



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

**Joanna Prukop**

Cabinet Secretary

**Mark E. Fesmire, P.E.**

Director

**Oil Conservation Division**

March 7, 2007

Pogo Producing Company  
c/o Mr. James Bruce  
P.O. Box 1056  
Santa Fe, New Mexico 87504

Re: Certification of Positive Production Response  
LaMunyon Paddock Pressure Maintenance Project

Dear Mr. Bruce:

Pursuant to your request dated February 5, 2007, please be advised that the Division hereby certifies that a positive production response occurred within the LaMunyon Paddock Pressure Maintenance Project on July 1, 2003.

The Division has further determined that four (4) wells within the subject pressure maintenance project, described below, are eligible for the recovered oil tax rate.

Pogo Producing Company shall notify the Division:

- (a) of the change in status of any of the producing wells shown below;
- (b) in the event new producing wells are drilled within the project area; and
- (c) of changes in operations within the project area which may affect the certification and resulting tax rate granted herein.

<u>Well Name &amp; Number</u>	<u>API Number</u>	<u>WellLocation</u>
C.E. LaMunyon No. 30	30-025-22460	Unit E, 22-23S-37E
C.E. LaMunyon No. 49	30-025-26177	Unit H, 21-23S-37E
C.E. LaMunyon No. 51	30-025-33133	Unit A, 21-23S-37E
C.E. LaMunyon No. 54	30-025-33252	Unit D, 22-23S-37E

*Positive Production Response*  
*Pogo Producing Company*  
*LaMunyon Paddock Pressure Maintenance Project*  
*March 7, 2007*  
*Page 2*

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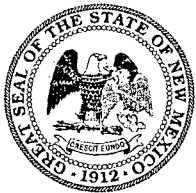
The Division Director shall notify the Secretary of the New Mexico Taxation and Revenue Department of the certification granted herein.

Sincerely,



Mark E. Fesmire, P.E.  
Director

Xc: File-EOR-60



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

**Joanna Prukop**

Cabinet Secretary

**Mark E. Fesmire, P.E.**

Director

Oil Conservation Division

March 7, 2007

Department of Taxation and Revenue  
P.O. Box 630  
Santa Fe, New Mexico 87504-0630

Attention: Oil & Gas Bureau

Re: Certification of a Positive Production Response  
Pogo Producing Company  
LaMunyon Paddock Pressure Maintenance Project

Dear Secretary Goodwin:

Enclosed is a copy of a Division Certification that was issued on March 7, 2007. This document certifies that a positive production response has occurred within the LaMunyon Paddock Pressure Maintenance Project that is currently operated by Pogo Producing Company. In addition, this positive production response has occurred within the five year time limit as described within the "*New Mexico Enhanced Oil Recovery Act*". The Division has determined that four (4) wells within the certified area producing from the Teague Paddock-Blinebry Pool are eligible for the recovered oil tax rate. These wells are shown on the Division Certification.

For your convenience, we have also enclosed a summary page showing all pertinent data. If additional information is required, please advise.

Sincerely,

Mark E. Fesmire, P.E.

Director

MEF/drc

Xc: EOR-60

**POSITIVE PRODUCTION RESPONSE DATA**  
**LAMUNYON Paddock PRESSURE MAINTENANCE PROJECT**

**NAME OF PROJECT:**

LaMunyon Paddock Pressure Maintenance Project

**OPERATOR**

Pogo Producing Company  
P.O. Box 10340  
Midland, Texas 79701

**POOL**

Teague Paddock-Blinbry Pool

**OCD ORDER NO. APPROVING PROJECT**

R-12756, February 6, 2002

**PROJECT AREA**

E/2 NE/4 of Section 21 and W/2 NW/4 of Section 22  
Both in Township 23 South, Range 37 East, NMPM, Lea County, New Mexico

**DATE WATER INJECTION COMMENCED**

October, 2002

**DATE CERTIFIED PROJECT TO TAXATION & REVENUE**

February 5, 2007

**DATE POSITIVE PRODUCTION RESPONSE OCCURRED**

July 1, 2003

**CURRENT NUMBER OF WELLS IN THE PROJECT AREA**

Injection—1  
Production—4

DATE IN 2/5/07	SUSPENSE	ENGINEER D. CATANACH	LOGGED IN 2/5/07	TYPE PPR	APP NO. PTDS0703649684
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ABOVE THIS LINE FOR DIVISION USE ONLY

## NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



### ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

#### Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]  
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]  
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]  
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]  
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]  
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

#### [1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication  
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement  
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☒ PPR

[D] Other: Specify \_\_\_\_\_

#### [2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☐ Offset Operators, Leaseholders or Surface Owner

[C] ☐ Application is One Which Requires Published Legal Notice

[D] ☐ Notification and/or Concurrent Approval by BLM or SLO  
 U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

#### [3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

James Bruce  
 P.O. Box 1056  
 Santa Fe, New Mexico 87504

*James Bruce*  
 Signature

Attorney for Applicant  
 Title Date

jamesbruc@aol.com  
 e-mail Address

2/5/07

2007 FEB 5 AM 10 17

**JAMES BRUCE**  
ATTORNEY AT LAW

POST OFFICE BOX 1056  
SANTA FE, NEW MEXICO 87504

369 MONTEZUMA, NO. 213  
SANTA FE, NEW MEXICO 87501

(505) 982-2043 (Phone)  
(505) 660-6612 (Cell)  
(505) 982-2151 (Fax)

[jamesbruc@aol.com](mailto:jamesbruc@aol.com)

February 5, 2007

Hand delivered

Mark E. Fesmire, P.E.  
Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

Re: Lamunyon Paddock Pressure Maintenance Project  
Division Order No. R-11722

Dear Mr. Fesmire:

Pursuant to the above order, Pogo Producing Company (the successor by merger to Arch Petroleum Inc.) applies for certification of a positive production response for the following project area:

Township 23 South, Range 37 East, N.M.P.M., Lea County, New Mexico  
Section 21: E½NE¼  
Section 22: W½NW¼

A plat of the project area, and a listing of producing and injection wells, is attached as Exhibit A.

Exhibit B is a composite production plot of the producing wells in the project area (the Lamunyon Well Nos. 30, 49, 51, and 54). As you can see, after injection commenced (on September 25, 2002), the production decline curves flattened, and the decline is substantially less than before injection commenced. Exhibit C contains individual decline curves for the producing wells.

