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MAR 31 2010
NMOCD ARTESIA

OCD-ARTESIA

ATS-10-70 RM

Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No.	LC057798 NMNM 78064
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	Magruder 15
9 API Well No.	30-015-37740
10 Field and Pool, or Exploratory	Yates - Seven Rivers
11 Sec, T R M or Blk and Survey or Area	Section 35, T17S, R27E
12 County or Parish	Eddy
13 State	NM

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

3/18/10 TEN

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

At surface: T17S R27E Section 35 LOT 3P ~~332 FSL 990 FEL~~

At proposed prod zone: 289FSL, 921FEL

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

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any)	332'	16 No of acres in lease: 200	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'	19 Proposed Depth: 540 FT	20 BLM/BIA Bond No. on file: NMB000328
21 Elevations (Show whether DF, KDB, RT, GL, etc.): 3626' GL		22 Approximate date work will start*: 08/15/2010	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
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): Joe L. Tarver	Date: 10/29/2009
Title: President		
Approved by (Signature): /s/ James Stovall	Name (Printed/Typed)	Date: MAR 26 2010
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 AND SPECIAL STIPULATIONS ATTACHED

MR

SEE ATTACHED FOR CONDITIONS OF APPROVAL

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**

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** NMLC 806

Legal Description of Land: **Unit 'P' 332 FSL - 990 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 Rd., 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

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30 015 37740	22230	YATES - SEVEN RIVERS

Property Code	Property Name	Well Number
38110	MAGRUDER	15

OGRID No.	Operator Name	Elevation
37594	JOE TARVER	3626'

Surface Location

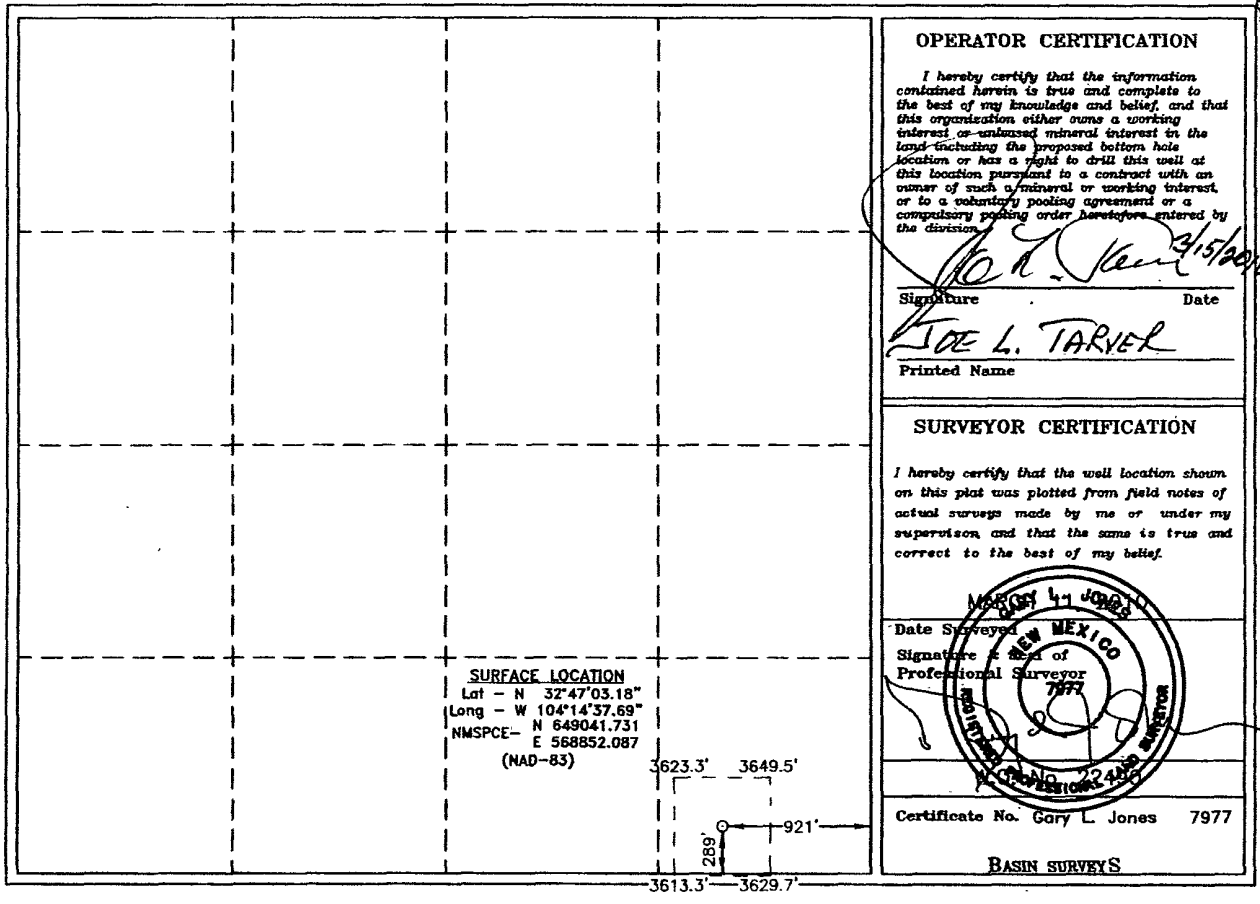
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	35	17 S	27 E		289	SOUTH	921	EAST	EDDY

