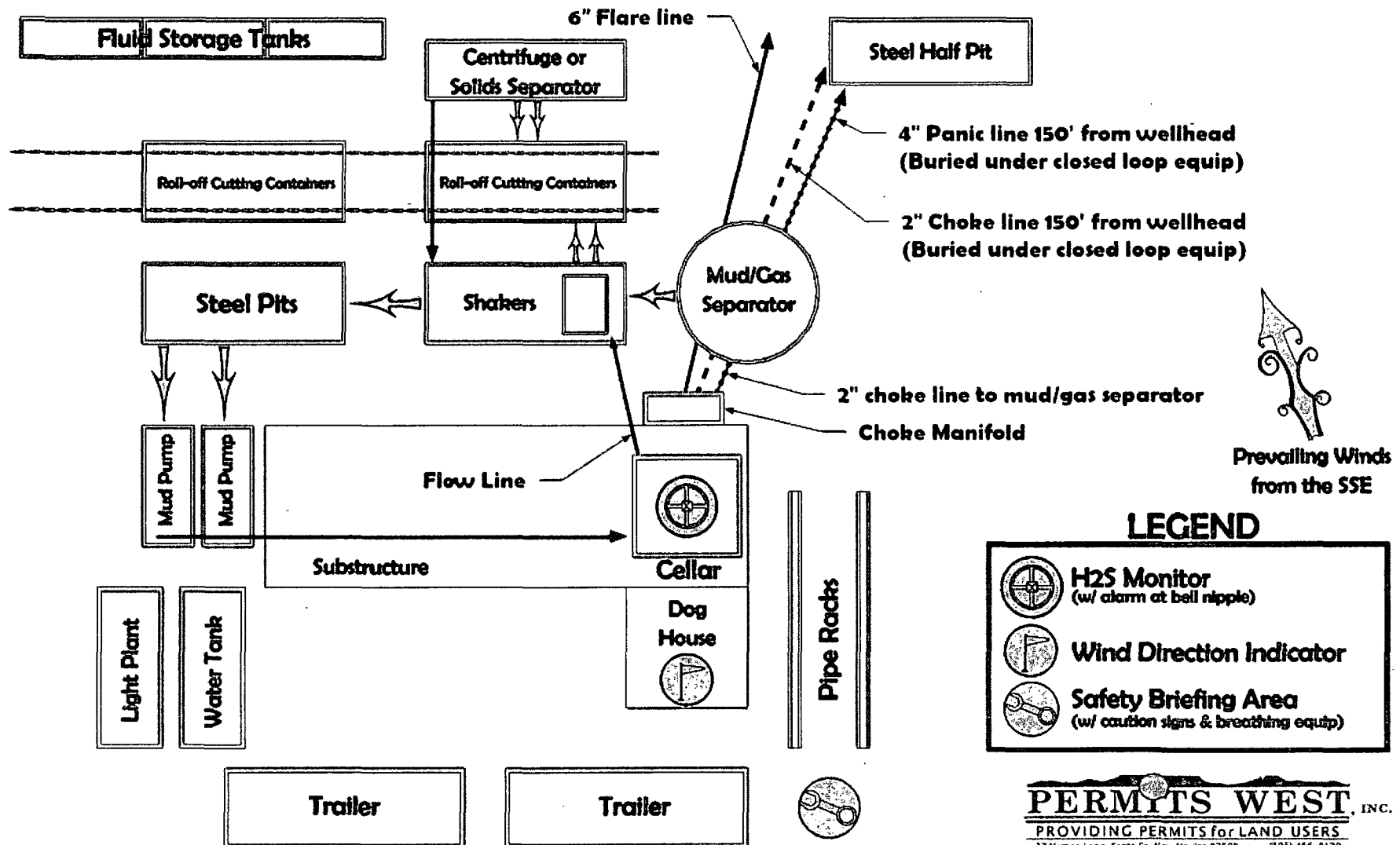
2. Safety valves and necessary subs to fit all drill string in use will be available.

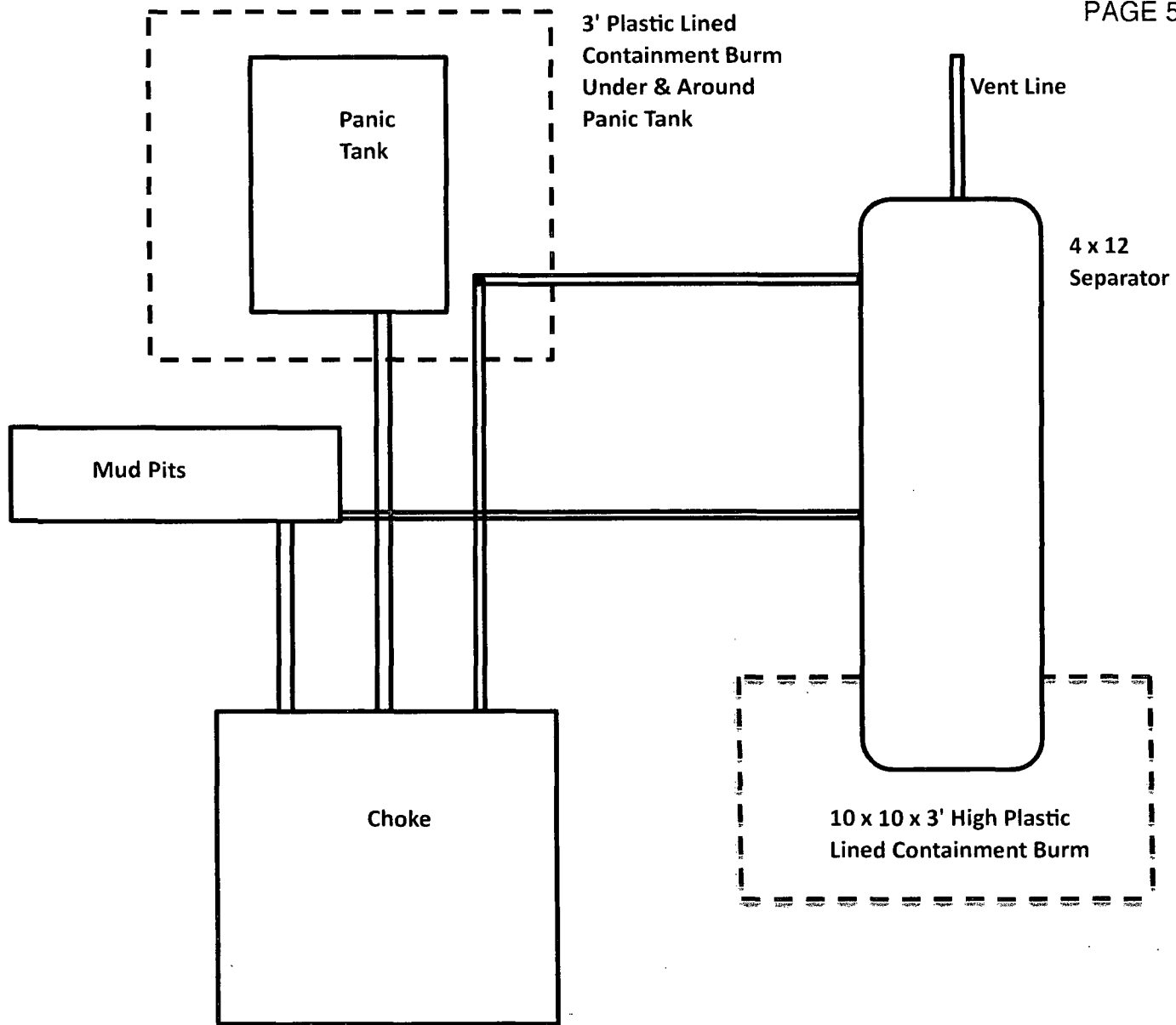


Note: This equipment is designed to meet requirements for a 2-M rating standard per 43 CFR part 3160 (amended). Proper operation and testing of equipment will be carried out per standard. 2,000 psi equipment can be substituted in the drawing to meet minimum requirements per standard.

