

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

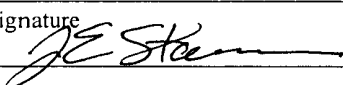
FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

5. Lease Serial No. NM 44593
6. If Indian, Allottee or Tribe Name
7. If Unit or CA Agreement, Name and No.
8. Lease Name and Well No. FIREFOX FEDERAL 001
9. API Well No. 30-015-36206
10. Field and Pool, or Exploratory LUSK MORROW WEST
11. Sec., T. R. M. or Blk. and Survey or Area SEC. 4, T19S, R31E
12. County or Parish EDDY
13. State NM
14. Distance in miles and direction from nearest town or post office* 10 MILES NW OF HALFWAY, NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660'
16. No. of acres in lease 318.52
17. Spacing Unit dedicated to this well 318.52
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
19. Proposed Depth 12,500
20. BLM/BIA Bond No. on file 3048 NM 0348
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3578'
22. Approximate date work will start* 01/15/2008
23. Estimated duration 40

24. Attachments

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

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

25. Signature 	Name (Printed/Typed) JIM STEVENS	Date 12/14/2007
Title OPERATIONS MANAGER		
Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed)	Date FEB 22 2008
Title FOR 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.

*(Instructions on page 2)

Capitan Controlled Water Basin

If earthen pits are used in association with the drilling of this well, an OCD pit permit must be obtained prior to pit construction.

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHEDSEE ATTACHED FOR
CONDITIONS OF APPROVAL

DISTRICT I
1825 N. French Dr., Hobbs, NM 88240
DISTRICT II
1301 W. Grand Ave., Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV
1220 St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Drive
Santa Fe, NM 87505

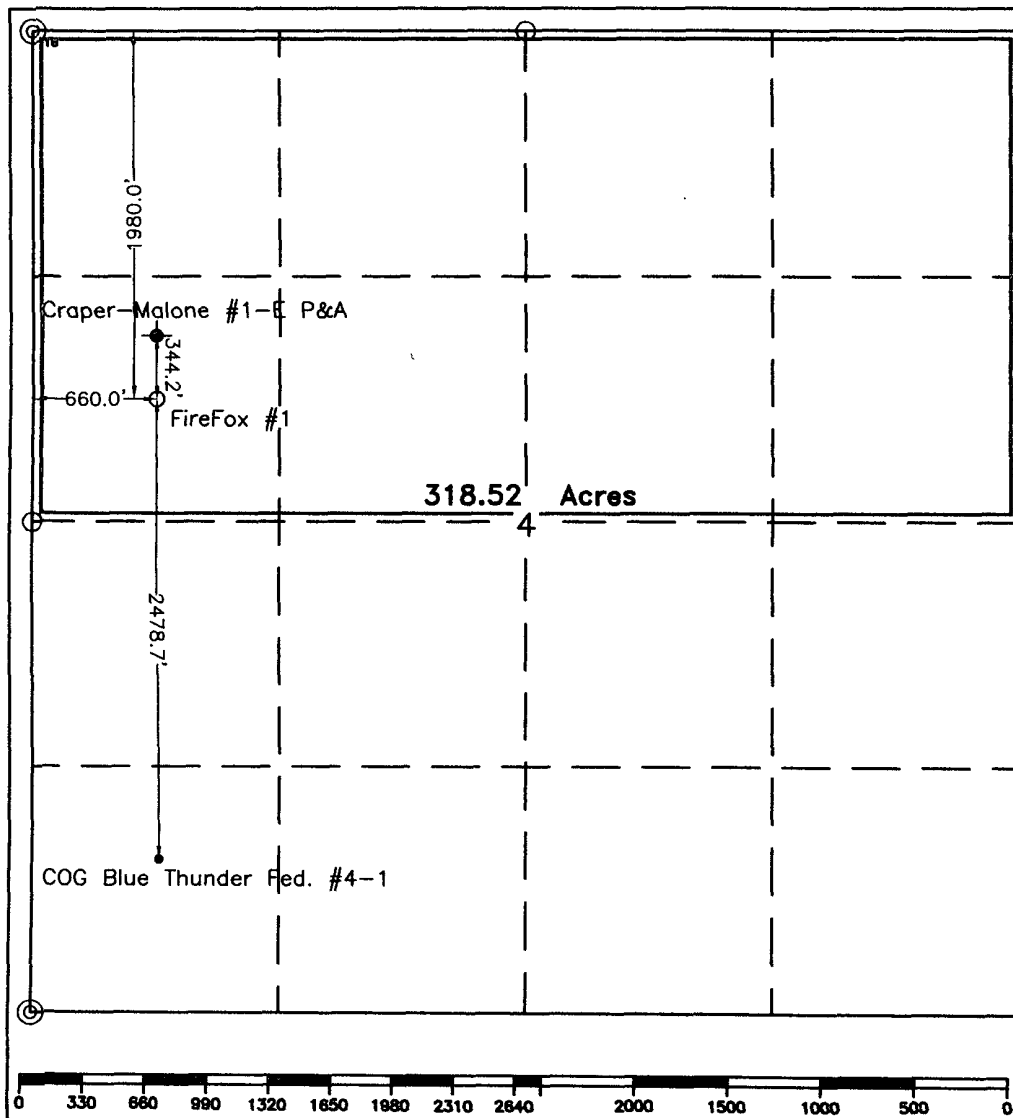
Form C-1021
Revised October 12, 2005
Submit to Appropriate District Office
State Lease-4 copies
Fee Lease-3 copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-015-36206		2 Pool Code 80840		3 Pool Name Lusk; Morrow, West					
4 Property Code 37058		5 Property Name FIREFOX FEDERAL			6 Well Number 1				
7 GRID No. 11181		8 Operator Name J.CLEO THOMPSON & JAMES CLEO THOMPSON, JR., L.P.			9 Elevation 3578'				
10 Surface Location									
UL or lot no. E	Section 4	Township 19-S	Range 31-E	Lot Idn	Feet from the 1980'	North/South line North	Feet from the 660'	East/West line West	County Eddy
11 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
12 Dedicated Acres 318.52		13 Joint or Infill		14 Consolidation Code		15 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.



17 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.

Jim Stevens 12/13/07
Signature Date

Jim Stevens
Printed Name

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

12/4/07
Date of Survey

Signature & Seal of Professional Surveyor:

John H. H. H.
Certificate No. 7254

○ = Staked Location • = Producing Well ● = Injection Well ◇ = Water Supply Well ◆ = Plugged & Abandon Well
⊙ = Found Section Corner, 2 or 3" Iron Pipe & GLO B.C. ○ = Found 1/4 Section Corner, 1" Iron Pipe & GLO B.C.

ADDITIONAL INFORMATION ON THE LOCATION

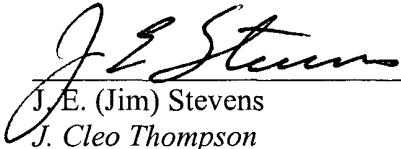
State Plane Coordinates			
Northing 615500.10 (1927= 615437.13)		Easting 680539.01 (1927=639359.69)	
Latitude 32°41'28.453"		Longitude 103°52'51.073"	
Zone North American Datum	Combined Grid Factor	Coordinate File	
East 1983	0.9997602	Firefox83e.crd	
Drawing File	Field Book		
Firefox.Dwg	Eddy #8, Page 60		

LEASE RESPONSIBILITY STATEMENT
J. Cleo Thompson & James Cleo Thompson, Jr., L.P.

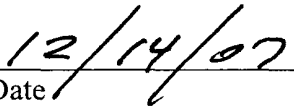
Firefox Federal, Well #1

1980' FNL & 660' FWL, Sec. 4, T-19-S, R-31-E
Eddy County, New Mexico

J. CLEO THOMPSON and JAMES CLEO THOMPSON, JR., L.P. accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof.



J. E. (Jim) Stevens
J. Cleo Thompson
Operations Manager



Date

DRILLING PROGRAM
J. Cleo Thompson & James Cleo Thompson, Jr., L.P.

