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. 11334

APPLICATION OF PHILLIPS PETROLEUM COMPANY
FOR A DETERMINATION IN ACCORDANCE WITH SECTION
70-2-33(H) NMSA (1978) OF PROPORTIONATE SHARE OF
RECOVERABLE HYDROCARBONS AND FOR THE ADOPTION
OF A SPECIAL OIL ALLOWABLE FOR THE SOUTH
PETERSON-FUSSELMAN OIL POOL,
ROOSEVELT COUNTY, NEW MEXICO

MEMORANDUM BRIEF IN SUPPORT OF ENSERCH EXPLORATION INC.'S MOTION TO DISMISS APPLICATION FOR REALLOCATION OF PHILLIPS PETROLEUM COMPANY

Enserch Exploration Inc. ("Enserch"), by and through its attorneys, Campbell, Carr & Berge, P.A., hereby submits this brief in support of its Motion to Dismiss the Application of Phillips Petroleum Company (Phillips) for a determination of proportionate share of recoverable hydrocarbons and for the adoption of a special oil allowable for the South Peterson-Fusselman Oil Pool, Roosevelt County, New Mexico.

SUMMARY OF POSITION AND RELIEF REQUESTED

Phillips' requested relief, setting the depth bracket allowable at 267 Barrels of Oil per Day (BOPD) for the South Peterson-Fusselman Pool, has already been rejected by the Oil Conservation Commission ("Commission") after a ***de novo*** hearing on the merits and after considering the same "new evidence" or evidence similar to it, that Phillips currently proposes to present to the Division. Accordingly, Enserch prays that the Division dismiss Phillips' Application in this case.

ARGUMENT

I. PROCEDURAL BACKGROUND

On April 18, 1995, the Oil Conservation Commission of New Mexico entered Order No. R-5771-C, approving Enserch's Application to set the special depth bracket allowable at 500 barrels of oil per day for the South Peterson-Fusselman Pool, which order is attached to this Memorandum Brief as Exhibit A. On May 8, 1995, Phillips applied to the Commission for Rehearing of the matters contained in the April 18, 1995 Commission order, which application is attached to this Memorandum Brief as Exhibit B. The first point made in Phillips' Application for Rehearing was an argument that there was new evidence, not available at the time of the Commission hearing, that would chang the result of the April 18 order. (Phillips' Appl. for Reh'g at 2 - 6). The new evidence that Phillips proposed to present to the Commission on rehearing purportedly showed the following: (a) the remaining recoverable oil reserves in the pool were different than the

Commission had determined; (b) the depth bracket allowable of 500 BOPD set by the Commission had resulted in increased decline rates; (c) the remaining reserves of both Phillips and Enserch were different than the Commission had determined; and (d) the drainage areas for Enserch Lambirth Well No. 1 was substantially increased as a result of the Commission's order. (Id. at 3 - 5).

Pursuant to the provisions of the Oil and Gas Act, NMSA 1978, §§ 70-2-25 (Repl. 1987) and Rule 1222 of the Rules and Regulations of the New Mexico Oil Conservation Commission, Phillips' Application for Rehearing was deemed denied due to inaction by the Commission ten days after the filing of the Application, on May 18, 1995. Phillips has petitioned the District Court of Roosevelt County for review of the Commission's order, which petition is attached to this Brief as Exhibit "C."

II. PHILLIPS IS ASKING THE DIVISION TO REVERSE THE COMMISSION'S DETERMINATION OF APPROPRIATE ALLOWABLE LIMITS FOR THE NORTH PETERSON-FUSSELMAN POOL

In the present application for allocation, Phillips is effectively requesting that the Division overrule the Commission's Order entered after a ***de novo*** hearing. Phillips' sole ground for the Application presently before the Division is that new data has been obtained that shows that the special depth bracket allowable of 500 BOPD, as set by the Commission, will result in damage to Phillips' correlative rights. (Phillips' Appl. at 2, ¶ 7). However, this "new data" upon which Phillips bases this current Application before

the Division is virtually identical to the evidence that Phillips proposed to introduce to the Commission if its Application for Rehearing had been granted.

Pursuant to statute and the Rules and Regulations of the New Mexico Oil Conservation Division, the Commission's refusal to grant Phillips' Application for Rehearing was a final disposition of the Application and the arguments contained therein. Since Phillips' argument regarding new data was included in its Application for Rehearing, the Commission's refusal of the Application for Rehearing was also a final disposition of Phillips' argument regarding "new data." By requesting the Division to lower the depth bracket allowable to the level rejected by the Commission on the basis of "new data" which the Commission declined to consider, Phillips is effectively requesting that the Division substitute its judgment for that of the Commission.

III. THE EVIDENCE THAT PHILLIPS FORWARDS AS "NEW EVIDENCE" DOES NOT MEET THE STANDARD FOR NEW EVIDENCE IN A CIVIL CONTEXT

Phillips premises its request for a return to the prior allowable limit of 267 BOPD on the argument that it has "new data" that indicates that the existing 500 BOPD allocation does not protect their correlative rights. The argument that a lower allowable will better protect Phillips' correlative rights is the same one that Phillips advanced at the previous proceedings before the Division, the Commission, and is presently advancing to the District Court. As the Commission has already ruled that the 500 BOPD allowable protects correlative rights and prevents waste better than the lower allowable, the

Division should not hear Phillips' new application unless there is different evidence, not previously available, which will lead the Division to a different conclusion. The only factor that is different between the previous Commission proceeding and this one is Phillips' allegedly "new data."

In the context of the Rules of Civil Procedure, SCRA 1986, 1-060(b) (Repl. 1994), parties are bound by the evidence and expert opinions that they presented at previous adjudications, and should not be allowed new adjudications every time that they produce an adjustment of quantifications presented at trial, as "[s]uch adjustments could go indefinitely, leading to multiple reopening of a single case. Parties take their chances based on the information existing at the time of trial." ***Fowler-Propst v. Dattilo***, 111 N.M. 573, 576, 807 P.2d 757, 760 (Ct. App.), ***cert. denied***, 111 N.M. 678, 808 P.2d 963 (1991).

The concern for finality inherent this Rule of Civil Procedure is particularly appropriate to the situation presented in this case. If the Division allows new hearings and sets new allowables every time that a party comes before it claiming the existence of new data, then there will be no end to the petitions for reallocation. Every time that a party received an allowable lower than they desired, all that they would need to do to receive a new hearing is look at the production data for an aditional month or two and come up with an alternate posturing of the information available concerning the production from the pool. Furthermore, granting petitions for new allocations on the

basis of new data encourages parties to Division hearings not to develop the most accurate or comprehensive data, as they will be able to receive a new hearing if they receive an unfavorable allocation and subsequently (and consequently) develop "new data." By refusing to hear repeated petitions for new allocations on the basis of "new data" if that data was available or discoverable through the exercise of due diligence, the Division would be ensuring that the most comprehensive data available is presented at each hearing.

The data that Phillips seeks to present was available, discoverable, and presented to the Commission in a prior proceeding. The most recent allowable was set by the Commission a mere three months ago, on April 18, 1995. The short span of time between that allocation and Phillips' discovery of "new data," combined with the fact that the "new data" is the same as that presented to the Commission in Phillips' Application for Rehearing, strongly suggests that Phillips is merely attempting to avoid the result of finality imposed by the Commission's denial of Phillips' Application for Rehearing.

IV. DISMISSING THE PETITION IS CONSISTENT WITH THE DIVISION'S DUTIES OF PROTECTING CORRELATIVE RIGHTS AND PREVENT WASTE

The Division is charged with protecting correlative rights "as far as is practicable to do so." NMSA 1978, § 70-2-11 (Repl. Pamp. 1987). The New Mexico courts have previously held that the qualification "if practicable" obviates the need to amend distributions every time that new evidence is uncovered. ***Grace v. Oil Conservation***

Comm'n, 87 N.M. 205, 211, 531 P.2d 939, 945 (1975) and ***Rutter & Wilbanks Corp. v. Oil Conservation Comm'n***, 87 N.M. 286, 291-92, 532 P.2d 582, 587-88 (1975). As long as the Commission's Order setting the depth bracket allowable is reasonable and logical, it should not be amended by the Division. ***Id.***

The Commission entered its order after a ***de novo*** hearing on the merits of Enserch's petition to increase the depth bracket allowable. (Order # R-5771-C at 1). The Commission considered evidence by Phillips that was presented in support of the argument that "increasing the rate of the oil allowable would benefit only one well in the pool, the Enserch Lambrith Well No. 1, and will have an adverse effect on the Phillps wells . . . ." (***Id.*** at 4, ¶ 9(d)). In spite of the evidence presented by Phillips, the Commission found that Enserch had shown that, with the application of new methods of extraction, the percentage of oil produced with a fixed volume of total fluid was increased. (***Id.*** at 4, ¶ 11). Accordingly, the Commission ordered that the depth bracket allowable be increased to 500 BOPD. (***Id.*** at 5, ¶ 1).

The Order of the Commission shows that the Commission carefully considered the evidence before it and only approved the requested increase in the depth bracket allowable after satisfying itself that an increase would prevent waste and protect correlative rights. That determination was based on accepted scientific evidence and was reasonable and logical based on that evidence. The evidence sought to be presented in the instant proceeding is the same evidence which the Commission rejected by denying

Phillips' Application for Rehearing. The Commission fulfilled its statutory duty of preventing waste and protecting correlative rights. The Division should recognize that waste is being prevented and correlative rights are being protected under the Commission's Order and reject the present Application.

V. CONCLUSION

The arguments and evidence that Phillips advances in support of the present Application are the same arguments and evidence that have been expressly rejected by the Commission. Rather than presenting evidence that actually is new and that would warrant a new allocation by the Division, Phillips is merely attempting to circumvent the finality imposed by the Commission's Order by recycling old evidence and arguments. The Division should recognize Phillips' attempt to manipulate the Division's duty to protect correlative rights and recognize the logic and reason contained in the Commission's Order by dismissing Phillips' current application.

WHEREFORE, Enserch Exploration urges the Division to deny Phillips' petition for a determination of proportionate share of recoverable hydrocarbons and for the adoption of a special oil allowable for the South Peterson-Fusselman Oil Pool, Roosevelt County, New Mexico.

CAMPBELL, CARR & BERGE, P.A.

By _____
William F. Carr, Esq.
Paul R. Owen, Esq.
Post Office Box 2208
Santa Fe, NM 87504-2208
505-988-4421

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing Memorandum in Support of Motion to Dismiss was mailed to Thomas Kellahin, Esq. 117 N. Guadalupe, Santa Fe, New Mexico 87501 this 20th day July, 1995.

_____
William F. Carr
Paul R. Owen

EXHIBIT A

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

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

DE NOVO
CASE NO. 10994
ORDER NO. R-5771-C

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

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:00 a.m. on February 23, 1995, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this 18th day of April, 1995, the Commission, a quorum being present, having considered the testimony and the record, and being fully advised in the premises,

FINDS THAT:

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

(2) By Division Order No. R-5771, dated July 17, 1978, the South Peterson-Fusselman Pool was defined and created for the production of oil from the Fusselman formation. The horizontal limits for said pool included the following described lands in Roosevelt County, New Mexico:

TOWNSHIP 5 SOUTH, RANGE 32 EAST, NMPM
Section 25: SE/4
Section 36: NE/4

TOWNSHIP 5 SOUTH, RANGE 33 EAST, NMPM
Section 30: S/2
Section 31: All

(a) the Enserch Lambrith Well No. 1, located in Unit "K" of said Section 31 is the best well in the pool because it occupies the highest structural position in the pool and has the best quality of reservoir rock and has the potential to produce at a rate in excess of 500 barrels of oil per day;

(b) 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;

(c) the reservoir is in an advanced state of depletion with the oil in the fracture system having been produced and displaced with water and the remaining oil production coming primarily from the matrix;

(d) increasing the production rate of total fluids from wells in this pool creates a pressure differential in the reservoir which increases oil production from the matrix and lowers water cuts;

(e) Enserch Exhibit No. 9, "SPE paper 7463 presented October 1, 1979 in Houston, Texas at the 53rd Annual Fall Technical Conference and Exhibition of the Society of Petroleum Engineers of A.I.M.E.", showed that from water drive reservoirs in West Texas, high volume lift is an effective means of increasing rates and ultimate recovery. Based upon this technical paper, Enserch theorized that by adding large submersible pumps which could lift 3,000 barrels of fluids per day in certain wells, additional oil recovery could be attained in the Pool.

(f) increasing the allowable to 500 barrels of oil per day per well would enable Enserch to recover an additional 456,000 barrels of oil that would otherwise be lost.

(9) In opposition, Phillips presented evidence which suggests that:

(a) the aforementioned Enserch Lambrith Well No. 1 is situated at the highest structural portion of the reservoir being 38 feet higher in their perforations at the top of the reservoir;

(b) By increasing the oil allowable Enserch would accelerate edge water advancement into the reservoir and water out the Phillips wells prematurely;

(14) Granting a special allowable in this specific case of a naturally fractured reservoir producing large amounts of water from all wells in the later stages of pool life is a different situation than one in which the reservoir is producing clean oil in a competitive situation early in the primary life of a pool. The presence of an oil column over the pump is not sufficient evidence in itself to justify an increase in the allowed rate.

(15) Enserch successfully applied modern technology to increase oil recoveries and should be granted their request for a higher allowable.

IT IS THEREFORE ORDERED THAT:

(1) The application of Enserch Exploration, Inc. for the assignment of a special depth bracket allowable for an 80 acre unit in the South Peterson-Fusselman Pool, Roosevelt County, New Mexico, pursuant to General Rule 505(d), of 500 barrels of oil per day to replace the current depth bracket allowable for said pool of 267 barrels of oil per day is hereby APPROVED effective June 1, 1994.

(2) All other provisions of the Special Rules and Regulations for the South Peterson-Fusselman Pool, as promulgated by Division Order No. R-5771, as amended shall remain in full force and effect until further notice.

(3) Jurisdiction of this cause is 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 COMMISSION

GARY CARLSON, Member

WILLIAM W. WEISS, Member

WILLIAM J. LEMAY, Chairman

S E A L

EXHIBIT B

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 (DeNovo)
ORDER NO. R-9771-C

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

APPLICATION FOR REHEARING BY PHILLIPS PETROLEUM COMPANY

This Application for Re-Hearing is submitted by W. Thomas Kellahin, Esq. of Kellahin and Kellahin and by Reese B. Copeland, Esq. of Phillips Petroleum Company on behalf of PHILLIPS PETROLEUM COMPANY (Phillips").

In accordance with the provisions of Section 70-2-25 NMSA (1978), Phillips requests the New Mexico Oil Conservation Commission grant this Application for ReHearing in Case 10994 (DeNovo) to correct erroneous findings and conclusions set forth in Order R-9771-C, attached as Exhibit "A" and to substitute Phillips' proposed Commission Order attached as Exhibit "B" hereto, and IN SUPPORT PHILLIPS STATES:

INTRODUCTION

On April 18, 1995, the New Mexico Oil Conservation entered its decision in this case which reversed the prior Division decision made in this case by Examiner Michael E. Stogner.

In doing so, the Commission made errors of fact and of law which require that another hearing be held. In addition, new data has become available since the Commission hearing which alter the findings and conclusions made by the Commission and which therefore require another hearing.

GROUNDS FOR REHEARING

POINT I:

THERE IS NEW EVIDENCE NOT AVAILABLE AT THE TIME OF THE COMMISSION HEARING WHICH WILL CHANGE THE RESULT OF ORDER R-5771-C.

The result of Order R-5771-C is to award Enserch for the application of modern technology (high volume submersible pumping equipment to lift oil and water--"HVL") based upon the Commission's belief that the facts then showed that:

(a) Phillips had tried the same technology and was "able to use the available reservoir energy, a natural water drive, to increase the oil rate in both of their wells and thus protected their correlative rights" (see Finding (10) of Order R-5771-C); and

(b) Enserch using this same technology would "be able to improve the efficiency of oil recovery from their well."

The impact of Order R-5771-C, unless modified upon Rehearing, will be a loss to Phillips of an estimated 159,000 barrels of remaining recoverable oil from this pool, thereby impairing its correlative rights in violation of the New Mexico Oil and Gas Act.

Subsequent to the Commission hearing, Phillips has obtained new production data upon which petroleum engineering studies were conducted to determine if the Commission's order as set forth in Order R-5771-C will result in the loss of remaining recoverable reserves to Phillips. In addition, based upon this new data, Phillips also has conducted engineering studies to determine if the Commission's order will result in increasing ultimate oil recovery from the pool.

Phillips concludes that the Commission order will not add additional oil recovery from the pool but simply reduces Phillips' share of remaining recoverable oil and increases Enserch's share of remaining recoverable oil.

Phillips has concluded and is prepared to present new evidence that:

(1) REMAINING RECOVERABLE OIL RESERVES:

As of January 1, 1995 there remained 492,000 barrels of recoverable oil in the pool to be recovered by the remaining four wells, three operated by Phillips and one operated by Enserch.

(2) INCREASED DECLINE RATES:

WELLS	BEFORE ENSERCH OVERPRODUCTION	AFTER
Phillips Lambirth "A" Well No. 1	**30%**	**78%**
Phillips Lambirth "A" Well No. 2	**19%**	**79%**
Phillips Lambirth "A" Well No. 3	**11%**	**56%**

(3) PHILLIPS' REMAINING RESERVES:

As of January 1, 1995, Phillips had 191,000 barrels of recoverable oil remaining to be produced provided the pool's oil allowable of 267 BOPD was not increased to 500 BOPD. However, as a result of the Commission's order, Phillips will suffer a loss of 159,000 barrels of remaining recoverable oil:

WELLS	BEFORE ENSERCH OVERPRODUCTION	AFTER
Phillips Lambirth "A" Well No. 1	6,000	1,000
Phillips Lambirth "A" Well No. 2	126,000	23,000
Phillips Lambirth "A" Well No. 3	59,000	8,000
TOTAL:	191,000	32,000 (barrels)

LOSS OF 159,000 barrels of recoverable oil

(4) ENSERCH'S REMAINING RESERVES:

As of January 1, 1995, Enserch had 300,000 barrels of recoverable oil remaining in addition to the 980,000 barrels of oil it had already recovered provided the pool's oil allowable of 267 BOPD was not increased to 500 BOPD. As a result of the Commission's order, Enserch will receive a "windfall" gain of 159,000 barrels of remaining recoverable oil:

WELL	BEFORE HVL	WITH INTERMEDIATE HVL (267-ALLOWABLE)	WITH HVL (500-ALLOWABLE)
Enserch's Lambirth Well No.1	270,000	300,000	460,000
TOTAL:			

GAIN OF 160,000 barrels of recoverable oil

(5) ENSERCH'S DRAINAGE AREAS:

The drainage areas for Enserch Lambirth Well No. 1 will be substantially increased as a result of the Commission Order:

RECOVERY FACTOR	ALLOWABLE 267 BOPD	ALLOWABLE 500 BOPD
40%	187 acres	210 acres
45%	166 acres	186 acres
50%	149 acres	167 acres

Increasing the oil allowable allows Enserch to increase its drainage area an additional 18 to 23 acres depending upon the recovery factor.

(6) PHILLIPS' PROPOSED EXHIBITS:

In the event a Rehearing is granted. Phillips' would present new evidence to support the above conclusions including the following which are attached to this Application:

Phillips Lambirth A-1

Graph #1: best fit decline-rate over last four years is 29.8% remaining reserves = 5,663 BO

Graph #2: declined rate since third quarter-1994 has been 78% (remaining reserves=1,169 BO)

Phillips Lambirth A-2

Graph #3: Decline rate since HVL installed in this well has been 19% with remaining reserves=125,800 BO

Graph #4: Decline rate for this well of 79% with remaining reserves=10,688 BO after Enserch installed HVL .

Graph #5: A larger HVL pump was then installed in this well in the fourth quarter-1994 to meet the Enserch pump size which reduced net reserve loss to Enserch but still declined at a rate of 79%

Phillips Lambirth A-3

Graph #6: Decline rate before Enserch HVL is 10.7% with remaining reserves=59,367 BO

Graph #7: Decline rate for this well of 56% with remaining reserves of 7,674 BO after Enserch installed HVL

Enserch Lambirth No. 1:

Graph #8: Decline rate before HVL
Graph #9: Decline rate after intermediate HVL
Graph #10: Decline rate after large HVL

POINT II:

THE COMMISSION FAILED TO MAKE AN ESSENTIAL JURISDICTIONAL FINDING CONCERNING PREVENTION OF WASTE

Although Finding (8)(f) of Order R-5771-C sets forth the contention of Enserch that using this modern technology "would enable Enserch to recover an additional 456,000 barrels of oil that would otherwise be lost", the Commission did not make any finding that this claim by Enserch was adopted by the Commission.

The Commission's failed to make this required statutory finding addressing prevention of waste and thereby ignored the ultimate issue in this case.

This is a simple case. The ultimate factual issue is whether increasing the oil allowable will result in increasing ultimate oil recovery from the entire pool--not just the Enserch well.

Phillips contended that increasing the oil allowable would simply produce the same amount of remaining oil faster and in doing so drain Phillips' spacing units;

Enserch contended that increasing the oil allowable would increase ultimate recovery.

The Commission found that increasing the allowable would improve the efficiency of oil recovery from the Enserch well **BUT** failed to determine if that increase was due simply to accelerated drainage of Phillips' adjoining spacing units or in fact was due to increased total pool recovery.

