CASE 7072: ENSERCH EXPLORATION INC. FOR POOL CREATION AND SPECIAL POOL RULES, ROOSEVELT COUNTY, NEW MEXICO

Dismiss portion of appl relating to pool creation - pool was created as reg SE nomenclature ~~Cont unit~~ in Lino R-6420

CASE NO.

7072

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,

ETC.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

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February 15, 1982

Mr. William F. Carr
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Attorneys at Law
Post Office Box 2208
Santa Fe, New Mexico 87501

Re: CASE NO. 7072
ORDER NO. R-6554-A

Applicant:

OCD (Enserch Exploration, Inc.)

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCD x
Artesia OCD x
Aztec OCD

Other

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 7072
Order No. R-6554-A

IN THE MATTER OF CASE 7072 BEING REOPENED
PURSUANT TO THE PROVISIONS OF ORDER
NO. R-6554, WHICH ORDER PROMULGATED TEMPORARY
SPECIAL RULES AND REGULATIONS FOR THE
NORTH PETERSON-PENNSYLVANIAN POOL,
ROOSEVELT COUNTY, NEW MEXICO, INCLUDING
A PROVISION FOR 80-ACRE SPACING UNITS.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on January 20, 1982, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 15th day of February, 1982, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That by Order No. R-6554, dated January 14, 1981, temporary special rules and regulations were promulgated for the North Peterson-Pennsylvanian Pool, Roosevelt County, New Mexico, establishing temporary 80-acre spacing units.

(3) That pursuant to the provisions of Order No. R-6554, this case was reopened to allow the operators in the subject pool to appear and show cause why the North Peterson-Pennsylvanian Pool should not be developed on 40-acre spacing units.

(4) That the evidence establishes that one well in the North Peterson-Pennsylvanian Pool can efficiently and economically drain and develop 80 acres.

(5) That the Special Rules and Regulations promulgated by Order No. R-6554 have afforded and will afford to the owner of each property in the pool the opportunity to produce his just and equitable share of the gas in the pool.

(6) That in order to prevent the economic loss caused by the drilling or unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, the Special Rules and Regulations promulgated by Order No. R-6554 should be continued in full force and effect until further order of the Commission.

IT IS THEREFORE ORDERED:

(1) That the Special Rules and Regulations governing the North Peterson-Pennsylvanian Pool, Roosevelt County, New Mexico, promulgated by Order No. R-6554, are hereby continued in full force and effect until further order of the Division.

(2) That 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 DIVISION

JOE D. RAMEY,
Director

SEAL

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO

20 January 1982

EXAMINER HEARING

IN THE MATTER OF:

Case No. 7072 being reopened on the Motion of the Oil Conservation Division and pursuant to the provisions of Order No. R-6554. CASE 7072

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: W. Perry Pearce, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant: William F. Carr, Esq.
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DANIEL C. RENOULT

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MR. STAMETS: Call next Case Number 7072.

MR. PEARCE: This is in the matter of Case Number 7072 being reopened on the motion of the Oil Conservation Division and pursuant to the provisions of Order No. R-6554, which order promulgated temporary special rules and regulations for the North Peterson-Pennsylvanian Pool in Roosevelt County, New Mexico.

MR. CARR: May it please the Examiner, my name is William F. Carr with the law firm Campbell, Byrd, and Black, P. A., of Santa Fe, appearing on behalf of the applicant.

I have two witnesses to be sworn.

(Witnesses sworn.)

THOMAS E. BROWN

being called as a witness and being duly sworn upon his oath testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. CARR:

Q. Would you state your name and place of residence?

A. Thomas E. Brown, Midland, Texas.

Q. Mr. Brown, by whom are you employed and in what capacity?

A. I'm employed as an Area Staff Geologist with Enserch Exploration, Incorporated.

Q. Have you previously testified before this Commission and had your credentials as a geologist accepted and made a matter of record?

A. Yes, I have.

Q. Are you familiar with the application in this case?

A. Yes.

Q. Are you familiar with the subject lands?

A. Yes.

MR. CARR: Are the witness' qualifications accepted?

MR. STAMETS: They are.

Q. Mr. Brown, will you briefly state what Enserch seeks with this application?

A. Enserch seeks permanent field rules in the Peterson North-Penn Field with 80-acre proration units.

Q. Have you prepared certain exhibits for introduction in this case?

A. Yes, I have.

Q. Will you please refer to what has been marked for identification as Enserch Exhibit Number One and review this for Mr. Stamets?

A. Exhibit Number One is a structure map. It's contoured on top of the pay in the field. The scale of the map is one inch equals 2000 feet. The contour interval is 50-foot.

The wells that have been drilled in this area are all indicated on here. There are a few locations, too.

You can see there are six oil wells in the field. There are three in Section 16, the No. 1, 2, and 3 Amoco State. In Section 17 there's the No. 2 and No. 3 Pearl Jordan, and in Section 21 there's the No. 1 Pearl Jordan.

The dark gray area that's on the map is Enserch acreage, either full or partial interest.

The discovery well on here was Enserch No. 1 Amoco State, which is 1980 from the south line and 660 from the west line of Section 16.

Q. Are you currently completing wells in this area?

A. Yes, we are. Down in Section 20, 660 out of the north and east corner, the Enserch No. 1 Scott

Federal Well is being completed now in this same pay, and there's completion efforts, I think we're just waiting on a pump, actually, in the No. 4 Amoco State, which is 2130 from the east line and 660 from the south line of Section 16.

And I think that's been changed to Tri-state No. 1 Enserch State Well, and it's 2130 from the east line and 1980 from the south line in Section 16, and they're presently trying to complete that well.

Q. Have there been any dry holes drilled in this area?

A. Yes, there have been. In Section 21, 1980 from the north line and 660 from the west line, the No. 4 Pearl Jordan was a dry hole in the field.

Q. How close is the North Peterson area to the nearest Pennsylvanian pool?

A. The nearest Pennsylvanian pool is the Peterson-Penn Field, which is in Township 5 South, and you can see this is 4 South, and most of the field is in Section 18 and 19 of 4 South, Range 33 East, or roughly six miles south of this field.

Q. Will you now refer to what has been marked as Enserch Exhibit Number Two and review this for Mr. Stamets?

A. Exhibit Two is a structural cross sec-

tion. It's hung on the subsea datum of -3000 feet. It lists the tops of the formations in the lower part of the section for the area. You can see most of the wells are TD'd in the Mississippian limestone.

The pays for the two wells on this, which are the No. 2 Pearl Jordan and the No. 3 Pearl Jordan, there in Section 21, I believe, Section 17, I'm sorry, and it shows the pays, where they're perforated, at this Peterson lime -- we call the Peterson lime because it's the same pay as in the Peterson-Penn Field six miles south.

It's just for information purposes, showing you where the wells are completed. These are the same pays that are in Section 16, also.

Q. And it shows a correlation between all the zones in -- on the cross section?

A. Yes, it does.

Q. And are these zones also the producing intervals in the -- well, in the discovery well?

A. Yes.

Q. Do you have anything further to add to your testimony?

A. No.

Q. Were Exhibits One and Two prepared by you?

A. Yes.

MR. CARR: At this time, Mr. Stamets, we would offer into evidence Enserch Exhibits One and Two.

MR. STAMETS: These exhibits will be admitted.

MR. CARR: I have nothing further on direct.

CROSS EXAMINATION

BY MR. STAMETS:

Q. Mr. Brown, I assume the thrust of your testimony is that this pay, as far as geologically speaking is continuous throughout the North Peterson area?

A. Yes. Of course the dry hole defines the limits to the south, and if we're unable to complete those wells to the east, the east side will be defined, and I think the Well No. 3 in Section 16, the Amoco State 3, is probably pretty close to the north limits of the field.

We haven't defined it westward.

Q. In several places on Exhibit Number One you show the letters WOC. What do those stand for?

A. Those were drafting -- at the time we had this map they -- they were waiting on completion units. That's what it is.

Q. Okay. What type of drive mechanism do you have in this pool?

A. This -- I'm -- I'm pretty sure it's pressure depletion.

Q. Okay.

MR. STAMETS: Any other questions of this witness? He may be excused.

MR. CARR: Call Mr. Renoult.

DANIEL C. RENOULT

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. CARR:

Q. Will you state your name and place of residence?

A. My name is Daniel C. Renoult, residing in Midland, Texas.

Q. By whom are you employed and in what capacity?

A. By Enserch Exploration, Inc., as a District Petroleum Engineer.

Q. Mr. Renoult, have you previously testi-

fied before this Commission and had your credentials as an engineer accepted and made a matter of record?

A. Yes, I have.

Q. Are you familiar with the application in this case?

A. Yes, sir.

Q. Are you familiar with the subject acreage?

A. Yes, sir.

MR. CARR: Are the witness' qualifications acceptable?

MR. STAMETS: They are.

Q. Will you please refer to what has been marked for identification as Enserch Exhibit Number Three, identify this, and explain what it shows?

A. Exhibit Number Three is a tabulation of all the Pennsylvanian oil pools drilled in southeast New Mexico on 80 and 160-acre spacing.

This list indicates that thirteen Pennsylvanian oil pools are drilled on 80-acre spacing and nine Pennsylvanian oil pools are drilled on a spacing of 160 acres.

Enserch is seeking permanent field spacing of 80 acres in the North Peterson-Pennsylvanian Pool in Roosevelt County, New Mexico.

Q. Will you now refer to Enserch Exhibit Number Four?

A. Exhibit Number Four is a well data sheet pertinent to the discovery well, the Enserch Exploration, Inc., Amoco State Well No. 1, which was completed on June the 4th of 1980, through the Pennsylvanian zone in the interval from 7826 feet to 7837 feet.

The well was initially potentialed on June the 6th, of June, June the 6th of 1980, at a rate of 132.5 barrels oil per day, 2 barrels of water per day. and 232 Mcf of gas per day, with a gas/oil ratio of 1045 standard cubic feet per barrel.

The well had a flowing tubing pressure of 150 psi against a 20/64th inch choke.

On page two and three of Exhibit Number Four is included the production history of the Amoco State Well No. 1;as of November, 1981, the cumulative production from the well amounted to 41,701 barrels of oil over an eighteen months period.

Page number four, five, and six of Exhibit Number Four consist of a series of open hole logs run through the Pennsylvanian pay zone in the Amoco State Well No. 1.

The first log is a formation density

compensated neutron log; the second log is a dualatero log microspherically focused log; and the last log is a borehole compensated sonic log.

Log evaluation indicated eight feet of net pay with an average porosity of 3 percent.

Pressure build-up analysis gave a permeability of 4.7 millidarcy through the pay zone.

A four-day pressure build-up was conducted from June the 6th till June the 11th of 1980. Pressure build-up analysis indicated an initial reservoir pressure of 2740 psi. This data will be presented in one of the following exhibits.

Q. Will you now review Exhibit Number Five for Mr. Stamets?

A. Exhibit Number Five is a well data sheet document, the Amoco State Well No. 2.

This well was initially perforated through Upper Pennsylvanian formation from 7825 feet to 7841 feet and from 7848 feet to 7855 feet.

The well was initially potentialed flowing at a rate of 327 barrels oil per day, water free, with a gas/oil ratio of 367-to-1.

The well had a flowing tubing pressure of 12 pounds against a 14/64th inch choke.

The well was worked over in November and early December, 1981, to reduce excessive water production, due to a possible channel. During this rework the well was cement block squeezed, reperforated through the Pennsylvanian zone from 7825 feet to 7835 feet and reacidized with 1000 gallons of mud clean-up acid.

Because of a lengthy workover operation conducted, the Amoco State Well No. 2 in November and December, 1981, oil production from the Amoco State Lease dropped from 7132 barrels of oil in October, 1981, to 3521 barrels of oil in November, 1981.

On page two and three of Exhibit Number Five is given the production history of the Amoco State Well No. 2. This well produced 58,124 barrels of oil the first fourteen months of production.

Page four and five of Exhibit Five give logs run through the pay zone of the subject well. Log evaluation indicated 15 feet of net pay with an average porosity of 3 percent.

Pressure build-up analysis indicated a permeability of 26.1 millidarcy through the pay zone.

The well was drill stem tested and the pressure build-up analysis was conducted. The Amoco State Well No. 2 in early November, 1980, indicated a reservoir

pressure of 2633 psi. This pressure data will also be presented in one of the following exhibits.

Q Will you now review Exhibit Six for Mr. Stamets?

A. Exhibit Number Six is a well data sheet pertinent to the Amoco State Well No. 3. This well was initially perforated from 7834 feet to 7840 feet and acidized in February, 1981.

The well was initially potentialed on April 24th of 1981, pumping at a rate of 37 barrels oil per day with a gas/oil ratio of 540 standard cubic feet per barrel.

Because of its limited production the first five months, additional Pennsylvanian perforations were added and stimulated in September, 1981, from 7841 feet to 7850 feet. These new perforations have not increased the deliverability of the Amoco State Well No. 3, indicating that the field may be bounded to the north by a permeability pinchout.

On page two and three of Exhibit Number Three is provided the production history of the Amoco State Well No. 3.

The Amoco State Well No. 3 produced only 5795 barrels of oil the first eight months of production.

Page number four and five gives the suite of logs run in the subject well. No drill stem test or pressure build-up were conducted in the Amoco State Well No. 3.

Q. Will you now review Exhibit Number Seven?

A. Exhibit Number Seven is a well data sheet pertinent to Pearl Jordan Well No. 1, drilled in Section 21.

This well was tested through Pennsylvanian formation from 7804 feet to 7817 feet and acidized with 3000 gallons of MOD 202 acid. The well swabbed dry in three hours with no show of gas and oil, indicating a tight reservoir.

Eventually the Amoco State Well No. 3 -- the Pearl Jordan Well No. 3 was completed through a Pennsylvanian formation from 8016 feet to 8024 feet. The well was potentialed --

Q. Is this the No. 3 well or the No. 1 that you're talking about?

A. Pearl Jordan Well No. 1.

The Pearl Jordan Well No. 1 was reperforated from 8016 feet to 8024 feet and potentialed pumping at a rate of 27 barrels oil per day with a gas/oil ratio of 1331 standard cubic feet of gas per barrel.

The production history of this well is provided on page two and three, indicates the Pearl Jordan Well No. 1 produced only 1491 barrels of oil the first 135 days of production.

Like the Amoco State Well No. 3 located to the north, the Pearl Jordan Well No. 1 located to the south indicates that the pool is bounded by a porosity-permeability pinchout.

The last six pages of Exhibit Number Seven gives -- give the suite of logs run through the Pennsylvanian formation in the subject well.

No drill stem test or pressure build-up were conducted in the Pearl Jordan Well No. 1.

Q. Will you now review Exhibit Number Eight for Mr. Stamets?

A. Exhibit Number Eight pertains to the Pearl Jordan Well No. 2, located northwest of the Pearl Jordan Well No. 1 in Section 17.

This well was perforated through a Pennsylvanian formation from 7830 feet to 7848 feet overall, and acidized with 3000 gallons of 15 percent acid.

The well was initially potentialed on March 11th, 1981, flowing at a rate of 266 barrels oil per day, with a gas/oil ratio of 808 standard cubic feet of gas

per barrel.

The well had a flowing tubing pressure of 410 pounds against a 14/64th inch choke.

Page two and three of Exhibit Number Eight give the production history of the Pearl Jordan Well No. 2. As of November, 1981, the Pearl Jordan Well No. 2 produced 58,187 barrels of oil over a nine month period.

The last two pages of Exhibit Number Three include a suite of logs run in the Enserch Exploration Pearl Jordan Well No. 2.

Log evaluation indicated 18 feet of net pay with an average porosity of 9 percent.

Pressure build-up analysis indicated permeability of 13 millidarcy through the pay zone. A 46-hour pressure build-up test was conducted in the subject well, yielding a reservoir pressure of 2350 psi. This indicates a pressure drop of 390 psi because of a production of the offset wells producing from the same productive Pennsylvanian zone.

This data will be part of one of the following exhibits.

Q. Mr. Renoult, will you now review Exhibit Number Nine?

A. Exhibit Number Nine pertains to Enserch

Exploration, Inc., Pearl Jordan Well No. 3, located in Section 17.

This well was perforated for a Pennsylvanian formation from 7830 feet to 7852 feet, and acidized with 5000 gallons of 15 percent acid.

The well was initially potentialed on June the 17th of 1981, flowing at a rate of 120 barrels oil per day with a gas/oil ratio of 1417 standard cubic feet of gas per barrel.

The well had a flowing tubing pressure of 100 psi against a 22/64th inch choke.

Page number two and three of this exhibit give a monthly production history of the subject well which produced 17,668 barrels of oil the first 127 days of production.

The last two pages of this exhibit include a suite of open hole logs run in the subject well.

Log evaluation indicated 18 feet of net pay with an average porosity of 6 percent. Bore core analysis of the Pennsylvanian pay zone indicated the presence of numerous fractures and gave an average formation permeability of 9.2 millidarcy. This core data will be presented in one of the following exhibits.

No DST or pressure build-up were con-

ducted in the Enserch Exploration Pearl Jordan Well No. 3.

To conclude this series of first exhibits, I would like to add, the field is fairly well designated from a reservoir standpoint. To the north by the Enserch Exploration Amoco State Well No. 3, with its limited oil production; to the east by the _____ Resources Enserch State Well No. 1 in Section 16. Log evaluation and --------- data indicated very questionable, marginal pay in the Pennsylvanian zone.

The well has not been potentialed.

To the east by the Enserch Exploration Amoco State Well No. 4 with limited producing capacity. The well has not been potentialed and is currently waiting for electricity.

There was water delineated to the south by the Enserch Exploration Pearl Jordan Well NO. 1 in Section 21, which was swabbed dry in three areas. To the south again by the Enserch Exploration Pearl Jordan Well No. 4 in Section 21, this was a dry hole.

The west side of the field the Sun Oil Company is currently drilling its Peterson Well No. 1 in Section 18 and the field will be delineated on the west side when the well would be drilled and completed.

Q Will you now review your well data sheet

which is marked Exhibit Number Ten for Mr. Stamets?

A. Exhibit Number Ten is a tabulation of the well properties for the Peterson-Pennsylvanian Pool.

The average well in the pool has 14 feet of net pay with an average porosity of 6.6 percent and a water saturation of 50 percent.

The average royalty and override burden for the subject pool is equal to 18.75 percent.

Q. Will you now review Exhibit Number Eleven?

A. Exhibit Number Eleven is composed of the production history of the Amoco State Lease on page number one; the Pearl Jordan Lease on page number two; the North Peterson-Pennsylvanian Pool on page number three of Exhibit Number Eleven.

Three wells have been officially potentialed and are producing in the Amoco State Lease, the Amoco State Well No. 1, the Amoco State Well No. 2, and the Amoco State Well No. 3.

The Amoco State Well No. 3 is located near the northern edge of the field and its production is very limited. As of November, 1981, the Amoco Lease produced 105,740 barrels of oil with 94 percent of the production coming from the Amoco State Well No. 1 and No. 2, and 6 per-

cent coming from the Amoco State Well No. 3.

In November, 1981, the best well in the lease, Amoco State Well No. 2, was worked over to reduce excessive water production due to a possible channel. As a result of this workover, production from the Amoco State Lease dropped from 7732 barrels of oil in October, 1981, to 3571 barrels of oil in November, 1981.

Between the months of May, 1981, and October, 1981, oil production from Amoco State Lease was following a constant 70 percent decline for the year.

Page number two of Exhibit Number Eleven gives the production history of the Pearl Jordan Pennsylvanian Lease. Three wells have been officially potentialed and are producing on the Pearl Jordan Lease, the Pearl Jordan Well No. 1, No. 2, and No. 3.

The Pearl Jordan Well No. 1, located on the south edge of the pool, has a very limited production. In November, 1981, the Pearl Jordan Well No. 1 produced only 2 percent of the Pearl Jordan Lease production. Between the months of August and November, 1981, oil production from the Pearl Jordan Lease was following 85 percent decline per year.

The last page of Exhibit Number Eleven gives a total oil production history and forecast for North Peterson-Pennsylvanian Pool. Cumulative oil production

amounted to 183,086 barrels oil as of November, 1981.

Using an average decline rate of 77.5 percent per year, it was established that the total reserves will amount to 316,000 barrels of oil, or 52,600 barrels oil per well, on the average.

It was estimated that in November, 1981, the field had already produced 58 percent of its total reserves.

Q. Will you now refer to Enserch Exhibit Number Twelve and review this?

A. Exhibit Number Twelve gives the production history and forecast for the average North Peterson-Pennsylvanian well.

As evidenced on the previous exhibit, an average yearly decline rate of 77.5 percent was used.

The average Pennsylvanian oil well will recover 52,600 barrels of oil over the four-year life. The production schedule is given on page two of Exhibit Number Twelve.

Q. Will you please review Exhibit Thirteen?

A. Exhibit Number Thirteen gives some calculations to compute how much oil could be recovered from an 80-acre lease.

The average reservoir characteristics

for the subject pool were used. An average net pay of 14 feet; an average porosity of 6.6 percent; an average water saturation of 50 percent; and a recovery factor of 20 percent.

These values indicated that 38,620 barrels oil could be produced from an 80-acre lease.

Since the average well in the subject pool produced 52,600 barrels of oil over a four-year life, the average drainage of a well in the subject pool is equal to 136 acres.

Q. Will you now review Exhibit Fourteen?

A. Exhibit Number Fourteen indicates that after the fourth year of production the average North Peterson Pennsylvanian oil well will have drained 104 acres to reach a total drainage of 136 acres at the end of its producing life.

Q. Will you now review Exhibit Fifteen?

A. The North Peterson Pennsylvanian Pool is currently developed on an 80-acre spacing and its average well will recover 52,600 barrels of oil.

Exhibit Number Fifteen is a comparative economic study between the current well spacing, one well per 80 acres, and a smaller spacing, two wells per 80 acres. This study used a total well cost of $945,750 to drill and

complete an oil well in the subject pool.

This study indicates that one well per 80-acre spacing will generate a net profit of $136,700.

Drilling two wells per 80 acres would generate a loss of $376,900 and a net present worth index of .78. This indicates that with two wells per 80 acres for every dollar invested one will get back only .38 cents.

Q. Will you now refer to Exhibit Sixteen?

A. On Exhibit Number Sixteen is submitted the core data of the Enserch Exploration Pearl Jordan Well No. 3, the only well cored in the field for a Pennsylvanian pay zone.

_____ and analysis of the core was conducted. It indicated the presence of vertical, or randomly oriented fractures in every foot of the core, but Sample No. 15 and 27 are on page number two.

And page number three of Exhibit Number Sixteen, the statistical analysis of available data is provided. It indicated that 18 feet of net pay are present in the Pearl Jordan Well No. 3 with an average formation permeability of 9.2 millidarcy.

Q. Will you now review Exhibit Number Seventeen?

A. Exhibit Number Seventeen is a pressure

build-up analysis of the Amoco State Well No. 1, the discovery well for the North Peterson-Pennsylvanian Pool. A 96-hour pressure build-up was conducted in June, 1980, when the pool was discovered.

The pressure build-up indicated the initial reservoir pressure of the Peterson Pool was equal to 2740 psi. This pressure build-up indicated that the subject well has an average permeability of 4.7 millidarcy. The radius of investigation during this 96-hour pressure build-up was 1562 feet, corresponding to 154 acres.

Q. Mr. Renoult, will you now review Exhibit Number Eighteen?

A. Exhibit Number Eighteen is a pressure build-up analysis on the Amoco State Well No. 2. A 64-hour pressure build-up was conducted in November of 1980, five months after the previous pressure build-up on the Amoco State Well No. 1.

This test indicated the Amoco State No. 2 to have an average permeability of 26.1 millidarcy. The radius of investigation during this 64-hour test was 2819 feet, corresponding to 523 acres. A pressure drop of 107 psi was recorded.

This indicates that in November, 1980, the newly completed Amoco State Well No. 2 had been already

partially depleted by the offset Amoco Well No. 1, located 1420 feet away.

Q. Will you now review Enserch Exhibit Nineteen?

A. Exhibit Number Nineteen, the pressure build-up analysis for Pearl Jordan Well No. 2. The pressure build-up was limited to 46 hours and 30 minutes.

This test indicated that the Pearl Jordan Well No. 2 had an average formation permeability of 13 millidarcy.

Because of the short duration of the test, a radius investigated was only 914 feet. A pressure drop of 390 psi was recorded. This pressure drop indicates that when the Pearl Jordan Well No. 2 was completed in January, 1981, the well had been already pressure depleted by the Amoco State Well No. 1, located 1320 feet east and by the Amoco State Well No. 2, located approximately 1867 feet southeast.

Q. Mr. Renoult, how many acres did you estimate this well would drain?

A. The radius of investigation was only 914 feet, which corresponds to 60 acres.

Q. If you'd run a longer test, would that have affected that figure?

A. Yes. If the test had been conducted for 96 hours, like in the Amoco State Well No. 1, the area investigated would have been 86 acres.

Q. In making your subsequent calculations you did, however, use the data from the 46-1/2 hour test, is that correct?

A. Yes, only 14 -- the results from the test.

Q. All right. Will you now refer to Enserch Exhibit Number Twenty and review this for Mr. Stamets?

A. Exhibit Number Twenty gives a summary of the permeability in the radius of investigation obtained during the three pressure build-ups conducted in the field.

It indicates the average permeability of the Pennsylvanian lime pay is equal to 13.2 millidarcy. The radius of investigation for different pressure build-ups is provided. As indicated previously, the radius of investigation for Pearl Jordan Well No. 2 was equal to only 914 feet because of the short duration of the test.

The pressure drop of 390 psi recorded in the Pearl Jordan No. 2 demonstrates that the Pearl Jordan No. 2 had been partially drained and pressure depleted by the offset producers.

Q. And will you now review Exhibit Number

Twenty-one?

A. Exhibit Number Twenty-one is a graph representing the pressure history of the North Peterson Pennsylvanian Pool. It shows that a drop in reservoir pressure in newly completed wells, indicating an excellent drainage of the reservoir when developed on an 80-acre spacing. Pressure history indicates the total oil reserves from the pool will amount to 307,000 barrels. This figure is in excellent agreement with the 316 barrels of oil derived by decline curves on page three of Exhibit Number Eleven.

Q. Mr. Renoult, would you briefly summarize the conclusions that you can reach from the data which you have presented?

A. The data presented today indicates that we are dealing with a fractured system with a very good permeability. It indicates that the wells are capable of draining more than 80 acres, and some new wells were pressure depleted by some wells located at least 1320 feet away.

Q. Do you have a recommendation to make to the Examiner concerning pool rules for this area?

A. Enserch Exploration, Inc., is asking for special pool rules to be made permanent.

Q. Do you have anything further that you'd like to add to your testimony?

A. No, sir.

Q. Were Exhibits Three through Twenty-one prepared either by you or under your direction and supervision?

A. Yes, sir.

MR. CARR: At this time, Mr. Stamets, we would like to offer Enserch Exhibits Three through Twenty-one into evidence.

MR. STAMETS: These exhibits will be admitted.

Q. Mr. Renoult, in your opinion will granting this application be in the best interest of conservation, the prevention of waste, and the protection of correlative rights?

A. Yes, sir, I agree.

MR. CARR: That concludes our direct examination.

MR. STAMETS: Are there any questions of this witness? He may be excused.

Is there anything further in this case?

MR. CARR: Nothing further.

MR. STAMETS: The case will be taken under advisement.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 7072, heard by me on 6-20 19 81.

Richard L. Stamets, Examiner
Oil Conservation Division

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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO

20 January 1982

EXAMINER HEARING

IN THE MATTER OF:

Case No. 7072 being reopened on the Motion of the Oil Conservation Division and pursuant to the provisions of Order No. R-6554. CASE 7072

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division:	W. Perry Pearce, Esq. Legal Counsel to the Division State Land Office Bldg. Santa Fe, New Mexico 87501
For the Applicant:	William F. Carr, Esq. CAMPBELL, BYRD, & BLACK P.A. Jefferson Place Santa Fe, New Mexico 87501

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MR. STAMETS: Call next Case Number 7072.

MR. PEARCE: This is in the matter of Case Number 7072 being reopened on the motion of the Oil Conservation Division and pursuant to the provisions of Order No. R-6554, which order promulgated temporary special rules and regulations for the North Peterson-Pennsylvanian Pool in Roosevelt County, New Mexico.

MR. CARR: May it please the Examiner, my name is William F. Carr with the law firm Campbell, Byrd, and Black, P. A., of Santa Fe, appearing on behalf of the applicant.

I have two witnesses to be sworn.

(Witnesses sworn.)

THOMAS E. BROWN

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. CARR:

Q. Would you state your name and place of residence?

A. Thomas E. Brown, Midland, Texas.

Q. Mr. Brown, by whom are you employed and in what capacity?

A. I'm employed as an Area Staff Geologist with Enserch Exploration, Incorporated.

Q. Have you previously testified before this Commission and had your credentials as a geologist accepted and made a matter of record?