Please contact me if you need any further information on this application.

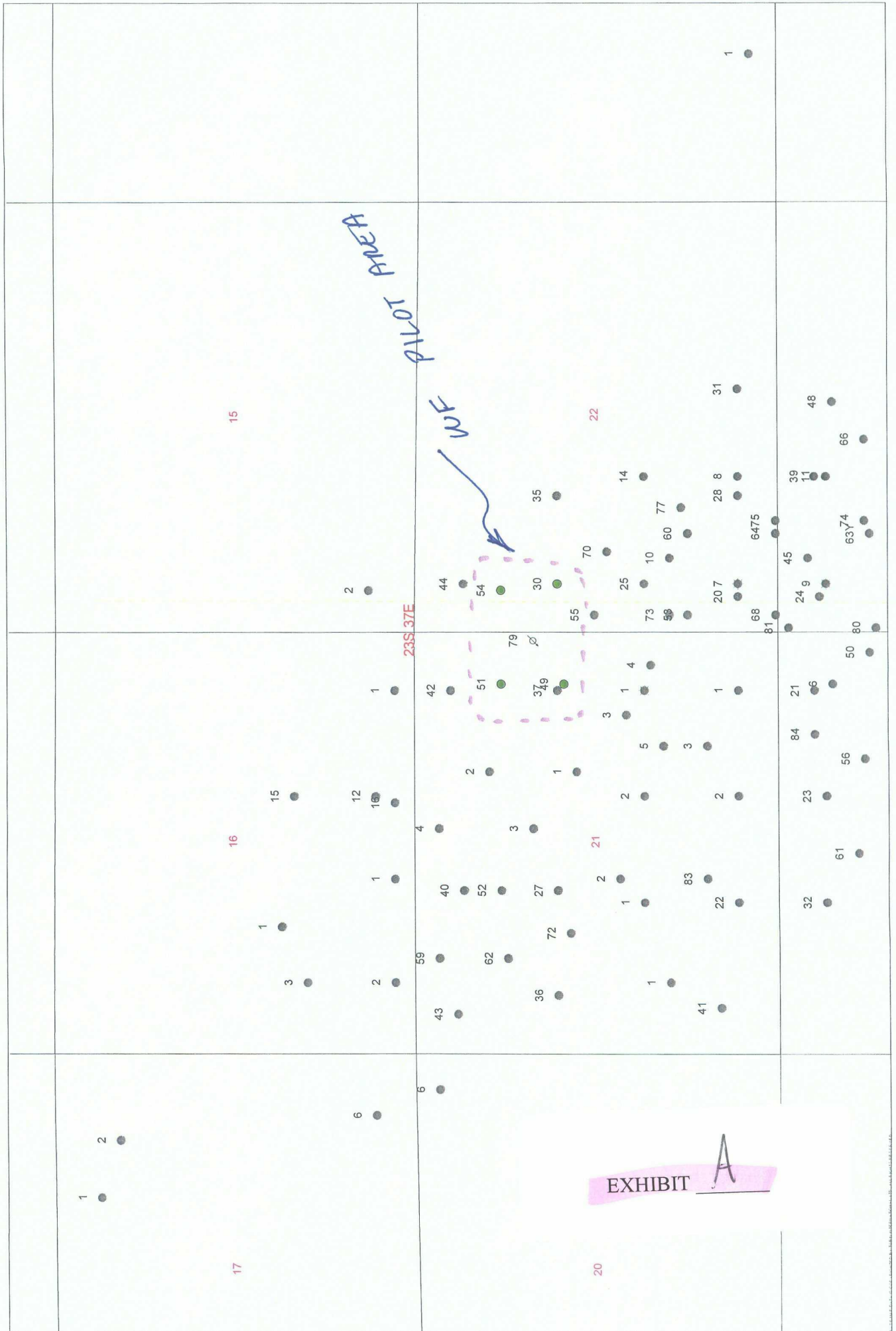
Very truly yours,

A handwritten signature in cursive script, appearing to read "James Bruce". The signature is written in dark ink and is positioned above the printed name.

James Bruce

Attorney for Pogo Producing Company

# PI/Dwights PLUS on CD Map Report





# TEAGUE WATERFLOOD

Lease Name	Well Num	Primary API	Location		County	State
C E LAMUNYON	30	30025224600003	1980' FSL & 660' FWL	Section 22	LEA	NM
C E LAMUNYON	49	30025261770002	2150' FNL & 550' FEL	Section 21	LEA	NM
C E LAMUNYON	51	30025331330000	1300' FNL & 560' FEL	Section 21	LEA	NM
C E LAMUNYON	54	30025332520000	1300' FNL & 660' FWL	Section 22	LEA	NM
C E LAMUNYON	79	30025359420000	1700' FNL & 10' FEL	Section 21	LEA	NM