The New Mexico Supreme Court in Sims v. Mechem, 72 N.M. 186 (1963) held that an Oil Conservation Commission order which did not contain a finding as to existence of waste and its prevention was void. Commission Order R-5771-C omits the jurisdictional findings concerning the prevention of waste as it applies to this case and the evidence to support such a finding. Without such a finding, the Commission was without jurisdiction to enter Order R-5771-C and therefore it is void.

POINT III:

FINDING (10) INCORRECTLY APPLIES CORRELATIVE RIGHTS AND IN DOING SO THE COMMISSION FAILS TO PROTECT CORRELATIVE RIGHTS

SPE Paper 7463 theorized that the use of high volume lift installation ("HVL") in a natural water-drive reservoir would result in an apparent increase in oil rate over that expected with conventional lift methods.

While SPE Paper 7463 discussed only increasing rate and recovery for an individual well and expressed no conclusions about

increasing ultimate oil recovery for the pool, both Enserch and Phillips installed submersible pumps and initiated high volume lift ("HVL") in an effort to increase oil recoveries.

As of January 1, 1995, it is estimated that approximately 492,000 barrels of oil remained to be recovered by four wells in the pool.

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 Nos. 1 and 2.

Because the bottom current perforations in these three wells are at the same correlative structural position and because both Phillips and Enserch were using HVL equipment, it was anticipated that the Phillips wells should have been able to protect its spacing units from drainage by Enserch when Enserch increased its oil production rates.

But Phillips' efforts were not successful because the permeability in the bottom perforations in the Enserch well is "tight" while its upper perforations have better permeability and because those upper perforations are also structurally higher than those in the Phillips wells. Enserch is able to increase its oil rate by draining oil from Phillips' adjoining spacing units. And Phillips' despite its efforts to do so cannot protect its spacing units from drainage by Enserch.

The Commission's approval of this unfair "uncompensated net drainage" by Enserch establishes a **new precedent** for the regulation of oil and gas industry in New Mexico.

Prior to the adoption of the Oil & Gas Act, oil and gas operators in New Mexico engaged in the "Rule of Capture" which allowed any operator is produce his oil well at capacity regardless of the adverse effect on either the reservoir or on the correlative rights of his neighbors.

With the adoption of the Oil & Gas Act, New Mexico modified the Rule of Capture and established limits on oil allowables so that a high capacity "Super-Star" well in a common source of supply would not

impair the correlative rights of the owners of the adjoining low capacity wells.

This order is contrary to the New Mexico Oil Gas Act and now allows Enserch's "Super-Star" to produce at such a high rate that it drains a substantial portion of the remaining oil production from Phillips.

This Order established a precedent unique in the field of oil and gas conservation in New Mexico.

POINT IV:

FINDING (11) IS NOT SUPPORTED BY SUBSTANTIAL EVIDENCE AND ADOPTS AN ARBITRARY AND CAPRICIOUS REASON TO SUPPORT INCREASING THE OIL ALLOWABLE FOR THIS POOL

Finding (11) is incorrect and not supported by substantial evidence. Contrary to Finding (11) and apart from the expectations of SPE Paper 7463 and contrary to the results contended by Enserch, the installation of the HVL for the Enserch Lambirth "A" Well No. 1 has resulted in dramatic increases in the water-cut of this well. An examination of Enserch's Exhibit 11 shows that when produced with the rod pump the water-cut was approximately 84% but then dramatically increased to 88% with the use of the large HVL pump.

Apart from the expectations of the SPE Paper 7463 and contrary to the results predicted by Enserch, the installation of the HVL for the Enserch Lambirth "A" Well No 1 has not demonstrated anything except that this is an acceleration in the rate of oil production.

Phillips presented evidence which demonstrated that the increase in the oil allowable will benefit only one well in the pool, the Enserch well, and will cause that higher capacity oil well to drain the oil from the adjoining spacing units which cannot be protected by their existing wells thereby impairing correlative rights.

An oil allowable of greater than 267 BOPD increases the rate of total fluids withdrawn from the Enserch well which creates a pressure differential in the reservoir which increases oil production by draining oil from the down-structure Phillips spacing unit.

All Enserch has demonstrated is that it now has the capacity to dramatically increase its drainage of the Phillips' spacing units.

POINT V:

FINDING (12) IS NOT SUPPORTED BY SUBSTANTIAL EVIDENCE AND ADOPTS AN ARBITRARY AND CAPRICIOUS REASON TO SUPPORT INCREASING THE OIL ALLOWABLE FOR THIS POOL

Finding (12) is not supported by substantial evidence and adopts an arbitrary and capricious reason to support increasing the oil allowable for this pool.

Phillips wells in the pool were drilled approximately seventeen (17) years ago. None of them has experienced collapsed casing.

If Enserch is experience "frequent collapse" of casing in its wells in the area then obviously Enserch has employed inferior drilling and completion methods on their wells causing them to suffer casing collapse.

Phillips should not be penalized for Enserch's poor completion practices.

POINT VI:

FINDING (13) IS WRONG AND IS NOT SUPPORTED BY SUBSTANTIAL EVIDENCE AND ADOPTS AN ARBITRARY AND CAPRICIOUS REASON TO SUPPORT INCREASING THE OIL ALLOWABLE FOR THIS POOL

Finding (13) is wrong and is not supported by substantial evidence and adopts an arbitrary and capricious reason to support increasing the oil allowable for this pool.

Finding (13) confuses "initial water breakthrough" with "current water-oil ratios" and in doing so addresses an irrelevant issue and ignores a critical relevant issue.

What the Commission should have been concerned about was whether all four remaining producing wells during the same period were being affected by water encroachment at the same rate and not whether initial water breakthrough had occurred. The uncontested evidence is that these wells are not being affected equally by water encroachment.

Contrary to Finding (13), Phillips presented detailed geologic and petroleum engineering evidence to demonstrate that structure has a significant effect on well performance and that "water break-through" has not uniformly affected all the remaining wells to the point that that issue can be ignored.

Phillips demonstrated that continuity of the reservoir clearly supports the fact that the production from Enserch's up-structure well has had and will continue to affect the immediate down-structure offsetting Phillips' wells.

The evidence further demonstrated that approval of the increased oil allowable will cause excessive water migration increasing the water-oil ratios which in turn will decrease oil recovery for the down-structure oil wells thereby violating correlative rights by denying Phillips the opportunity to recover its share of the remaining oil.

POINT VII:

THERE IS NO SUBSTANTIAL EVIDENCE TO SUPPORT FINDING (14) CONCERNING THE COMMISSION REASON FOR GRANTING THE INCREASED ALLOWABLE

There is no substantial evidence to support Finding (14) as a reasonable basis upon which to grant an increase in oil allowable.

The Commission creates an arbitrary distinction between the point in time when an oil pool produces oil with low water-oil ratios ("clean-oil") from that later period when the wells are experiencing increased water production. Based upon that arbitrary distinction, the Commission decides that it no longer has a duty to protect correlative rights in the later stages of recovery from this pool.

It is not valid for the Commission to allow correlative rights to be violated in a pool with higher water-oil ratios but to seek to protect them only when that pool is in the early stages of production. It unacceptable to pick some arbitrary point in the life of a pool and then say the Commission will no longer protect correlative rights.

The fact that three of the four wells produce large volumes of water does not mean all wells have equivalent water-oil ratios.

In this pool, the wells still have dramatic differences in water-oil ratios:

Phillips Lambirth "A" Well No 1 = 70 barrels of water/one BO
Phillips Lambirth "A" Well No 1 = 21 barrels of water/one BO
Phillips Lambirth "A" Well No 1 = 0 barrels of water/one BO
Enserch Lambirth Well No 1 = 8 barrels of water/one BO

The Commission is factually wrong when it presumes that these four wells are all virtually "watered out" and are at the same stage of depletion. The Commission is wrong when it fails to protect correlative rights for a pool "in the later stages of pool life."

POINT VIII:

FINDING (15) VIOLATES CORRELATIVE RIGHTS

While Enserch contended that increasing the rate to 500 BOPD allowable would add an additional 456,000 barrels of recoverable oil, Enserch failed to present any supporting data, engineering calculations or other studies to demonstrate it was adding to total pool recovery and that they could do so without harming Phillips.

Under the existing 267 BOPD allowable, the Enserch Lambirth Well No. 1 already has produced 980,000 barrels of oil and has drained 800 acres which amounts to 38% of the total oil in the entire pool while only having 20% of the original oil in place under this spacing unit.

Now of the remaining 492,00 barrels oil yet to be produced, Enserch is to be rewarded by allowing them to produce 159,00 barrels of oil to which Phillips is entitled.

The only way Enserch is adding additional reserves is by taking them from Phillips. The modern technology which the Commission seeks to encourage is nothing more than high capacity drainage of Phillips which until now the Commission has always precluded.

POINT IX:

ORDER R-5771-C WAS ADOPTED BY THE COMMISSION BASED UPON AN INCORRECT UNDERSTANDING OF "BURDEN OF PROOF"

In its enthusiasm to reward Enserch for "successfully applying modern technology", the Commission improperly shifted the "Burden of Proof" to Phillips to demonstrate that Enserch's application was impairing Phillips' correlative rights.

It is not Phillips' burden to prove that this applicant will harm it. To the contrary, it is the Applicant's Burden of Proof to persuade the Commission that it will not.

The following is presented to guide the Commission in understanding the legal concept of "Burden of Proof." The term "proof" is the end result of conviction or persuasion produced by the evidence. The term encompasses two separate burdens of proof: one is the burden of producing evidence and the second is the burden of persuading the trier of fact that the alleged fact is true.

In this case, the alleged fact is that the approval of this application will prevent waste and protect correlative rights. The Applicant always retains the ultimate burden of producing evidence AND the burden of persuasion of those two basic and fundamental issues. The Applicant's failure to provide evidence of the volume of additional oil which would not otherwise be recovered from the pool; of shift in recoverable reserves between spacing units; of the drainage areas of the wells; or of the decline rates on the wells, is a failure of the Applicant to meet its "Burden of Proof."

It is improper to put the Applicant's failure of proof on the Opponent.

POINT X:

THE COMMISSION VIOLATED THE FASKIN, THE VIKING PETROLEUM AND THE CONTINENTAL OIL CASES WHEN IT FAILED TO ADDRESS AND DECIDE THE OPPONENTS' ISSUES AND OBJECTIONS

The Commission is required to make findings of ultimate facts which are material to the issues and to make sufficient findings to disclose the reasoning of the Commission in reaching its ultimate findings with substantial support in the record for such findings. Fasken

v. Oil Conservation Commission, 87 N.M. 292, 532 P.2d 588 (1975). Continental Oil Company v. Oil Conservation Commission, 70 N.M. 310, 373 P.2d 809 (1962).

Likewise, in Viking Petroleum v. Oil Conservation Commission, 100 N.M. 451, 453, 672 P.2d 280 (1983), the New Mexico Supreme Court reiterated its opinions in Continental Oil and Fasken, that administrative findings by the Commission should be sufficiently extensive to show the basis of the order and that findings must disclose the reasoning of the Commission in reaching its conclusions.

It is not enough in this case for the Commission to find that Enserch "application of modern technology" will increase the recovery from one well. The Commission needs to articulate its decision on each of the issues which were opposed by Phillips.

The Commission failed to explain why it omitted findings concerning ultimate oil recovery. A rehearing is required, if for no other reason than for the Commission to adopt an adequate order which complies with state law.

POINT XI:

THE COMMISSION FAILED TO ENFORCE THE LAWFUL ORDER OF THE DIVISION AND THEREBY ESTABLISHED A PRECEDENT FOR VIOLATION OF CORRELATIVE RIGHTS

Regardless of its decision, the Commission established a precedent when it failed to explain or address the issue of Enserch's violation of Division Order R-5771-B when for more than five (5) months Enserch continued to produce its well at a rate of 550 BOPD despite being limited to only 267 BOPD.

As a result of its overproduction, Enserch has produced an estimated 30,000 barrels of oil in excess of its allowable and to the impairment of Phillips' correlative rights. Now, the Commission excuses the violation of Division Order R-5771-B by making its order retroactive so as to cancel out this overproduction.

With limited resources, the Division operates under the assumption that the oil and gas operators it regulates will voluntarily comply with the rules, regulations and orders of the Division. In this case, Enserch has chosen to ignore a specific order entered by the Division. The Commission has condoned this violation by Enserch and in doing so sends a message to the oil and gas industry that there is no consequences either in terms of fines or penalties for violating Division Orders and Rules.

Violation of Order R-5771-B and the resulting impairment of correlative rights should be referred to the Division Director to institute appropriate fines and/or penalties against Enserch.

The retroactive granting of Enserch's application is contrary to law and violates Phillips' correlative rights.

CONCLUSION

Phillips petitions the Commission to:

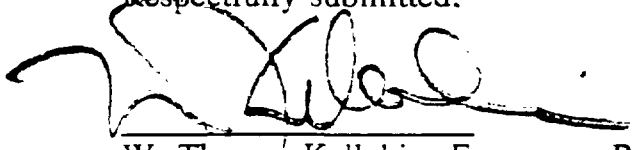
(a) withdraw Order R-5771-C and substitute Phillips' proposed order which is attached hereto as Exhibit "B" and incorporated herein by reference; or in the alternative

(b) should vacate Order R-5771-C and grant a Rehearing to address:

1. The new evidence issues raised herein, and/or
2. all of the other issues set forth in this Application for Rehearing.

In order to preserve Opponents' right to further appeals of this matter, all of the issues set forth in our proposed Order R-5771-C are made a part of this Application for Rehearing.

Respectfully submitted.



W. Thomas Kellahin, Esq.
KELLAHIN & KELLAHIN
P.O. Box 2265
Santa Fe, New Mexico 87504
(505) 982-4285

Reese B. Copeland, Esq.
Phillips Petroleum Company
4001 Penbrook, Suite 216
Odessa, Texas 79762
(915) 368-1278

ATTORNEYS FOR PHILLIPS PETROLEUM COMPANY

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

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

DE NOVO
CASE NO. 10994
ORDER NO. R-5771-C

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

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:00 a.m. on February 23, 1995, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this 13th day of April, 1995, the Commission, a quorum being present, having considered the testimony and the record, and being fully advised in the premises,

FINDS THAT:

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

(2) By Division Order No. R-5771, dated July 17, 1978, the South Peterson-Fusselman Pool was defined and created for the production of oil from the Fusselman formation. The horizontal limits for said pool included the following described lands in Roosevelt County, New Mexico:

TOWNSHIP 5 SOUTH, RANGE 32 EAST, NMPM
Section 25: SE/4
Section 36: NE/4

TOWNSHIP 5 SOUTH, RANGE 33 EAST, NMPM
Section 30: S/2
Section 31: All

TOWNSHIP 6 SOUTH, RANGE 33 EAST, NMPM

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

(3) Said Order No. R-5771, as amended by Division Order No. R-5771-A, promulgated special rules and regulations for the South Peterson-Fusselman Pool which established 80-acre spacing and proration units and designated well location requirements. This pool is operated under these special rules and regulations and the General Rules of the Division which set a depth bracket allowable for an 80-acre unit of 267 barrels of oil per day and a limiting gas/oil ratio of 2,000 cubic feet of gas per barrel of oil which results in a casinghead gas allowable of 534 MCF per day.

(4) The applicant in this matter, Enserch Exploration, Inc. ("Enserch"), now seeks the assignment of a special depth bracket allowable for the South Peterson-Fusselman Pool, pursuant to General Rule 505(d), of 500 barrels of oil per day to replace the current depth bracket allowable for said pool of 267 barrels of oil per day.

(5) There are currently three operators in the subject pool: Enserch, Phillips Petroleum Company, and Bledsoe Petro Corporation.

(6) Phillips Petroleum Company ("Phillips"), who currently operates three wells in said Pool, appeared at the hearing and presented geologic and petroleum engineering evidence in opposition to increasing the oil allowable in the subject Pool.

(7) The Fusselman formation in this pool is a highly fractured fine to coarse crystaline to sucrosic grey dolomite which exhibits a dual porosity system consisting of a fracture system and a matrix system. A strong bottom water drive with an edge water drive component is the reservoir drive mechanism in the South Peterson-Fusselman Pool, which results in wells with high water cuts. Currently there are six wells producing from this pool, one of which is outside of the structural feature being shared by the other five wells all in Section 31, Township 5 South, Range 33 East, NMPM, Roosevelt County, New Mexico.

(8) Evidence presented by Enserch suggests that:

(a) the Enserch Lambrith Well No. 1, located in Unit "K" of said Section 31 is the best well in the pool because it occupies the highest structural position in the pool and has the best quality of reservoir rock and has the potential to produce at a rate in excess of 500 barrels of oil per day;

(b) 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;

(c) the reservoir is in an advanced state of depletion with the oil in the fracture system having been produced and displaced with water and the remaining oil production coming primarily from the matrix;

(d) increasing the production rate of total fluids from wells in this pool creates a pressure differential in the reservoir which increases oil production from the matrix and lowers water cuts;

(e) Enserch Exhibit No. 9, "SPE paper 7463 presented October 1, 1979 in Houston, Texas at the 53rd Annual Fall Technical Conference and Exhibition of the Society of Petroleum Engineers of A.I.M.E.", showed that from water drive reservoirs in West Texas, high volume lift is an effective means of increasing rates and ultimate recovery. Based upon this technical paper, Enserch theorized that by adding large submersible pumps which could lift 3,000 barrels of fluids per day in certain wells, additional oil recovery could be attained in the Pool.

(f) increasing the allowable to 500 barrels of oil per day per well would enable Enserch to recover an additional 456,000 barrels of oil that would otherwise be lost.

(9) In opposition, Phillips presented evidence which suggests that:

(a) the aforementioned Enserch Lambrith Well No. 1 is situated at the highest structural portion of the reservoir being 38 feet higher in their perforations at the top of the reservoir;

(b) By increasing the oil allowable Enserch would accelerate edge water advancement into the reservoir and water out the Phillips wells prematurely;

(c) as a result of previous test with the installation of submersible pumps in both the Phillips' wells a dramatic increase in water production was observed and Phillips was not able to achieve the kind of results hypothecated in SPE paper 7463;

(d) increasing the rate of the oil allowable in this pool would serve to benefit only one well in the pool, the Enserch Lambrith Well No. 1, and will have an adverse effect on the Phillips wells by increasing the rate of water inflow into the Phillips wells because of increased edge water drive caused by the increased pressure differential.

(10) Correlative rights are defined as the opportunity of owners in a pool to produce their share of oil and gas utilizing their share of reservoir energy. Phillips exercised their right to the available reservoir energy in 1992 by installing submersible pumps in their Lambrith A1 and A2 wells. They viewed their effort as unsuccessful even through the oil rate and a proportional amount of water increased in both cases. Phillips was able to use the available reservoir energy, a natural water drive, to increase the oil rate in both of their wells and thus protected their correlative rights.

(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 water/oil ratio. 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 time remaining to produce the South Peterson Fusselman Pool reserves may be constrained by the frequent collapse of casing in wells in 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.

(14) Granting a special allowable in this specific case of a naturally fractured reservoir producing large amounts of water from all wells in the later stages of pool life is a different situation than one in which the reservoir is producing clean oil in a competitive situation early in the primary life of a pool. The presence of an oil column over the pump is not sufficient evidence in itself to justify an increase in the allowed rate.

(15) Enserch successfully applied modern technology to increase oil recoveries and should be granted their request for a higher allowable.

IT IS THEREFORE ORDERED THAT:

(1) The application of Enserch Exploration, Inc. for the assignment of a special depth bracket allowable for an 80 acre unit in the South Peterson-Fusselman Pool, Roosevelt County, New Mexico, pursuant to General Rule 505(d), of 500 barrels of oil per day to replace the current depth bracket allowable for said pool of 267 barrels of oil per day is hereby APPROVED effective June 1, 1994.

(2) All other provisions of the Special Rules and Regulations for the South Peterson-Fusselman Pool, as promulgated by Division Order No. R-5771, as amended shall remain in full force and effect until further notice.

(3) Jurisdiction of this cause is 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 COMMISSION

GARY CARLSON, Member

WILLIAM W. WEISS, Member

WILLIAM J. LEMAY, Chairman

S E A L

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 (DeNovo)
ORDER NO. R-5771-C

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 COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:00 a.m. on February 23, 1995, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this ____ May, 1995, the Commission, a quorum being present, having considered the testimony and the record, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Commission 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) On August 16, 1979, the Division issued Order R-5771-A which made these rules permanent and which have remained unchanged for approximately sixteen years.

(4) There are now only two operators, Enserch Exploration Inc ("Enserch") and Phillips Petroleum Company ("Phillips") and only four wells capable of producing the remaining oil within the same structural feature of this pool all in Section 31, T5S, R33E, NMPM:

Enserch's operated Lambirth Well No 1 (Unit K)
Phillips' operated Lambirth "A" Well No 1 (Unit J)
Phillips' operated Lambirth "A" Well No. 2 (Unit F)
Phillips' operated Lambirth "A" Well No. 3 (Unit N)

(5) 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 than that expected with conventional lift methods. (See Enserch Exhibit 10 "SPE paper 7463 presented October 1, 1979")

(6) While SPE Paper 7463 discussed only oil rate increase and expressed no conclusions about increasing ultimate oil recovery, both Enserch and Phillips installed submersible pumps and initiated high volume lift ("HVL") in an effort to increase ultimate oil recovery of the remaining recoverable oil from this pool.