Firefox Federal, Well #1

1980' FNL & 660' FWL, Sec. 4, T-19-S, R-31-E
Eddy County, New Mexico

1. Well Plan: Drill and complete a 12,500' MD Morrow Test
2. Ground Elevation: 3578'
3. Proposed Drilling Depth: 12,500'
4. Estimated Tops and Geological Markers:

Rustler	650'
Yates	2700'
Queen	3350'
Delaware	4920'
Bone Spring	6500'
Wolfcamp	9850'
Strawn	10850'
Atoka	11150'
Morrow Lime	11350'
Morrow Clastics	11730'

5. Estimated depths to water, oil, or gas formations.

Bone Spring	6500'	Oil
Atoka	11150'	Gas
Morrow	11730'	Gas

6. Casing Program

<u>Hole Size</u>	<u>Setting Depth</u>	<u>Csg Size & Wgt</u>	<u>Class</u>	<u>Grade/Jt</u>
17-1/2"	0'-600'	13-3/8", 48#	New	H40/STC
11"	0'-3500'	8-5/8", 32#	New	J55/STC
7-7/8"	0' - 500'	5-1/2", 17#	New	P110/LTC
	500' - 10,000'	5-1/2", 17#	New	N-80/LTC
	10,000' - 12500'	5-1/2", 17#	New	HCP110/LTC

Design Factors: Collapse: 1.175 Burst: 1.2 Tension: 1.8

DRILLING PROGRAM
J. Cleo Thompson & James Cleo Thompson, Jr., L.P.

Firefox Federal, Well #1

1980' FNL & 660' FWL, Sec. 4, T-19-S, R-31-E
Eddy County, New Mexico

7. Auxiliary Equipment:

Blowout preventer, gas detector, kelly cock and stabbing valve

8. Cementing and Setting Depths:

13-3/8" Surface

see COA

0'- 600' Set 600' of 13-3/8" 48# H40 STC casing.
Cement with 650 sacks Premium Plus C Cement + 2% bwoc
CaCl₂ + 56.4% Fresh Water. Yield: 1.34 cf/sx
Circulate Cement

8-5/8" Intermediate

0'- 3500' Set 3500' of 8-5/8" 32# J-55 STC casing.
Lead Slurry: 1060 sxs (35:65) Poz (Fly Ash): Premium Plus
C Cement + 5% bwow NaCl + 0.125 lbs/sack Cello Flake +
6% bwoc Bentonite + 111.6% Fresh Water. Yield: 2.09 cf/sx
Tail Slurry: 150 sxs Premium Plus C Cement + 1% bwoc
CaCl₂ + 56.3% Fresh Water. Yield: 1.34 cf/sx
Circulate cement.

5-1/2" Production

0'-12500' Set 12500' of 5-1/2" 17# casing.
Lead Slurry: 660 sxs (35:65) Poz (Fly Ash): Class H Cement
+ 5% bwow NaCl + 5 lbs/sx LCM-1 + 0.3% bwoc FL-52A =
6% bwoc Bentonite + 102.9% fresh water.
Yield 2.05 cf/sx
Tail Slurry: 150 sxs Class H Cement. Yield 1.18 cf/sx.
TOC: 9,000'

*see
COA*

DRILLING PROGRAM
J. Cleo Thompson & James Cleo Thompson, Jr., L.P.

Firefox Federal, Well #1

1980' FNL & 660' FWL, Sec. 4, T-19-S, R-31-E
Eddy County, New Mexico

9. Pressure Control Equipment:

The pressure control equipment for the 11" hole will consist of a 13-5/8" x 3,000 psi annular preventer. A diagram is attached. The blowout preventer equipment (BOP) for the 7-7/8" hole will be a 5,000 psi working pressure stack with both blind and pipe rams. In addition, an annular preventer rated to 3,000 psi will be installed on top of the stack. A diagram of the BOP stack and choke manifold is attached. All BOP and accessory equipment will be tested according to Onshore Order #2 before drilling out with the 7-7/8" hole and tested weekly.

See
COA →

10. Proposed Mud Program:

	<u>Program Depths</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Waterloss</u>
see COA	0' - 600'	Fresh water	8.4-9.2	28 - 35	NC
	600' - 3500'	Brine water	10.0 - 10.2	28 - 29	NC
	3500' - 10800'	Cut brine	8.4 - 9.2	28 - 29	NC
	10800' - 11150'	Brine	9.2 - 9.6	31 - 32	20 cc
	11150' - 11730'	Brine	9.6 - 9.8	36 - 42	< 15
	11730' - 12500'	Brine	9.8- 9.9	36 - 42	< 8

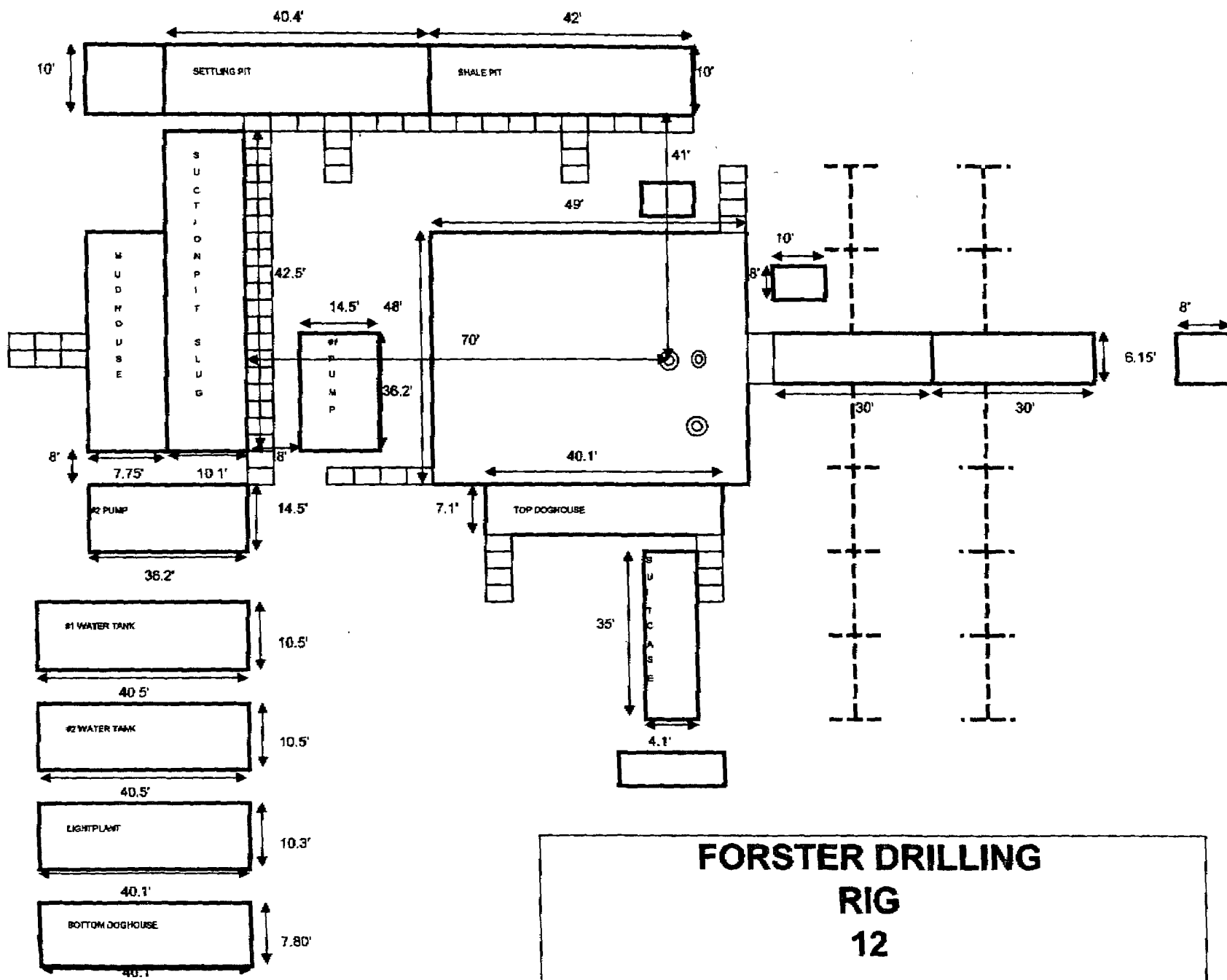
11. Testing, Logging and Coring Program:

