

BEFORE THE  
OIL CONSERVATION DIVISION  
NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES

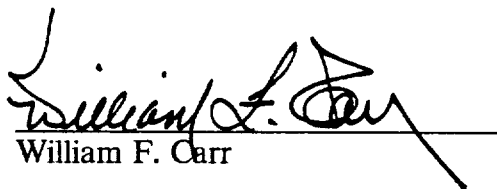
IN THE MATTER OF THE APPLICATION  
OF ENSERCH EXPLORATION, INC.  
FOR THE ASSIGNMENT AT A  
SPECIAL DEPTH BRACKET OIL ALLOWABLE,  
ROOSEVELT COUNTY, NEW MEXICO.

CASE NO. 10994

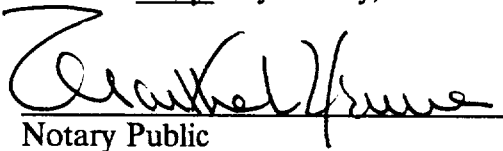
SUPPLEMENTAL AFFIDAVIT

STATE OF NEW MEXICO        )  
  ) ss.  
COUNTY OF SANTA FE        )

William F. Carr, attorney in fact and authorized representative of Enserch Exploration, Inc., the Applicant herein, being first duly sworn, upon oath, states that in accordance with the notice provisions of Rule 1207 of the New Mexico Oil Conservation Division the Applicant has attempted to find the correct addresses of all interested persons entitled to receive notice of this application and that notice has been given at the addresses shown on Exhibit "A" attached hereto as provided in Rule 1207.

  
William F. Carr

SUBSCRIBED AND SWORN to before me this 20th day of July, 1994.

  
Notary Public

My Commission Expires:

August 19, 1995

**EXHIBIT A**

Bledsoe Petroleum Corporation  
c/o Bledsoe Partners, Inc.  
3908 North Peniel, Suite 500  
Bethany, OK 73008

CAMPBELL, CARR, BERGE  
& SHERIDAN, P.A.  
LAWYERS

MICHAEL B. CAMPBELL  
WILLIAM F. CARR  
BRADFORD C. BERGE  
MARK F. SHERIDAN

PATRICIA A. MATTHEWS  
MICHAEL H. FELDEWERT  
DAVID B. LAWRENZ  
TANYA M. TRUJILLO

JACK M. CAMPBELL  
OF COUNSEL

JEFFERSON PLACE  
SUITE 1 - 110 NORTH GUADALUPE  
POST OFFICE BOX 2208  
SANTA FE, NEW MEXICO 87504-2208  
TELEPHONE: (505) 988-4421  
TELECOPIER: (505) 983-6043

June 30, 1994

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Bledsoe Petroleum Corporation  
c/o Bledsoe Partners, Inc.  
3908 North Peniel, Suite 500  
Bethany, OK 73008

Re: Application of Enserch Exploration, Inc., for Special Pool Rules, Roosevelt  
County, New Mexico

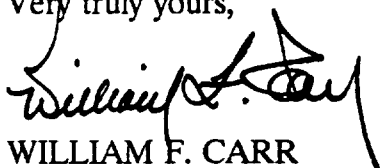
Gentlemen:

This letter is to advise you that Enserch Exploration, Inc., has filed the enclosed application with the New Mexico Oil Conservation Division seeking an order promulgating Special Rules and Regulations for the South Peterson-Fusselman Pool located in portions of Townships 5 and 6 South, Ranges 32 and 33 East, N.M.P.M., Roosevelt County, New Mexico setting a special oil allowable for the pool of 500 barrels per day.

This application has been set for hearing before an Examiner of the Oil Conservation Division on July 21, 1994. You are not required to attend this hearing, but as an owner of an interest that may be affected by this application, you may appear at the hearing and present testimony. Failure to appear at that time or otherwise become a party of record will preclude you from challenging this application at a later date.

Parties appearing in cases before the Division have been requested to file a Pre-hearing Statement substantially in the form prescribed by the Division (Oil Conservation Division Memorandum 2-90). Pre-hearing statements should be filed by 4:00 o'clock p.m., on the Friday before a scheduled hearing.

Very truly yours,



WILLIAM F. CARR  
ATTORNEY FOR ENSERCH EXPLORATION, INC.  
WFC:mlh  
Enclosure

P 111 332 825



# Receipt for Certified Mail

No Insurance Coverage Provided  
Do not use for International Mail  
(See Reverse)

To: c/o Bledsoe Partners, Ltd. Bledsoe Petroleum Corporation	
Street: 3908 North Peniel, Suite 500	
City, State, ZIP: Bethany, OK 73008	
Postage	\$ 1.29
Certified Fee	1.00
Special Delivery Fee	
Registered Delivery Fee	
Return Receipt (providing to Addressee)	1.00
Return Receipt (providing to Addressee's Address)	
TOTAL Postage & Fees	\$ 2.29
Postmark or Date June 30, 1994	

PS Form 3800, June 1991

<p><b>SENDER:</b> Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.</p> <p>Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.</p> <p>1. <input type="checkbox"/> Show to whom delivered, date, and addressee's address. 2. <input type="checkbox"/> Restricted Delivery (Extra charge)</p>	
3. Article Addressed to:	4. Article Number
Bledsoe Petroleum Corporation c/o Bledsoe Partners, Inc. 3908 North Peniel, Suite 500 Bethany, OK 73008	P 111 332 825
5. Signature - Address X	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
6. Signature - Agent <i>[Signature]</i>	Always obtain signature of addressee or agent and DATE DELIVERED.
7. Date of Delivery 6/30/94	8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3811, Mar. 1988 U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

**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. 10994  
Order No. R-\_\_\_\_\_

APPLICATION OF ENSERCH EXPLORATION,  
INC. FOR THE ASSIGNMENT OF A  
SPECIAL DEPTH BRACKET ALLOWABLE,  
ROOSEVELT COUNTY, NEW MEXICO.