PROD

PROD

PROD

PROD

NJ

EXHIBIT

B

TEAGUE WF PILOT

- LAMUNYON #20, #49, #51, #54

30

Oil\_Daily

1000

Mcf/day

100

10000

10

1000

1

100

10

1000

Bbl/day

10000

1000

100

10

START WITH INJ  
OCT-2002

Oil\_Daily

Gas\_Daily

Water\_Daily

Years

10

09

08

07

06

05

04

03

02

01

00

99

98

97

# Oil\_Daily

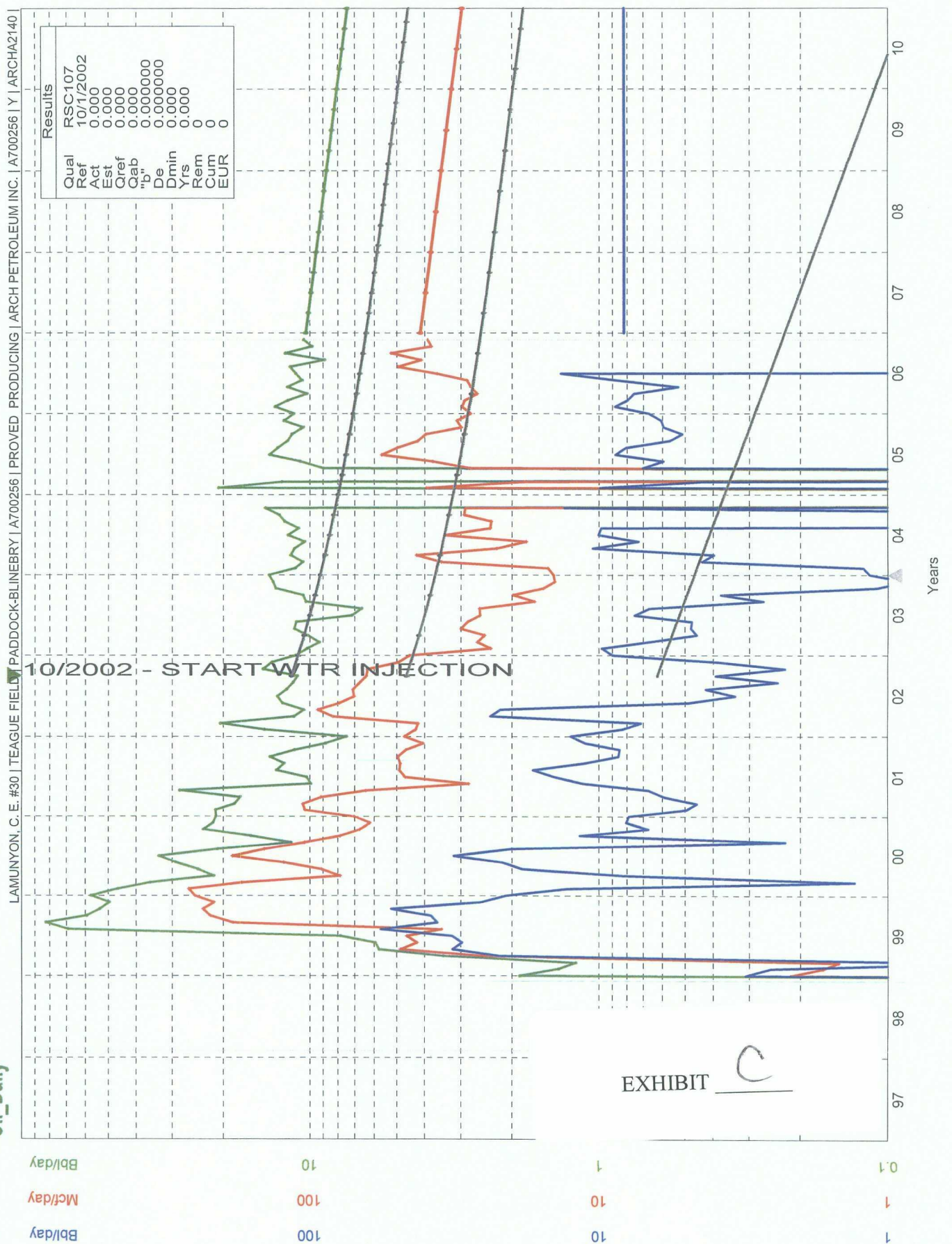
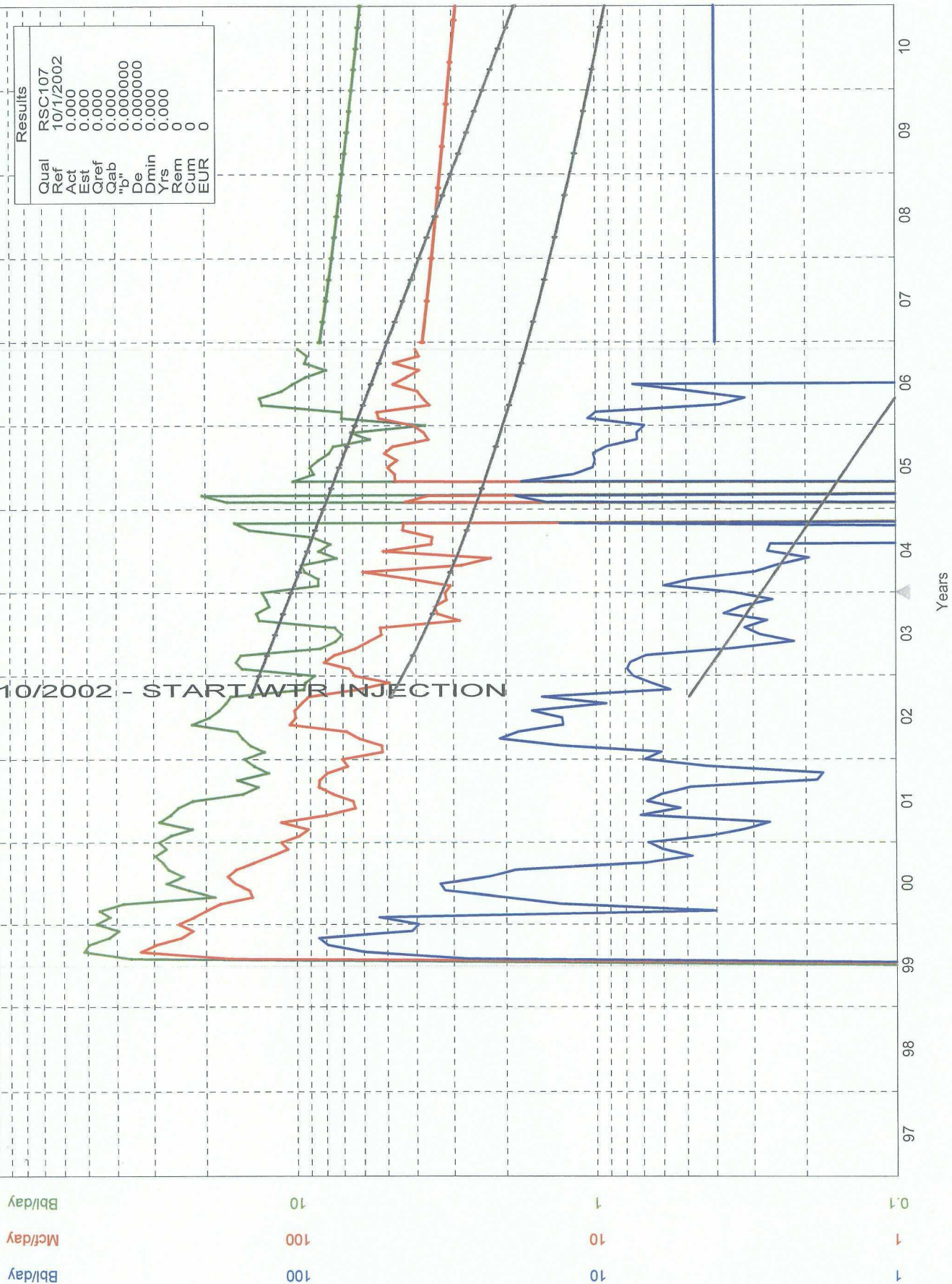