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.
40			

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



OPERATOR CERTIFICATION

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

Signature 3/15/2010 Date

JOE L. TARVER
Printed Name

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.

Date Surveyed
Signature & Seal of Professional Surveyor

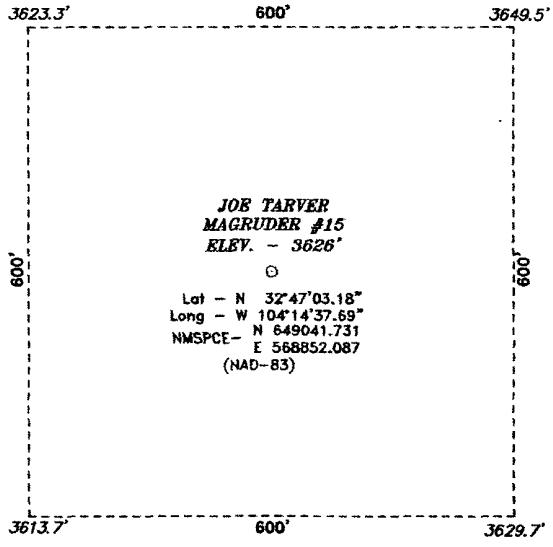
Certificate No. Gary L. Jones 7977

BASIN SURVEYS

3/15/2010

SECTION 35, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M.,

EDDY COUNTY, NEW MEXICO.



NOTE: PAD CORNERS ONLY, NO INTERNAL TOPO SHOWN.

200 0 200 400 FEET

SCALE: 1" = 200'

