OCD Artesia

TG 10-14-14

Form 3160-3
(March 2012)

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

# APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NM-19418

6. If Indian, Allotee or Tribe Name:

7. If Unit or CA Agreement, Name and No.:

1a. Type of work: [✓] DRILL [ ] REENTER

1b. Type of Well: [✓] Oil Well [ ] Gas Well [ ] Other [✓] Single Zone [ ] Multiple Zone

8. Lease Name and Well No.: Feil Federal No. 2 <18247>

2. Name of Operator: Fasken Oil and Ranch, Ltd. <151416>

9. API Well No.: 30-015-42721

3a. Address: 6101 Holiday Hill Road, Midland, TX 79707

3b. Phone No. *(include area code)*: 432-687-1777

10. Field and Pool, or Exploratory: N. Seven Rivers; Glorieta-Yeso <97565>

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

At surface: 355' FNL and 330' FWL

At proposed prod. zone: 355' FNL and 330' FWL

11. Sec., T. R. M. or Blk. and Survey or Area: Sec. 28, T20S, R25E

14. Distance in miles and direction from nearest town or post office*: 18 miles Northwest from Carlsbad.

12. County or Parish: Eddy

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 330'

16. No. of acres in lease: 320

17. Spacing Unit dedicated to this well: 40 Acres, NW/4 of the NW/4, Sec. 28

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 500'

19. Proposed Depth: 3500'

20. BLM/BIA Bond No. on file: NM 2729 Statewide Bond

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3517' GL

22. Approximate date work will start*: 09/01/2013

23. Estimated duration: 12 days

## 24. Attachments

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

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

25. Signature: Kim Tyson — Name *(Printed/Typed)*: Kim Tyson — Date: 09/04/2014

Title: Regulatory Analyst

Approved by *(Signature)*: Steve Caffey — Name *(Printed/Typed)*: — Date: OCT - 8 2014

Title: FIELD MANAGER — Office: CARLSBAD FIELD OFFICE

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

APPROVAL FOR TWO YEARS

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

(Continued on page 2)

*(Instructions on page 2)

Roswell Controlled Water Basin

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 10 2014
RECEIVED

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

**Fasken Oil and Ranch, Ltd.**

**Feil Federal No. 2**

**Operator Certification**

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access road proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of State and Federal laws application 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 20th day of June 2013.

Cory Frederick

Signature


Name: Cory Frederick

Position: Senior Drilling Engineer

Address: 303 West Wall, Suite 1800
Midland, TX 79701

Telephone: (432) 687-1777

Email: coryf@forl.com

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) 748-1283 Fax: (575) 748-9720
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

# 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

10-14

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

| API Number | Pool Code | Pool Name |
|---|---|---|
| 30-015-42721 | 97565 | N. Seven Rivers; Glorieta-Yeso |

| Property Code | Property Name | Well Number |
|---|---|---|
| 18247 | FEIL FEDERAL | 2 |

| OGRID No. | Operator Name | Elevation |
|---|---|---|
| 151416 | FASKEN OIL AND RANCH, LTD | 3517' |

### Surface Location

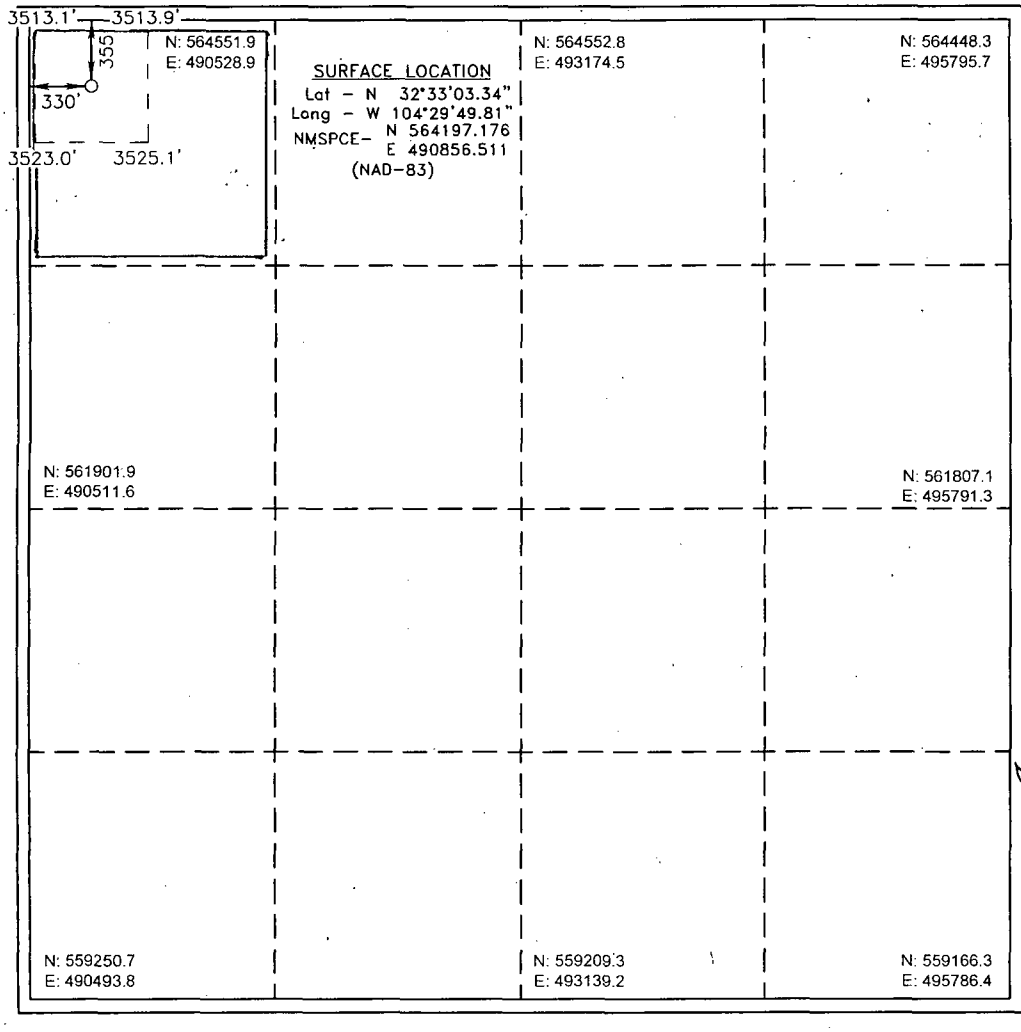
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| D | 28 | 20 S | 25 E | | 355 | NORTH | 330 | WEST | EDDY |

### Bottom Hole Location If Different From Surface

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

| Dedicated Acres | Joint or Infill | Consolidation Code | Order No. |
|---|---|---|---|
| 40 | | | |

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




### OPERATOR CERTIFICATION

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

Kim Tyson 7-10-2013
Signature Date

Kim Tyson
Printed Name

kimt@forl.com
Email Address

### SURVEYOR CERTIFICATION

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

JUNE 4, 2013
Date Surveyed

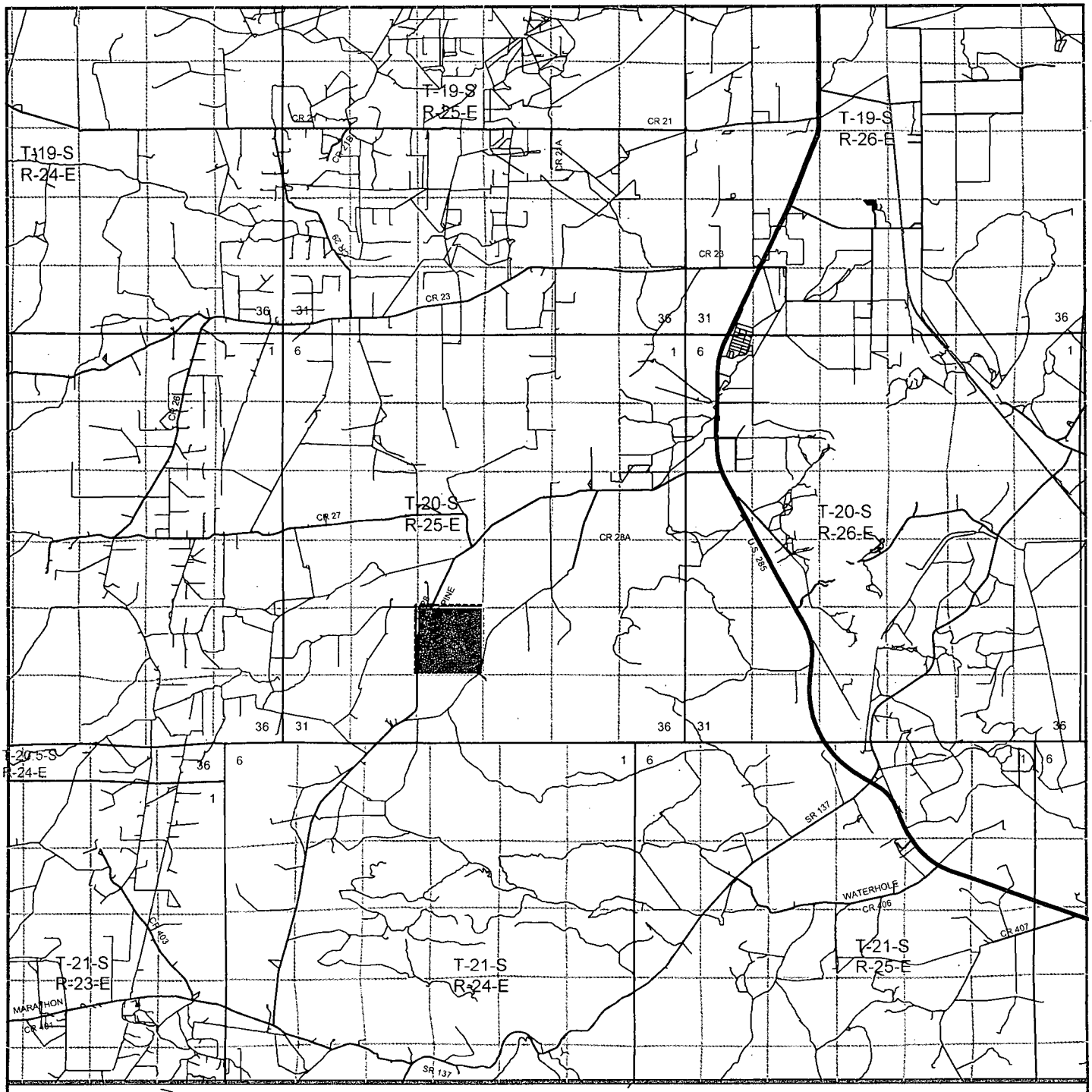
Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate No. Gary L. Jones 7977