(7) As of January 1, 1995, it is estimated that approximately 492,000 barrels of oil remained to be recovered by these four wells.

(8) On May 5, 1994, the Division's Supervisory-Hobbs granted Enserch's request for a special twenty (20) day temporary allowable of up to 335 BOPD so that Enserch could produce its well and obtain test data **but** specifically required that:

> "if the application for additional allowable is not granted the production from the well will be curtailed back until the overage is made up."

(9) On May 17, 1994, Enserch applied to the Division for an order to increase the maximum daily oil allowable from 267 BOPD to 500 BOPD in the Pool which was docketed as Case 10994 and heard on June 23, 1994.

(10) Phillips appeared at the Division hearing and presented geologic and petroleum engineering evidence in opposition to increasing the oil allowable in the Pool.

(11) On November 3, 1994, the Division entered Order R-5771-B in case 10994 **denying** Enserch's application.

(12) Despite having its application denied and being limited to an oil allowable of 267 BOPD, Enserch continued to produce its Lambirth Well No. 1 in Unit K at an average daily rate of approximately 550 BOPD.

(13) As of the Commission hearing held on February 23, 1995, Enserch had produced an estimated total of 30,000 barrels of oil from its well in excess of its allowable.

(14) Before the Commission and 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 four remaining producing wells all located within the same structural feature of the same portion of reservoir;

(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) 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.

(e) increasing the allowable to 500 barrels of oil per day would enable Enserch to recover an additional 456,000 barrels of oil that would not be recovered.

(14) 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;

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

(c) the SPE paper theorized that once 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;

(d) because the bottom current perforation in these three wells are at the same correlative structural position and because Phillips was using the same sized HVL equipment, then it was anticipated that the Phillips wells should have been able to obtain the increased oil production achieved by Enserch.

(e) but Phillips' efforts were not successful because the permeability in the bottom perforations in the Enserch well is poor ("tight") while upper perforations have better permeability and are also structurally higher than in the Phillips's wells, Enserch is able to increase its oil rate by draining oil from Phillips' adjoining spacing units. (See Phillips' Exhibit 4).

(f) an oil allowable of greater than 267 BOPD increases the rate of total fluids withdrawn from the Enserch well which creates a pressure differential in the reservoir which increases oil production by draining oil from the down-structure Phillips' spacing units.

(g) a plot of the production curve for the Phillips Lambirth A Well No. 1 in October 1992 shows that the installation of a submersible pump resulted in a dramatic increase in the water cut--a result diametrically opposed to and contrary with the Enserch's conclusion;

(h) a plot of the production curve for the Phillips Lambirth A Well No. 2 shows that the installation of a submersible pump in February, 1992 resulted in a dramatic increase in the water cut---a result inconsistent with and contrary to the Enserch's conclusion and expectation;

(i) apart from the expectations of the SPE, and contrary to the results predicted by Enserch (Enserch Exhibit 11), the installation of a HVL for the Enserch Lambirth "A" Well No. 1 has resulted in dramatic increases in the water-cut of this well;

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

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

(l) 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;

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

(n) the Enserch Lambirth 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 Commission 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 an increase in the daily oil rate **and does not** in fact prove that increase oil rate will increase ultimate oil recovery;

(b) Enserch based its application on a production test but failed to supply any engineering calculations to demonstrate the effect its requested rate of 500 BOPD would have on the drainage patterns for all four wells in the pool;

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

(d) 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 159,000 barrels;

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

(f) well test data from the subject wells including actual production data, indicates that higher oil production rate in the Enserch well 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.

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

(a) 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;

(b) **only** the higher structure, high capacity Enserch Lambirth No. 1 Well is capable of producing in excess of the 267 BOPD allowable. Phillips' structurally lower wells will never be capable of producing at this rate;

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

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

(e) 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 reliable engineering calculations 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) It appears that correlative rights were impaired by Enserch as a result of its violation of Order R-5771-B and this matter should be referred to the Division Director to consider instituting fines and/or penalties against Enserch.

(13) In addition, Enserch should be ordered to immediate cease all production from the subject Lambirth No. 1 Well and that said well shall be shut-in pending a determination by the Division of the total volume of over-production and how that over-production should be made up.

(14) 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) That Enserch Exploration, Inc. is hereby order to immediately shut-in its Lambirth Well No. 1 located in Unit K of Section 31, T5S, R33E, NMPM, Roosevelt County, New Mexico.

(3) That the Director of the Oil Conservation Division shall immediately initiate a hearing to determine the total volume of over-production attributable to the Enserch Exploration Inc.'s Lambirth Well No. 1 and to issue such fines and/or penalties against Enserch Exploration, Inc. as are appropriate.

(4) 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 COMMISSION

Gary Carlson. Member

William W. Weiss, Member

William J. LeMay, Chairman

seal

FAULTS

EROSIONAL UNCONFORMITY PINCHOUT

BEFORE THE
OIL CONSERVATION DIVISION
Case No.10994 DeNovo Exhibit No. 3
Submitted By:
PHILLIPS PETROLEUM
Hearing Date: February 23, 1995

PHILLIPS 66 PHILLIPS PETROLEUM COMPANY
PERMIAN BASIN GEOLOGY

SOUTH PETERSON FIELD

ROOSEVELT CO., NEW MEXICO

0 2,000 4,000
SCALE (FEET)

SCALE	1" = 50	GEOLOGY BY: SCOTT BALKE	DATE: 95
CONTOURED ON	TOP OF FUSSELMAN		
TYPE LOG		DRAFTING: R COS...	

EXH. 1

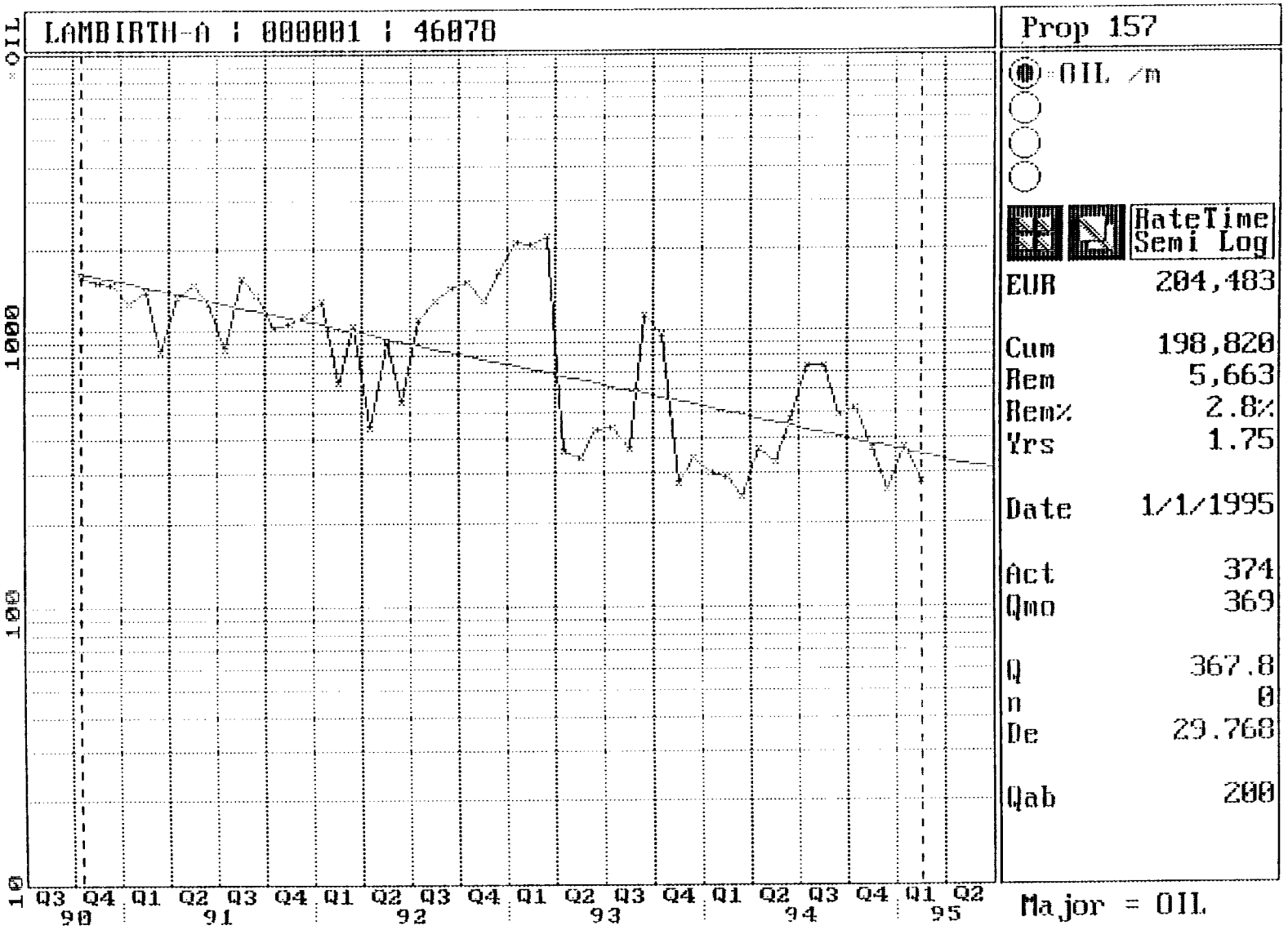

LAMBIRTH-A | 000001 | 46070
OIL
1000
100
10
Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2
90 91 92 93 94 95
Prop 157
OIL /m
RateTime
Semi Log
EUR 204,483
Cum 198,820
Rem 5,663
Rem% 2.8%
Yrs 1.75
Date 1/1/1995
Act 374
Qmo 369
Q 367.8
n 0
De 29.768
Qab 200
Major = OIL

EXHIBIT
2

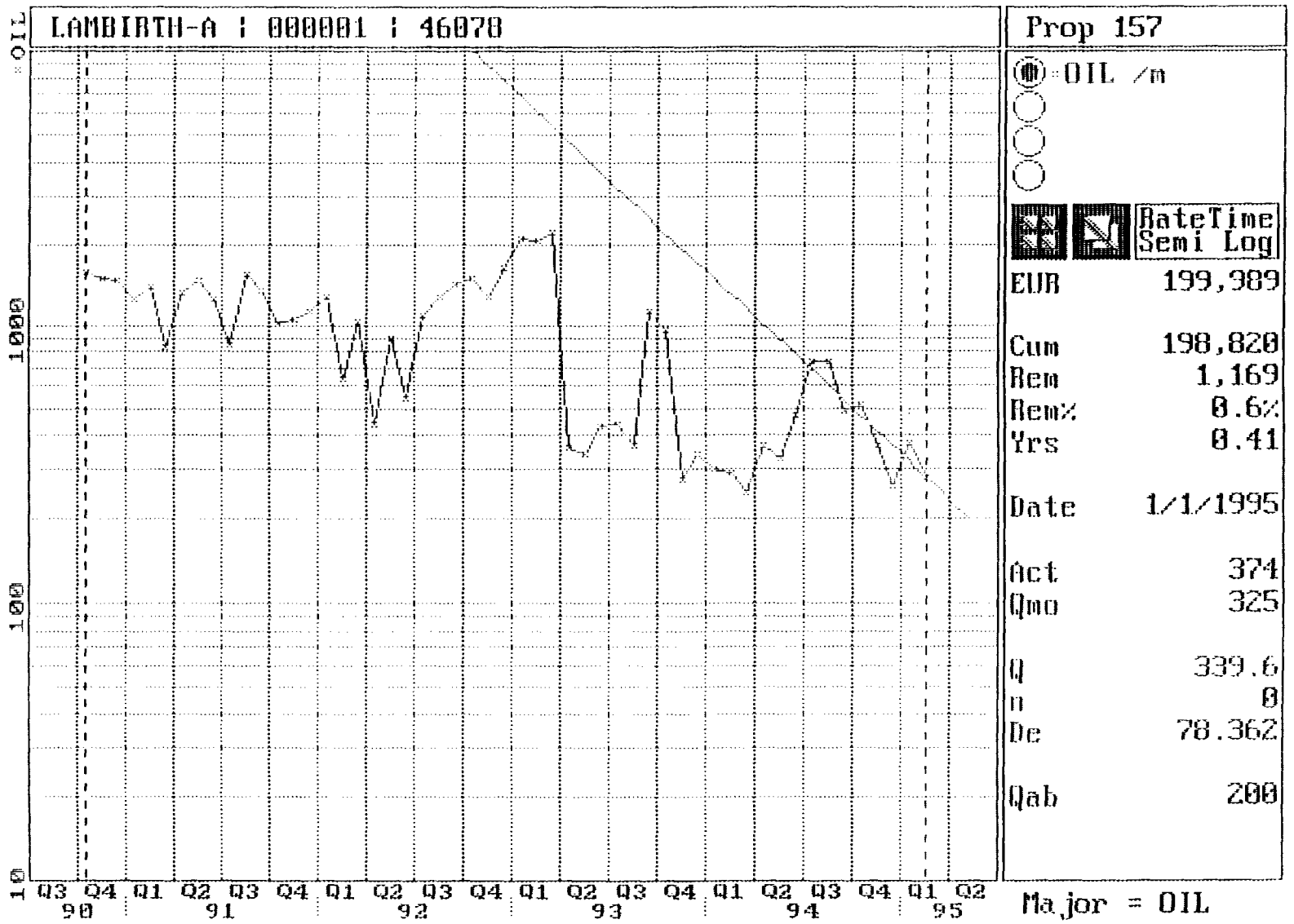
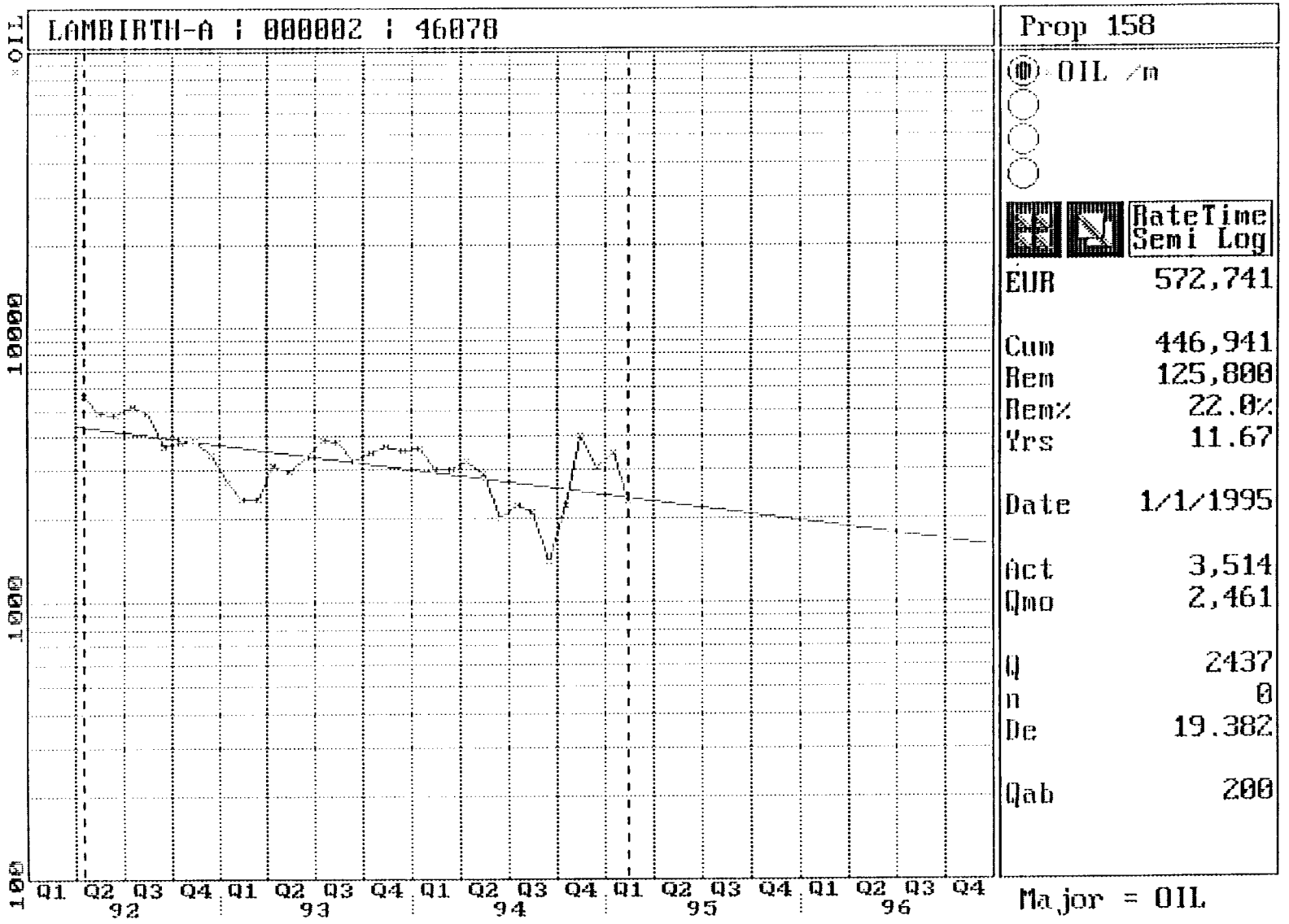
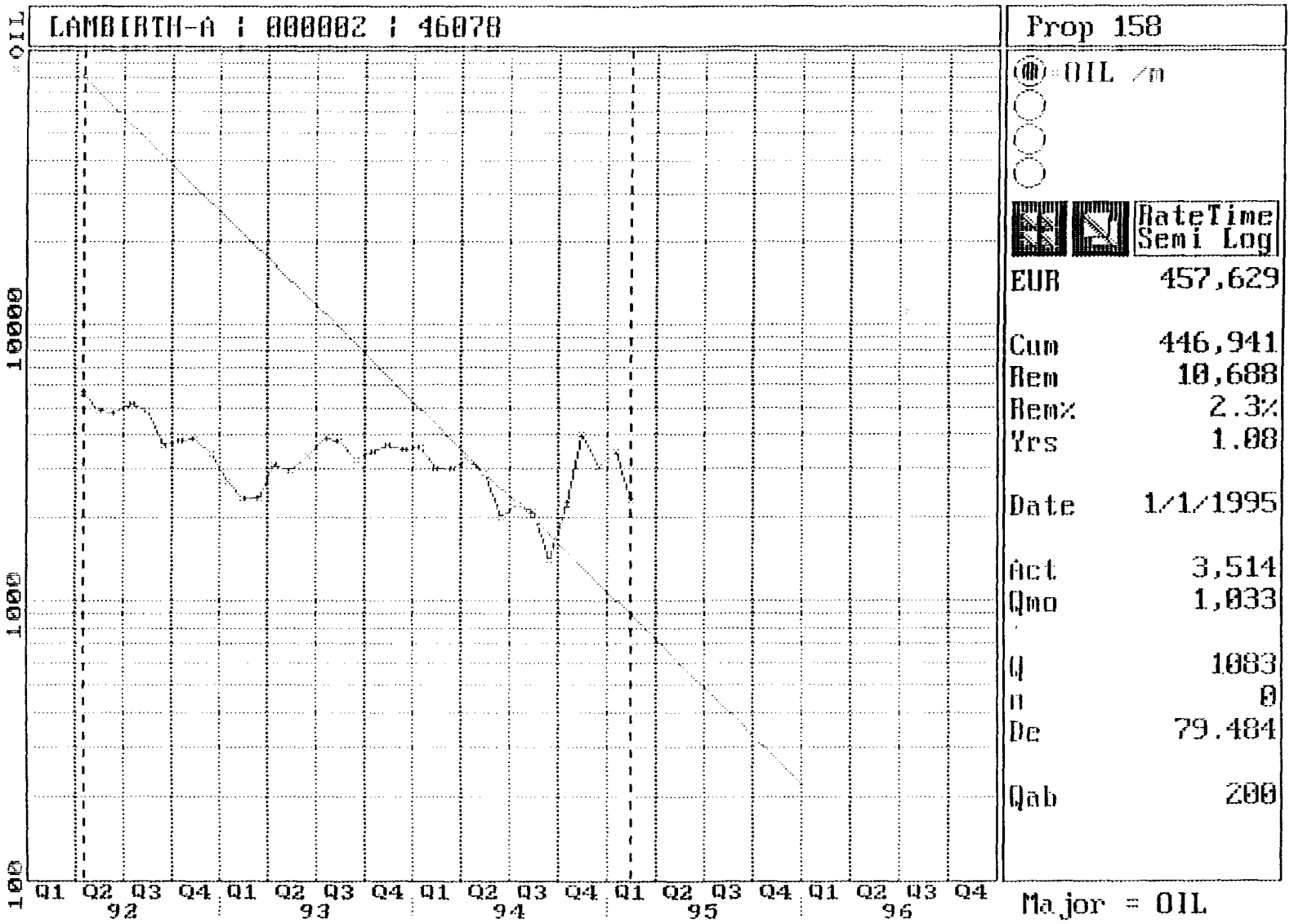

LAMBIRTH-A | 000001 | 46070
OIL
1000
100
10
Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2
90 91 92 93 94 95
Prop 157
OIL /m
RateTime
Semi Log
EUR 199,389
Cum 198,820
Rem 1,169
Rem% 0.6%
Yrs 0.41
Date 1/1/1995
Act 374
Qmo 325
Q 339.6
n 0
De 78.362
Qab 200
Major = OIL

