ATS-10-78

RECEIVED
APR 15 2010
NMOCD ARTESIA

Form 3160-3
(April 2004)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No.
LC028755(A)

6 If Indian, Allotee or Tribe Name
N/A

7 If Unit or CA Agreement, Name and No
N/A

8 Lease Name and Well No.
Russell C-3

9. API Well No.
30-015-37783

10 Field and Pool, or Exploratory
Empire; Yates-Seven Rivers

11 Sec, T R M or Blk and Survey or Area
Section 35, T17S, R27E

1a. Type of work ☑ DRILL ☐ REENTER

1b. Type of Well ☑ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

2 Name of Operator
Joe L. Tarver

3a Address **12403 CR 2300**
Lubbock, TX 79423

3b Phone No. *(include area code)*
(806) 795 - 2042

4. Location of Well *(Report location clearly and in accordance with any State requirements *)*
At surface **990' FSL, 2225' FEL, T17S R27E Section 35**
At proposed prod zone **SAME**

14 Distance in miles and direction from nearest town or post office*
9 miles East of Artesia, NM

12 County or Parish
Eddy

13 State
NM

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any)	16 No of acres in lease	17 Spacing Unit dedicated to this well
330'	**200**	**10 Acres**
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19 Proposed Depth	20 BLM/BIA Bond No on file
660'	**540 FT**	**NMB000328**
21 Elevations (Show whether DF, KDB, RT, GL, etc)	22 Approximate date work will start*	23 Estimated duration
3609 GL	**10/15/2010**	**15 Days**

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
2 A Drilling Plan
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)
4 Bond to cover the operations unless covered by an existing bond on file (see Item 20 above)
5 Operator certification
6 Such other site specific information and/or plans as may be required by the authorized officer.

25 Signature	Name *(Printed/Typed)*	Date
	Joe L. Tarver	**10/29/2009**

Title **President**

Approved by *(Signature)* /s/ Don Peterson	Name *(Printed/Typed)* /s/ Don Peterson	Date APR 07 2010
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)

ROSWELL CONTROLLED WATER BASIN

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
DISTRICT II
811 South First, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-102
Revised March 17, 1999
Instruction on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-37783	22230	Empire Seven Rivers-Yates

Property Code	Property Name	Well Number
351666	RUSSELL "C"	3

OGRID No.	Operator Name	Elevation
37594	JOE TARVER	3609

Surface Location

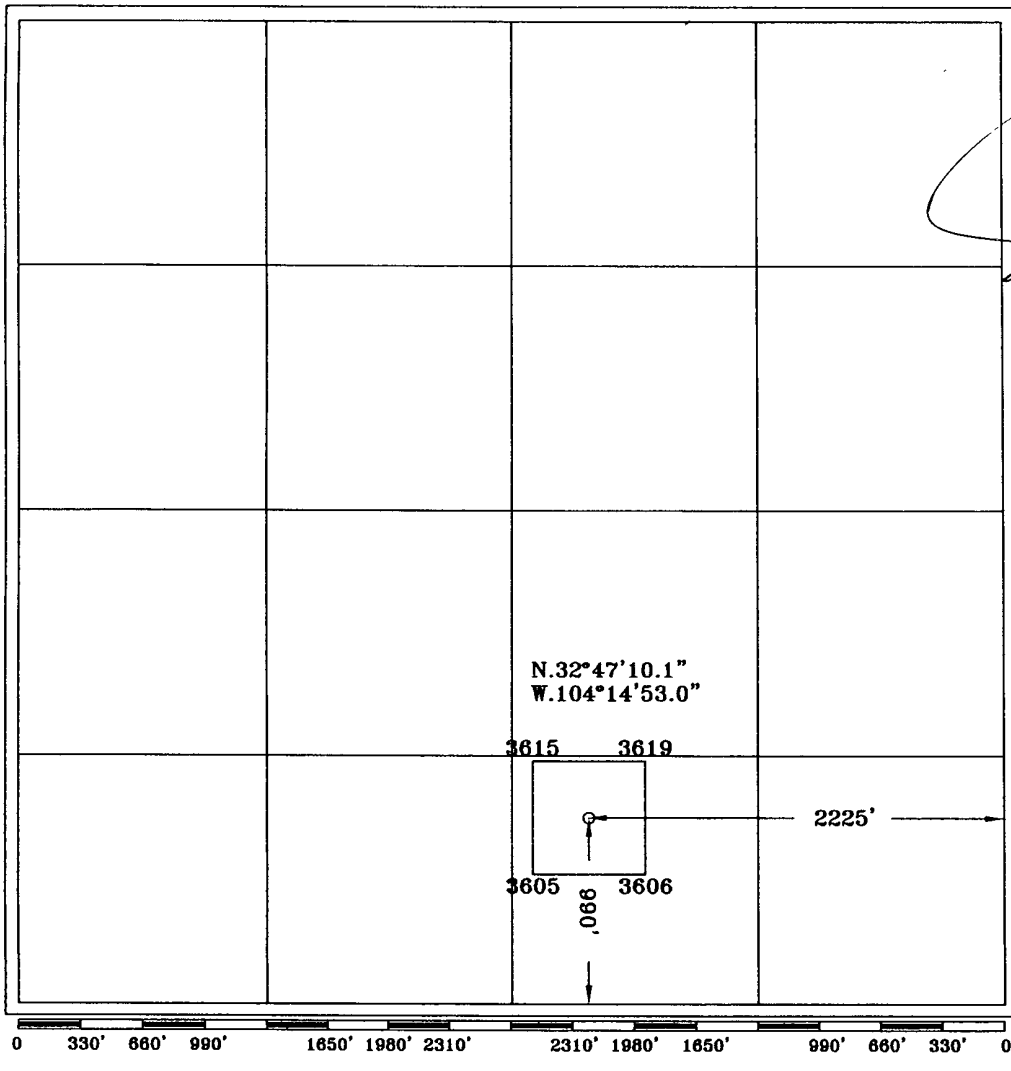
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	35	17S	27E		990	SOUTH	2225	EAST	EDDY