# Rig and Closed Loop System with H2S Safety Equipment Diagram

PAGE 4







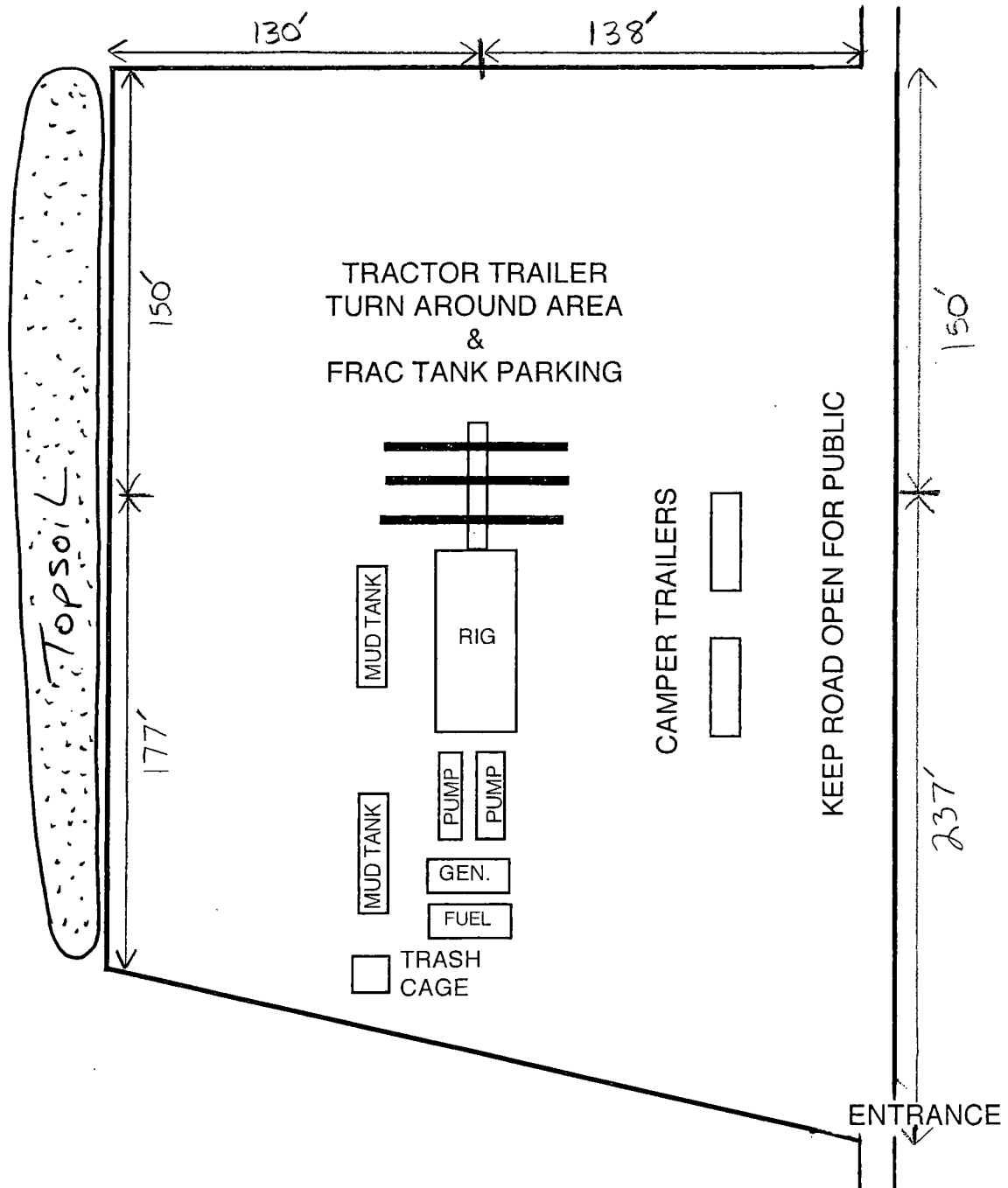
Fair Oil, Ltd.  
Fair 17 Federal 1  
1792' FNL & 727' FWL  
Sec. 17, T. 17 S., R. 31 E.  
Eddy County, New Mexico

PAGE 18

1" = 60'

30-015-28969

NORTH



TEN  
8/18/12

# Hydrogen Sulfide (H<sub>2</sub>S) Drilling Operations Plan

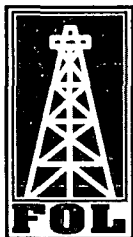
## Fair 17 Federal 1

1792' FNL & 727' FWL Section 17, T. 17 S., R. 31 E.

Eddy County, New Mexico

32° 50' 12.66" North & 103° 53' 53.15" West

Prepared for



# FAIR OIL, LTD.

P.O. Box 689 • Tyler, Texas, 75710 • 225 South College • Tyler, Texas 75702 • (903) 592-3811 • FAX (903) 597-3587

Prepared by

**PERMITS WEST, INC.**  
PROVIDING PERMITS for LAND USERS  
37 Verano Loop, Santa Fe, New Mexico 87505 (505) 466-8120

## **Table of Contents**

<b>1.0 General</b>	<b>1</b>
1.0 Description of Hydrogen Sulfide Gas	1
1.1 Toxicity	1
1.2 H <sub>2</sub> S First Aid and Treatment Procedures	2
<b>2.0 Hydrogen Sulfide H<sub>2</sub>S Contingency Plan</b>	<b>3</b>
2.1 Introduction	3
2.2 Purpose	3
2.3 Operating Procedures	4
2.4 H <sub>2</sub> S Emergency Procedures	8
<b>3.0 Appendices</b>	<b>12</b>

## **Checklist for Drilling, Work Over, and Maintenance in H<sub>2</sub>S Environment**

1. All personnel will receive proper H<sub>2</sub>S training in accordance with Onshore Order 6, Section III.C.3.a.
2. Two safety-briefing areas will be established at least 100 yards from the wellhead. At least one briefing area will be upwind at all times. These sites should be located uphill whenever possible. (see Appendix 3.1)
3. Identify direction of prevailing winds (see Appendix 3.1)
4. At least two wind socks will be installed at all times
5. Primary and secondary emergency escape routes (flagged trail minimum)
6. Number, types, and storage location of H<sub>2</sub>S emergency respirators for personnel, and number of personnel to be present onsite at any one time.
7. H<sub>2</sub>S detector locations (3 minimum to include cellar or bell nipple and mud tanks at shale shaker). Type and location of visual and audible alarms to be used.
8. H<sub>2</sub>S evacuation and emergency training procedures and schedule (i.e. Contingency Plan)
9. List of area residents within a two-mile radius, evacuation plan, and contact list (including agencies and individuals)
10. Types and quantities of mud additives and scavengers to be available at location for H<sub>2</sub>S operations
11. Design features and operational procedures to be used to provide safe working environment (all equipment meets standards for H<sub>2</sub>S service)
12. Appropriate warning signs and flags on all access roads
13. Provisions for blocking and monitoring access to location during critical incident
14. Ventilation fan under rig floor
15. In event of uncontrolled blowout, designation of local official who has authority to ignite flow
16. Swabbing or drill stem fluids containing H<sub>2</sub>S should be put through a separator to permit flaring of gas. Flare should have a continuous pilot light to ensure ignition of all such gas.