BASIN SURVEYS 28613

Exhibit "A"




*FEIL FEDERAL #2*
*Located 355' FNL and 330' FWL*
*Section 28, Township 20 South, Range 25 East,*
*N.M.P.M., Eddy County, New Mexico.*

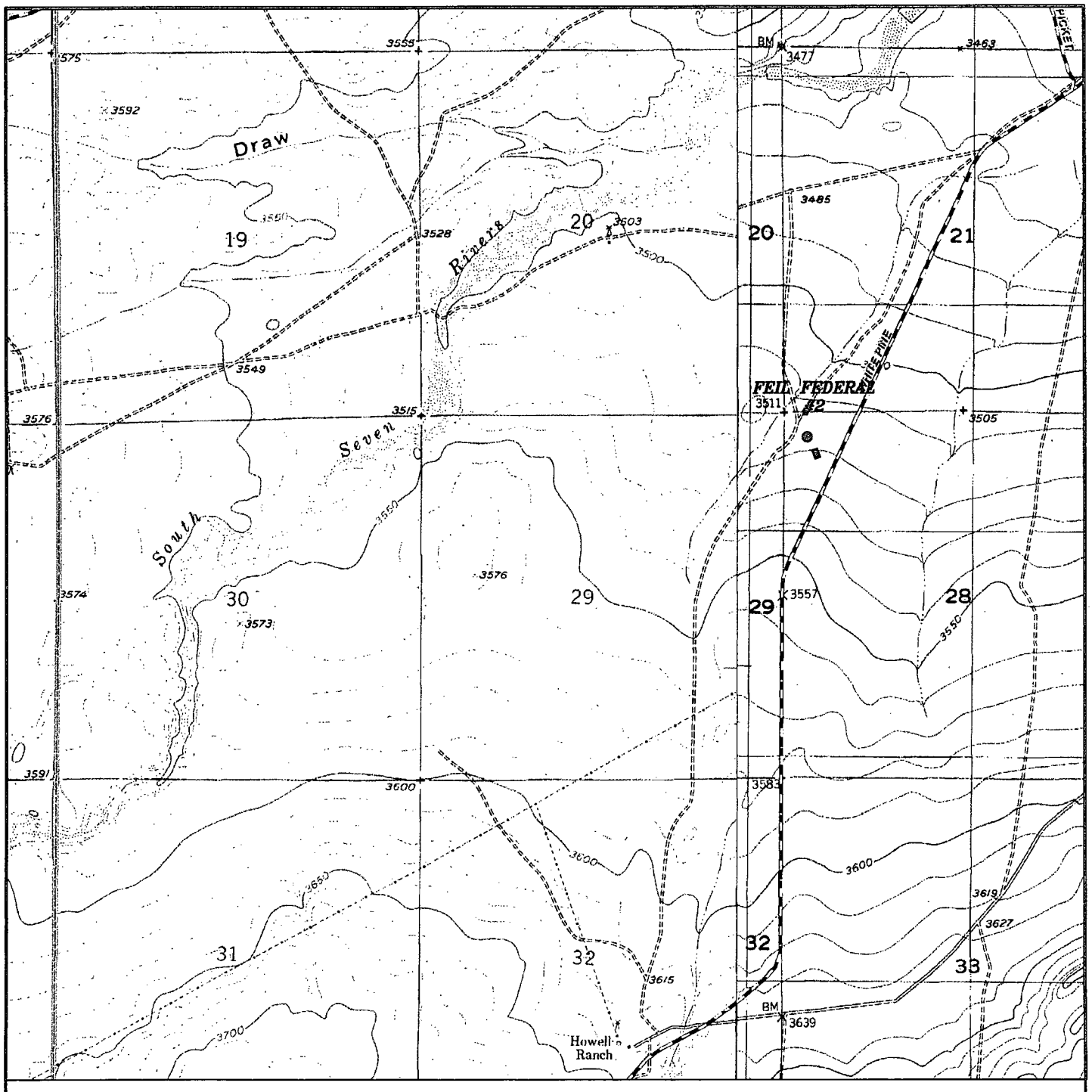
basin surveys
focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number: JG - 28613
Survey Date: 5-28-2013
Scale: 1" = 2 Miles
Date: 6-4-2013

N

FASKEN OIL AND RANCH, LTD




*FEIL FEDERAL #2*
*Located 355' FNL and 330' FWL*
*Section 28, Township 20 South, Range 25 East,*
*N.M.P.M., Eddy County, New Mexico.*

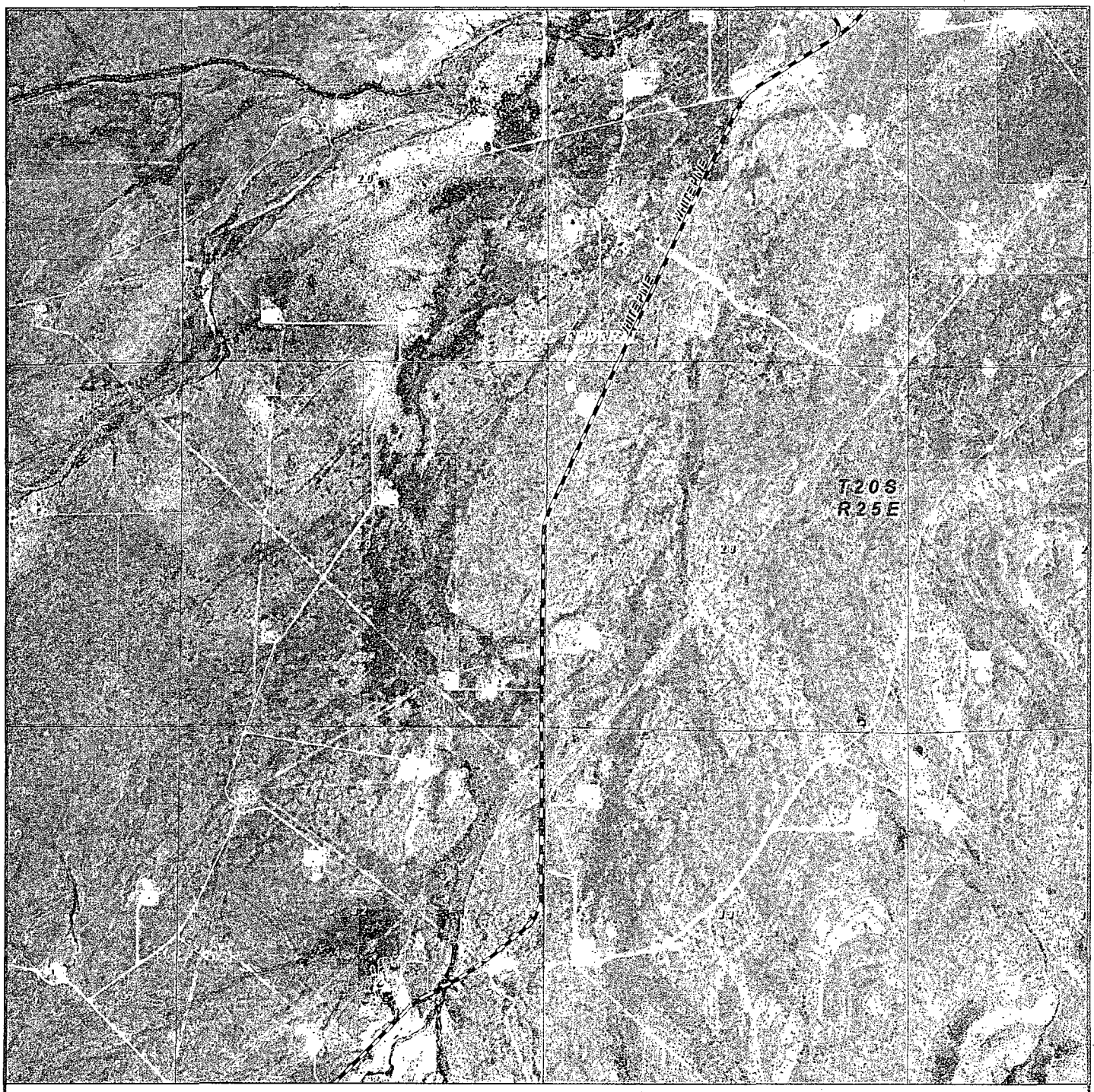

basin surveys
focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com


W.O. Number: JG - 28613
Survey Date: 5-28-2013
Scale: 1" = 2000'
Date: 6-4-2013

N

FASKEN OIL AND RANCH, LTD




*FEIL FEDERAL #2*
*Located 355' FNL and 330' FWL*
*Section 28, Township 20 South, Range 25 East,*
*N.M.P.M., Eddy County, New Mexico.*

basin surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number: JG - 28613

Scale: 1" = 2000'

