

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work. <input checked="" type="checkbox"/> DRILL <input checked="" type="checkbox"/> REENTER - NO RDS -		5. Lease Serial No. LC057798 NM 117806
1b. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator Joe L. Tarver - PARCO ENERGY (279579)		7. If Unit or CA Agreement, Name and No N/A
3a. Address 12403 CR 2300 Lubbock, TX 79423	3b. Phone No. (include area code) (806) 795 - 2042	8. Lease Name and Well No. Magruder 11
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface T17S R27E Section 35 LOT #P 330 FSL, 482 FEL At proposed prod. zone		9. API Well No. 30-015-00629
14. Distance in miles and direction from nearest town or post office* 9 miles East of Artesia, NM		10. Field and Pool, or Exploratory EMPIRE; YATBS - Seven Rivers
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 200	11. Sec., T. R. M. or BLM and Survey or Area Section 35, T17S, R27E
17. Spacing Unit dedicated to this well 10 Acres	18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 660'	12. County or Parish Eddy
19. Proposed Depth 540 FT	20. BLM/BIA Bond No. on file NMB000328	13. State NM
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3643' GL	22. Approximate date work will start* 09/06/2010	23. Estimated duration 2 WEEKS

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) Joe L. Tarver	Date 10/29/2009
Title President		
Approved by (Signature) 	Name (Printed/Typed)	Date 3/26/10
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.

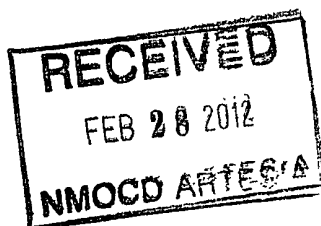
APPROVAL FOR TWO YEARS

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

\*(Instructions on page 2)

Roswell Controlled Water Basin

Approval Subject to General Requirements  
& Special Stipulations Attached



SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

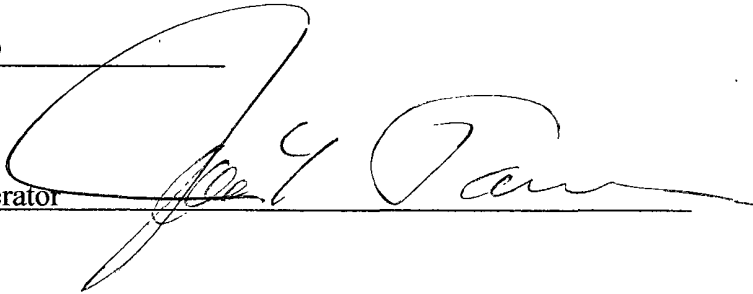
## Operator Certification:

### MARGUER #11

I hereby certify that I, or persons under my direct supervision, have inspected the drill site and access roads proposed herein; that I am familiar with the conditions which presently exist; that I have knowledge of State and Federal laws applicable to this operation; that the statements made in the APD package are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed in conformity with this plan and the terms and conditions under which it is approved. I also certify that I, am responsible for the operations conducted under this application. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Date December 18, 2009

Name and Title Joe Tarver – Operator

A handwritten signature in black ink, appearing to read "Joe Tarver", is written over a horizontal line. The signature is stylized with a large, looping initial "J" and a long, sweeping tail.

**United States Department of the Interior**

**Bureau of Land Management**

**Carlsbad Field Office 620 E. Greene Street  
Carlsbad, New Mexico 88220**

**Statement Accepting Responsibility for Operations**

Operator Name: **Joe L. Tarver**  
Street or Box: **12403 County Road 2300**  
City, State: **Lubbock, TX**  
Zip Code: **79423**

*TARCO ENERGY*

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

Lease No.: **LC057798**

Legal Description of Land: **Unit 'P' 330 FSL - 482 FEL Sec. 35, T17S R27E,  
Eddy County, NM**

Formation(s) (if applicable): **Yates Seven Rivers**

Bond Coverage: (State, Nationwide or Individual) **Individual**

BLM Bond File No.: **NMB000328**

Authorized Signature

  
Joe L. Tarver

Title: Operator

Date: 11-24-2009

DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II  
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III  
1000 Rio Brazos Ed., Aztec, NM 87410

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

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 October 15, 2009

**RECEIVED**

Submit one copy to appropriate District Office

FEB 28 2012

NMOCD ARTESIA

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number <b>30-015-00629</b>	Pool Code <b>22230</b>	Pool Name <b>EMPIRE; YATES-Seven Rivers</b>
Property Code <b>309286</b>	Property Name <b>MAGRUDER</b>	
OGRIID No. <b>279579</b>	Operator Name <b>TARCO ENERGY</b>	Well Number <b>11</b>
Surface Location		Elevation <b>3643'</b>

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	35	17 S	27 E		330	SOUTH	482	EAST	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.						