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
		Same							

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



OPERATOR CERTIFICATION

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

Signature

JOE TARVER
Printed Name

operator
Title

10-29-2009
Date

SURVEYOR CERTIFICATION

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

7/11/2006
Date Surveyed

Signature & Seal of Professional Surveyor

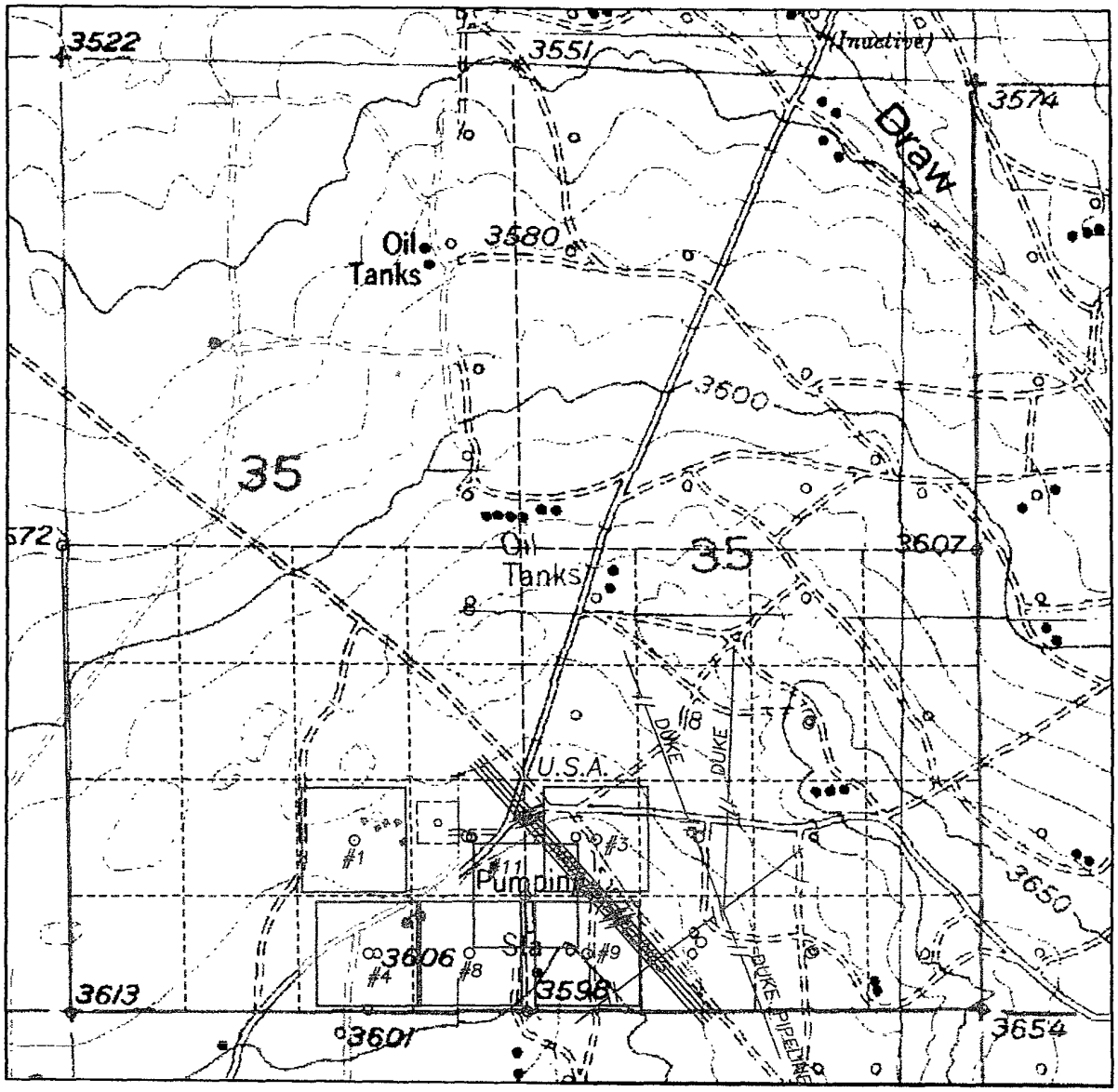
HERSCHEL L. JONES NEW MEXICO 9640 REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate No. Herschel L. Jones RLS 3640

RUSSELL C #3

GENERAL SURVEYING COMPANY

SECTION 35, TOWNSHIP 17 SOUTH, RANGE 27 EAST, NMPM, EDDY COUNTY, NEW MEXICO.