Drill Stem Tests:	As deemed necessary in the Wolfcamp
Logging:	Platform Express TD to Intermediate Csg (Possible FMI & Repeat Formation Tester)
Coring:	No coring anticipated

12. No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered the proposed mud program will be modified to safely handle the increased pressures. The estimated BHP is 5100 psi with a temperature of 160°.

13. H₂S: None Expected

14. Anticipated Start Date: January 15, 2008
Anticipated Drilling time: 40 days



**FORSTER DRILLING
RIG
12**

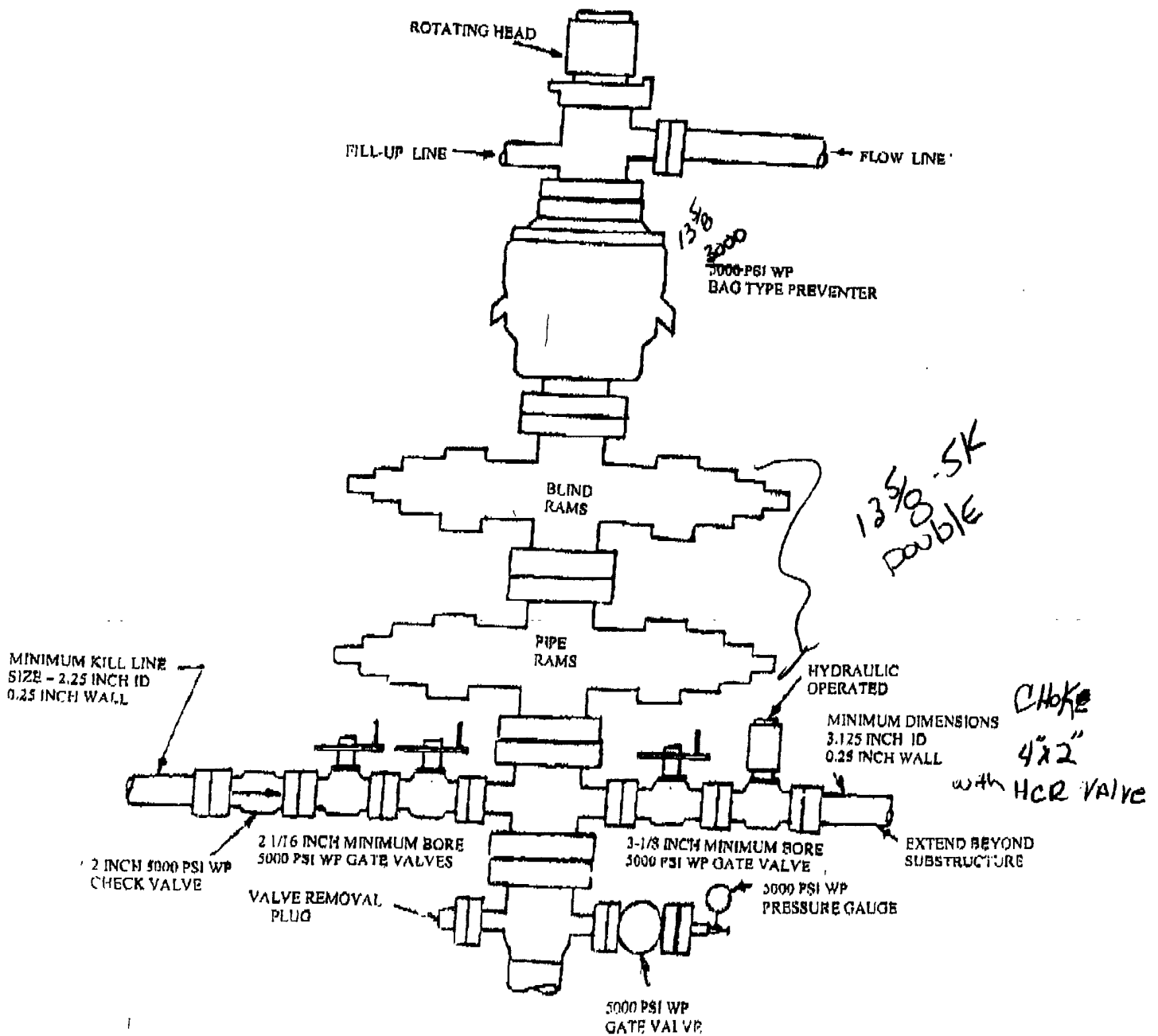
J. Cleo Thompson & James Cleo Thompson, Jr., L.P.