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

	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or undivided mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>[Signature]</i> Signature Date <b>11/24/2009</b></p> <p><b>JOE L. TARYER</b> Printed Name</p>
	<p><b>SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>NOV 24 2009 Date Surveyed</p> <p><i>[Signature]</i> Signature &amp; Seal of Professional Surveyor 7977</p> <p><b>Certificate No. Gary L. Jones 7977</b></p> <p><b>BASIN SURVEYS</b></p>

## DRILLING PROGRAM

**Magruder #11  
Sec. 35, T-17-S, R-27-E  
Eddy County  
Joe Tarver, Operator**

**1. Geologic Name of Surface Formation:**

a. Rustler

**2. Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:**

a. Upper Permian Sands	300'	We have not encountered water in this area.
b. Yates	430'	Oil

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands are protected by 8 5/8" casing set @ 1067' and cement circulated to the surface, and 5 1/2" casing set @ 5,840' and cement circulated to the surface.

**3. Casing Program:**

*Casing already in place in this re-entry*

<u>Hole Size</u>	<u>Interval</u>	<u>O.D. Casing</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>	<u>Collapse Design Factor</u>	<u>Burst Design Factor</u>	<u>Tension Design Factor</u>
11"	0' - 1067'	8 5/8"	Casing placed in service when well was first drilled.					
7 7/8"	0' - 5840'	5 1/2"	Casing placed in service when well was first drilled.					