1000' 0 1000' 2000'

Scale 1" = 1000'

THE PREPARATION OF THIS PLAT AND THE PERFORMANCE OF THE SURVEY UPON WHICH IT IS BASED WERE DONE UNDER MY DIRECTION AND THE PLAT ACCURATELY DEPICTS THE RESULTS OF SAID SURVEY AND MEET THE REQUIREMENTS OF THE STANDARDS FOR LAND SURVEYS IN NEW MEXICO AS ADOPTED BY THE NEW MEXICO STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS.

NEW MEXICO 3640 REGISTERED PROFESSIONAL LAND SURVEYOR

HERSCHEL L. JONES R.P.S. No.3640

GENERAL SURVEYING COMPANY P.O. BOX 1928
LOVINGTON, NEW MEXICO 88260

JOE TARVER

JOE TARVER WELLS, RUSSELL "C" WELL #1, #3, #4, #8, #9, & #11 LOCATED IN SECTION 35, TOWNSHIP 17 SOUTH, RANGE 27 EAST, NMPM, EDDY COUNTY, NEW MEXICO.

Survey Date: 7/11/2006		Sheet 1 of 1 Sheets
Drawn By: Ed Blevins		W.O. Number
Date: 7/12/06		Scale 1" = 1000' RUSSELL