**ENSERCH EXPLORATION INC.'S  
PROPOSED ORDER OF THE DIVISION**

---

**BY THE DIVISION:**

This cause came on for hearing at 8:15 a.m. on June 23, 1994, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this \_\_\_\_\_ day of July, 1994, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

**FINDS:**

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Enserch Exploration, Inc., pursuant to the provisions of General Rule 505 D, seeks the amendment of the Special Pool Rules and Regulations for the South Peterson-Fusselman Pool to include a special depth bracket allowable of 500 barrels of oil per day.

(3) Phillips Petroleum Company, an operator in this pool, appeared and presented testimony in opposition to this application.

(4) The South Peterson-Fusselman Pool was established on July 17, 1978 by Division Order No. R-5771 and has been extended from time to time to include the following described lands in Roosevelt County, New Mexico:

**Township 5 South, Range 32 East, N.M.P.M.**

Section 25: SE/4  
Section 36: NE/4

**Township 5 South, Range 33 East, N.M.P.M.**

Section 30: S/2  
Section 31: All

**Township 6 South, Range 33 East, N.M.P.M.**

Section 1: Lots 3 and 4  
Section 2: Lots 1, 2, 3 and 4  
Section 3: Lots 1 and 2  
Section 10: NE/4

Order No. R-5771 also promulgated Special Rules and Regulations for this pool which establish 80-acre spacing units. This pool is operated under these Special Rules and Regulations and the General Rules of the Division which set a depth bracket allowable for 80-acre units of 267 barrels per day and a gas allowable rate of 374 mcf per day at a 2,000 to 1 Gas/Oil Ratio.

(5) There are three operators in this pool; Enserch, Phillips and Bledsoe Petroleum Corporation.

(6) The parties are in agreement that the Fusselman formation in this pool is highly fractured which results in oil being produced from a dual porosity system and that a bottom water drive is the reservoir drive mechanism in this pool. (Enserch Exhibit 5, Testimony of Faigle, Balke and Pickett). Currently, only five wells are productive in the pool. These wells are completed in the fracture system producing with water cuts which range from 89% in the Enserch Lambirth No. 1 to 99% in the Phillips Lambirth No. 1-A. (Enserch Exhibit 4, Testimony of Faigle).

(7) Enserch presented evidence which shows:

- A. The Enserch Lambirth 1 and the Phillips Lambirth 2A have the potential to produce in excess of current allowable limits and that the Lambirth 1 could produce at rates as high as 500 barrels of oil per day. (Testimony of Telford).
- B. This reservoir is in an advanced state of depletion with the oil in the fracture system having been produced and the remaining oil production coming primarily from the matrix. (Testimony of Telford).

- C. Increasing the production rate from wells in this pool creates a pressure differential in the reservoir which increases oil production from the matrix and lowers water cuts. (Enserch Exhibit 5, Testimony of Telford).
- D. Recent production histories from the Lambirth 1, 1-A and 2 demonstrate that higher oil recovery results when high volume lift techniques are installed on the wells in this pool. (Enserch Exhibits 6, 7, 8 and 9, Testimony of Telford and Pickett).
- E. That maximum benefit from high volume lift and a resulting increase in ultimate recovery from the reservoir is achieved in reservoirs like the subject pool when high volume lift is installed on wells with producing water cuts in excess of 70% and less than 95%. (SPE Study 7463, Enserch Exhibit 10, at p. 4).
- F. Correlative rights should not be impaired. Drainage that could result from certain wells being placed on high volume lift would occur only in the fracture system which is water saturated and from which oil has already been produced. (Testimony of Telford).

(8) Phillips opposes managing this reservoir in its last years of production by increasing the oil allowable and utilizing high volume lift techniques. Instead, Phillips recommended delaying high volume lift techniques until their remaining wells have been produced to their economic limits and abandoned.

(9) Although Phillips challenged the value of high volume lift, its own evidence demonstrated that changing the rods in their Lambirth No. 1-A in late 1989 increased the lift in this well and resulted in an increase in oil production and a decrease in water cut. (Phillips Exhibit \_\_, Testimony of Pickett). Furthermore, Phillips testified that its current production practices in this reservoir are affected by its ability to dispose of produced water and that once its Lambirth 1-A Well is abandoned it intends to increase the lift and production rate from its Lambirth 2A. (Testimony of Pickett).

(10) The South Peterson-Fusselman Pool can best be managed by the employment of high volume lift techniques to increase the ultimate recovery of oil from this pool.

(11) Delaying the implementation of high volume lift techniques as recommended by Phillips will result in the producing water cuts in additional wells in this pool exceeding 95% thereby reducing the benefits from high volume lift and reducing the ultimate recovery

of oil from this pool. (See Enserch Exhibit 10).

(12) Approval of this application will not impair the correlative rights for any pressure drawn down created by increased withdrawals from any well in this pool should be confined to the fracture system which has been substantially watered out.

(13) Increasing the depth bracket allowables for the South Peterson-Fusselman Pool should increase the ultimate recovery of oil from this pool, will not impair correlative rights and should be approved.