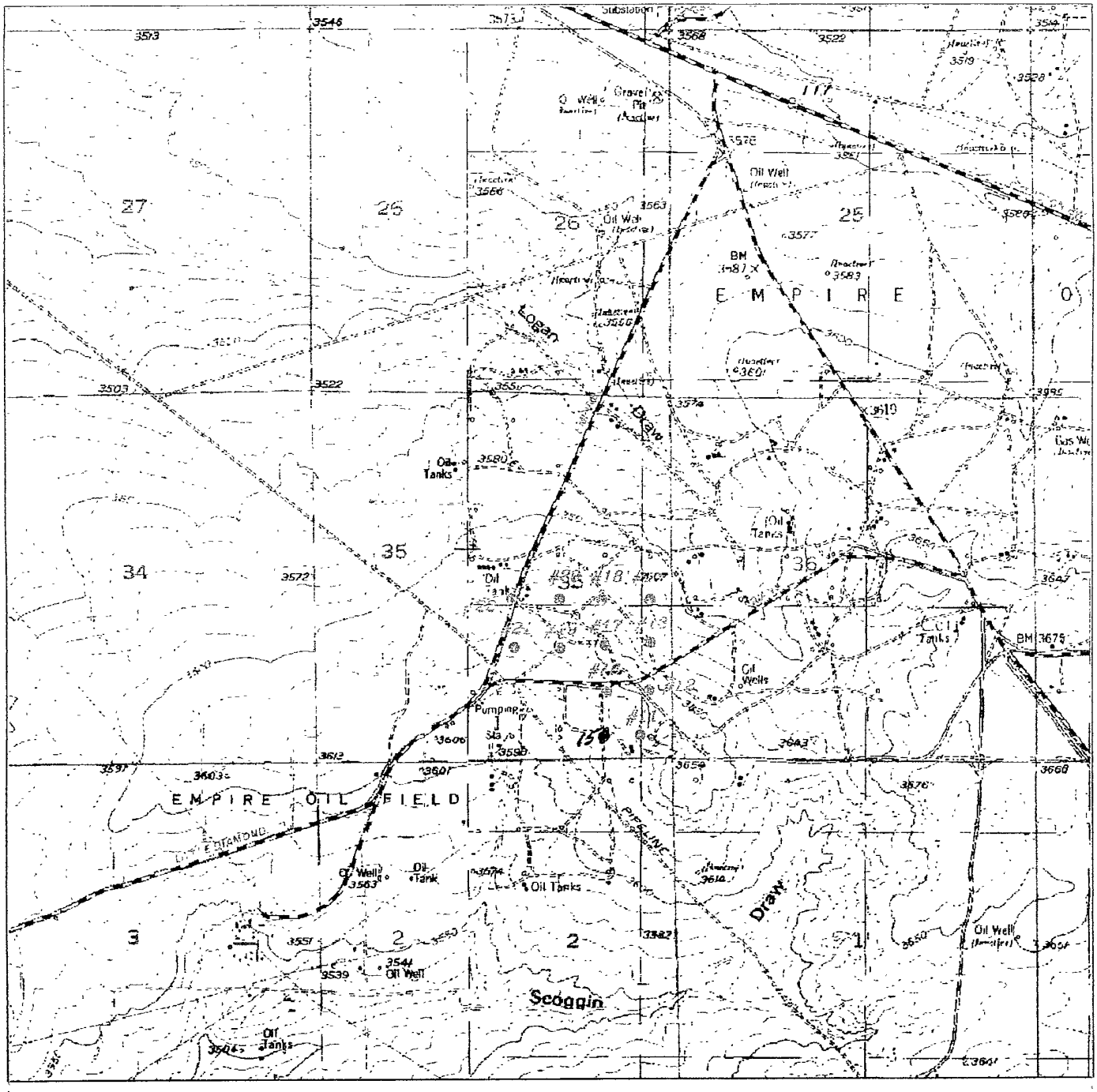
JOE TARVER

REF: MAGRUDER #15 / WELL PAD TOPO

THE MAGRUDER #15 LOCATED 289' FROM THE SOUTH LINE AND 921' FROM THE EAST LINE OF SECTION 35, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 22490	Drawn By: J. SMALL		
Date: 03-12-2010	Disk: JMS 2490	Survey Date: 03-11-2010	Sheet 1 of 1 Sheets