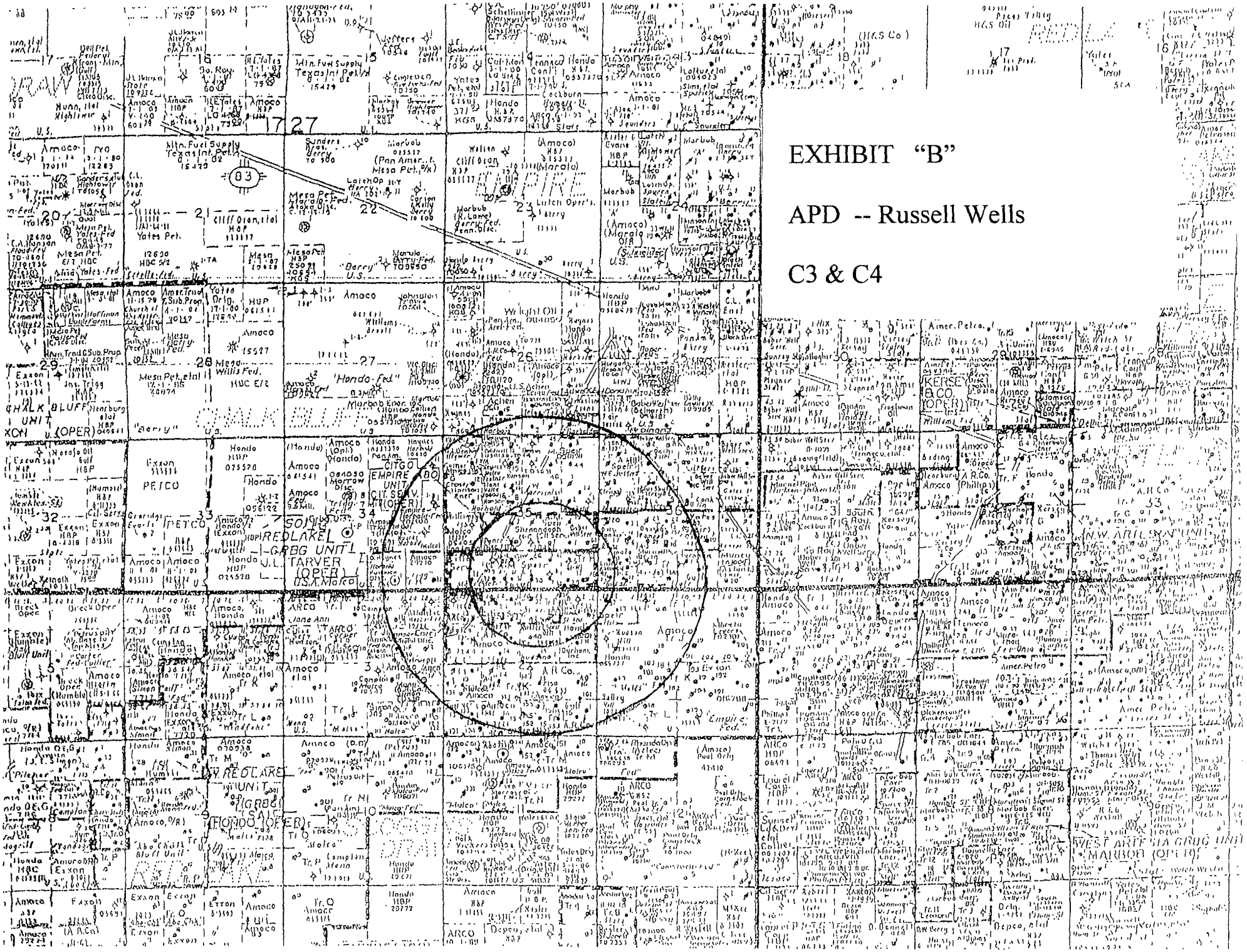


EXHIBIT "B"
APD -- Russell Wells
C3 & C4

Joe Tarver

Russell	#3, #4
Magruder	#11, #12, #13, #14, #15, #16, #17, #18, #19, #20, #21, #22

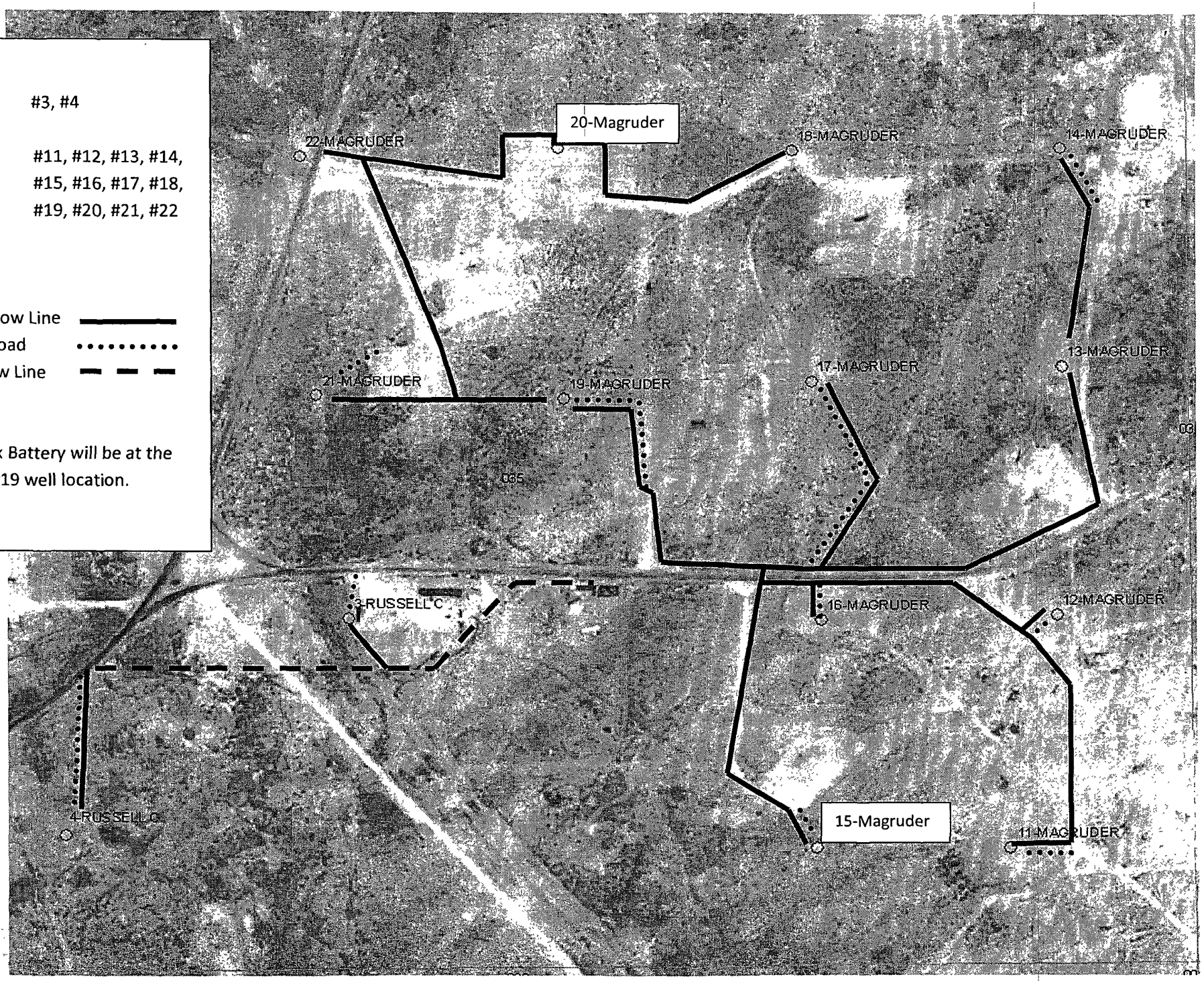
Legend

Proposed Flow Line

Proposed Road

Existing Flow Line

*Note: Tank Battery will be at the Magruder #19 well location.