EXHIBIT
3


LAMBIRTH-A | 000002 | 46078
OIL
10000
1000
100
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
92 93 94 95 96
Prop 158
OIL /m
RateTime
Semi Log
EUR 572,741
Cum 446,941
Rem 125,800
Rem% 22.0%
Yrs 11.67
Date 1/1/1995
Act 3,514
Qmo 2,461
Q 2437
n 0
De 19.382
Qab 200
Major = OIL


LAMBIRTH-A | 000002 | 46078
Prop 158
OIL /m
RateTime
Semi Log
EUR 457,629
Cum 446,941
Rem 10,688
Rem% 2.3%
Yrs 1.08
Date 1/1/1995
Act 3,514
Qmo 1,033
Q 1083
n 0
De 79.484
Qab 200
Major = OIL
1000
100
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
92 93 94 95 96

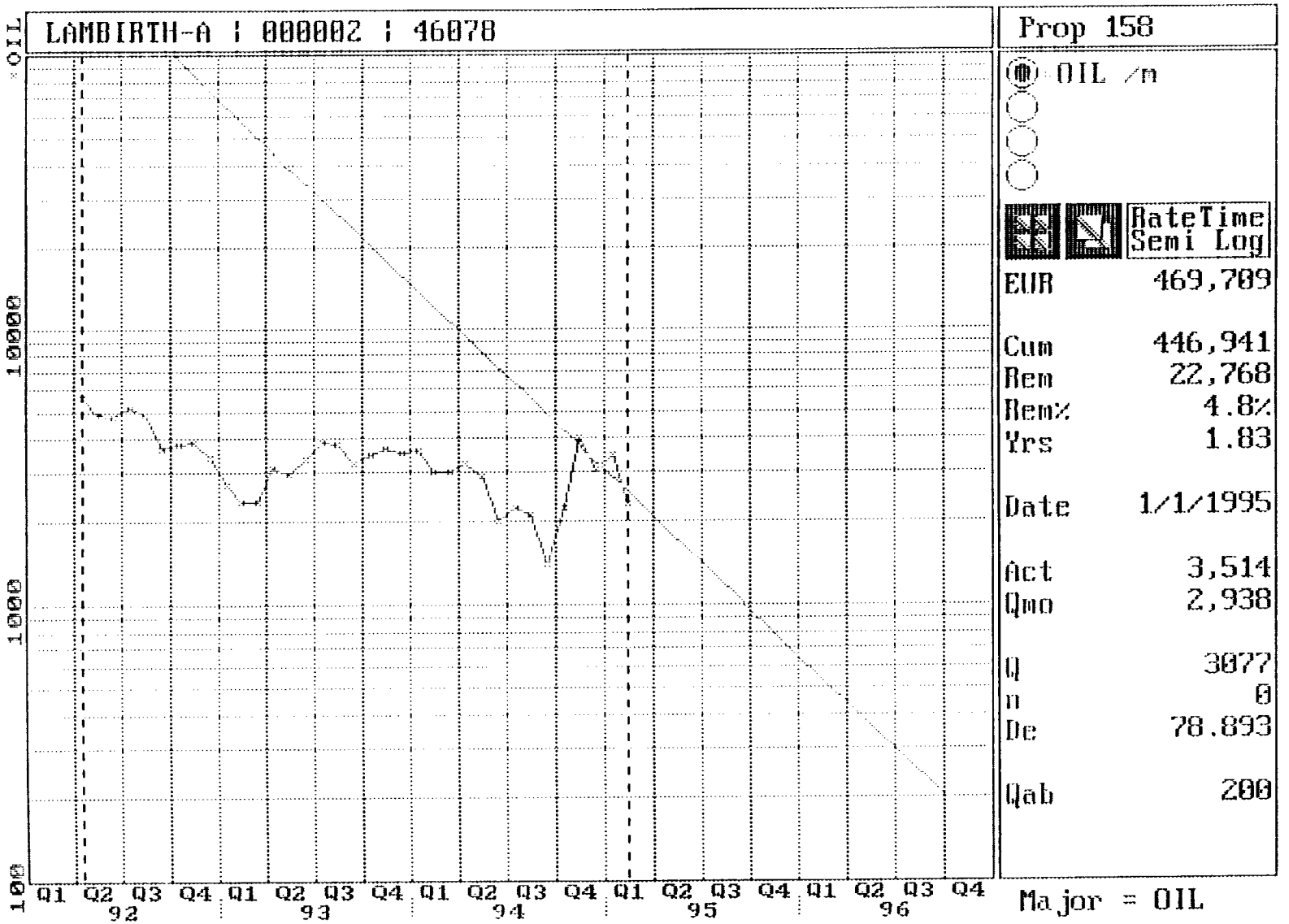

LAMBIRTH-A | 000002 | 46078
OIL
10000
1000
100
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
92
93
94
95
96
Prop 158
OIL /n
RateTime
Semi Log
EUR 469,709
Cum 446,941
Rem 22,768
Rem% 4.8%
Yrs 1.83
Date 1/1/1995
Act 3,514
Qmo 2,938
Q 3077
n 0
De 78.893
Qab 200
Major = OIL

EXHIBIT 6

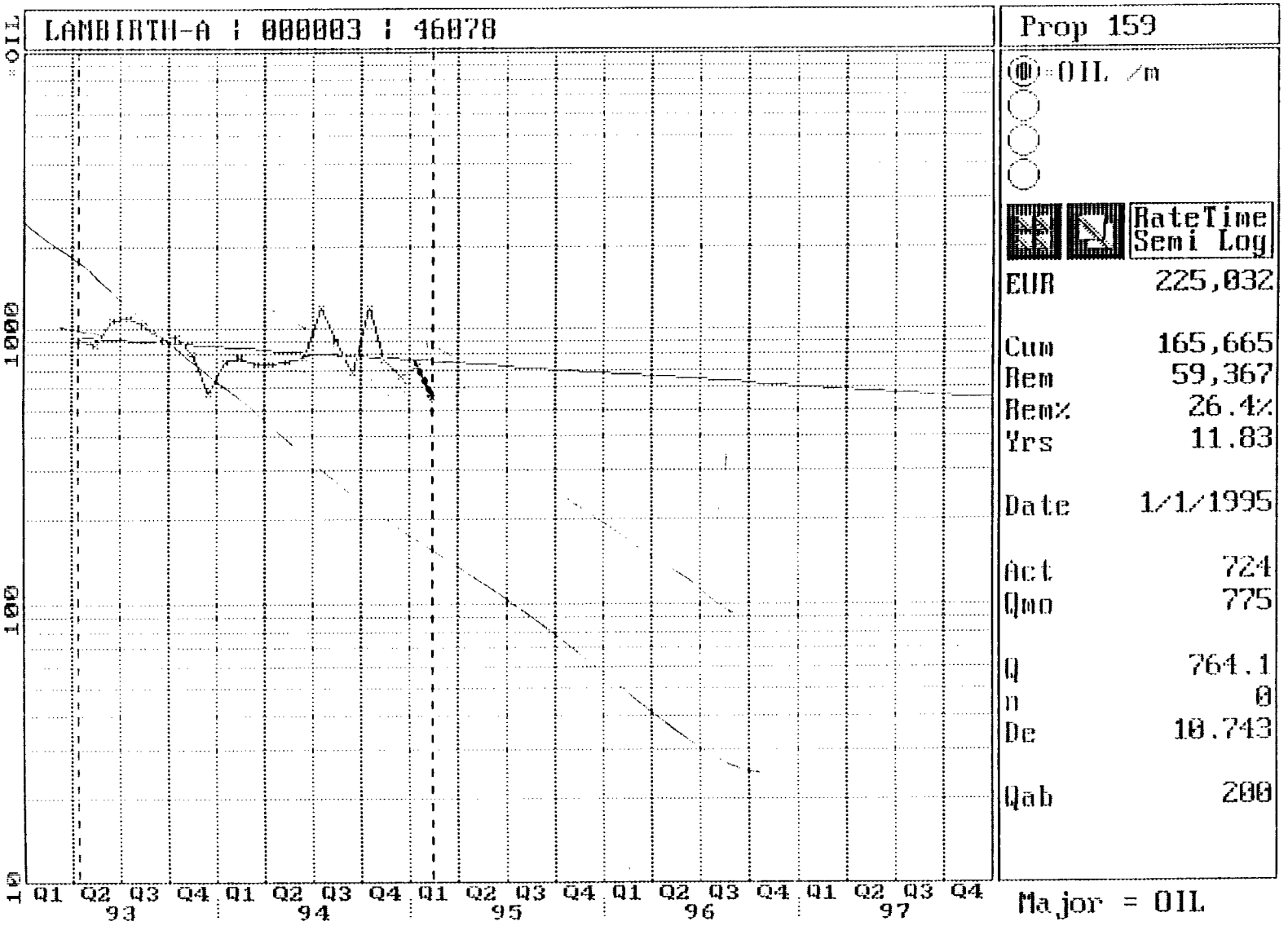
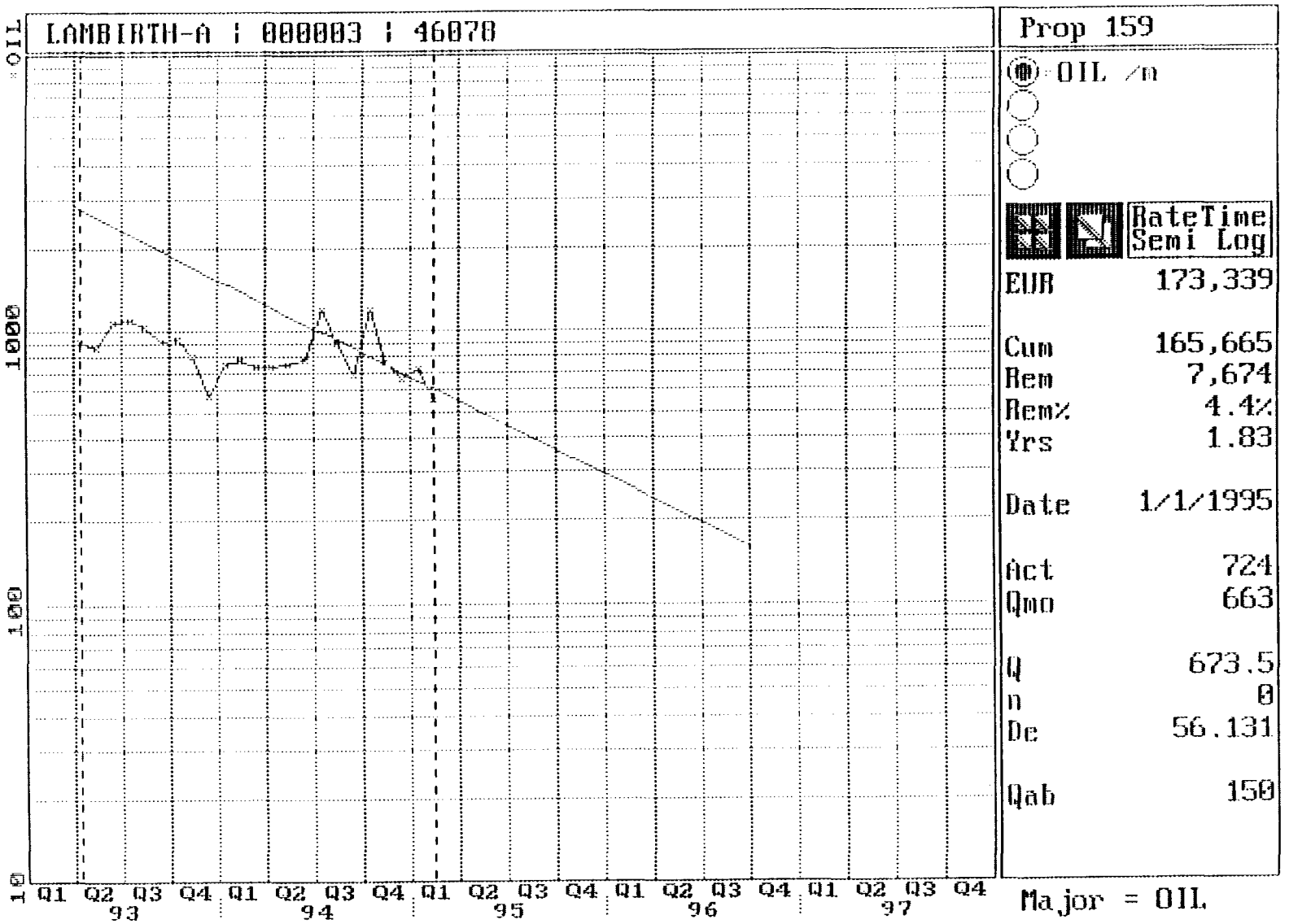
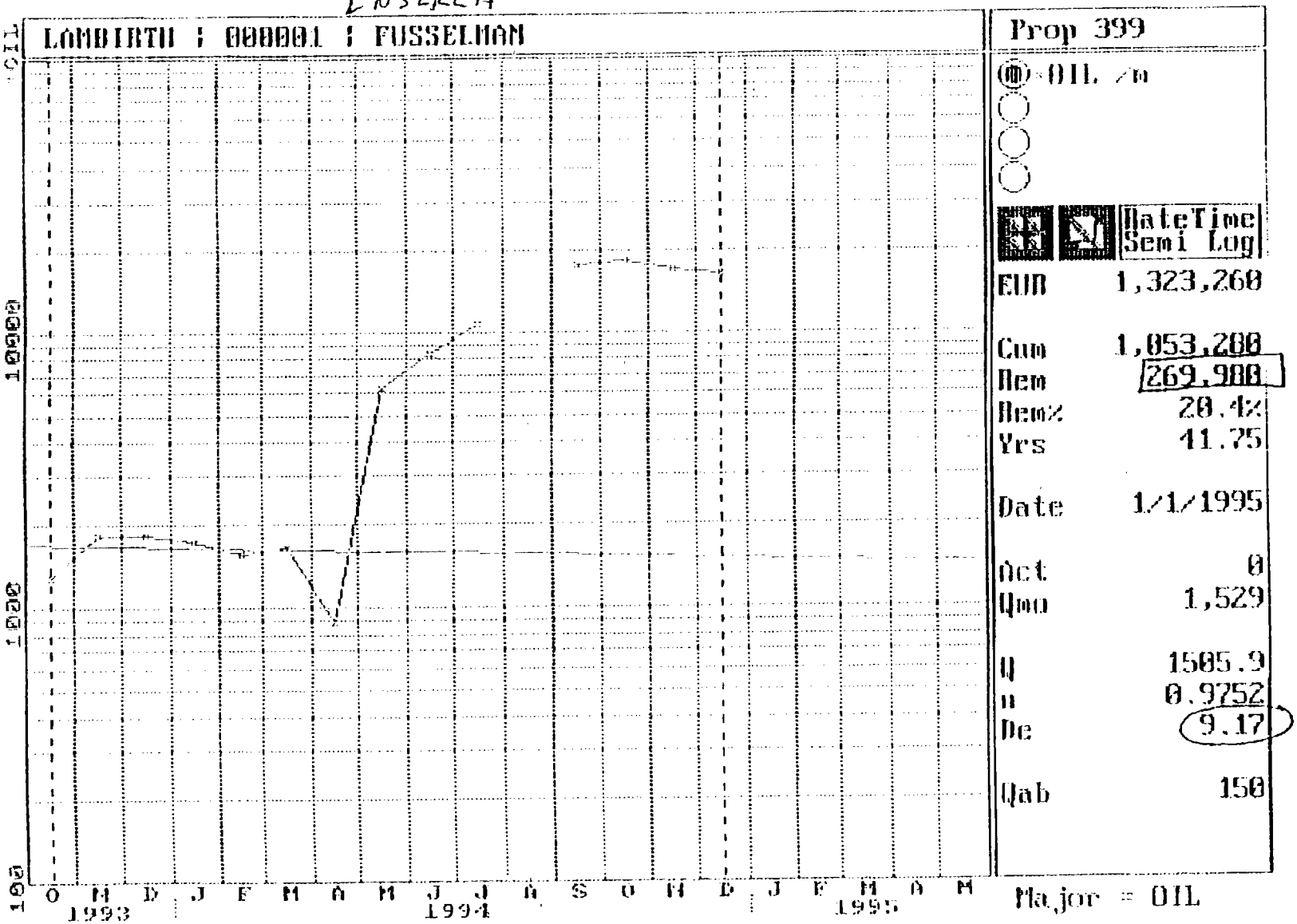

LAMBIRTH-A | 000003 | 46078
OIL
1000
100
10
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
93
94
95
96
97
Prop 159
OIL /m
RateTime
Semi Log
EUR 225,032
Cum 165,665
Rem 59,367
Rem% 26.4%
Yrs 11.83
Date 1/1/1995
Act 724
Qmo 775
Q 764.1
n 0
De 10.743
Qab 200
Major = OIL

EXHIBIT 7


LAMBIRTH-A | 000003 | 46070
OIL
1000
100
10
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
93
94
95
96
97
Prop 159
OIL /n
RateTime
Semi Log
EUR 173,339
Cum 165,665
Rem 7,674
Rem% 4.4%
Yrs 1.83
Date 1/1/1995
Act 724
Qmo 663
Q 673.5
n 0
De 56.131
Qab 150
Major = OIL