**4. Cement Program:**

*Cement already in place in this re-entry.*

**8 5/8" Cemented from 968' to the surface  
5 1/2" Cemented from 5,840' to the surface**

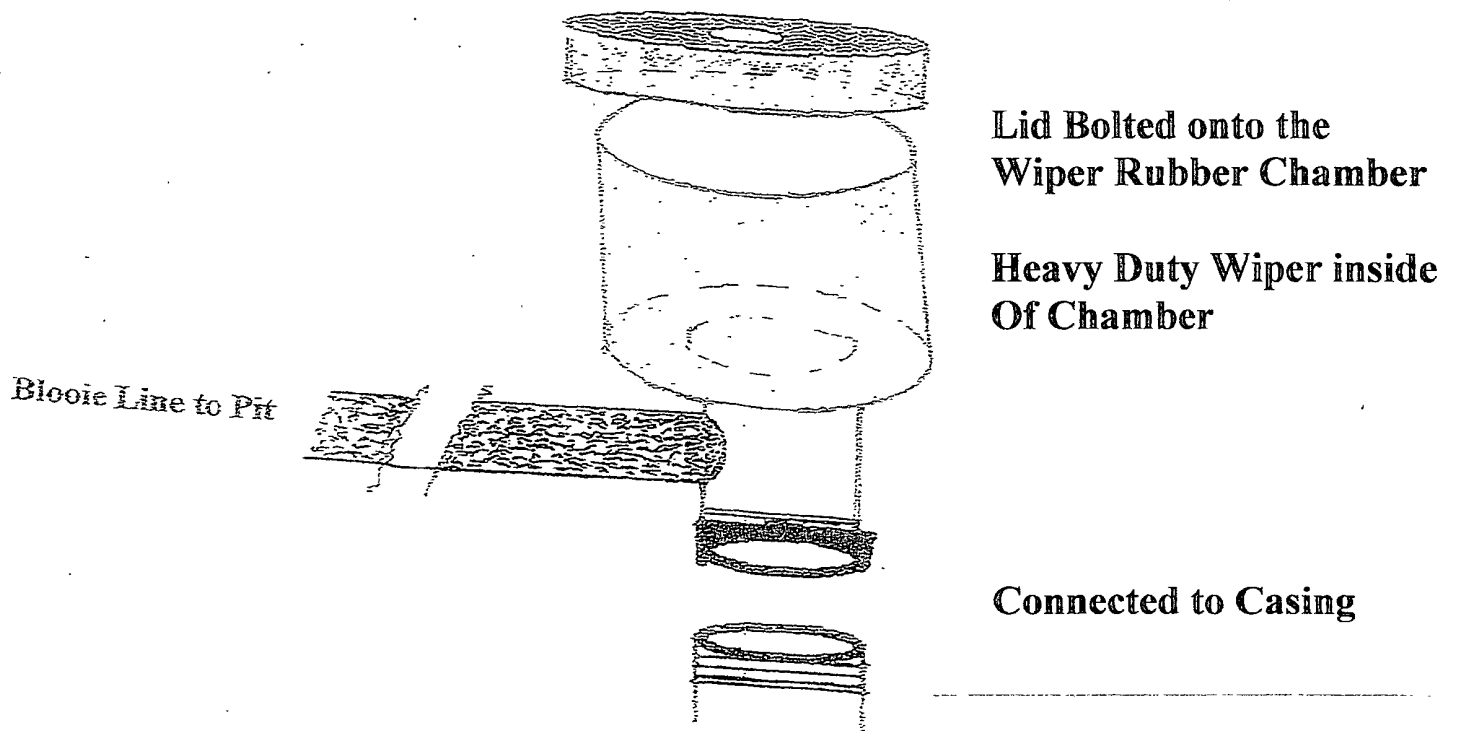
5. **Pressure Control:**

Please consider this request for a B.O.P. variance from on shore regulations.

This is a re-entry within two strings of casing, both cemented to the surface.  
See the following Schematic of a diverter control system.

B.O.P.

## Control Diverter For Air Drilling



**6. Proposed Well Will Be Drilled With Air:**

The Drill Rig is truck mounted. The Air Compressor is operated from a "PTO" from the drilling engine.

- 7.** The top of the Yates will be 430' based on the logs of the Russell #7Y 1320' to the West. The TD will be 540'. After the plug is drilled out to 540', Compensated Neutron and Gamma Ray-CCL Logs will be run to pinpoint zone to perforate.

**8. Potential Hazards:**

Only drilling out cement plug. No pressure or abnormal temperatures are expected. No H2S is anticipated to be encountered. However, the crew will have personal H2S detectors to protect in the event of H2S from nearby tank batteries.

**9. Anticipated Starting Date and Duration of Operations:**

No location construction is required. Rig move in will begin after the BLM has approved the APD. Anticipated spud date is 09-06-2010 Move in operations and drilling is expected to take 7 days to 2 weeks.

Following is information to perfect this Application to Reenter.  
Info requested by Wesley Ingram, Eng. BLM

**Joe Tarver**

**Magruder # 11 --- Lease – NMLC057798**

**This is a Re-entry of BP America abandoned “Riverwolf #13 API #3001500629”**

**See attached Log of the original well.**

**The Casing information was typed over other writing, making it difficult to read, however, it looks as if the:**

**8 5/8 Casing is ---- 24LB**

**5 ½ Production string is --- 15 1/2 LB**





NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico

REQUEST FOR (OIL) - (GAS) ALLOWABLE

RECEIVED

APR 8 1960

(Form C-104)  
Revised 7/1/57

New Well  
Recompletion

This form shall be submitted by the operator before an initial allowable will be assigned to any completed Oil or Gas well. Form C-104 is to be submitted in QUADRUPLICATE to the same District Office to which Form C-101 was sent. The allowable will be assigned effective 7:00 A.M. on date of completion or recompletion, provided this form is filed during calendar month of completion or recompletion. The completion date shall be that date in the case of an oil well when new oil is delivered into the stock tanks. Gas must be reported on 15.025 psia at 60° Fahrenheit.

Artesia, New Mexico  
(Place)

April 8, 1960  
(Date)

WE ARE HEREBY REQUESTING AN ALLOWABLE FOR A WELL KNOWN AS:

Carper-Sivley Empire Joint Account Magruder Well No. 13, in SE 1/4 SE 1/4,  
(Company or Operator) (Lease)

R.V., Sec. 35, T. 17-S, R. 27-E, NMPM, Undesignated Pool

Eddy

County. Date Spudded 3-9-60

Date Drilling Completed 3-28-60

Please indicate location:

Elevation 3653' DF

Total Depth 5840 PBTD 5809

Top Oil/Gas Pay 5750

Name of Prod. Form. Abo

PRODUCING INTERVAL -

Perforations 5750'-5757', 5765'-5778', 5786'-5792', 5799'-5804'

Open Hole None Depth 5840 Casing Shoe 5730'

OIL WELL TEST -

Natural Prod. Test: bbls. oil, bbls water in hrs, min. Choke Size

Test After Acid or Fracture Treatment (after recovery of volume of oil equal to volume of load oil used): 75 bbls. oil, 0 bbls water in 3 hrs, 0 min. Choke Size 6/64

GAS WELL TEST -

Natural Prod. Test: MCF/Day; Hours flowed Choke Size

Method of Testing (pitot, back pressure, etc.):

Test After Acid or Fracture Treatment: MCF/Day; Hours flowed

Choke Size Method of Testing:

Acid or Fracture Treatment (Give amounts of materials used, such as acid, water, oil, and sand): 10,000 gals. 15% HCl w/ Hyflo and 80 rubber balls, Casing Tubing Date first new Press. 200 oil run to tanks April 7, 1960

Oil Transporter Service Pipe Line Company

Gas Transporter None

Remarks:

I hereby certify that the information given above is true and complete to the best of my knowledge.