## 1.0 General

### 1.1 Description of Hydrogen Sulfide Gas

Hydrogen Sulfide ( $H_2S$ ) is a colorless, transparent gas with a distinct and characteristic rotten-egg odor at low concentrations. It is not detectable by odor at high concentrations.  $H_2S$  at higher concentrations and/or over longer periods of exposure paralyzes the olfactory sense for that specific odor. The gas is extremely toxic to humans and can easily become dangerous and lethal. Extreme care and caution is needed to prevent injury and/or death.  $H_2S$  has a specific gravity of 1.192 that is heavier than air. It tends, therefore, to accumulate in low places. This collection of gas can lead to dangerous concentrations in areas such as arroyos and drainages.  $H_2S$  from "down hole" is often warmer than surface air and will therefore tend to rise and therefore affect workers above the escaping source. Hydrogen Sulfide is explosive and water soluble.

### 1.2 Toxicity

American National Standards Institute standard: Z37.2-1972 Acceptable Concentrations of Hydrogen Sulfide describes  $H_2S$  toxicity in this way: Hydrogen Sulfide is an extremely toxic and irritating gas. Free hydrogen sulfide in the blood reduces its oxygen-carrying capacity, thereby depressing the nervous system. Hydrogen sulfide is oxidized quite rapidly to sulfates in the body, therefore no permanent aftereffects occur in cases of recovery from acute exposures unless oxygen deprivation of the nervous system is prolonged. There is no evidence that repeated exposures to hydrogen sulfide result in accumulative or systemic poisoning. Effects such as eye irritation, respiratory tract irritation, slow pulse rate, lassitude, digestive disturbances, and cold sweats may occur but these symptoms disappear in a relatively short time after removal from the exposure. Odors become detectable in concentrations as low as .008 parts per million (ppm) (California studies), but the sense of smell is lost after 2-15 minutes at 100 ppm.

### 1.3 H<sub>2</sub>S First Aid and Treatment Procedures

- Victim should be removed to fresh air immediately\*\*
- If victim is not breathing, rescue breathing or artificial breathing should be started immediately
- Treat for shock; keep victim warm and comfortable
- Call ambulance and/or doctor, take victim immediately to emergency room or other healthcare facility

**\*\*The rescuer(s) should always wear personal protective equipment when attempting to rescue an H<sub>2</sub>S victim. It is important to never increase the number of victims unnecessarily during an H<sub>2</sub>S emergency.**

## 2.0 Hydrogen Sulfide (H<sub>2</sub>S) Contingency Plan

### 2.1 Introduction

This plan provides required procedures to be followed to provide for a safe H<sub>2</sub>S working environment. These required procedures include safety procedures, precautionary measures, and training for emergency and standard procedures. This document sets forth the responsibilities of the operator and all individuals and entities under employment or contract with the operator working in a sour oil or gas (H<sub>2</sub>S) area.

To make this contingency plan effective and in order to provide a safe working environment, cooperation from all individuals is a necessity. Each person on site must understand normal and emergency operating procedures for this site. Each individual on site must have adequate information, training, and practice with the specific procedures described in this Contingency Plan. It is the responsibility of both the operator to provide adequate equipment, training, and procedures, as well as the individual worker's responsibility to participate fully in all H<sub>2</sub>S procedures, to familiarize themselves with the location of all safety equipment and features, and to keep equipment and procedures in working order and up to date.

In order for Fair Oil, Ltd. to provide a safe working environment for all workers and individuals in the vicinity of the well the safeguards are put in place. **Initiative lies with each and every individual for the safety of all. To this end the drilling foreman is required to and will enforce all safety procedures, for the benefit of all involved.**

### 2.2 Purpose

Fair Oil, Ltd. will provide a safe working environment for all neighbors, employees, contractors, and others involved with the drilling of its well. There exists the possibility of encountering toxic H<sub>2</sub>S gas during the drilling, completion, maintenance, and production of the well. This H<sub>2</sub>S contingency plan will be put into effect after surface casing is drilled or when it is deemed necessary by the BLM in consultation with Fair Oil, Ltd.

Safety procedures are established for each person's safety connected with the operation and for the safety of the residents of the local area. No house is within 2 miles. However, Burnett Oil Co. (575 677-2313) has an office 2.1 miles southwest.

The Fair Oil, Ltd foreman will strictly enforce these procedures. Noncompliance may result in loss of pay or dismissal from the site, job, or employment.

## 2.3 Operating Procedures

**Before this H<sub>2</sub>S contingency plan is operational, all personnel that are to be involved with operation will be thoroughly trained\* in the proper use of breathing apparatus\*\* (i. e. Self Contained Breathing Apparatus and Escape Units), emergency procedures, and H<sub>2</sub>S first aid and rescue methods. Training will include means of communication when wearing breathing apparatus. An approved list of trained personnel will be supplied by the safety company and stored with the drilling foreman.**

\*Required training for operation personnel will include, but not be limited to, an H<sub>2</sub>S safety course from an approved training company, safety briefing at the drill site on all safety equipment use and locations before the start of work for each and every person onsite, safety related training in-place, on-site 1,000 feet before drilling the first H<sub>2</sub>S formation.

\*\*Throughout this contingency plan breathing apparatus shall be understood as

- a) A Self-Contained Breathing Apparatus (SCBA) manufactured such as Scott Industrial C100 or similar.
- b) Or an emergency Escape Unit such as the Scott SCRAM or Elsa (or similar) often referred to as hip packs, hoods, or pony bottles.

The two types of breathing apparatus will be differentiated as a SCBA or as an Escape Unit as required.

### 2.3.1 Safety Equipment

Personal H<sub>2</sub>S & SO<sub>4</sub> monitors - Every person on site will be required to wear a personal H<sub>2</sub>S & SO<sub>4</sub> monitor at all times while onsite. Monitors will not be worn on hard hats, but should be worn on the waist belt or preferably near the chest in-front.

Breathing Apparatus - All personnel on the drill site will be assigned an individual breathing apparatus unit. This may be either an escape unit or a SCBA unit. A minimum of two SCBA type units will be onsite. These units will be used by the team whose duty it is to serve as the onsite rescue team.