ENSERCH



EXHIBIT

8

ENSERCH

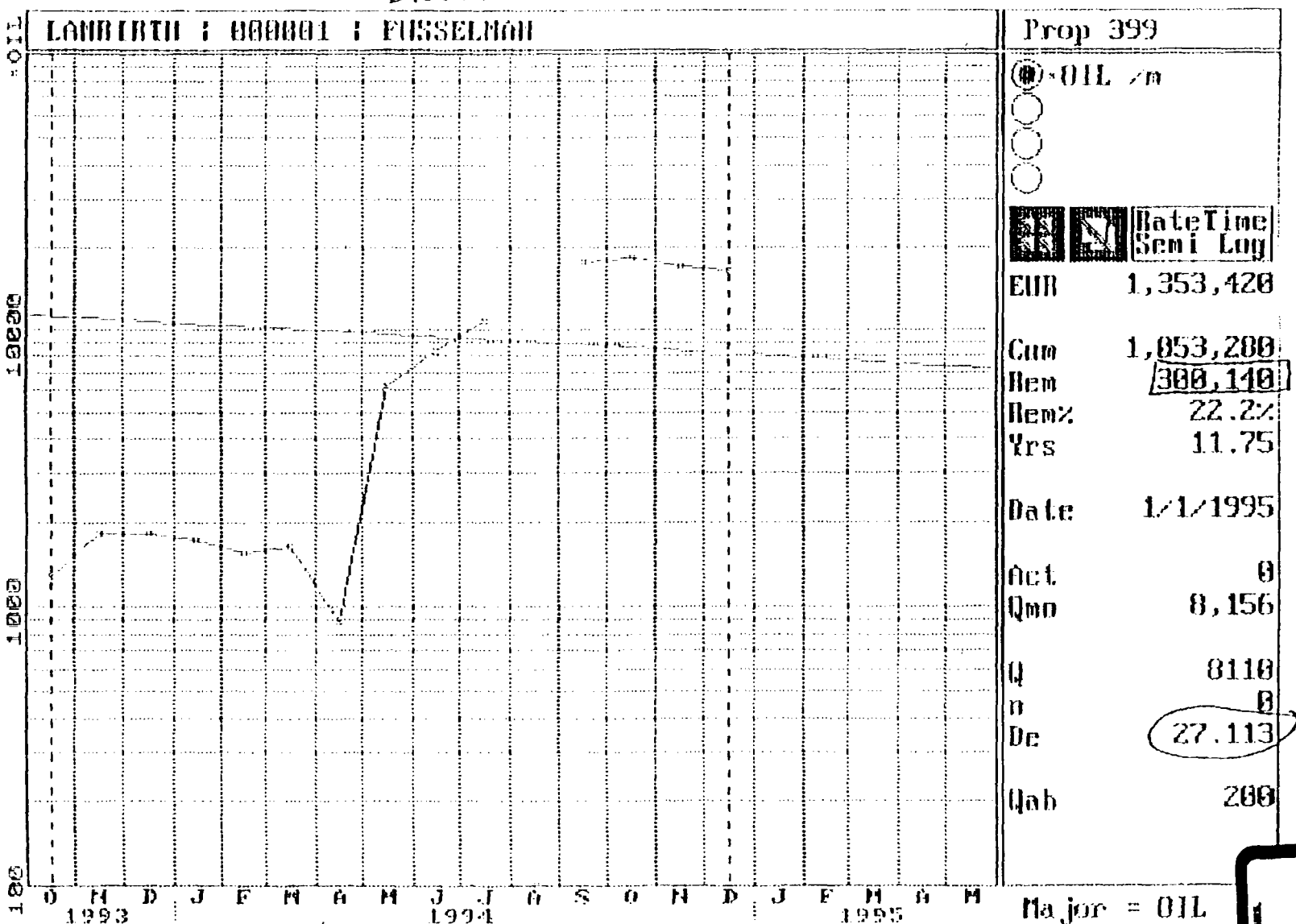


EXHIBIT 9

ENSERCH

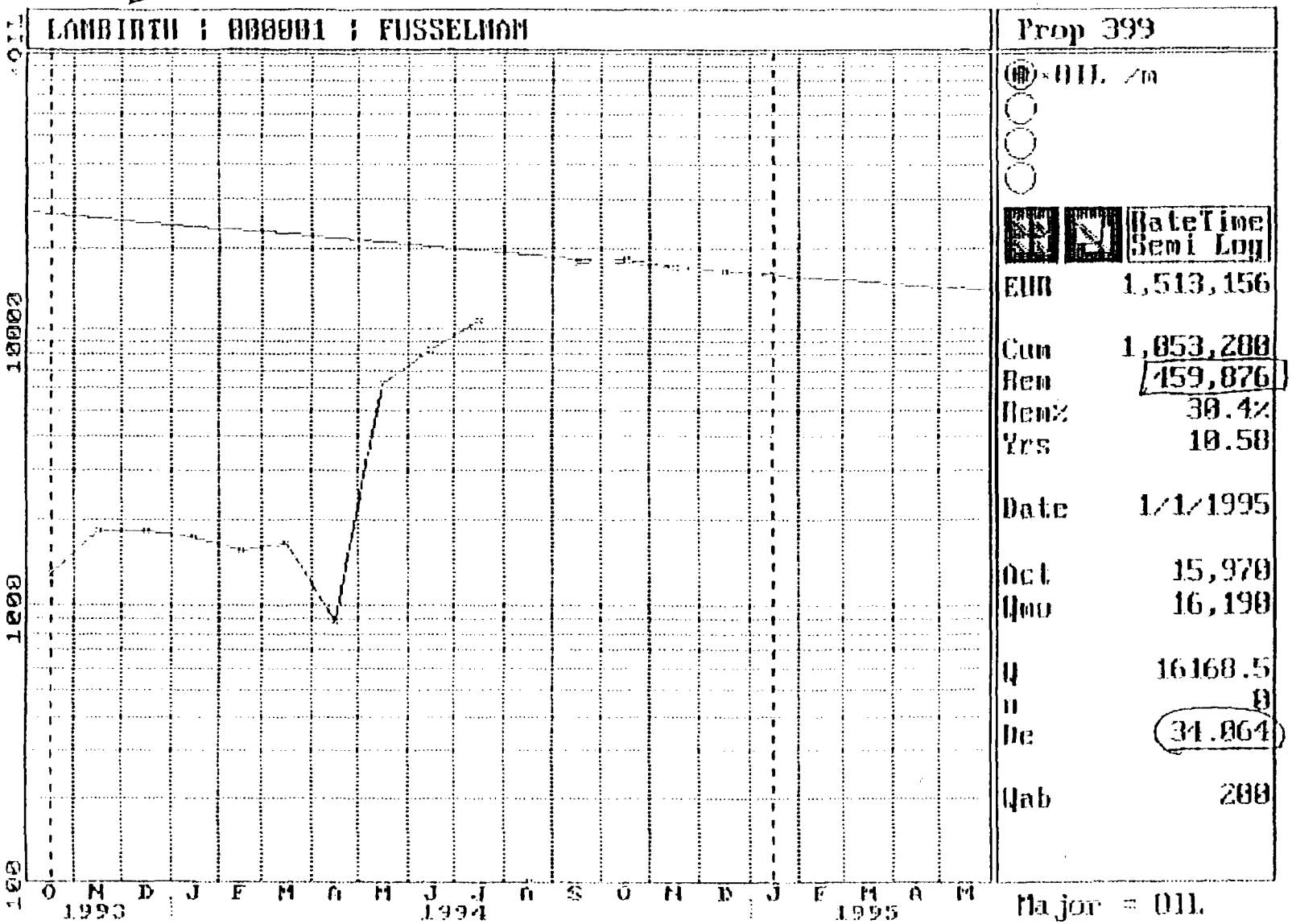


EXHIBIT
10

EXHIBIT C

NINTH JUDICIAL DISTRICT
STATE OF NEW MEXICO
COUNTY OF ROOSEVELT

PHILLIPS PETROLEUM COMPANY,
Petitioner,

vs. No. ~~CIV-95-~~95-CV-74 ( )

Case Assigned
To: Judge HENSLEY

OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO AND
ENSERCH EXPLORATION INC.
a Delaware corporation
Respondents.

PETITION FOR REVIEW OF A DECISION OF THE OIL CONSERVATION COMMISSION OF NEW MEXICO

COMES NOW, Phillips Petroleum Company, pursuant to the provisions of Section 70-2-25, N.M.S.A. (1978), as amended, and respectfully petitions the Court for review of the actions of the Oil Conservation Commission of New Mexico in Case No. 10994 (DeNovo) on the Commission's docket and its Order R-5771-C entered therein.

PARTIES:

1. Petitioner, Phillips Petroleum Company, a foreign corporation authorized to and doing business in the State of New Mexico, is an oil and gas operator and owner of hydrocarbons being produced from the South Peterson-Fusselman Oil Pool, Roosevelt County, New Mexico, and is a party of record in all of the proceedings before the Commission in this matter and is adversely affected by the Commission Order R-5771-C entered in Case 10994 (DeNovo).

2. The Oil Conservation Commission of the State of New Mexico ("Commission") is a statutory body created and existing under the provisions of the New Mexico Oil & Gas Act, Sections 70-2-1 through 70-2-36, N.M.S.A. (1978), laws of the State of New Mexico, as amended.

3. Enserch Exploration Inc. is a party of record in all of the proceedings before the Commission in this matter being the applicant before the Commission in Case 10994 (DeNovo) and sought approval of an increase in the daily oil producing allowable for the South Peterson-Fusselman Oil Pool in Roosevelt County, New Mexico which is opposed by Phillips Petroleum Company and which was approved by Commission Order R-5771-C.

JURISDICTION:

4. The Commission held a public Hearing in Case 10994 (DeNovo) on February 23, 1995 and entered Order R-5771-C on April 18, 1995.

5. On May 8, 1995, Petitioner filed its Application for Rehearing, a copy of which is attached as Exhibit "1" and incorporated herein, which was deemed denied by the Commission when it failed to act on the application within ten days as required by Section 70-2-25, N.M.S.A. (1978), as amended.

6. Petitioner has exhausted its administrative remedies before the Commission and now seeks judicial review of the Commission's decision within the time provided for by Section 70-2-25 N.M.S.A. (1978), as amended.

7. The Ninth Judicial District, Roosevelt County, New Mexico, has jurisdiction of this case pursuant to the provisions of Section 70-2-25 N.M.S.A. (1978), because the property affected Commission Order R-5771-C is located within Roosevelt County, New Mexico.

RELIEF SOUGHT:

8. Petitioner complains of Commission Order R-5771-C and asserts that said Order is arbitrary, capricious, unreasonable, not supported by substantial evidence and is contrary to law as set forth in its Application for Rehearing (Exhibit "1") and further states:

POINT I:

THERE IS NEW EVIDENCE NOT AVAILABLE AT THE TIME OF THE COMMISSION HEARING WHICH WILL CHANGE THE RESULTS OF ORDER R-5771-C.

POINT II:

THE COMMISSION FAILED TO MAKE AN ESSENTIAL JURISDICTIONAL FINDINGS CONCERNING PREVENTION OF WASTE

POINT III:

FINDING (10) INCORRECTLY APPLIES CORRELATIVE RIGHTS AND IN DOING SO, THE COMMISSION FAILS TO PROTECT CORRELATIVE RIGHTS

POINT IV:

FINDING (11) IS NOT SUPPORTED BY SUBSTANTIAL EVIDENCE AND ADOPTS AN ARBITRARY AND CAPRICIOUS REASON TO SUPPORT INCREASING THE OIL ALLOWABLE FOR THIS POOL

POINT V:

FINDING (12) IS NOT SUPPORTED BY SUBSTANTIAL EVIDENCE AND ADOPTS AN ARBITRARY AND CAPRICIOUS REASON TO SUPPORT INCREASING THE OIL ALLOWABLE FOR THIS POOL

POINT VI:

FINDING (13) IS WRONG AND IS NOT SUPPORTED BY SUBSTANTIAL EVIDENCE AND ADOPTS AN ARBITRARY AND CAPRICIOUS REASON TO SUPPORT INCREASING THE OIL ALLOWABLE FOR THIS POOL

POINT VII:

THERE IS NO SUBSTANTIAL EVIDENCE TO SUPPORT FINDING (14) CONCERNING THE COMMISSION'S REASON FOR GRANTING THE INCREASED ALLOWABLE

POINT VIII:

FINDING (15) VIOLATES CORRELATIVE RIGHTS

POINT IX:

ORDER R-5771-C WAS ADOPTED BY THE COMMISSION BASED UPON AN INCORRECT UNDERSTANDING OF "BURDEN OF PROOF"

POINT X:

THE COMMISSION VIOLATED THE FASKIN, THE VIKING PETROLEUM AND THE CONTINENTAL OIL CASES WHEN IT FAILED TO ADDRESS AND DECIDE THE OPPONENTS' ISSUES AND OBJECTIONS

POINT XI:

THE COMMISSION FAILED TO ENFORCE THE LAWFUL ORDER OF THE DIVISION AND THEREBY ESTABLISHED A PRECEDENT FOR VIOLATING CORRELATIVE RIGHTS

POINT XII:

THE COMMISSION FAILED TO ADOPT THE ORDER PROPOSED BY PHILLIPS PETROLEUM COMPANY AND THAT FAILURE RESULTS IN THE VIOLATION OF CORRELATIVE RIGHTS

POINT XIII:

THE COMMISSION ENTERED A "RETROACTIVE" ORDER AND IN DOING SO VIOLATED DUE PROCESS AND THE CORRELATIVE RIGHTS OF PHILLIPS PETROLEUM COMPANY

WHEREFORE, Petitioner prays that the Court review New Mexico Oil Conservation Commission Case 10994 (DeNovo) and Commission Order R-5771-C and hold said order unlawful, invalid and void, and for such other and further relief as may be proper in the premises.

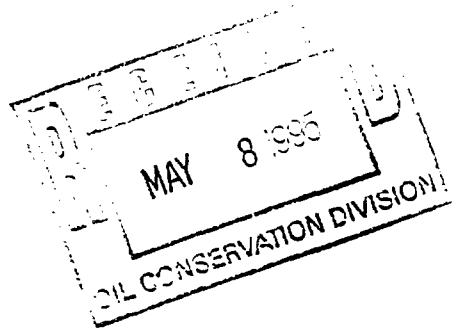
Respectfully submitted,

W. THOMAS KELLAHIN, Esq.
KELLAHIN & KELLAHIN
P. O. Box 2265
Santa Fe, New Mexico 87504
(505) 982-4285

Reese B. Copeland, Esq.
Phillips Petroleum Company
4001 Penbrook
Odessa, Texas 79762
(915) 368-1278

ATTORNEYS FOR PHILLIPS PETROLEUM COMPANY

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 (DeNovo)
ORDER NO. R-9771-C

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

APPLICATION FOR REHEARING BY PHILLIPS PETROLEUM COMPANY

This Application for Re-Hearing is submitted by W. Thomas Kellahin, Esq. of Kellahin and Kellahin and by Reese B. Copeland, Esq. of Phillips Petroleum Company on behalf of PHILLIPS PETROLEUM COMPANY (Phillips").

In accordance with the provisions of Section 70-2-25 NMSA (1978), Phillips requests the New Mexico Oil Conservation Commission grant this Application for ReHearing in Case 10994 (DeNovo) to correct erroneous findings and conclusions set forth in Order R-9771-C, attached as Exhibit "A" and to substitute Phillips' proposed Commission Order attached as Exhibit "B" hereto, and IN SUPPORT PHILLIPS STATES:

INTRODUCTION

On April 18, 1995, the New Mexico Oil Conservation entered its decision in this case which reversed the prior Division decision made in this case by Examiner Michael E. Stogner.

In doing so, the Commission made errors of fact and of law which require that another hearing be held. In addition, new data has become available since the Commission hearing which alter the findings and conclusions made by the Commission and which therefore require another hearing.

GROUNDS FOR REHEARING

POINT I:

THERE IS NEW EVIDENCE NOT AVAILABLE AT THE TIME OF THE COMMISSION HEARING WHICH WILL CHANGE THE RESULT OF ORDER R-5771-C.

The result of Order R-5771-C is to award Enserch for the application of modern technology (high volume submersible pumping equipment to lift oil and water--"HVL") based upon the Commission's belief that the facts then showed that:

(a) Phillips had tried the same technology and was "able to use the available reservoir energy, a natural water drive, to increase the oil rate in both of their wells and thus protected their correlative rights" (see Finding (10) of Order R-5771-C); and

(b) Enserch using this same technology would "be able to improve the efficiency of oil recovery from their well."

The impact of Order R-5771-C, unless modified upon Rehearing, will be a loss to Phillips of an estimated 159,000 barrels of remaining recoverable oil from this pool, thereby impairing its correlative rights in violation of the New Mexico Oil and Gas Act.

Subsequent to the Commission hearing, Phillips has obtained new production data upon which petroleum engineering studies were conducted to determine if the Commission's order as set forth in Order R-5771-C will result in the loss of remaining recoverable reserves to Phillips. In addition, based upon this new data, Phillips also has conducted engineering studies to determine if the Commission's order will result in increasing ultimate oil recovery from the pool.

Phillips concludes that the Commission order will not add additional oil recovery from the pool but simply reduces Phillips' share of remaining recoverable oil and increases Enserch's share of remaining recoverable oil.

Phillips has concluded and is prepared to present new evidence that:

(1) REMAINING RECOVERABLE OIL RESERVES:

As of January 1, 1995 there remained 492,000 barrels of recoverable oil in the pool to be recovered by the remaining four wells, three operated by Phillips and one operated by Enserch.

(2) INCREASED DECLINE RATES:

WELLS	BEFORE ENSERCH OVERPRODUCTION	AFTER
Phillips Lambirth "A" Well No. 1	**30%**	**78%**
Phillips Lambirth "A" Well No. 2	**19%**	**79%**
Phillips Lambirth "A" Well No. 3	**11%**	**56%**

(3) PHILLIPS' REMAINING RESERVES:

As of January 1, 1995, Phillips had 191,000 barrels of recoverable oil remaining to be produced provided the pool's oil allowable of 267 BOPD was not increased to 500 BOPD. However, as a result of the Commission's order, Phillips will suffer a loss of 159,000 barrels of remaining recoverable oil:

WELLS	BEFORE ENSERCH OVERPRODUCTION	AFTER
Phillips Lambirth "A" Well No. 1	6,000	1,000
Phillips Lambirth "A" Well No. 2	126,000	23,000
Phillips Lambirth "A" Well No. 3	59,000	8,000
TOTAL:	191,000	32,000 (barrels)

LOSS OF 159,000 barrels of recoverable oil

(4) ENSERCH'S REMAINING RESERVES:

As of January 1, 1995, Enserch had 300,000 barrels of recoverable oil remaining in addition to the 980,000 barrels of oil it had already recovered provided the pool's oil allowable of 267 BOPD was not increased to 500 BOPD. As a result of the Commission's order, Enserch will receive a "windfall" gain of 159,000 barrels of remaining recoverable oil:

WELL	BEFORE HVL	WITH INTERMEDIATE HVL (267-ALLOWABLE)	WITH HVL (500-ALLOWABLE)
Enserch's Lambirth Well No.1	270,000	300,000	460,000
TOTAL:			

GAIN OF 160,000 barrels of recoverable oil

(5) ENSERCH'S DRAINAGE AREAS:

The drainage areas for Enserch Lambirth Well No. 1 will be substantially increased as a result of the Commission Order:

RECOVERY FACTOR	ALLOWABLE 267 BOPD	ALLOWABLE 500 BOPD
40%	187 acres	210 acres
45%	166 acres	186 acres
50%	149 acres	167 acres

Increasing the oil allowable allows Enserch to increase its drainage area an additional 18 to 23 acres depending upon the recovery factor.

(6) PHILLIPS' PROPOSED EXHIBITS:

In the event a Rehearing is granted, Phillips' would present new evidence to support the above conclusions including the following which are attached to this Application:

Phillips Lambirth A-1

Graph #1: best fit decline rate over last four years is 29.8% remaining reserves = 5,663 BO

Graph #2: declined rate since third quarter-1994 has been 78% (remaining reserves=1,169 BO)

Phillips Lambirth A-2

Graph #3: Decline rate since HVL installed in this well has been 19% with remaining reserves=125,800 BO

Graph #4: Decline rate for this well of 79% with remaining reserves=10,688 BO after Enserch installed HVL .

Graph #5: A larger HVL pump was then installed in this well in the fourth quarter-1994 to meet the Enserch pump size which reduced net reserve loss to Enserch but still declined at a rate of 79%

Phillips Lambirth A-3

Graph #6: Decline rate before Enserch HVL is 10.7% with remaining reserves=59,367 BO

Graph #7: Decline rate for this well of 56% with remaining reserves of 7,674 BO after Enserch installed HVL

Enserch Lambirth No. 1:

Graph #8: Decline rate before HVL
Graph #9: Decline rate after intermediate HVL
Graph #10: Decline rate after large HVL

POINT II:

THE COMMISSION FAILED TO MAKE AN ESSENTIAL JURISDICTIONAL FINDING CONCERNING PREVENTION OF WASTE

Although Finding (8)(f) of Order R-5771-C sets forth the contention of Enserch that using this modern technology "would enable Enserch to recover an additional 456,000 barrels of oil that would otherwise be lost", the Commission did not make any finding that this claim by Enserch was adopted by the Commission.

The Commission's failed to make this required statutory finding addressing prevention of waste and thereby ignored the ultimate issue in this case.

This is a simple case. The ultimate factual issue is whether increasing the oil allowable will result in increasing ultimate oil recovery from the entire pool--not just the Enserch well.

Phillips contended that increasing the oil allowable would simply produce the same amount of remaining oil faster and in doing so drain Phillips' spacing units;

Enserch contended that increasing the oil allowable would increase ultimate recovery.

The Commission found that increasing the allowable would improve the efficiency of oil recovery from the Enserch well **BUT** failed to determine if that increase was due simply to accelerated drainage of Phillips' adjoining spacing units or in fact was due to increased total pool recovery.

The New Mexico Supreme Court in Sims v. Mechem, 72 N.M. 186 (1963) held that an Oil Conservation Commission order which did not contain a finding as to existence of waste and its prevention was void. Commission Order R-5771-C omits the jurisdictional findings concerning the prevention of waste as it applies to this case and the evidence to support such a finding. Without such a finding, the Commission was without jurisdiction to enter Order R-5771-C and therefore it is void.

POINT III:

FINDING (10) INCORRECTLY APPLIES CORRELATIVE RIGHTS AND IN DOING SO THE COMMISSION FAILS TO PROTECT CORRELATIVE RIGHTS

SPE Paper 7463 theorized that the use of high volume lift installation ("HVL") in a natural water-drive reservoir would result in an apparent increase in oil rate over that expected with conventional lift methods.

While SPE Paper 7463 discussed only increasing rate and recovery for an individual well and expressed no conclusions about

increasing ultimate oil recovery for the pool, both Enserch and Phillips installed submersible pumps and initiated high volume lift ("HVL") in an effort to increase oil recoveries.

As of January 1, 1995, it is estimated that approximately 492,000 barrels of oil remained to be recovered by four wells in the pool.

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 Nos. 1 and 2.

Because the bottom current perforations in these three wells are at the same correlative structural position and because both Phillips and Enserch were using HVL equipment, it was anticipated that the Phillips wells should have been able to protect its spacing units from drainage by Enserch when Enserch increased its oil production rates.

But Phillips' efforts were not successful because the permeability in the bottom perforations in the Enserch well is "tight" while its upper perforations have better permeability and because those upper perforations are also structurally higher than those in the Phillips wells, Enserch is able to increase its oil rate by draining oil from Phillips' adjoining spacing units. And Phillips' despite its efforts to do so cannot protect its spacing units from drainage by Enserch.

The Commission's approval of this unfair "uncompensated net drainage" by Enserch establishes a **new precedent** for the regulation of oil and gas industry in New Mexico.

Prior to the adoption of the Oil & Gas Act, oil and gas operators in New Mexico engaged in the "Rule of Capture" which allowed any operator is produce his oil well at capacity regardless of the adverse effect on either the reservoir or on the correlative rights of his neighbors.

With the adoption of the Oil & Gas Act, New Mexico modified the Rule of Capture and established limits on oil allowables so that a high capacity "Super-Star" well in a common source of supply would not

impair the correlative rights of the owners of the adjoining low capacity wells.

This order is contrary to the New Mexico Oil Gas Act and now allows Enserch's "Super-Star" to produce at such a high rate that it drains a substantial portion of the remaining oil production from Phillips.

This Order established a precedent unique in the field of oil and gas conservation in New Mexico.

POINT IV:

FINDING (11) IS NOT SUPPORTED BY SUBSTANTIAL EVIDENCE AND ADOPTS AN ARBITRARY AND CAPRICIOUS REASON TO SUPPORT INCREASING THE OIL ALLOWABLE FOR THIS POOL

Finding (11) is incorrect and not supported by substantial evidence. Contrary to Finding (11) and apart from the expectations of SPE Paper 7463 and contrary to the results contended by Enserch, the installation of the HVL for the Enserch Lambirth "A" Well No. 1 has resulted in dramatic increases in the water-cut of this well. An examination of Enserch's Exhibit 11 shows that when produced with the rod pump the water-cut was approximately 84% but then dramatically increased to 88% with the use of the large HVL pump.

Apart from the expectations of the SPE Paper 7463 and contrary to the results predicted by Enserch, the installation of the HVL for the Enserch Lambirth "A" Well No 1 has not demonstrated anything except that this is an acceleration in the rate of oil production.