Approved APR 8 1960, 19

Carper Drilling Company, Inc.  
(Company or Operator)

By: J. Marshall Reedy  
(Signature)

OIL CONSERVATION COMMISSION

By: M. L. Armstrong

Title Vice President  
Send Communications regarding well to:

Title OIL AND GAS INSPECTOR

Name Carper-Sivley Empire Joint Account

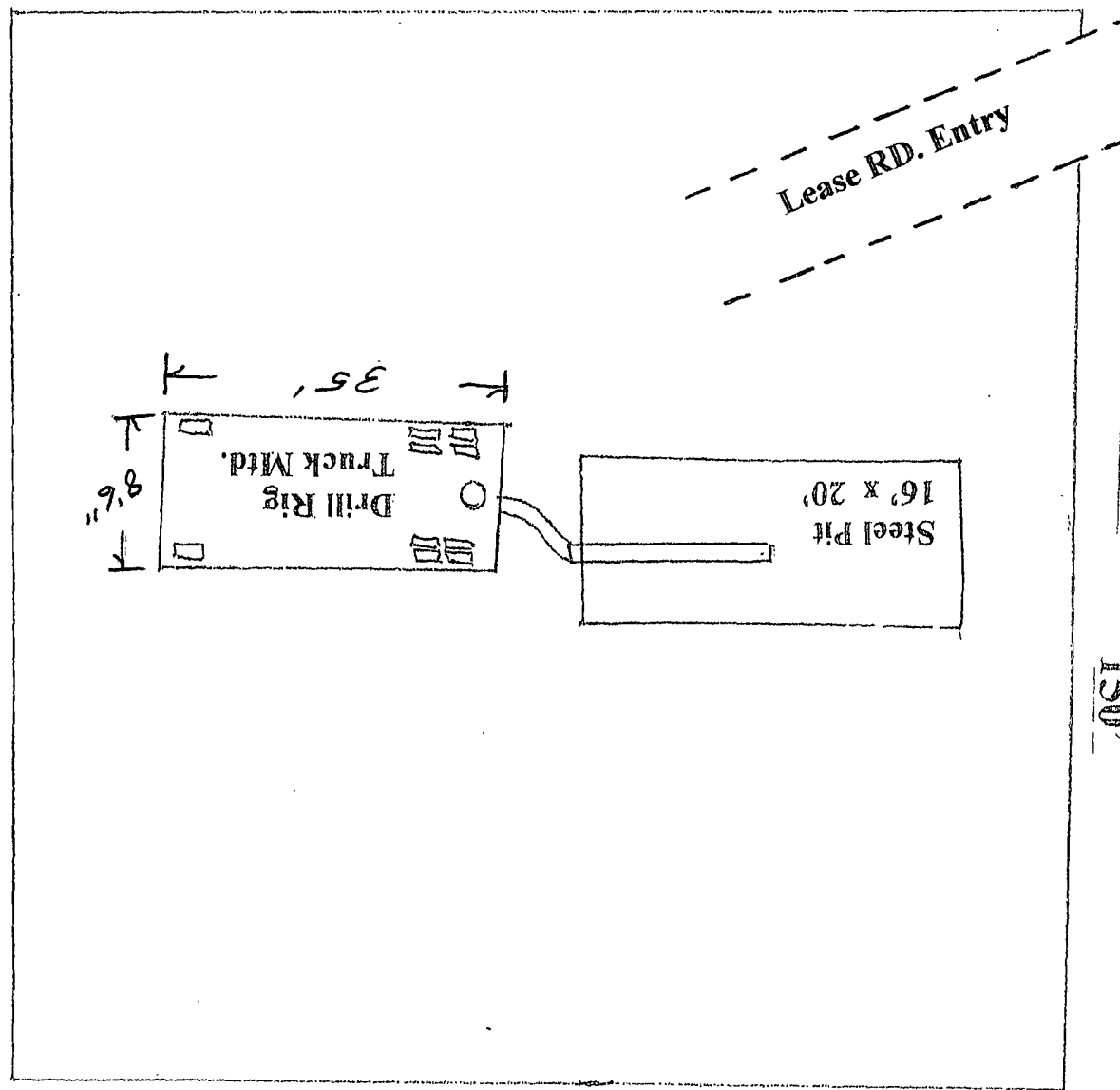


EXHIBIT "C"