**IT IS THEREFORE ORDERED THAT:**

(1) The application of Enserch Exploration, Inc. for a special depth bracket allowable of 500 barrels of oil per day for the South Peterson-Fusselman Pool is hereby granted.

(2) Rule 6 of the Special Rules and Regulations for the South Peterson-Fusselman Pool is hereby amended as follows:

Rule 6: Top unit allowable for a standard proration unit (79 through 81 acres) shall be 500 barrels per day, and in the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

(3) 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**

**WILLIAM J. LeMAY  
Director**

**S E A L**

BEFORE THE  
OIL CONSERVATION DIVISION  
NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES

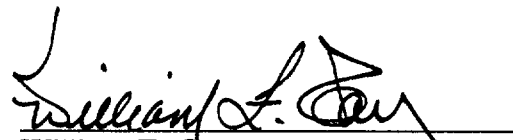
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CASE NO. 10994

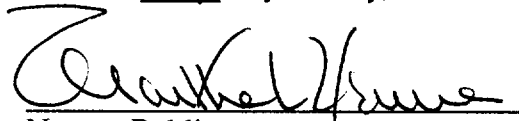
SUPPLEMENTAL AFFIDAVIT

STATE OF NEW MEXICO        )  
  ) ss.  
COUNTY OF SANTA FE        )

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William F. Carr

SUBSCRIBED AND SWORN to before me this 20th day of July, 1994.

  
Notary Public

My Commission Expires:

August 19, 1995

**EXHIBIT A**

Bledsoe Petroleum Corporation  
c/o Bledsoe Partners, Inc.  
3908 North Peniel, Suite 500  
Bethany, OK 73008

CAMPBELL, CARR, BERGE  
& SHERIDAN, P.A.  
LAWYERS

MICHAEL B. CAMPBELL  
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TANYA M. TRUJILLO

JACK M. CAMPBELL  
OF COUNSEL

JEFFERSON PLACE  
SUITE 1 - 110 NORTH GUADALUPE  
POST OFFICE BOX 2208  
SANTA FE, NEW MEXICO 87504-2208  
TELEPHONE: (505) 988-4421  
TELECOPIER: (505) 983-6043

June 30, 1994

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Bledsoe Petroleum Corporation  
c/o Bledsoe Partners, Inc.  
3908 North Peniel, Suite 500  
Bethany, OK 73008

Re: Application of Enserch Exploration, Inc., for Special Pool Rules, Roosevelt  
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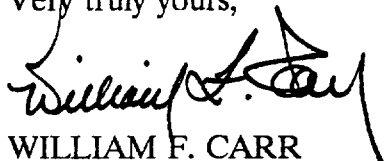
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Parties appearing in cases before the Division have been requested to file a Pre-hearing Statement substantially in the form prescribed by the Division (Oil Conservation Division Memorandum 2-90). Pre-hearing statements should be filed by 4:00 o'clock p.m., on the Friday before a scheduled hearing.

Very truly yours,



WILLIAM F. CARR  
ATTORNEY FOR ENSERCH EXPLORATION, INC.  
WFC:mlh  
Enclosure

P 111 332 825



# Receipt for Certified Mail

No Insurance Coverage Provided  
Do not use for International Mail  
(See Reverse)

To: c/o Bledsoe Partners, Ltd. Bledsoe Petroleum Corporation	
3908 North Peniel, Suite 500	
Bethany, OK 73008	
Postage	\$ 1.29
Insurance	1.00
Restricted Delivery	
Return Receipt (and/or to Whom & Date Delivered)	1.00
Return Receipt (and/or to Whom, Date, and Addressee's Address)	
TOTAL Postage & Fees	\$ 2.29
Postmark or Date June 30, 1994	

PS Form 3800, June 1991

<p><b>SENDER:</b> Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.</p> <p>Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check boxes for additional service(s) requested.</p> <p>1. <input type="checkbox"/> Show to whom delivered, date, and addressee's address. 2. <input type="checkbox"/> Restricted Delivery (Extra charge)</p>	
3. Article Addressed to:	4. Article Number
Bledsoe Petroleum Corporation c/o Bledsoe Partners, Inc. 3908 North Peniel, Suite 500 Bethany, OK 73008	P 111 332 825
5. Signature - Address	Type of Service:
X	<input type="checkbox"/> Registered <input type="checkbox"/> Insured
6. Signature - Agent	<input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD
7. Date of Delivery	<input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
1-25-94	Always obtain signature of addressee or agent and DATE DELIVERED.
	8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3811, Mar. 1988 \* U.S.G.P.O. 1988-212-865

DOMESTIC RETURN RECEIPT

**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. 10994  
Order No. R-\_\_\_\_\_

APPLICATION OF ENSERCH EXPLORATION,  
INC. FOR THE ASSIGNMENT OF A  
SPECIAL DEPTH BRACKET ALLOWABLE,  
ROOSEVELT COUNTY, NEW MEXICO.

**ENSERCH EXPLORATION INC'.S  
PROPOSED ORDER OF THE DIVISION**

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**BY THE DIVISION:**

This cause came on for hearing at 8:15 a.m. on June 23, 1994, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this \_\_\_\_\_ day of July, 1994, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

**FINDS:**

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Enserch Exploration, Inc., pursuant to the provisions of General Rule 505 D, seeks the amendment of the Special Pool Rules and Regulations for the South Peterson-Fusselman Pool to include a special depth bracket allowable of 500 barrels of oil per day.

(3) Phillips Petroleum Company, an operator in this pool, appeared and presented testimony in opposition to this application.