EXHIBIT C



# Oil\_Daily

LAMUNYON, C. E. #49 | TEAGUE FIELD | PADDOCK | A700276.A | PROVED PRODUCING | ARCH PETROLEUM INC. | A700276.A | Y | ARCHA1010



# Oil\_Daily

Bbl/day  
Mc/day  
Bbl/day

10  
100  
100

1  
10  
10

0.1  
1  
1

Results	
Qual	RSC107
Ref	10/1/2002
Act	0.000
Est	0.000
Qref	0.000
Qab	0.000
"b"	0.000000
De	0.000000
Dmin	0.000
Yrs	0
Rem	0
Cum	0
EUR	0

10/2002 - START WTR INJECTION

Years

10

09

08

07

06

05

04

03

02

01

00

99

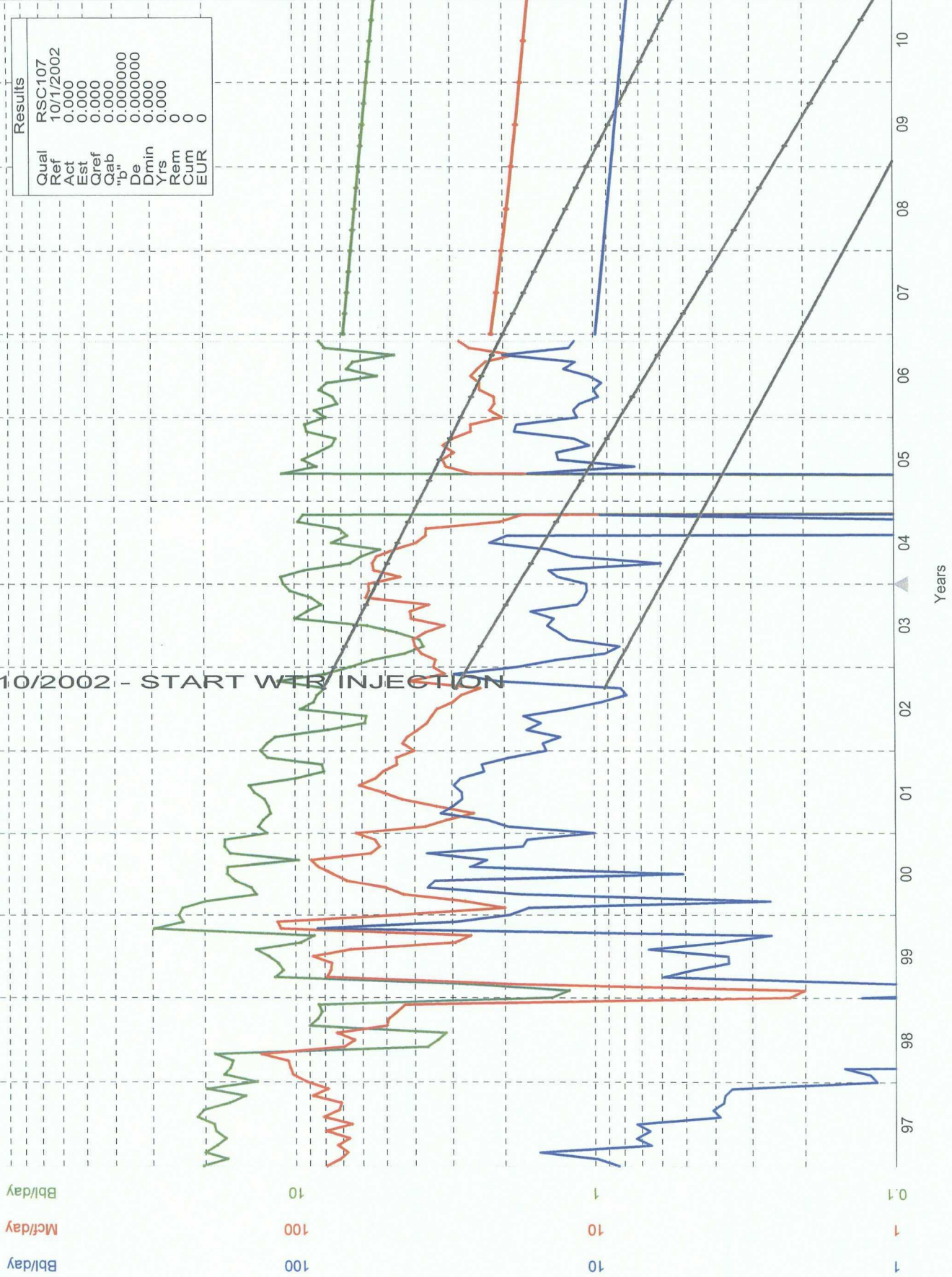
98

97



# Oil\_Daily

LAMUNYON, C. E. #54 | TEAGUE FIELD | PADDOCK-BLINEBRY | A700282 | PROVED PRODUCING | ARCH PETROLEUM INC. | A700282 | Y | ARCHA2340 |





# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

**Joanna Prukop**

Cabinet Secretary

**Mark E. Fesmire, P.E.**

Director

**Oil Conservation Division**

February 5, 2007

Pogo Producing Company  
c/o Mr. James Bruce  
P.O. Box 1056  
Santa Fe, New Mexico 87504

## **CERTIFICATION OF ENHANCED OIL RECOVERY PROJECT FOR RECOVERED OIL TAX RATE**

The New Mexico Oil Conservation Division hereby certifies that the following Enhanced Oil Recovery Project has been approved by the Division as a secondary recovery project pursuant to the provisions of the "*New Mexico Enhanced Oil Recovery Act*," Sections 7-29A-1 through 7-29A-5, NMSA 1978. In order to qualify for the recovered oil tax rate, you must apply for certification of positive production response within five years from the date of this certification. Only production from that portion of the project area identified herein which is actually developed for enhanced recovery will qualify for the reduced tax rate.

If operation of this project is terminated for any reason, the operator of the project must notify this Division and the Secretary of the Taxation and Revenue Department not later than the thirtieth day after termination.