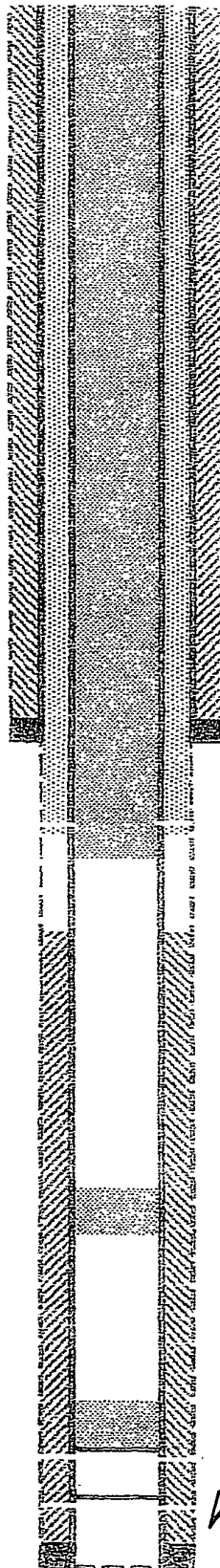
Magruder # 11

Oerator  
Joe Tarver

Operator: Joe Tarver  
Lease: LC057798

Magruder #11 ReEntry  
T17S - R27E, 330FSL & 482FEL

GL@ 3643



PROPOSED RE-ENTRY  
TO 530'

11" Hole  
8 5/8" - @ 1067'  
Circulated cement to  
Surface

7 7/8" Hole  
5 1/2" - @ 5840'  
Circulated Cement  
To Surface

Joe Tarver

## Air Drill Rig Equipment

RE: Magruder #11

We Purchased a Chicago Pneumatic Drilling Rig specifically for the purpose of drilling the Seven Rivers (500+/-). The Drill Rig and Compressor are both mounted on a Crain Carrier truck. It has performed well, drilling Seven Rivers wells.

The Rig has an Air Compressor for drilling. We have used the air drilling method because it is much more practical. We also have a trailer mounted Wheatley 6" x 6" Duplex Mud Pump. We can switch from air to mud if necessary.

### Special Drilling Operations:

- 1.) The Rig has a lubricated and maintained rotating head.
- 2.) All the Rig Equipment is powered by a Catapillar Diesel Engine. A Spark Arrester will be installed on the engine.
- 3.) We are drilling 500 feet depth. The discharge line will not carry the cuttings 100 feet. This Rig<sup>as</sup> designed for a short straight blooie line 8 ft. to 10 ft. **I am requesting a variance from this regulation because of the size of the equipment used.** We will have a straight line run.
- 4.) There is a misting of water to settle the dust.
- 5.) Cuttings will be directed to a Steel Pit.
- 6.) **Please allow a variance from the "float valve above pit" rule, in that we will have no fluid.**
- 7.) **Please allow a variance from "Igniter" rule. We are only drilling our a Partial Plug.**
- 8.) The compressor is mounted on the Drill Rig truck 30 feet from the rotary table. **Please allow a variance from the "100 foot from well bore" rule.**
- 9.) Mud Circulating Equipment is mounted on a separate trailer. Water will be on standby.



United States Department of the Interior  
Bureau of Land Management  
Carlsbad Field Office

Refer To: 3160-3

January 22, 2010

To: AFM, Lands & Minerals, CFO

From: Geologist, CFO

Subject: Geologic Review of Application for Permit to Drill

Operator: Joe L. Tarver.