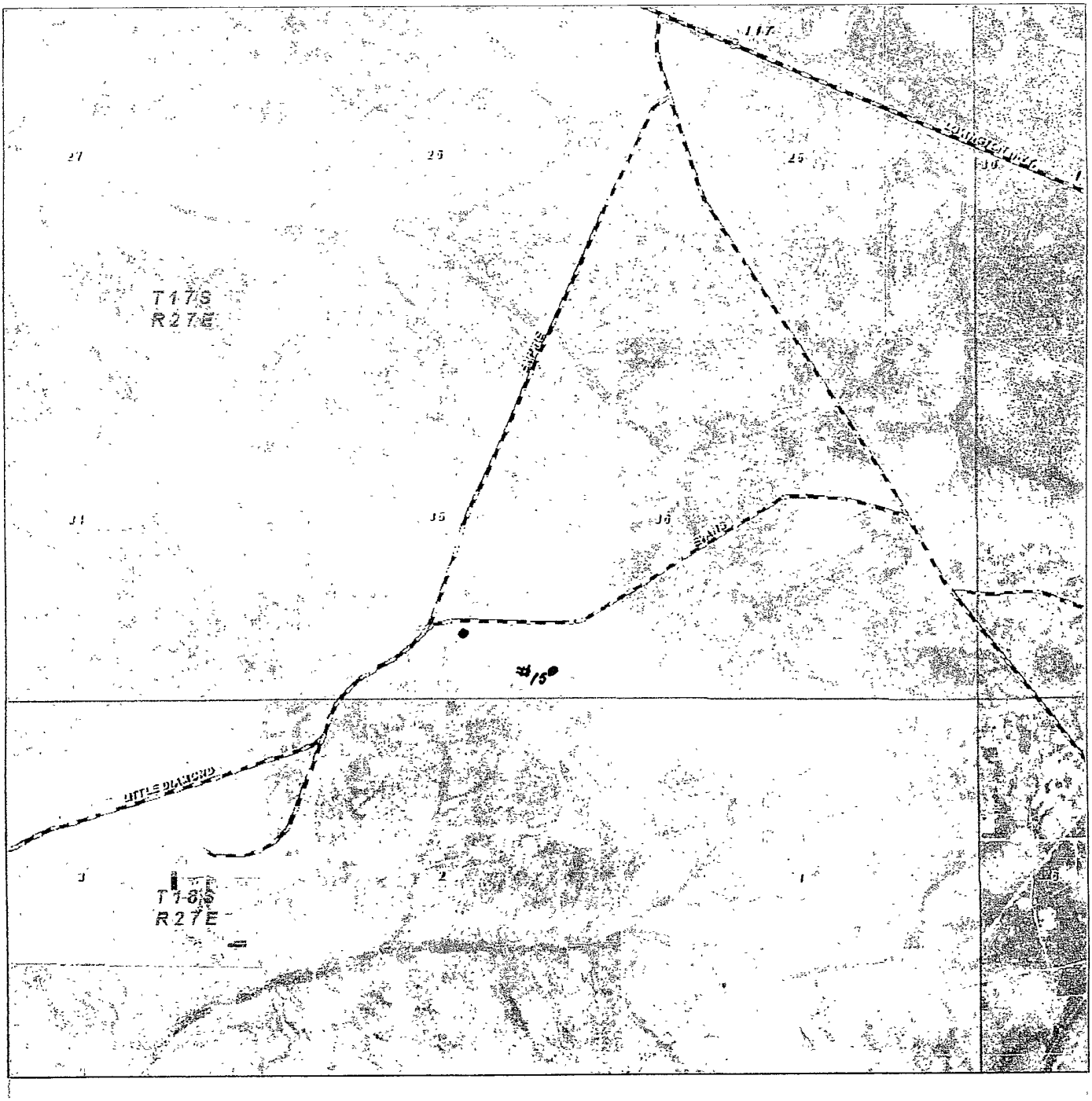


MAGRUDER WELLS

Section 35, Township 17 South, Range 27 East,
N.M.P.M., Eddy County, New Mexico.

surveys

JOE TARVER



MAGRUDER WELLS

Section 26, Township 17 South, Range 27 East,
N.M.P.M., Eddy County, New Mexico.