(4) The South Peterson-Fusselman Pool was established on July 17, 1978 by Division Order No. R-5771 and has been extended from time to time to include the following described lands in Roosevelt County, New Mexico:

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Section 30: S/2

Section 31: All

**Township 6 South, Range 33 East, N.M.P.M.**

Section 1: Lots 3 and 4

Section 2: Lots 1, 2, 3 and 4

Section 3: Lots 1 and 2

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(5) There are three operators in this pool; Enserch, Phillips and Bledsoe Petroleum Corporation.

(6) The parties are in agreement that the Fusselman formation in this pool is highly fractured which results in oil being produced from a dual porosity system and that a bottom water drive is the reservoir drive mechanism in this pool. (Enserch Exhibit 5, Testimony of Faigle, Balke and Pickett). Currently, only five wells are productive in the pool. These wells are completed in the fracture system producing with water cuts which range from 89% in the Enserch Lambirth No. 1 to 99% in the Phillips Lambirth No. 1-A. (Enserch Exhibit 4, Testimony of Faigle).

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- A. The Enserch Lambirth 1 and the Phillips Lambirth 2A have the potential to produce in excess of current allowable limits and that the Lambirth 1 could produce at rates as high as 500 barrels of oil per day. (Testimony of Telford).
- B. This reservoir is in an advanced state of depletion with the oil in the fracture system having been produced and the remaining oil production coming primarily from the matrix. (Testimony of Telford).

- C. Increasing the production rate from wells in this pool creates a pressure differential in the reservoir which increases oil production from the matrix and lowers water cuts. (Enserch Exhibit 5, Testimony of Telford).
- D. Recent production histories from the Lambirth 1, 1-A and 2 demonstrate that higher oil recovery results when high volume lift techniques are installed on the wells in this pool. (Enserch Exhibits 6, 7, 8 and 9, Testimony of Telford and Pickett).
- E. That maximum benefit from high volume lift and a resulting increase in ultimate recovery from the reservoir is achieved in reservoirs like the subject pool when high volume lift is installed on wells with producing water cuts in excess of 70% and less than 95%. (SPE Study 7463, Enserch Exhibit 10, at p. 4).
- F. Correlative rights should not be impaired. Drainage that could result from certain wells being placed on high volume lift would occur only in the fracture system which is water saturated and from which oil has already been produced. (Testimony of Telford).

(8) Phillips opposes managing this reservoir in its last years of production by increasing the oil allowable and utilizing high volume lift techniques. Instead, Phillips recommended delaying high volume lift techniques until their remaining wells have been produced to their economic limits and abandoned.

(9) Although Phillips challenged the value of high volume lift, its own evidence demonstrated that changing the rods in their Lambirth No. 1-A in late 1989 increased the lift in this well and resulted in an increase in oil production and a decrease in water cut. (Phillips Exhibit \_\_, Testimony of Pickett). Furthermore, Phillips testified that its current production practices in this reservoir are affected by its ability to dispose of produced water and that once its Lambirth 1-A Well is abandoned it intends to increase the lift and production rate from its Lambirth 2A. (Testimony of Pickett).

(10) The South Peterson-Fusselman Pool can best be managed by the employment of high volume lift techniques to increase the ultimate recovery of oil from this pool.

(11) Delaying the implementation of high volume lift techniques as recommended by Phillips will result in the producing water cuts in additional wells in this pool exceeding 95% thereby reducing the benefits from high volume lift and reducing the ultimate recovery

of oil from this pool. (See Enserch Exhibit 10).

(12) Approval of this application will not impair the correlative rights for any pressure drawn down created by increased withdrawals from any well in this pool should be confined to the fracture system which has been substantially watered out.

(13) Increasing the depth bracket allowables for the South Peterson-Fusselman Pool should increase the ultimate recovery of oil from this pool, will not impair correlative rights and should be approved.

**IT IS THEREFORE ORDERED THAT:**

(1) The application of Enserch Exploration, Inc. for a special depth bracket allowable of 500 barrels of oil per day for the South Peterson-Fusselman Pool is hereby granted.

(2) Rule 6 of the Special Rules and Regulations for the South Peterson-Fusselman Pool is hereby amended as follows:

Rule 6: Top unit allowable for a standard proration unit (79 through 81 acres) shall be 500 barrels per day, and in the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

(3) 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

WILLIAM J. LeMAY  
Director

S E A L

KELLAHIN AND KELLAHIN

ATTORNEYS AT LAW

EL PATIO BUILDING

117 NORTH GUADALUPE

POST OFFICE BOX 2265

SANTA FE, NEW MEXICO 87504-2265

W. THOMAS KELLAHIN\*

\*NEW MEXICO BOARD OF LEGAL SPECIALIZATION  
RECOGNIZED SPECIALIST IN THE AREA OF  
NATURAL RESOURCES-OIL AND GAS LAW

TELEPHONE (505) 982-4285

TELEFAX (505) 982-2047

JASON KELLAHIN (RETIRED 1991)

July 27, 1994

HAND DELIVERED

Mr. Michael E. Stogner  
Chief Hearing Examiner  
Oil Conservation Division  
310 Old Santa Fe Trail  
Santa Fe, New Mexico 87501

Computer  
Floppy  
ATTACHED

Re: NMOCD Case 10994  
Application of Enserch Exploration, Inc.  
For the Adoption of a Special Oil Allowable  
for South Peterson-Fusselman Oil Pool,  
Roosevelt County, New Mexico.