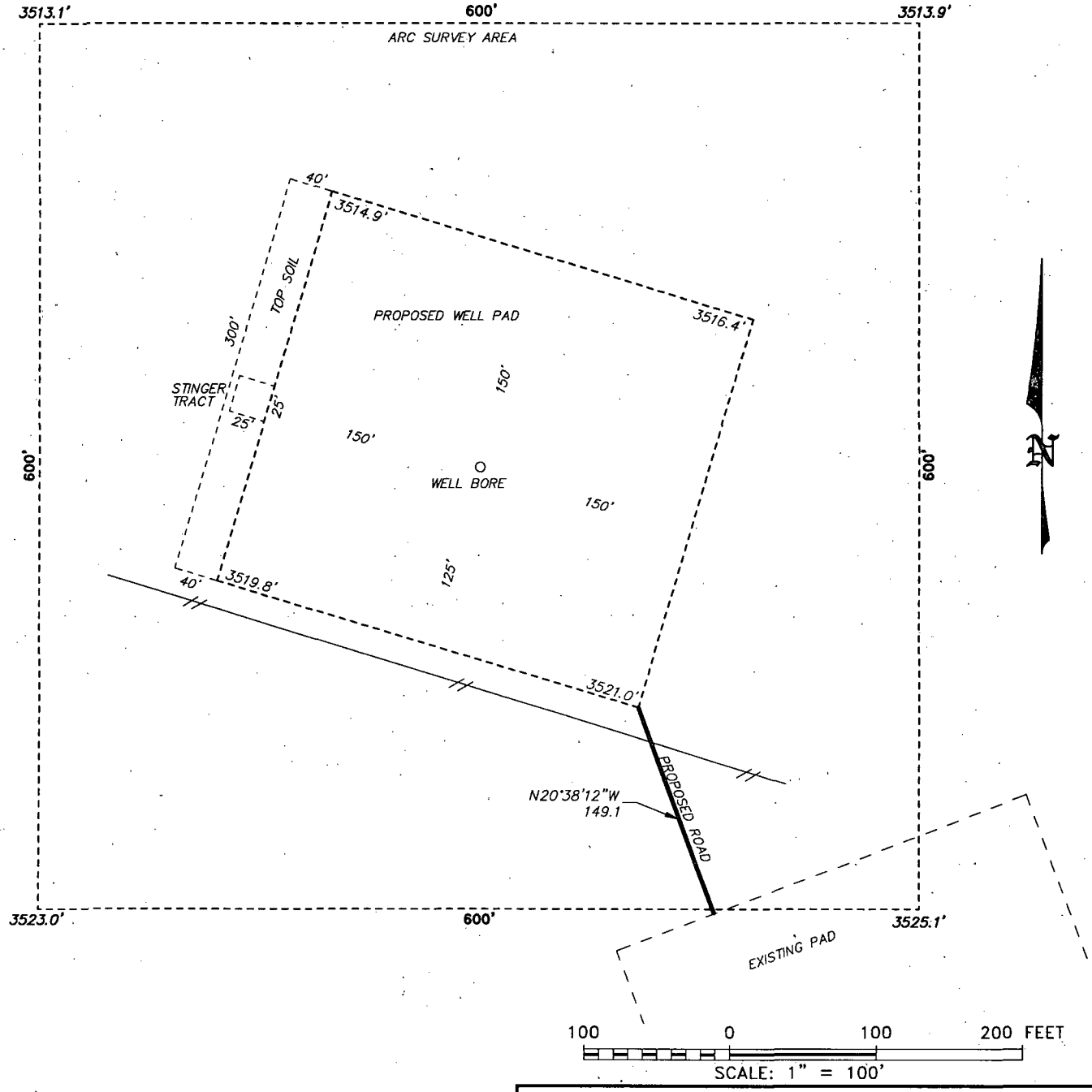
YELLOW TINT - USA LAND
BLUE TINT - STATE LAND
NATURAL COLOR - FEE LAND

N

FASKEN OIL AND RANCH, LTD

# SECTION 28, TOWNSHIP 20 SOUTH, RANGE 25 EAST, N.M.P.M.,

**EDDY COUNTY,** **NEW MEXICO.**




**FASKEN OIL AND RANCH, LTD**

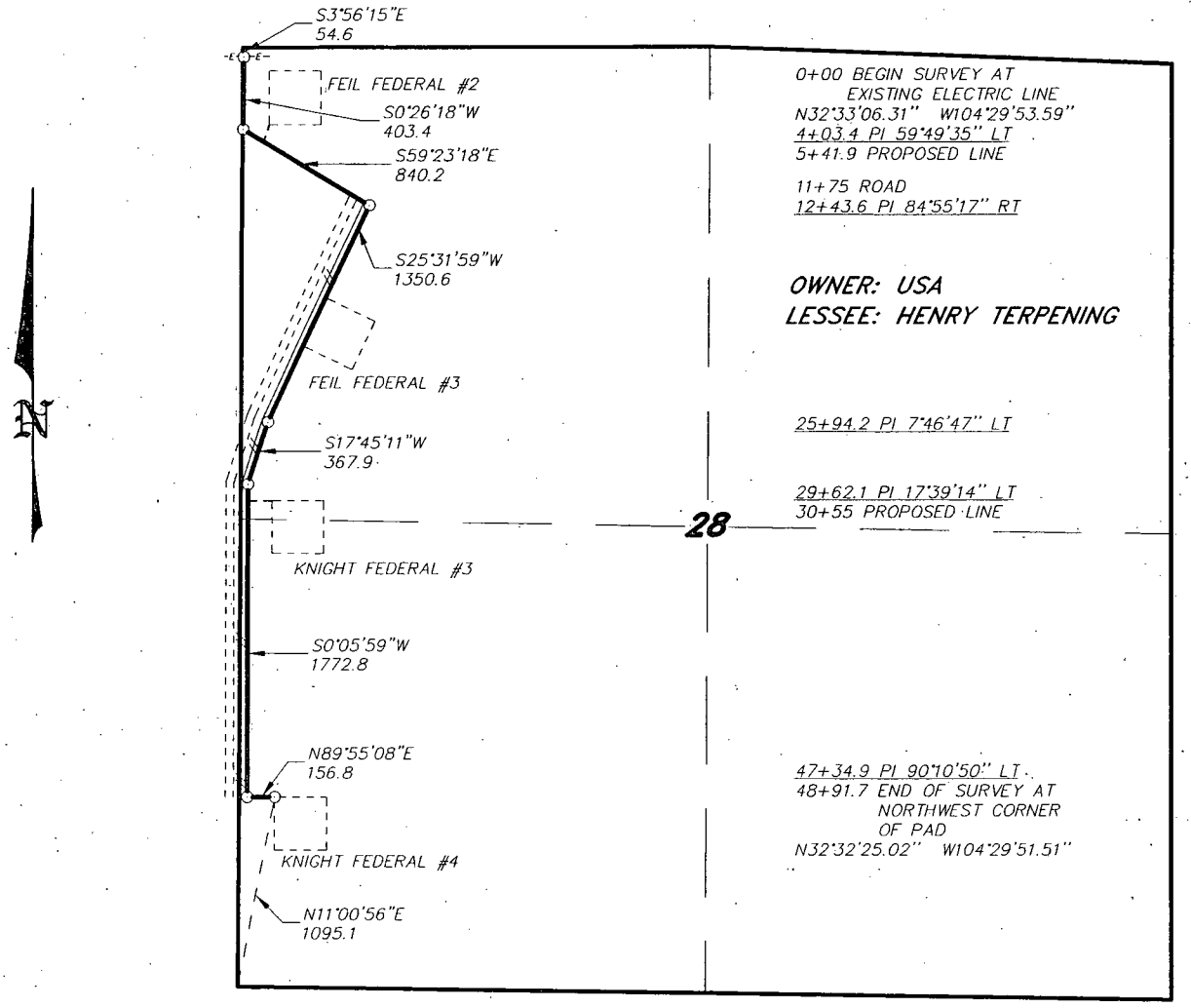
REF: FEIL FEDERAL #2 / WELL PAD TOPO

THE FEIL FEDERAL #2 LOCATED 355' FROM THE NORTH LINE AND 330' FROM THE WEST LINE OF SECTION 28, TOWNSHIP 20 SOUTH, RANGE 25 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

| | | | |
|---|---|---|---|
| W.O. Number: 28613 | Drawn By: J. GOAD | | |
| Date: 6-4-2013 | Disk: JG – 28613 | Survey Date: 5-28-2013 | Sheet 1 of 1 Sheets |

# SECTION 28, TOWNSHIP 20 SOUTH, RANGE 25 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.




## LEGAL DESCRIPTION

A STRIP OF LAND 50.0 FEET WIDE, LOCATED IN SECTION 28, TOWNSHIP 20 SOUTH, RANGE 25 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING 25.0 FEET LEFT AND RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

4891.7 FEET = 0.93 MILES = 296.47 RODS = 5.61 ACRES

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF AN ACTUAL SURVEY AND MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED BY THIS STATE.