A. Yes, I have.

Q. Are you familiar with the application in this case?

A. Yes.

Q. Are you familiar with the subject lands?

A. Yes.

MR. CARR: Are the witness' qualifications accepted?

MR. STAMETS: They are.

Q. Mr. Brown, will you briefly state what Enserch seeks with this application?

A. Enserch seeks permanent field rules in the Peterson North-Penn Field with 80-acre proration units.

Q. Have you prepared certain exhibits for introduction in this case?

A. Yes, I have.

Q. Will you please refer to what has been marked for identification as Enserch Exhibit Number One and review this for Mr. Stamets?

A. Exhibit Number One is a structure map. It's contoured on top of the pay in the field. The scale of the map is one inch equals 2000 feet. The contour interval is 50-foot.

The wells that have been drilled in this area are all indicated on here. There are a few locations, too.

You can see there are six oil wells in the field. There are three in Section 16, the No. 1, 2, and 3 Amoco State. In Section 17 there's the No. 2 and No. 3 Pearl Jordan, and in Section 21 there's the No. 1 Pearl Jordan.

The dark gray area that's on the map is Enserch acreage, either full or partial interest.

The discovery well on here was Enserch No. 1 Amoco State, which is 1980 from the south line and 660 from the west line of Section 16.

Q. Are you currently completing wells in this area?

A. Yes, we are. Down in Section 20, 660 out of the north and east corner, the Enserch No. 1 Scott

Federal Well is being completed now in this same pay, and there's completion efforts, I think we're just waiting on a pump, actually, in the No. 4 Amoco State, which is 2130 from the east line and 660 from the south line of Section 16.

And I think that's been changed to Tri-state No. 1 Enserch State Well, and it's 2130 from the east line and 1980 from the south line in Section 16, and they're presently trying to complete that well.

Q. Have there been any dry holes drilled in this area?

A. Yes, there have been. In Section 21, 1980 from the north line and 660 from the west line, the No. 4 Pearl Jordan was a dry hole in the field.

Q. How close is the North Peterson area to the nearest Pennsylvanian pool?

A. The nearest Pennsylvanian pool is the Peterson-Penn Field, which is in Township 5 South, and you can see this is 4 South, and most of the field is in Section 18 and 19 of 4 South, Range 33 East, or roughly six miles south of this field.

Q. Will you now refer to what has been marked as Enserch Exhibit Number Two and review this for Mr. Stamets?

A. Exhibit Two is a structural cross sec-

tion. It's hung on the subsea datum of -3000 feet. It lists the tops of the formations in the lower part of the section for the area. You can see most of the wells are TD'd in the Mississippian limestone.

The pays for the two wells on this, which are the No. 2 Pearl Jordan and the No. 3 Pearl Jordan, there in Section 21, I believe, Section 17, I'm sorry, and it shows the pays, where they're perforated, at this Peterson lime -- we call the Peterson lime because it's the same pay as in the Peterson-Penn Field six miles south.

It's just for information purposes, showing you where the wells are completed. These are the same pays that are in Section 16, also.

Q And it shows a correlation between all the zones in -- on the cross section?

A Yes, it does.

Q And are these zones also the producing intervals in the -- well, in the discovery well?

A Yes.

Q Do you have anything further to add to your testimony?

A No.

Q Were Exhibits One and Two prepared by you?

A. Yes.

MR. CARR: At this time, Mr. Stamets, we would offer into evidence Enserch Exhibits One and Two.

MR. STAMETS: These exhibits will be admitted.

MR. CARR: I have nothing further on direct.

CROSS EXAMINATION

BY MR. STAMETS:

Q. Mr. Brown, I assume the thrust of your testimony is that this pay, as far as geologically speaking is continuous throughout the North Peterson area?

A. Yes. Of course the dry hole defines the limits to the south, and if we're unable to complete those wells to the east, the east side will be defined, and I think the Well No. 3 in Section 16, the Amoco State 3, is probably pretty close to the north limits of the field.

We haven't defined it westward.

Q. In several places on Exhibit Number One you show the letters WOC. What do those stand for?

A. Those were drafting -- at the time we had this map they -- they were waiting on completion units. That's what it is.

Q Okay. What type of drive mechanism do you have in this pool?

A This -- I'm -- I'm pretty sure it's pressure depletion.

Q Okay.

MR. STAMETS: Any other questions of this witness? He may be excused.

MR. CARR: Call Mr. Renoult.

DANIEL C. RENOULT

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. CARR:

Q Will you state your name and place of residence?

A My name is Daniel C. Renoult, residing in Midland, Texas.

Q By whom are you employed and in what capacity?

A By Enserch Exploration, Inc., as a District Petroleum Engineer.

Q Mr. Renoult, have you previously testi-

fied before this Commission and had your credentials as an engineer accepted and made a matter of record?

A. Yes, I have.

Q. Are you familiar with the application in this case?

A. Yes, sir.

Q. Are you familiar with the subject acreage?

A. Yes, sir.

MR. CARR: Are the witness' qualifications acceptable?

MR. STAMETS: They are.

Q. Will you please refer to what has been marked for identification as Enserch Exhibit Number Three, identify this, and explain what it shows?

A. Exhibit Number Three is a tabulation of all the Pennsylvanian oil pools drilled in southeast New Mexico on 80 and 160-acre spacing.

This list indicates that thirteen Pennsylvanian oil pools are drilled on 80-acre spacing and nine Pennsylvanian oil pools are drilled on a spacing of 160 acres.

Enserch is seeking permanent field spacing of 80 acres in the North Peterson-Pennsylvanian Pool in Roosevelt County, New Mexico.

Q Will you now refer to Enserch Exhibit Number Four?

A Exhibit Number Four is a well data sheet pertinent to the discovery well, the Enserch Exploration, Inc., Amoco State Well No. 1, which was completed on June the 4th of 1980, through the Pennsylvanian zone in the interval from 7826 feet to 7837 feet.

The well was initially potentialed on June the 6th, of June, June the 6th of 1980, at a rate of 132.5 barrels oil per day, 2 barrels of water per day, and 232 Mcf of gas per day, with a gas/oil ratio of 1045 standard cubic feet per barrel.

The well had a flowing tubing pressure of 150 psi against a 20/64th inch choke.

On page two and three of Exhibit Number Four is included the production history of the Amoco State Well No. 1;as of November, 1981, the cumulative production from the well amounted to 41,701 barrels of oil over an eighteen months period.

Page number four, five, and six of Exhibit Number Four consist of a series of open hole logs run through the Pennsylvanian pay zone in the Amoco State Well No. 1.

The first log is a formation density

compensated neutron log; the second log is a dualatero log microspherically focused log; and the last log is a borehole compensated sonic log.

Log evaluation indicated eight feet of net pay with an average porosity of 3 percent.

Pressure build-up analysis gave a permeability of 4.7 millidarcy through the pay zone.

A four-day pressure build-up was conducted from June the 6th till June the 11th of 1980. Pressure build-up analysis indicated an initial reservoir pressure of 2740 psi. This data will be presented in one of the following exhibits.

Q Will you now review Exhibit Number Five for Mr. Stamets?

A Exhibit Number Five is a well data sheet document, the Amoco State Well No. 2.

This well was initially perforated through Upper Pennsylvanian formation from 7825 feet to 7841 feet and from 7848 feet to 7855 feet.

The well was initially potentialed flowing at a rate of 327 barrels oil per day, water free, with a gas/oil ratio of 367-to-1.

The well had a flowing tubing pressure of 12 pounds against a 14/64th inch choke.

The well was worked over in November and early December, 1981, to reduce excessive water production, due to a possible channel. During this rework the well was cement block squeezed, reperforated through the Pennsylvanian zone from 7825 feet to 7835 feet and reacidized with 1000 gallons of mud clean-up acid.

Because of a lengthy workover operation conducted, the Amoco State Well No. 2 in November and December, 1981, oil production from the Amoco State Lease dropped from 7132 barrels of oil in October, 1981, to 3521 barrels of oil in November, 1981.

On page two and three of Exhibit Number Five is given the production history of the Amoco State Well No. 2. This well produced 58,124 barrels of oil the first fourteen months of production.

Page four and five of Exhibit Five give logs run through the pay zone of the subject well. Log evaluation indicated 15 feet of net pay with an average porosity of 3 percent.

Pressure build-up analysis indicated a permeability of 26.1 millidarcy through the pay zone.

The well was drill stem tested and the pressure build-up analysis was conducted. The Amoco State Well No. 2 in early November, 1980, indicated a reservoir

pressure of 2633 psi. This pressure data will also be presented in one of the following exhibits.

Q Will you now review Exhibit Six for Mr. Stamets?

A Exhibit Number Six is a well data sheet pertinent to the Amoco State Well No. 3. This well was initially perforated from 7634 feet to 7840 feet and acidized in February, 1981.

The well was initially potentialed on April 24th of 1981, pumping at a rate of 37 barrels oil per day with a gas/oil ratio of 540 standard cubic feet per barrel.

Because of its limited production the first five months, additional Pennsylvanian perforations were added and stimulated in September, 1981, from 7841 feet to 7850 feet. These new perforations have not increased the deliverability of the Amoco State Well No. 3, indicating that the field may be bounded to the north by a permeability pinchout.

On page two and three of Exhibit Number Three is provided the production history of the Amoco State Well No. 3.

The Amoco State Well No. 3 produced only 5795 barrels of oil the first eight months of production.

Page number four and five gives the suite of logs run in the subject well. No drill stem test or pressure build-up were conducted in the Amoco State Well No. 3.

Q Will you now review Exhibit Number Seven?

A. Exhibit Number Seven is a well data sheet pertinent to Pearl Jordan Well No. 1, drilled in Section 21.

This well was tested through Pennsylvanian formation from 7804 feet to 7817 feet and acidized with 3000 gallons of MOD 202 acid. The well swabbed dry in three hours with no show of gas and oil, indicating a tight reservoir.

Eventually the Amoco State Well No. 3 -- the Pearl Jordan Well No. 3 was completed through a Pennsylvanian formation from 8016 feet to 8024 feet. The well was potentialed --

Q Is this the No. 3 well or the No. 1 that you're talking about?

A. Pearl Jordan Well No. 1.

The Pearl Jordan Well No. 1 was reperforated from 8016 feet to 8024 feet and potentialed pumping at a rate of 27 barrels oil per day with a gas/oil ratio of 1331 standard cubic feet of gas per barrel.

The production history of this well is provided on page two and three, indicates the Pearl Jordan Well No. 1 produced only 1491 barrels of oil the first 135 days of production.

Like the Amoco State Well No. 3 located to the north, the Pearl Jordan Well No. 1 located to the south indicates that the pool is bounded by a porosity-permeability pinchout.

The last six pages of Exhibit Number Seven gives -- give the suite of logs run through the Pennsylvanian formation in the subject well.

No drill stem test or pressure build-up were conducted in the Pearl Jordan Well No. 1.

Q. Will you now review Exhibit Number Eight for Mr. Stamets?

A. Exhibit Number Eight pertains to the Pearl Jordan Well No. 2, located northwest of the Pearl Jordan Well No. 1 in Section 17.

This well was perforated through a Pennsylvanian formation from 7830 feet to 7848 feet overall, and acidized with 3000 gallons of 15 percent acid.

The well was initially potentialed on March 11th, 1981, flowing at a rate of 266 barrels oil per day, with a gas/oil ratio of 808 standard cubic feet of gas

per barrel. —

The well had a flowing tubing pressure of 410 pounds against a 14/64th inch choke.

Page two and three of Exhibit Number Eight give the production history of the Pearl Jordan Well No. 2. As of November, 1981, the Pearl Jordan Well No. 2 produced 58,187 barrels of oil over a nine month period.

The last two pages of Exhibit Number Three include a suite of logs run in the Enserch Exploration Pearl Jordan Well No. 2.

Log evaluation indicated 18 feet of net pay with an average porosity of 9 percent.

Pressure build-up analysis indicated permeability of 13 millidarcy through the pay zone. A 46-hour pressure build-up test was conducted in the subject well, yielding a reservoir pressure of 2350 psi. This indicates a pressure drop of 390 psi because of a production of the offset wells producing from the same productive Pennsylvanian zone.

This data will be part of one of the following exhibits.

Q. Mr. Renoult, will you now review Exhibit Number Nine?

A. Exhibit Number Nine pertains to Enserch

Exploration, Inc., Pearl Jordan Well No. 3, located in Section 17.

This well was perforated for a Pennsylvanian formation from 7830 feet to 7852 feet, and acidized with 5000 gallons of 15 percent acid.

The well was initially potentialed on June the 17th of 1981, flowing at a rate of 120 barrels oil per day with a gas/oil ratio of 1417 standard cubic feet of gas per barrel.

The well had a flowing tubing pressure of 100 psi against a 22/64th inch choke.

Page number two and three of this exhibit give a monthly production history of the subject well which produced 17,668 barrels of oil the first 127 days of production.

The last two pages of this exhibit include a suite of open hole logs run in the subject well.

Log evaluation indicated 18 feet of net pay with an average porosity of 6 percent. Bore core analysis of the Pennsylvanian pay zone indicated the presence of numerous fractures and gave an average formation permeability of 9.2 millidarcy. This core data will be presented in one of the following exhibits.

No DST or pressure build-up were con-

ducted in the Enserch Exploration Pearl Jordan Well No. 3.

To conclude this series of first exhibits, I would like to add, the field is fairly well designated from a reservoir standpoint. To the north by the Enserch Exploration Amoco State Well No. 3, with its limited oil production; to the east by the _____ Resources Enserch State Well No. 1 in Section 16. Log evaluation and --------- data indicated very questionable, marginal pay in the Pennsylvanian zone.

The well has not been potentialed.

To the east by the Enserch Exploration Amoco State Well No. 4 with limited producing capacity. The well has not been potentialed and is currently waiting for electricity.

There was water delineated to the south by the Enserch Exploration Pearl Jordan Well NO. 1 in Section 21, which was swabbed dry in three areas. To the south again by the Enserch Exploration Pearl Jordan Well No. 4 in Section 21, this was a dry hole.

The west side of the field the Sun Oil Company is currently drilling its Peterson Well No. 1 in Section 18 and the field will be delineated on the west side when the well would be drilled and completed.

Q Will you now review your well data sheet

which is marked Exhibit Number Ten for Mr. Stamets?

A. Exhibit Number Ten is a tabulation of the well properties for the Peterson-Pennsylvanian Pool.

The average well in the pool has 14 feet of net pay with an average porosity of 6.6 percent and a water saturation of 50 percent.

The average royalty and override burden for the subject pool is equal to 18.75 percent.

Q. Will you now review Exhibit Number Eleven?

A. Exhibit Number Eleven is composed of the production history of the Amoco State Lease on page number one; the Pearl Jordan Lease on page number two; the North Peterson-Pennsylvanian Pool on page number three of Exhibit Number Eleven.

Three wells have been officially potentialed and are producing in the Amoco State Lease, the Amoco State Well No. 1, the Amoco State Well No. 2, and the Amoco State Well No. 3.

The Amoco State Well No. 3 is located near the northern edge of the field and its production is very limited. As of November, 1981, the Amoco Lease produced 105,740 barrels of oil with 94 percent of the production coming from the Amoco State Well No. 1 and No. 2, and 6 per-

cent coming from the Amoco State Well No. 3.

In November, 1981, the best well in the lease, Amoco State Well No. 2, was worked over to reduce excessive water production due to a possible channel. As a result of this workover, production from the Amoco State Lease dropped from 7732 barrels of oil in October, 1981, to 3571 barrels of oil in November, 1981.

Between the months of May, 1981, and October, 1981, oil production from Amoco State Lease was following a constant 70 percent decline for the year.

Page number two of Exhibit Number Eleven gives the production history of the Pearl Jordan Pennsylvanian Lease. Three wells have been officially potentialed and are producing on the Pearl Jordan Lease, the Pearl Jordan Well No. 1, No. 2, and No. 3.

The Pearl Jordan Well No. 1, located on the south edge of the pool, has a very limited production. In November, 1981, the Pearl Jordan Well No. 1 produced only 2 percent of the Pearl Jordan Lease production. Between the months of August and November, 1981, oil production from the Pearl Jordan Lease was following 85 percent decline per year.

The last page of Exhibit Number Eleven gives a total oil production history and forecast for North Peterson-Pennsylvanian Pool. Cumulative oil production

amounted to 183,086 barrels oil as of November, 1981.

Using an average decline rate of 77.5 percent per year, it was established that the total reserves will amount to 316,000 barrels of oil, or 52,600 barrels oil per well, on the average.

It was estimated that in November, 1981, the field had already produced 58 percent of its total reserves.

Q. Will you now refer to Enserch Exhibit Number Twelve and review this?

A. Exhibit Number Twelve gives the production history and forecast for the average North Peterson-Pennsylvanian well.

As evidenced on the previous exhibit, an average yearly decline rate of 77.5 percent was used.

The average Pennsylvanian oil well will recover 52,600 barrels of oil over the four-year life. The production schedule is given on page two of Exhibit Number Twelve.

Q. Will you please review Exhibit Thirteen?

A. Exhibit Number Thirteen gives some calculations to compute how much oil could be recovered from an 80-acre lease.

The average reservoir characteristics

for the subject pool were used. An average net pay of 14 feet; an average porosity of 6.6 percent; an average water saturation of 50 percent; and a recovery factor of 20 percent.

These values indicated that 38,620 barrels oil could be produced from an 80-acre lease.

Since the average well in the subject pool produced 52,600 barrels of oil over a four-year life, the average drainage of a well in the subject pool is equal to 136 acres.

Q Will you now review Exhibit Fourteen?

A. Exhibit Number Fourteen indicates that after the fourth year of production the average North Peterson Pennsylvanian oil well will have drained 104 acres to reach a total drainage of 136 acres at the end of its producing life.

Q Will you now review Exhibit Fifteen?

A. The North Peterson Pennsylvanian Pool is currently developed on an 80-acre spacing and its average well will recover 52,600 barrels of oil.

Exhibit Number Fifteen is a comparative economic study between the current well spacing, one well per 80 acres, and a smaller spacing, two wells per 80 acres. This study used a total well cost of $945,750 to drill and

complete an oil well in the subject pool.

This study indicates that one well per 80-acre spacing will generate a net profit of $136,700.

Drilling two wells per 80-acres would generate a loss of $376,900 and a net present worth index of .78. This indicates that with two wells per 80 acres for every dollar invested one will get back only .38 cents.

Q. Will you now refer to Exhibit Sixteen?

A. On Exhibit Number Sixteen is submitted the core data of the Enserch Exploration Pearl Jordan Well No. 3, the only well cored in the field for a Pennsylvanian pay zone.

_____ and analysis of the core was conducted. It indicated the presence of vertical, or randomly oriented fractures in every foot of the core, but Sample No. 15 and 27 are on page number two.

And page number three of Exhibit Number Sixteen, the statistical analysis of available data is provided. It indicated that 18 feet of net pay are present in the Pearl Jordan Well No. 3 with an average formation permeability of 9.2 millidarcy.

Q. Will you now review Exhibit Number Seventeen?

A. Exhibit Number Seventeen is a pressure

build-up analysis of the Amoco State Well No. 1, the discovery well for the North Peterson-Pennsylvanian Pool. A 96-hour pressure build-up was conducted in June, 1980, when the pool was discovered.

The pressure build-up indicated the initial reservoir pressure of the Peterson Pool was equal to 2740 psi. This pressure build-up indicated that the subject well has an average permeability of 4.7 millidarcy. The radius of investigation during this 96-hour pressure build-up was 1562 feet, corresponding to 154 acres.

Q. Mr. Renoult, will you now review Exhibit Number Eighteen?

A. Exhibit Number Eighteen is a pressure build-up analysis on the Amoco State Well No. 2. A 64-hour pressure build-up was conducted in November of 1980, five months after the previous pressure build-up on the Amoco State Well No. 1.

This test indicated the Amoco State No. 2 to have an average permeability of 26.1 millidarcy. The radius of investigation during this 64-hour test was 2819 feet, corresponding to 523 acres. A pressure drop of 107 psi was recorded.

This indicates that in November, 1980, the newly completed Amoco State Well No. 2 had been already

partially depleted by the offset Amoco Well No. 1, located 1420 feet away.

Q. Will you now review Enserch Exhibit Nineteen?

A. Exhibit Number Nineteen, the pressure build-up analysis for Pearl Jordan Well No. 2. The pressure build-up was limited to 46 hours and 30 minutes.

This test indicated that the Pearl Jordan Well No. 2 had an average formation permeability of 13 millidarcy.

Because of the short duration of the test, a radius investigated was only 914 feet. A pressure drop of 390 psi was recorded. This pressure drop indicates that when the Pearl Jordan Well No. 2 was completed in January, 1981, the well had been already pressure depleted by the Amoco State Well No. 1, located 1320 feet east and by the Amoco State Well No. 2, located approximately 1867 feet southeast.

Q. Mr. Renoult, how many acres did you estimate this well would drain?

A. The radius of investigation was only 914 feet, which corresponds to 60 acres.

Q. If you'd run a longer test, would that have affected that figure?

A. Yes. If the test had been conducted for 96 hours, like in the Amoco State Well No. 1, the area investigated would have been 86 acres.

Q. In making your subsequent calculations you did, however, use the data from the 46-1/2 hour test, is that correct?

A. Yes, only 14 -- the results from the test.

Q. All right. Will you now refer to Enserch Exhibit Number Twenty and review this for Mr. Stamets?

A. Exhibit Number Twenty gives a summary of the permeability in the radius of investigation obtained during the three pressure build-ups conducted in the field.

It indicates the average permeability of the Pennsylvanian lime pay is equal to 13.2 millidarcy. The radius of investigation for different pressure build-ups is provided. As indicated previously, the radius of investigation for Pearl Jordan Well No. 2 was equal to only 914 feet because of the short duration of the test.

The pressure drop of 390 psi recorded in the Pearl Jordan No. 2 demonstrates that the Pearl Jordan No. 2 had been partially drained and pressure depleted by the offset producers.

Q. And will you now review Exhibit Number

Twenty-one?

A. Exhibit Number Twenty-one is a graph representing the pressure history of the North Peterson Pennsylvanian Pool. It shows that a drop in reservoir pressure in newly completed wells, indicating an excellent drainage of the reservoir when developed on an 80-acre spacing. Pressure history indicates the total oil reserves from the pool will amount to 307,000 barrels. This figure is in excellent agreement with the 316 barrels of oil derived by decline curves on page three of Exhibit Number Eleven.

Q. Mr. Renoult, would you briefly summarize the conclusions that you can reach from the data which you have presented?

A. The data presented today indicates that we are dealing with a fractured system with a very good permeability. It indicates that the wells are capable of draining more than 80 acres, and some new wells were pressure depleted by some wells located at least 1320 feet away.

Q. Do you have a recommendation to make to the Examiner concerning pool rules for this area?

A. Enserch Exploration, Inc., is asking for special pool rules to be made permanent.

Q. Do you have anything further that you'd like to add to your testimony?

A. No, sir.

Q. Were Exhibits Three through Twenty-one prepared either by you or under your direction and supervision?

A. Yes, sir.

MR. CARR: At this time, Mr. Stamets, we would like to offer Enserch Exhibits Three through Twenty-one into evidence.

MR. STAMETS: These exhibits will be admitted.

Q. Mr. Benoult, in your opinion will granting this application be in the best interest of conservation, the prevention of waste, and the protection of correlative rights?

A. Yes, sir, I agree.

MR. CARR: That concludes our direct examination.

MR. STAMETS: Are there any questions of this witness? He may be excused.

Is there anything further in this case?

MR. CARR: Nothing further.

MR. STAMETS: The case will be taken under advisement.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. _____, heard by me on _____ 19____.

_____, Examiner
Oil Conservation Division

SALLY W. BOYD, C.S.R.
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Santa Fe, New Mexico 87501
Phone (505) 455-7409

R - 33 - E

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 1
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

AMERADA
LIEB
Glor # 287

7

T 4 S

18

17

16

Drlg.
DESANA
PETERSON

PETERSON, N. (PENN)

-3600
-3550
-3500
-3450

Enserch Pet.

ENSERCH
JORDAN
-3412

Line of Cross Section

-3424
ENSERCH
AMOCO-ST
-3405

ROCKWOOD RES.
ENSERCH-ST
WOCU

OWWO
WOCU
-3457
TD 8250

-3432

-3412

19

ENSERCH
SCOTT-FED
20

WOCU
-3475

ENSERCH
JONES
-3458

ENSERCH
HAYS
21

Abnd. Loc

TD 8303
-3503

30

29

6mi

Dunlap

ENSERCH EXPLORATION INC.
WEST TEXAS AREA

PETERSON, NORTH AREA
ROOSEVELT COUNTY, NEW MEXICO

STRUCTURE MAP
TOP CISCO LIME

Contour Interval: 50'
Scale 1" = 2000'
1/81
TF 8

ENSERCH EXPLORATION, INC.

Docket No. 7072

Exhibit 3

Date 01/20/82

SOUTHEAST NEW MEXICO PENN POOLS
80-ACRE SPACING

Pool Name	Top Oil Allowable (Bbl)	Top Casinghead Gas Limit (MCF)	GOR Limit
Allison Penn	355	710	2000
Bagley Penn, North	400	800	2000
Dean Permo Penn	455	890	2000
Four Lakes Penn	400	800	2000
Hightower Lower Penn	400	800	2000
Hightower Upper Penn, East	355	214	2000
Inbe Permo Penn	355	710	2000
Lovington Penn, NE	534	1068	2000
Peterson Penn, North	267	534	2000
Prairie Cisco, South	355	710	2000
Ranger Lake Penn	400	800	2000
Tobac Penn	355	710	2000
Vacuum Upper Penn	400	800	2000

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 3
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

ENSERCH EXPLORATION, INC.

Docket No._____

Exhibit_____

Date_____

SOUTHEAST NEW MEXICO PENN POOLS
160-ACRE SPACING

Pool Name	Top Oil Allowable (Bbl)	Top Casinghead Gas Limit (MCF)	GOR Limit
Bar-U Penn	355	710	2000
Baum Upper Penn	355	710	2000
Cerca Upper Penn	560	1120	2000
High Plains Penn	560	1120	2000
Nonombre Upper Penn	560	1120	2000
Saunders Permo Penn, East	560	1120	2000
Tres Papalotes Penn	560	1120	2000
Tres Papalotes Penn, West	560	1120	2000
Tulk Pennsylvanian	355	710	2000

ENSERCH EXPLORATION, INC.