Dear Mr. Stogner:

On behalf of Phillips Petroleum Company, please find enclosed our proposed order which if adopted by you would deny the referenced application.

Very truly yours,



W. Thomas Kellahin

cc: Elizabeth A. Harris, Esq.  
Phillips Petroleum Company

cc: Mr. William F. Carr, Esq.  
Attorney for Enserch Petroleum, Inc.

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

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

CASE NO. 10994  
ORDER NO. R-

APPLICATION OF ENSERCH EXPLORATION, INC.  
FOR THE ADOPTION OF A SPECIAL OIL ALLOWABLE  
FOR SOUTH PETERSON-FUSSELMAN OIL POOL,  
ROOSEVELT COUNTY, NEW MEXICO

**PHILLIPS PETROLEUM COMPANY'S  
PROPOSED  
ORDER OF THE DIVISION**

**BY THE DIVISION:**

This cause came on for hearing at 8:15 a.m. on June 23, 1994, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this \_\_\_\_ day of July, 1994, the Division Director, having considered the testimony, the record and the recommendations of the Examiner, and being fully advised in the premises,

**FINDS THAT:**

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) On July 6, 1978, in Case 6270, the Division issued Order R-5771 which granted the application of Enserch Exploration, Inc. ("Enserch") to create the South Peterson-Fusselman Oil Pool ("the Pool") and to establish 80-acre oil proration and spacing units with a maximum depth bracket oil allowable of 267 BOPD.

(3) Now after some sixteen years of operating under those rules, the applicant seeks an order to increase the maximum daily oil allowable from 267 BOPD to 500 BOPD in the Pool.

(4) Phillips Petroleum Company ("Phillips"), the only other operator in the Pool, appeared at the hearing and presented geologic and petroleum engineering evidence in opposition to increasing the oil allowable in the Pool.

(5) In support of its contention to increase the oil allowable to 500 BOPD, Enserch relied upon the following:

(a) that the Pool is a strong water drive reservoir which produces oil along with significant volumes of salt water;

(b) that the Pool is in an advanced stage of depletion with only three remaining producing wells all located within the same structural feature of the same portion of reservoir in Section 31, T5S, R33S, NMPM:

Enserch operated Lambrith Well No. 1 (Unit K)

Phillips operated Lambirth "A" Well No. 1 (Unit J)

Phillips operated Lambirth "A" Well No. 2 (Unit F)

(c) that although structurally up-dip to both Phillips' wells, the Enserch well does not have any advantage because the base of the current perforations in each of these wells is at the same correlative point.

(d) that use of high volume lift installation ("HVL") in an Ellenburger, a Devonian and a Strawn reservoir in West Texas, each of which was a natural water-drive reservoir, had resulted in an apparent increase in oil rate and ultimate oil recovery than that expected with conventional lift methods. (See Enserch Exhibit 10 "SPE paper 7463 presented October 1, 1979")

(e) and based upon that SPE paper, Enserch theorized that by adding large submersible pumps which could lift 3,000 total fluids per day, additional recovery could be attained in the Pool.

(f) that the SPE theory has already been tested in the Pool when a submersible pump was installed in the Phillips Lambirth A Well No. 1 in August 1990 and, as a direct result, the watercut dropped dramatically thus proving that higher withdrawal rates were more efficient;

(g) similarly, Enserch also concluded that a submersible pump was installed in the Phillips Lambirth A Well No. 2 in February, 1991 and that as a direct result of that HVL installation, the watercut dropped dramatically thus proving that higher withdrawal rates were more efficient;

(6) In opposition, Phillips presented geologic and petroleum engineering evidence which demonstrated that:

(a) the Enserch's Lambirth Well No 1 is at the highest structural portion of the reservoir being some 56 feet and 69 feet, respectively, up-dip to the Phillips Lambirth A Well No 1 and the Phillips Lambirth A Well No. 2;

(b) that also based upon the hypothetical expectations of performance in the SPE paper, once the wells were experiencing 95% water cut or greater, then any additional recovery generated by increasing withdrawal rates was not enough incremental recovery to be economically attractive;

(c) only the Enserch Lambrith Well No. 1 would benefit from increasing the oil allowable and that benefit would be at the expense of drainage from the Phillips' adjoining spacing units;

(d) Enserch's petroleum engineer had mistakenly shown the installation of the submersible pump in the Phillips Lambrith A Well No 1 to be August, 1990 when in fact it was actually installed approximately 2 years later in October 1992; that when correctly plotted on the production curve for that well, the installation of the pump resulted in a dramatic increase in the water cut--a result diametrically opposed to and contrary with the Enserch's conclusion;

(e) again, Enserch's petroleum engineer mistakenly had shown the installation of the submersible pump in the Phillips Lambrith A Well No 2 to be February, 1991 when in fact it was actually installed approximately 12 months later in February 1992; that when correctly plotted on the production curve for that well, the installation of the pump resulted in a dramatic increase in the water cut---a result inconsistent with and contrary to the Enserch's conclusion and expectation;

(f) apart from the expectations of the SPE, and contrary to the results predicted by Enserch, the installation of a HVL for the Enserch Lambrith "A" Well No 1 has resulted in dramatic increases in the watercut of this well;

(g) apart from the expectations of the SPE, and contrary to the results predicted by Enserch, the installation of a HVL for the Enserch Lambrith "A" Well No 1 has not demonstrate anything except that this is a short-term temporary acceleration in the rate of oil production;

(h) that increasing the rate of oil allowable will benefit only one well in the pool, the Enserch Lambrith Well No 1 and will cause that higher capacity oil well to draining the oil from the adjoining spacing units including those operated by Phillips which cannot be protected by their existing wells thereby impairing correlative rights;