Monitoring and Recording Devices - An experienced safety company (such as Total Safety U. S., Inc., Artesia, NM) will responsible for the installation and monitoring of H<sub>2</sub>S detectors placed on site. These units will be tested and recalibrated as the safety company requires. If H<sub>2</sub>S is detected, the monitors will be tested and recalibrated at least every 12 hours. This monitoring system may or may not be integral to the required 2-stage alarm system on site. This 2-stage system (visual and audio) will have a minimum



of three H<sub>2</sub>S detector locations. Monitors will be located: 1) in the cellar or on the bell nipple, 2), at the mud tanks' shale shaker, and 3), to be determined by the safety company. Visual (light) and audio (siren) alarms will activate when H<sub>2</sub>S concentrations reach 10 ppm.

First-Aid and rescue equipment - Stored on-site, but ideally uphill and upwind from H<sub>2</sub>S sources a minimum of one "rescue pack" will contain at least:

- 1 backboard, straps, head blocks
- a set of cervical collars (s-xl)
- 1 bag valve mask
- 1 bottle of oxygen
- gauze and other standard first-aid items

suggest - 1 AED (automatic external defibrillator)

Gas Monitor - An appropriate monitor should be on-site that can measure for LLE, VOC, and other explosive or hazardous gasses.

### 2.3.2 Safety Procedures

Cascade System - Every person required to perform duties within "safety zones" (see list below) will be provided with breathing equipment attached to a cascade air system. These areas are as follows

- rig floor
- mud pit
- derrick
- shale shaker
- mud hopper and bulk hopper
- all hazardous locations will be accessible by hose and work pack (SCBA)

Escape Routes - Two escape routes will be at a minimum flagged and kept clear at all times.

Safety Briefing Areas - Two safety-briefing areas will be located at the end of escape routes (see above). The briefing areas will be clearly marked, at least one up-hill, and located so that one site is always up wind. Please see attached site map for safety briefing areas in Appendix 3.1.

Safety, first-aid, and rescue equipment - Will be stored on site using best practices. This will include proper maintenance and scheduled testing, inspection, and training/practice.

Service companies - All service companies will be briefed regarding potential hazards of the well site including the presence (or potential for) H<sub>2</sub>S. These companies will be required to provide breathing apparatus and training to their employees. No service company personnel will be allowed onsite without meeting these requirements. In addition a safety briefing under the direction of the drill foreman regarding site specific H<sub>2</sub>S procedures will be provided to each new personnel member reporting on-site.

Drills and practice - Drills reviewing all and any safety procedures including evacuation, rescue, and proper procedures to shut-in a well, and identify source of H<sub>2</sub>S in instance of a leak will be practiced under the supervision of the safety company representative and company foreman. Proper use of breathing apparatus will be instructed during such drills. Drill schedule will be designed to familiarize new personnel with all safety procedures. Each crew should also be familiar with all operations. Drills should include a short work period in safety equipment.

Warning Signs - Warning signs will be posted on all access roads. "No smoking" signs will be posted at access points as well. Signs will be posted at least 200 feet and no more than 500 from well pad. When H<sub>2</sub>S is present at 10 ppm or greater a red flag shall be displayed on the warning sign. Gates, road barricades, and/or gate guards will be used if necessary to prevent access during critical or hazardous situations.

Wind Socks - A minimum of two windsocks should be installed at locations easily observable from all work areas. If more than two windsocks are needed in order to allow "workers" at all times to easily identify the wind direction; more windsock will be installed.

Vehicle Parking - Vehicles should be parked 200 feet from the well site with their fronts pointing away from the well site. Preferably vehicles will be located up hill and up wind from the well along the escape route.

Testing Fluids - Swabbing and testing fluids containing H<sub>2</sub>S will be pass through a separator to permit flaring of the gas. There will be a pilot light in such instances.

Bug Blowers - Circulation will be provided by explosion proof electric fans at all critical locations when necessary.

Drills - Reviewing any and all safety procedures including evacuation, rescue, proper procedures to shut-in a well, and how to identify the source of H<sub>2</sub>S if a leak occurs

will be practiced under the supervision of the safety company representative and company foreman. Proper use of breathing apparatus will be taught during such drills. The drill schedule will be designed to familiarize new personnel with all safety procedures. Each crewmember will be familiar with all operations. Drills should include a short work period in safety equipment.

### 2.3.3 Working Conditions

Occupational Safety and Health Administration (OSHA) has set guidelines for Permissible Exposure Limits (PEL). The standard is to be considered the threshold **never to be exceeded** for the health and safety of all workers on this site. Ideally, exposure would never be this high.

#### 2.3.3.1 Exposure Limits

OSHA Permissible Exposure Limit (PEL) for General Industry: 29 CFR 1910.1000 Z-2 Table -- Exposures shall not exceed 20 ppm (ceiling) with the following exception: if no other measurable exposure occurs during the 8-hour work shift, exposures may exceed 20 ppm, but not more than 50 ppm (peak), for a single time period up to 10 minutes.

OSHA Permissible Exposure Limit (PEL) for Construction Industry: 29 CFR 1926.55 Appendix A -- 10 ppm, 15 mg/m<sup>3</sup> TWA (accessed via the internet at: [http://www.osha.gov/dts/chemicalsampling/data/CH\\_246800.html#exposure](http://www.osha.gov/dts/chemicalsampling/data/CH_246800.html#exposure) on 19 July 2007)

The maximum exposure limit for an 8 hour day is less than 10 ppm.

## 2.4 H<sub>2</sub>S Emergency Procedures

### 2.4.1 Incident

H<sub>2</sub>S alarm system activation. Light and siren warnings or personal H<sub>2</sub>S monitor activation for any one “worker.”

### 2.4.2 Primary Emergency Procedure

- i. All rig crew personnel and all auxiliary personnel must **DON BREATHING APPARATUS IMMEDIATELY.**
- ii. Rig crew should mask up with SCBA type work packs preferentially
- iii. All auxiliary crew should move to safety briefing area, uphill and upwind.
- iv. All non-essential personal should continue to evacuate site.

### 2.4.3 Secondary Emergency Procedure

#### I. Supervisory Personnel

- i. Company Foreman
  - a. Proceed to cascade trailer and check for safe operation of the cascade system.
  - b. Proceed to active safety briefing areas and account for all personnel. If all personnel are not accounted, then initiate an appropriate search.
  - c. Return to the drilling floor and supervise operations.
- ii. Tool Pusher
  - a. Proceed to cascade trailer and check if Company Foreman is operating cascade system safely. If NOT ensure safe operations of the cascade system.
  - b. Proceed to drilling floor and supervise operations. Make sure all crewmembers are accounted for and institute buddy system. If all personnel are not accounted for, initiate appropriate search.