Well Name and Number: Magruder Federal No. 11

Location: 330' FSL & 482' FEL

Section: 35, T. 17 S., R. 27 E., NMPM

County: Eddy

State: NM

Lease No.: LC-057798

Date APD Rec'd: 01/21/10

1. Surface Elevation **3,643'** Surface Geology **Tansill Formation**

2. Geologic Marker Tops (from reports on surrounding wells):

<u>Geologic Marker</u>	<u>Depth</u>
Bowers	669'
Queen	848'
Grayburg	1264'
Premier Ss.	1478'
San Andres	1500'

Marker tops taken from the Eagle 33A No. 1 located in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ , sec. 33, T. 17 S., R. 27 E., NMPM, Eddy County

<u>Geologic Marker</u>	<u>Depth</u>
Queen	900'
San Andres	1632'
Glorieta	2996'
Abo	5178'
Wolfcamp	6510'
Strawn	8910'
Atoka	9250'
Mississippian	10,052'

Marker tops taken from the MaGruder A No. 15 well located in the NW¼SW¼, sec. 35, T. 17 S., R. 27 E., NMPM

<u>Geologic Marker</u>	<u>Depth</u>	<u>Porosity</u>
Tansill	surface	
Yates	110' ?	10
Seven Rivers	360'	1
Bowers	970'	20
Queen	1015'	6
Penrose	1220'	4
Grayburg	1400'	0
Loco Hills	1450'	4
Metex	1530'	4
Premier	1680'	10
San Andres	1790'	1
San Andres Sand	2375'	10
Lovington	2965'	8
Glorieta	3100'	10
Paddock	3212'	6
Blinbry	3390'	2

Marker tops taken from the MaGruder A No. 12 well located in the SE¼SE¼, sec. 35, T. 17 S., R. 27 E., NMPM

<u>Geologic Marker</u>	<u>Depth</u>	<u>Porosity</u>
Tansill	surface	
Yates	42' ?	23
Seven Rivers	292'	1
Bowers	970'	5
Queen	1105'	3
Penrose	1220'	22

<u>Geologic Marker</u>	<u>Depth</u>	<u>Porosity</u>
Grayburg	1290'	-2
Loco Hills	1445'	8
Metex	1540'	4
Premier	1680'	10
San Andres	1790'	1
San Andres Sand	1985'	8
Lovington	2555'	10
Glorieta	3100'	7
Paddock	3355'	4

Marker tops taken from the Logan 35 Federal No. 13 well located in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ , sec. 35, T. 17 S., R. 27 E., NMPM

<u>Geologic Marker</u>	<u>Depth</u>	<u>Porosity</u>
Tansill	surface	
Yates	50' ?	8
Seven Rivers	370'	20
Bowers	980'	-3
Queen	1020'	6
Penrose	1230'	6
Grayburg	1400'	0
Loco Hills	1450'	6
Metex	1550'	4
Premier	1690'	6
San Andres	1795'	4
San Andres Sand	2075'	7
Lovington	2860'	8
Glorieta	3100'	6
Paddock	3350'	1
Blinebry	3660'	2

Marker tops taken from the Logan 35 No. 11 well located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ , sec. 35, T. 17 S., R. 27 E., NMPM

3. Fresh Water Information: Fresh water for Domestic use may be obtained as deep as 1144' from the Artesia Group in particular the Grayburg Formation. Wells in secs. 5, 6 and 8 have encountered the artesian aquifer at depths of 990' to 1130'. Oil and Gas wells have encountered useable water down to 1144' from the Sparks No. 1 (Sec. 20). State Engineer lists domestic supplies in secs. 16 and 17 from the Grayburg Formation. Further research of this township indicates an abrupt change in water depths going from 1130' to



425' to less than 300' in the space of .5 to 1 mile. In the vicinity of this well, casing should be set at 1144' in order to avoid protecting both hydrocarbons and fresh water with the same string of casing.

Deepest Expected Fresh Water: 300'

Does Surface Casing cover all anticipated usable fresh water zones? Yes.

If no, set surface casing to      feet

Controlled Water Basin: Yes

Capitan                      Carlsbad                      Roswell **X**                      Lea

Remarks: This is a re-entry well. Casing already in place.

4. Geologic Hazards? Yes

H<sub>2</sub>S **X**              Karst **X**              Abnormal Pressures              Other **X**

Remarks: H<sub>2</sub>S is always a possible hazard. H<sub>2</sub>S has been reported from various wells completed in the Morrow, Atoka, Empire, Empire Yates and Seven Rivers, Red Lake and Logan Draw Morrow, in Sections 20, 22, 25, 33, 34, and 35, T. 17 S., R. 27 E., NMPM; measuring 20 ppm. in STVs only. But, H<sub>2</sub>S has also been reported several times in a Riverwolf Unit well completed in the Abo, located in the SE $\frac{1}{4}$ SW $\frac{1}{4}$  of Sec. 35, T. 17 S., R. 27 E., NMPM; measuring 18,000 ppm. in the Gas Streams and 50+ ppm. in STVs. Possible loss of circulation in the Grayburg and San Andres Formations. The potential for the occurrence of Karst type features is high down to 350 feet.