NAME OF PROJECT:	LaMunyon Paddock Pressure Maintenance Project
OCD ORDER NO.	R-11722
OPERATOR:	Pogo Producing Company
ADDRESS:	P.O. Box 10340 Midland, Texas 79702
CERTIFICATION DATE:	February 5, 2007

PROJECT AREA:

Township 23 South, Range 37 East, NMPM

Section 21: E/2 NE/4  
Section 22: W/2 NW/4

APPROVED BY:

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



MARK E. FESMIRE, P.E.  
DIRECTOR

Xc: File-EOR 60  
Ms. Jan Goodwin, Secretary  
New Mexico Taxation and Revenue Department



**JAMES BRUCE**  
ATTORNEY AT LAW

POST OFFICE BOX 1056  
SANTA FE, NEW MEXICO 87504

369 MONTEZUMA, NO. 213  
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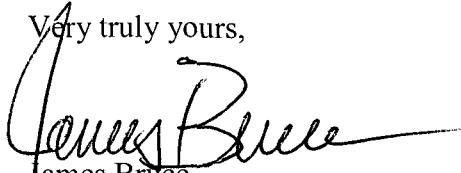
February 1, 2007

Mark E. Fesmire, P.E.  
Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

Dear Mr. Fesmire:

Enclosed is a draft Certification of an Enhanced Recovery Project regarding the Lamunyon Paddock Pressure Maintenance Project operated by Pogo Producing Company (formerly Arch Petroleum Inc.). I ask for a certification date of February 1, because I will be filing an application for positive production response in the next few days. Thank you.

Very truly yours,

  
James Bruce  
Attorney for Pogo Producing Company

**CERTIFICATION OF ENHANCED OIL RECOVERY PROJECT  
FOR RECOVERED OIL TAX RATE**

The New Mexico Oil Conservation hereby certifies that the following Enhanced Oil Recovery Project has been approved by the Division as an approved secondary recovery project pursuant to the provisions of the "*New Mexico Enhanced Oil Recovery Act*," Sections 7-29A-1 through 7-29A-5, NMSA 1978. In order to qualify for the recovered oil tax rate, you must apply for certification of a positive production response within five years of the date of certification. Only production from that portion of the project area identified herein which is actually developed for enhanced recovery will qualify for the reduced tax rate.

If operation of this project is terminated for any reason, the operator of the project must notify the Division and the Secretary of the Taxation and Revenue Department not later than the thirtieth day after termination.

NAME OF PROJECT:	Lamunyon Paddock Pressure Maintenance Project
OCD ORDER NO.:	R-11722
INJECTION COMMENCED:	September 25, 2002
OPERATOR:	Pogo Producing Company (successor by merger to Arch Petroleum Inc.)
ADDRESS:	P.O. Box 10340 Midland, Texas 79702
CERTIFICATION DATE:	February 1, 2007
PROJECT AREA:	<u>Township 23 South, Range 37 East, N.M.P.M.</u> Section 21: E½NE¼ Section 22: W½NW¼

Approved by:	STATE OF NEW MEXICO OIL CONSERVATION DIVISION  MARK E. FESMIRE, P.E. DIRECTOR
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Log: Teague

xc: RLW

**STATE OF NEW MEXICO  
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:**

**CASE NO. 12756  
ORDER NO. R-11722**

**APPLICATION OF ARCH PETROLEUM, INC. FOR APPROVAL OF A PILOT  
PRESSURE MAINTENANCE PROJECT AND TO QUALIFY THE PROJECT  
FOR THE RECOVERED OIL TAX RATE PURSUANT TO THE ENHANCED  
OIL RECOVERY ACT, LEA COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing at 8:15 a.m. on November 1, 2001, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 6th day of February, 2002, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

**FINDS THAT:**

(1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.

(2) The applicant, Arch Petroleum, Inc. ("Arch"), seeks authority to institute a pilot pressure maintenance project within the Teague Paddock-Blinebry Pool on its C. E. LaMunyon Lease comprising the E/2 NE/4 of Section 21, and the W/2 NW/4 of Section 22, Township 23 South, Range 37 East, NMPM, Lea County, New Mexico, by the injection of water into the Paddock formation through the C. E. LaMunyon No. 79 to be drilled at a location 1700 feet from the North line and 10 feet from the East line (Unit H) of Section 21.

(3) Arch testified that the proposed pilot pressure maintenance project area comprises a single Federal lease (Lease No. LC-030187), and that the interest ownership within the project area is common throughout.

(4) Arch presented geologic evidence that demonstrates:

Case No. 12756  
Order No. R-11722  
Page 2

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- (a) the proposed pilot pressure maintenance project is located within the Teague Paddock-Blinebry Pool;
  - (b) the Teague-Blinebry Pool was created by Division Order No. R-3280 dated July 24, 1967. By Order No. R-10776 dated February 28, 1997, the vertical limits of the Teague-Blinebry Pool were extended to include the Paddock formation;
  - (c) the Blinebry formation within this pool is characterized by low porosity and permeability, and is fairly depleted at this time;
  - (d) development of the Paddock formation in this area did not occur until the mid to late 1990's;
  - (e) the Paddock formation in the proposed project area has not reached the advanced or stripper state of depletion;
  - (f) injection into the C. E. LaMunyon No. 79 will initially be limited to the "P4" and "P5" intervals of the Paddock formation. These producing Paddock intervals are continuous throughout the proposed project area; and
  - (g) injection into the Blinebry formation within this project may occur at a later time.
- (5) Arch presented engineering evidence that demonstrates:
- (a) it will initially utilize four producing wells and one injection well within the pilot pressure maintenance project. The producing wells are the C. E. LaMunyon Wells No. 51, 49, 54 and 30;
  - (b) within the four project producing wells, it will plug off the Blinebry formation and produce the Paddock formation only;

Case No. 12756  
Order No. R-11722  
Page 3

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- (c) the four project producing wells currently produce at an average rate of approximately 15 barrels of oil per day;
- (d) project costs are estimated to be approximately \$675,000; and
- (e) the implementation of a pilot pressure maintenance project within the project area should result in the recovery of an additional 60,000 barrels of oil and 150 MMCF of gas from the Paddock formation.
- (6) Application of the proposed pilot pressure maintenance project should result in the recovery of additional hydrocarbons, including additional crude oil, from the Paddock formation of the Teague Paddock-Blinbry Pool within the project area which may otherwise not be recovered, thereby preventing waste, and will not violate correlative rights.
- (7) Injection into the C. E. LaMunyon No. 79 should occur into the perforated interval from approximately 5,098 feet to 5,228 feet.
- (8) The operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.
- (9) Injection should be accomplished through 2 7/8 inch internally plastic-lined tubing installed in a packer set at a depth of 5,050 feet. The casing-tubing annulus should be filled with an inert fluid and a gauge or approved leak-detection device should be attached to the annulus in order to determine leakage in the casing, tubing, or packer.
- (10) The injection well or pressurization system should be equipped with a pressure control device or acceptable substitute that will limit the surface injection pressure to no more than 1020 psi.
- (11) Prior to commencing injection operations, the casing should be pressure tested throughout the interval from the surface down to the proposed packer setting depth to assure the integrity of such casing.
- (12) Arch testified that prior to commencing injection operations into the C. E. LaMunyon No. 79, it will plug and abandon the C. E. LaMunyon Well No. 47 located