Firefox Federal, Well #1

1980' FNL & 660' FWL, Sec. 4, T-19-S, R-31-E

Eddy County, New Mexico

5000 PSI WORKING PRESSURE BLOWOUT PREVENTER STACK

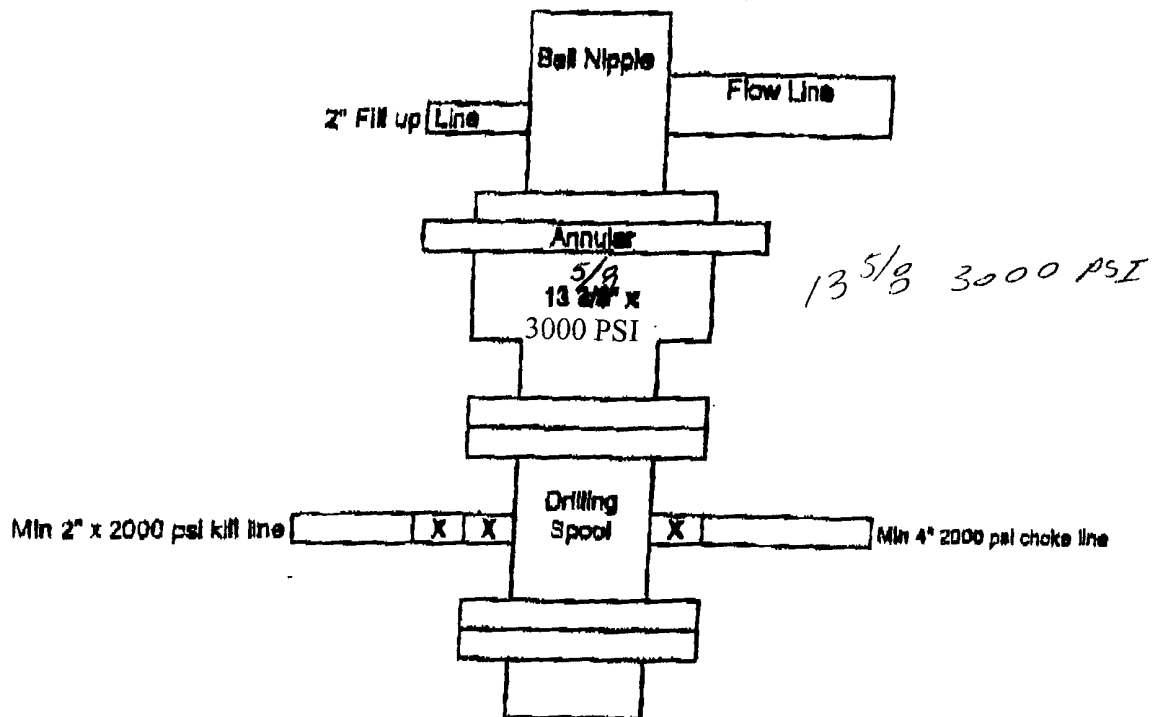


J. Cleo Thompson & James Cleo Thompson, Jr., L.P.

Firefox Federal, Well #1

1980' FNL & 660' FWL, Sec. 4, T-19-S, R-31-E
Eddy County, New Mexico

BOP Schematic for 11" Hole

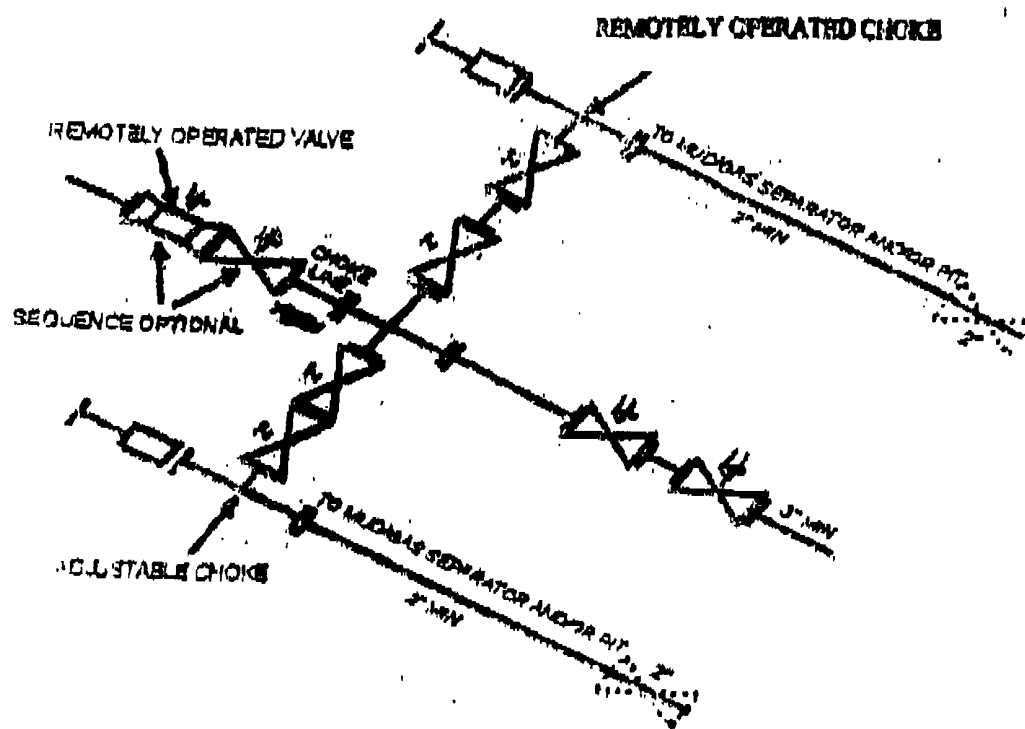


J. Cleo Thompson & James Cleo Thompson, Jr., L.P.

Firefox Federal, Well #1

1980' FNL & 660' FWL, Sec. 4, T-19-S, R-31-E

Eddy County, New Mexico



H₂S CONTINGENCY PLAN

J. Cleo Thompson & James Cleo Thompson, Jr., L.P.

**Firefox Federal, Well #1
1980' FNL & 660' FWL
UL: E, Sec. 4, T19S, R31E
Eddy County, New Mexico**

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SCOPE

This plan establishes **J. Cleo Thompson** guidelines for all company and contract employees whose duties may involve exposure to hydrogen sulfide gas (H₂S) on the Firefox Federal, Well #1. **This well is located 1980' FNL & 660' FWL in Unit E, Section 4 of the Township 19S, Range 31E of Eddy County, New Mexico.** This plan also establishes procedure for isolation of the work site and evacuating the public on the condition that:

- A. There is a release of H₂S that compasses the radius of exposure (ROE) in this plan,
- B. There are persons and/or roads within the ROE and,
- C. There is the endangerment of human or animal life within the ROE.

OBJECTIVE

The objective of the **J. Cleo Thompson Company** is to:

- A. Prevent any and all accidents, and to prevent the uncontrolled release of H₂S into the atmosphere and,
- B. Provide proper evacuation procedures to cope with emergencies and,
- C. Provide immediate and adequate medical attention should in injury occur.

It should be noted that J. Cleo Thompson does not expect there to be any release of H₂S into the atmosphere but has taken the necessary steps to react properly to and control any hazards encountered on any of our facilities.

GENERAL EMERGENCY ACTION

In the event of an emergency, the following action should be initiated,

1. All personnel shall immediately evacuate to an up-wind and up-hill “*safe breathing*” area.
2. Those who must enter the hazard area must wear positive pressure self-contained breathing apparatus and must use other appropriate safety equipment as outlined on page 10.
3. Isolate the well, if possible.
4. Use the “Buddy System” at all times.
5. Account for all personnel and take appropriate action as necessary for personnel safety.
6. Display the appropriate color warning flag to describe the type of emergency.
7. The *J. Cleo Thompson* supervisor will assess the situation and assign duties to various persons to bring the situation under control. The *J. Cleo Thompson* supervisor will assign the notification of local emergency response agencies and residents. Media inquiries are be referred to:

J. Cleo Thompson
325 North St. Paul, Suite 4300
Dallas, Texas 75201

**J. CLEO THOMPSON
EMERGENCY CALL OUT NUMBERS**

NAME	OFFICE NUMBER	CELLULAR NUMBER	HOME NUMBER
Johnnie Holder Drilling Foreman	(432)550-8887	(432)556-9325	(432)363-8054
Jim Stevens Operations Manager	(432) 550-8887	(432) 664-2917	(432) 563-5504
Amador Pando Production Foreman	(505)677-2396	(505)746-7324	(505) 677-2396

J. Cleo Thompson is aware and will abide by any current city; county and state burn ban policies.

**Emergency Notification Numbers
Eddy County, NM**

Organization or Agency	Phone Number
New Mexico State Police	(505)885-3137
Eddy County Sheriff's Department	(505)887-7551
Eddy County Emergency Management	(505)887-9511
Emergency Medical Service (Ambulance)	911
State Emergency Response Center <i>Max Johnson (Chairman)</i>	(505)476-9620
Carlsbad Fire Department	911 or (505)885-3125
Bureau Land Management (District II)	(505)234-5972
Oil Conservation Division (District II)	(505)748-1283
National Response Center (NRC)	(800)424-8802
Chemtrec	(800)424-9300
Midland Safety & Health	(432)520-3838

Firefox Federal, Well #1

Neighboring Residents to Firefox Federal, Well #1

NONE

**EMERGENCY PROCEDURES FOR UNCONTROLLABLE RELEASE OF
HYDROGEN SULFIDE GAS (H₂S)**

1. Secure and don self-contained breathing apparatus.
2. Remove all personnel to up-wind and up-hill "safe breathing" zone.
3. Contact all concerned employees and immediate supervisor for instructions.
4. Take steps to protect and/or remove the general public to an upwind area away from source of H₂S.
5. Deny entry to unnecessary personnel.
6. Notify necessary public safety personnel:
 - a. State Police if on or near a **state road**
 - b. Sheriff's Department if on or near a **county road***(For assistance in the evacuation of the general public and to help maintain roadblocks)*
7. Contact the Bureau of Land Management (BLM)
8. While attempting to control the release, maintain tight security and safety procedures.
9. Use the "Buddy System" when entering any hazardous area.