Survey

JOE TARVER

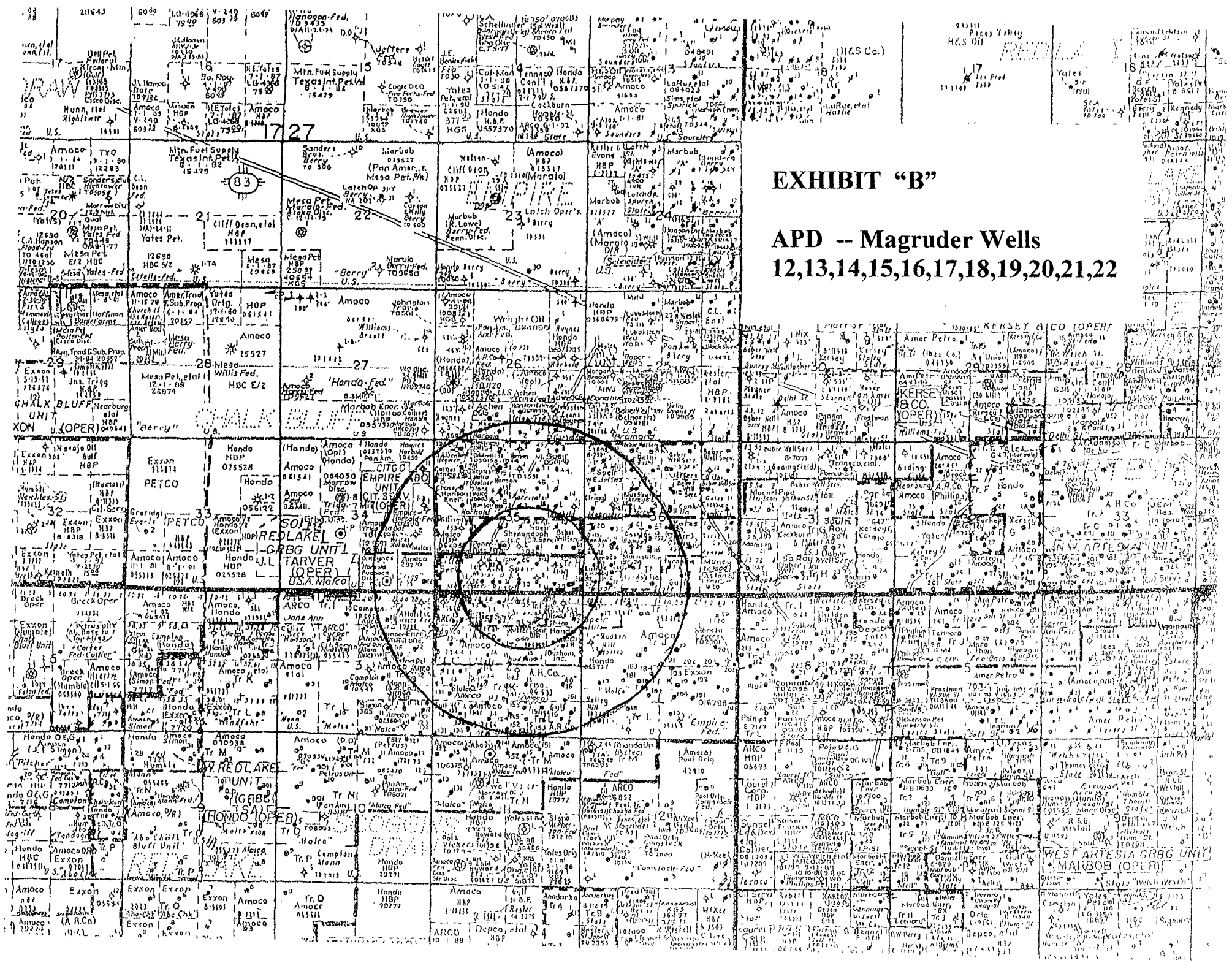


EXHIBIT "B"
APD -- Magruder Wells
12,13,14,15,16,17,18,19,20,21,22

Joe Tarver

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

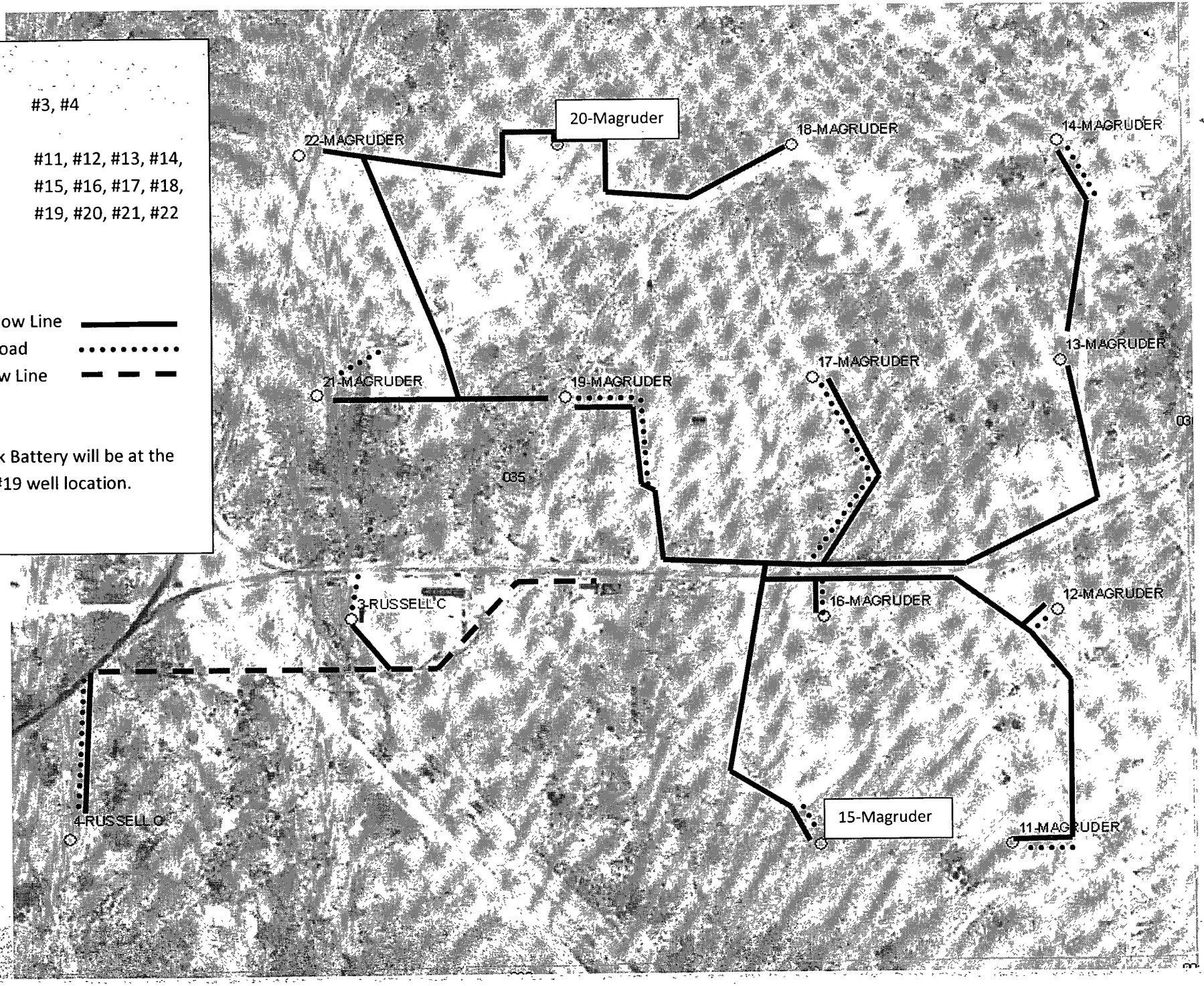
Legend

Proposed Flow Line

Proposed Road

Existing Flow Line

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



DRILLING PROGRAM

Magruder #15
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

4. **Cement Program:**

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

Revised

JAN 20 2010

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

Joe Tarver

Magruder # 15 - Lease NMLC057798

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'~~ See COA	8 5/8"	24#	S/T	J55	1370	2950	139,000
				Safety Factor=		4.57	147	27.11
7 7/8"	0' - ~~530'~~ 540' per operator	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'~~ 380' to the surface**

11" hole – 8.58"– ~~360'~~ 380', 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'~~ 540' to the surface**

8" HOLE TO ~~360'~~ 380' THEN 7 7/8 HOLE TO ~~530'~~ 540', 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.