(i) the reservoir is sensitive to the rate of withdrawals and increasing the rate of oil production will have an adverse effect on ultimate recovery from the pool thereby causing waste;

(j) on July 25, 1979, before the Division in Case 6270 on behalf of Enserch's application to make the Pool rules permanent, Mr. Leonard Kersh, a petroleum engineer for Enserch, testified that the results of a 66-hours extended pressure drawn test, the Enserch Lambirth No 1, caused him to conclude that the well had a contributing pore volume of 17.76 million reservoir barrels which comes out to be an equivalent drainage area of approximately 830 acres;

(k) under existing 267 BOPD allowables, the Enserch well already has produced 953,358 barrels of oil, 554,119 MCFG and has drained 800 acres; and

(l) the Enserch Lambrith No. 1 well has already produced 38% of the total oil in the entire pool while only having 20% of the original oil in place under this spacing unit.

(8) Both Enserch and Phillips presented engineering evidence and testimony to the Division and, based upon such evidence and testimony, there is substantial evidence to support the following conclusions concerning the South Peterson-Fusselman Pool:

(a) Enserch's data only demonstrates that there is a temporary increase in the daily oil rate but does not confirm if that production is simply rate acceleration or in fact will increase ultimate oil recovery.

(b) Enserch based its application on a short term test but failed to supply any rate sensitivity test data to demonstrate what would actually happen to individual wells if produced at the requested rate of 500 BOPD.

(c) Structure has a significant effect on well performance. Neglecting structural effects and water migration leads to the erroneous conclusion that the potential losses due to higher water/oil production are negligible.

(d) instead of increasing ultimate recovery from the pool, increasing the oil allowable will simply allow the Enserch to drain more of the offsetting spacing units thereby impairing correlative rights with no apparent increase in ultimate oil recovery from the pool.

(e) As a result of increasing the oil allowable from 267 BOPD to 500 BOPD, the primary recovery of oil for the Phillips' wells in Section 31 of Pool would be reduced by 200,000 barrels.

(f) Pressure and production data indicates that Enserch's high capacity up-dip well is depleting its offsets.

(g) Well test data from the subject wells including actual production data, indicates that the wells are sensitive to production rates. A higher oil production rate resulted in higher water-oil ratios. Lowering the oil rates resulted in lower water-oil ratios. With less water produced per barrel of oil, recovery is improved. Enserch presented no test data to prove otherwise. Enserch presented no test data to support 500 BOPD allowables. Enforcing the current 287 BOPD limit will improve oil recovery.

(9) Phillips presented detailed geology and petroleum engineering evidence and testimony from which the Division finds substantial evidence to support the following conclusions:

(a) ONLY the higher structure, high capacity Enserch Lambrith No 1 Well is capable of producing in excess of the 267 BOPD allowable but in fact has never been tested at any rate over 300 BOPD. Phillips' structurally lower wells will never be capable of producing at this rate;

(b) Continuity of the reservoir clearly supports the fact that production from Enserch's up-structure well will affect the immediate down-structure offsetting wells.

(c) The evidence available at the present time demonstrates that approval of the application will only temporarily increase the rate of oil production from one well in the pool;

(d) The evidence further demonstrated that approval of the application will cause excessive water migration which in turn will decrease ultimate oil recovery for the down-structure oil wells thereby violating correlative rights by denying the operators in the pool the opportunity to maximize their ultimate oil recovery.

(10) Enserch failed to provide any engineering estimates of the volume of additional oil that Enserch contends might be recovered and therefore failed to meet its burden to prove by substantial evidence that waste of hydrocarbons would be prevented.

(11) There is no substantial evidence that the approval of the application will increase ultimate oil recovery

(12) The application should be DENIED.

IT IS THEREFORE ORDERED THAT:

(1) The application of Enserch Exploration, Inc. for the promulgation of special rules and regulations for an increase in the depth bracket oil allowable from 287 BOPD to 500 BOPD in the South Peterson-Fusselman Pool, Roosevelt County, New Mexico is hereby DENIED.

(2) 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

WILLIAM J. LEMAY,  
Director.

seal

**KELLAHIN AND KELLAHIN**

ATTORNEYS AT LAW

EL PATIO BUILDING

117 NORTH GUADALUPE

POST OFFICE BOX 2265

SANTA FE, NEW MEXICO 87504-2265

W. THOMAS KELLAHIN\*

\*NEW MEXICO BOARD OF LEGAL SPECIALIZATION  
RECOGNIZED SPECIALIST IN THE AREA OF  
NATURAL RESOURCES-OIL AND GAS LAW

JASON KELLAHIN (RETIRED 1991)

TELEPHONE (505) 982-4285  
TELEFAX (505) 982-2047

February 12, 1997

**VIA FACSIMILE**

(505) 827-8177

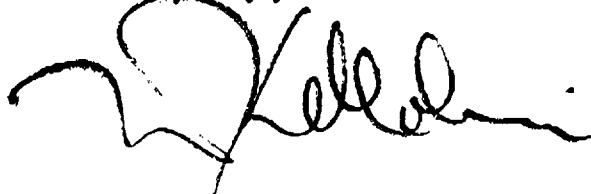
Mr. William J. LeMay, Chairman  
Oil Conservation Commission  
2040 South Pacheco  
Santa Fe, New Mexico 87503

**Re: NOTICE OF DISMISSAL**  
**NMOCD Case 10994 (DeNovo) Order R-5771-C**  
**Application of Phillips Petroleum Company**  
**to Reopen DeNovo Case 10994 concerning**  
**Increased Special Oil Allowable**  
**South Peterson-Fusselman Pool**  
**Roosevelt County, New Mexico.**

Dear Mr. LeMay:

On behalf of Phillips Petroleum Company, please dismiss its application in the referenced case which is currently set for a hearing before the Commission on the February 13, 1997 docket.