The responsibility of this plan is with the J. Cleo Thompson supervisor(s) who shall be in complete command during the emergency.

IGNITION PROCEDURES FOR UNCONTROLLABLE WELL CONDITIONS

The decision to ignite the well is the decision of the company supervisor(s). This decision should be made only as a last resort and in a situation where it is determined that:

- Human life and/or property are endangered
- There is no hope of controlling the blowout under the prevailing conditions at the well.

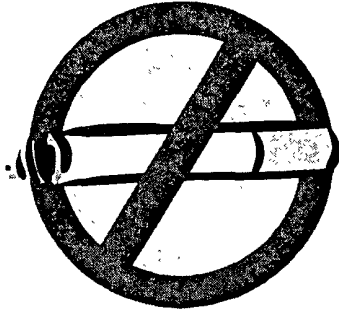
INSTRUCTIONS FOR IGNITING THE RELEASE

1. Two personnel are required for the ignition operation. They **must** wear positive self-contained breathing apparatus and a D-ring style full body safety harness with a non-flammable safety rope attached. **(Must be an OSHA approved body harness)**
2. One (safety) person will test the atmosphere for explosive gases with an approved Triple-range (H_2S , O_2 , LFL) monitor.
3. Primary method of ignition shall be with 25mm flare gun with range of approximately 500 feet.
4. Ignite up-wind and do not approach any closer than is warranted.
5. Select a safe ignition site, which offers ultimate egress.
6. Before activating flare gun, check for presence of combustible gas.
7. After ignition, continue emergency action and procedure as before.
8. All unassigned personnel will limit their actions to those directed by the company supervisor.

After the well is ignited, burning H_2S will produce SO_2 , which is also highly toxic. **Do not assume the area is safe after the well is ignited.**

A NO SMOKING POLICY shall be strictly enforced on location at all times.

DANGER



NO SMOKING

EMERGENCY EQUIPMENT REQUIREMENTS

1. Respiratory Protection

- **Rescue Units (SCBA's):** One (1) unit shall be placed at each briefing area and 2 shall be stored in the safety trailer.
- **Work/Escape Units:** Four (4) units shall be stored on the rig floor connected to the safety trailer with sufficient hose to allow workers to adequately perform duties with minimal restriction.
- **Emergency Escape Units:** Four (4) units shall be stored in the top dog house for emergency evacuation purposes.

2. Signs and Flags

- **One (1) Condition Sign shall be placed at location entrance with the following language:**

DANGER

H₂S

POTENTIAL DANGER (GREEN)

MODERATE DANGER (YELLOW OR ORANGE)

EXTREME DANGER (RED)

- **Condition flags shall be displayed at the sign in one of the designations:**

Green/normal conditions

Yellow or Orange / potential danger

Red/danger
H₂S Present

3. **Briefing Area:** Two (2) briefings areas, designed by signs, shall be located perpendicular to each other and be easily visible and readily accessible.
4. **Windsocks:** Two (2) windsocks shall be strategically placed where they are easily visible from all points.

5. **Hydrogen Sulfide Detectors and Alarms:**

- One (1) stationary H₂S monitor with three sensors shall be located on the rig in the top dog house. The H₂S monitor shall be calibrated to alarm at 10PPM for the low alarm (visual alarm) and 15 PPM for the high alarm (audible alarm). Calibrations shall be checked every 30 days or as needed. The sensors shall be located as follows:

#1 – Rig Floor

#2 – Bell Nipple

#3 – Flow line or where the well bore fluid is discharged

- A gas sampling pump, with detector tubes capable of measuring H₂S gas, shall be located in the safety trailer.

6. **Additional Rescue Equipment**

- One hundred Feet (100') of 5/8" OSHA approved rope.
- Two (2) OSHA approved full body harness
- One (1) Stretcher

7. **Fire Extinguishers:**

- One (1) 20#, Class ABC fire extinguisher shall be located in the safety trailer.

8. Communication:

- Cellular Phones/Mobile Phones or two-way radios shall be available via the vehicles on location and on the rig floor.

TOXIC EFFECTS OF HYDROGEN SULFIDE

Hydrogen Sulfide (H₂S) is extremely toxic. The accepting ceiling concentration for an eight (8) hour exposure is 10PPM, which is .001% by volume. Hydrogen sulfide (H₂S) is colorless. Hydrogen Sulfide (H₂S) is heavier than air, the specific gravity is equal to 1.19, which is 20% heavier than ambient temp air, which is 1.00. Hydrogen sulfide (H₂S) can form an explosive mixture with air between 4.3% and 46.0%. By volume hydrogen sulfide (H₂S) is as toxic as hydrogen cyanide and is between 5-6 times more toxic than carbon monoxide.

TOXICITY OF VARIOUS GASES

Common Name	Chemical Formula	Specific Gravity	Threshold Limit¹	Hazardous Limit²	Lethal Concentration³
Hydrogen Cyanide	HCN	0.94	10 PPM	150 ppm/Hr	300PM
Hydrogen Sulfide	H ₂ S	1.189	10 PPM ⁴ 15 PPM ⁵	100 PPM/Hr	600 PM
Sulfur Dioxide	SO ₂	2.21	2 PPM	N/A	100 PPM
Chlorine	CL ₂	2.45	1 PPM	4 PPM/Hr	1000 PPM
Carbon Monoxide	CO	.97	50 PPM	400 PPM/Hr	1000 PPM
Carbon Dioxide	CO ₂	1.52	5000 PPM	5%	10%
Methane	CH ₄	0.55	90,000 PPM	Combustible @5%	N/A

(1)Threshold limit – Concentration at which it is believed that all workers may be repeatedly exposed, day after day with out adverse effects also referred to as Time Weighted Average (TWA).

(2) Hazardous limit – Concentration that may cause death

(3) Lethal concentration– Concentration that will cause death with short-term exposure

(4) Threshold limit – 10PPM – NIOSH guide to chemical hazards

(5) Short – term threshold limit – Concentration higher than Threshold limit with limits placed on time one can be exposed. Exposure time is limited to 15 minutes followed by one (1) hour in fresh air. This cycle can be repeated for four (4) times during a normal eight (8) hour work day.

PHYSICAL EFFECTS OF HYDROGEN SULFIDE (H₂S)

(Concentrations are calculated @ 15.00 psia and 60 ° F.)

Concentrations		Physical Effects
0.0001%	10 PPM	Obvious & unpleasant odor. Safe for eight (8) hour exposure.
0.005%	50 PPM	Can cause some flu-like symptoms and can cause pneumonia
0.01%	100 PPM	IDLH¹ . Kills the sense of smell in 3 to 15 minutes. May irritate eyes and throat.
0.02%	200 PPM	Kills the sense of smell rapidly. Severely irritates eyes and throat. Severe flu-like symptoms after 4 or more hours may cause lung damage and/or death.
0.06%	600 PPM	Loss of consciousness quickly, death will result if not rescued promptly.