DRILLING PROGRAM

Russell # C3
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 will be protected by 8 5/8" casing set @ 360' and cement circulated to the surface, and 4 1/2" casing set @ 530' and cement circulated to the surface.

3. **Casing Program:**

Hole Size	Interval	O.D. Casing	Weight	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
11"	0' - 360'	8 5/8"	24#	S/T	J55	1370	2950	139,000
7 7/8"	0' - 530'	4 1/2"	11.6#	L/T	J55	4960	5350	162,000

Revised Jan 19 2010

4. **Cement Program:**

8 5/8" Cemented from 360' to the surface
4 1/2" Cemented from 530' to the surface

Following is information to perfect the APD. requested by BLM.

Joe Tarver

Russell # C 3 Lease — LC 028755 (A)

Drilling Program – item 3 and 4

Expected bottom hole pressure ---20 PSI

" " " Temperature ---- 75 degrees F

3. Casing Program:

Hole Size	Interval	O.D. Casing	Weight	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
11"	0' - 360'	8 5/8"	24#	S/T	J55	1370	2950	139,000
				Safety Factor=		4.57	147	27.11
7 7/8"	0' - 530'	4 1/2"	11.6#	L/T	J55	4960	5350	162,000
				Safety Factor =		15.51	248	26.35

The casing will be certified used when available, if not available it will be NEW

4. Cement Program:

Class "C" neat cement –mix w/water @ 6.32gal per sac. Yield 1.32, Density 14.8 Slurry – We will use the same mix for surface and production string.

Surface string cement: 8 5/8" Cemented from 360' to the surface

11" hole – 8.58"– 360', Ann. Vol 91.51 CF, 70 Sac X 6.32 water, Yield 1.32 Slurry Density 14.8, Volume 16.3bbl, X 1.2 (for volume assurance) = 19.56bbl.

Production string cement: 4 1/2" Cemented from 530' to the surface

8" HOLE TO 360' THEN 7 7/8 HOLE TO 530', Ann. Vol 124.61CF, 95 Sac. X 6.32gal water per Sac = Yield 1.32, Slurry Density 14.8 , Volume 22.19 bbl X 1.2(for volume assurance) = 26.63 bbl.

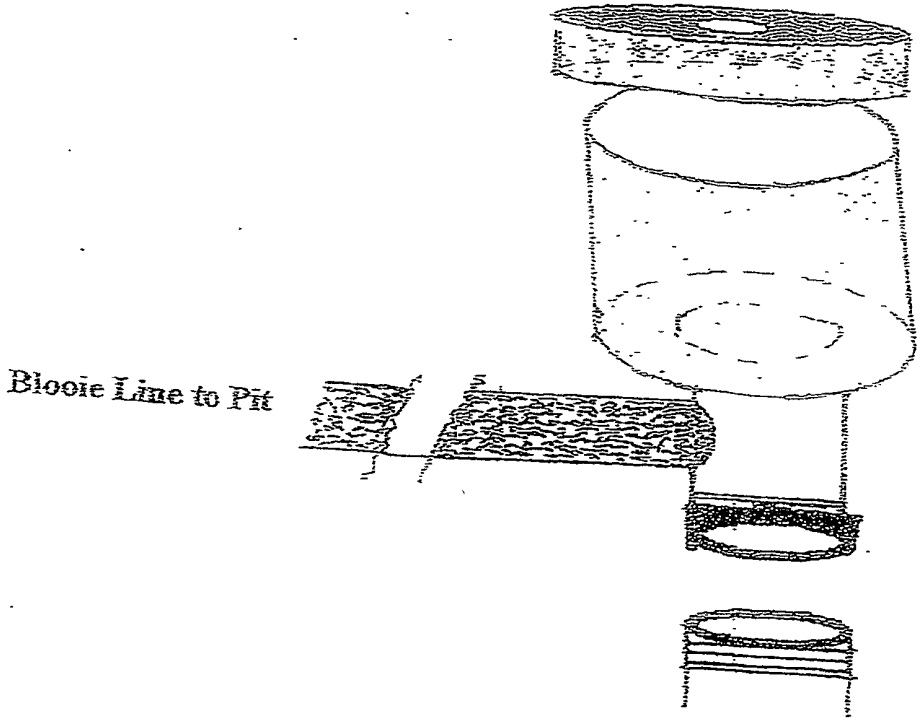
5. **Pressure Control:**

Please consider this request for a B.O.P. variance from ON SHORE regulations.

There have been many wells drilled to this 540" depth with initial pressure to small to measure. "TSTM"

See the following schematic of our ROTATING DIVERTER SYSTEM . We have used this system on all of our wells in the past.