GARY L. JONES N.M.P.S. No. 7977
TEXAS P.L.S. No. 5074

1000 0 1000 2000 FEET

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

**FASKEN OIL AND RANCH, Ltd.**

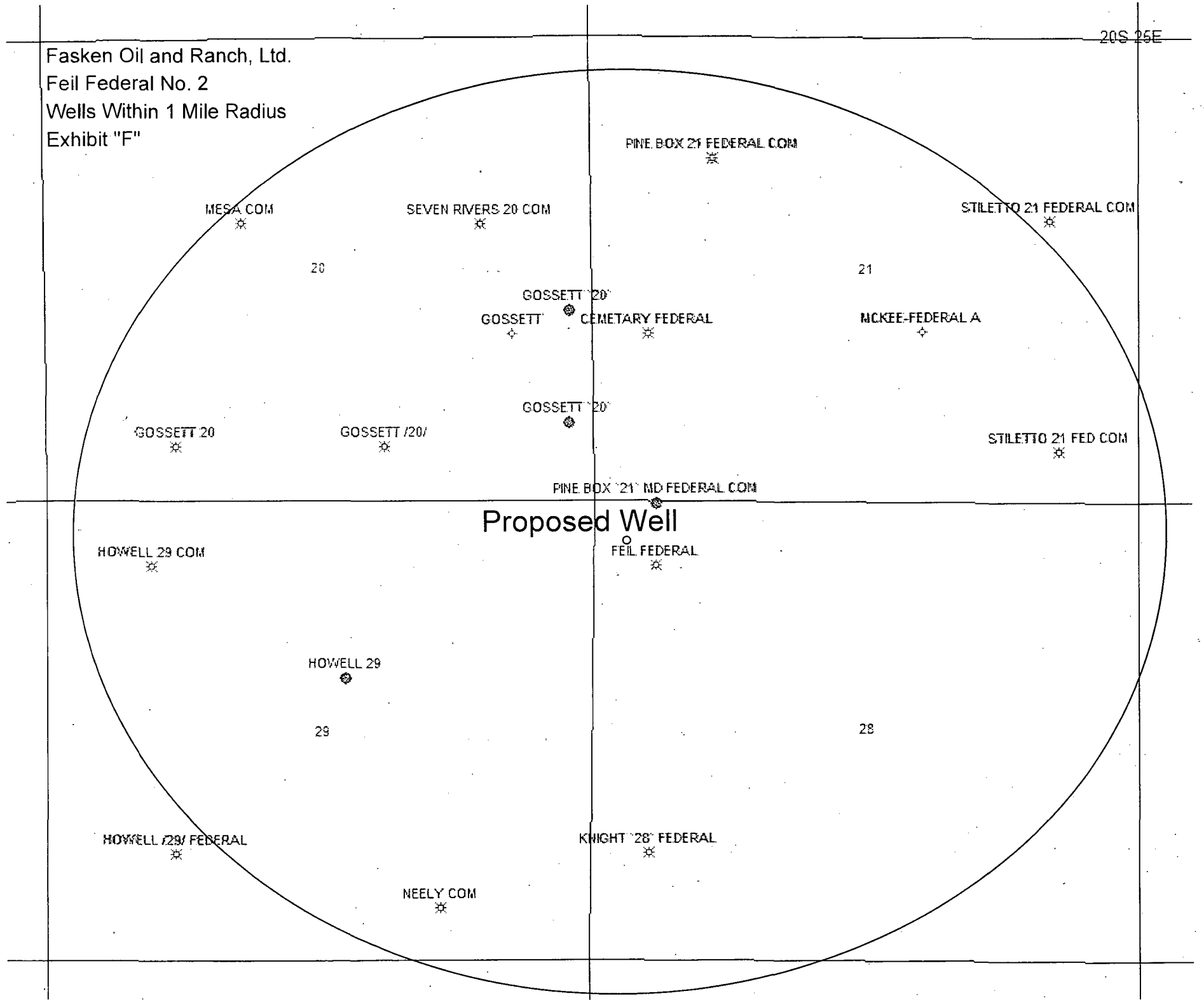
REF: PROPOSED MULTI-USE RIGHT OF WAY TO KNIGHT FEDERAL #4H

A MULTI-USE R/W CROSSING USA LAND IN
SECTION 28, TOWNSHIP 20 SOUTH, RANGE 25 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

| | | | |
|---|---|---|---|
| W.O. Number: 28791 | Drawn By: J. GOAD | | |
| Date: 6-3-2013 | Disk: JG – 28791P | Survey Date: 5-28-2013 | Sheet 1 of 1 Sheets |

Exhibit "I"

Fasken Oil and Ranch, Ltd.
Feil Federal No. 2
Wells Within 1 Mile Radius
Exhibit "F"



**DRILLING PROGRAM**

Fasken Oil and Ranch, Ltd.
Feil Federal No. 2
355' FNL & 330' FWL
Sec. 28, T20S, R25E
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill, Fasken Oil and Ranch, Ltd. submits the following items of pertinent information in accordance with the Onshore Oil and Gas Order Nos. 1 & 2, and with all other applicable federal and state regulations.

1. **Location:** 355' FNL & 330' FWL, Sec. 28, T20S, R25E

2. **Ground Elevation:** 3517'

3. **Geologic Name of Surface Formation:** Quaternary deposits

4. **Drilling Tools and Associated Equipment:** Conventional rotary drilling using fluids as a circulating medium for solids removal.

5. **Proposed Drilling Depth:** 3500' TVD

6. **Estimate Tops of Geologic Markers are as Follows:**

| | |
|---|---|
| Grayburg | 395' |
| San Andres | 820' |
| Glorietta | 2,470' |
| Yeso | 2,650' |

7. **Possible Mineral Bearing Formations:** Fresh water is anticipated at shallow depths of 100' or less. Oil and gas are anticipated in the following formations:

   San Andres
   Glorietta
   Yeso

8. Mud Program:

| Depth | Mud Type | M.W. (ppg) | Vis | WL | pH |
|---|---|---|---|---|---|
| 0-825' | SPUD | 8.4-9.7 | 34-40 | N/C | 10.0 |
| 825-3,500' | FW | 8.4-8.8 | 28-32 | N/C-20 | 10.0 |

Sufficient mud materials will be kept on location at all times in order to combat lost circulation or any unexpected kicks that may occur. In order to run DST's, open hole logs, and casing, the viscosity and water loss may have to be modified.

Electronic pit volume totalizers and flow sensors will be installed as part of the active mud system as required in Onshore Order No. 1.

**Proposed Drilling Plan:** Set and cement 40' of 16" conductor pipe. Drill 12-1/4" hole to approximately 825', and set and cement 9-5/8" surface casing. After setting, cementing, and pressure testing casing, drill 8-3/4" hole to TD of approximately 3500'. Once TD is reached, circulate and condition mud, trip out of hole, run wireline logs. Trip back in hole, condition and establish circulation. Trip out of hole and run 5-1/2" production casing to TD.

9. Proposed Casing Program:

Casing Design (all casing is new):

| String | Hole Size | Depth | Size | Weight | Grade | T&C |
|---|---|---|---|---|---|---|
| Surface | 12-1/4" | 0'-825' | 9-5/8" | 36# | J-55 | LT&C |
| Production | 8-3/4" | 0'-3500' | 5-1/2" | 17# | J-55 | LT&C |

Casing Design Factors: 1.0 for burst, 1.125 for collapse, and 1.8 for joint strength.

10. Cementing Design:

**Surface** Lead with 200 sx Class "C" with 2% $CaCl_2$, 4% gel, 0.13 lbs/sk lost circulation agent (s.w. 13.5 ppg, yield 1.74 $ft^3$/sx). Tail in with 160 sx Class "C" with 2% $CaCl_2$ and 0.13 lbs/sk lost circulation agent (s.w. 14.8 ppg, yield 1.35 $ft^3$/sx). **TOC SURFACE, calculated 100%**

**excess, centralized middle of shoe joint, top of bottom joint, then every 4th joint to surface.**

**Production** Lead with 280 sx 50:50 POZ:C slurry with 5% NaCl, 28.98 lbs/sk extender, 6% gel, 0.2% anti-foam, 0.1% viscosifier, 3 lbs/sk extender, 0.13 lbs/sk lost circulation agent, 0.2% retarder (s.w. 12.4 ppg, yield 2.19 $ft^3$/sx). Tail in with 370 sx Class "C" with 0.3% dispersant, 0.2% anti-foam, 3 lbs/sk extender, and 0.13 lbs/sk lost circulation agent (s.w. 14.8 ppg, yield 1.35 $ft^3$/sx). **TOC SURFACE, calculated 30% excess over annular hole volume, centralized middle of shoe joint, top of second joint, fourth joint, and all flint coated joints across pay zones. Temperature survey will be run if cement does not circulate to surface.**

See COA

11. **Pressure Control Equipment:** Exhibit "E". An 11" 3000 psi working pressure BOP consisting of one set of blind rams, one set of pipe rams, and a 3000 psi annular preventer. A kelly cock will be installed and maintained in operating condition and a drill string safety valve in the open position will be available on the rig floor. The BOP unit will be hydraulically operated. BOP will be operated once a day while drilling and the blind rams will be function tested when out of the hole on trips. No abnormal temperatures or pressures are expected on this well. The 9-5/8" casing and BOP will be hydrotested before drilling out of the shoe joint. 9-5/8" casing will be pressure tested to 250 psi low and 1500 psi high. BOP will be pressure tested by a third party to 3000 psi.