Case No. 12756  
Order No. R-11722  
Page 4

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2180 feet from the North line and 560 feet from the West line (Unit E) of Section 22, Township 23 South, Range 37 East, NMPM, in a manner approved by the Supervisor of the Division's Hobbs District Office.

(13) The operator should give advance notice to the Supervisor of the Division's Hobbs District Office of the date and time (i) injection equipment will be installed; (ii) the mechanical integrity pressure test will be conducted on the C. E. LaMunyon No. 79; and (iii) plugging operations will be conducted on the C. E. LaMunyon No. 47, so these operations may be witnessed.

(14) The operator should immediately notify the Supervisor of the Division's Hobbs District Office of the failure of the tubing, casing or packer in the injection well or the leakage of water, oil or gas from or around any producing or plugged and abandoned well within the project area, and should take all steps as may be timely and necessary to correct such failure or leakage.

(15) The proposed pilot pressure maintenance project should be approved and the project should be governed by Division Rules No. 701 through 708.

(16) The project oil allowable should be established at 428 barrels of oil per day. The project allowable may be produced by any producing well in the project area in any proportion.

(17) The injection authority granted herein for the C. E. LaMunyon No. 79 should terminate one year after the date of this order if the operator has not commenced injection operations into the well; provided, however, the Division, upon written request by the operator, may grant an extension for good cause.

(18) The applicant seeks to qualify the proposed pilot pressure maintenance project as an "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (NMSA 1978 Sections 7-29A-1 through 7-29A-5).

(19) The evidence presented demonstrates that the proposed pilot pressure maintenance project meets all the criteria for approval.

(20) The proposed project area has been so far depleted that it is prudent to apply the proposed enhanced recovery techniques at this time to maximize ultimate recovery of crude oil from the project area.

(21) The proposed pilot pressure maintenance project is economically and technically reasonable, and application therefore has not been prematurely filed.

Case No. 12756

Order No. R-11722

Page 5

(22) The approved project area should initially comprise the E/2 NE/4 of Section 21 and the W/2 NW/4 of Section 22; provided, however, the "project area" and/or the producing wells eligible for the enhanced oil recovery (EOR) tax rate may be contracted and reduced based upon the evidence presented by the applicant in its demonstration of a positive production response.

(23) To be eligible for the EOR tax rate, the operator should advise the Division of the date and time water injection commences within the pilot pressure maintenance project. At that time, the Division will certify the project to the New Mexico Taxation and Revenue Department.

(24) At such time as a positive production response occurs, and within five years from the date the project was certified to the New Mexico Taxation and Revenue Department, the applicant must apply to the Division for certification of a positive production response. This application shall identify the area benefiting from enhanced oil recovery operations and the specific wells eligible for the EOR tax rate. The Division may review the application administratively or set it for hearing. Based upon the evidence presented, the Division will certify to the New Mexico Taxation and Revenue Department those wells that are eligible for the EOR tax rate.

**IT IS THEREFORE ORDERED THAT:**

(1) Arch Petroleum, Inc. is hereby authorized to institute a pilot pressure maintenance project within the Teague Paddock-Blinbry Pool on its C. E. LaMunyon Lease comprising the E/2 NE/4 of Section 21, and the W/2 NW/4 of Section 22, Township 23 South, Range 37 East, NMPM, Lea County, New Mexico, by the injection of water into the Paddock formation through the C. E. LaMunyon No. 79 to be drilled at a location 1700 feet from the North line and 10 feet from the East line (Unit H) of Section 21.

(2) Injection into the C. E. LaMunyon No. 79 shall occur into the perforated interval from approximately 5,098 feet to 5,228 feet.

(3) The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

(4) Injection shall be accomplished through 2 7/8 inch internally plastic-lined tubing installed in a packer set at approximately 5,050 feet. The casing-tubing annulus

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Order No. R-11722  
Page 6

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shall be filled with an inert fluid and a gauge or approved leak-detection device shall be attached to the annulus in order to determine leakage in the casing, tubing, or packer.

(5) The injection well or pressurization system shall be equipped with a pressure control device or acceptable substitute that will limit the surface injection pressure to no more than 1020 psi.

(6) The Division Director may administratively authorize a pressure limitation in excess of the above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.

(7) Prior to commencing injection operations, the casing shall be pressure tested throughout the interval from the surface down to the proposed packer setting depth to assure the integrity of such casing.

(8) Prior to commencing injection operations into the C. E. LaMunyon No. 79, the applicant shall plug and abandon the C. E. LaMunyon Well No. 47 located 2180 feet from the North line and 560 feet from the West line (Unit E) of Section 22, Township 23 South, Range 37 East, NMPM, in a manner approved by the Supervisor of the Division's Hobbs District Office.

(9) The operator shall give advance notice to the Supervisor of the Division's Hobbs District Office of the date and time (i) injection equipment will be installed; (ii) the mechanical integrity pressure test will be conducted on the C. E. LaMunyon No. 79; and (iii) plugging operations will be conducted on the C. E. LaMunyon No. 47, so these operations may be witnessed.

(10) The operator shall immediately notify the Supervisor of the Division's Hobbs District Office of the failure of the tubing, casing or packer in the injection well or the leakage of water, oil or gas from or around any producing or plugged and abandoned well within the project area, and shall take all steps as may be timely and necessary to correct such failure or leakage.

(11) The project is hereby designated the LaMunyon Paddock Pressure Maintenance Project, and the applicant shall conduct injection operations in accordance with Division Rules No. 701 through 708, and shall submit monthly progress reports in accordance with Division Rules No. 706 and 1115.

(12) The project oil allowable is hereby established at 428 barrels of oil per day. The project allowable may be produced by any producing well in the project area in any proportion.