Very truly yours,

A handwritten signature in black ink, appearing to read 'W. Thomas Kellahin', with a large, stylized initial 'W'.

W. Thomas Kellahin

cc: William F. Carr, Esq.  
Attorney for Enserch Exploration, Inc.  
Phillips Petroleum Company  
Attn: Jack Pickett



## New Mexico Petroleum Recovery Research Center

New Mexico Institute of Mining and Technology  
Kelly Building  
Socorro, NM 87801

Phone: (505) 835-5142  
FAX: (505) 835-6031

Commissioner William LeMay  
NM Oil Conservation Commission  
P.O. Box 6429  
Santa Fe, NM 87505

March 2, 1995

Re: Case 10994, Enserch vs Phillips concerning the South Peterson Fusselman Pool Special Depth Allowable.

Dear Commisioner LeMay,

I offer the following comments concerning Case 10994. Incidentally, Enserch was theoretically correct in their no-flow boundary calculation.

The main thrust of PPCo argument was the violation of their correlative rights because Enserch successfully applied modern technology. The operative word is successful. In 1992 PPCo applied the same technology unsuccessfully, prior to Enserch's 1994 application.

The **Rules and Regulations** define correlative rights as the opportunity afforded to pool owners to produce gas and oil without waste from the owners lease, utilizing his share of reservoir energy. Both parties agree that the South Peterson Fusselman reservoir is a naturally fractured dolomite. They disagree on the need for oil producing rates greater than the depth allowable.

PPCo exercised their right to the available reservoir energy in 1992 by installing submersible pumps in their Lambrith A1 & A2 wells. They viewed their effort as unsuccessful even though the oil rate and a proportional amount of water increased in both cases. Apparently, they defined success in terms of the water to oil ratio, with a decrease in WOR indicating success. A decrease in WOR means that an equivalent amount of reservoir energy is producing more oil and less water from the reservoir. They were able to use the available reservoir energy (a natural water drive) to increase the oil rate in both wells. The source of the energy is either a bottom water or edge water drive. This

source of the reservoir energy (bottom hole pressure) was more than sufficient to drive the increased oil and water to the well bore. It was more than sufficient because both wells still had fluid over the pump.

11) Enserch demonstrated that with the application of new ideas utilizing proven equipment, they were able to improve the efficiency of oil recovery from their Lambrith #1 well as evidenced by the decrease in WOR. <sup>water/oil ratio.</sup> They installed high volume pumping equipment which utilized the available reservoir energy more efficiently. However, they did not use the maximum energy available because a large fluid column remained over the pump. The additional drawdown in reservoir pressure resulted in the flow of oil from the reservoir matrix to the natural fracture system where it flowed to the wellbore, thus increasing the percentage of oil produced with a fixed volume of total fluid.

12) The Enserch presented evidence that time remaining to produce the South Peterson Fusselman Pool reserves may be constrained by the frequent collapse of casing in wells the area. The increase in the oil producing rate by both parties reduces the chance of losing oil reserves due to casing failure and subsequent well abandonment.

13) The issue of premature water breakthrough was raised during the testimony. However, water breakthrough occurred prior to the installation of high volume pumping equipment and is a non-issue in this case.

PPCo presented superficial testimony concerning the original oil in place. The evidence was not sufficient to accurately define the original oil in place in the pool.

Care must be exercised in the wording of the order granting Enserch their requested allowable.

14) Granting a special allowable in this specific case of a naturally fractured reservoir ~~that was~~ producing large amounts of water from all wells ~~is much different than~~ <sup>is</sup> reservoirs ~~that are~~ producing clean oil in a competitive situation early in the primary life of a pool. ~~Evidence demonstrating the need for increased allowables for fields producing clean oil at allowable rates would require a great deal of detailed testing.~~ The presence of an oil column over the pump is not sufficient evidence <sup>in itself</sup> to justify an increase in the allowed rate.

Sincerely,

Bill Weiss  
W. W. Weiss

in the later stages of pool life  
is a different situation than  
one in which the



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
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HOBBS, NEW MEXICO 88241-1980  
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May 26, 1995

William J. LeMay  
Director  
Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505

SUBJECT: Division Order R-5771-C  
South Peterson-Fusselman Pool

Dear Mr. LeMay:

According to the provisions of Division Order R-5771-C, effective June 1, 1994, a special depth bracket allowable of 500 barrels of oil per day is assigned to a standard 80 acre proration unit, for the South Peterson-Fusselman Pool in Roosevelt County, New Mexico.

All other provisions as previously assigned to the pool will remain in effect.

Very truly yours

OIL CONSERVATION DIVISION

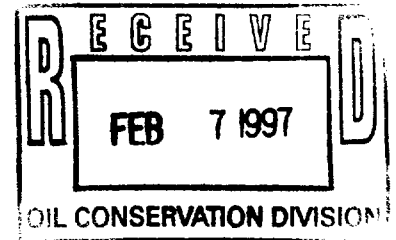
*Jerry Sexton by Gary W. Wink*  
Jerry Sexton  
Supervisor, District I

JS:bp

cc: Bureau of Land Management  
Nelda Morgan - Proration Dept.  
Marie Peterson - Proration Dept.  
Karen Sharp - Ongard  
Paul Kautz - Geologist  
File

*Case File*  
*Case 10994*  
*WLS*

BEFORE THE  
OIL CONSERVATION COMMISSION



NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES

APPLICATION OF PHILLIPS PETROLEUM  
COMPANY TO REOPEN DE NOVO CASE NO. 10994,  
ROOSEVELT COUNTY, NEW MEXICO.