12. **Auxiliary Equipment:** Upper Kelly Cock, Full Opening Stabbing Valve, PVT.

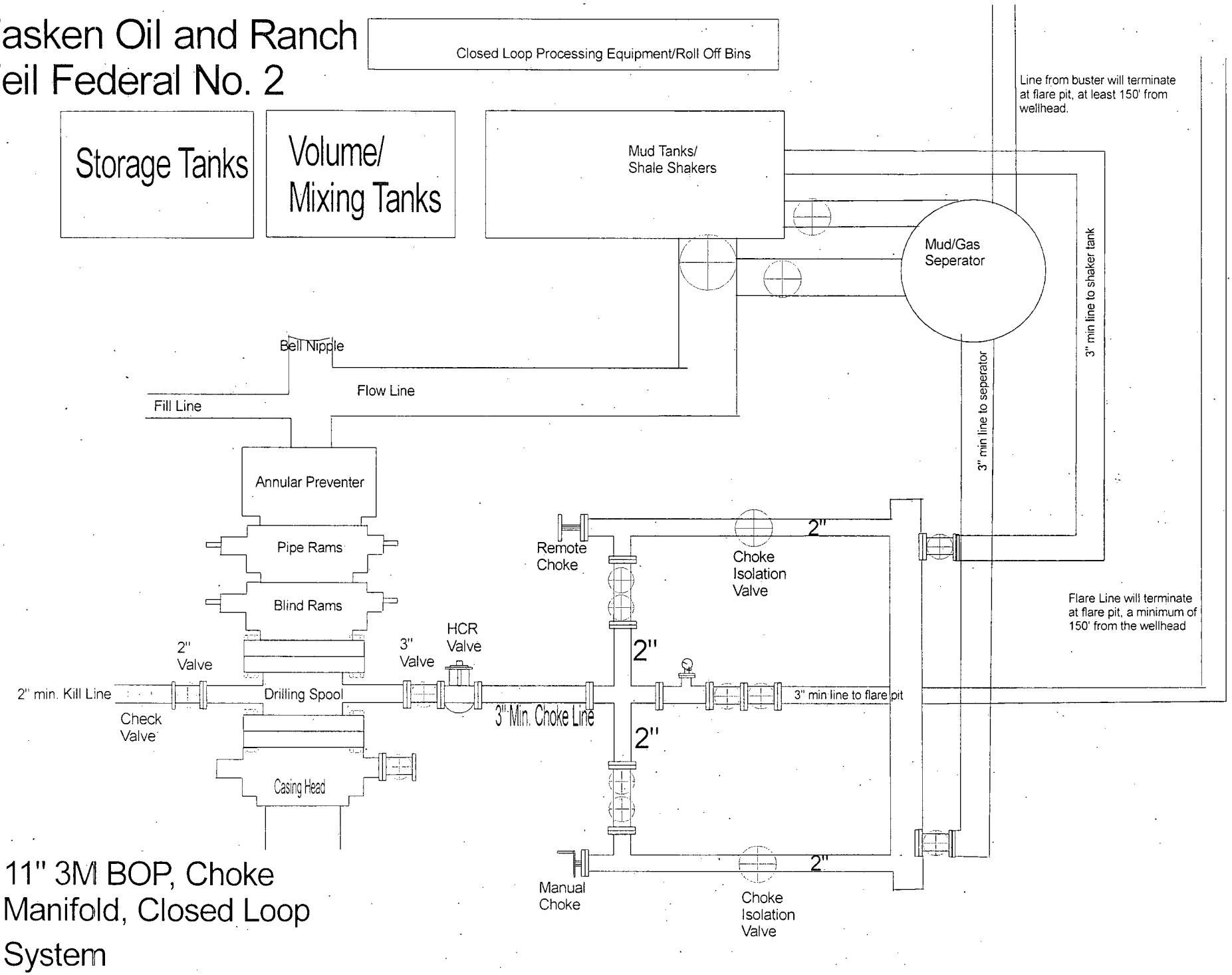
13. **Abnormal Pressure, Temperature, or Other Hazards:** No abnormal temperatures or pressures are anticipated. Lost circulation is anticipated in the surface hole. Maximum anticipated bottom hole pressure is approximately 1300-1500 psi, with a maximum anticipated bottom hole temperature of approximately 130°F.

See COA

14. **Testing, Logging, and Coring Programs:**
    -DST's: None anticipated
    -Mud logging: 2-man unit taking samples every 10' from surface casing shoe drill out to T.D.
    -Electric logs: GR, CNL, DIL, LDT, Caliper, cased hole GR, CNL from 9-5/8" shoe to surface.
    -Coring: None anticipated

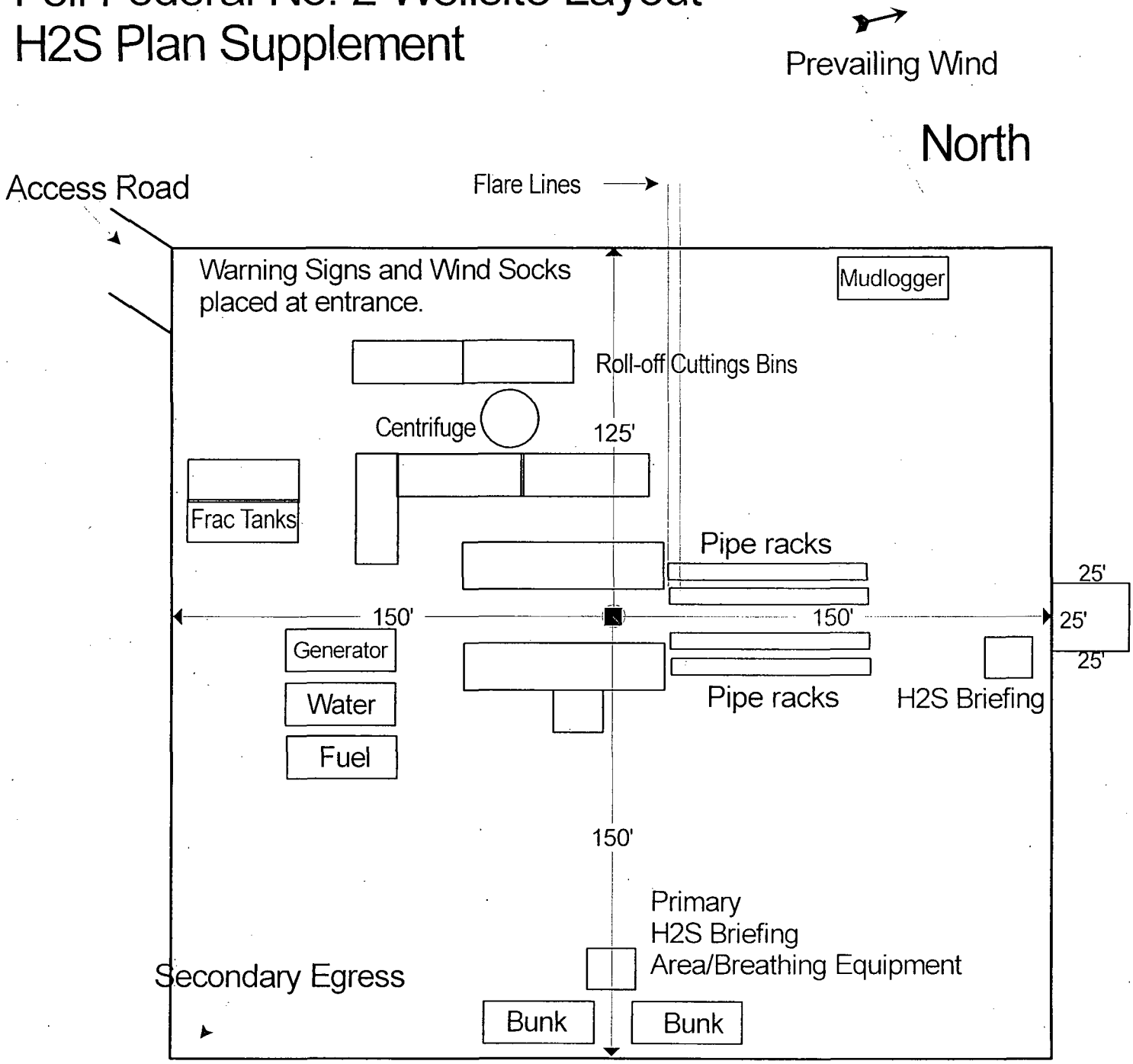
15. **Anticipated Start Date:** Road and location construction will begin after the BLM approval of the APD. Anticipated spud date will be as soon as possible after BLM approval and based on availability of a rig. Move in operation and drilling is expected to take approximately 10-12 days. If production casing is run then an additional 10-20 days will be needed to complete the well and lay flowlines to place well on production.