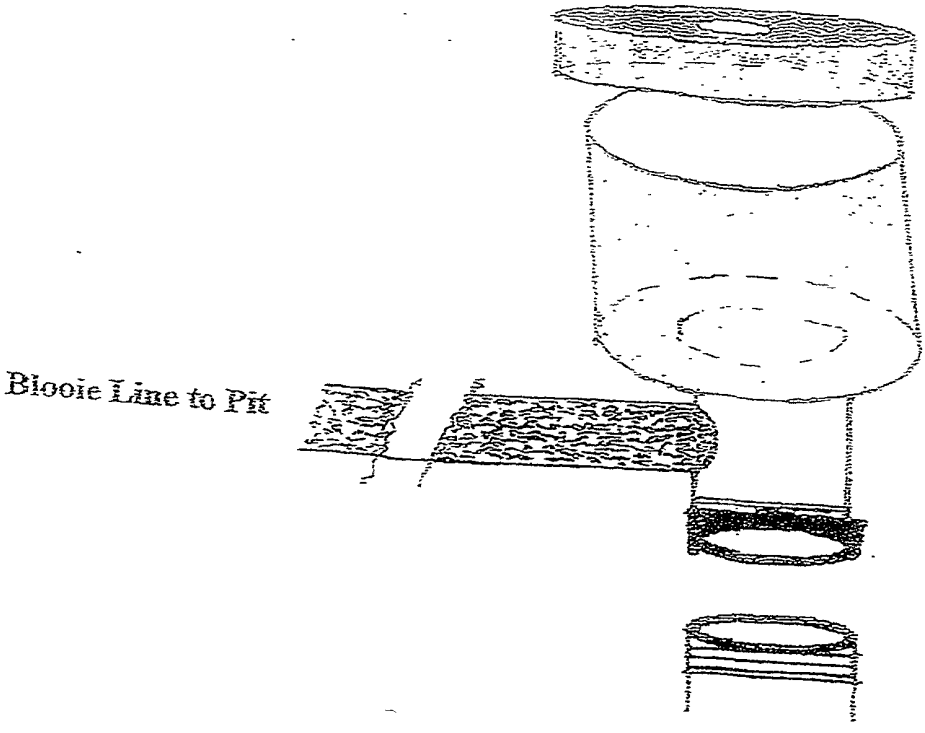
5. **Pressure Control:**

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



Lid Bolted onto the Wiper Rubber Chamber

Heavy Duty Wiper inside Of Chamber

Connected to Casing

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 #C7Y 660' to the West. 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 8-15-2010. Move in operations and drilling is expected to take 7 days to 2 weeks.

Joe Tarver

Air Drill Rig Equipment

RE: Magruder #15

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.

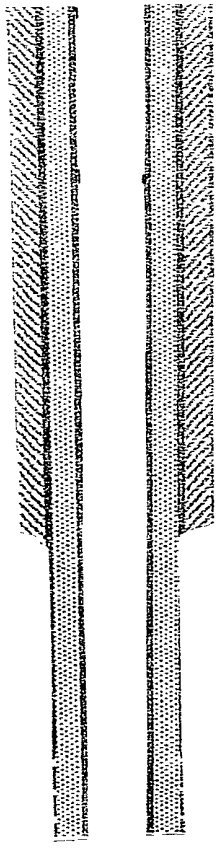
8.) The compressor is mounted on the Drill Rig truck 30 feet from the rotary table. **Please allow a variance from the "100 foot from well bore" rule.**

9.) Mud Circulating Equipment is mounted on a separate trailer. Water will be on standby.

Operator: Joe Tarver
Lease: LC057798

Magruder #15
T17S – R27E,332FSL & 990FEL

GL@ 3626



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

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

EXHIBIT "C"

Magruder # 15

Operator
Joe Tarver

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Joe L. Tarver
Magruder #15
332 FSL– 990 FEL - T17S – R27E, Eddy Co. NM

LC057798

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. Go 1 mile to the black top road on the left. Take the black top(Evans Road) 1600 ft to caliche road on right. Take caliche road 800' to location.

2. PLANNED ACCESS ROAD:
   A. The location joins service road from the North.

   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 a tank battery to be constructed 1350 ft. to the West North West..

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. Slopes 3 degress to the South.

B. Soil: The soil at the wellsite 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:

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:

MARGUER #15

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.:	NM117806
WELL NAME & NO.:	MAGRUDER 15
SURFACE HOLE FOOTAGE:	289' FSL & 921' FEL
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.

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 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 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.