Docket No. 7072

Exhibit 4

Date 01/20/82

WELL COMPLETION DATA
ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 1
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Top of Penn Lime: 7808' (-3405') KB: 4402.7'

Perforated Production Interval: 7826'-7837' (1 JSPF)

Stimulation Treatment: Spotted 150 gallons 15% MCA acid (6/4/80)
Pumped 2000 gallons MOD 303 acid

Initial Potential Test:

Date of Test: 6/8/80 (flowing)
172.5 BO + 232 MCFG + 2 BW
GOR: 1345:1

Current Status: Put well on pump 1/31/81. Producing

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 4
CASE NO. 7270
Submitted by ENSERCH
Hearing Date 1/20/82

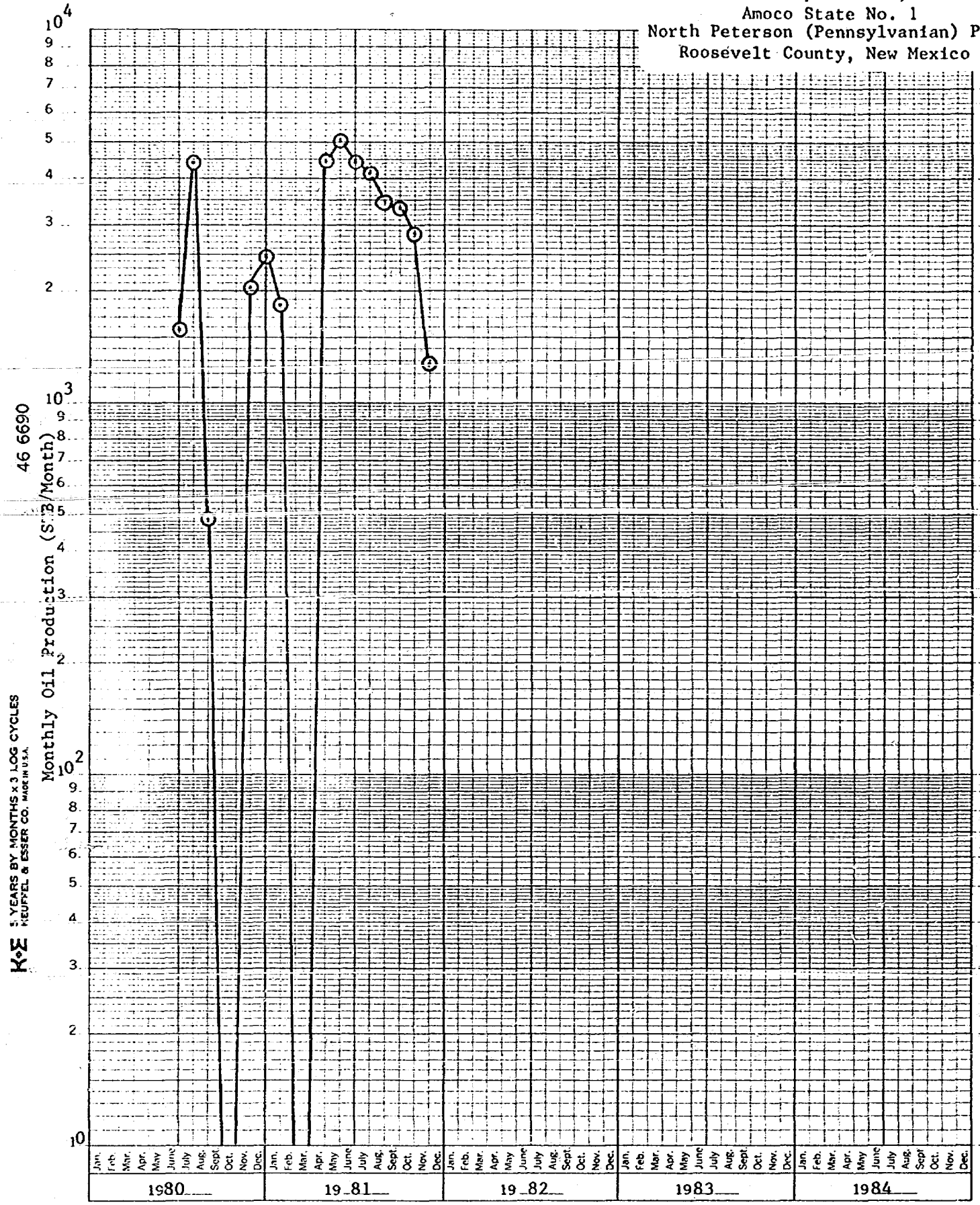
Attach
B-10

PRODUCTION HISTORY

ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 1
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

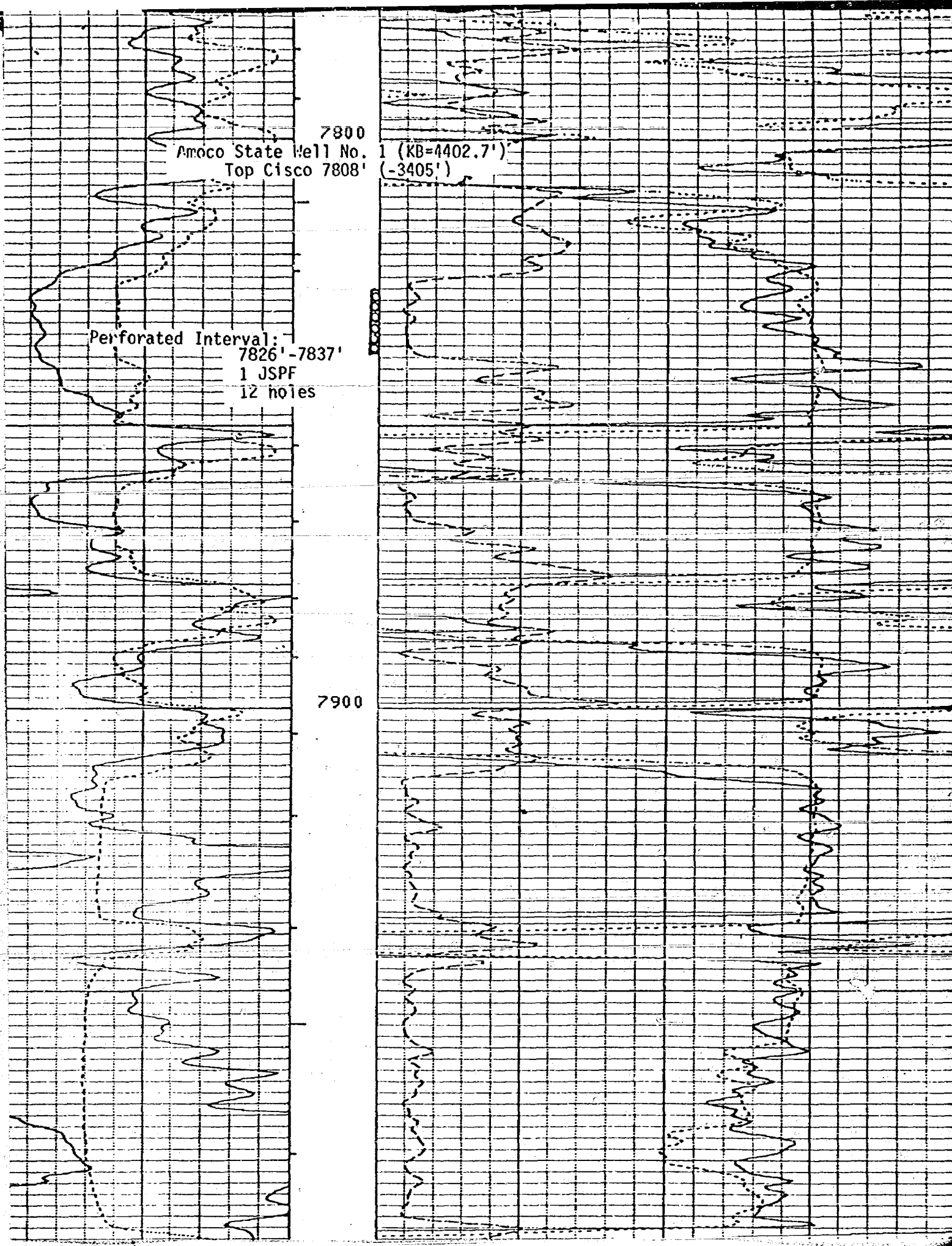
Date	Days of Production	Oil (STB)	Gas (MCF)	Water (Bbl)	GOR (SCF/Bbl)	Water Cut (%)
06/1980	21	1,578	1,954	0	1,238	0
07/1980	31	4,401	4,964	0	1,128	0
08/1980	4	488	605	0	1,240	0
09/1980	0	0	0	0	-	0
10/1980	0	0	0	0	-	0
11/1980	21	2,035	795	0	391	0
12/1980	25	2,444	1,407	41	576	2
01/1981	24	1,838	416	8	226	0.4
02/1981	0	2	0	0	-	0
03/1981	0	0	0	0	-	0
04/1981	17	4,469	662	0	148	0
05/1981	29	5,029	1,545	0	307	0
06/1981	25	4,406	1,571	0	357	0
07/1981	26	4,127	2,003	0	485	0
08/1981	31	3,483	1,858	0	533	0
09/1981	30	3,327	1,553	0	467	0
10/1981	31	2,852	1,374	0	482	0
11/1981	30	1,292	518	0	401	0
12/1981						
Cumulative Production	345	41,771	21,225	49	508	0

PRODUCTION HISTORY
Enserch Exploration, Inc.
Amoco State No. 1
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico



46 6690

K+E 5 YEARS BY MONTHS x 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.


7800
Amoco State Well No. 1 (KB=4402.7')
Top Cisco 7808' (-3405')
Perforated Interval:
7826'-7837'
1 JSPF
12 holes
7900

7800

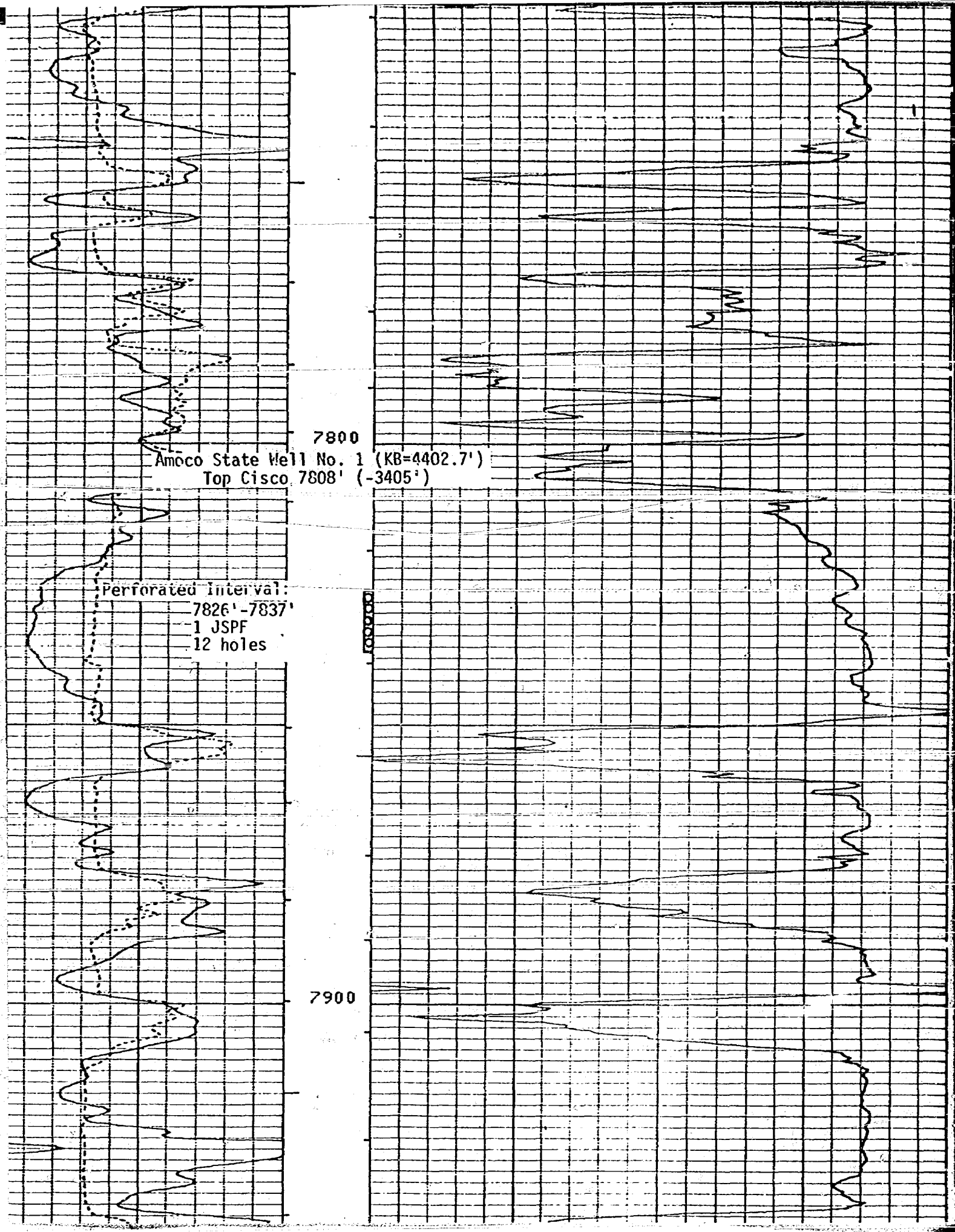
Amoco State Well No. 1 (KB=4402.7')
Top Cisco 7808' (-3405')

Perforated Interval:
7826'-7837'
1 JSPF
12 holes

7900

FR

MFC
LLS


7800
Amoco State Well No. 1 (KB=4402.7')
Top Cisco 7808' (-3405')
Perforated Interval:
7826'-7837'
1 JSPF
12 holes
7900

ENSERCH EXPLORATION, INC.

Docket No. 7072

Exhibit 5

Date 01/20/82

WELL COMPLETION DATA
ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 2
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Top of Penn Lime: 7822' (-3412') KB: 4410'

Perforated Production Interval: 7825'-7835' (1 JSPF)

Stimulation Treatment: Spotted 150 gallons 15% MCA acid (10/16/80)
Pumped 3000 gallons MOD 303 acid
Dropped 20 RCN ball sealers

Initial Potential Test:

Date of Test: ~~10/20/81~~ 10/18/80 (flowing)
327 BO + 120 MCFG + 0 BW
GOR: 367:1

Current Status: Put well on pump 2/15/81. Producing

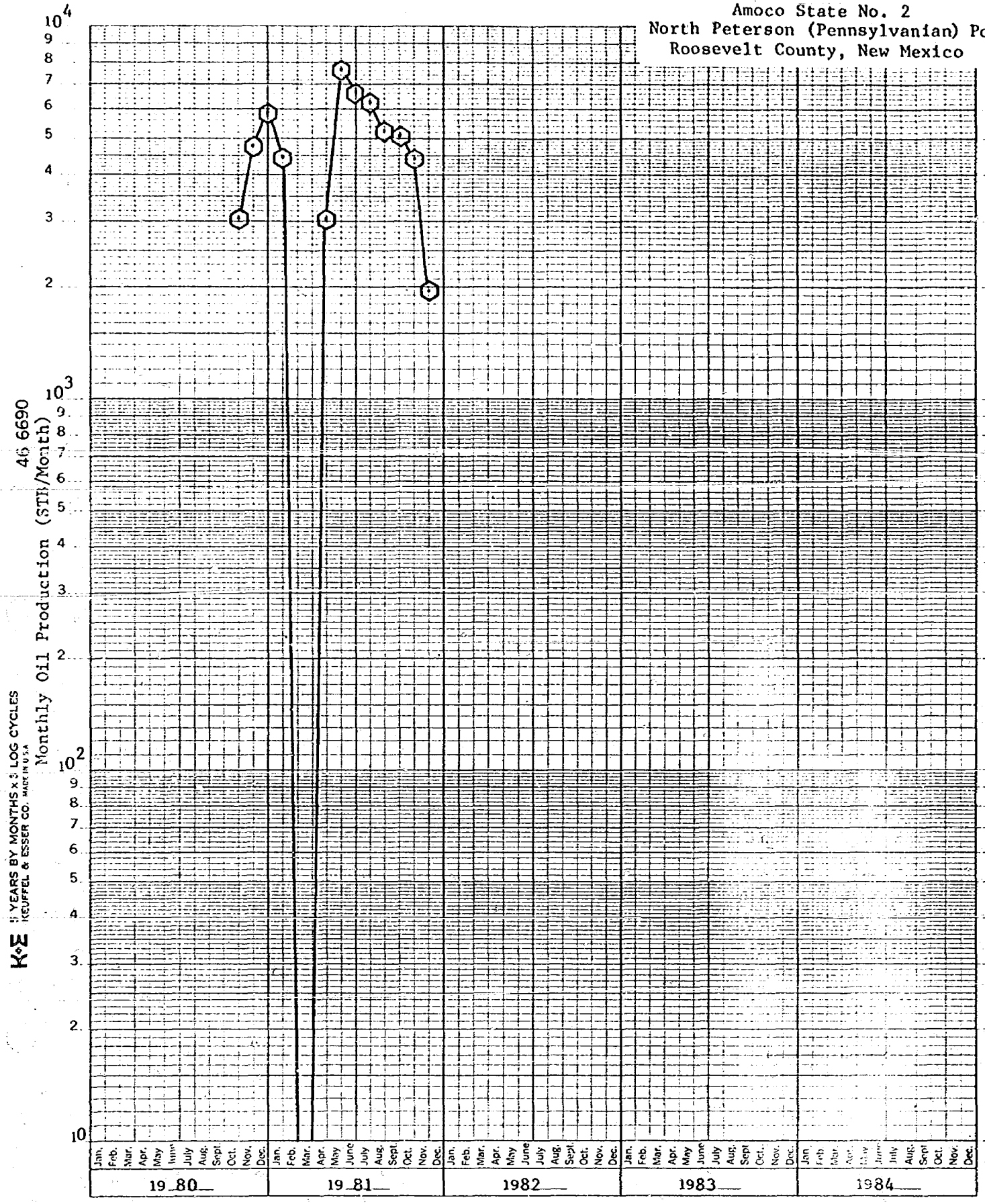
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 5
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

PRODUCTION HISTORY

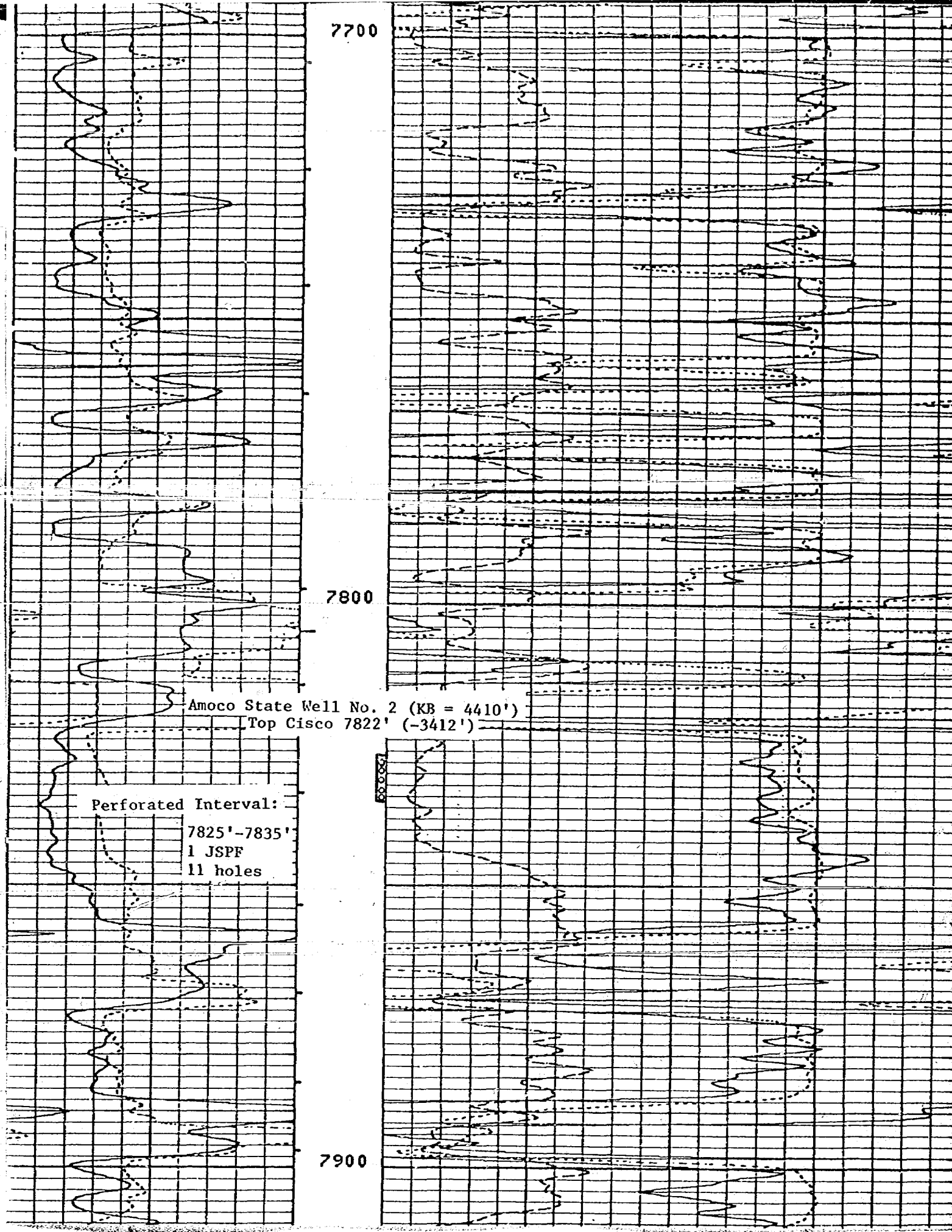
ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 2
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

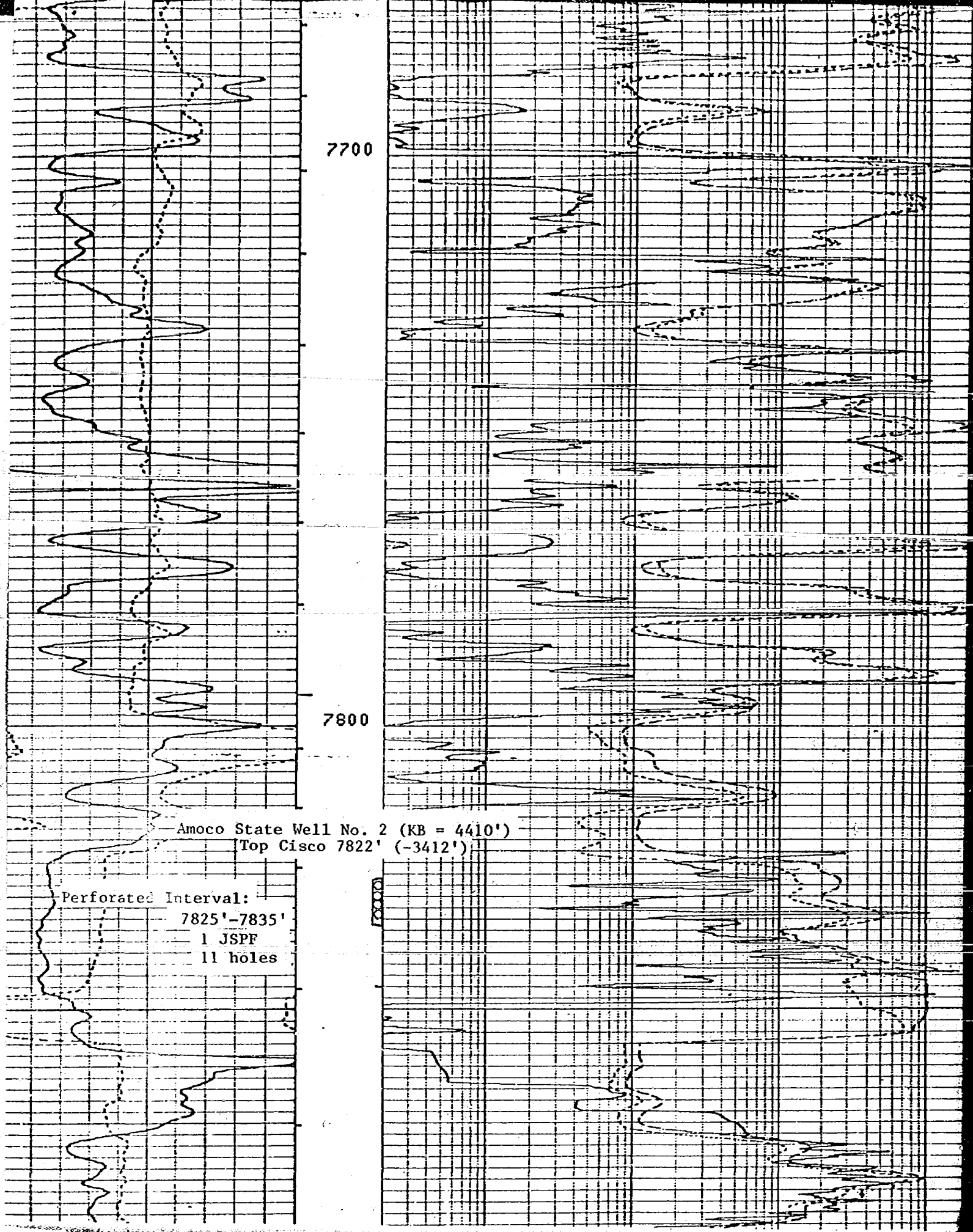
Date	Days of Production	Oil (STB)	Gas (MCF)	Water (Bbl)	GOR (SCF/Bbl)	Water Cut (%)
10/1980	11	3,083	0	0	-	0
11/1980	20	4,887	3,317	0	679	0
12/1980	9	5,871	965	252	164	4.1
01/1981	19	4,413	224	678	51	13.3
02/1981	0	3	0	0	-	0
03/1981	0	0	0	0	-	0
04/1981	16	3,042	826	271	272	8.2
05/1981	31	7,618	2,061	2,543	271	25.0
06/1981	30	6,675	2,119	2,301	317	25.6
07/1981	30	6,253	2,714	2,816	434	31.0
08/1981	26	5,008	2,495	2,735	479	34.4
09/1981	30	5,041	2.045	3,548	406	41.3
10/1981	31	4,322	1,807	5,492	418	56.0
11/1981	8	1,958	657	1,434	336	42.3
Cumulative Production	261	58,174	21,291	22,070	366	27.5

PRODUCTION HISTORY
Enserch Exploration, Inc.
Amoco State No. 2
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico



46 6690
KEUFFEL & ESSER CO. MADE IN U.S.A.
5 YEARS BY MONTHS x 3 LOG CYCLES


7700
7800
7900
Amoco State Well No. 2 (KB = 4410')
Top Cisco 7822' (-3412')
Perforated Interval:
7825'-7835'
1 JSPF
11 holes


7700
7800
Amoco State Well No. 2 (KB = 4410')
Top Cisco 7822' (-3412')
Perforated Interval:
7825'-7835'
1 JSPF
11 holes

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 6
Date 01/20/82

WELL COMPLETION DATA
ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 3
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Top of Penn Lime: 7818' (-3424') KB: 4394'

Perforated Production Interval: 7834'-7840' (1 JSPF) First stage
7841'-7850' (1 JSPF) Second stage

Stimulation Treatment:

First stage acid job: Spotted 150 gallons 15% MCA acid (2/15/81)
Pumped 250 gallons 2% KCl water. Swabbed
Pumped 500 gallons 15% MCA acid
Pumped 1000 gallons MOD 202 acid

Second stage acid job: Pumped 3200 gallons 15% NEFE acid (9/19/81)
Dropped 13 RCN ball sealers

Initial Potential Test:

Date of Test: 4/21/81 (pumping)
37 BO + 20 MCFG + 31 BW
GOR: 540:1

Current Status: Producing

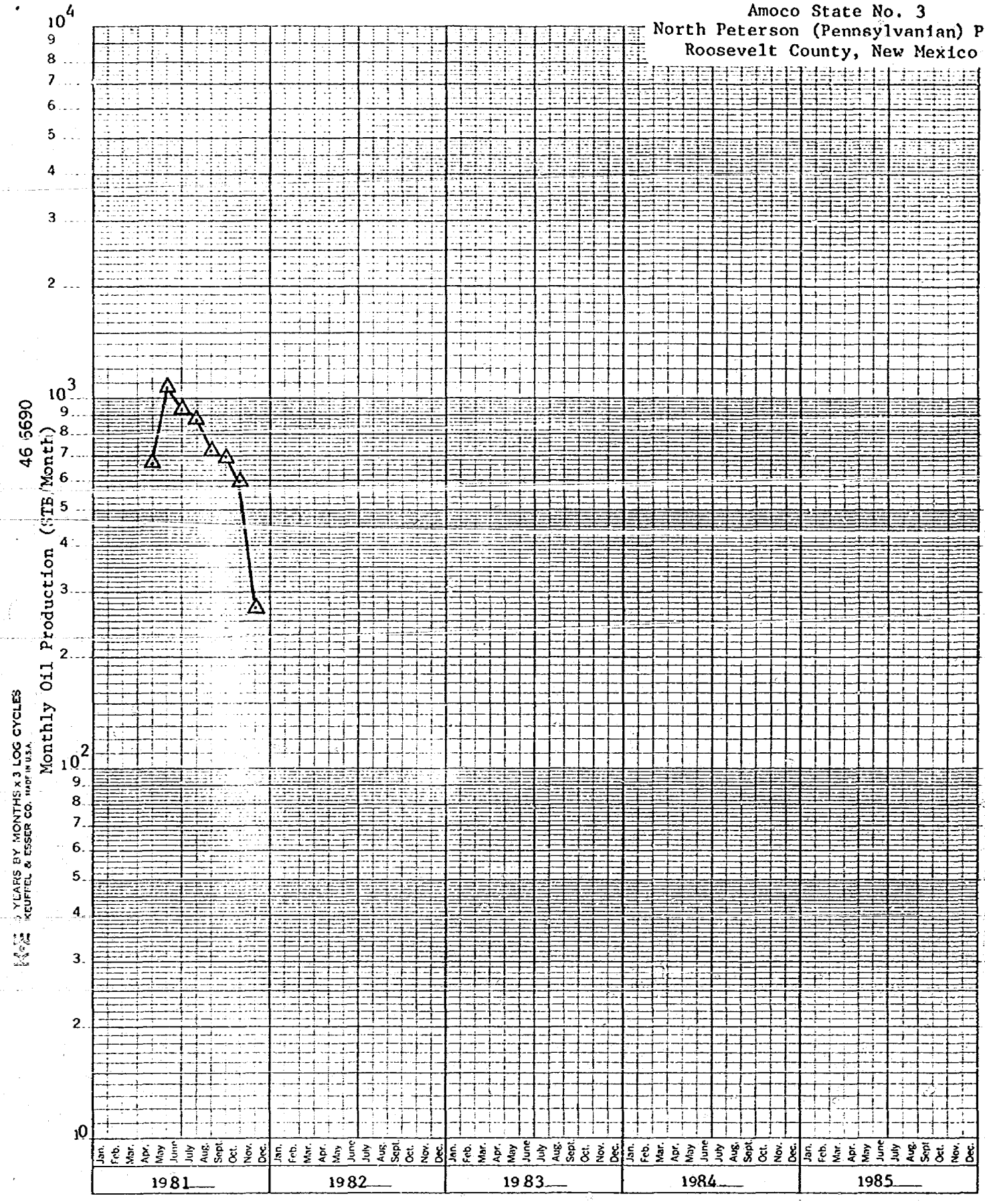
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 6
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