# Fasken Oil and Ranch
# Feil Federal No. 2




11" 3M BOP, Choke Manifold, Closed Loop System

# Fasken Oil and Ranch, Ltd.
# Feil Federal No. 2 Wellsite Layout
# H2S Plan Supplement




Alarms will be placed on the mud tanks, at the shale shaker, and on the rig floor. Windsocks will also be present on the top of the substructure and near the mud tanks.

Terrain is flat, semi-brushy desert with little vegetation.

The prevailing wind direction is W/SW. The wellpad can be evacuated in virtually any direction due to the nature of the landscape.

# HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

Fasken Oil and Ranch, Ltd.
Feil Federal No. 2
355' FNL & 330' FWL
Sec. 28, T20S, R25E
Eddy County, New Mexico

## I. Hydrogen Sulfide Training

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

1. The hazards and characteristics of hydrogen sulfide ($H_2S$)

2. The proper use and maintenance of personal protective equipment and life support systems.

3. The proper use of $H_2S$ detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.

4. The proper techniques of first aid and rescue procedures.

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

1. The effects of $H_2S$ on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.

2. Corrective action and shut-in procedures when drilling or re-working a well and blowout prevention and well control procedures.

3. The contents and requirements of the $H_2S$ Drilling Operations Plan.

There will be an initial training session just prior to encountering a known or probable $H_2S$ zone (within 3 days or 500 feet) and weekly $H_2S$ and well control drills for all personnel in each crew. The initial training session shall

include a review of the site specific $H_2S$ Drilling Operations Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

## II. $H_2S$ Safety Equipment and Systems

**NOTE**: All $H_2S$ safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above or three days prior to penetration the first zone containing or reasonably expected to contain $H_2S$.

1. Well Control Equipment:

   A. Flare line

   B. Choke manifold

   C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.

   D. Auxiliary equipment to include: annular preventer, mud-gas separator

2. Protective equipment for essential personnel:

   A. 5-minute escape units located in the dog house and 30-minute air units at briefing areas, as indicated on well site diagram.

3. $H_2S$ detection and monitoring equipment:

   A. 3- portable $H_2S$ monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when $H_2S$ levels of 20 ppm are reached.

   B. 1- portable $SO_2$ monitor positioned near flare line during $H_2S$ flaring operations.

4. Visual warning systems:

A. Wind direction indicators as shown on well site diagram.

B. Caution/danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be a readable distance from the immediate location.

5. Mud program:

A. The mud program has been designed to minimize the volume of $H_2S$ circulated to surface. Proper mud weight safe drilling practices and the use of $H_2S$ scavengers when necessary will minimize hazards when penetrating $H_2S$ bearing zones.

6. Metallurgy:

A. All drill strings, casings, tubing, wellhead, blowout preventers, drilling spools, kill lines, choke manifold, and line valves shall be suitable for $H_2S$ service.

B. All elastomers used for packing and seals shall be $H_2S$ trimmed.

7. Communications:

A. Radio communications and/or cellular phones will be available in company vehicles and rig dog house.

8. Well testing:

A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity which are necessary to safely and adequately conduct the test. The drill stem testing of any known formation that contains $H_2S$ will be conducted during daylight hours only.

**Fasken Oil and Ranch, Ltd.**
**$H_2S$ Contingency Plan**
**Emergency Phone Numbers**
**Feil Federal No. 2**
**355' FNL & 330' FWL**
**Sec. 28, T-20-S, R-25-E**
**Eddy County, New Mexico**
**Lat: N 32°33'03.34"; Long: W 104°29'49.81"**

| | |
|---|---|
| **Fasken Oil and Ranch, Ltd.** | 432-687-1777 |

**Key Personnel**

| | |
|---|---|
| Tommy Taylor, Drilling Manager | 432-556-2228 |
| Cory Frederick, Drilling Engineer | 432-288-0086 |
| Deryl Briles, Drilling Foreman | 432-556-4269 |
| Jimmy Davis, Operations Manager | 432-557-5668 |

**Carlsbad, Eddy County, New Mexico**

| | |
|---|---|
| Ambulance | 911 |
| State Police | 911 or 575-885-3138 |
| Sheriff's Office | 911 or 575-887-7551 |
| Fire Department | 911 or 575-885-3125 |
| Local Emergency Planning Committee | 575-887-7553 |
| Bureau of Land Management | 575-628-3471 |
| New Mexico Oil Conservation Division (Artesia) | 575-748-1283 |

**Hobbs, Lea County, New Mexico**

| | |
|---|---|
| Ambulance | 911 |
| State Police | 911 or 575-392-5580 |
| Sheriff's Office | 911 or 575-396-3611 |
| Fire Department | 911 or 575-397-9308 |
| Local Emergency Planning Committee | 575-393-2870 |
| New Mexico Oil Conservation Division | 575-393-6161 |

**Statewide and National Emergency Numbers**

| | |
|---|---|
| New Mexico Department of Homeland Security and Emergency Management | 505-476-9600 |
| New Mexico State Emergency Operations | |

| | |
|---|---|
| Center (24 Hour Number) | 505-476-9635 |
| National Emergency Response Center | 800-424-8802 |

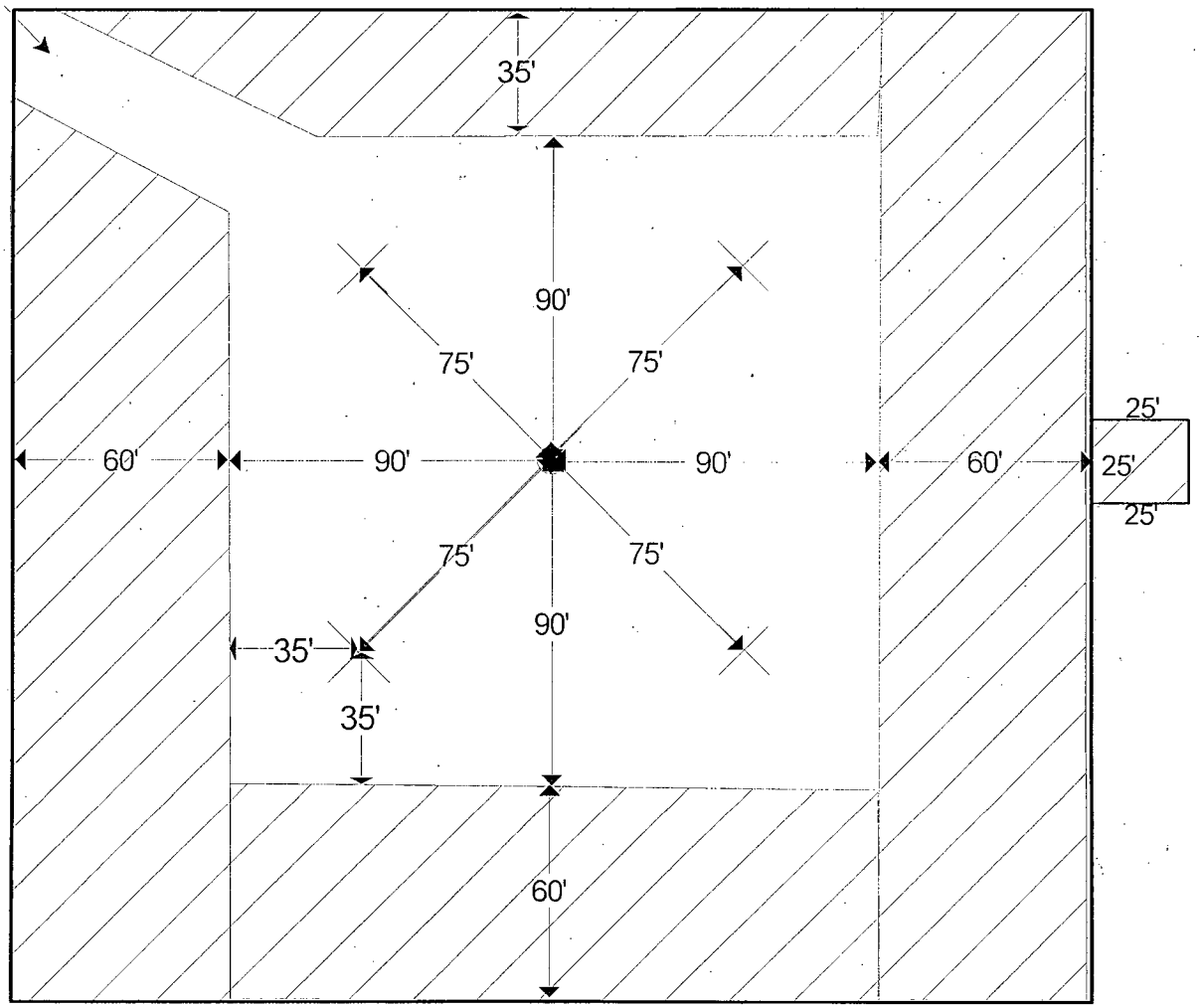
**Other Numbers for Emergency Response**

| | |
|---|---|
| Boots & Coots IWC | 800-256-9688 or 281-931-8884 |
| Cudd Pressure Control | 432-563-3356 |
| MCH Care Star Flight Service (air ambulance) | 432-640-4000 |
| Aerocare (air ambulance) | 806-725-1111 |

# Fasken Oil and Ranch, Ltd.
# Feil Federal No. 2 Interim Reclamation Plan Layout
# Exhibit "H"

North

Access Road




Hatched area is the interim reclamation area,
X denotes pulling unit anchors.