#### II. Rig Crew

- i. Driller
  - a. if drilling

1. after donning breathing apparatus proceed to console and raise kelly to slip set position

2. shut down mud pumps

3. monitor well flow, remain at console

4. use hand signals to verify all personnel are at stations, verify company man and toolpusher's position, initiate search if well is not flowing

b. If tripping

1. after donning breathing apparatus put pipe in the slip-set position

2. stab safety valve, close safety valve

3. monitor well flow-remain at console

4. watch derrick man descend from derrick, verify all personnel locations, verify company man and tool pusher's position, initiate search if well is not flowing

c. if well is flowing

1. after donning breathing apparatus, shut well in HARD

2. verify all personnel locations, verify company man and tool pusher's position, initiate search if necessary

3. obtain necessary pressures for well control

4. proceed to safety briefing area with crew, plan well control operations with all personnel

ii. Derrick Man

- a. after donning breathing apparatus, go to pit side window on the floor whether drilling or tripping (descend derrick)

- b. maintain visual contact with driller and monitor flow

- c. if mud properties are needed, then proceed to the shaker with "buddy"

- d. monitor other hands on pit side of rig visually

- e. proceed to open manual well-head if necessary (with "buddy")

iii. Motorman

- a. after donning breathing apparatus, go to the cascade system and ensure safe operation
- b. maintain visual contact with chain hand on doghouse side of floor

iv. Chain Hand

- a. after donning breathing apparatus, stab safety valve if tripping
- b. go to doghouse/pipe-rack and maintain visual contact with driller and motorman

v. Floor man

- a. after donning breathing apparatus, stab safety valve if tripping
- b. aid driller while maintaining visual contact with driller, derrick man, and chain hand

III. Auxiliary Personnel

- i. Mud engineer and Company man or geologist are to act as wardens. Wardens must account for all other auxiliary crew.
- ii. All auxiliary crew are to remain in safety briefing area unless evacuated by wardens.
- iii. Wardens organize search with notification from company. All searches are to be done with "buddy". Geologist warden should remain in safety briefing area.

2.4.4 Igniting the Well

I. Decision

- i. The Company Foreman is responsible for the decision to ignite a well. If he is incapacitated or absent, then authority passes to the tool pusher, and then the contract driller
- ii. the decision to ignite the well is only to be made as a last resort safety measure if:
  - a. there is threat human life and grave threat to public safety and equipment
  - b. there is no alternative way of containing the well given the emergency faced.
  - c. an attempt was made to contact area office (circumstances permitting)\*

**\*When human life is threatened, there can be no delay in making a decision.**

## I. Instructions for Igniting the Well

- i. Two individuals are required for ignition
- ii. Both individuals will wear SCBAs & have 200-foot retrieval ropes tied to their waists
- iii. One individual will measure the atmosphere for explosive gasses with appropriate meter.
- iv. The other individual will remain in the safety briefing area
- v. Others in the briefing area are to remain aware of both individuals and aid as able. If either tethered individual is overcome by gas, he should be pulled to safety.
- vi. The well should be lit with a 25 mm meteor type flare gun when well conditions allow. The safest method of igniting the well should always be used.
- vii. Burning  $\text{H}_2\text{S}$  will produce sulfur dioxide which is poisonous. The area therefore is not safe once the well has ignited. Continue to observe all emergency procedures and follow orders from supervisors and the area office. Notice of incident must be reported to all appropriate authorities.

### 3.0 Appendices

#### 3.1 Check List for Safety Equipment (designed for a maximum of 11 people)

Safety Trailer housing cascade system at least ten 300 cu. ft. bottles of compressed air

7 SCBA type breathing apparatus with 45 cu. ft. bottles

5 breathing masks connected to the cascade system with 7 cu. ft. pony bottles

2 extra 300 cu. ft. bottles able to refill SCBA bottles at the safety briefing areas

2 Wind socks

1 Flare gun and flares

1 rescue pack (as described in section 2.3.1)

Warning signs for access (flags for marking conditions)

“Safety Briefing Area” signs, evacuation route flags

H<sub>2</sub>S monitors (personnel and stationary)

Alarm system (audio and visual—explosion proof)

Gas Monitor

#### Onshore Order 6 III. A. 1. c. equipment and systems

i. Flare line will have an electronic igniter and/or a continuous pilot flame. The choke manifold will have at least 1 remote controlled choke. There will be a flare gun with flares on the rig floor.

ii. Safety equipment is listed above. Breathing equipment will be stored on the rig floor and at the primary briefing area (see Page 18). Equipment will be tested, and maintained as needed, at least weekly and after any use. Crew will practice using hand signals, or wireless if so equipped, to communicate while wearing breathing apparatus at least weekly.

iii. There will be at least 2 portable H<sub>2</sub>S and SO<sub>2</sub> monitors (sensors) on location. Monitors will have warning lights and sirens or horns. Monitors will activate when H<sub>2</sub>S levels reach 20-ppm. One monitor will be on the rig floor and one will be at the flare line.

iv. See Page 18 for the location of windsocks and warning signs.

v. The mud program will minimize the amount of H<sub>2</sub>S reaching the surface by appropriate mud weight and H<sub>2</sub>S scavenger additives. An H<sub>2</sub>S gas buster and mud gas separator will be used as needed.

vi. The drill pipe, casing, tubing, well head equipment, blow out preventers, drilling spool, kill lines, choke manifold and lines, valves, and elastomers used for packing and seals will be H<sub>2</sub>S compatible.

vii. Cellular phones will be on the rig floor, vehicles, and company man’s trailer.



### 3.2 Emergency Phone Numbers

#### Fair Oil, Ltd. Personnel to be Notified

Rodney Thompson, Production Manager

Office: (903) 510-6527

or

Jay Bynum

Office: (903) 510-6525

#### Safety Company Personnel

(Name)	(Position)	(Number work)	(Number home)
(Name)	(Position)	(Number work)	(Number home)

#### Local & County Agencies

Loco Hills Fire Department

911 or (575) 677-2349

Maljamar Fire Department

911 or (575) 676-4100

Eddy County Sheriff (Artesia)

911 (575) 748-2323

Eddy County Emergency Management (Carlsbad)

(575) 887-9511

Eddy County Emergency Management (Artesia)

(575) 746-9540

Eddy County Health Services (Carlsbad)

(575) 887-9511

Artesia Hospital

(575) 748-3333

702 North 13<sup>th</sup> Street, Artesia

#### State Agencies

NM State Police (Artesia)

(575) 748-9718

NM Oil Conservation (Artesia)

(575) 748-1283

NM Oil Conservation (Santa Fe)

(505) 476-3440

NM Dept. of Transportation (Roswell)

(575) 637-7201

### Federal Agencies

BLM Carlsbad Field Office	(575) 234-5972
National Response Center	(800) 424-8802
US EPA Region 6 (Dallas)	(800) 887-6063 or (214) 665-6444