(1) Immediately dangerous to life or health

TOXICITY OF HYDROGEN SULFIDE

H₂S % (PPM)	0 – 2 Minutes	0 – 15 Minutes	15 – 30 Minutes	30 Minutes to 1 Hours	1 – 4 Hours	4 - 8 Hours	8 – 48 Hours
0.005 (50 ppm) 0.010 (100 ppm)				Mild Conjunctivitis; Respiratory Tract Irritation			
0.010 (100 ppm) 0.015 (150 ppm)		Coughing; Irritation of eyes; loss of sense of smell	Disturbed Respiration Pain in eyes; Sleepiness	Throat	Salivation & Mucous Discharge; Sharp Pain in eyes; Coughing	Increased Symptoms*	Hemorrhag & Death*
0.015 (150 ppm) 0.020 (200 ppm)		Loss of Sense of Smell	Throat & Eye Irritation	Throat & Eye Irritation	Difficult breathing, Blurred Vision, Light & Shy	Serious irritating Effects	Hemorrhag & Death*
0.025 (250 ppm) 0.035 (350 ppm)	Irritation of Eye and Loss of Sense of Smell	Irritation of Eyes	Painful Secretion of Tears, Weariness	Light & Shy; Nasal Catarrh, Pain in Eyes, Difficult Breathing	Hemorrhage & Death		
0.035 (350 ppm)		Irritation of Eye and Loss of Sense of Smell	Difficult Respiration; Coughing, Irritation of Eyes	Increased Irritation of Eyes & Nasal Tract; Dull pain in Head; Weariness; Light & Shy	Dizziness, Weakness; Increased Irritation; Death	Death*	
0.050 (500 ppm)	Coughing, Collapse & Unconsciousness	Respiratory Disturbances; Irritation of Eyes; Collapse	Serious Eye Irritation; Palpitation of Heart, Few Cases of Death	Severe pain in eyes and head, Dizziness; Trembling of Extremities; Great Weakness & Death*			
0.060 (600 ppm) 0.070 (700 ppm) 0.080 (800 ppm) 0.100 (1000 ppm) 1.150 (1500 ppm)	Collapse* Unconsciousness Death*	Collapse* Unconsciousness Death					

***Data secured from experiments of dogs, which have susceptibility similar to men/women.**

****PPM parts per million**

THE USE OF SELF-CONTAINED BREATHING AIR EQUIPMENT

SCBA should be worn when:

- Working near the top or on top of any tank.
- Disconnecting any line where H₂S can reasonably be expected.
- Sampling air in the area to determine if toxic concentration of H₂S exist.
- Working in areas where over 10PPM of H₂S has been detected.
- At any time there is a doubt as to the H₂S level in the area to be entered.

Air quality testing shall be continuous throughout the entire operation if a container is breeched or in a hazardous location.

All personnel shall be trained in the use of SCBA prior to working in a potentially hazardous location.

Facial hair and standard eyeglasses are not allowed with SCBA use.

Contact lenses are never allowed with the use of SCBA.

The SCBA shall be inspected monthly.

After each use, the SCBA shall be cleaned, disinfected, serviced, inspected and refilled to proper specifications.

RESCUE & FIRST AID FOR VICTIMS OF HYDROGEN SULFIDE (H₂S) **POISONING**

Do not panic!

Remain calm and think with your head and not your heart.

Don breathing apparatus

Protect yourself, then remove victim to fresh air as quickly as possible.

When evacuating: walk not run, upwind and uphill from the source or crosswind to achieve upwind.

Notify emergency response personnel

Provide artificial respiration and/or CPR, as necessary.

Remove all contaminated clothing to avoid further exposure.

A minimum of two (2) personnel on location shall be trained in CPR and First Aid.

MULTI POINT SURFACE USE AND OPERATIONS PLAN
J. Cleo Thompson & James Cleo Thompson, Jr., L.P.

Firefox Federal, Well #1

1980' FNL & 660' FWL, Sec. 4, T-19-S, R-31-E
Eddy County, New Mexico

This plan is submitted with the Application for Permit to Drill the above described well. The purpose of the plan is to describe the location of the proposed well; the proposed construction activities and operations plan to be followed in rehabilitating the surface and environmental effects associated with the operations.

1. EXISTING ROADS

- A. Exhibit "A" is a portion of a topo' map showing the location of the proposed well as staked. The well location is approximately 10 miles northwest of Halfway, NM.
- B. Directions: From the intersection of County Road 222 (Shugart Road) and County Road 249 (Westall Road) go north along County Road 222 for approximately 250'. Turn west and follow caliche road in a westerly direction approximately 0.3 miles to a road intersection. Continue west approximately 500' to the next intersection. At this intersection turn south and go approximately 700' to the Firefox Federal well pad.

2. ACCESS ROADS

- A. Length and Width: There is an access road right to the well site. No additional roads need be built.
- B. Surface Material: Existing
- C. Turnouts: None
- D. Culverts: None
- E. Cuts and Fills: None Required
- F. Gates, Cattle Guards: None
- G. Drainage Design: Existing

MULTI POINT SURFACE USE AND OPERATIONS PLAN
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Eddy County, New Mexico

3. LOCATION OF EXISTING WELLS

Existing wells in the immediate area are shown on the topo map as well as on the Acreage Dedication Plat.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

J. Cleo Thompson and James Cleo Thompson Jr., L.P. has no existing wells or facilities. If the well proves to be commercial, the necessary production facilities, gas separation-process equipment and tank battery, if required, will be installed on the drilling pad.

5. LOCATION AND TYPE OF WATER SUPPLY

It is planned to drill the proposed well with fresh water that will be obtained from private or commercial sources and will be transported over the existing access roads.

6. SOURCE OF CONSTRUCTION MATERIALS

Caliche for surfacing the proposed access road and well site pad will be obtained from the location, if available, or from a commercial site. No surface materials will be disturbed except those necessary for actual grading and leveling of the drill site.

7. METHODS OF HANDLING WASTE DISPOSAL

- A. Drill cuttings will be disposed of in the reserve pits.
- B. Drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry.
- C. All pits will be fenced with normal fencing materials to prevent livestock from entering the area.
- D. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or a separate disposal application will be submitted to the BLM for approval.

MULTI POINT SURFACE USE AND OPERATIONS PLAN
J. Cleo Thompson & James Cleo Thompson, Jr., L.P.

Firefox Federal, Well #1

1980' FNL & 660' FWL, Sec. 4, T-19-S, R-31-E
Eddy County, New Mexico

- E. Oil produced during operations will be stored in tanks until sold.
- F. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- G. Trash, waste paper, garbage and junk will be contained in trash bins to prevent scattering by the wind and will be removed for deposit in an approved sanitary landfill within 30 days after finishing drilling and/or completion operations.

8. ANCILLARY FACILITIES

- A. None Required

9. WELL SITE LAYOUT

- A. Exhibit "B" shows the relative location and dimensions of the well pad, reserve pits, and major rig components. The pad and pit area has been staked, 400' X 400'.
- B. Mat size: 150' X 300', plus 150' X 150' reserve pits on the West.
- C. Cut and Fill: None required
- D. The surface will be topped with compacted caliche and the reserve pits will be plastic lined.

10. PLANS FOR RESTORATION OF THE SURFACE

- A. After completion of drilling and /or completion operations, all equipment and other material not required for operations will be removed. Pits will be filled and the location cleaned of all trash and junk to leave the well site in an aesthetically pleasing a condition as possible.
- B. Any unguarded pits containing fluids will be fenced until are filled.
- C. If the proposed well is non-productive, all rehabilitation and/or vegetation

MULTI POINT SURFACE USE AND OPERATIONS PLAN
J. Cleo Thompson & James Cleo Thompson, Jr., L.P.

Firefox Federal, Well #1

1980' FNL & 660' FWL, Sec. 4, T-19-S, R-31-E
Eddy County, New Mexico

requirements of the Bureau of Land Management will be complied with and will be accomplished as expeditiously as possible. All pits will be filled and leveled as soon as they are dry enough to be worked.

11. OTHER INFORMATION

A. Topography

The land surface at the well site is rolling native grass with a regional slope being to the east.

B. Soil

Topsoil at the well site is sandy soil.

C. Flora and Fauna

The location is in an area sparsely covered with mesquite and range grasses.

D. Ponds and Streams

There are no rivers, lakes, ponds, or streams in the area.

E. Residences and Other Structures

There are no residences within a mile of the proposed well site.