**SURFACE USE PLAN**

Fasken Oil and Ranch, Ltd.
Feil Federal No. 2
355' FNL & 330' FWL
Sec. 28, T20S, R25E
Eddy County, New Mexico

1. EXISTING ROADS: Area maps, Exhibit "A" shows the proposed well site as staked. Exhibit "B" is a reproduction of Eddy County general highway map. Exhibit "C" is a reproduction of a USGS Topographic Map, and Exhibit "D" is a well site layout map, showing proposed road to location and existing road.

2. NEW or RECONSTRUCTED ACCESS ROADS: Exhibit "D" shows the proposed road to be built from the existing road (White Pine Road) to the location. All roads will be crowned and ditched with a 14' running surface, having a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1' deep with a 3:1 slope.

   A. From the junction of State Hwy 285 and Co. Rd. 28 (White Pine Rd.) go west, southwest 5.3 miles to proposed road on right.

3. LOCATION OF EXISTING WELLS IN A ONE-MILE RADIUS:
   A. Water wells- None known

   B. Disposal wells- None known

   C. Drilling wells- None known

   D. Producing wells- Listed below and shown on Exhibit "F"

| Operator | Well Name |
|---|---|
| Fasken Oil and Ranch, Ltd. | Gossett "20" #1 |
| Fasken Oil and Ranch, Ltd. | Gossett "20" #2 |
| Fasken Oil and Ranch, Ltd. | Gossett "20" #3H |
| Fasken Oil and Ranch, Ltd. | Gossett "20" #4H |
| Fasken Oil and Ranch, Ltd. | Feil Federal #1 |
| Fasken Oil and Ranch, Ltd. | Knight "28" Federal #1 |
| Fasken Oil and Ranch, Ltd. | Howell "29" Com #1 |
| Fasken Oil and Ranch, Ltd. | Howell "29" Com #2 |
| Fasken Oil and Ranch, Ltd. | Neely Com #1 |

| | |
|---|---|
| Rhombus Energy | Mesa Com #1 |
| Pogo Producing Co. | Seven Rivers "20" Com #1 |
| Mewbourne Oil Co. | Pine Box "21" MD #1H |
| Mewbourne Oil Co. | Pine Box "21" Federal #1 |
| Echo Production, Inc. | Stiletto "21" Federal #2 |

E. Abandoned wells- Listed below and shown on Exhibit "F"

| Operator | Well Name |
|---|---|
| CH Juni | Gossett #1 |
| International Yates | McKee-Federal A #2 |
| Fasken Oil and Ranch, Ltd. | Cemetary Federal #1 |

4. PROPOSED PRODUCTION FACILITIES: If upon completion this well is a producer, production facilities will be located on the east side of the Feil Federal No. 3 pad. BLM approval has been granted for this location by Mr. Tanner Nygren. A multi-use right-of-way, shown in Exhibit "I", will be utilized for flowlines to the production facility as well as an overhead powerline to service production equipment. Any changes to the facilities will be accompanied by a Sundry notice. The following items that service this well are contained in the multi-use right-of-way.

   a.) A total of up to five (5) pipelines will be buried in the multi-use ROW at the current time. Two of these pipelines will be 4" SDR-11 polyethylene pipe. These two will both start at the production facility located on the Feil Federal No. 3 location, and will end at the tie-in point in the northwest corner of Section 28 of T20S, R25E. The first of these pipelines will be a produced water pipeline, and the other will be a gas pipeline.

   b.) In addition to the two previously mentioned pipelines, three flowlines will be buried in the multi-use ROW. One line will start at the Feil Federal No. 2 and end at the previously mentioned production facility. The other two lines will start at the Knight "28" Federal No. 3 and Knight "28" Federal No. 4, respectively, and also end at the production facility. These flowlines will transport oil, water, and gas to the production facility. They will be 3" diameter fiberglass lines with an estimated working pressure of 500 psi.

   These five lines will be buried, and the width to be bladed will be 50' (25' on either side, as shown in the plat attached to each APD).

   c.) One three-phase, electric, overhead power line will be constructed. It will begin at the tie-in point at the northwest corner of Section 28 in T20S, R25E, and

will service the wells to be drilled in Section 28, T20S, R25E, as well as the production facility located on the Feil Federal No. 3 location.

5. LOCATION AND TYPE OF WATER SUPPLY: Fresh and brine water, if necessary, will be purchased locally from a private source and trucked over the access roads or piped to location in flexible lines laid on top of the ground.

6. SOURCE OF CONSTRUCTION MATERIALS: If needed, construction materials will be obtained from drill sites excavations or from a local source. These materials will be transported over the access roads as shown on Exhibit "C". Topsoil will be stockpiled as depicted on Exhibit "D".

7. METHOD FOR HANDLING WASTE DISPOSAL:
   A. Trash, waste paper, and garbage will be contained in a trash trailer and disposed of in an approved public landfill.
   B. Chemicals remaining after completion of the well will be stored in the manufacturer containers and picked up by the supplier.
   C. If trailer houses are utilized during the drilling or completion process, the sewage from these units will be stored in a tank on location and hauled away to an approved disposal facility as needed. A "Porta John" will be provided for rig crews. This will be properly maintained and removed after drilling operations are completed.
   D. Drilling fluids will be contained in steel pits in a closed circulating system. Fluids will be cleaned and re-used. Water produced during testing will be contained in steel pits and disposed of at a state approved disposal facility. Any oil or condensate produced during testing will be stored in test tanks until sold and hauled from the site.
   E. Drilled cuttings will be separated by solids removal equipment, stored in steel containment pits, and hauled away to a state approved disposal facility.

8. ANCILLARY FACILITIES:

   No camps or airstrips will be constructed.

9. WELL SITE LAYOUT: Exhibit "G" illustrates the pad dimensions and the layout of the site during the drilling phase of the project. Mud pits will be steel and all mud and cuttings will be stored in steel pits. If the well is a producer, areas of location not essential to production equipment/facilities will be reclaimed and reseeded as per BLM requirements.

10. PLANS FOR RESTORATION OF SURFACE:

Rehabilitation of the location will begin in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer or a dry hole.

The interim reclaimed area (the hatched area illustrated in Exhibit "H") will be reclaimed by being removing the surfacing material, reshaping to its natural contour, topsoil from the spoils reapplied, and seeded and revegetated as per BLM requirements.

Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be modified in certain circumstances to prevent inundation of the location pad and any necessary surface facilities. After the area has been shaped and contoured, top soil from the spoil pile (if any) will be placed over the disturbed area to the extent possible. Revegetation procedures will comply with BLM standards.

If the well is a dry hole, or upon final abandonment, the surfacing material will be removed and the pad and road area will be recontoured to match the existing terrain. Topsoil will be spread to the extent possible. Revegetation will comply with BLM standards.

11. SURFACE OWNERSHIP: The surface is owned by the United States Department of the Interior.

12. OTHER INFORMATION:
    a. The topography is of relatively flat terrain with vegetation of sagebrush, yuccas, and native grasses. The soils are silty and very shallow.
    b. There are no buildings of any kind in the area.

13. OPERATOR'S REPRESENTATIVE: Field representative for contact regarding compliance with the Surface Use Plan is:

<u>Before, during, and after construction</u>:

Chris Hubbard
6101 Holiday Hill Rd.

Midland, Tx 79707
(432) 687-1777

# PECOS DISTRICT
# CONDITIONS OF APPROVAL

| | |
|---|---|
| **OPERATOR'S NAME:** | **Fasken Oil and Ranch** |
| **LEASE NO.:** | **NMNM-19418** |
| **WELL NAME & NO.:** | **Feil Federal 2** |
| **SURFACE HOLE FOOTAGE:** | **0355' FNL & 0330' FWL** |
| **LOCATION:** | **Section 28, T. 20 S., R 25 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**
  - Berm Pad
  - Cave/Karst
- ☐ **Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
  - Cement Requirements
  - High Cave/Karst
  - Logging Requirements
  - Waste Material and Fluids
- ☒ **Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines
  - Electric Lines
- ☐ **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)

Berming of the Well Pad

The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.

- The berm shall be constructed at a minimum of 24 inches high with impermeable mineral material (e.g. caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)

### Cave/Karst

## Cave and Karst

** Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

### Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

**Construction:**
In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

**No Blasting:**
No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

**Pad Berming:**
The pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the pad. All sides will be bermed.

**Tank Battery Liners and Berms:**
Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

**Leak Detection System:**
A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

**Automatic Shut-off Systems**:
Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

## Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

**Rotary Drilling with Fresh Water:**
Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

**Directional Drilling:**
Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

**Lost Circulation:**
ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

**Abandonment Cementing:**
Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

**Pressure Testing:**

Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

# 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. EXCLOSURE FENCING (CELLARS & PITS)

**Exclosure Fencing**
The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For

examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

## G. 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-five (25) 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.