### Other Contacts

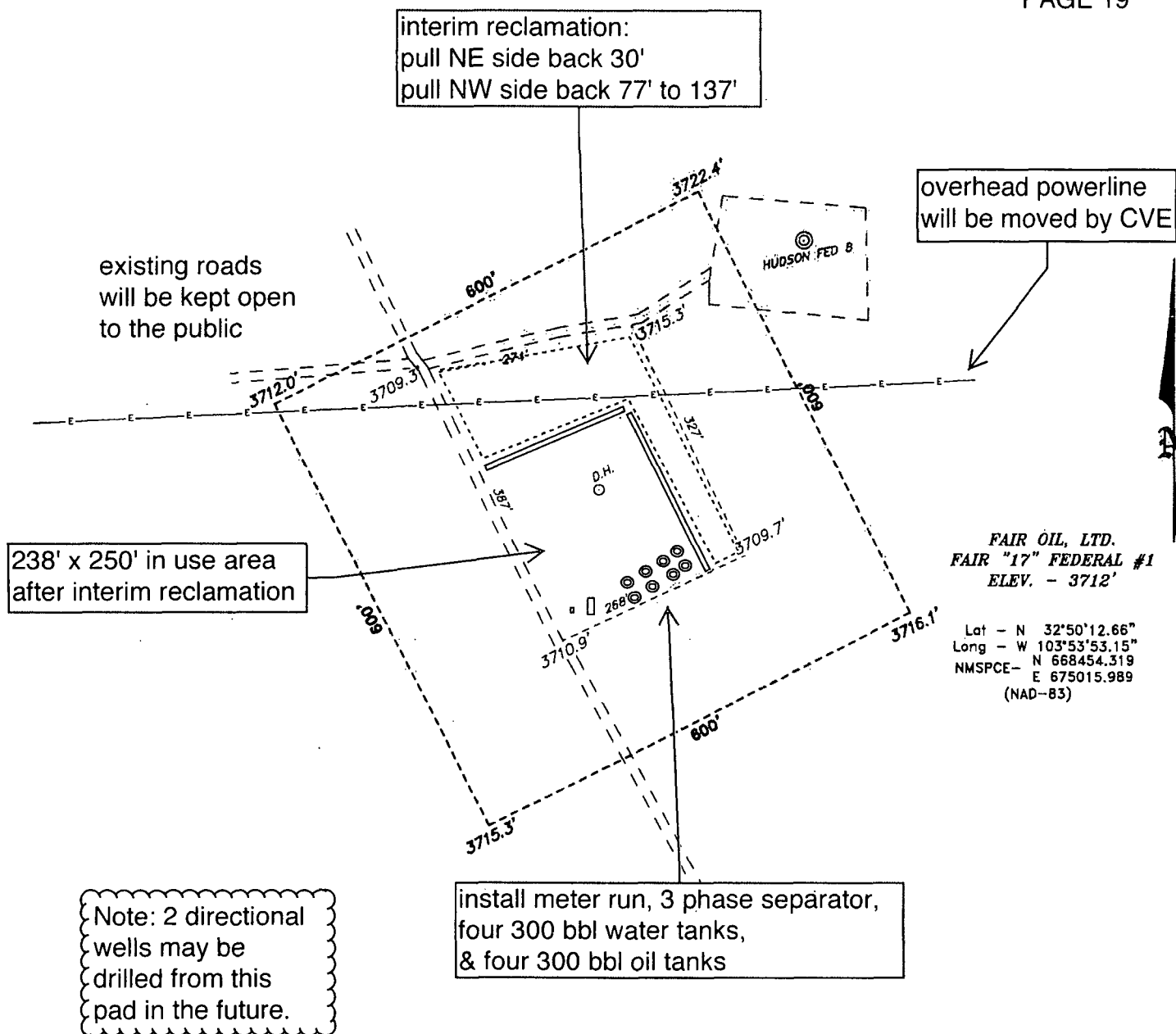
Veterinarian	Artesia Animal Clinic	(575) 748-2042
--------------	-----------------------	----------------

### Residents within 2 miles

There are no homes within 2 miles. However, Burnett Oil Co. has an office 2.1 miles southwest. Their phone number is (575) 677-2313. The office is on County Road 220.

SECTION 17, TOWNSHIP 17 SOUTH, RANGE 31 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.

PAGE 19



Directions to Location:

FROM THE JUNCTION OF HWY 82 AND SKELLY, GO  
NORTH ON SKELLY FOR 1.1 MILES TO LEASE ROAD,  
ON LEASE ROAD GO EAST 0.1 MILES TO LEASE  
ROAD, ON LEASE ROAD GO NORTH 0.1 MILES TO A  
"T", GO EASTERLY 0.6 MILES TO A "Y", GO  
NORTHEAST 0.1 MILES THENCE NORTH TO A "T" GO  
EAST 0.6 MILES TO PROPOSED WELL LOCATION.

**BASIN SURVEYS** P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 26788 Drawn By: J. SMALL

Date: 06-12-2012 Disk: JMS 26788

**FAIR OIL, LTD.**

REF: FAIR "17" FEDERAL #1 / WELL PAD VACINITY

THE FAIR "17" FEDERAL #1 LOCATED 1792'

FROM THE NORTH LINE AND 727' FROM THE WEST LINE OF  
SECTION 17, TOWNSHIP 17 SOUTH, RANGE 31 EAST,

N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 05-15-2012 Sheet 2 of 5 Sheets

Fair Oil, Ltd.  
Fair 17 Federal 1  
1792' FNL & 727' FWL  
Sec. 17, T. 17 S., R. 31 E.  
Eddy County, New Mexico

PAGE 9

30-015-28969

Surface Use Plan

1. DIRECTIONS & EXISTING ROADS (See PAGES 14 & 15)

From the Loco Hills Post Office...

Go East 3.9 miles on US 82 to the equivalent of Mile Post 135.95

Then turn left and go North 1.2 miles on paved County Road 221 (Skelly)

Then turn right and go East 0.8 mile on a caliche road

Then bear left and go Northeast 0.2 mile on a caliche road

Then turn right and go Southeast 1/3 mile on a caliche road

Fair's proposed pad overlaps the caliche road

Roads will be maintained to a standard at least equal to or better than their present condition.

2. ROAD TO BE BUILT OR UPGRADED

No new road will be built. The existing road will be kept open for the public. Upgrading of the existing road will consist of filling potholes with caliche.

3. EXISTING WELLS (See PAGE 15)

There are 152 oil or gas wells, 36 injection or disposal wells, and 28 P & A wells within a one mile radius. There are no water wells within a mile.

Fair Oil, Ltd.  
Fair 17 Federal 1  
1792' FNL & 727' FWL  
Sec. 17, T. 17 S., R. 31 E.  
Eddy County, New Mexico

PAGE 10

30-015-28969

#### 4. PROPOSED PRODUCTION FACILITIES

All production equipment will be installed on the pad and painted flat shale green. A Sundry Notice will be filed for approval prior to construction once the production volumes and equipment needs are known. Fair will use the existing Frontier gas pipeline on the pad that previously served the well. No power line is planned. If one is needed, Central Valley will provide the service and acquire the right-of-way

#### 5. WATER SUPPLY (PAGE 16)

Water will be trucked from private land in Maljamar or Loco Hills to a 200' x 320' lined frac pond to be built northeast of Fair's existing Fair 18 Federal 1 pad. The pond was described and approved in Fair's Fair 18 Federal 2 APD. A temporary surface pipeline will be laid on lease along the road  $\approx$ 1,000' southeast from the Fair 18 Federal 2 to the Fair 17 Federal 1. Current plan is to complete both wells consecutively.

#### 6. CONSTRUCTION MATERIALS & METHODS

Central Valley Electric will move its overhead power line. NM One Call (1-800-321-ALERT) will be notified before construction starts.