Case No. 12756  
Order No. R-11722  
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(13) The LaMunyon Paddock Pressure Maintenance Project is hereby certified as an "Enhanced Oil Recovery Project." The project area shall initially comprise the E/2 NE/4 of Section 21 and the W/2 NW/4 of Section 22; provided, however, the "project area" and/or the producing wells eligible for the enhanced oil recovery (EOR) tax rate may be contracted and reduced based upon the evidence presented by the applicant in its demonstration of a positive production response.

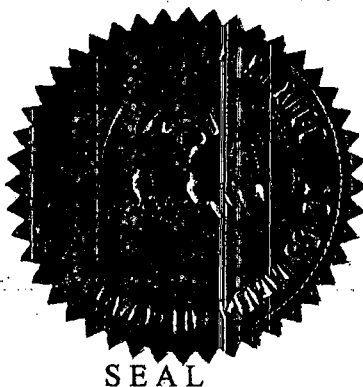
(14) To be eligible for the EOR tax rate, the operator shall advise the Division of the date and time water injection commences within the pressure maintenance project. At that time, the Division will certify the project to the New Mexico Taxation and Revenue Department.

(15) At such time as a positive production response occurs, and within five years from the date the project was certified to the New Mexico Taxation and Revenue Department, the applicant must apply to the Division for certification of a positive production response. This application shall identify the area benefiting from enhanced oil recovery operations and the specific wells eligible for the EOR tax rate. The Division may review the application administratively or set it for hearing. Based upon the evidence presented, the Division will certify to the New Mexico Taxation and Revenue Department those wells that are eligible for the EOR tax rate.

(16) The injection authority granted herein for the C. E. LaMunyon No. 79 shall terminate one year after the date of this order if the operator has not commenced injection operations into the well; provided, however, the Division, upon written request by the operator, may grant an extension for good cause.

(17) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.



STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

*Lori Wrotenbery*  
LORI WROTENBERY  
Director

**STATE OF NEW MEXICO  
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:**

**CASE NO. 12756  
ORDER NO. R-11722**

**APPLICATION OF ARCH PETROLEUM, INC. FOR APPROVAL OF A PILOT  
PRESSURE MAINTENANCE PROJECT AND TO QUALIFY THE PROJECT  
FOR THE RECOVERED OIL TAX RATE PURSUANT TO THE ENHANCED  
OIL RECOVERY ACT, LEA COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing at 8:15 a.m. on November 1, 2001, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 6th day of February, 2002, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

**FINDS THAT:**

(1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.

(2) The applicant, Arch Petroleum, Inc. ("Arch"), seeks authority to institute a pilot pressure maintenance project within the Teague Paddock-Blinebry Pool on its C. E. LaMunyon Lease comprising the E/2 NE/4 of Section 21, and the W/2 NW/4 of Section 22, Township 23 South, Range 37 East, NMPM, Lea County, New Mexico, by the injection of water into the Paddock formation through the C. E. LaMunyon No. 79 to be drilled at a location 1700 feet from the North line and 10 feet from the East line (Unit H) of Section 21.

(3) Arch testified that the proposed pilot pressure maintenance project area comprises a single Federal lease (Lease No. LC-030187), and that the interest ownership within the project area is common throughout.

(4) Arch presented geologic evidence that demonstrates:

- (a) the proposed pilot pressure maintenance project is located within the Teague Paddock-Blinebry Pool;
  - (b) the Teague-Blinebry Pool was created by Division Order No. R-3280 dated July 24, 1967. By Order No. R-10776 dated February 28, 1997, the vertical limits of the Teague-Blinebry Pool were extended to include the Paddock formation;
  - (c) the Blinebry formation within this pool is characterized by low porosity and permeability, and is fairly depleted at this time;
  - (d) development of the Paddock formation in this area did not occur until the mid to late 1990's;
  - (e) the Paddock formation in the proposed project area has not reached the advanced or stripper state of depletion;
  - (f) injection into the C. E. LaMunyon No. 79 will initially be limited to the "P4" and "P5" intervals of the Paddock formation. These producing Paddock intervals are continuous throughout the proposed project area; and
  - (g) injection into the Blinebry formation within this project may occur at a later time.
- (5) Arch presented engineering evidence that demonstrates:
- (a) it will initially utilize four producing wells and one injection well within the pilot pressure maintenance project. The producing wells are the C. E. LaMunyon Wells No. 51, 49, 54 and 30;
  - (b) within the four project producing wells, it will plug off the Blinebry formation and produce the Paddock formation only;

- (c) the four project producing wells currently produce at an average rate of approximately 15 barrels of oil per day;
- (d) project costs are estimated to be approximately \$675,000; and
- (e) the implementation of a pilot pressure maintenance project within the project area should result in the recovery of an additional 60,000 barrels of oil and 150 MMCF of gas from the Paddock formation.

(6) Application of the proposed pilot pressure maintenance project should result in the recovery of additional hydrocarbons, including additional crude oil, from the Paddock formation of the Teague Paddock-Blinbry Pool within the project area which may otherwise not be recovered, thereby preventing waste, and will not violate correlative rights.

(7) Injection into the C. E. LaMunyon No. 79 should occur into the perforated interval from approximately 5,098 feet to 5,228 feet.

(8) The operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

(9) Injection should be accomplished through 2 7/8 inch internally plastic-lined tubing installed in a packer set at a depth of 5,050 feet. The casing-tubing annulus should be filled with an inert fluid and a gauge or approved leak-detection device should be attached to the annulus in order to determine leakage in the casing, tubing, or packer.

(10) The injection well or pressurization system should be equipped with a pressure control device or acceptable substitute that will limit the surface injection pressure to no more than 1020 psi.

(11) Prior to commencing injection operations, the casing should be pressure tested throughout the interval from the surface down to the proposed packer setting depth to assure the integrity of such casing.

(12) Arch testified that prior to commencing injection operations into the C. E. LaMunyon No. 79, it will plug and abandon the C. E. LaMunyon Well No. 47 located

2180 feet from the North line and 560 feet from the West line (Unit E) of Section 22, Township 23 South, Range 37 East, NMPM, in a manner approved by the Supervisor of the Division's Hobbs District Office.

(13) The operator should give advance notice to the Supervisor of the Division's Hobbs District Office of the date and time (i) injection equipment will be installed; (ii) the mechanical integrity pressure test will be conducted on the C. E. LaMunyon No. 79; and (iii) plugging operations will be conducted on the C. E. LaMunyon No. 47, so these operations may be witnessed.