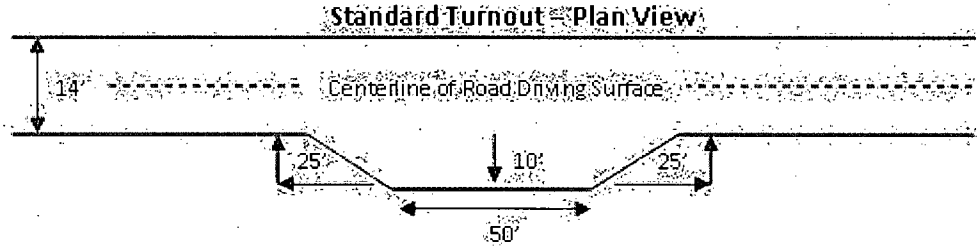
Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

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.

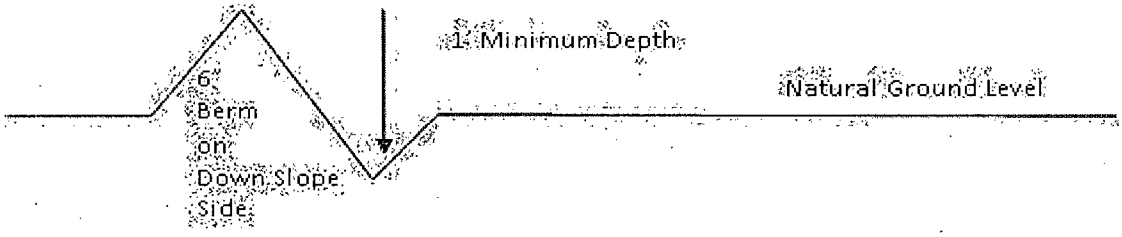
**Turnouts**
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



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

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

**Cross Section of a Typical Lead-off Ditch**




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

**Formula for Spacing Interval of Lead-off Ditches**

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

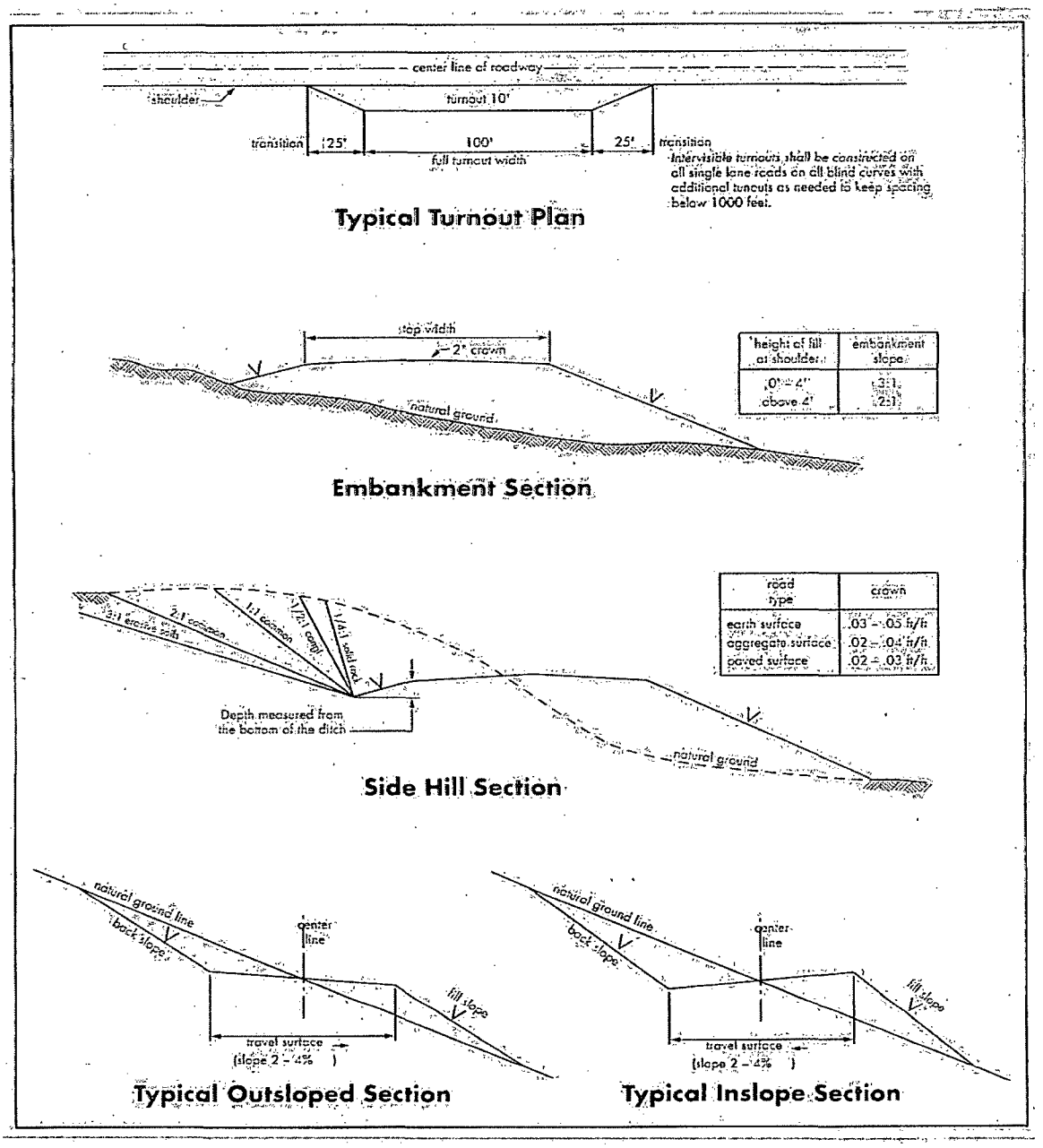
400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ lead-off ditch interval

**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.

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

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



# VII. DRILLING

## A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

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

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, report measured amounts and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies.**

## B. CASING

**Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.**

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

**Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS. See individual casing strings for details regarding lead cement slurry requirements.**

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

**Possibility of water flows in the San Andres.**
**Possibility of lost circulation in the Grayburg.**

**A MINIMUM OF TWO CASING STRINGS CEMENTED TO SURFACE IS REQUIRED IN HIGH CAVE/KARST AREAS. THE CEMENT MUST BE IN A SOLID SHEATH. THEREFORE, ONE INCH OPERATIONS ARE NOT SUFFICIENT TO PROTECT CAVE KARST RESOURCES. A CASING DESIGN THAT HAS A ONE INCH JOB PERFORMED DOES NOT COUNT AS A SOLID SHEATH.**

**CONTINGENCY CASING WILL BE REQUIRED IF LOST CIRCULATION (TOTAL LOSS) OCCURS WHILE DRILLING THE SURFACE HOLE. THE SURFACE HOLE WILL HAVE TO BE REAMED AND A LARGER CASING INSTALLED AND THE BLM IS TO BE CONTACTED PRIOR TO RUNNING THE CASING. NOTE: A DEEP CONDUCTOR WILL BE TREATED AND CEMENTED AS A CONTINGENCY CASING.**

**WHERE THE SURACE CASING HAD A SUCCESSFUL CEMENT JOB; IF LOST CIRCULATION (TOTAL LOSS) OCCURS WHILE DRILLING THE PRODUCTION 8-3/4 HOLE, THE CEMENT PROGRAM FOR THE PRODUCTION 5-1/2" CASING WILL NEED TO BE MODIFIED AND THE BLM IS TO BE CONTACTED PRIOR TO RUNNING THE CASING. A DV TOOL WILL BE REQUIRED.**

1. The **9-5/8** inch surface casing shall be set at approximately **825** feet and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

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

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

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

2. The minimum required fill of cement behind the **5-1/2** inch production casing is:

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

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

## C. PRESSURE CONTROL

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

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.

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

   a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

   b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.

   c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

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

   e. 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.**

   f. 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. This test shall be performed prior to the test at full stack pressure.

## D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

## E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

**JAM 100814**

# 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.

**Exclosure Netting (Open-top Tanks)**
Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

**Chemical and Fuel Secondary Containment and Exclosure Screening**
The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

**Open-Vent Exhaust Stack Exclosures**
The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

**Containment Structures**
Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the

largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

**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** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

## B. PIPELINES

BURIED PIPELINE STIPULATIONS

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, 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 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. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil 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 or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of 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 holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of **36** inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be **50** feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed **30** feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)

- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed **50** feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)

- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. 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.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

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. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

| | |
|---|---|
| ( x) seed mixture 1 | ( ) seed mixture 3 |
| ( ) seed mixture 2 | ( ) seed mixture 4 |
| ( ) seed mixture 2/LPC | ( ) Aplomado Falcon Mixture |

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. 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. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. 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 before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (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 actions to prevent the loss of significant 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.

17. 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 associated roads, 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.

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches that are not otherwise fenced, screened, or netted to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

## C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

**A copy of the grant 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 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. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roasting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-

of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.

6. 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 the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. 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 actions to prevent the loss of significant 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.

11. Special Stipulations:
- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- Fill in any holes with native soil.

## 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).

Seed Mixture 1, for Loamy 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 regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

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

| Species | lb/acre |
|---|---|
| Plains lovegrass (Eragrostis intermedia) | 0.5 |
| Sand dropseed (Sporobolus cryptandrus) | 1.0 |
| Sideoats grama (Bouteloua curtipendula) | 5.0 |
| Plains bristlegrass (Setaria macrostachya) | 2.0 |

*Pounds of pure live seed:

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