The top 6" of soil will be stockpiled northeast of the pad. A closed loop drilling system will be used. Caliche will be bought and hauled from an existing approved caliche pit. Dirt contractor will be responsible for caliche.

Fair Oil, Ltd.  
Fair 17 Federal 1  
1792' FNL & 727' FWL  
Sec. 17, T. 17 S., R. 31 E.  
Eddy County, New Mexico

PAGE 11

30-015-28969

#### 7. WASTE DISPOSAL

All trash will be placed in a portable trash cage. It will be hauled to a county landfill. There will be no trash burning. Contents of the mud tanks will be hauled to state approved disposal sites. Human waste will be disposed of in chemical toilets and hauled to an approved dump station.

#### 8. ANCILLARY FACILITIES

There will be no airstrip or camp. Camper trailers will be on location for the company man, tool pusher, or mud logger.

#### 9. WELL SITE LAYOUT

See Page 18 for depictions of the well pad, trash cage, access onto the location, parking, living facilities, and rig orientation.

#### 10. RECLAMATION

Interim reclamation will consist of reducing the pad footprint by 2/3 to a  $\approx 175'$  x  $\approx 175'$  area and reclaiming around the pump and anchors, while leaving enough space for work overs and production equipment. Disturbed areas will be contoured to a natural shape and no steeper than 3:1. Topsoil will be evenly spread over disturbed areas. Seeded areas will be ripped and/or harrowed. A BLM approved seed mix will be sown in a BLM approved manner. Enough stockpiled topsoil will be retained to cover the remainder of the pad when the well is plugged. Once the well is plugged, then the remainder of the pad will be similarly reclaimed. Noxious weeds will be controlled.

Fair Oil, Ltd.  
Fair 17 Federal 1  
1792' FNL & 727' FWL  
Sec. 17, T. 17 S., R. 31 E.  
Eddy County, New Mexico

PAGE 12

30-015-28969

11. SURFACE OWNER

All construction will be on lease and on BLM.

12. OTHER INFORMATION

The nearest hospital (Artesia General) is a  $\approx 1/2$  hour drive away in Artesia at 702 North 13th Street. Its phone number is (575) 748-3333.

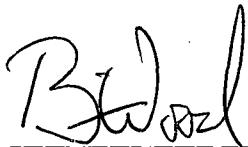
An on site inspection was conducted by Tanner Nygren (BLM). Fair will make a contribution to the Permian Basin MOA Fund for the water pipeline. Erin Goslin determined on July 23 that a contribution was not needed for the existing pad.

Fair Oil, Ltd.  
Fair 17 Federal 1  
1792' FNL & 727' FWL  
Sec. 17, T. 17 S., R. 31 E.  
Eddy County, New Mexico

PAGE 13

30-015-28969

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently 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 the company I represent, 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 31st day of July, 2012.



\_\_\_\_\_  
Brian Wood, Consultant  
Permits West, Inc.

37 Verano Loop, Santa Fe, NM 87508

(505) 466-8120

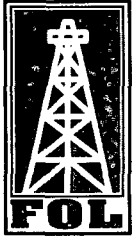
FAX: (505) 466-9682 Cellular: (505) 699-2276

Field representative will be:

Rodney Thomson, Production Manager  
Fair Oil, Ltd.

225 South College Ave., Tyler, TX 75702  
(903) 510-6527





# FAIR OIL, LTD.

P.O. Box 689 • Tyler, Texas, 75710 • 225 South College • Tyler, Texas 75702 • (903) 592-3811 • FAX (903) 597-3587

## DESIGNATION OF AGENT

November 18, 2010

Bureau of Land Management  
Carlsbad Field Office  
620 E. Greene Street  
Carlsbad NM 88220

Gentlemen:

Please be informed that Brian Wood with Permits West, Inc. is an Agent employed by Fair Oil, Ltd. He is authorized to prepare and submit APD's, Right of Way applications and other BLM required forms.

Permits West Inc. address is as follows:

37 Verano Loop  
Sante Fe NM 87508

505-466-8120 Office  
505-466-9682 Fax  
505-699-2276 Cell

Should you have any questions or require any additional information, contact Rodney Thomson at 903-510-6527 or e-mail [rodney.thomson@fairoil.com](mailto:rodney.thomson@fairoil.com).

Sincerely  
Fair Oil, Ltd.

**Rodney K. Thomson**

Rodney K. Thomson  
Production Manager

## PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	FAIR OIL, LTD
LEASE NO.:	LC054908
WELL NAME & NO.:	1-FAIR 17 FEDERAL
SURFACE HOLE FOOTAGE:	1792'/N. & 727'/W.
BOTTOM HOLE FOOTAGE	
LOCATION:	Section 17, T. 17 S., R. 31 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.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
  - Lesser Prairie-Chicken Timing Stipulations
  - Ground-level Abandoned Well Marker
- ☒ **Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
  - Re-Entry Requirements
  - Witness CIT - Requirements
  - Waste Material and Fluids
- ☒ **Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines
- ☐ **Interim Reclamation**
- ☒ **Final Abandonment & Reclamation**

## **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.

## **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) 234-5909 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 6 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 the Carlsbad 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**

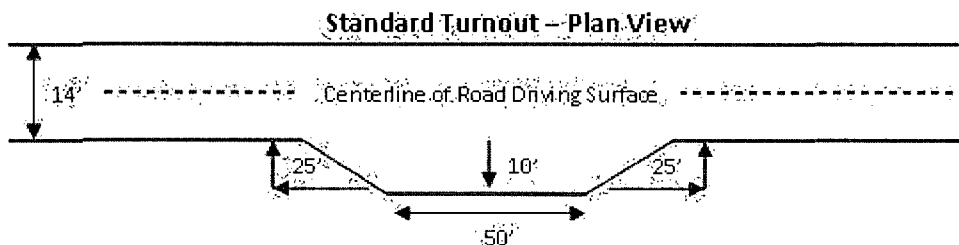
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

### **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:

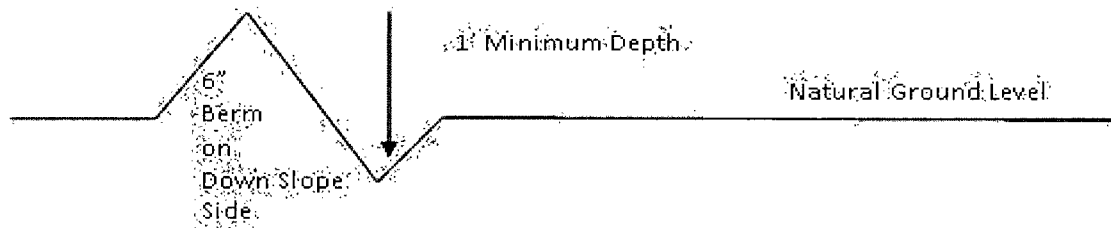


### **Drainage**

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.

### **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:

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

#### **Culvert Installations**

Appropriately sized culvert(s) shall be installed at 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).