F. Archaeological, Historical, and Cultural Sites

None observed on this area.

G. Land Use

Grazing

H. Surface Owner

The proposed well site and part of the access road is on BLM surface with Federal minerals.

MULTI POINT SURFACE USE AND OPERATIONS PLAN
J. Cleo Thompson & James Cleo Thompson, Jr., L.P.

Firefox Federal, Well #1

1980' FNL & 660' FWL, Sec. 4, T-19-S, R-31-E
Eddy County, New Mexico

12. OPERATOR'S REPRESENTATIVE

- A. The field representative for assuring compliance with the approved use and operations plan is as follows:

Jim Stevens

J. Cleo Thompson & James Cleo Thompson, Jr., L.P.

P.O. Box 12577

Odessa, TX 79768

Office Phone: (432) 550-8887

Cell Phone: (432) 664-2917

MULTI POINT SURFACE USE AND OPERATIONS PLAN
J. Cleo Thompson & James Cleo Thompson, Jr., L.P.


Firefox Federal, Well #1

1980' FNL & 660' FWL, Sec. 4, T-19-S, R-31-E
Eddy County, New Mexico

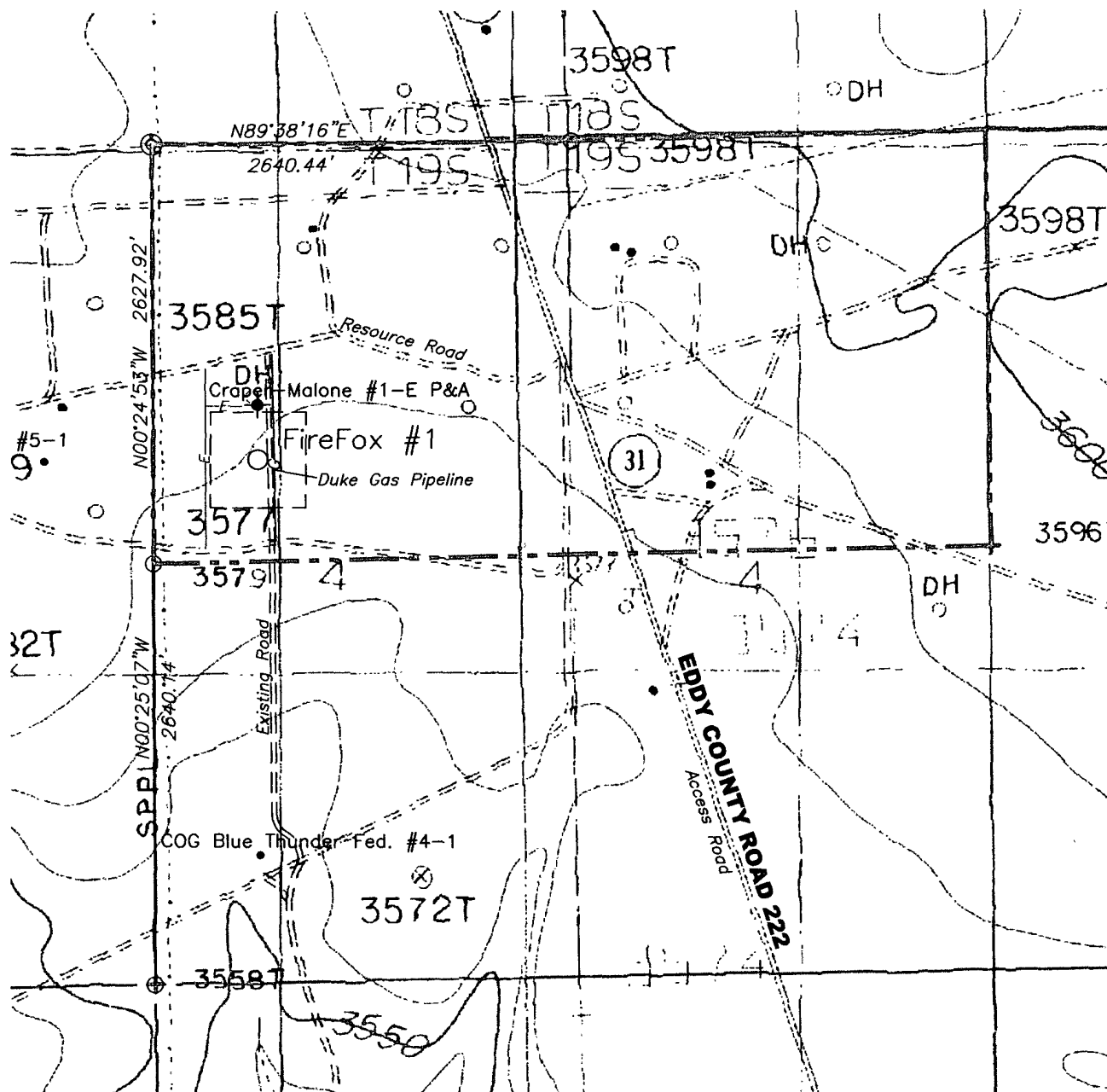
13. CERTIFICATION:

I hereby certify that I have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in the plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by J. Cleo Thompson and James Cleo Thompson, Jr., L.P. and its contractors and sub contractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C 1001 for the filing of a false statement.

Date: 12/26/07



J. E. Stevens
Operations Manager for J. Cleo Thompson



LEGEND OF SYMBOLS

- E- = Existing Electric Line
- G- = Duke Gas Pipeline
- o = Staked Well Location
- = Producing Well Location
- ⦿ = Water Injection Well
- o = Found 1" Iron Pipe with Brass Cap
- ⊙ = Found 2" or 3" Iron Pipe with Brass Cap
- = Unit or Lease Boundary

EXHIBIT "A"

ACCESS ROAD AND FACILITIES MAP

J. CLEO THOMPSON & JAMES CLEO THOMPSON, JR., L.P.

Firefox Federal #1
 Located 1980' FNL & 660' FWL, Section 4,
 T-19-S, R-31-E, Eddy County, NM

Drawn by: Gene M. Rodriguez

Scale: 1" = 1000'

Date: 12/12/07

Attn.: Jim Stevens

Checked by: J.S. Piper

Sheet 1 of 1

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Thompson J Cleo
LEASE NO.:	NM-44593
WELL NAME & NO.:	1-Firefox Federal
SURFACE HOLE FOOTAGE:	1980' FNL & 660' FWL
LOCATION:	Section 4, T. 19 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**
 - Cave/Karst
 - VRM
 - Cultural
- ☒ **Construction**
 - Notification
 - Topsoil
 - Reserve Pit
 - Federal Mineral Material Pits
 - Well Pads (See Special Requirements)
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
- ☐ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines
 - Electric Lines
- ☐ **Reserve Pit Closure/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)

Due to the pipeline waiver received from DCP Midstream, allowing the proposed well pad to be built over the pipeline, these special requirements are to be followed:

- 1) Dirt will be added, not removed from the pipeline.**
- 2) No equipment shall be placed on top of the pipeline.**
- 3) No digging or drilling near the pipeline.**
- 4) The pipeline should be clearly marked for all personnel and passers-by to see.**

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 (505) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

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

B. TOPSOIL

The operator shall stockpile the topsoil of the well pad. The topsoil to be stripped is approximately inches in depth. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

There is no measurable soil on this well pad to stockpile. No topsoil stockpile is required.

C. RESERVE PITS

The reserve pit shall be constructed and closed in accordance with the NMOCD rules.

The reserve pit shall be constructed 150' X 150' on the West side of the well pad.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of three feet below ground level. Should the pit content level not meet the three foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of three feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

D. FEDERAL MINERAL MATERIALS PIT

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

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Carlsbad Field Office at (505) 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 thirty (30) feet.