Phillips presented evidence which demonstrated that the increase in the oil allowable will benefit only one well in the pool, the Enserch well, and will cause that higher capacity oil well to drain the oil from the adjoining spacing units which cannot be protected by their existing wells thereby impairing correlative rights.

An oil allowable of greater than 267 BOPD increases the rate of total fluids withdrawn from the Enserch well which creates a pressure differential in the reservoir which increases oil production by draining oil from the down-structure Phillips spacing unit.

All Enserch has demonstrated is that it now has the capacity to dramatically increase its drainage of the Phillips' spacing units.

POINT V:

FINDING (12) IS NOT SUPPORTED BY SUBSTANTIAL EVIDENCE AND ADOPTS AN ARBITRARY AND CAPRICIOUS REASON TO SUPPORT INCREASING THE OIL ALLOWABLE FOR THIS POOL

Finding (12) is not supported by substantial evidence and adopts an arbitrary and capricious reason to support increasing the oil allowable for this pool.

Phillips wells in the pool were drilled approximately seventeen (17) years ago. None of them has experienced collapsed casing.

If Enserch is experience "frequent collapse" of casing in its wells in the area then obviously Enserch has employed inferior drilling and completion methods on their wells causing them to suffer casing collapse.

Phillips should not be penalized for Enserch's poor completion practices.

POINT VI:

FINDING (13) IS WRONG AND IS NOT SUPPORTED BY SUBSTANTIAL EVIDENCE AND ADOPTS AN ARBITRARY AND CAPRICIOUS REASON TO SUPPORT INCREASING THE OIL ALLOWABLE FOR THIS POOL

Finding (13) is wrong and is not supported by substantial evidence and adopts an arbitrary and capricious reason to support increasing the oil allowable for this pool.

Finding (13) confuses "initial water breakthrough" with "current water-oil ratios" and in doing so addresses an irrelevant issue and ignores a critical relevant issue.

What the Commission should have been concerned about was whether all four remaining producing wells during the same period were being affected by water encroachment at the same rate and not whether initial water breakthrough had occurred. The uncontested evidence is that these wells are not being affected equally by water encroachment.

Contrary to Finding (13), Phillips presented detailed geologic and petroleum engineering evidence to demonstrate that structure has a significant effect on well performance and that "water break-through" has not uniformly affected all the remaining wells to the point that that issue can be ignored.

Phillips demonstrated that continuity of the reservoir clearly supports the fact that the production from Enserch's up-structure well has had and will continue to affect the immediate down-structure offsetting Phillips' wells.

The evidence further demonstrated that approval of the increased oil allowable will cause excessive water migration increasing the water-oil ratios which in turn will decrease oil recovery for the down-structure oil wells thereby violating correlative rights by denying Phillips the opportunity to recover its share of the remaining oil.

POINT VII:

THERE IS NO SUBSTANTIAL EVIDENCE TO SUPPORT FINDING (14) CONCERNING THE COMMISSION REASON FOR GRANTING THE INCREASED ALLOWABLE

There is no substantial evidence to support Finding (14) as a reasonable basis upon which to grant an increase in oil allowable.

The Commission creates an arbitrary distinction between the point in time when an oil pool produces oil with low water-oil ratios ("clean-oil") from that later period when the wells are experiencing increased water production. Based upon that arbitrary distinction, the Commission decides that it no longer has a duty to protect correlative rights in the later stages of recovery from this pool.

It is not valid for the Commission to allow correlative rights to be violated in a pool with higher water-oil ratios but to seek to protect them only when that pool is in the early stages of production. It unacceptable to pick some arbitrary point in the life of a pool and then say the Commission will no longer protect correlative rights.

The fact that three of the four wells produce large volumes of water does not mean all wells have equivalent water-oil ratios.

In this pool, the wells still have dramatic differences in water-oil ratios:

Phillips Lambirth "A" Well No 1 = 70 barrels of water/one BO
Phillips Lambirth "A" Well No 1 = 21 barrels of water/one BO
Phillips Lambirth "A" Well No 1 = 0 barrels of water/one BO
Enserch Lambirth Well No 1 = 8 barrels of water/one BO

The Commission is factually wrong when it presumes that these four wells are all virtually "watered out" and are at the same stage of depletion. The Commission is wrong when it fails to protect correlative rights for a pool "in the later stages of pool life."

POINT VIII:

FINDING (15) VIOLATES CORRELATIVE RIGHTS

While Enserch contended that increasing the rate to 500 BOPD allowable would add an additional 456,000 barrels of recoverable oil, Enserch failed to present any supporting data, engineering calculations or other studies to demonstrate it was adding to total pool recovery and that they could do so without harming Phillips.

Under the existing 267 BOPD allowable, the Enserch Lambirth Well No. 1 already has produced 980,000 barrels of oil and has drained 800 acres which amounts to 38% of the total oil in the entire pool while only having 20% of the original oil in place under this spacing unit.

Now of the remaining 492,00 barrels oil yet to be produced, Enserch is to be rewarded by allowing them to produce 159,00 barrels of oil to which Phillips is entitled.

The only way Enserch is adding additional reserves is by taking them from Phillips. The modern technology which the Commission seeks to encourage is nothing more than high capacity drainage of Phillips which until now the Commission has always precluded.

POINT IX:

ORDER R-5771-C WAS ADOPTED BY THE COMMISSION BASED UPON AN INCORRECT UNDERSTANDING OF "BURDEN OF PROOF"

In its enthusiasm to reward Enserch for "successfully applying modern technology", the Commission improperly shifted the "Burden of Proof" to Phillips to demonstrate that Enserch's application was impairing Phillips' correlative rights.

It is not Phillips' burden to prove that this applicant will harm it. To the contrary, it is the Applicant's Burden of Proof to persuade the Commission that it will not.

The following is presented to guide the Commission in understanding the legal concept of "Burden of Proof." The term "proof" is the end result of conviction or persuasion produced by the evidence. The term encompasses two separate burdens of proof: one is the burden of producing evidence and the second is the burden of persuading the trier of fact that the alleged fact is true.

In this case, the alleged fact is that the approval of this application will prevent waste and protect correlative rights. The Applicant always retains the ultimate burden of producing evidence AND the burden of persuasion of those two basic and fundamental issues. The Applicant's failure to provide evidence of the volume of additional oil which would not otherwise be recovered from the pool; of shift in recoverable reserves between spacing units; of the drainage areas of the wells; or of the decline rates on the wells, is a failure of the Applicant to meet its "Burden of Proof."

It is improper to put the Applicant's failure of proof on the Opponent.

POINT X:

THE COMMISSION VIOLATED THE FASKIN, THE VIKING PETROLEUM AND THE CONTINENTAL OIL CASES WHEN IT FAILED TO ADDRESS AND DECIDE THE OPPONENTS' ISSUES AND OBJECTIONS

The Commission is required to make findings of ultimate facts which are material to the issues and to make sufficient findings to disclose the reasoning of the Commission in reaching its ultimate findings with substantial support in the record for such findings. Fasken

v. Oil Conservation Commission, 87 N.M. 292, 532 P.2d 588 (1975). Continental Oil Company v. Oil Conservation Commission, 70 N.M. 310, 373 P.2d 809 (1962).

Likewise, in Viking Petroleum v. Oil Conservation Commission, 100 N.M. 451, 453, 672 P.2d 280 (1983), the New Mexico Supreme Court reiterated its opinions in Continental Oil and Fasken, that administrative findings by the Commission should be sufficiently extensive to show the basis of the order and that findings must disclose the reasoning of the Commission in reaching its conclusions.

It is not enough in this case for the Commission to find that Enserch "application of modern technology" will increase the recovery from one well. The Commission needs to articulate its decision on each of the issues which were opposed by Phillips.

The Commission failed to explain why it omitted findings concerning ultimate oil recovery. A rehearing is required, if for no other reason than for the Commission to adopt an adequate order which complies with state law.

POINT XI:

THE COMMISSION FAILED TO ENFORCE THE LAWFUL ORDER OF THE DIVISION AND THEREBY ESTABLISHED A PRECEDENT FOR VIOLATION OF CORRELATIVE RIGHTS

Regardless of its decision, the Commission established a precedent when it failed to explain or address the issue of Enserch's violation of Division Order R-5771-B when for more than five (5) months Enserch continued to produce its well at a rate of 550 BOPD despite being limited to only 267 BOPD.

As a result of its overproduction, Enserch has produced an estimated 30,000 barrels of oil in excess of its allowable and to the impairment of Phillips' correlative rights. Now, the Commission excuses the violation of Division Order R-5771-B by making its order retroactive so as to cancel out this overproduction.

With limited resources, the Division operates under the assumption that the oil and gas operators it regulates will voluntarily comply with the rules, regulations and orders of the Division. In this case, Enserch has chosen to ignore a specific order entered by the Division. The Commission has condoned this violation by Enserch and in doing so sends a message to the oil and gas industry that there is no consequences either in terms of fines or penalties for violating Division Orders and Rules.

Violation of Order R-5771-B and the resulting impairment of correlative rights should be referred to the Division Director to institute appropriate fines and/or penalties against Enserch.

The retroactive granting of Enserch's application is contrary to law and violates Phillips' correlative rights.

CONCLUSION

Phillips petitions the Commission to:

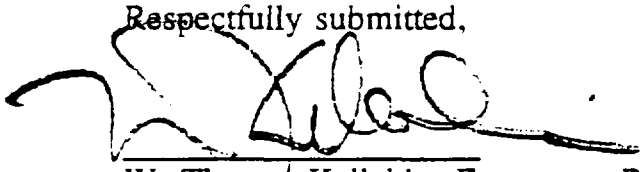
(a) withdraw Order R-5771-C and substitute Phillips' proposed order which is attached hereto as Exhibit "B" and incorporated herein by reference; or in the alternative

(b) should vacate Order R-5771-C and grant a Rehearing to address:

1. The new evidence issues raised herein, and/or
2. all of the other issues set forth in this Application for Rehearing.

In order to preserve Opponents' right to further appeals of this matter, all of the issues set forth in our proposed Order R-5771-C are made a part of this Application for Rehearing.

Respectfully submitted,



W. Thomas Kellahin, Esq.
KELLAHIN & KELLAHIN
P.O. Box 2265
Santa Fe, New Mexico 87504
(505) 982-4285

Reese B. Copeland, Esq.
Phillips Petroleum Company
4001 Penbrook, Suite 216
Odessa, Texas 79762
(915) 368-1278

ATTORNEYS FOR PHILLIPS PETROLEUM COMPANY

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

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

DE NOVO
CASE NO. 10994
ORDER NO. R-5771-C

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

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:00 a.m. on February 23, 1995, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this [illegible] day of April, 1995, the Commission, a quorum being present, having considered the testimony and the record, and being fully advised in the premises.

FINDS THAT:

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

(2) By Division Order No. R-5771, dated July 17, 1978, the South Peterson-Fusselman Pool was defined and created for the production of oil from the Fusselman formation. The horizontal limits for said pool included the following described lands in Roosevelt County, New Mexico:

TOWNSHIP 5 SOUTH, RANGE 32 EAST, NMPM
Section 25: SE/4
Section 36: NE/4

TOWNSHIP 5 SOUTH, RANGE 33 EAST, NMPM
Section 30: S/2
Section 31: All

TOWNSHIP 6 SOUTH, RANGE 33 EAST, NMPM

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

(3) Said Order No. R-5771, as amended by Division Order No. R-5771-A, promulgated special rules and regulations for the South Peterson-Fusselman Pool which established 80-acre spacing and proration units and designated well location requirements. This pool is operated under these special rules and regulations and the General Rules of the Division which set a depth bracket allowable for an 80-acre unit of 267 barrels of oil per day and a limiting gas/oil ratio of 2,000 cubic feet of gas per barrel of oil which results in a casinghead gas allowable of 534 MCF per day.

(4) The applicant in this matter, Enserch Exploration, Inc. ("Enserch"), now seeks the assignment of a special depth bracket allowable for the South Peterson-Fusselman Pool, pursuant to General Rule 505(d), of 500 barrels of oil per day to replace the current depth bracket allowable for said pool of 267 barrels of oil per day.

(5) There are currently three operators in the subject pool: Enserch, Phillips Petroleum Company, and Bledsoe Petro Corporation.

(6) Phillips Petroleum Company ("Phillips"), who currently operates three wells in said Pool, appeared at the hearing and presented geologic and petroleum engineering evidence in opposition to increasing the oil allowable in the subject Pool.

(7) The Fusselman formation in this pool is a highly fractured fine to coarse crystaline to sucrosic grey dolomite which exhibits a dual porosity system consisting of a fracture system and a matrix system. A strong bottom water drive with an edge water drive component is the reservoir drive mechanism in the South Peterson-Fusselman Pool, which results in wells with high water cuts. Currently there are six wells producing from this pool, one of which is outside of the structural feature being shared by the other five wells all in Section 31, Township 5 South, Range 33 East, NMPM, Roosevelt County, New Mexico.

(8) Evidence presented by Enserch suggests that:

(a) the Enserch Lambrith Well No. 1, located in Unit "K" of said Section 31 is the best well in the pool because it occupies the highest structural position in the pool and has the best quality of reservoir rock and has the potential to produce at a rate in excess of 500 barrels of oil per day;

(b) 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;

(c) the reservoir is in an advanced state of depletion with the oil in the fracture system having been produced and displaced with water and the remaining oil production coming primarily from the matrix;

(d) increasing the production rate of total fluids from wells in this pool creates a pressure differential in the reservoir which increases oil production from the matrix and lowers water cuts;

(e) Enserch Exhibit No. 9, "SPE paper 7463 presented October 1, 1979 in Houston, Texas at the 53rd Annual Fall Technical Conference and Exhibition of the Society of Petroleum Engineers of A.I.M.E.", showed that from water drive reservoirs in West Texas, high volume lift is an effective means of increasing rates and ultimate recovery. Based upon this technical paper, Enserch theorized that by adding large submersible pumps which could lift 3,000 barrels of fluids per day in certain wells, additional oil recovery could be attained in the Pool.

(f) increasing the allowable to 500 barrels of oil per day per well would enable Enserch to recover an additional 456,000 barrels of oil that would otherwise be lost.

(9) In opposition, Phillips presented evidence which suggests that:

(a) the aforementioned Enserch Lambrith Well No. 1 is situated at the highest structural portion of the reservoir being 38 feet higher in their perforations at the top of the reservoir;

(b) By increasing the oil allowable Enserch would accelerate edge water advancement into the reservoir and water out the Phillips wells prematurely;

(c) as a result of previous test with the installation of submersible pumps in both the Phillips' wells a dramatic increase in water production was observed and Phillips was not able to achieve the kind of results hypothecated in SPE paper 7463;

(d) increasing the rate of the oil allowable in this pool would serve to benefit only one well in the pool, the Enserch Lambrith Well No. 1, and will have an adverse effect on the Phillips wells by increasing the rate of water inflow into the Phillips wells because of increased edge water drive caused by the increased pressure differential.

(10) Correlative rights are defined as the opportunity of owners in a pool to produce their share of oil and gas utilizing their share of reservoir energy. Phillips exercised their right to the available reservoir energy in 1992 by installing submersible pumps in their Lambrith A1 and A2 wells. They viewed their effort as unsuccessful even through the oil rate and a proportional amount of water increased in both cases. Phillips was able to use the available reservoir energy, a natural water drive, to increase the oil rate in both of their wells and thus protected their correlative rights.

(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 water/oil ratio. 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 time remaining to produce the South Peterson Fusselman Pool reserves may be constrained by the frequent collapse of casing in wells in 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.

(14) Granting a special allowable in this specific case of a naturally fractured reservoir producing large amounts of water from all wells in the later stages of pool life is a different situation than one in which the reservoir is producing clean oil in a competitive situation early in the primary life of a pool. The presence of an oil column over the pump is not sufficient evidence in itself to justify an increase in the allowed rate.

(15) Enserch successfully applied modern technology to increase oil recoveries and should be granted their request for a higher allowable.

IT IS THEREFORE ORDERED THAT:

(1) The application of Enserch Exploration, Inc. for the assignment of a special depth bracket allowable for an 80 acre unit in the South Peterson-Fusselman Pool, Roosevelt County, New Mexico, pursuant to General Rule 505(d), of 500 barrels of oil per day to replace the current depth bracket allowable for said pool of 267 barrels of oil per day is hereby APPROVED effective June 1, 1994.

(2) All other provisions of the Special Rules and Regulations for the South Peterson-Fusselman Pool, as promulgated by Division Order No. R-5771, as amended shall remain in full force and effect until further notice.

(3) Jurisdiction of this cause is 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 COMMISSION

GARY CARLSON, Member

WILLIAM W. WEISS, Member

WILLIAM J. LEMAY, Chairman

S E A L

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 (DeNovo)
ORDER NO. R-5771-C

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 COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:00 a.m. on February 23, 1995, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this ____ May, 1995, the Commission, a quorum being present, having considered the testimony and the record, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Commission 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) On August 16, 1979, the Division issued Order R-5771-A which made these rules permanent and which have remained unchanged for approximately sixteen years.

(4) There are now only two operators, Enserch Exploration Inc ("Enserch") and Phillips Petroleum Company ("Phillips") and only four wells capable of producing the remaining oil within the same structural feature of this pool all in Section 31, T5S, R33E, NMPM:

Enserch's operated Lambirth Well No 1 (Unit K)
Phillips' operated Lambirth "A" Well No 1 (Unit J)
Phillips' operated Lambirth "A" Well No. 2 (Unit F)
Phillips' operated Lambirth "A" Well No. 3 (Unit N)

(5) 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 than that expected with conventional lift methods. (See Enserch Exhibit 10 "SPE paper 7463 presented October 1, 1979")

(6) While SPE Paper 7463 discussed only oil rate increase and expressed no conclusions about increasing ultimate oil recovery, both Enserch and Phillips installed submersible pumps and initiated high volume lift ("HVL") in an effort to increase ultimate oil recovery of the remaining recoverable oil from this pool.

(7) As of January 1, 1995, it is estimated that approximately 492,000 barrels of oil remained to be recovered by these four wells.

(8) On May 5, 1994, the Division's Supervisory-Hobbs granted Enserch's request for a special twenty (20) day temporary allowable of up to 335 BOPD so that Enserch could produce its well and obtain test data **but** specifically required that:

> "if the application for additional allowable is not granted the production from the well will be curtailed back until the overage is made up."

(9) On May 17, 1994, Enserch applied to the Division for an order to increase the maximum daily oil allowable from 267 BOPD to 500 BOPD in the Pool which was docketed as Case 10994 and heard on June 23, 1994.

(10) Phillips appeared at the Division hearing and presented geologic and petroleum engineering evidence in opposition to increasing the oil allowable in the Pool.

(11) On November 3, 1994, the Division entered Order R-5771-B in case 10994 **denying** Enserch's application.

(12) Despite having its application denied and being limited to an oil allowable of 267 BOPD, Enserch continued to produce its Lambirth Well No. 1 in Unit K at an average daily rate of approximately 550 BOPD.

(13) As of the Commission hearing held on February 23, 1995, Enserch had produced an estimated total of 30,000 barrels of oil from its well in excess of its allowable.

(14) Before the Commission and 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 four remaining producing wells all located within the same structural feature of the same portion of reservoir;

(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) 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.

(e) increasing the allowable to 500 barrels of oil per day would enable Enserch to recover an additional 456,000 barrels of oil that would not be recovered.

(14) 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;

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

(c) the SPE paper theorized that once 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;

(d) because the bottom current perforation in these three wells are at the same correlative structural position and because Phillips was using the same sized HVL equipment, then it was anticipated that the Phillips wells should have been able to obtain the increased oil production achieved by Enserch.

(e) but Phillips' efforts were not successful because the permeability in the bottom perforations in the Enserch well is poor ("tight") while upper perforations have better permeability and are also structurally higher than in the Phillips's wells, Enserch is able to increase its oil rate by draining oil from Phillips' adjoining spacing units. (See Phillips' Exhibit 4).

(f) an oil allowable of greater than 267 BOPD increases the rate of total fluids withdrawn from the Enserch well which creates a pressure differential in the reservoir which increases oil production by draining oil from the down-structure Phillips' spacing units.

(g) a plot of the production curve for the Phillips Lambirth A Well No. 1 in October 1992 shows that the installation of a submersible pump resulted in a dramatic increase in the water cut--a result diametrically opposed to and contrary with the Enserch's conclusion;

(h) a plot of the production curve for the Phillips Lambirth A Well No. 2 shows that the installation of a submersible pump in February, 1992 resulted in a dramatic increase in the water cut---a result inconsistent with and contrary to the Enserch's conclusion and expectation;

(i) apart from the expectations of the SPE, and contrary to the results predicted by Enserch (Enserch Exhibit 11), the installation of a HVL for the Enserch Lambirth "A" Well No. 1 has resulted in dramatic increases in the water-cut of this well;

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

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

(l) 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;

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

(n) the Enserch Lambirth 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 Commission 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 an increase in the daily oil rate **and does not** in fact prove that increase oil rate will increase ultimate oil recovery;

(b) Enserch based its application on a production test but failed to supply any engineering calculations to demonstrate the effect its requested rate of 500 BOPD would have on the drainage patterns for all four wells in the pool;

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

(d) 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 159,000 barrels;

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

(f) well test data from the subject wells including actual production data, indicates that higher oil production rate in the Enserch well 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.

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

(a) 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;

(b) **only** the higher structure, high capacity Enserch Lambirth No. 1 Well is capable of producing in excess of the 267 BOPD allowable. Phillips' structurally lower wells will never be capable of producing at this rate;

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

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

(e) 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 reliable engineering calculations 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) It appears that correlative rights were impaired by Enserch as a result of its violation of Order R-5771-B and this matter should be referred to the Division Director to consider instituting fines and/or penalties against Enserch.