B.O.P -- Rotating Control Diverter System



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 #C5Y660' to the east. The TD will be 530'. Compensated Neutron and Gamma Ray-CCL Logs will be run to pinpoint zone to perforate.

8. **Potential Hazards:**

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 10,15,2010. Move in operations and drilling is expected to take 7 days to 2 weeks.

TEN
3/10/10

EXHIBIT "C"

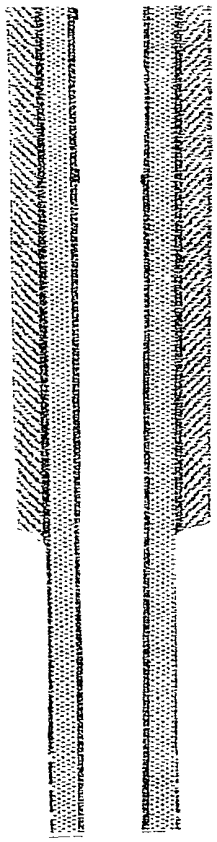
Russell # C3

Operator
Joe Tarver

Operator: Joe Tarver
Lease: LC028755 (A)

Russell # C 3
990FSL,2225FEL
T17S,R27E SEC 35

GL@3609



11" Hole
8 5/8 - @360'
Circulate cement to Surface

7 7/8" Hole
4 ½ -@ 530'
Circulate Cement to Surface

Joe Tarver

Air Drill Rig Equipment

RE:Russell #C3

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 will, 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 530 feet depth. The discharge line will not carry the cuttings 100 feet. This Rig was 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.** TD is 530' only.

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.

H. P. N. Russell #3

Joe L. Tarver
Russell C Lease – Wells #3 and #4

Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE TRAINING

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

1. The hazards and characteristics of hydrogen sulfide (H2S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H2S detectors alarms warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

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

1. The effects of H2S on metal components. High tensile tubulars will not be used.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H2S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan and the Public Protection Plan.

II. H2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonable expected to contain H2S.

1. **Well Control Equipment:**

   A. Flare line.

   B. Choke manifold.

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

   D. Auxiliary equipment may include if applicable: annular preventer & rotating head.

2. **Protective Equipment for Essential Personnel:**

   A. Mark II Survive air 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram.

3. **H2S Detection and Monitoring Equipment:**

   A. 1 Portable H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 PPM are reached.

4. **Visual Warning Systems:**

   A. Wind direction indicators as shown on well site diagram (Exhibit #8).

   B. Caution/Danger signs (Exhibit #7) shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

5. **Mud Program:**

   A. The mud program has been designed to minimize the volume of H2S circulated to surface. Proper mud weight and safe drilling practices will minimize hazards when penetrating H2S bearing zones.

6. **Metallurgy:**

   A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

   B. All elastomers used for packing and seals shall be H2S trim.

7. **Communication:**

   A. Radio communications in company vehicles including cellular telephone and 2-way radio.

   B. Land line (telephone) communication at Office.

8. **Well Testing:**

   A. There will be no drill stem testing.

EXHIBIT #7

WARNING
YOU ARE ENTERING AN H2S AREA

AUTHORIZED PERSONNEL ONLY

1. **BEARDS OR CONTACT LENSES NOT ALLOWED**
2. **HARD HATS REQUIRED**
3. **SMOKING IN DESIGNATED AREAS ONLY**
4. **BE WIND CONSCIOUS AT ALL TIMES**
5. **CHECK WITH OPERATING FOREMAN AT (806) 241-2364**

EDDY COUNTY EMERGENCY NUMBERS
ARTESIA FIRE DEPT. 575-746-5050
ARTESIA POLICE DEPT. 575-746-5000
EDDY CO. SHERIFF DEPT. 575-746-9888

LEA COUNTY EMERGENCY NUMBERS
HOBBS FIRE DEPT. 575-397-9308
HOBBS POLICE DEPT. 575-397-9385
LEA CO. SHERIFF DEPT. 575-396-1196

RUSSELL-C 4

H_2S CONTINGENCY PLAN EMERGENCY CONTACTS

(Names & Phone Numbers Must be Verified)

Company Office Wireless Tow Lights	806 – 795 - 2042
Cell Phone	806-787-5138

Key Personnel

Name	Title	Phone Number
Joe Tarver	Operator	806 – 795 - 3737
Blake Tarver	Field Foreman	806 - 2412364

Ambulance	911
State Police	575-746-2703
City Police	575-746-2703
Sheriff's Office	575-746-9888
Fire Department	575-746-2701
Local Emergency Planning Committee	575-746-2122
New Mexico Oil Conservation Division	575-748-1283

Carlsbad

Ambulance	911
State Police	575-8885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	575-887-3798
Local Emergency Planning Committee	575-887-6544
US Bureau of Land Management	575-887-6544

New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
24 Hour	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635
National Emergency Response Center (Washington, DC)	800-424-8802