Surfacing

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

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

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

Crowning

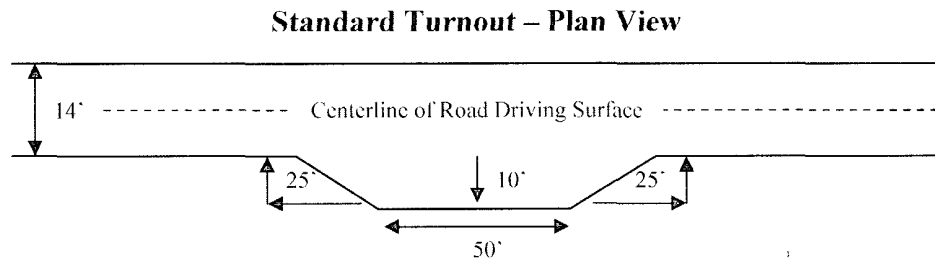
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1: cross section and plans for typical road construction.

Ditching

Ditching shall be required on both sides of the road.

Turnouts

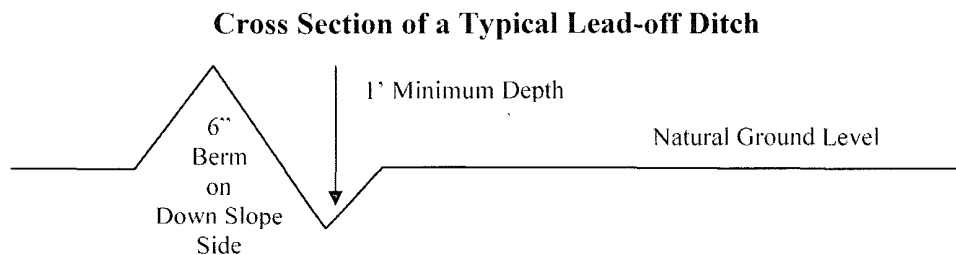
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



Drainage

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

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



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

Formula for Spacing Interval of Lead-off Ditches

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

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

Culvert Installations

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

Cattleguards

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

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

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

Fence Requirement

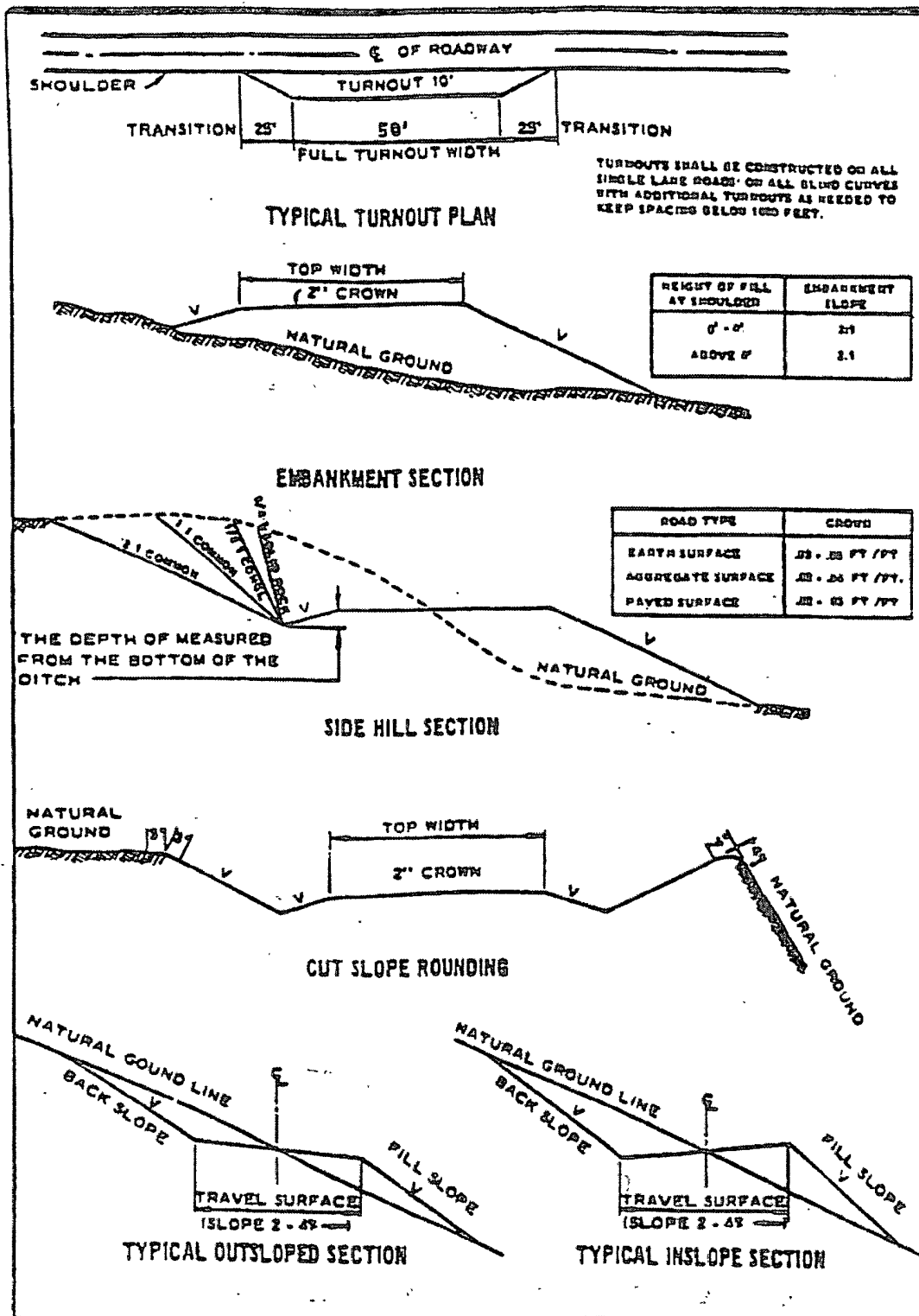
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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

Public Access

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

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

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

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

☒ **Eddy County**

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

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a possible hazard. It has been reported in the Township to the east measuring 200-3000 ppm in gas streams and 200-3000 ppm in STVs. If Hydrogen Sulfide is encountered, please report measured amounts 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.
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 are located, this does not include the dog house or stairway area.

B. CASING

1. The **13-3/8** inch surface casing shall be set **a minimum of 25 feet into the Rustler Anhydrite and above the salt at approximately 675 feet** and cemented to the surface. **Fresh water mud to be used to this depth.**
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

- b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement). **Please provide WOC times to inspector for cement slurries.**
- 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, a remedial cement job will be done prior to drilling out that string.

**Possible lost circulation in the Artesia Group and Capitan Reef.
Possible water flows in the Artesia and Salado Groups.**

- 2. The minimum required fill of cement behind the **8-5/8** inch intermediate casing is:

☒ Cement to surface. If cement does not circulate see B.1.a-d above. **Please provide WOC times to inspector for cement slurries.**

Formation below the 8-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i.

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

☒ **Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. Additional cement will be required and it may be necessary to do a two stage cement job. A sundry with two stage plan proposal will be required if a two stage job is done.**

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

C. PRESSURE CONTROL

- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
- 2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **8-5/8"** intermediate casing shoe shall be **5000 (5M) psi. To be classified as a 5M system, a 5M annular is required.**

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.
 - 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.
 - e. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation **if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days**. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

E. DRILL STEM TEST

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

Engineer on call phone (after hours): Carlsbad: (575) 706-2779

WWI 020508

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

VRM Facility Requirement

IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

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

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

At the time reserve pits are to be reclaimed, operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions 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 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.

B. RESERVE PIT CLOSURE

The reserve pit, when dried and closed, shall be recontoured, all trash removed, and reseeded as follows:

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

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

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

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.