(13) In addition, Enserch should be ordered to immediate cease all production from the subject Lambirth No. 1 Well and that said well shall be shut-in pending a determination by the Division of the total volume of over-production and how that over-production should be made up.

(14) 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) That Enserch Exploration, Inc. is hereby order to immediately shut-in its Lambirth Well No. 1 located in Unit K of Section 31, T5S, R33E, NMPM, Roosevelt County, New Mexico.

(3) That the Director of the Oil Conservation Division shall immediately initiate a hearing to determine the total volume of over-production attributable to the Enserch Exploration Inc.'s Lambirth Well No. 1 and to issue such fines and/or penalties against Enserch Exploration, Inc. as are appropriate.

(4) 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 COMMISSION

Gary Carlson. Member

William W. Weiss, Member

William J. LeMay, Chairman

seal

ILLEGIBLE

FAULTS

EROSIONAL UNCONFORMITY PINCHOUT

BEFORE THE
OIL CONSERVATION DIVISION
Case No. 10994 DeNovo Exhibit No. 3
Submitted By:
PHILLIPS PETROLEUM
Hearing Date: February 23, 1995

PHILLIPS PETROLEUM COMPANY
PERMIAN BASIN GEOLOGY

SOUTH PETERSON FIELD

ROOSEVELT CO., NEW MEXICO

0 2,000 4,000
SCALE IFEET)

SCALE	1" = 50'	DRAWN BY SCOTT BALKE	DATE
CONTOURED BY	TOP OF FUSSELMAN		

EXHIBIT
1

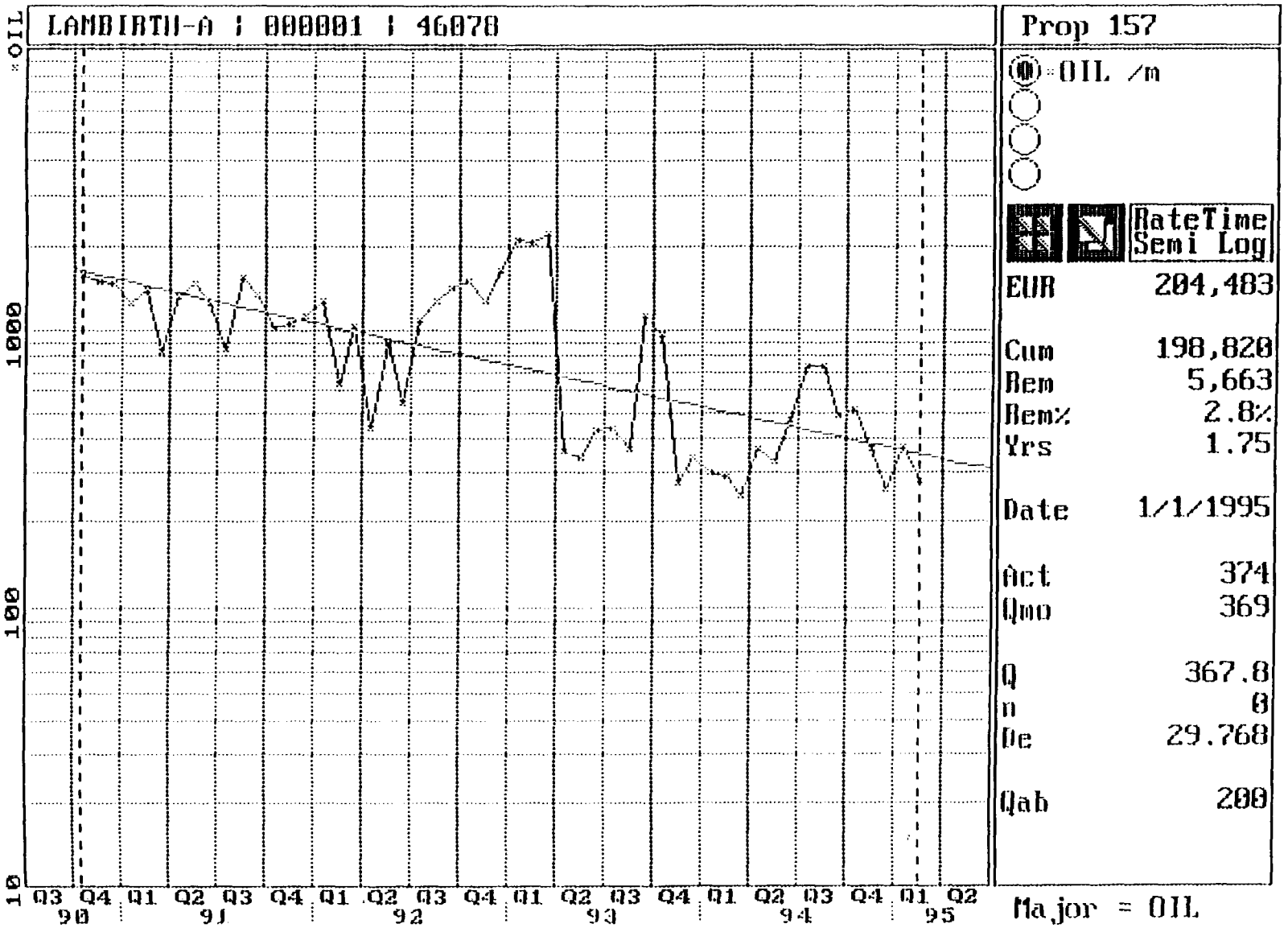

LAMBIRTH-A | 000001 | 46078
Prop 157
OIL /m
RateTime
Semi Log
EUR 204,483
Cum 198,820
Rem 5,663
Rem% 2.8%
Yrs 1.75
Date 1/1/1995
Act 374
Qmo 369
Q 367.8
n 0
De 29.768
Qab 200
Major = OIL
OIL
1000
100
10
Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2
90 91 92 93 94 95

EXHIBIT
2

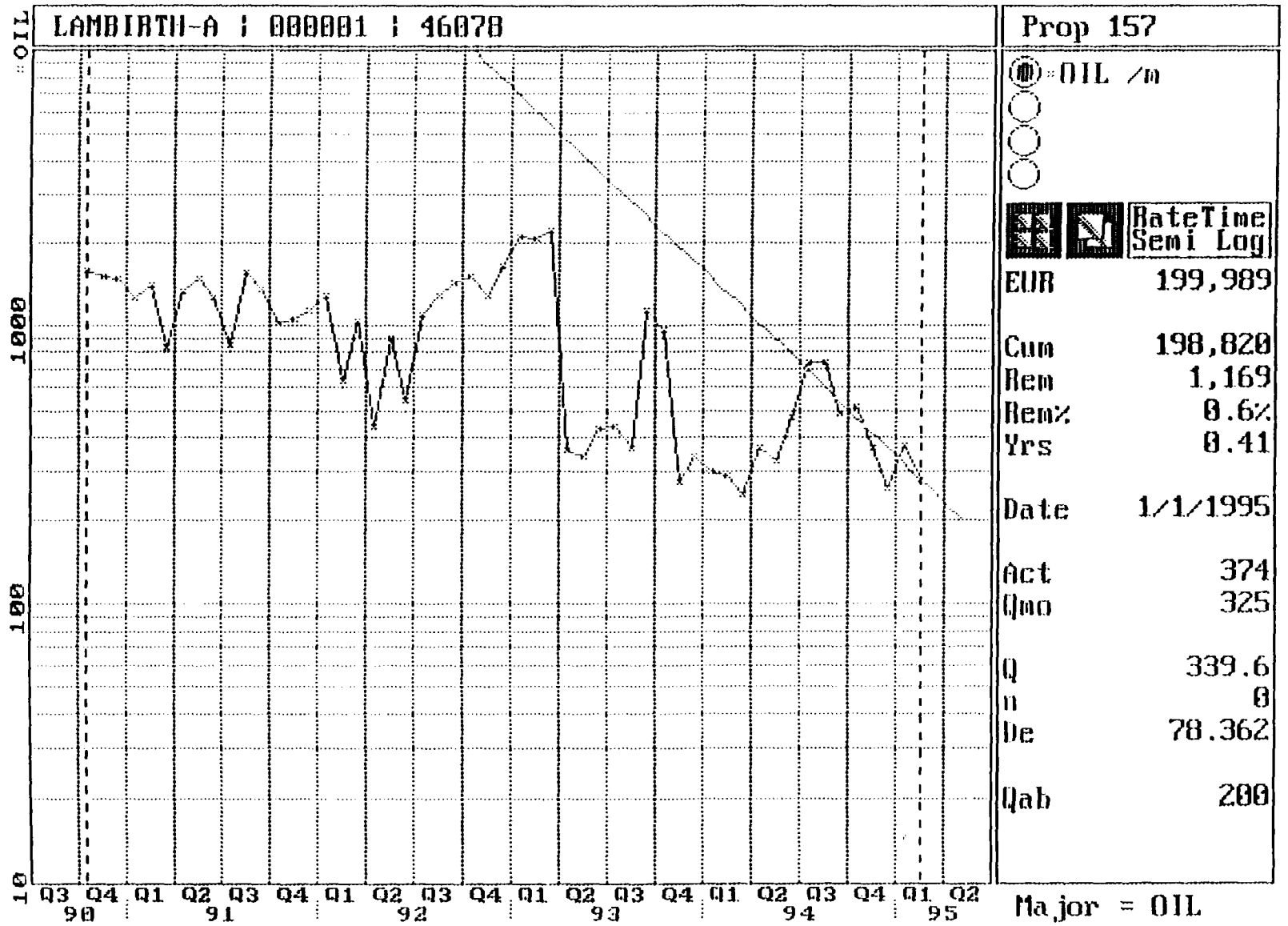

LAMBIRTH-A | 000001 | 46078
Prop 157
OIL /m
RateTime
Semi Log
EUR 199,989
Cum 198,820
Rem 1,169
Rem% 0.6%
Yrs 0.41
Date 1/1/1995
Act 374
Qmo 325
Q 339.6
n 0
De 78.362
Qab 200
OIL
1000
100
10
Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2
90 91 92 93 94 95
Major = OIL

EXHIBIT
3

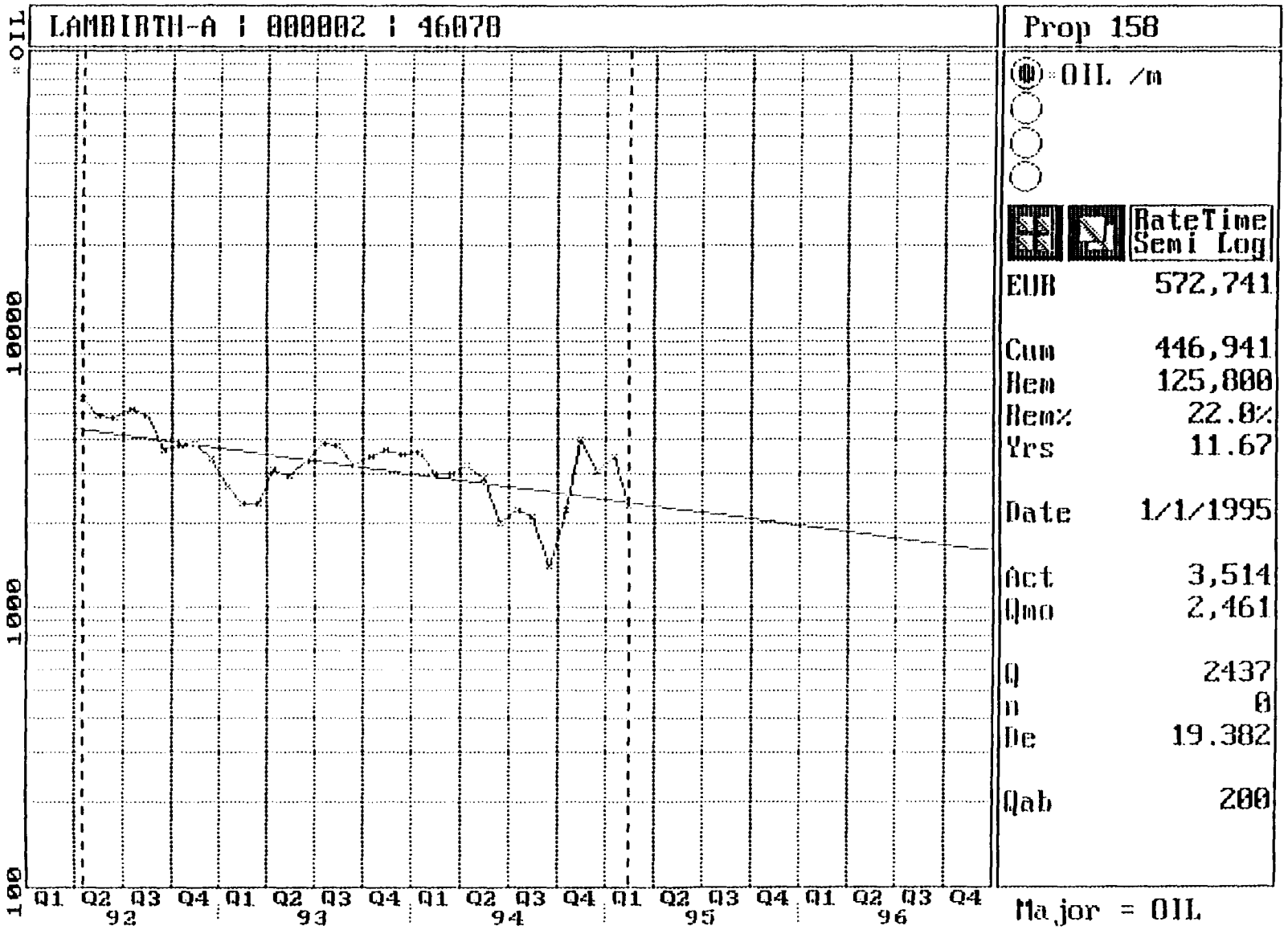

LAMBIRTH-A | 000002 | 46070
Prop 158
OIL /m
RateTime
Semi Log
EUR 572,741
Cum 446,941
Rem 125,800
Rem% 22.8%
Yrs 11.67
Date 1/1/1995
Act 3,514
Qmo 2,461
Q 2437
n 0
De 19.382
Qab 200
Major = OIL
1000
100
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
92 93 94 95 96

EXHIBIT
4

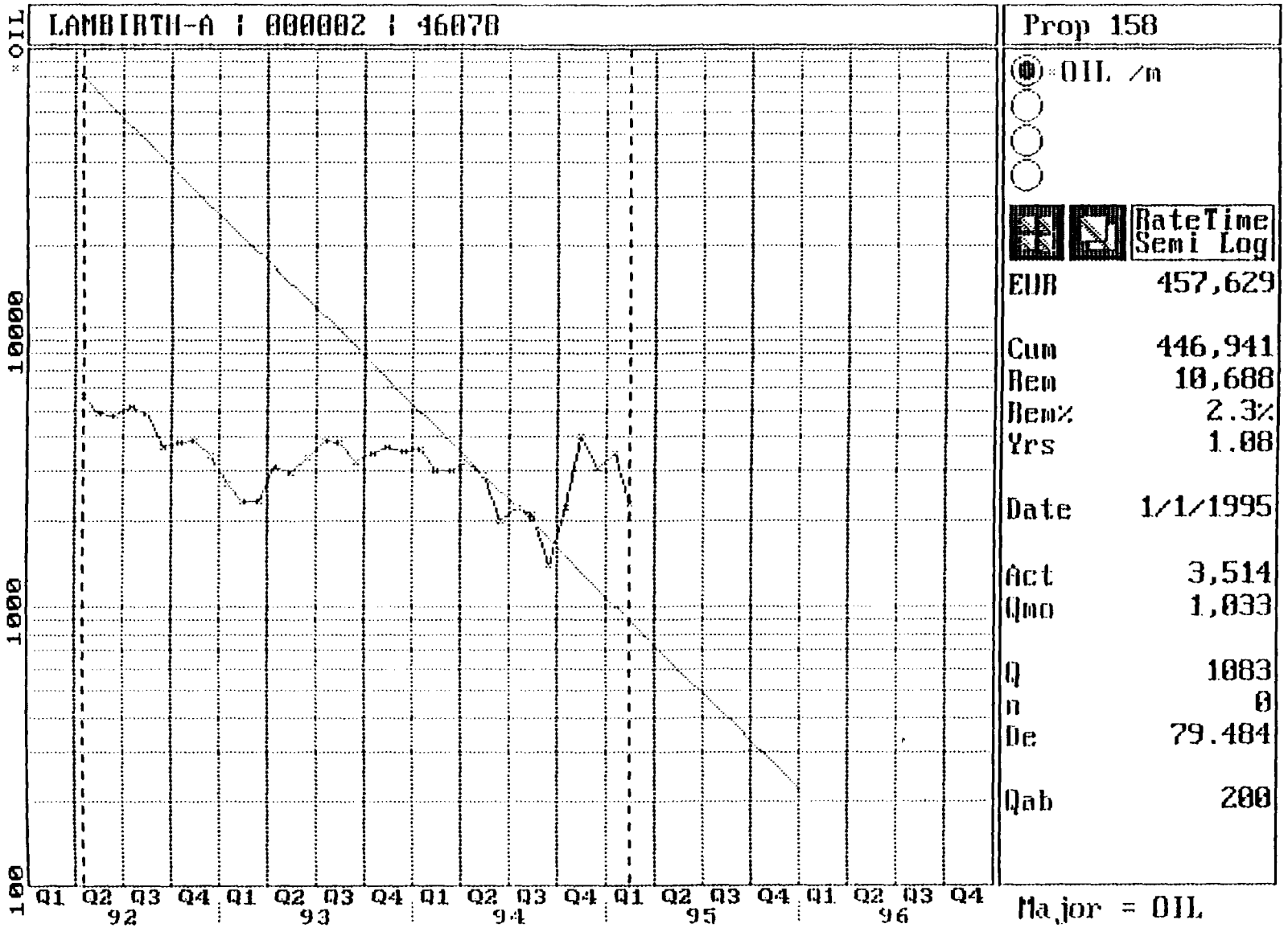

LAMBIRTH-A | 000002 | 46070
OIL
10000
1000
100
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
92 93 94 95 96
Prop 158
OIL /m
RateTime
Semi Log
EUR 457,629
Cum 446,941
Rem 10,688
Rem% 2.3%
Yrs 1.08
Date 1/1/1995
Act 3,514
Qmo 1,033
Q 1083
n 0
De 79.484
Qab 200
Major = OIL

EXHIBIT 5

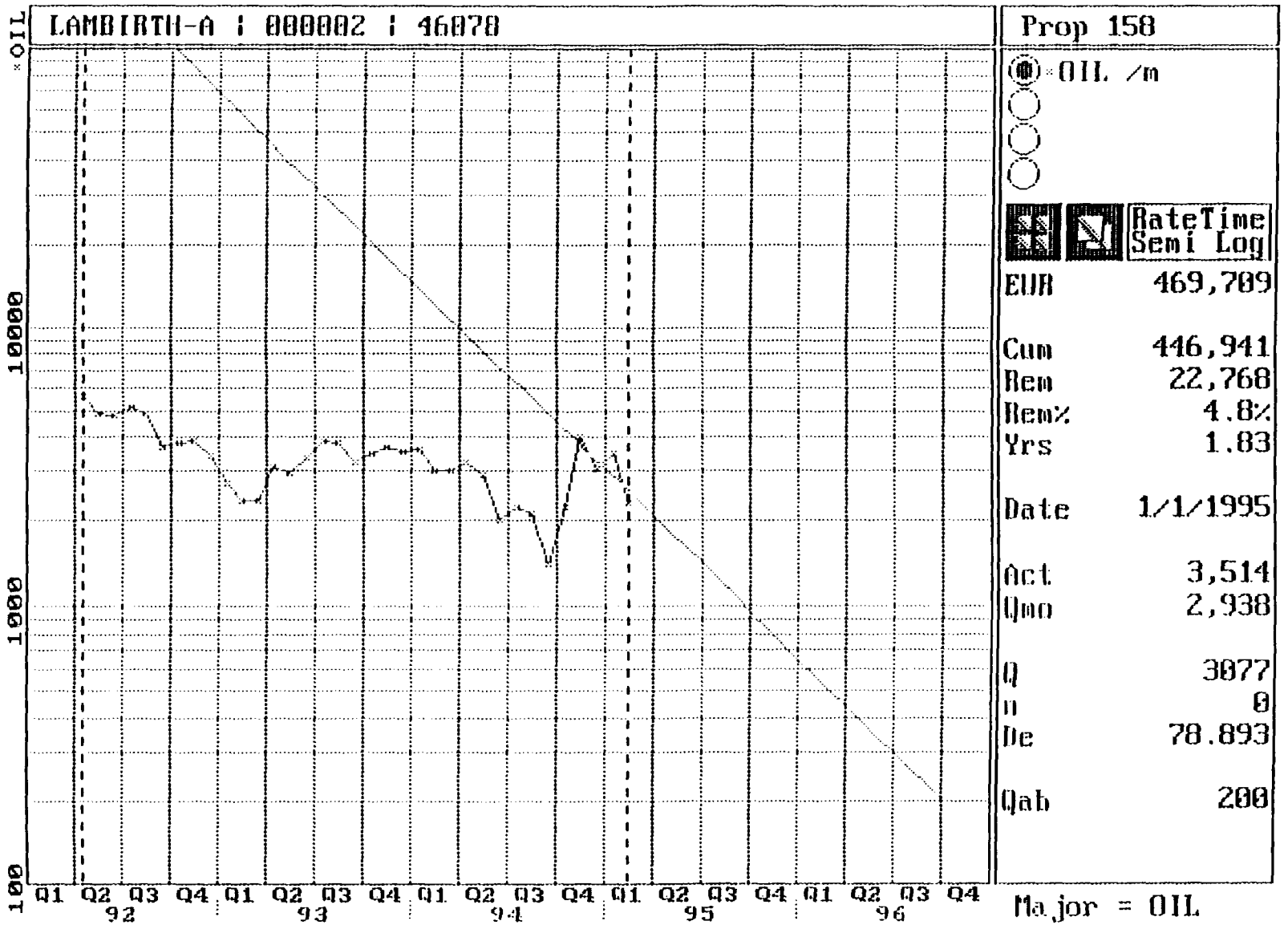

LAMBIRTH-A | 000002 | 46078
OIL
10000
1000
100
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
92
93
94
95
96
Prop 158
OIL /m
RateTime
Semi Log
EUR 469,709
Cum 446,941
Rem 22,768
Rem% 4.8%
Yrs 1.83
Date 1/1/1995
Act 3,514
Qmo 2,938
Q 3077
n 0
De 78.893
Qab 200
Major = OIL