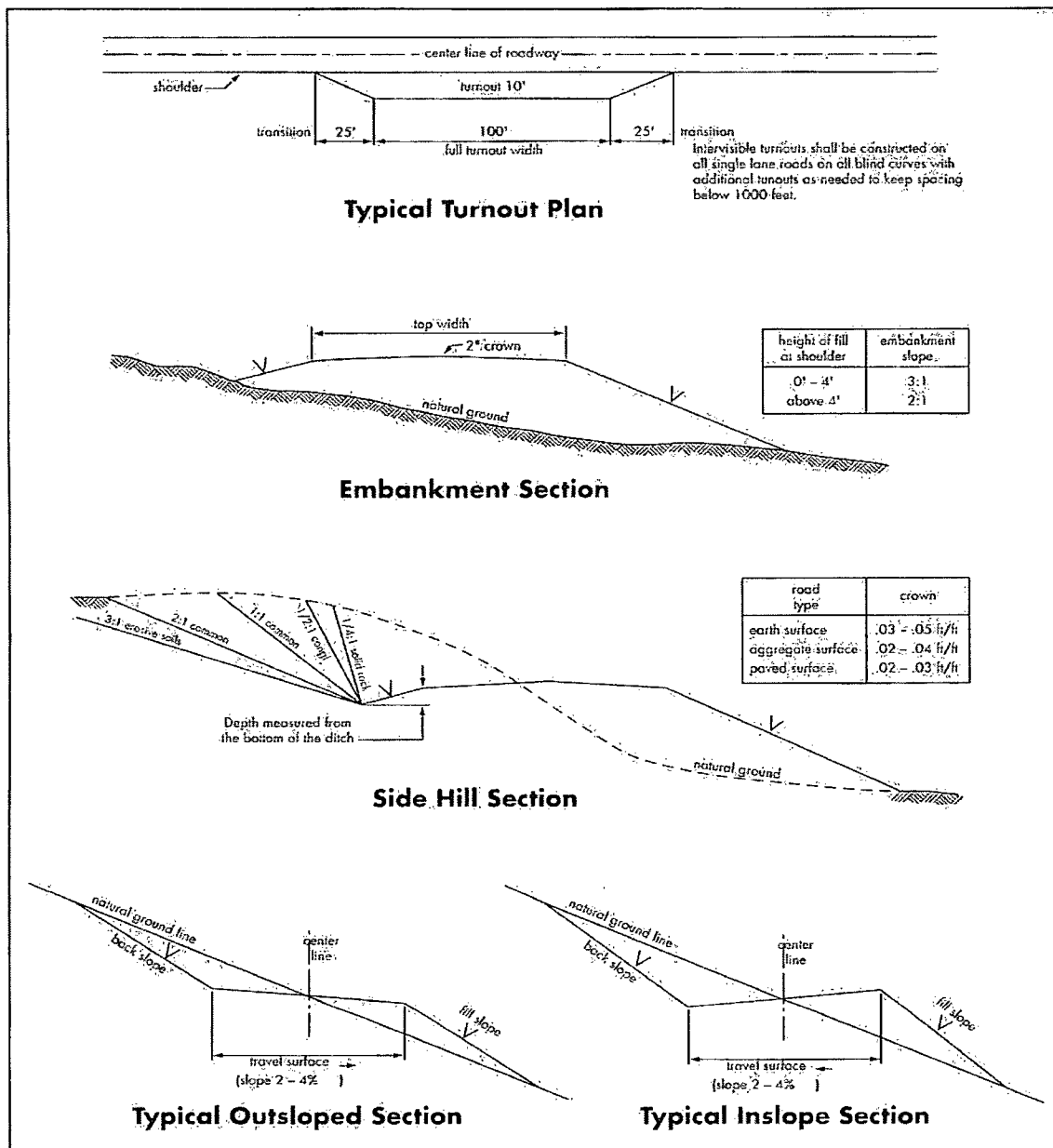
Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

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

#### **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 –Re-entry

### 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 – Re-entry
- b. Setting and/or Cementing of all casing strings and remedial casing cement work.
- c. BOPE tests

☒ **Eddy County**

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

1. **Hydrogen Sulfide has been reported as a hazard in Grayburg formation and in deeper formations than the proposed completion interval. It is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide. If Hydrogen Sulfide is encountered, please report measurements and formations to the BLM.**
2. **Operator to provide a current copy of CBL to BLM. CBL shall be from 6600 feet to surface. If necessary run a new CBL from 6600' to surface and submit to the BLM as soon as possible.**
3. Unless the well has been properly plugged, the re-entry 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.**

### B. CASING –Re-entry

**Changes to the approved APD casing and cement program and remedial casing cement work 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.**

#### Existing casing

1. The 13-3/8 inch 48# H-40 surface casing is set at 600 feet with cement circulated to surface.
2. The 8-5/8 inch 24# S80/J55 intermediate casing is set at 4,700 feet with top of cement estimated at 280 feet with a temperature survey.

3. The 5-1/2 inch production casing is set at 11,492 feet with top of cement estimated at 2500 feet with a temperature survey.

### **Requirements for Operator**

4. **Operator to tag the plug set at approximately 6665 feet to verify and report results on a subsequent sundry; this plug was set on 02/28/2008.**
5. **After setting proposed CIBP at 6300' and top off with 50 sx of cement and WOC and before perforating. Operator will be required to do a casing integrity test (CIT). The CIT will be witness by a BLM PET (charted) and test to 700psig. Report result to BLM Engineer and on a subsequent sundry. Pressure leak off may require corrective action prior to perforating in zone of interest.**
6. **Submit a subsequent sundry and Form 3160-4 completion report within 30 days of the date all BLM approved procedures are complete.**
7. 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. Operator will test BOP/BOPE as soon as it is installed and prior to drilling plug at 2600 feet.**

All blowout preventer (BOP) and related equipment (BOPE) shall comply with reasonable well control requirements. A two ram system with a blind ram and a pipe ram designed for the size of the work string shall be adequate. Tapered work strings will require an additional pipe ram. The manifold shall comply with Onshore Oil and Gas Order #2 Attachment I (2M Diagrams of Choke Manifold Equipment). The accumulator system shall have an immediately available power source to close the rams and retain 200 psi above pre-charge. The pre-charge test shall follow requirements in Onshore Order #2.

3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. 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).
  - b. The results of the test shall be reported to the appropriate BLM office.
  - c. 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.**
  - d. 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. 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.

**EGF 111912**

## **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

### **B. PIPELINES**

#### **STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES**

**A copy of the APD and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.**

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. The pipeline shall be routed no farther than 6 feet from and parallel to existing roads. The authorized right-of-way width will be 20 feet. 14 feet of the right-of-way width will consist of existing disturbance (existing lease roads) and the remaining 6 feet will consist of area adjacent to the disturbance. All construction and maintenance activity will be confined to existing roads.

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 or dune areas, the pipeline will be "snaked" around hummocks and dunes rather than 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 2, for Sandy 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:

<u>Species</u>	<u>lb/acre</u>
Sand dropseed ( <i>Sporobolus cryptandrus</i> )	1.0
Sand love grass ( <i>Eragrostis trichodes</i> )	1.0
Plains bristlegrass ( <i>Setaria macrostachya</i> )	2.0

\*Pounds of pure live seed:

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