PRODUCTION HISTORY

ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 3
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

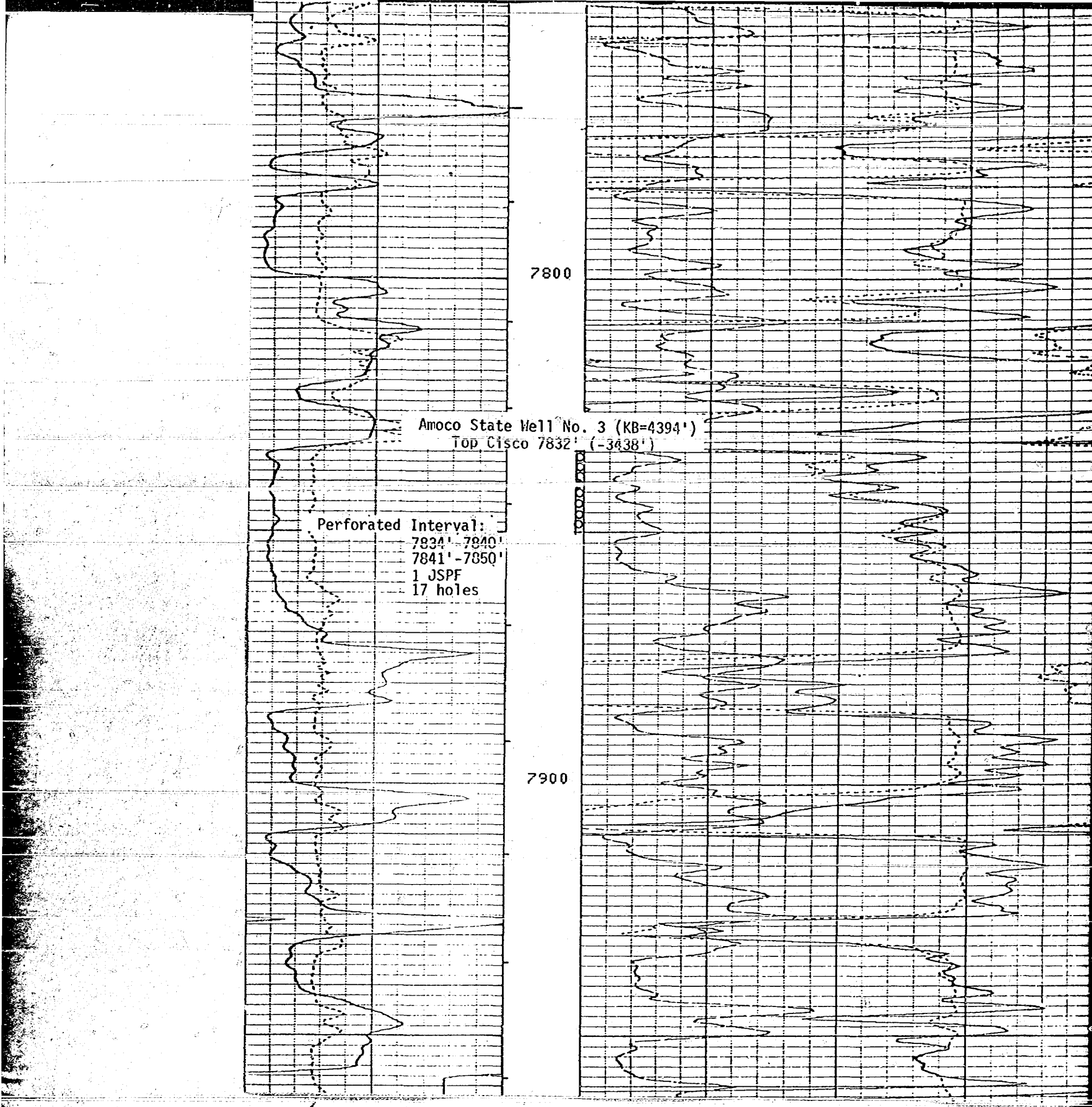
Date	Days of Production	Oil (STB)	Gas (MCF)	Water (Bbl)	GOR (SCF/Bbl)	Water Cut (%)
04/1981	13	662	118	1,339	178	66.9
05/1981	27	1,055	278	848	264	44.6
06/1981	30	924	295	767	319	45.4
07/1981	30	866	354	939	409	52.0
08/1981	31	721	334	903	463	55.6
09/1981	18	698	303	1,169	434	62.6
10/1981	31	598	275	478	460	44.4
11/1981	30	271	127	557	469	67.3
12/1981						
Cumulative Production	210	5,795	2,084	7,000	360	54.7

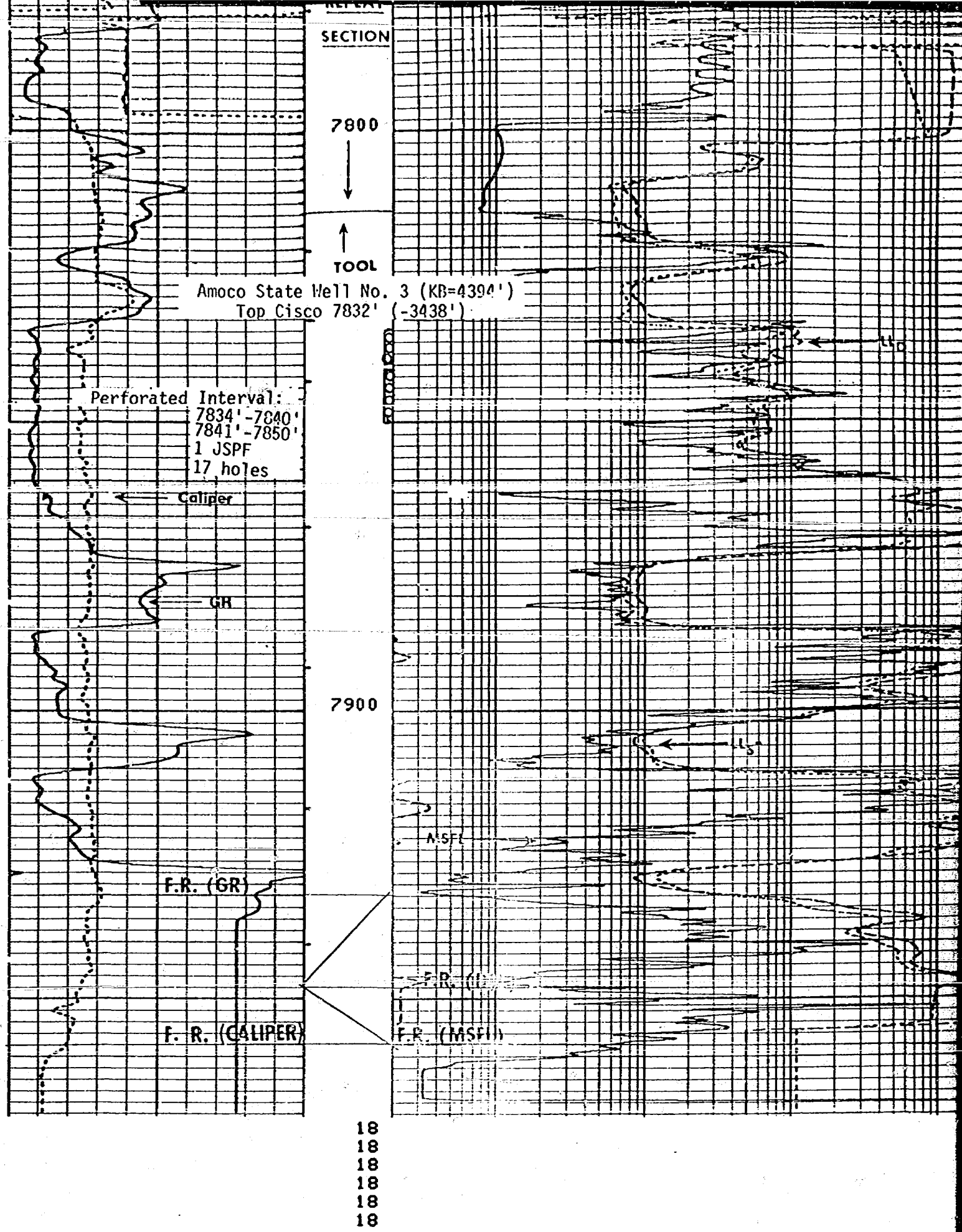
PRODUCTION HISTORY
Enserch Exploration, Inc.
Amoco State No. 3
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico



46 5690

KEUFFEL & ESSER CO. MADE IN U.S.A.
5 YEARS BY MONTHS x 3 LOG CYCLES


7800
Amoco State Well No. 3 (KB=4394')
Top Cisco 7832' (-3438')
Perforated Interval:
7834'-7840'
7841'-7850'
1 JSPF
17 holes
7900



18
18
18
18
18
18

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 7
Date 01/20/82

WELL COMPLETION DATA
ENSERCH EXPLORATION, INC.
PEARL JORDAN NO. 1
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Top of Penn Lime: 7803' (-3458') KB: 4345'

Perforated Production Interval: 8016'-8024' (2 JSPF)

Stimulation Treatment: Spotted 150 gallons 7½% MCA acid (5/5/81)
Pumped 1000 gallons 7½% MCA acid
Dropped 15 RCN ball sealers. Swabbed
Pumped 4000 gallons 15% NEFE acid (5/8/81)
Dropped 10 RCN ball sealers

Initial Potential Test:

Date of Test: 5/20/81 (pumping)
27 BO + 36 MCFG + 14 BW
GOR: 1331:1

Current Status: Producing

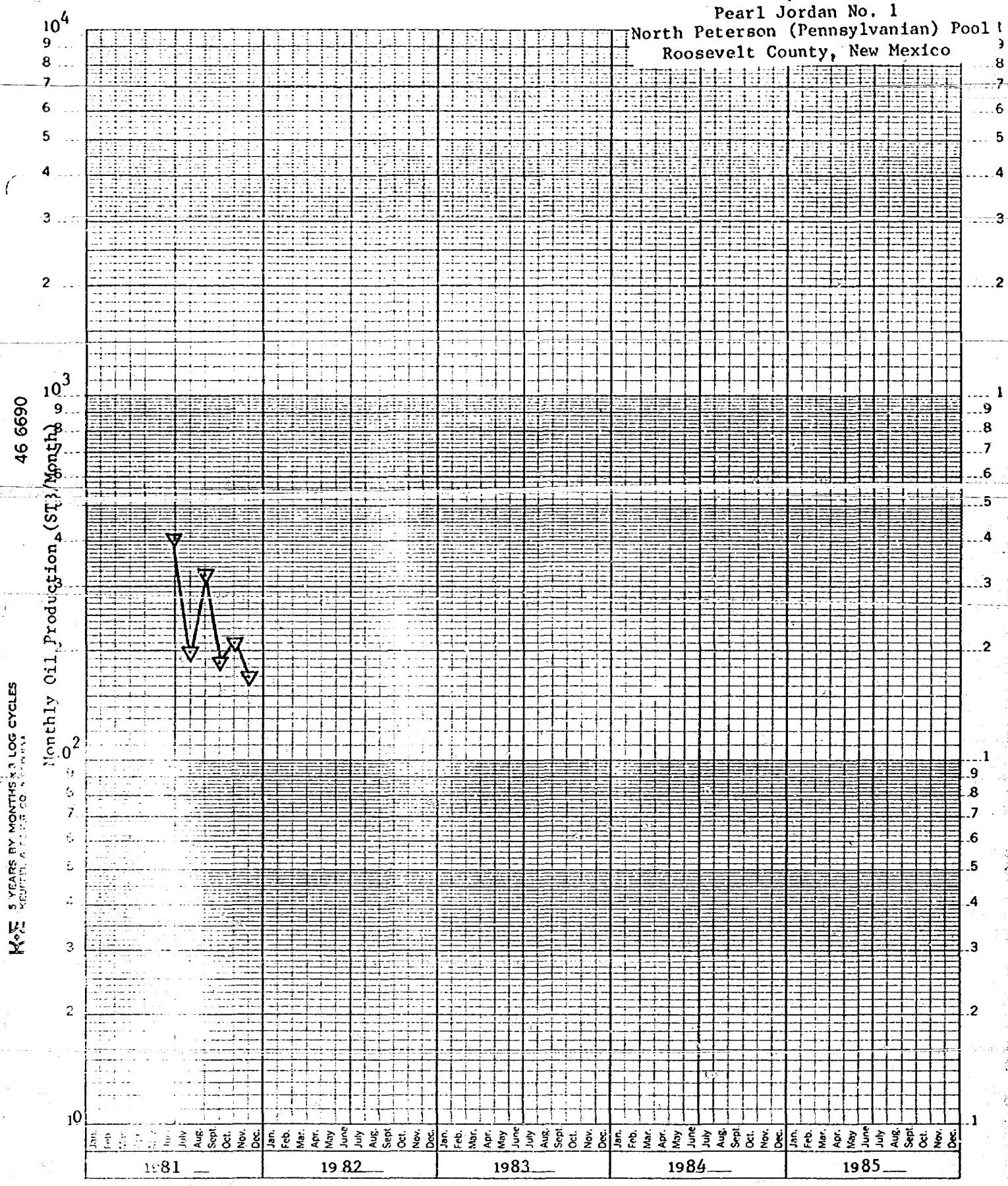
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 7
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

PRODUCTION HISTORY

ENSERCH EXPLORATION, INC.
PEARL JORDAN NO. 1
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

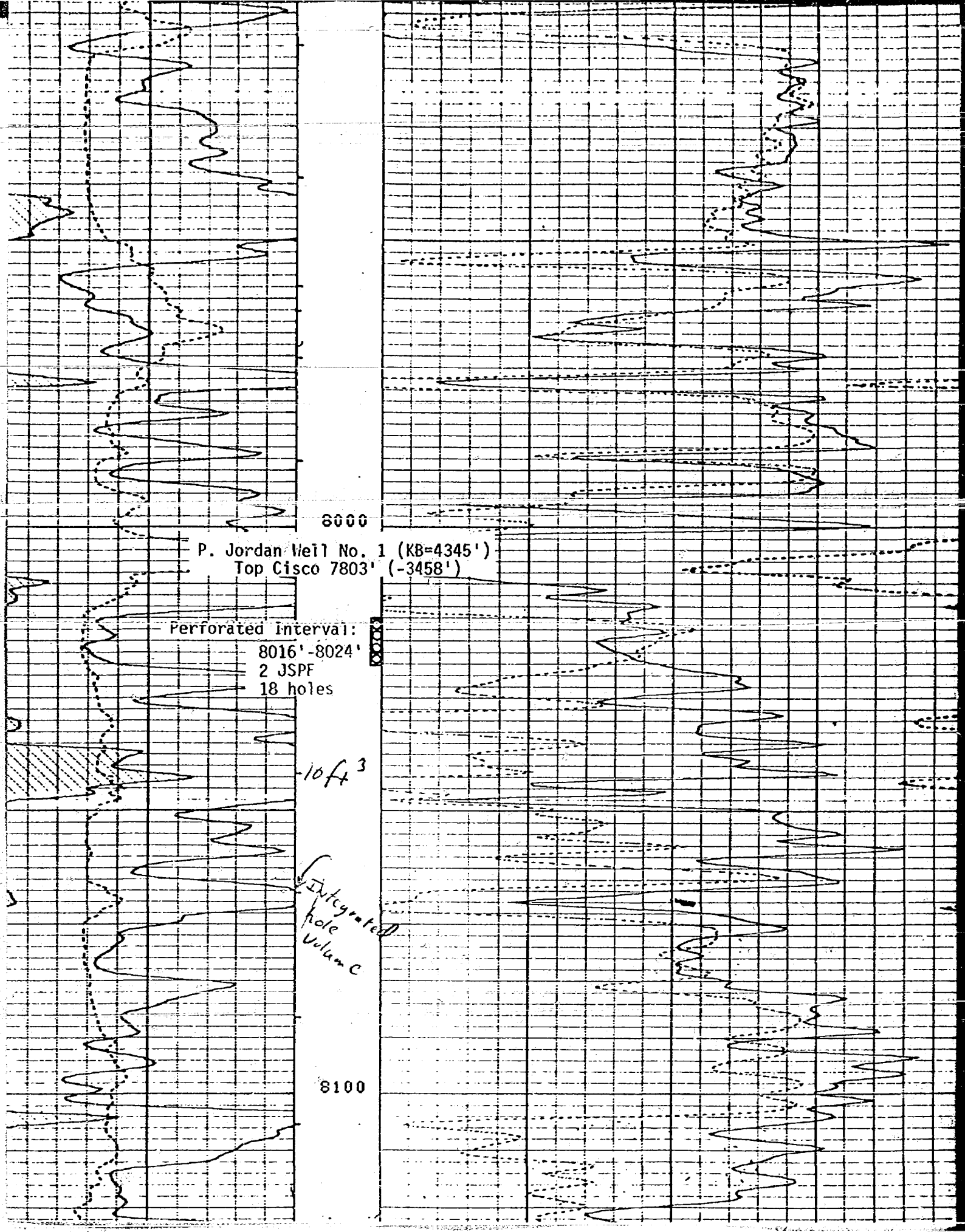
Date	Days of Production	Oil (STB)	Gas (MCF)	Water (Bbl)	GOR (SCF/Bbl)	Water Cut (%)
05/1981	0	0	825	To Test Tanks		-
06/1981	24	405	462	0	1,141	0
07/1981	8	199	281	90	1,412	31.1
08/1981	12	324	875	521	2,700	61.7
09/1981	30	183	693	119	3,787	39.4
10/1981	31	210	846	88	4,029	29.5
11/1981	30	170	642	79	3,776	31.7
12/1981						
Cumulative Production	135	1,491	4,624	897	3,101	37.6

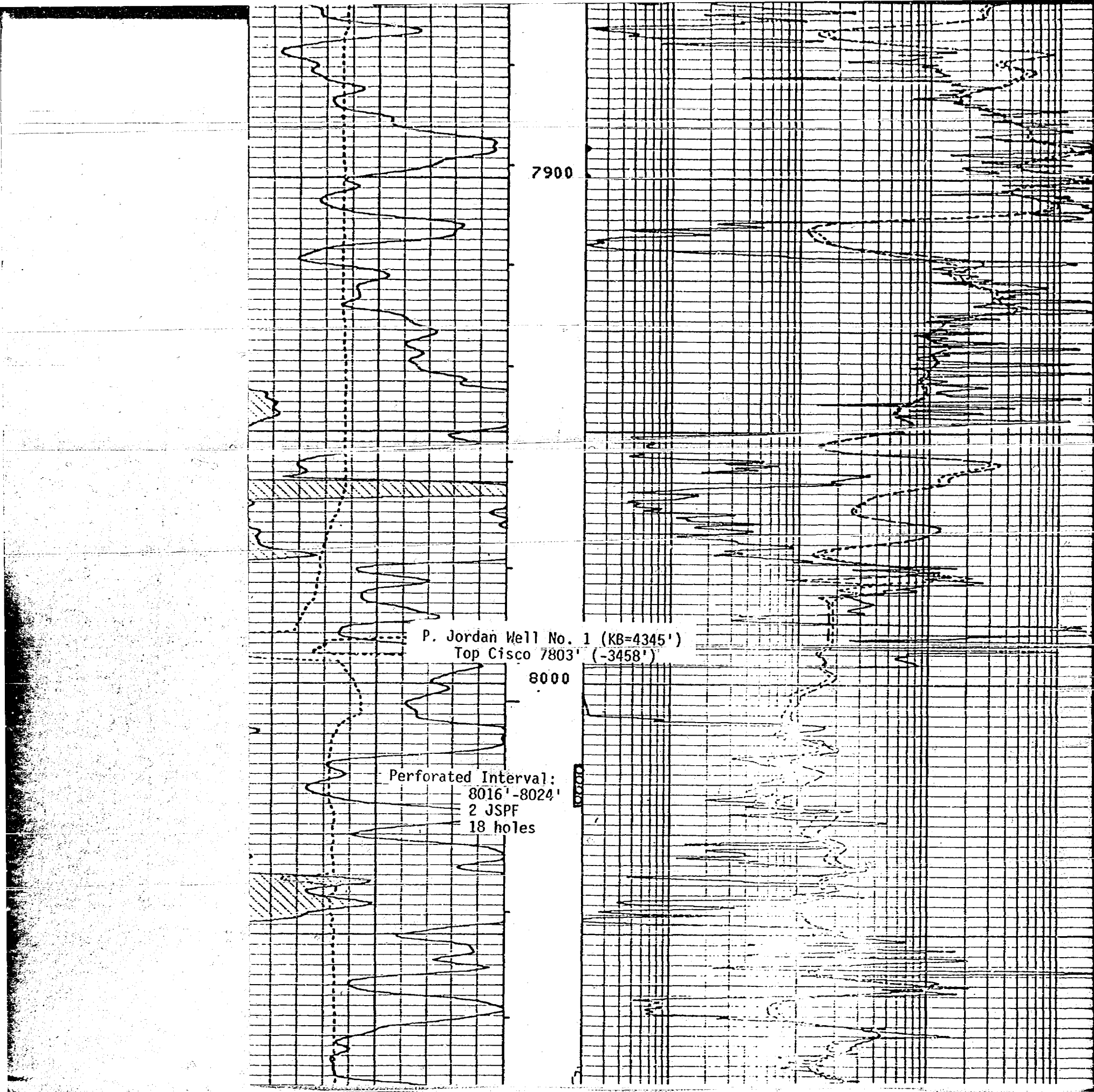
PRODUCTION HISTORY
Enserch Exploration, Inc.
Pearl Jordan No. 1
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico

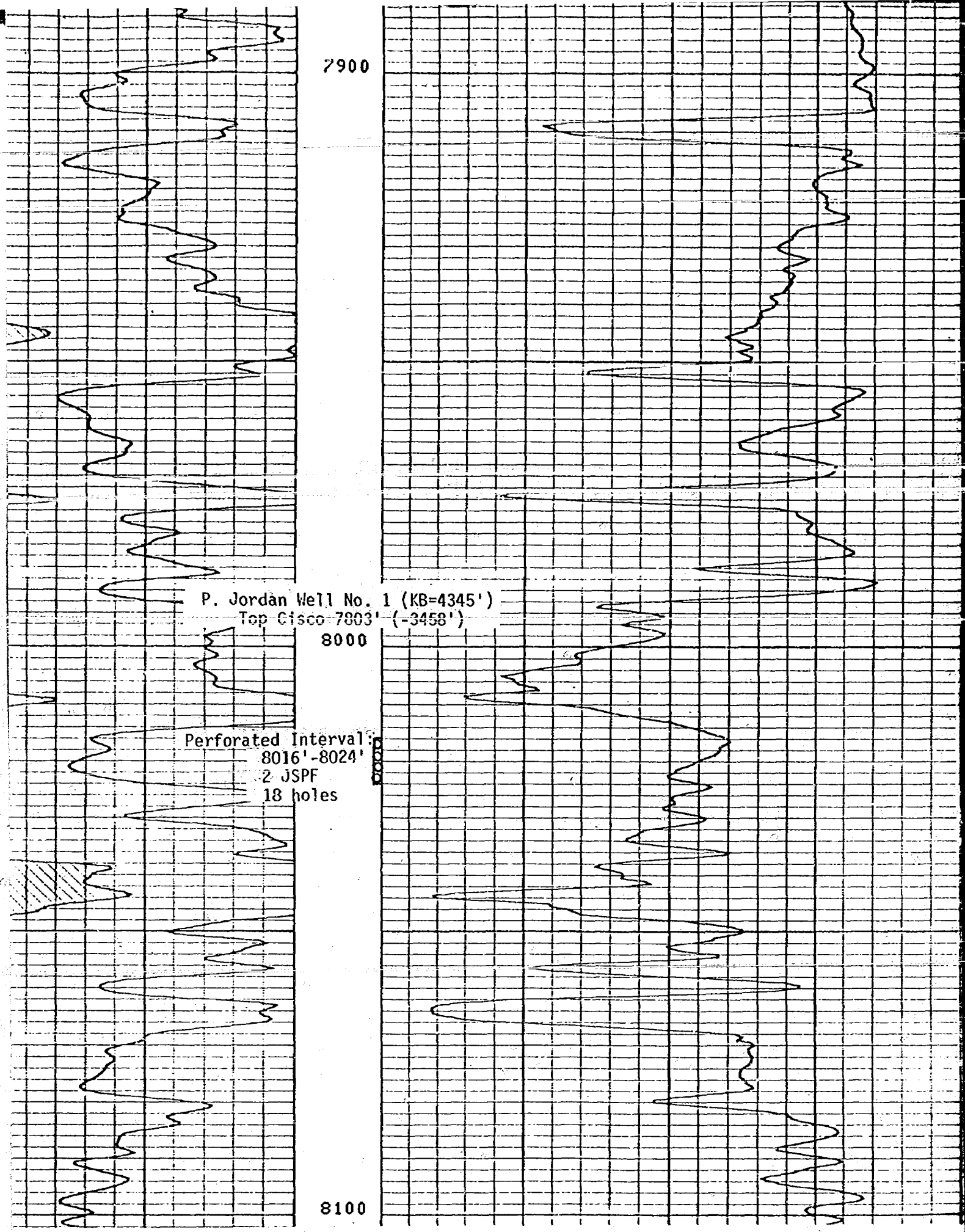


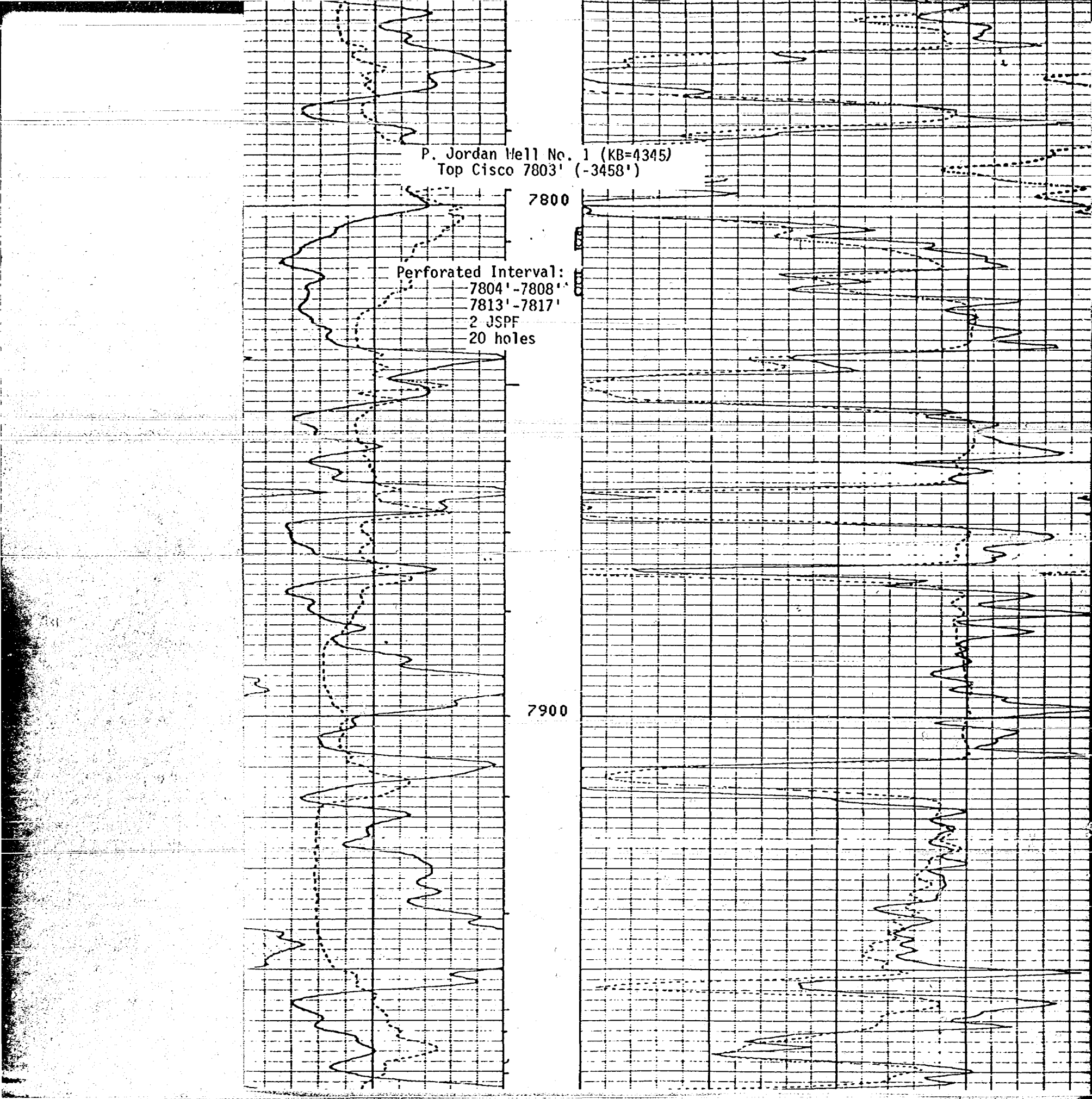
46 6690

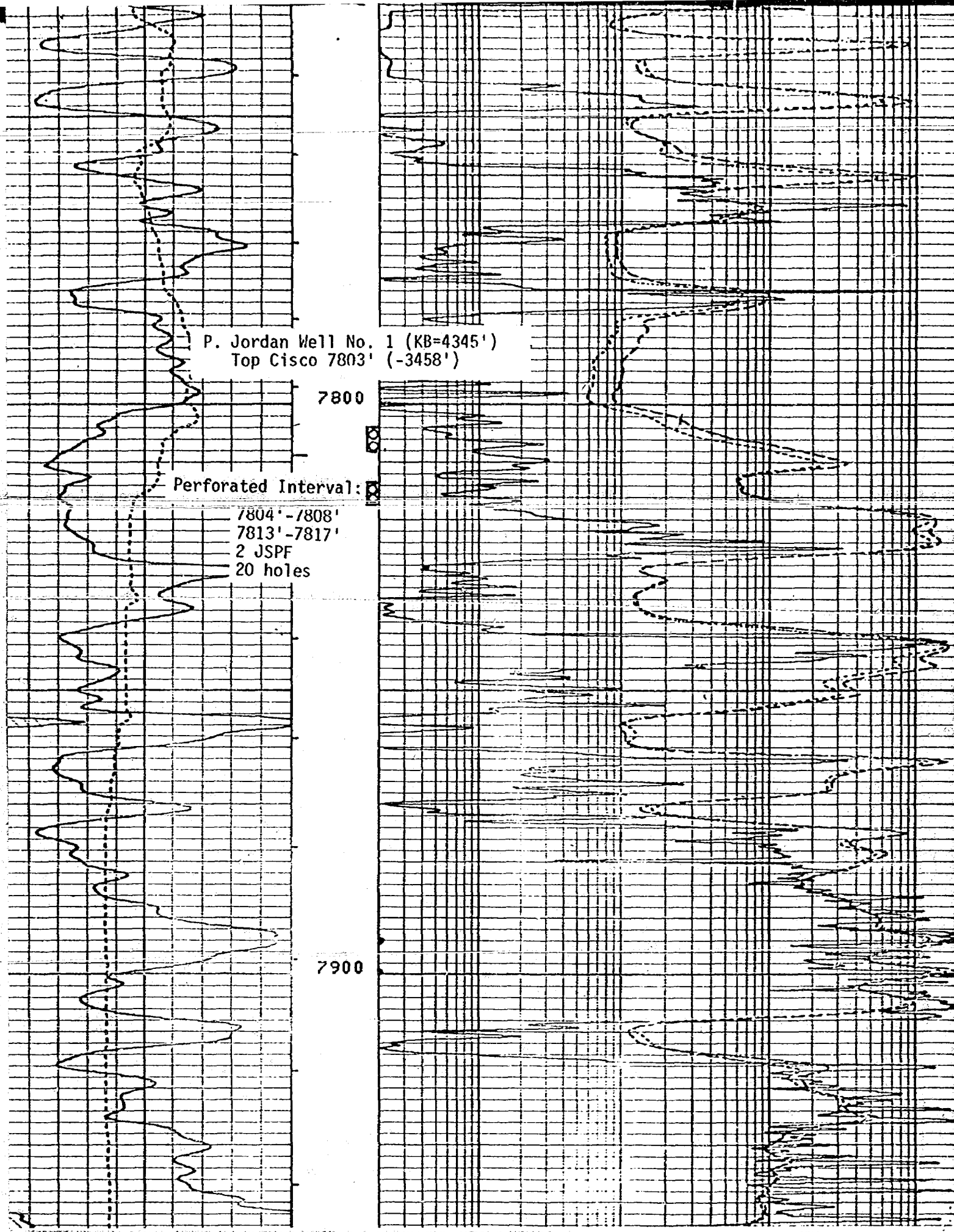
KEUFFEL & ESSER CO.
5 YEARS BY MONTHS X 3 LOG CYCLES

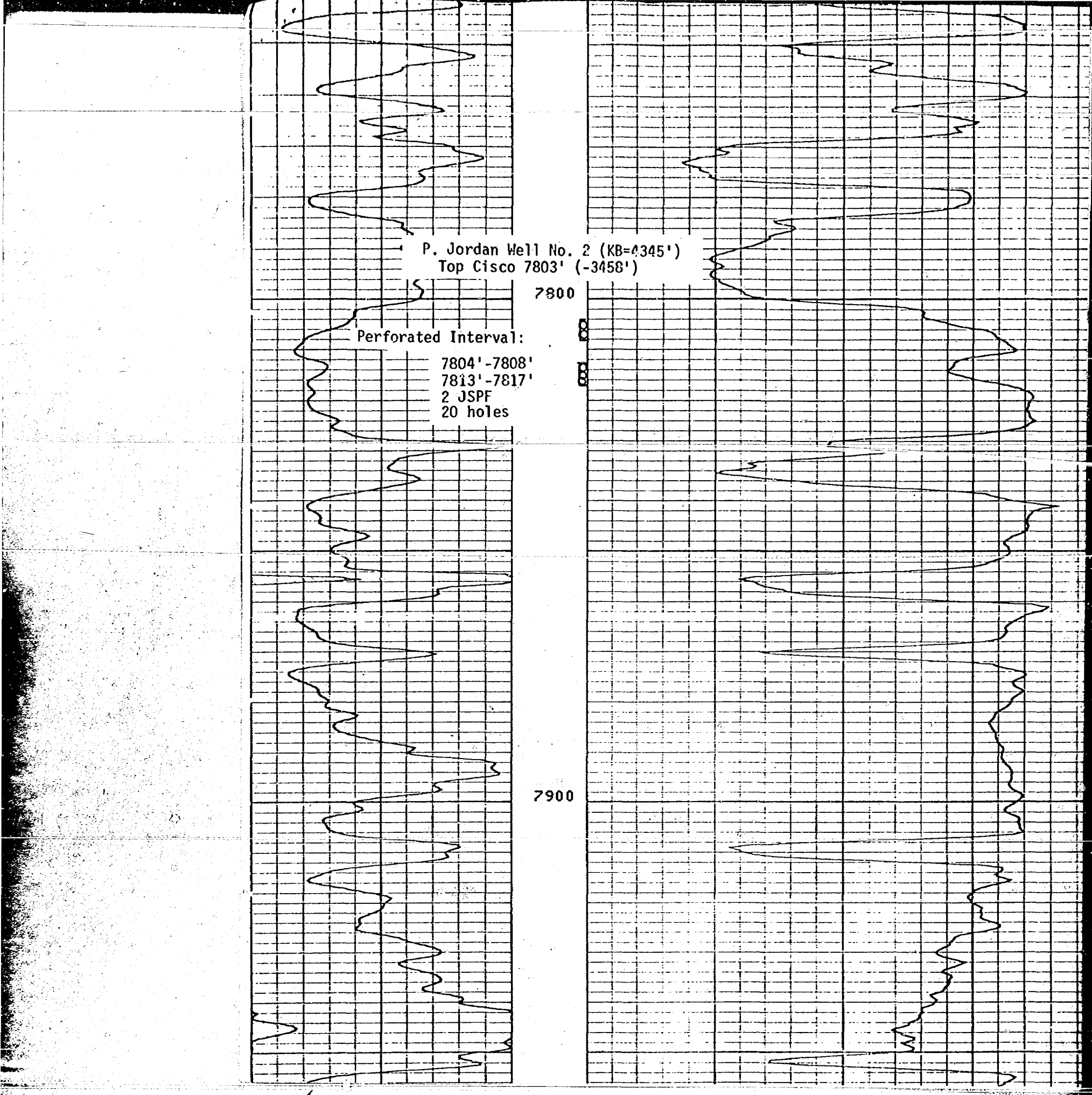

8000
P. Jordan Well No. 1 (KB=4345')
Top Cisco 7803' (-3458')
Perforated Interval:
8016'-8024'
2 JSPF
18 holes
1 of 4 3
Integrated hole volume
8100


7900
P. Jordan Well No. 1 (KB=4345')
Top Cisco 7803' (-3458')
8000
Perforated Interval:
8016'-8024'
2 JSPF
18 holes


7900
P. Jordan Well No. 1 (KB=4345')
Top Cisco 7803' (-3458')
8000
Perforated Interval:
8016'-8024'
2 JSPF
18 holes
8100


P. Jordan Well No. 1 (KB=4345)
Top Cisco 7803' (-3458')
7800
Perforated Interval:
7804'-7808'
7813'-7817'
2 JSPF
20 holes
7900


P. Jordan Well No. 1 (KB=4345')
Top Cisco 7803' (-3458')
7800
Perforated Interval:
7804'-7808'
7813'-7817'
2 JSPF
20 holes
7900


P. Jordan Well No. 2 (KB=4345')
Top Cisco 7803' (-3458')
7800
Perforated Interval:
7804'-7808'
7813'-7817'
2 JSPF
20 holes
7900

1

ENSERCH EXPLORATION, INC.

Docket No. 7072

Exhibit 8

Date 01/20/82

WELL COMPLETION DATA
ENSERCH EXPLORATION, INC.
PEARL JORDAN NO. 2
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Top of Penn Lime: 7826' (-3412') KB: 4414'

Perforated Production Interval: 7830'-7834' (2 JSPF)
7836'-7838' (2 JSPF)
7842'-7848' (2 JSPF)

Stimulation Treatment: Spotted 150 gallons 15% NCA acid (3/7/81)
Pumped 3000 gallons 15% NEFE acid
Dropped 20 RCN ball sealers

Initial Potential Test:

Date of Test: 3/11/81 (flowing)
266 BO + 215 MCFG + 16 BW
GOR: 808:1

Current Status: Put well on pump. Producing

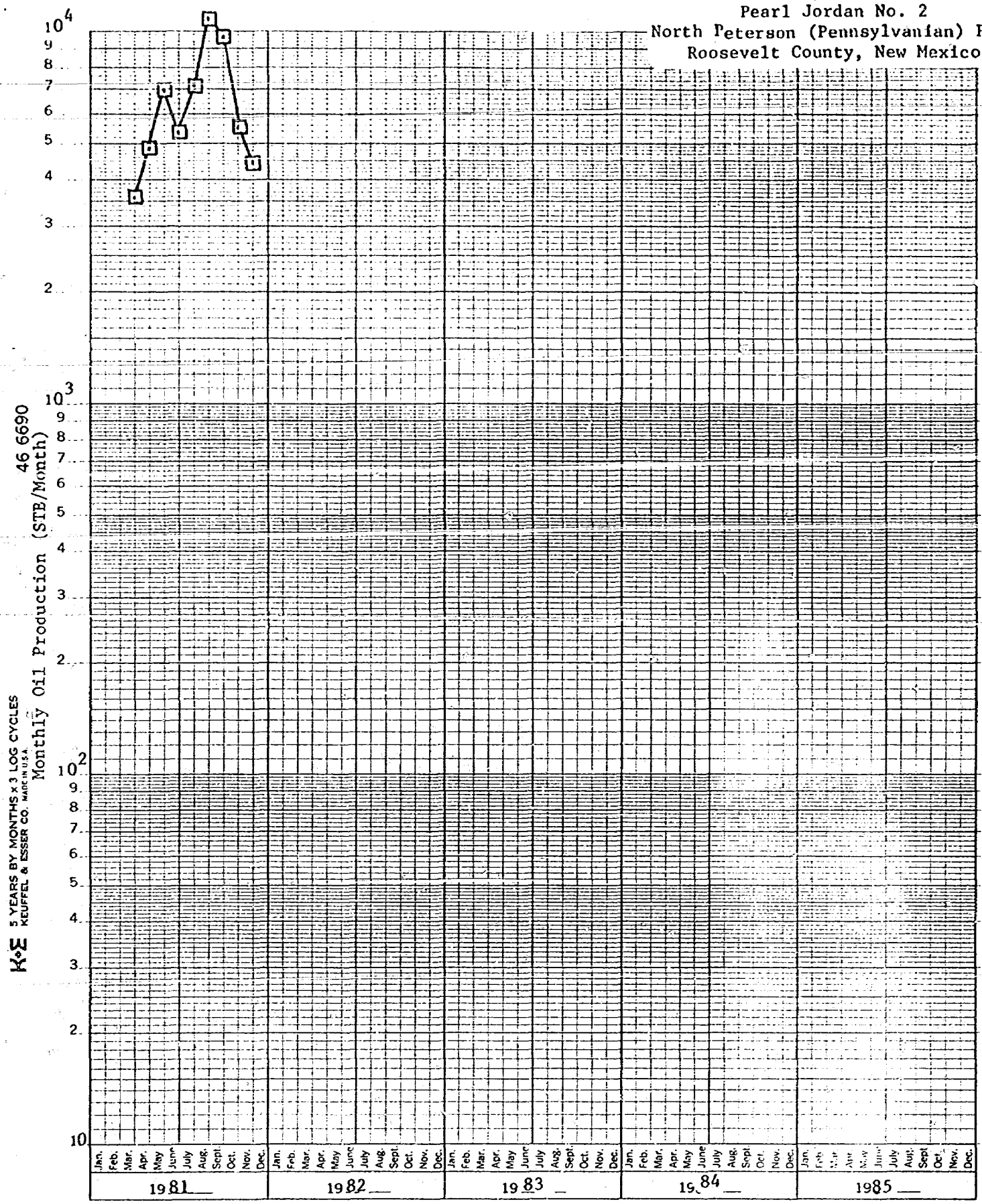
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
Applicant EXHIBIT NO. 8
CASE NO. 7072
Submitted by Enserch
Hearing Date 1/20/82

PRODUCTION HISTORY

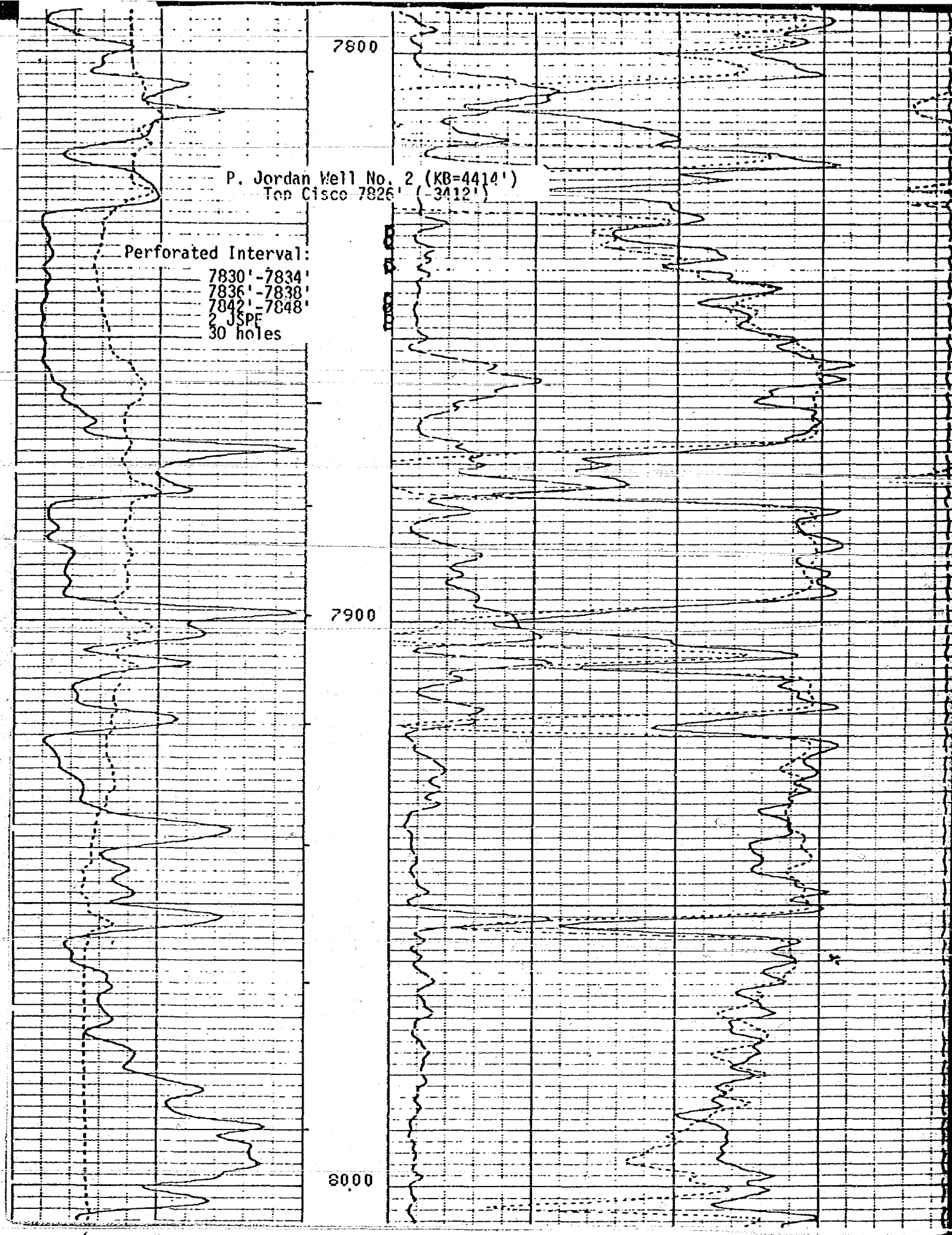
ENSERCH EXPLORATION, INC.
PEARL JORDAN NO. 2
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

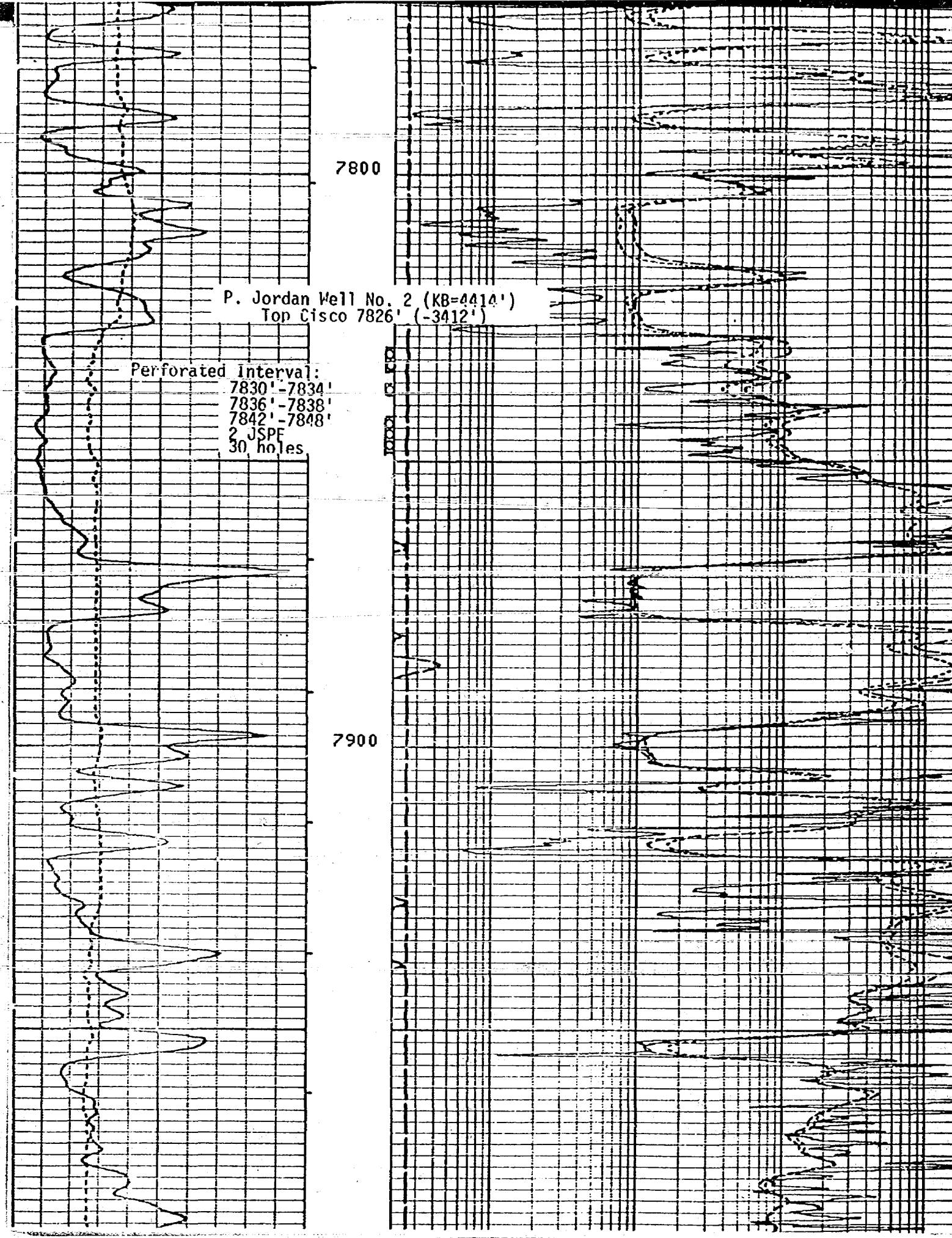
Date	Days of Production	Oil (STB)	Gas (MCF)	Water (Bbl)	GOR (SCF/Bbl)	Water Cut (%)
03/1981	17	3,595	2,904	0	808	0
04/1981	30	4,856	2,816	0	580	0
05/1981	31	6,966	2,628	0	377	0
06/1981	29	5,390	2,712	0	503	0
07/1981	31	7,162	1,055	0	147	0
08/1981	28	10,687	1,142	0	107	0
09/1981	30	9,623	2,477	36	257	3.7
10/1981	31	5,468	3,038	911	556	14.3
11/1981	30	4,440	2,290	824	516	15.6
12/1981						
Cumulative Production	257	58,187	21,062	1,771	362	2.9

PRODUCTION HISTORY
Enserch Exploration, Inc.
Pearl Jordan No. 2
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico



46 6690
KEUFFEL & ESSER CO. MADE IN U.S.A.
5 YEARS BY MONTHS x 3 LOG CYCLES


7800
P. Jordan Well No. 2 (KB=4414')
Top Cisco 7826' (-3412')
Perforated Interval:
7830'-7834'
7836'-7838'
7842'-7848'
2 JSPF
30 holes
7900
8000


7800
P. Jordan Well No. 2 (KB=4414')
Top Cisco 7826' (-3412')
Perforated Interval:
7830'-7834'
7836'-7838'
7842'-7848'
2 JSPF
30 holes
7900

ENSERCH EXPLORATION, INC.

Docket No. 7072

Exhibit 9

Date 01/20/82

WELL COMPLETION DATA
ENSERCH EXPLORATION, INC.
PEARL JORDAN NO. 3
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Top of Penn Lime: 7829' (-3432') KB: 4397'

Perforated Production Interval: 7830'-7852' (2 JSPF)

Stimulation Treatment: Spotted 150 gallons 15% MCA acid (6/12/81)
Pumped 5000 gallons 15% NEFE acid
Dropped 25 RCN ball sealers

Initial Potential Test:

Date of Test: 6/17/81 (flowing)
120 BO + 170 MCFG + 10 BW
GOR: 1417:1

Current Status: Put well on pump 7/26/81. Producing

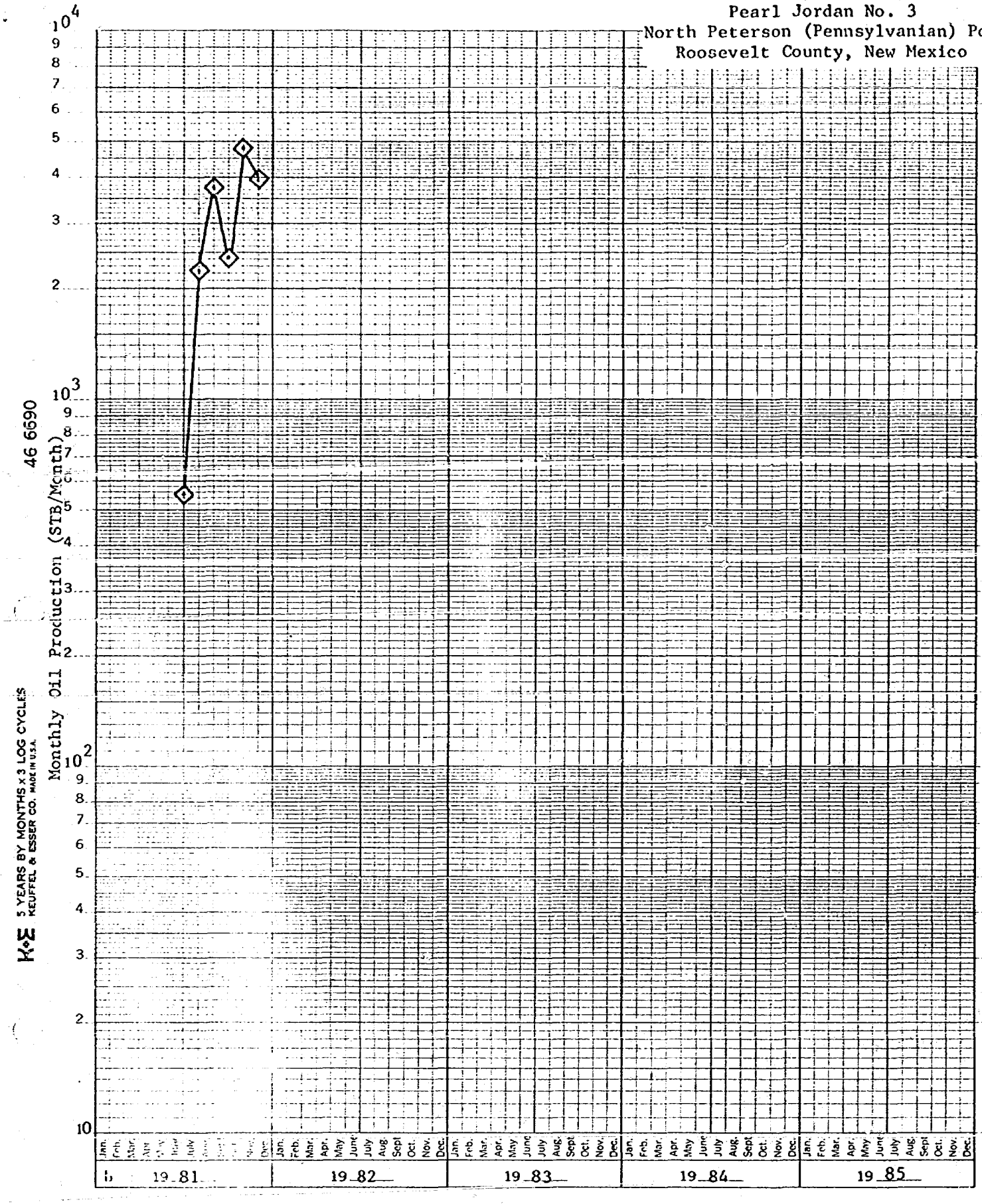
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 9
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

PRODUCTION HISTORY

ENSERCH EXPLORATION, INC.
PEARL JORDAN NO. 3
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