Other

Boots & Coots IWC	800-256-9688 or 281-931-8884
Cudd PressureControl	915-699-0139 or 915-563-3356
Halliburton	575-746-2757
B. J. Services	575-746-3569
Flight For Life – 4000 24th St. Lubbock, Texas	806-743-9911
Aerocare – R3, Box 49F, Lubbock, Texas	806-747-8923
Med Flight Air Amb – 2301 Yale Blvd SE #D3, Albuq., NM	505-842-4433
S B Air Med Service – 2505 Clark Carr Loop SE, Albuq., NM	505-842-4949

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Joe L. Tarver
Russell #C3
990FSL,2225FEL - T17S – R27E, Eddy Co. NM

LC028755(A)

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, the magnitude of necessary surface disturbance involved, and the procedures to be followed in rehabilitating the surface after completion of the operation so that a complete appraisal can be made of the environmental effects associated with the operation.

1. EXISTING ROADS:
   A. Exhibit "A" is a portion of a road map showing the location of the proposed well as staked. The well is approximately 9 miles east of Artesia, New Mexico.

   B. Directions: From Artesia go east on Highway 82, 9 miles turn right on County Road 204. Go ½ mile turn right to County Road 225 Take 225 1mile to black top on the left. Take black top 150'to location on the right.

2. PLANNED ACCESS ROAD:
   A. No additional access road necessary. Location joins CR 225 on the East.

   B. No additional cutting or construction is necessary.

   C. Culverts: none necessary

   D. Cuts and Fills: none necessary

   E. Gates, Cattleguards: none

   F. Right-of-Way: Existing Right-of-Way. Federal Right of Way will be utilized.

3. LOCATION OF EXISTING WELLS:
   A. Existing wells are indicated on EXHIBIT B.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

   If the well is productive, production storage will be into the Russell tank battery 660' to the East.

5. LOCATION AND TYPE OF WATER SUPPLY:
   Fresh water, if needed will be purchased from a comercial supply.

6. SOURCE OF CONSTRUCTION MATERIALS:
   None necessary

7. METHODS OF HANDLING WASTE DISPOSAL:
   A. Drill cuttings will be caught in above ground drilling pits and hauled to an approved disposal facility.

   B. Drilling fluids will be allowed to evaporate in the drilling pits until the pits are dry.

   C. Water produced during test will be disposed of in the drilling pits.

   D. Current laws and regulations pertaining to the disposal of human waste will be complied with.

   E. Trash, waste paper, garbage and junk will be contained and hauled to a disposal facility. All waste material will be contained to prevent scattering by the wind.

   F. All trash and debris will be removed from the well site within 30 days after finishing drilling and/or completion of operations.

8. ANCILLARY FACILITIES:
   A. None necessary

9. WELL SITE LAYOUT:
   A. The wellsite area has been surveyed and flagged.

   B. Dimensions and relative location of the drill pad, pit and equipment are shown on EXHIBIT C.

10. PLANS FOR RESTORATION OF THE SURFACE:
   A. After completion of drilling and/or completion operations, all equipment and other materials not needed for operations will be removed. Metal pits will be removed and the location cleaned of all trash and junk to leave the well site in an aesthetically pleasing condition as possible.

   B. Any unguarded pits containing fluids will be covered until they are emptied.

   C. If the well completion is unsuccessful, the disturbed area will be rehabilitated to Federal Agency Requirements and will be accomplished as expeditiously as possible.

11. OTHER INFORMATION:
   A. Topography: The regional terrain is a rolling alluvial plain sloping to the South. The access road is essentially level. The drill site is essentially level.

   B. Soil: The soil at the well site is sandy gravel.

C. Flora and Fauna: Flora consists of sparse range grasses. No wildlife was observed. Fauna probably includes reptiles, rodents and various birds.

D. Ponds or Streams: There are no ponds near the wellsite. The Pecos River is 6 miles to the west.

E. Residences and Other Structures: There are no occupied dwellings within 6 miles.

F. Archaeological, Historical and Other Cultural Sites: This well will disturb no area outside of the Fairways Resources well site recently abandoned. Bruce Boeke (BLM Ark Dept) was consulted about this site.

G. Land Use: The vicinity surrounding the wellsite is semi-arid rangeland, used primarily for grazing.

H. Surface Ownership: The access road and wellsite are on Public Surface (BLM) within the lease boundary.

12. OPERATOR'S REPRESENTATIVE:

Representative responsible for assuring compliance with the approved Surface Use Plan:

Joe L. Tarver
12403 CR 2300
Lubbock, TX 79423
Ph: 806-795-2042

Operator Certification:

RUSSELL #3

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

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	JOE L. TARVER
LEASE NO.:	NMLC029755A
WELL NAME & NO.:	3-RUSSELL C
SURFACE HOLE FOOTAGE:	0990' FSL & 2225' FWL
BOTTOM HOLE FOOTAGE	SAME
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.

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, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

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

Cave/Karst Subsurface Mitigation

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

Rotary Drilling with Fresh Water:

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

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 theCarlsbad 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 maintaincd at fcncc 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.