EXHIBIT 6

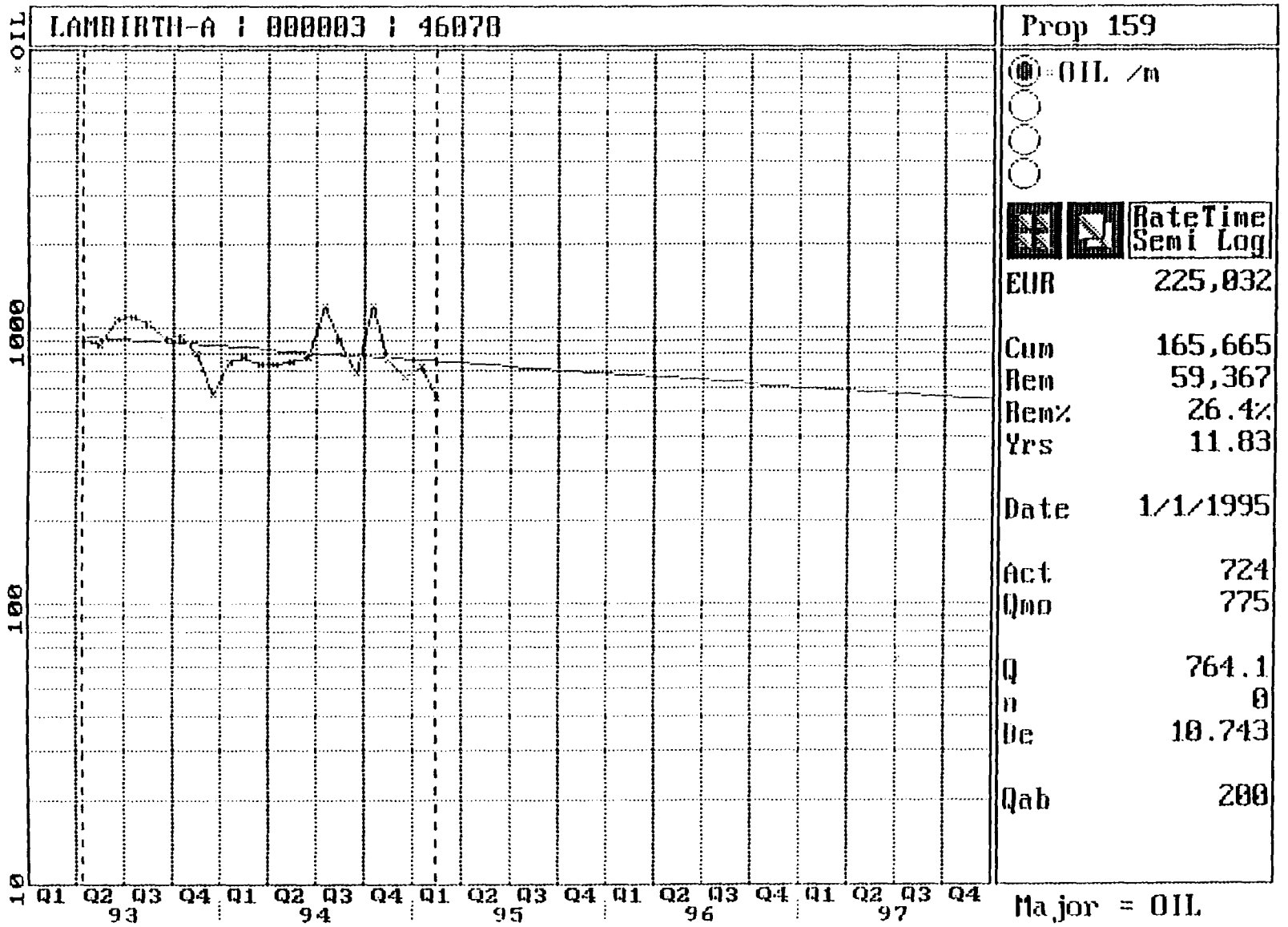
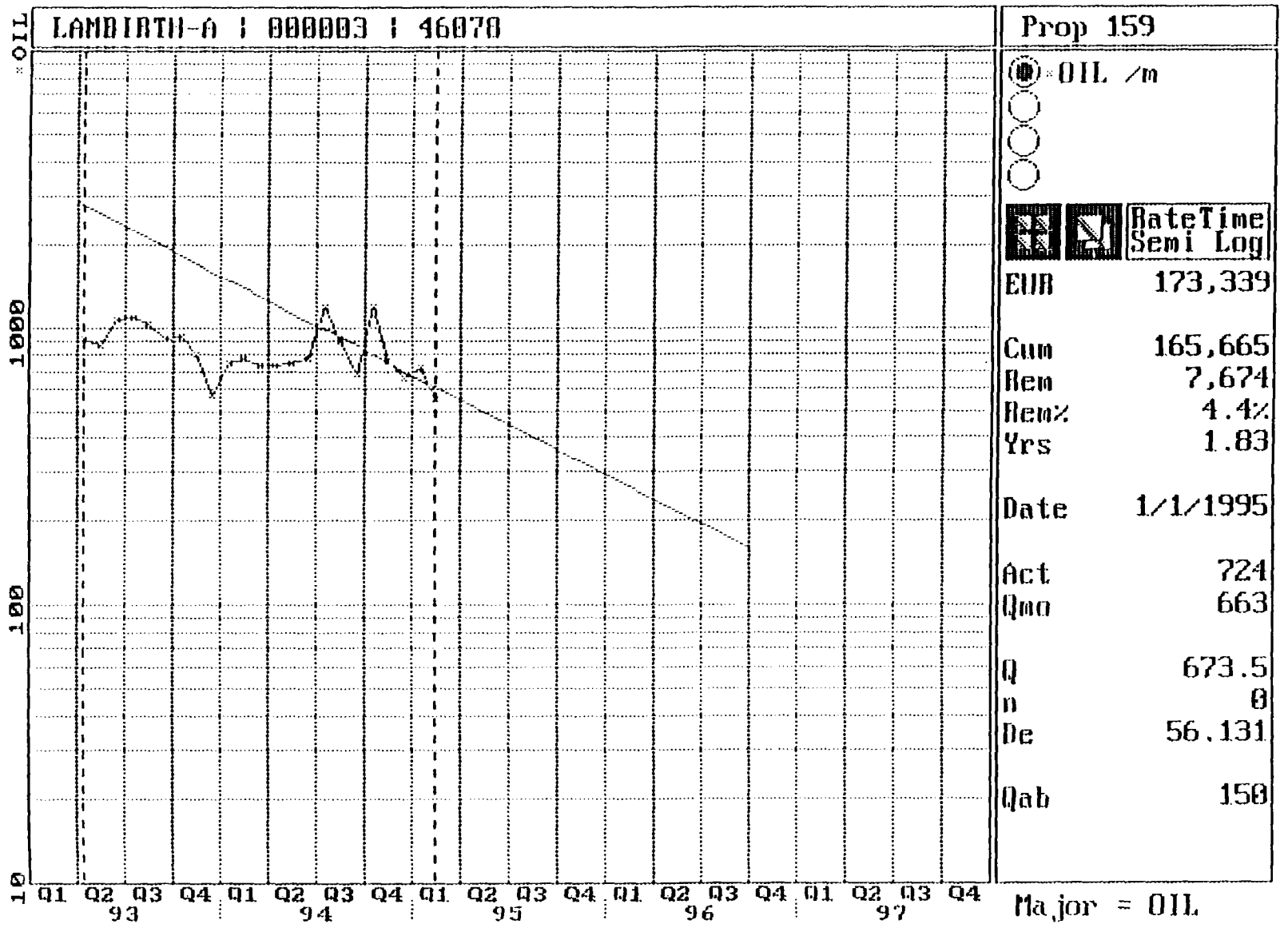

LAMBIRTH-A | 000003 | 46078
OIL
1000
100
10
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
93
94
95
96
97
Prop 159
OIL /m
RateTime
Semi Log
EUR 225,032
Cum 165,665
Rem 59,367
Rem% 26.4%
Yrs 11.83
Date 1/1/1995
Act 724
Qmo 775
Q 764.1
n 0
De 10.743
Qab 200
Major = OIL

EXHIBIT
7


LAMBIRTH-A | 000003 | 46078
Prop 159
OIL /m
RateTime
Semi Log
EUR 173,339
Cum 165,665
Rem 7,674
Rem% 4.4%
Yrs 1.83
Date 1/1/1995
Act 724
Qma 663
Q 673.5
n 0
De 56.131
Qab 150
Major = OIL
OIL
1000
100
10
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
93
94
95
96
97

ENSERCH

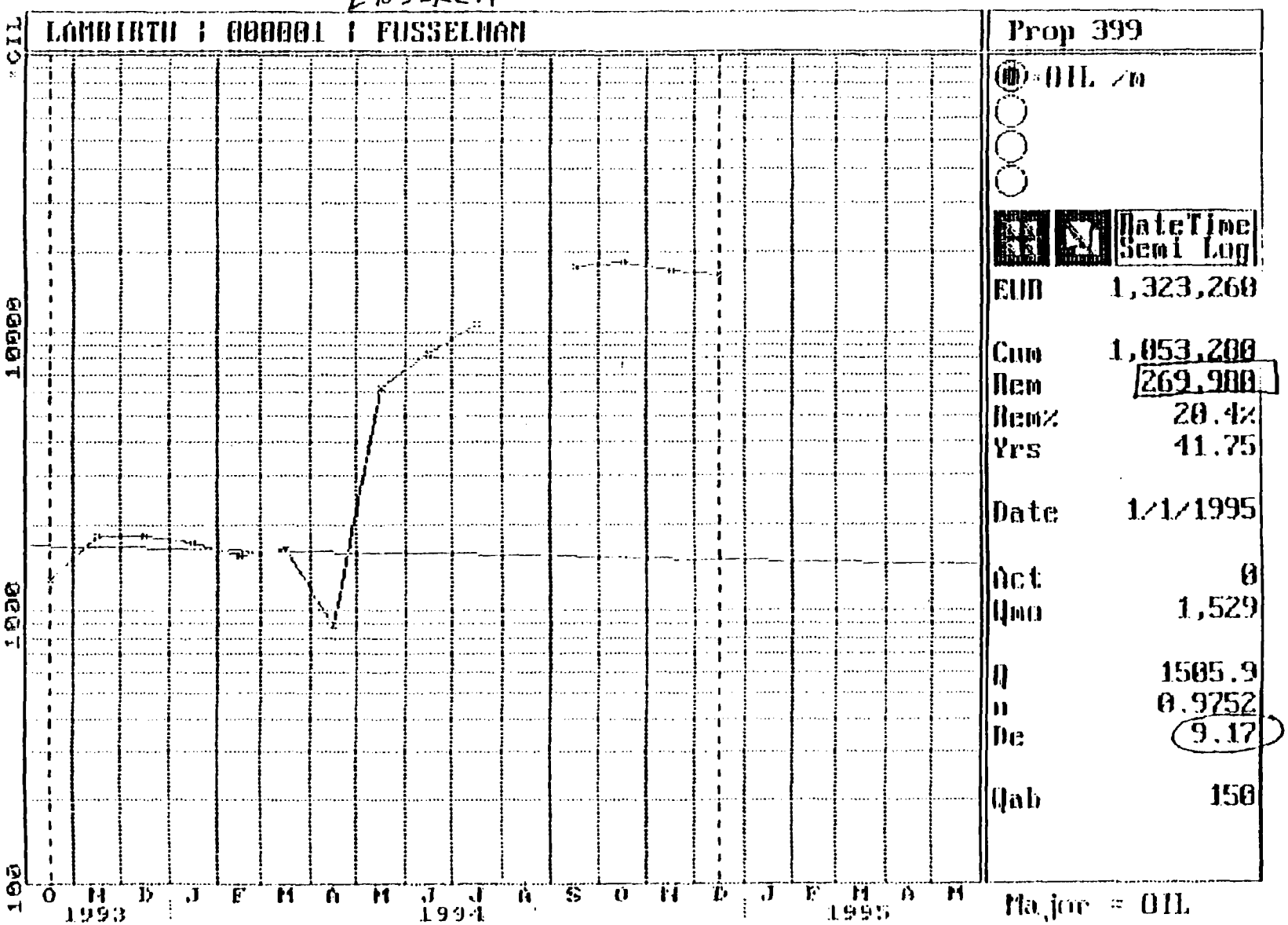


EXHIBIT
8

ENSERCH

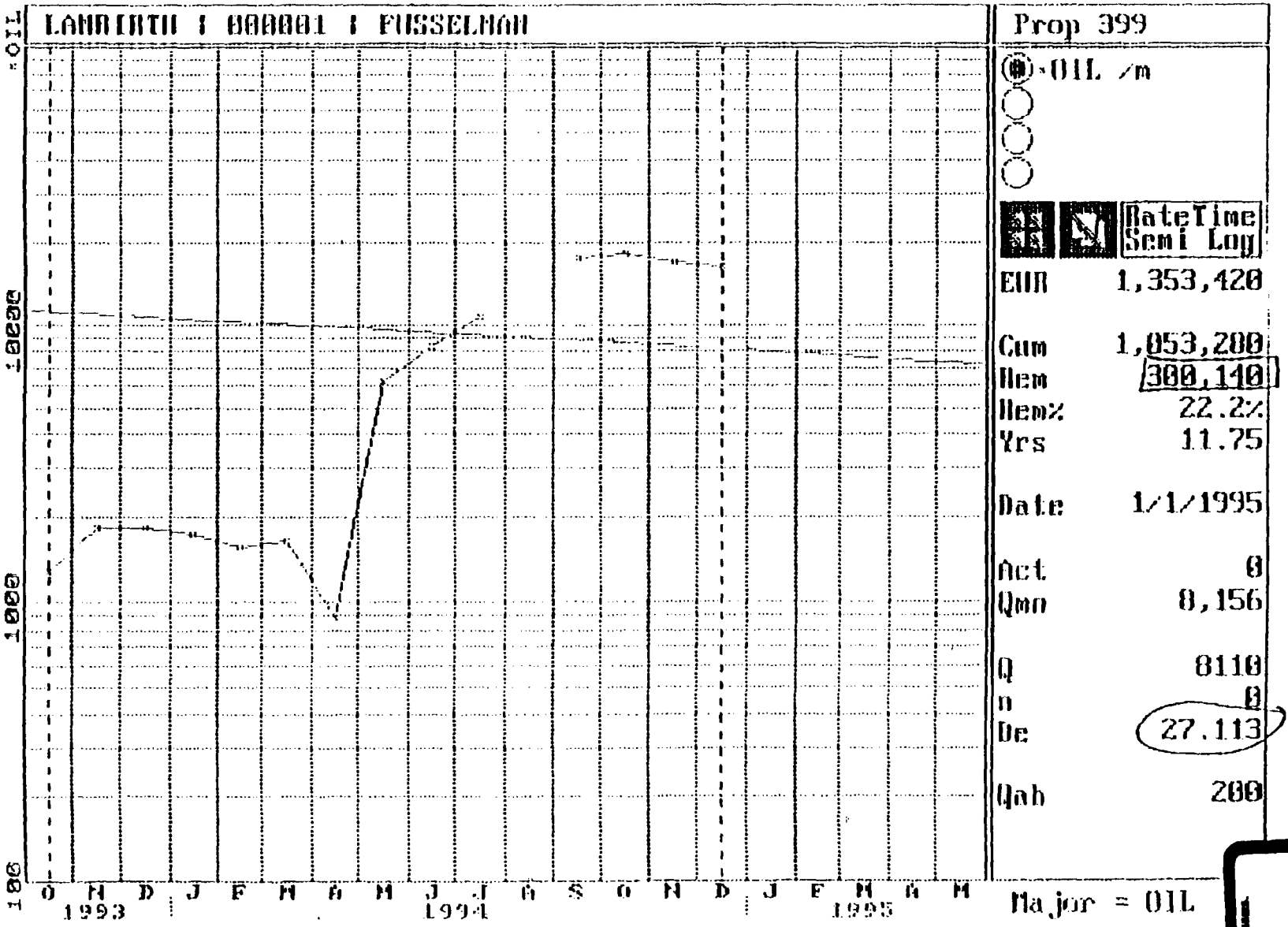
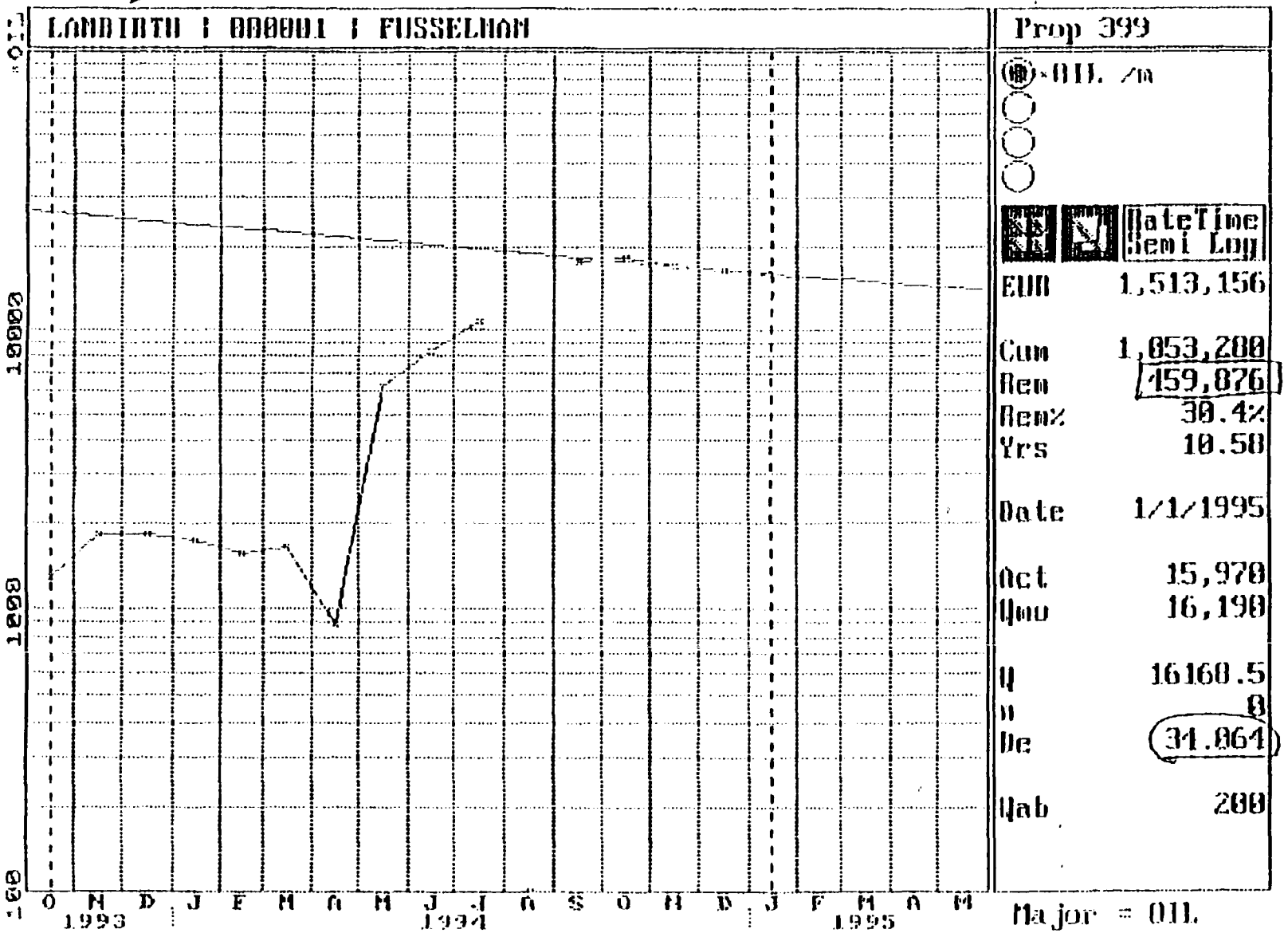


EXHIBIT 9

ENSERCH



EXHIBIT

10