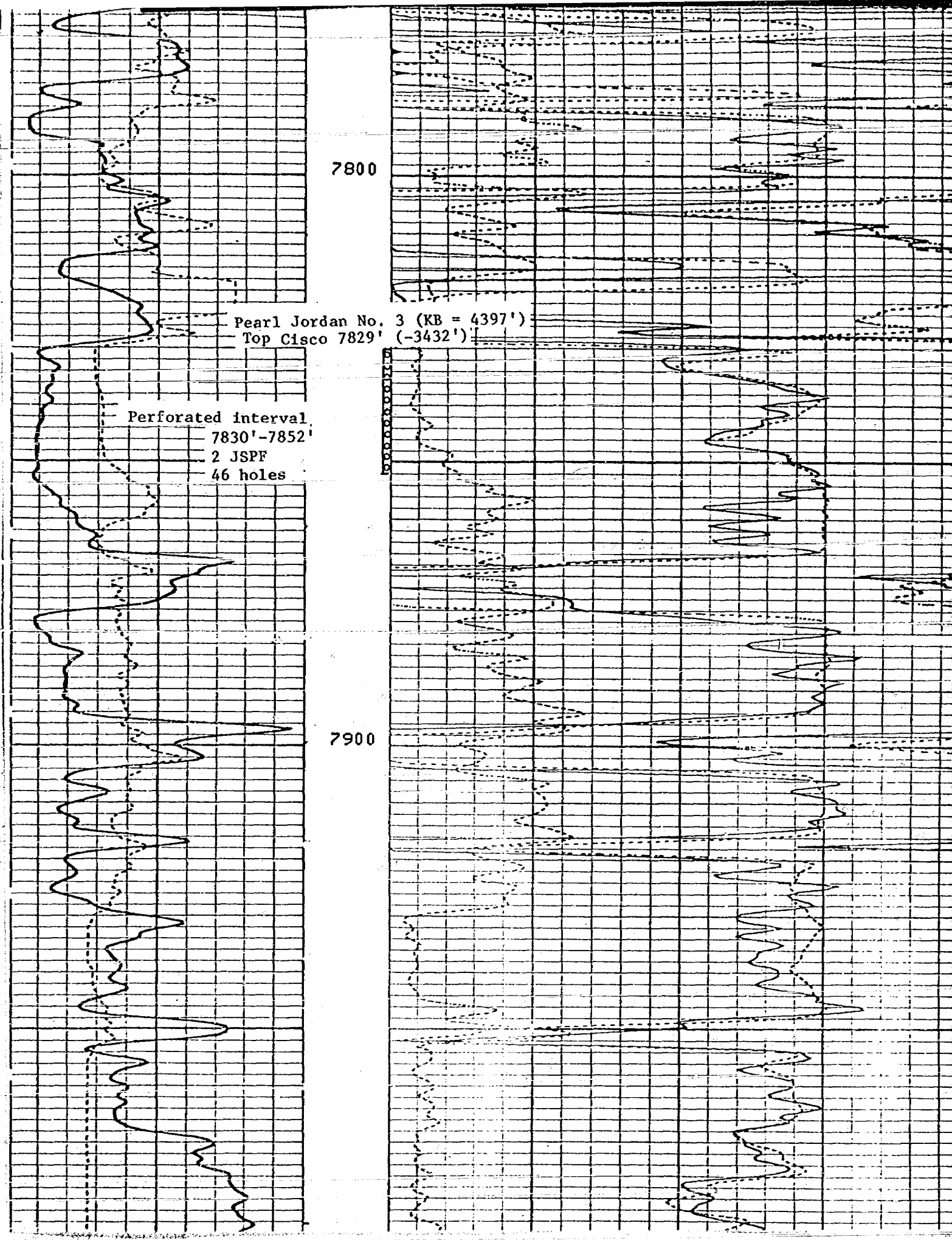
Date	Days of Production	Oil (STB)	Gas (MCF)	Water (Bbl)	GOR (SCF/Bbl)	Water Cut (%)
06/1981	2	558	1,417	0	2,539	0
07/1981	5	2,221	2,731	152	1,230	6.4
08/1981	29	3,710	237	938	62	20.2
09/1981	30	2,415	1,765	2,016	731	45.5
10/1981	31	4,837	2,164	771	447	13.7
11/1981	30	3,927	1,635	697	416	15.1
12/1981						
Cumulative Production	127	17,668	9,949	4,574	563	20.6

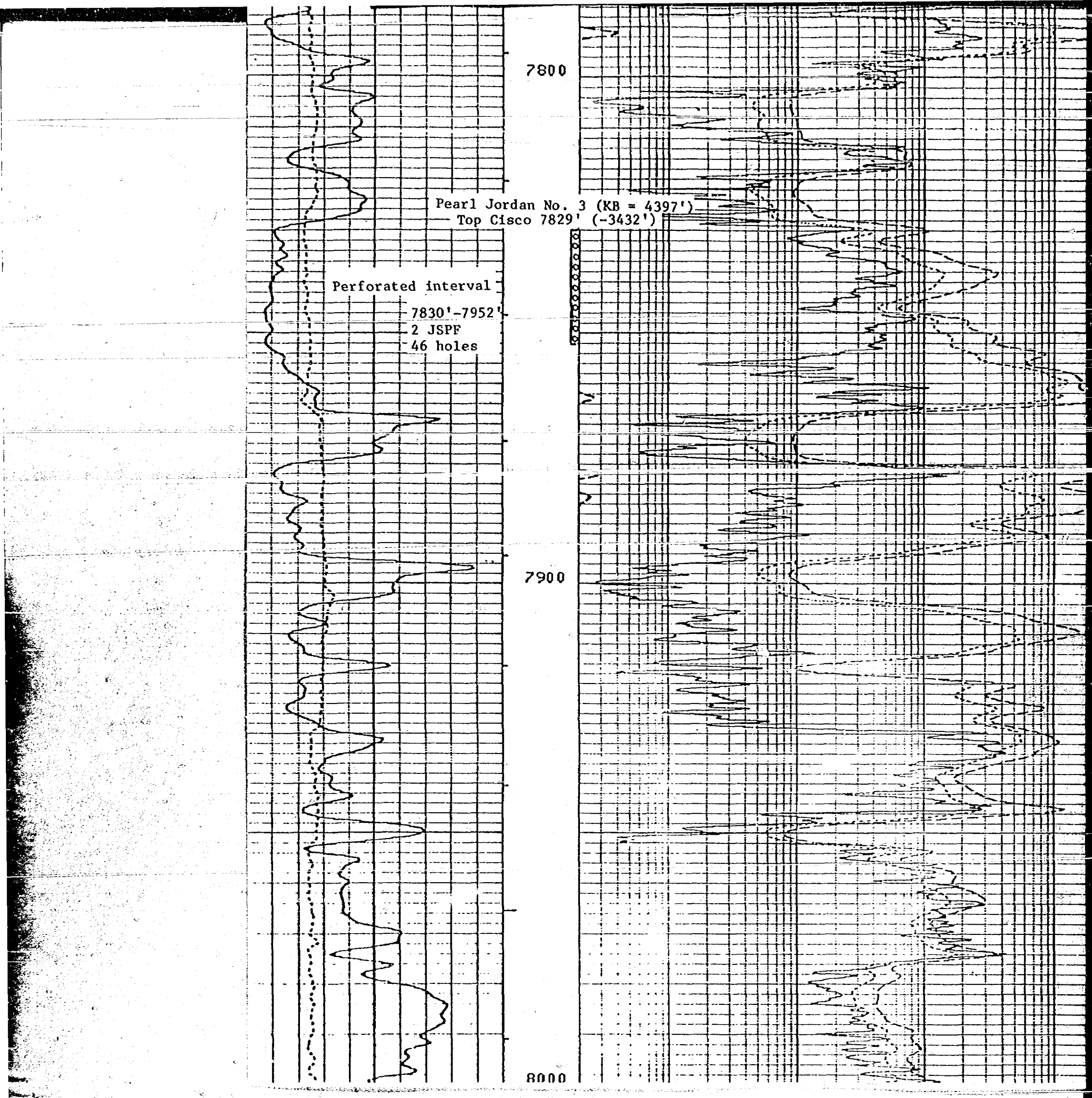
PRODUCTION HISTORY
Enserch Exploration, Inc.
Pearl Jordan No. 3
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico



46 6590

KE 5 YEARS BY MONTHS x 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.


7800
Pearl Jordan No. 3 (KB = 4397')
Top Cisco 7829' (-3432')
Perforated interval
7830'-7852'
2 JSPF
46 holes
7900


7800
Pearl Jordan No. 3 (KB = 4397')
Top Cisco 7829' (-3432')
Perforated interval
7830'-7952'
2 JSPF
46 holes
7900
8000

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit ID
Date 01/20/82

WELL DATA SHEET
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Ex. 6

Well Name	Amoco State No. 1	Amoco State No. 2	Amoco State No. 3	Pearl Jordan No. 1	Pearl Jordan No. 2	Pearl Jordan No. 3	Average Parameters
Perforated Interval (overall)	7826'-7837'	7825'-7835'	7834'-7850'	8016'-8024'	7830'-7848'	7830'-7852'	
Estimated Pay Thickness	8'	15'	20'	8'	18'	18'	14'
Average Porosity (%)	3	3	7	12	9	6	6.6
Average Water Saturation (%)	56	56	42	49	38	59	50
Initial Potential Test (BOPD)	172.5	327	37	27	266	120	158
Initial GOR (SCF/STB)	1345:1	367:1	540:1	1333:1	808:1	1417:1	968:1
Oil Gravity (°API)	45.5	45.6	45.3	45.2	43.4	45.3	45.1
Royalty & Overrride (%)	25.0	25.0	25.0	12.5	12.5	12.5	18.75

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 10
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

ENSERCH EXPLORATION, INC.
AMOCO STATE LEASE PRODUCTION
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 11
Date 01/20/82

Monthly Oil Production (STB/Month)

100,000
20,000
10,000
1,000
100

Stock Tank Bbls

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS
CASE 7072
Submitted by ENSERCH
Hearing Date 1/20/82

Lease Decline: 70% per year
Current Cumulative Production:
105,740 STB

Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

1980 | 1981 | 1982 | 1983 | 1984

ENSERCH EXPLORATION, INC.
PEARL JORDAN LEASE PRODUCTION
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit
Date 01/20/82

Monthly Oil Production (STB/Month)

100,000
20,000
10,000
1,000
100

Lease Decline: 85% per year
Current Cumulative Production:
77,346 STB

Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

1980 1981 1982 1983 1984

ENSERCH EXPLORATION, INC.
TOTAL OIL PRODUCTION
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit
Date: 01/20/82

Monthly Oil Production (STB/Month)

100,000
10,000
1,000
100

Field Decline: 77.5% per year
Current Cumulative Production: 183,086 STB
Total Field Recoverable Reserves: 316,000 STB
Average Well Recoverable Reserves:
316,000/6 = 52,600 STB

Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

19 80 | 19 81 | 19 82 | 19 83 | 19 84

PRODUCTION HISTORY & FORECAST
Enserch Exploration, Inc.
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANT'S 12
7072
Submitted
Hearing Date 1/20/82

Monthly Oil Production (STB/Month)

Amoco State No. 1
Amoco State No. 2
Amoco State No. 3
Pearl Jordan No. 1
Pearl Jordan No. 2
Pearl Jordan No. 3

Recoverable Reserves: 52,600 STB
50,900 MCF

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 12
Date 01/20/82

Year 1 | Year 2 | Year 3 | Year 4

1

PRODUCTION FORECAST
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

Year	Oil Production STB	Gas Production MCF
1	40,000	38,720
2	9,600	9,300
3	2,400	2,300
4	600	580
Cumulative Production	52,600	50,900

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 13
Date 01/20/82

VOLUMETRIC CALCULATIONS
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Average Formation Characteristics

Pay Thickness: 14'
Porosity: 6.6%
Water Saturation: 50%

Average Formation Fluid Characteristics

Average Initial Potential Test: 158 bopd
GOR: 968:1
Oil Gravity: 45.1° API
Initial Formation Volume Factor: 1.485

Original Oil In Place Under an 80-Acre Lease

$$OOIP = 7758 \times A \times h \times \phi \times (1-S_w)/B_o$$
$$= 7758 \times 80 \times 14 \times .066 \times (1-0.50)/1.485$$
$$= 172.4 \text{ STB/acre-ft}$$
$$= 193,100 \text{ STB}$$

Recoverable Oil Under an 80-Acre Lease

$$N_p = OOIP \times R.F.$$
$$= 193,100 \times 0.20$$
$$= 38,620 \text{ bbls}$$

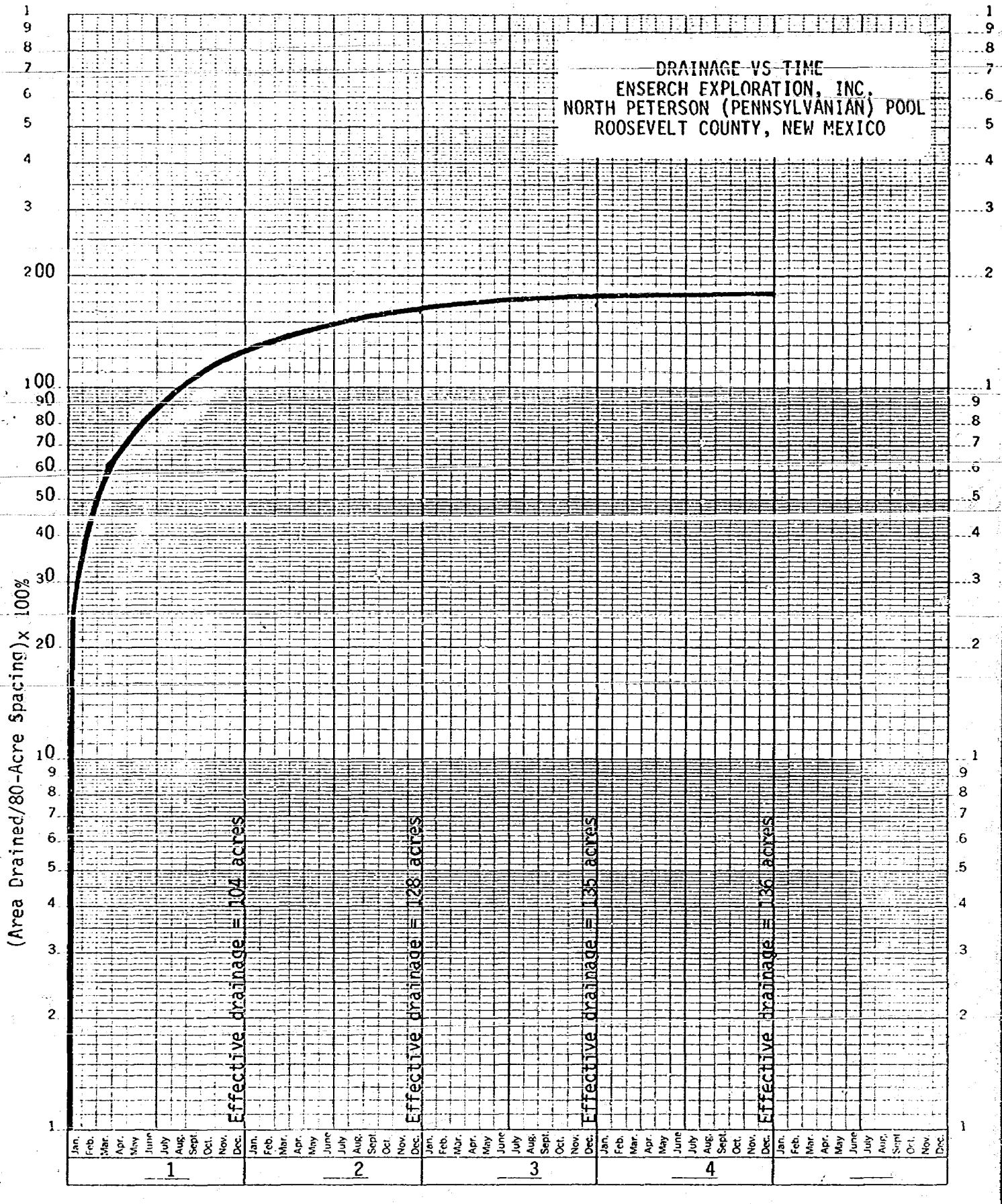
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 13
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 14
Date 01/20/82

DRAINAGE CALCULATIONS
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Year	Oil Production (STB)	Cumulative Oil Production (STB)	Area Drained At Year End (Acres)	$\frac{\text{Area Drained}}{\text{80 Acre Spacing}} \times 100\%$ (%)
1	40,000	40,000	104	129
2	9,600	49,600	128	160
3	2,400	52,000	135	169
4	600	52,600	136	170
Cumulative Production	52,600	52,600	-	-

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 14
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1 20 82


DRAINAGE VS TIME
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO
(Area Drained/80-Acre Spacing) x 100%
Effective drainage = 104 acres
Effective drainage = 128 acres
Effective drainage = 135 acres
Effective drainage = 136 acres
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
1
2
3
4

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 15
Date 01/20/82

ECONOMIC EVALUATION
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

INPUT DATA

Well Cost

Tangibles:	$293,900	Total Well Cost:	$945,750
Intangibles:	$651,850		
Dry Hole Cost:	$531,950		
Salvage Value:	$113,000		

Oil Price

$35/bbl + 5% per year escalation

Casinghead Gas Price

$2.57/MCF + $0.12 per year escalation

Recoverable Hydrocarbon Reserves

52,600 STB
50,900 MCF

OUTPUT DATA

First Case: One well per 80 acres
Total Net Present Worth: $136,700
Present Worth Index: 1.15

Second Case: Two wells per 80 acres
Total Net Present Worth: $-376,900
Present Worth Index: 0.78

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 15
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

INIT WORKING INTEREST	
INIT R & D GAS	
INIT R & D GAS	
NET OF DOLLARS	

YEAR	LIQUIDS MBBLS	GAS MMCF	LIQUIDS MBBLS	GAS MMCF
1	40.0	.38		31.5
2	9.6	.0		7.6
3	2.4	.0		1.9
4	0.6	.0		0.5
TOTALS	52.6	.50		41.4

TOTAL PROJECT NET		
TOTAL PROJECT PRESE		
TOTAL PROJECT RATE OF		

	[illegible]	[illegible]		
	[illegible]	[illegible]		
	[illegible]	[illegible]		

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

ENSERCH EXPLORATION, INC.
NO. 3 PEARL JORDAN
PETERSON NORTH PENN FIELD
ROOSEVELT COUNTY, NEW MEXICO

DATE : 5-23-81
FORMATION : CISCO
DRLG. FLUID : BRINE BASE MUD
LOCATION : 660' FSL & 660' FEL, SEC. 17, T-33-E

FILE NO : 3202-12348
ANALYSTS : REINHEIMER
LABORATORY : MIDLAND TEXAS

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 16
Date 01/20/82

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH FEET	PERM MAXIMUM	PERM 90 DEG	PERM VERTICAL	HE POR	OIL% PORE	WTR% PORE	GRAIN DEN	DESCRIPTION
	CORE NO. 1	7821.0-7851.0	CUT 30'	REC 28'					
1	7821.0-22.0	0.25	0.20	<0.01	1.4	0.0	85.7	2.72	LM SL/SHY SL/F PP STY
2	7822.0-23.0	0.15	0.08	<0.01	4.3	9.3	53.3	2.72	LM SL/F PP STY
3	7823.0-24.0	2.3	2.3	0.25	8.3	6.0	47.9	2.72	LM SL/F PP V STY
4	7824.0-25.0	42.	39.	33.	12.7	8.9	45.2	2.78	LM SL/CALC V F STY
5	7825.0-26.0	80.	76.	106.	12.2	8.5	47.1	2.79	LM SL/CALC V F STY
6	7826.0-27.0	2.6	1.9	1.9	8.3	4.6	41.3	2.74	LM V SL/CALC V F STY
7	7827.0-28.0	0.88	0.79	0.98	7.1	3.5	38.6	2.75	LM V SL/F STY
8	7828.0-29.0	0.61	0.59	0.32	4.5	6.2	46.9	2.72	LM SL/V SL/F PP STY
9	7829.0-30.0	1.4	0.87	0.38	4.5	5.0	50.0	2.72	LM SL/V SL/F PP FOSS STY
10	7830.0-31.0	0.16	0.16	0.06	3.7	3.1	56.2	2.73	LM SL/V VF PP FOSS STY
11	7831.0-32.0	0.38	0.35	0.06	1.6	3.8	56.6	2.72	LM F PP
12	7832.0-33.0	0.71	0.63	0.18	5.8	7.2	36.1	2.72	LM SL/V SL/CALC F PP FOSS
13	7833.0-34.0	0.77	0.51	0.12	1.5	5.7	62.9	2.72	LM SL/CALC VF PP FOSS STY
14	7834.0-35.0	0.89	0.77	0.53	3.2	11.8	44.1	2.72	LM SL/V SL/CALC SL/F PP
15	7835.0-36.0	2.1	1.9	0.53	5.1	4.3	31.9	2.74	LM V SL/CALC STY
16	7836.0-37.0	3.6	3.5	1.3	5.8	6.5	33.9	2.75	LM V SL/CALC SL/F STY
17	7837.0-38.0	12.	7.9	3.7	6.4	2.2	36.6	2.75	LM V SL/CALC SL/F STY
18	7838.0-39.0	6.8	6.4	4.1	7.3	5.1	32.1	2.75	LM V SL/CALC SL/F STY
19	7839.0-40.0	2.1	1.8	0.76	4.5	2.9	32.9	2.74	LM V SL/CALC F STY
20	7840.0-41.0	3.0	2.7	6.9	5.0	7.7	26.9	2.75	LM V SL/CALC VF
21	7841.0-42.0	0.53	0.45	0.26	2.8	3.8	37.7	2.73	LM SL/V SL/F SL/CALC
22	7842.0-43.0	2.2	2.0	2.5	4.8	8.9	25.3	2.74	LM V SL/CALC F STY
23	7843.0-44.0	0.53	0.20	0.31	1.9	8.3	50.0	2.73	LM V SL/CALC VF PP STY
24	7844.0-45.0	0.49	0.42	0.58	2.3	0.0	51.7	2.73	LM SL/CALC VF PP STY

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

ENSERCH EXPLORATION, INC.
NO. 3 PEARL JORDON

DATE : 5-23-81
FORMATION : CISCO

FILE NO : 3202-12348
ANALYSTS : REINHEIMER

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH FEET	PERM MAXIMUM	PERM 90 DEG	PERM VERTICAL	HE POR	OIL% PORE	WTR% PORE	GRAIN DEN	DESCRIPTION
25	7845.0-46.0	0.69	0.67	3.1	2.0	5.4	54.1	2.71	LM SL/CALC SL/V VF PP,STY
26	7846.0-47.0	0.41	0.40	9.6	2.7	4.9	53.7	2.72	LM SL/V SL/CALC VF PP STY
27	7847.0-48.0	0.53	0.32	0.11	1.3	0.0	37.5	2.73	LM SL/CALC SL/SHY SHLAM PP
* 28	7848.0-49.0	0.19		0.18	0.9	0.0	46.8	2.75	LM SL/V SL/SHY VF SHLAM PP

* INDICATES PLUG PERMEABILITY

LITHOLOGICAL ABBREVIATIONS

ANH(Y)	ANHYDRITE, ANHYDRITIC
ARK	ARKOSE, ARKOSIC
BAN	BAND, BANDED
BREC	BRECCIA, BRECCIATED
CALC	CALCITE, CALCAREOUS
CARB	CARBONACEOUS
CG	COARSE GRAINED
CHK(Y)	CHALK, CHALKY
CHT(Y)	CHERT, CHERTY
CONGL	CONGLOMERATE, CONGLOMERITIC
CXLN	COARSELY CRYSTALLINE
DNS	DENSE
DOL(C)	DOLOMITE, DOLOMITIC
→ F	RANDOMLY ORIENTED FRACTURES
FG	FINE GRAINED
FOSS	FOSSILIFEROUS
FR	FRIABLE
FXLN	FINELY CRYSTALLINE
GAL	GALENA
GLAUC	GLAUCONITE, GLAUCONITIC
GRAN	GRANITE
GYP	GYPSUM, GYPSIFEROUS
HF	PREDOMINANTLY HORIZONTALLY FRACTURED
INC	INCLUSION
INTBD	INTERBEDDED
LAM	LAMINATED
LM(Y)	LIMESTONE, LIMY
MG	MEDIUM GRAINED
MTX	MATRIX
NA	INTERVAL NOT ANALYZED (AT REQUEST OF CLIENT)
NOD	NODULE, NODULAR
OOL	OOLITIC
PISO	PISOLITIC
PP	PINPOINT POROSITY
PT	PARTING
PYR	PYRITE, PYRITIC
SD(Y)	SANDSTONE, SANDY
SH(Y)	SHALE, SHALY
SHR	SOLID HYDROCARBON RESIDUE
SL/	SLIGHTLY
SLT(Y)	SILT, SILTY
STY	STYLOLITE, STYLOLITIC
SUC	SUCROSIC
SUL	SULPHUR
TBFA	TOO BROKEN FOR ANALYSIS
TRIP	TRIPOLITE
V/	VERY
→ VF	PREDOMINANTLY VERTICALLY FRACTURED
V	VUGULAR
XBD	CROSSBEDDED
XLN	MEDIUM CRYSTALLINE

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: ENSEARCH CORPORATION WELL : NO. 3 PEARL JORDON
FIELD : PETERSON NORTH PENN FIELD COUNTY, STATE: ROOSEVELT COUNTY, NEW MEXICO

MILLIDARCY-FEET OF FLOW CAPACITY LOST FOR SELECTED PERMEABILITY CUT OFF

PERMEABILITY CUT OFF	FEET LOST	CAPACITY LOST (%)		FEET REMAINING	CAPACITY REMAINING (%)	GEOM MEAN	MEDIAN
0.005	0.0	0.0		28.0	100.0	1.25	0.95
0.010	0.0	0.0		28.0	100.0	1.25	0.95
0.020	0.0	0.0		28.0	100.0	1.25	0.95
0.039	0.0	0.0		28.0	100.0	1.25	0.95
0.078	0.0	0.0		28.0	100.0	1.25	0.95
0.156	1.0	0.1		27.0	99.9	1.36	1.02
Permeability cut-off: 0.5md 0.312	4.0	0.4		24.0	99.6	1.73	1.25
0.625	11.0	2.5		17.0	97.5	2.90	2.03
1.250	16.0	4.9		12.0	95.1	4.99	3.15
2.500	21.0	10.9		7.0	89.1	9.63	7.07
5.	24.0	16.3		4.0	83.7	22.88	20.00
10.	25.0	20.4	Net Pay: 18'	3.0	79.6	34.29	56.57
20.	26.0	27.5		2.0	72.5	57.97	80.00
40.	26.0	27.5		2.0	72.5	57.97	80.00
80.	27.0	52.5		1.0	47.5	80.00	
160.	28.0	100.0		0.0	0.0		

TOTAL FLOW CAPACITY IN MILLIDARCY-FEET(ARITHMETIC) = 168.27

Flow capacity in md-ft above permeaiblity cut-off = 168.27 x 0.98 = 165 md-ft

Average formation permeability = 168/18 = 9.2 md

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CORE LABORATORIES, INC. *Petroleum Reservoir Engineering*

COMPANY CHISHOLM CORPORATION FILE NO. 3202-12348

WELL NO. 1 PEARL JORDON DATE 5-23-81

FIELD PETERSON NORTH PENN FIELD FORMATION CISCO ELEV.

COUNTY ROOSEVELT COUNTY STATE NEW MEXICO DRLG. FLD. BRINE BASE MUD CORES AMERICAN COLDSET CORP.