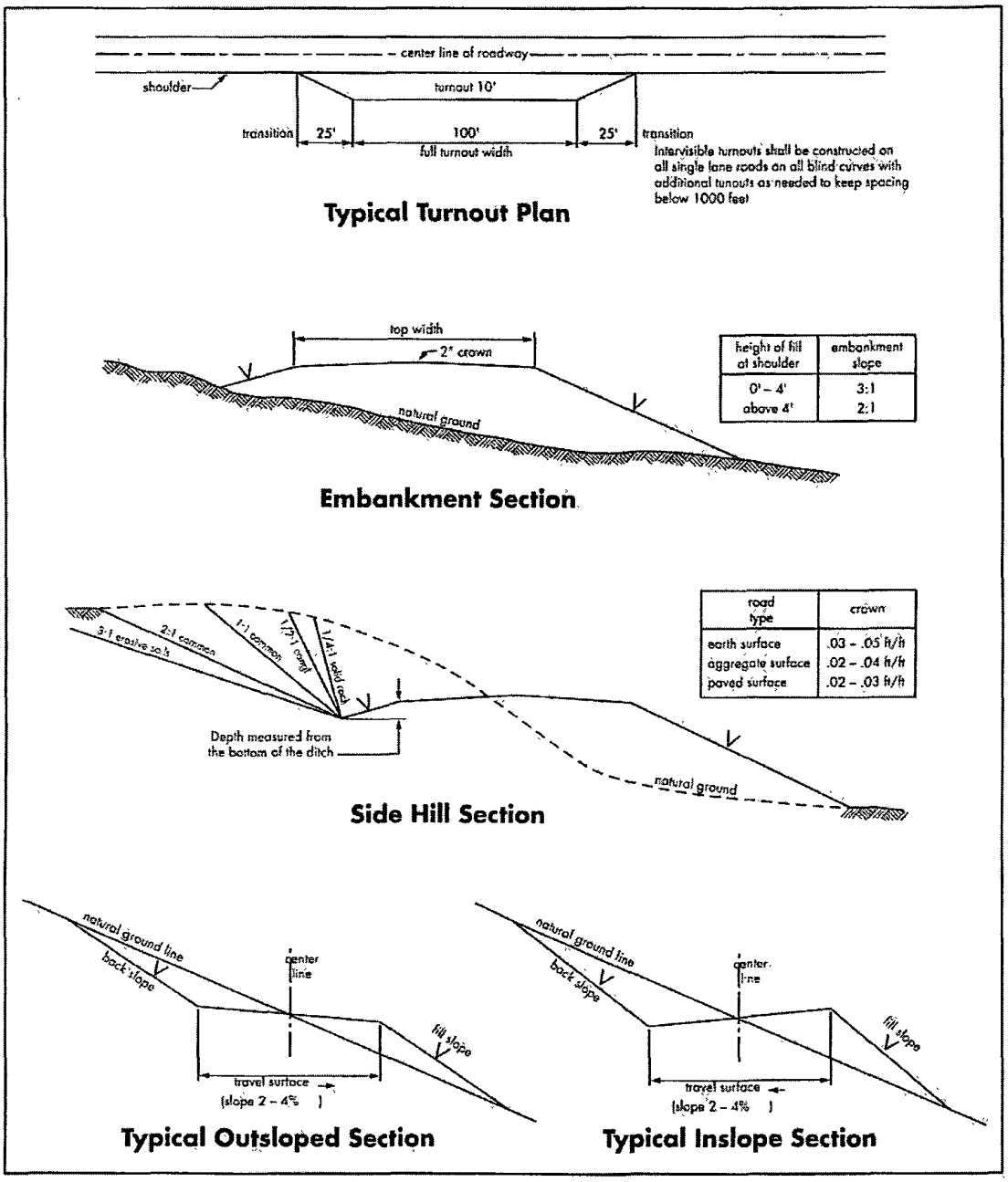
A gate shall be constructed and fastened securely to H-braces.

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 (H2S) Drilling Plan should be activated 500 feet prior to drilling into the Yates formation. **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.**

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

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

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

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 for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements

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

Approval to use certified used casing will be contingent upon the wall thickness of any such casing being verified to be at least 87.5% of the nominal wall thickness of new casing. Certification papers must be on location.

HIGH CAVE/KARST

1. The **8-5/8** inch surface casing shall be set at approximately **360 feet** and cemented to the surface. **Additional cement will be needed as excess was calculated to - 13%.**

    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. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

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

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

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

2. The minimum required fill of cement behind the **4-1/2** inch production casing is:

    ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Additional cement will be needed as excess was calculated to - 6%.**

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

C. PRESSURE CONTROL

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

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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 (abandoned reserve pit) 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 abandoned reserve pit and all construction and maintenance activity will be confined to the existing disturbance.

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 of duney areas, the pipeline will be "snaked" around hummocks and dunes rather then 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:

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

*Pounds of pure live seed:

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