5. Other Mineral Deposits: Possible caliche, sand and gravel.

6. Potash:

Secretary's  
Oil-Potash Area              R-111-P Area              Not Applicable **X**

7. Other References:

New Mexico State Engineer's Water Well Listings;

Eddy County H<sub>2</sub>S List;

Nicholson, A., Jr., and Clebsch, A., Jr., 1961, Geology and Ground-Water Conditions of Southern Lea County, New Mexico; Ground-Water Report No. 6, New Mexico Bureau of Mines and Mineral Resources, Campus Station, Socorro, New Mexico.

Hudson, J.D., and Borton, R.L., 1983, Ground-Water levels in New Mexico, 1976-1980, Basic Data Report, New Mexico State Engineer

Oil and Gas historical files.

8. No active mining claims are located in this vicinity.

Geologist Signature: Jerry B. Fant

Date: 01/22/10

# PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Joe L. Tarver
LEASE NO.:	NM117806
WELL NAME & NO.:	Magruder #11
SURFACE HOLE FOOTAGE:	330' FSL & 482' FEL
BOTTOM HOLE FOOTAGE	' F L & ' F L
LOCATION:	Section 35, T. 17 S., R 27 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**
  - Well Location/Access Road Construction
  - Cave/Karst
- ☒ **Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
  - H2S
  - High Cave/Karst
- ☐ **Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines
    - Right-of-Way Width and Placement
- ☒ **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)**

### **Well Location and Access Road Construction:**

As discussed on the onsite, the well location will not be surfaced with any mineral material other than underneath the pumpjack. The access road will not be surfaced either, but maintained as a two-track road.

## **Cave and Karst**

### **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, siting valves 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 valves, 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.

**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) 234-5972 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 off the edge of the well location in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil will be used for interim and final reclamation.

### **C. CLOSED LOOP SYSTEM**

Tanks are required for drilling operations: No Pits.

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

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

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

#### **E. WELL PAD SURFACING**

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

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

##### **Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width.

##### **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.

##### **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.

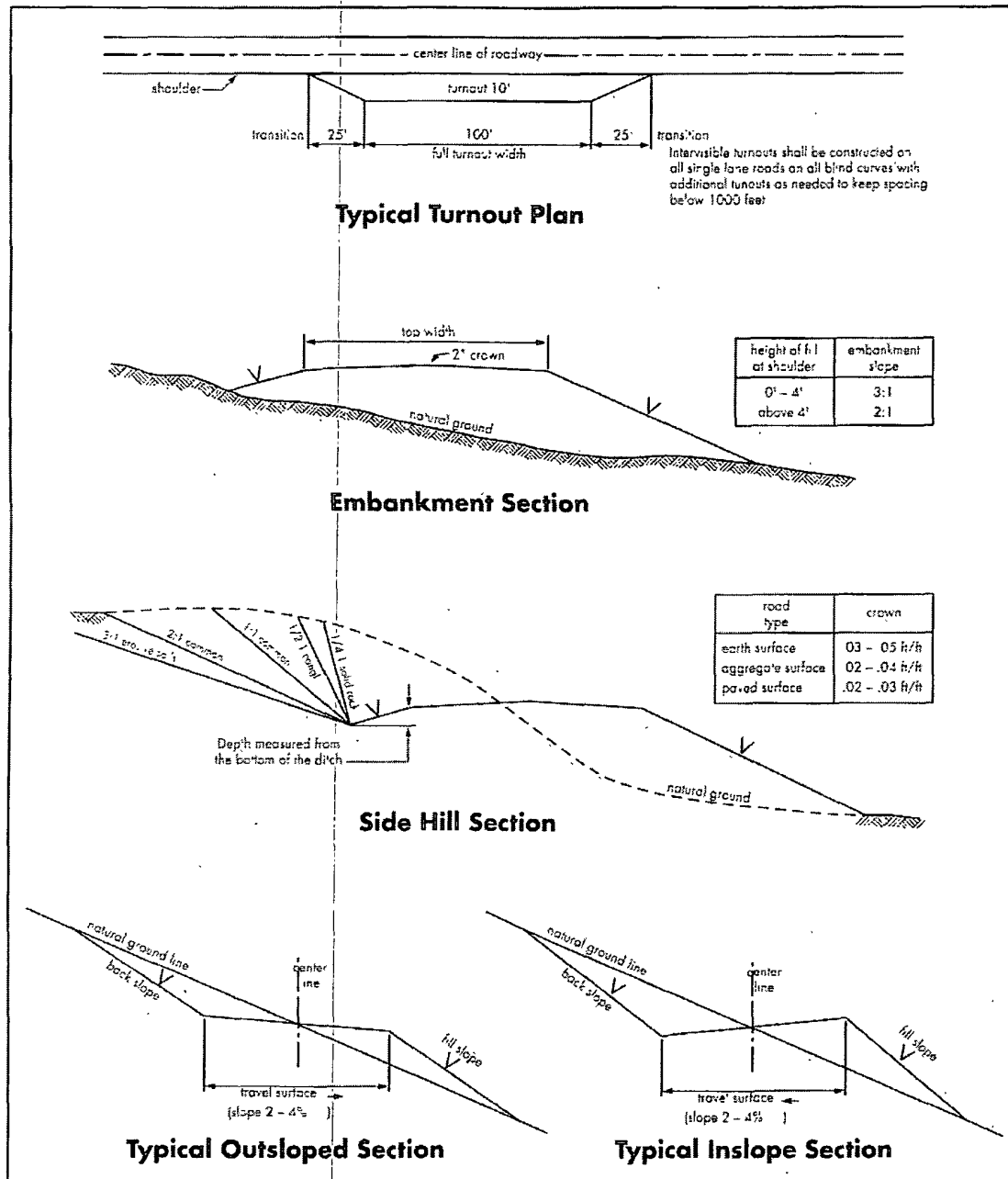
The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