LOCATION 660' FSL & 660' FEL, SEC. 17, T-33-E

CORRELATION COREGRAPH

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Total Water ___
PERCENT PORE SPACE
100 80 60 40 20 0

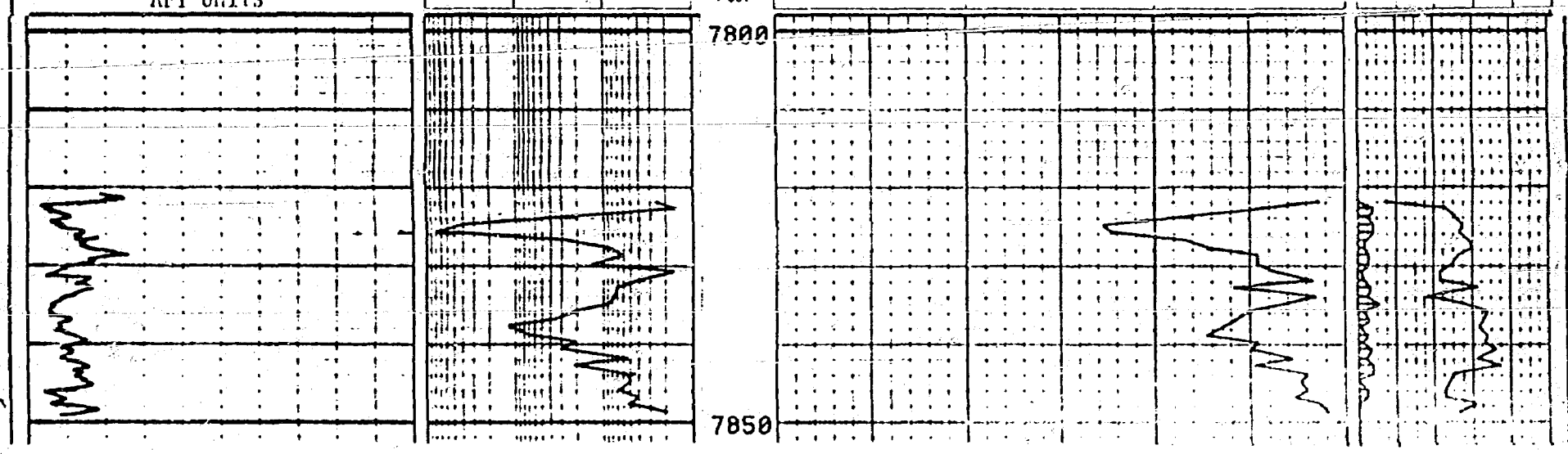
Gamma Ray
RADIATION INCREASE →
API UNITS

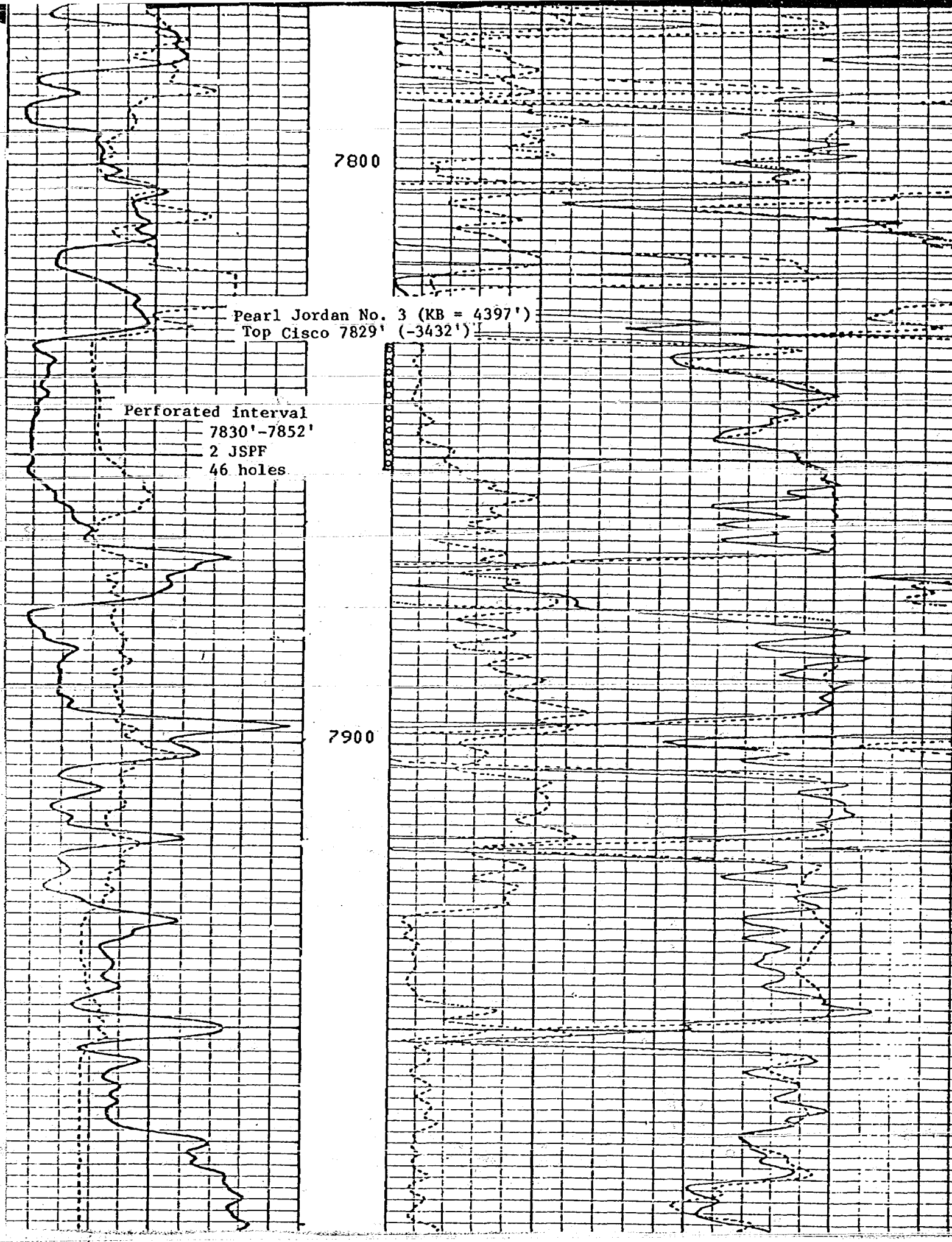
Permeability ___
MILLIDARCIES
100 10 1.0 .1

Depth Feet

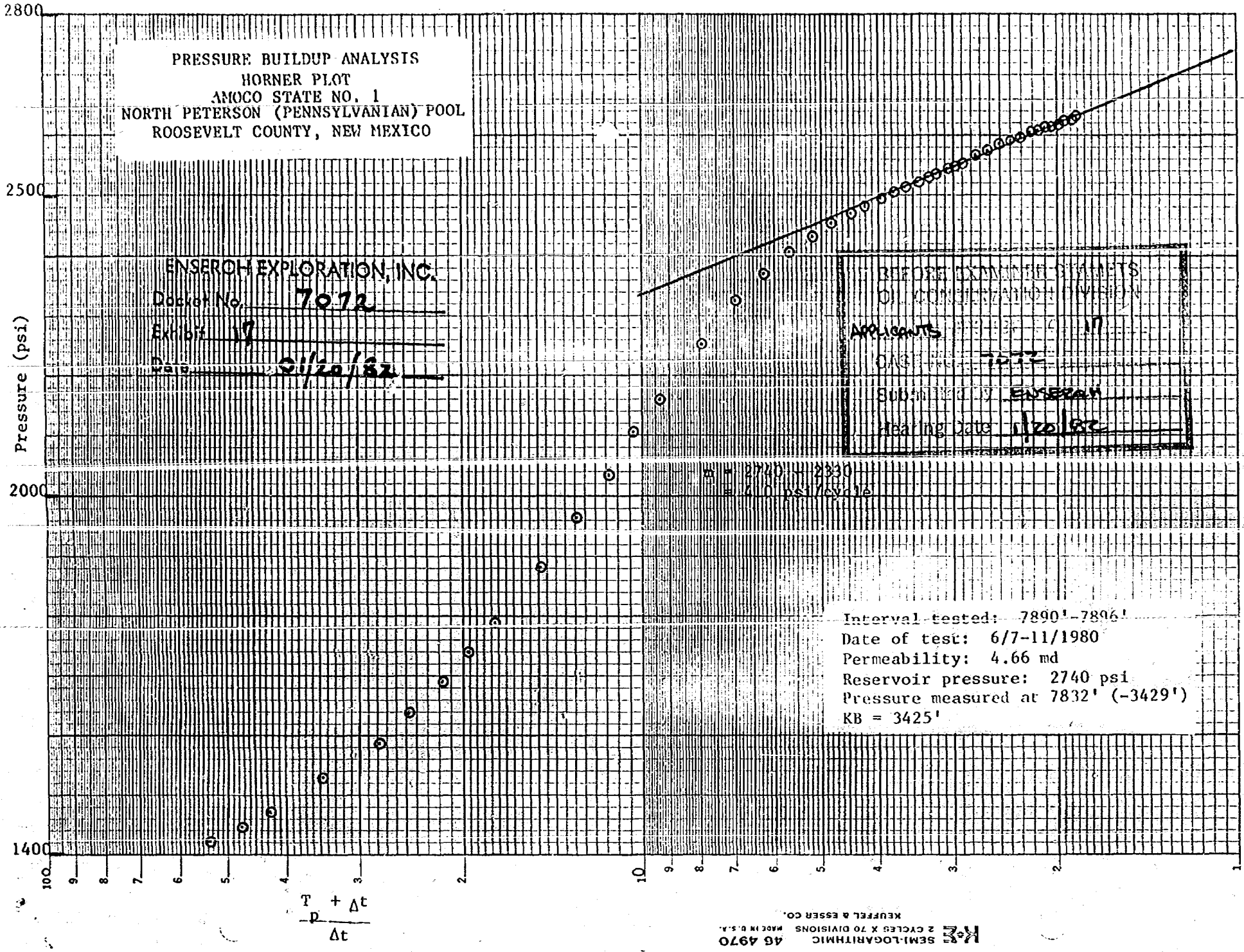
Porosity ___
PERCENT
30 20 10 0

Oil Saturation
PERCENT PORE SPACE
0 20 40 60 80 100




7800
Pearl Jordan No. 3 (KB = 4397')
Top Cisco 7829' (-3432')
Perforated interval
7830'-7852'
2 JSPF
46 holes
7900

PRESSURE BUILDUP ANALYSIS
HORNER PLOT
AMOCO STATE NO. 1
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO



OIL

WELL PRESSURE ANALYSIS
West Texas District

Test Date: 6/7-11/1980 Lease: Amoco State

Formation: Pennsylvanian Lime Well No.: 1

Casing Size: 5-1/2" Field: North Peterson

Cum. Prod. Np(Bbl): 604 State: New Mexico

Prod. Rate (Bbl/Day): 173

Prod. Life = 24Np/q: 83.8 hrs

I. Calculation of kh (md-ft) and k (md):

$kh = \frac{162.6\ q\mu B}{m}$; $k = \frac{kh}{h}$

h = 8 ft μ = 0.365 cp

q = 173 B/D B = 1.49

m = 410 psi/cycle

$kh = \frac{162.6 \times (173) \times (.365) \times (1.49)}{(410)} = 37.3$

$k = \left\{\frac{37.3}{8}\right\} = 4.66$

II. Calculation of Skin Effect, s; and Pressure Loss Due to Skin, Δp_{skin} (psi):

$$s = 1.151\left[\frac{p_{1\text{-hr}} - p_{wf}}{m} - \log\left(\frac{k}{\phi\mu c r_w^2}\right) + 3.23\right]$$

$$s = 1.151\left[\frac{(1967)-(1195)}{(410)} - \log\left[\frac{(4.66)}{(.03)(.365)(16.5 \times 10^{-6})(.229^2)}\right] + 3.23\right] = -4.12$$

$\Delta p_{skin} = (m) \times 0.87\ (s)$ $\Delta p_{skin} = (410) \times 0.87\ (-4.12) = -1469.6$

k = 4.66 md r_w = 0.229 ft

φ = 0.03 $p_{1\ hr}$ = 1967 psig

μ = 0.365 cp p_{wf} = 1195 psig

c = 16.5×10^{-6} psi^{-1} m = 410 psi/cycle

III. Calculation of Productivity Index (B/D-psi) and Flow Efficiency:

$J_{(actual)} = \frac{q}{p^* - p_{wf}}$ $J_{(ideal)} = \frac{q}{(p^* - p_{wf}) - \Delta p_{skin}}$

$J_{(actual)} = \frac{(173)}{(2740)-(1195)}$ $J_{(ideal)} = \frac{(173)}{[(2740)-(1195)] - (-1470)}$

$J_{(actual)}$ = 0.112 $J_{(ideal)}$ = 0.057

Δp_{skin} = -1470 psi p^* = 2740 psig

q = 173 B/D p_{wf} = 1195 psig

Flow Efficiency = $\frac{J_{(actual)}}{J_{(ideal)}} = \frac{(0.112)}{(0.057)} = 1.96$

PARAMETERS:

$C_t = S_w C_w + S_o C_o + C_f = (.56)(3 \times 10^{-6}) + (.44)(14.3 \times 10^{-6}) + (8.5 \times 10)^6 = 16.5 \times 10^{-6}$

P_c = _____ psia S_w = 56 %

T_c = _____ °R S_o = 44 %

BHT = _____ °F ρ_o = _____

BHP = _____ psia

Radius of investigation during pressure buildup:

$r_i = \left(\frac{kt}{\phi\mu C_t}\right) = 0.029\left(\frac{(4.66)(96.33)}{(.03)(.357)(16.5 \times 10^{-6})}\right)^{\frac{1}{2}} = 1561.6'$ (154 acres in 96.3 hours)

PRESSURE BUILDUP ANALYSIS
HORNER PLOT
ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 2
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS 18
CASE 7072
SUBMITTED BY ENSERCH
HEARING DATE 1/20/82

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 18
Date 01/20/82

Pressure (psi)

2600
2550
2500

m = 2633 - 2578
= 55 psi/cycle

Interval Tested: 7825'-7841'
7848'-7855'
Date of Test: 11/3-6/1980
Permeability: 26.1
Reservoir Pressure: 2633
Pressure drop: 107 psi
Pressure measured at 7840' (-3430')
KB = 4410'

10 9 8 7 6 5 4 3 2 1 9 8 7 6 5 4 3 2 1 9 8 7 6 5 4 3 2 1

$\frac{(T + \Delta t)}{\Delta t}$

K&E SEMI-LOGARITHMIC • 3 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

OIL

WELL PRESSURE ANALYSIS
West Texas District

Test Date: 11/3-6/1980 Lease: Amoco State

Formation: Pennsylvanian Lime Well No.: 2

Casing Size: 5-1/2" Field: North Peterson

Cum. Prod. Np(Bbl): 3521 State: New Mexico

Prod. Rate (Bbl/Day): 252

Prod. Life = 24Np/q: 335.33

I. Calculation of kh (md-ft) and k (md):

$kh = \frac{162.6\ q\mu B}{m}$; $k = \frac{kh}{h}$

h = 15 ft μ = 0.357 cp

q = 252 B/D B = 1.472

m = 55 psi/cycle

$kh = \frac{162.6 \times (252) \times (0.357) \times (1.472)}{(55)} = 391.5$

$k = \frac{(391.5)}{(15)} = 26.1$

II. Calculation of Skin Effect, s; and Pressure Loss Due to Skin, Δp_{skin}(psi):

$s = 1.151\left[\frac{p_{1\text{-hr}} - p_{wf}}{m} - \log\left(\frac{k}{\phi\mu c r_w^2}\right) + 3.23\right]$

$s = 1.151\left[\frac{(2497)-(2398)}{(55)} - \log\left[\frac{(26.1)}{(0.03)(0.357)(16.5\times10^{-6})(2038^2)}\right] + 3.23\right] = -5.2$

$\Delta p_{skin} = (m) \times 0.87\ (s)$ $\Delta p_{skin} = (55) \times 0.87\ (-5.2) = -248.8$

k = 26.1 md r_w = .2038 ft

φ = 0.03 $p_{1\ hr}$ = 2497 psig

μ = 0.357 cp p_{wf} = 2398 psig

c = 16.5×10^{-6} psi^{-1} m = 55 psi/cycle

III. Calculation of Productivity Index (B/D-psi) and Flow Efficiency:

$J_{(actual)} = \frac{q}{p^* - p_{wf}}$ $J_{(ideal)} = \frac{q}{(p^*-p_{wf}) - \Delta p_{skin}}$

$J_{(actual)} = \frac{(252)}{(2633)-(2398)}$ $J_{(ideal)} = \frac{(252)}{[(2633)-(2398)] - (-249)}$

$J_{(actual)}$ = 1.072 $J_{(ideal)}$ = 0.52

Δp_{skin} = -249 psi p* = 2633 psig

q = 252 B/D p_{wf} = 2398 psig

Flow Efficiency = $\frac{J_{(actual)}}{J_{(ideal)}} = \frac{(1.072)}{(0.52)} = 2.06$

PARAMETERS:

$C_t = S_w C_w + S_o C_o + C_f = (.56)(3\times10^{-6}) + (.44)(14.3\times10^{-6}) + (3.5\times10^{-6}) = 10.\ldots\times10^{-6}$

P_c = _____ psia S_w = .56

T_c = _____ °R S_o = .44

BHT = _____ °F ρ_o = 0.623

BHP = _____ psia

Radius of investigation during pressure build-up:

$r_1 = 0.029\left(\frac{kt}{\phi\mu C_t}\right)^{\frac{1}{2}} = 0.029\left(\frac{(2.62)(64)}{(.02)(.357)(16.5\times10^{-6})}\right)^{\frac{1}{2}} = 2819.5'$

(573 acres in 64 hours)

PRESSURE BUILDUP ANALYSIS
HORNER PLOT
ENSERCH EXPLORATION, INC.
PEARL JORDAN-WELL NO. 2
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

APPLICANT'S 19
7072
ENSERCH
Hearing Date 1/20/82

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 19
Date 01/20/82

Pressure (psi)

2340
2300
2250
2200

m = 2350 - 2258
= 92 psi/cycle

Interval Tested: 7830'-7848'
Date of Test: 1/11-13/1981
Permeability: 13 md
Reservoir pressure: 2350 psi
Pressure drop: 390 psi
Pressure measured at 7839' (-3425')
KB = 4414'

1000 9 8 7 6 5 4 3 2 100 9 8 7 6 5 4 3 2 10

$\frac{T_p + \Delta t}{\Delta t}$

OIL

WELL PRESSURE ANALYSIS
West Texas District

Test Date: 3/11-13/81 Lease: Pearl Jordan

Formation: Pennsylvanian Well No.: 2

Casing Size: 5-1/2" Field: North Peterson

Cum. Prod. Np(Bbl): 520 State: New Mexico

Prod. Rate (Bbl/Day): 250

Prod. Life = 24Np/q: 50 hrs

I. Calculation of kh (md-ft) and k (md):

$$kh = \frac{162.6\ q\mu B}{m} \quad ; \quad k = \frac{kh}{h}$$

h = 18 ft μ = 0.357 cp

q = 250 B/D B = 1.445

m = 92 psi/cycle

$$kh = \frac{162.6 \times (250) \times (0.357) \times (1.445)}{(92)} = 227.9$$

$$k = \left(\frac{227.9}{18}\right) = 12.7 \text{ md}$$

II. Calculation of Skin Effect, s; and Pressure Loss Due to Skin, Δp_{skin} (psi):

$$s = 1.151\left[\frac{p_{1\,hr} - p_{wf}}{m} - \log\left(\frac{k}{\phi\mu c r_w^2}\right) + 3.23\right]$$

$$s = 1.151\left[\frac{(2192)-(2173)}{(92)} - \log\left[\frac{(12.7)}{(0.09)(0.357)(8.5\times10^{-6})(.2038^2)}\right] + 3.23\right] = -6.07$$

$\Delta p_{skin} = (m) \times 0.87\ (s)$ $\Delta p_{skin} = (92) \times 0.87\ (-6.07) = -485$

k = 12.7 md r_w = .2038 ft

φ = 0.09 $p_{1\,hr}$ = 2192 psig

μ = 0.357 cp p_{wf} = 2173 psig

c = 18.5×10^{-6} psi^{-1} m = 92 psi/cycle

III. Calculation of Productivity Index (B/D-psi) and Flow Efficiency:

$$J_{(actual)} = \frac{q}{p^* - p_{wf}}$$

$$J_{(actual)} = \frac{(250)}{(2350)-(2173)}$$

$J_{(actual)}$ = 1.41

$$J_{(ideal)} = \frac{q}{(p^* - p_{wf}) - \Delta p_{skin}}$$

$$J_{(ideal)} = \frac{(250)}{[(2350)-(2173)] - (-481)}$$

$J_{(ideal)}$ = 0.38

Δp_{skin} = 481 psi p^* = 2350 psig

q = 250 B/D p_{wf} = 2173 psig

$$\text{Flow Efficiency} = \frac{J_{(actual)}}{J_{(ideal)}} = \frac{(1.41)}{(0.38)} = 3.71$$

PARAMETERS:

$C_t = S_w C_w + S_o C_o + C_f = (.38)(3\times10^{-6}) + (.62)(4.3\times) + (8.5\times10^{-6}) =$ 18.5×10^{-6}

P_c = _____ psia S_w = 38 %

T_c = _____ °R S_o = 62 %

BHT = 140 °F ρ_o = 0.6727 gm/cu

BHP = 2350 psia

Radius of investigation during pressure buildup

$$r_i = 0.029\left(\frac{kt}{\phi\mu C_t}\right)^{\frac{1}{2}} = 0.029\left(\frac{(12.7)(46.5)}{(.09)(.357)(18.5\times10^{-6})}\right)^{\frac{1}{2}} = 914 \text{ ft (60 acres in 46.5 hrs)}$$

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 20
Date 01/20/82

SUMMARY
PERMEABILITY AND DRAINAGE
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

I. PERMEABILITY

Amoco State Well No. 1	(PBU Analysis)	4.7 md
Amoco State Well No. 2	(PBU Analysis)	26.1 md
Pearl Jordan Well No. 2	(PBU Analysis)	12.7 md
Pearl Jordan Well No. 3	(Whole Core Analysis)	9.2 md
	Average	13.2 md

II. DRAINAGE - RADIUS OF INVESTIGATION

Amoco State Well No. 1	(t = 96 hrs)	154 acres
Amoco State Well No. 2	(t = 64 hrs)	573 acres
Pearl Jordan Well No. 2	(t = 46.5 hrs)	60 acres
	Average	262 acres

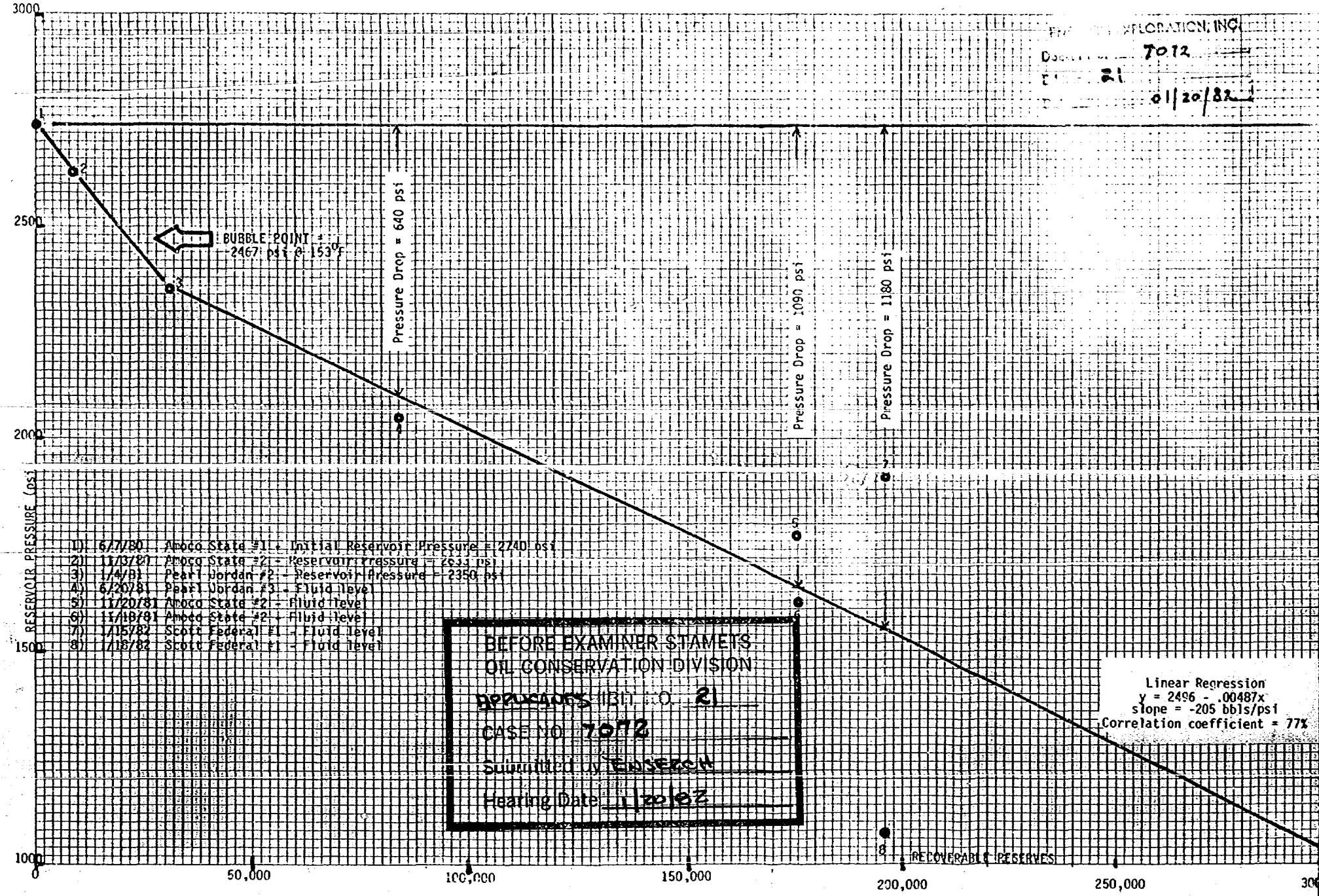
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 20
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

EXPLORATION, INC.

Date 7072

21

01/20/82



BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANT'S EXH. NO. 21
CASE NO. 7072
Submitted by TENNECO
Hearing Date 1/20/82

R - 3 3 - E

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 1
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

T 4 S

AMERADA LEA Glor # 287

7 8 9

18 17 16

Drlg. DESANA PETERSON

-3600
-3550
-3500
-3450

ENSERCH JORDAN -3412 -3432

Line of Cross Section

-3424 ENSERCH AMOCO-ST -3405 -3412

ROCKWOOD RES. ENSERCH-ST WOCU

OWWO WOCU -3457 TD 8250

ENSERCH SCOTT-FED -3475

WOCU -3475

ENSERCH KIMSEY -3458

ENSERCH HAYS Abnd. Loc

TD 8300 -3503

19 20 21

30 29

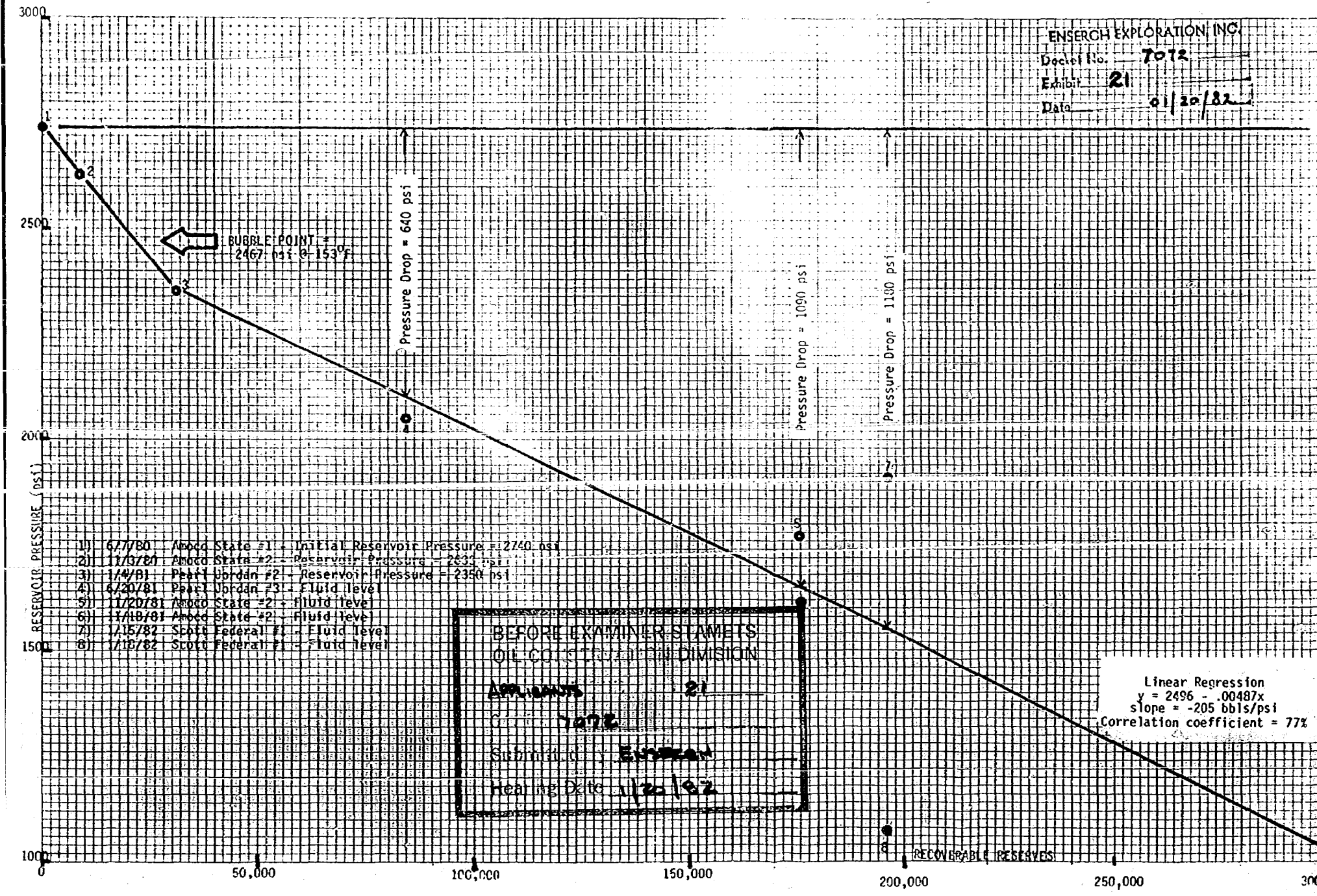
ENSERCH EXPLORATION INC.
WEST TEXAS AREA

PETERSON, NORTH AREA
ROOSEVELT COUNTY, NEW MEXICO

STRUCTURE MAP
TOP CISCO LIME

Contour Interval 50'
Scale 1" = 2000' 1/81 TFH

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 21
Date 01/20/82



BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANT'S
EXHIBIT NO. 21
CASE NO. 7072
Submitted by Enserch
Hearing Date 1/20/82

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 3
Date 01/20/82

SOUTHEAST NEW MEXICO PENN POOLS
80-ACRE SPACING

Pool Name	Top Oil Allowable (Bbl)	Top Casinghead Gas Limit (MCF)	GOR Limit
Allison Penn	355	710	2000
Bagley Penn, North	400	800	2000
Dean Permo Penn	455	890	2000
Four Lakes Penn	400	800	2000
Hightower Lower Penn	400	800	2000
Hightower Upper Penn, East	355	214	2000
Inbe Permo Penn	355	710	2000
Lovington Penn, NE	534	1068	2000
Peterson Penn, North	267	534	2000
Prairie Cisco, South	355	710	2000
Ranger Lake Penn	400	800	2000
Tobac Penn	355	710	2000
Vacuum Upper Penn	400	800	2000

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS 3
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

ENSERCH EXPLORATION, INC.