(14) The operator should immediately notify the Supervisor of the Division's Hobbs District Office of the failure of the tubing, casing or packer in the injection well or the leakage of water, oil or gas from or around any producing or plugged and abandoned well within the project area, and should take all steps as may be timely and necessary to correct such failure or leakage.

(15) The proposed pilot pressure maintenance project should be approved and the project should be governed by Division Rules No. 701 through 708.

(16) The project oil allowable should be established at 428 barrels of oil per day. The project allowable may be produced by any producing well in the project area in any proportion.

(17) The injection authority granted herein for the C. E. LaMunyon No. 79 should terminate one year after the date of this order if the operator has not commenced injection operations into the well; provided, however, the Division, upon written request by the operator, may grant an extension for good cause.

(18) The applicant seeks to qualify the proposed pilot pressure maintenance project as an "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (NMSA 1978 Sections 7-29A-1 through 7-29A-5).

(19) The evidence presented demonstrates that the proposed pilot pressure maintenance project meets all the criteria for approval.

(20) The proposed project area has been so far depleted that it is prudent to apply the proposed enhanced recovery techniques at this time to maximize ultimate recovery of crude oil from the project area.

(21) The proposed pilot pressure maintenance project is economically and technically reasonable, and application therefore has not been prematurely filed.

(22) The approved project area should initially comprise the E/2 NE/4 of Section 21 and the W/2 NW/4 of Section 22; provided, however, the "project area" and/or the producing wells eligible for the enhanced oil recovery (EOR) tax rate may be contracted and reduced based upon the evidence presented by the applicant in its demonstration of a positive production response.

(23) To be eligible for the EOR tax rate, the operator should advise the Division of the date and time water injection commences within the pilot pressure maintenance project. At that time, the Division will certify the project to the New Mexico Taxation and Revenue Department.

(24) At such time as a positive production response occurs, and within five years from the date the project was certified to the New Mexico Taxation and Revenue Department, the applicant must apply to the Division for certification of a positive production response. This application shall identify the area benefiting from enhanced oil recovery operations and the specific wells eligible for the EOR tax rate. The Division may review the application administratively or set it for hearing. Based upon the evidence presented, the Division will certify to the New Mexico Taxation and Revenue Department those wells that are eligible for the EOR tax rate.

**IT IS THEREFORE ORDERED THAT:**

(1) Arch Petroleum, Inc. is hereby authorized to institute a pilot pressure maintenance project within the Teague Paddock-Blinebry Pool on its C. E. LaMunyon Lease comprising the E/2 NE/4 of Section 21, and the W/2 NW/4 of Section 22, Township 23 South, Range 37 East, NMPM, Lea County, New Mexico, by the injection of water into the Paddock formation through the C. E. LaMunyon No. 79 to be drilled at a location 1700 feet from the North line and 10 feet from the East line (Unit H) of Section 21.

(2) Injection into the C. E. LaMunyon No. 79 shall occur into the perforated interval from approximately 5,098 feet to 5,228 feet.

(3) The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

(4) Injection shall be accomplished through 2 7/8 inch internally plastic-lined tubing installed in a packer set at approximately 5,050 feet. The casing-tubing annulus

shall be filled with an inert fluid and a gauge or approved leak-detection device shall be attached to the annulus in order to determine leakage in the casing, tubing, or packer.

(5) The injection well or pressurization system shall be equipped with a pressure control device or acceptable substitute that will limit the surface injection pressure to no more than 1020 psi.

(6) The Division Director may administratively authorize a pressure limitation in excess of the above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.

(7) Prior to commencing injection operations, the casing shall be pressure tested throughout the interval from the surface down to the proposed packer setting depth to assure the integrity of such casing.

(8) Prior to commencing injection operations into the C. E. LaMunyon No. 79, the applicant shall plug and abandon the C. E. LaMunyon Well No. 47 located 2180 feet from the North line and 560 feet from the West line (Unit E) of Section 22, Township 23 South, Range 37 East, NMPM, in a manner approved by the Supervisor of the Division's Hobbs District Office.

(9) The operator shall give advance notice to the Supervisor of the Division's Hobbs District Office of the date and time (i) injection equipment will be installed; (ii) the mechanical integrity pressure test will be conducted on the C. E. LaMunyon No. 79; and (iii) plugging operations will be conducted on the C. E. LaMunyon No. 47, so these operations may be witnessed.

(10) The operator shall immediately notify the Supervisor of the Division's Hobbs District Office of the failure of the tubing, casing or packer in the injection well or the leakage of water, oil or gas from or around any producing or plugged and abandoned well within the project area, and shall take all steps as may be timely and necessary to correct such failure or leakage.

(11) The project is hereby designated the LaMunyon Paddock Pressure Maintenance Project, and the applicant shall conduct injection operations in accordance with Division Rules No. 701 through 708, and shall submit monthly progress reports in accordance with Division Rules No. 706 and 1115.

(12) The project oil allowable is hereby established at 428 barrels of oil per day. The project allowable may be produced by any producing well in the project area in any proportion.

(13) The LaMunyon Paddock Pressure Maintenance Project is hereby certified as an "Enhanced Oil Recovery Project." The project area shall initially comprise the E/2 NE/4 of Section 21 and the W/2 NW/4 of Section 22; provided, however, the "project area" and/or the producing wells eligible for the enhanced oil recovery (EOR) tax rate may be contracted and reduced based upon the evidence presented by the applicant in its demonstration of a positive production response.

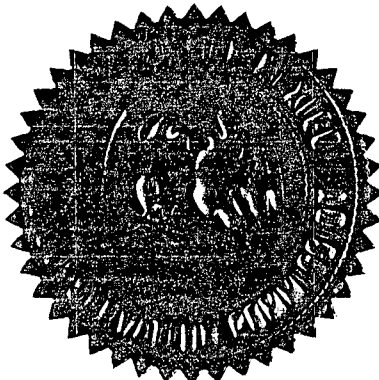
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(16) The injection authority granted herein for the C. E. LaMunyon No. 79 shall terminate one year after the date of this order if the operator has not commenced injection operations into the well; provided, however, the Division, upon written request by the operator, may grant an extension for good cause.

(17) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.



SEAL

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

*Lori Wrotenbery*  
LORI WROTENBERY  
Director