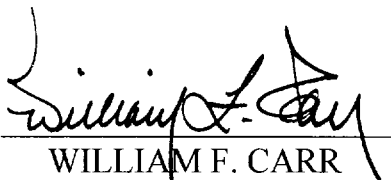
CASE NO. 10994  
(Reopened)

ENTRY OF APPEARANCE

COMES NOW CAMPBELL, CARR, BERGE & SHERIDAN, P.A., and hereby  
enters its appearance in the above referenced case on behalf of Enserch Exploration and  
Production Inc.

Respectfully submitted,

CAMPBELL, CARR, BERGE  
& SHERIDAN, P.A.,

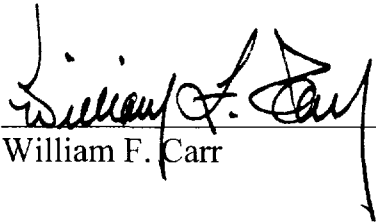
By:   
WILLIAM F. CARR  
Post Office Box 2208  
Santa Fe, New Mexico 87504  
Telephone: (505) 988-4421

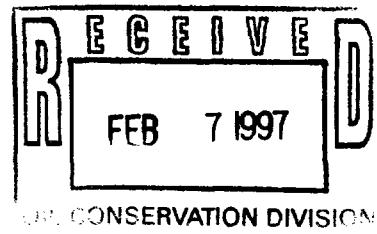
ATTORNEYS FOR ENSERCH EXPLORATION  
AND PRODUCTION INC.

## CERTIFICATE OF SERVICE

I hereby certify that on this 14 day of February, 1997, I have caused to be hand-delivered a copy of our Entry of Appearance in the above-captioned case to:

W. Thomas Kellahin, Esq.  
Kellahin & Kellahin  
117 North Guadalupe Street  
Santa Fe, New Mexico 87501

  
\_\_\_\_\_  
William F. Carr



BEFORE THE

OIL CONSERVATION COMMISSION

NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES

APPLICATION OF PHILLIPS PETROLEUM  
COMPANY TO REOPEN DE NOVO CASE NO. 10994,  
ROOSEVELT COUNTY, NEW MEXICO.

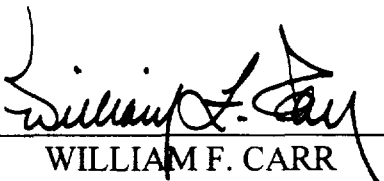
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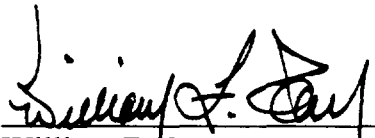
By:   
WILLIAM F. CARR  
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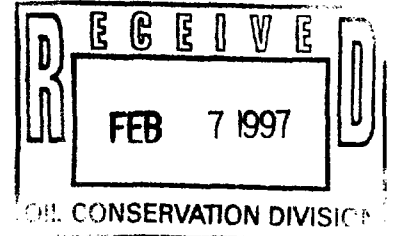
ATTORNEYS FOR ENSERCH EXPLORATION  
AND PRODUCTION INC.

## CERTIFICATE OF SERVICE

I hereby certify that on this 4th day of February, 1997, I have caused to be hand-delivered a copy of our Entry of Appearance in the above-captioned case to:

W. Thomas Kellahin, Esq.  
Kellahin & Kellahin  
117 North Guadalupe Street  
Santa Fe, New Mexico 87501

  
\_\_\_\_\_  
William F. Carr



BEFORE THE  
OIL CONSERVATION COMMISSION

NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES

APPLICATION OF PHILLIPS PETROLEUM  
COMPANY TO REOPEN DE NOVO CASE NO. 10994,  
ROOSEVELT COUNTY, NEW MEXICO.

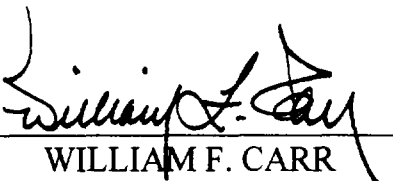
CASE NO. 10994  
(Reopened)

ENTRY OF APPEARANCE

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Respectfully submitted,

CAMPBELL, CARR, BERGE  
& SHERIDAN, P.A.,

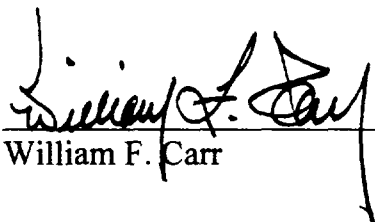
By:   
WILLIAM F. CARR  
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ATTORNEYS FOR ENSERCH EXPLORATION  
AND PRODUCTION INC.

## CERTIFICATE OF SERVICE

I hereby certify that on this 7th day of February, 1997, I have caused to be hand-delivered a copy of our Entry of Appearance in the above-captioned case to:

W. Thomas Kellahin, Esq.  
Kellahin & Kellahin  
117 North Guadalupe Street  
Santa Fe, New Mexico 87501

  
\_\_\_\_\_  
William F. Carr