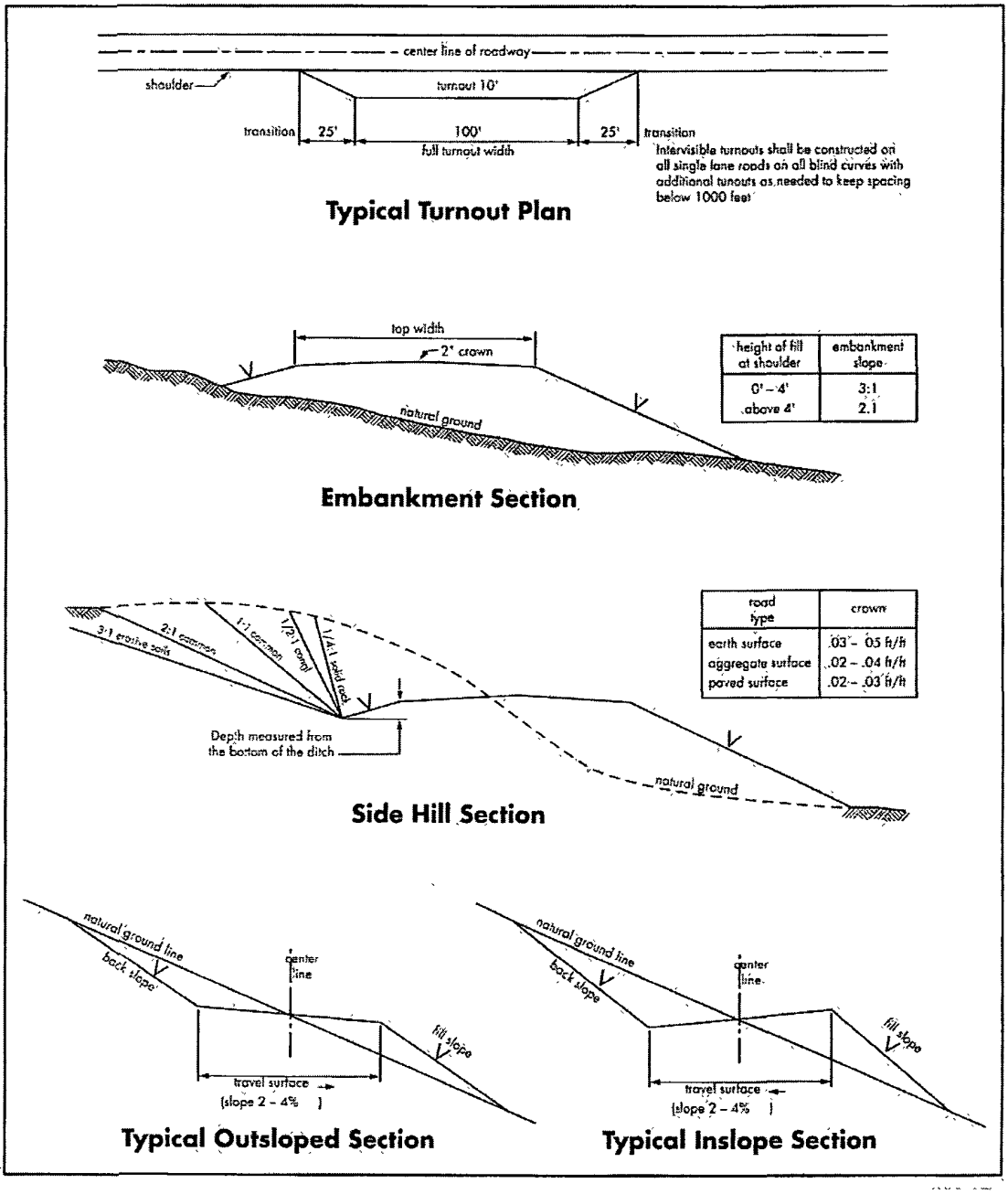
A gate shall be constructed and fastened securely to H-braces.

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 (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. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

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 **380 feet** and cemented to the surface. **Additional cement will be needed as excess was calculated to - 17%.**

    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 - 7%.**

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 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 021810

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 roads 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 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