**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. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan should be activated before running in hole..  
**As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**

### B. CASING

**8-5/8" casing set at 1067' and cemented to surface.**

**5-1/2" casing set at 5840' and cemented to surface.**

**A CIT is to be performed on the 5-1/2" casing per Onshore Oil and Gas Order**

**2.III.B.1.h. Test pressure to be 500 psi.**

*OCD Required 60016 psi*

### 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. **A BOP variance is granted to use a control diverter for air drilling due to shallow depth (540').**

### D. AIR/GAS SPECIAL DRILLING OPERATIONS

1. In addition to the equipment already specified elsewhere the following equipment shall be in place and operational during air/gas drilling:
  - a. Properly lubricated and maintained rotating head.
  - b. Spark arresters on engines (baffled exhaust extension) or water cooled exhaust. Device is attached directly to exhaust.
  - c. **Bloolie line discharge granted a variance due to equipment used.**

- d. Straight run on blooie line unless otherwise approved
- e. Deduster equipment – operator will use water misting.
- f. All cuttings and circulating medium shall be directed into a reserve or blooie pit – pit should be 12' x 12' and lined per NMOCD requirements.
- g. Compressors located in the opposite direction from the blooie line a minimum of 100 feet from the well bore. **Variance is granted on compressor being in opposite direction and 100 feet from wellbore due to size of rig.**
- h. Mud circulating equipment, water, and mud materials (does not have to be premixed) sufficient to maintain the capacity of the hole and circulating tanks or pits.

#### **E. DRILL STEM TEST**

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

**MAK 022510**

## **VIII. PRODUCTION (POST DRILLING)**

### **A. WELL STRUCTURES & FACILITIES**

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

#### **Containment Structures**

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

#### **Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color  
Shale Green, Munsell Soil Color Chart # 5Y 4/2

### **B. PIPELINES**

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

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

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the

authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

- a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
- b. Activities of other parties including, but not limited to:
  - (1) Land clearing.
  - (2) Earth-disturbing and earth-moving work.
  - (3) Blasting.
  - (4) Vandalism and sabotage.
- c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he

deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. The authorized right-of-way width will be 25 feet. 14 feet of the right-of-way width will consist of existing disturbance (existing lease roads) and the remaining 11 feet will consist of area adjacent to the disturbance. The flow line will be laid within the 11 feet area adjacent to the lease road and all construction and maintenance activity will be confined to the existing roads.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky or dune areas, the pipeline will be "snaked" around hummocks and dunes rather than suspended across these features.

9. The pipeline shall be buried with a minimum of 24 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a

legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

## **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, if caliche is used, the removal of that material 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:

<u>Species</u>	<u>lb/acre</u>
Plains lovegrass ( <i>Eragrostis intermedia</i> )	0.5
Sand dropseed ( <i>Sporobolus cryptandrus</i> )	1.0
Sideoats grama ( <i>Bouteloua curtipendula</i> )	5.0

\*Pounds of pure live seed:

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