Docket No._____

Exhibit_____

Date_____

SOUTHEAST NEW MEXICO PENN POOLS
160-ACRE SPACING

Pool Name	Top Oil Allowable (Bbl)	Top Casinghead Gas Limit (MCF)	GOR Limit
Bar-U Penn	355	710	2000
Baum Upper Penn	355	710	2000
Cerca Upper Penn	560	1120	2000
High Plains Penn	560	1120	2000
Nonombre Upper Penn	560	1120	2000
Saunders Permo Penn, East	560	1120	2000
Tres Papalotes Penn	560	1120	2000
Tres Papalotes Penn, West	560	1120	2000
Tulk Pennsylvanian	355	710	2000

ENSERCH EXPLORATION, INC.

Docket No. 7072

Exhibit 4

Date 01/20/82

WELL COMPLETION DATA
ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 1
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Top of Penn Lime: 7808' (-3405') KB: 4402.7'

Perforated Production Interval: 7826'-7837' (1 JSPF)

Stimulation Treatment: Spotted 150 gallons 15% MCA acid (6/4/80)
Pumped 2000 gallons MOD 303 acid

Initial Potential Test:

Date of Test: 6/8/80 (flowing)
172.5 BO + 232 MCFG + 2 BW
GOR: 1345:1

Current Status: Put well on pump 1/31/81. Producing

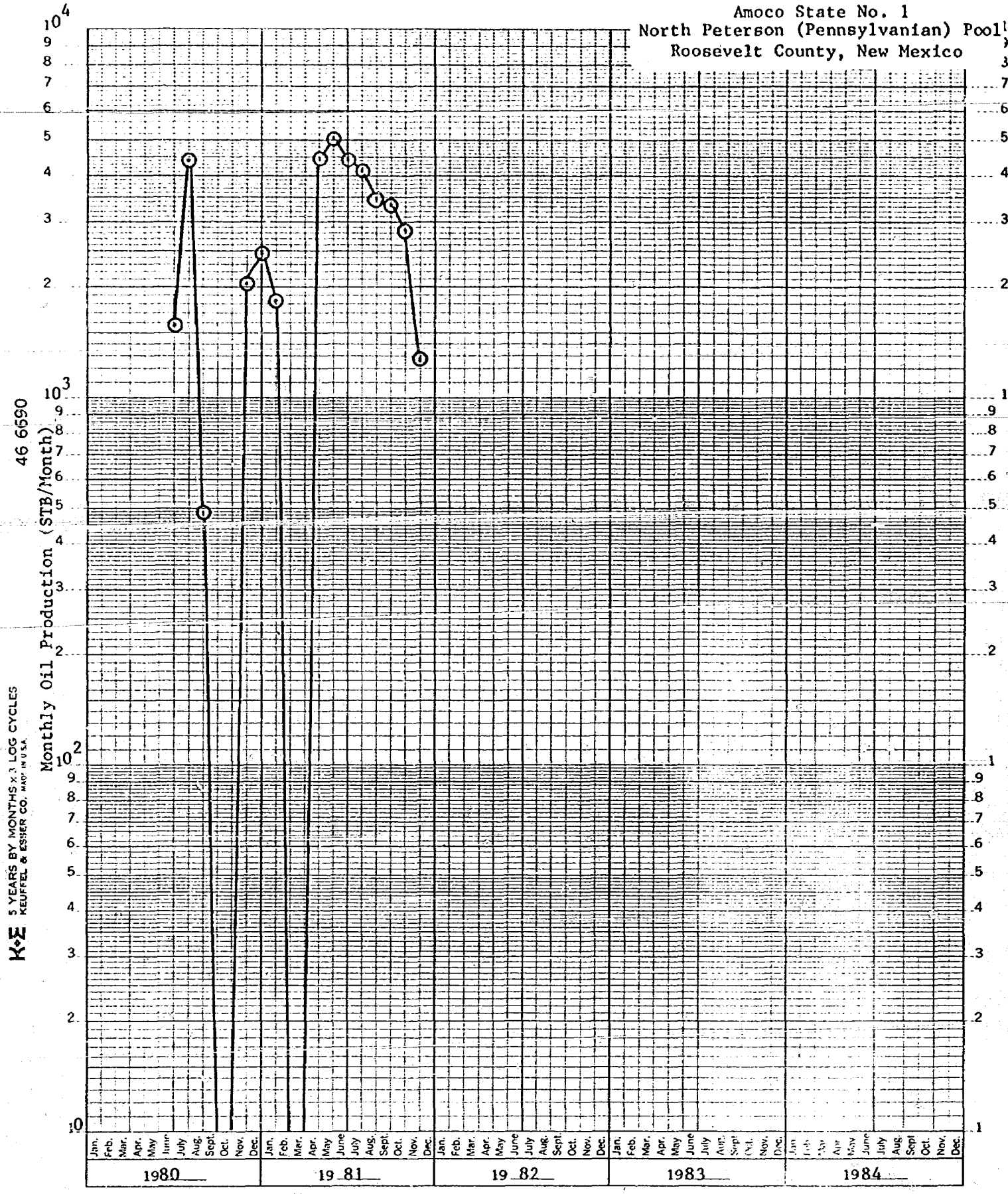
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 4
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

PRODUCTION HISTORY

ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 1
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

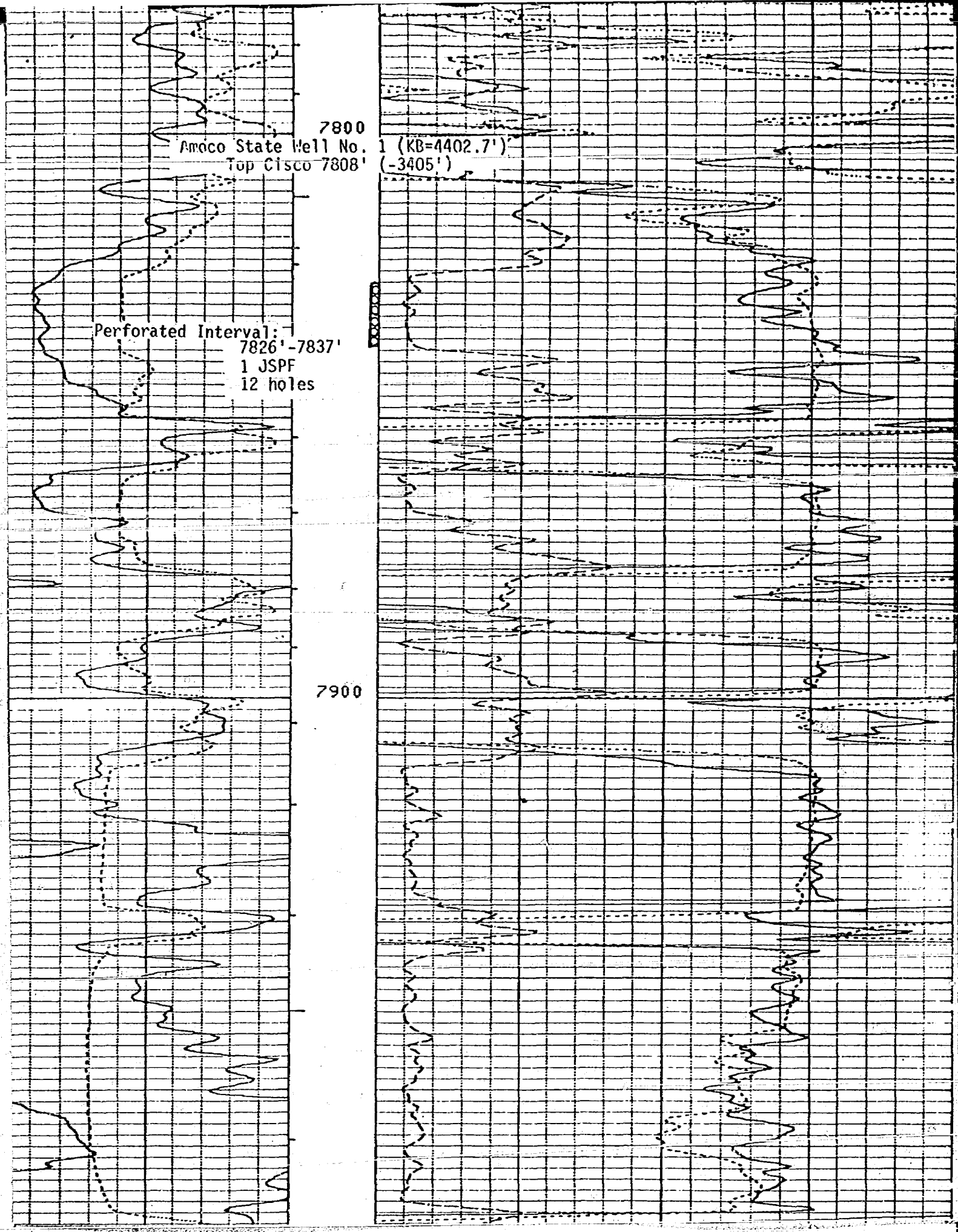
Date	Days of Production	Oil (STB)	Gas (MCF)	Water (Bbl)	GOR (SCF/Bbl)	Water Cut (%)
06/1980	21	1,578	1,954	0	1,238	0
07/1980	31	4,401	4,964	0	1,128	0
08/1980	4	488	605	0	1,240	0
09/1980	0	0	0	0	-	0
10/1980	0	0	0	0	-	0
11/1980	21	2.035	795	0	391	0
12/1980	25	2,444	1,407	41	576	2
01/1981	24	1,838	416	8	226	0.4
02/1981	0	2	0	0	-	0
03/1981	0	0	0	0	-	0
04/1981	17	4,469	662	0	148	0
05/1981	29	5,029	1,545	0	307	0
06/1981	25	4,406	1,571	0	357	0
07/1981	26	4,127	2,003	0	485	0
08/1981	31	3,483	1,858	0	533	0
09/1981	30	3,327	1,553	0	467	0
10/1981	31	2,852	1,374	0	482	0
11/1981	30	1,292	518	0	401	0
12/1981						
Cumulative Production	345	41,771	21,225	49	508	0

PRODUCTION HISTORY
Enserch Exploration, Inc.
Amoco State No. 1
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico



46 6690

K+E 5 YEARS BY MONTHS X 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.


7800
Amoco State Well No. 1 (KB=4402.7')
Top Cisco 7808' (-3405')
Perforated Interval:
7826'-7837'
1 JSPF
12 holes
7900

7800

Amoco State Well No. 1 (KB=4402.7')
Top Cisco 7808' (-3405')

Perforated Interval:
7826'-7837'
1 JSPF
12 holes

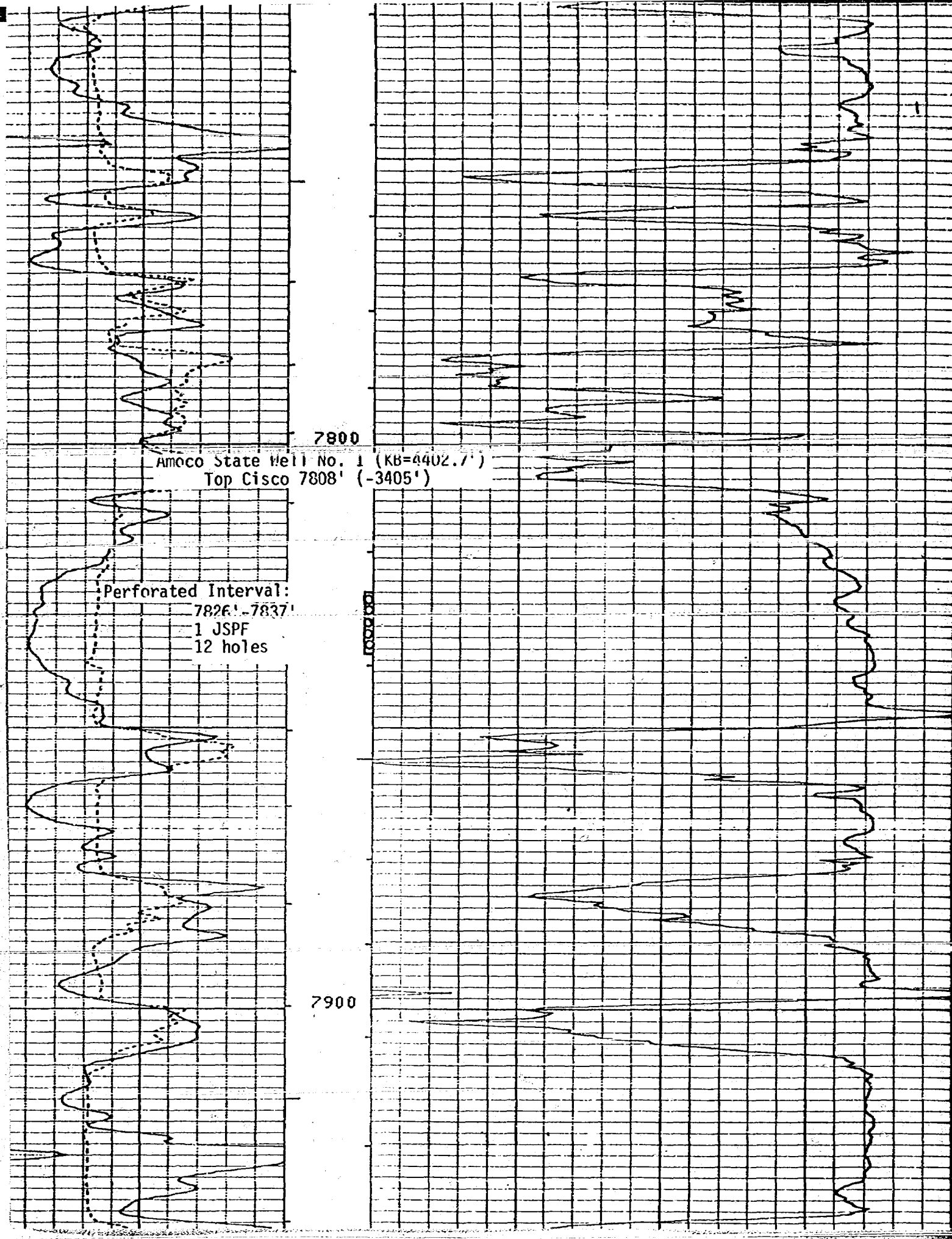
7900

CAL

FR

MFC
LLS

LD


7800
Amoco State Well No. 1 (KB=4402.7')
Top Cisco 7808' (-3405')
Perforated Interval:
7826'-7837'
1 JSPF
12 holes
7900

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 5
Date 01/20/82

WELL COMPLETION DATA
ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 2
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Top of Penn Lime: 7822' (-3412') KB: 4410'

Perforated Production Interval: 7825'-7835' (1 JSPF)

Stimulation Treatment: Spotted 150 gallons 15% MCA acid (10/16/80)
Pumped 3000 gallons MOD 303 acid
Dropped 20 RCN ball sealers

Initial Potential Test:
Date of Test: 10/18/80 ~~10/20/81~~ (flowing)
327 BO + 120 MCFG + 0 BW
GOR: 367:1

Current Status: Put well on pump 2/15/81. Producing

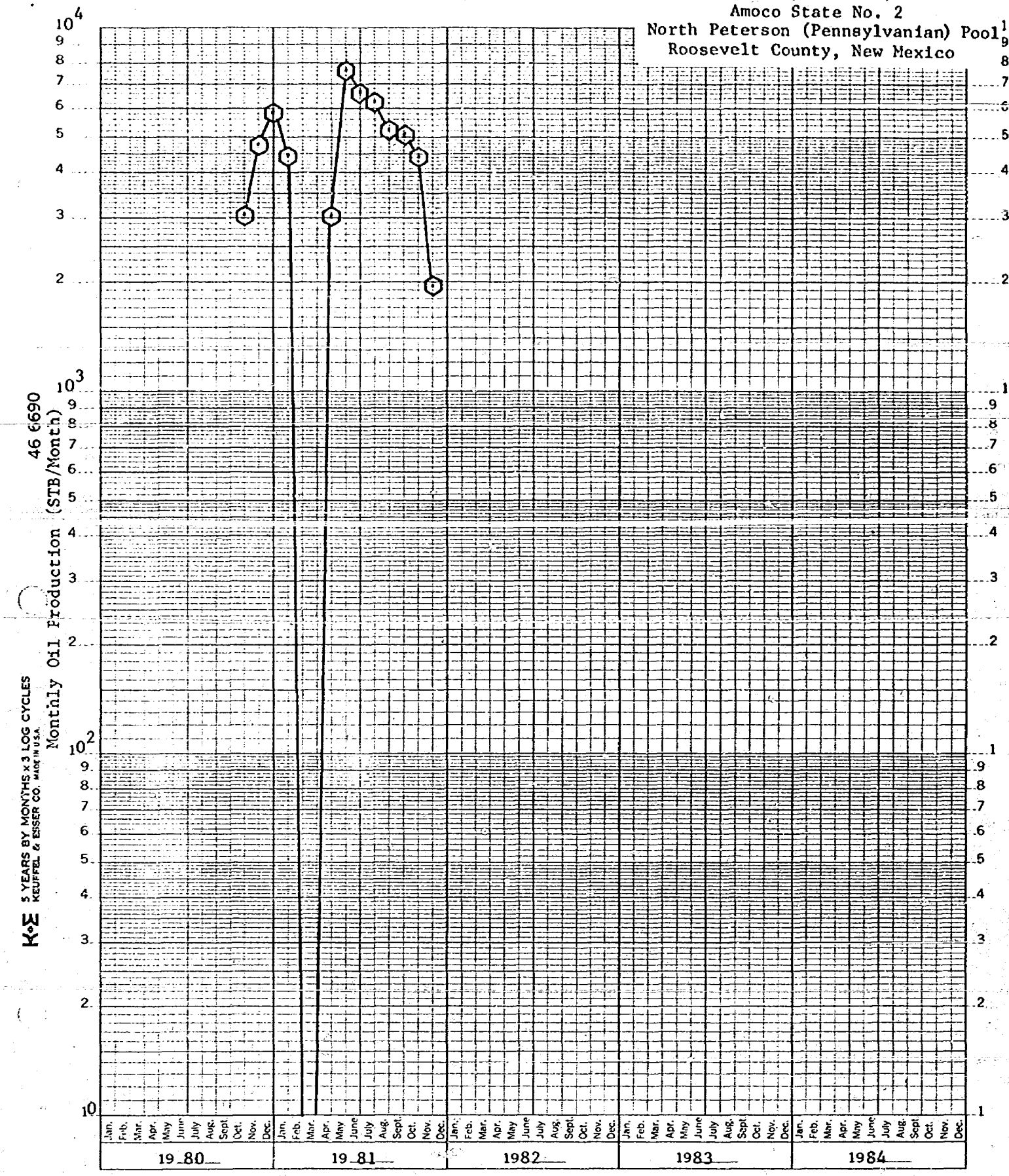
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 5
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

PRODUCTION HISTORY

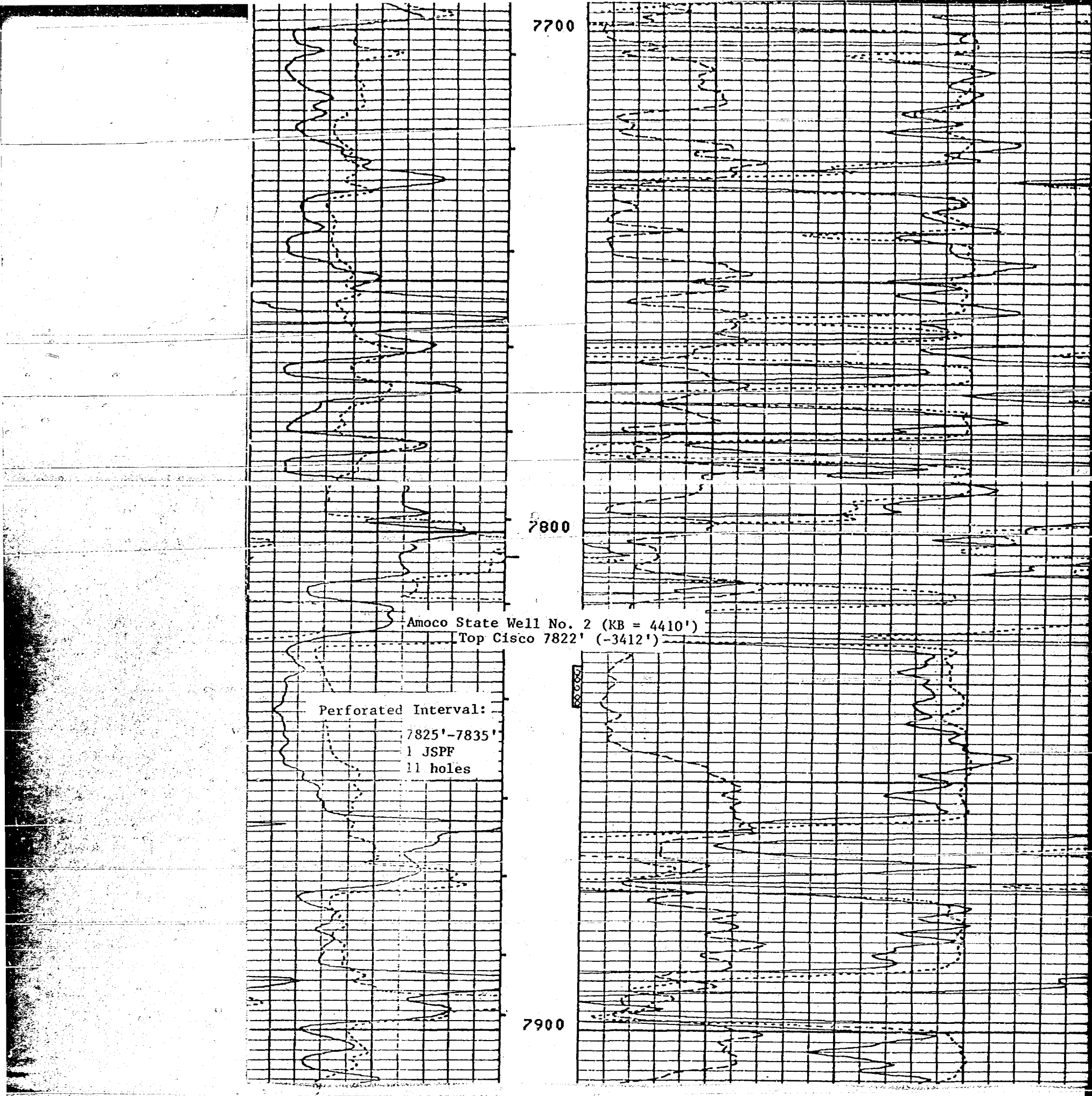
ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 2
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

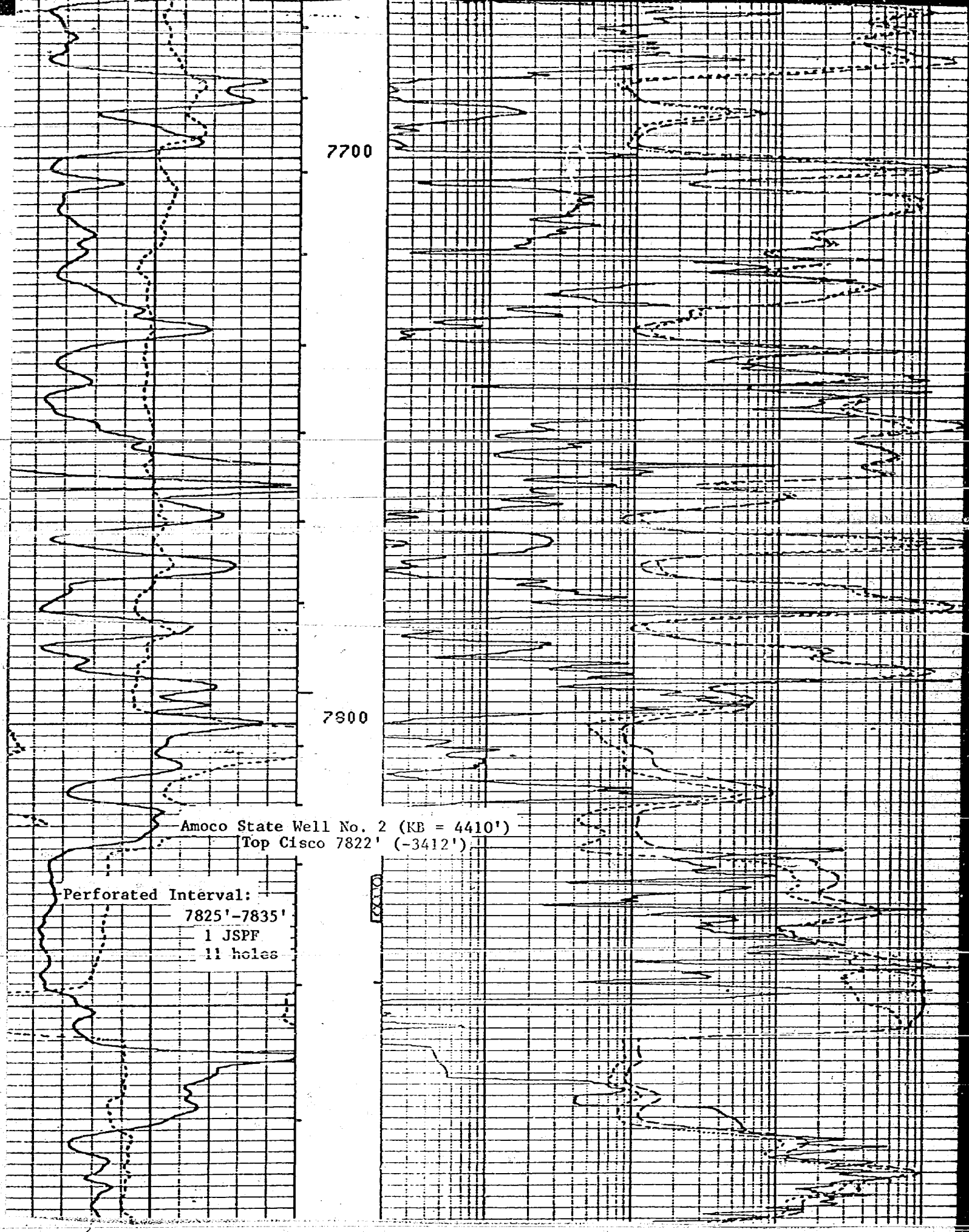
Date	Days of Production	Oil (STB)	Gas (MCF)	Water (Bbl)	GOR (SCF/Bbl)	Water Cut (%)
10/1980	11	3,083	0	0	-	0
11/1980	20	4,887	3,317	0	679	0
12/1980	9	5,871	965	252	164	4.1
01/1981	19	4,413	224	678	51	13.3
02/1981	0	3	0	0	-	0
03/1981	0	0	0	0	-	0
04/1981	16	3,042	826	271	272	8.2
05/1981	31	7,618	2,061	2,543	271	25.0
06/1981	30	6,675	2,119	2,301	317	25.6
07/1981	30	6,253	2,714	2,816	434	31.0
08/1981	26	5,008	2,495	2,735	479	34.4
09/1981	30	5,041	2.045	3,548	406	41.3
10/1981	31	4,322	1,807	5,492	418	56.0
11/1981	8	1,958	657	1,434	336	42.3
Cumulative Production	261	58,174	21,291	22,070	366	27.5

PRODUCTION HISTORY
Enserch Exploration, Inc.
Amoco State No. 2
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico



46 6690
K·E 5 YEARS BY MONTHS x 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.


7700
7800
7900
Amoco State Well No. 2 (KB = 4410')
Top Cisco 7822' (-3412')
Perforated Interval:
7825'-7835'
1 JSPF
11 holes


7700
7800
Amoco State Well No. 2 (KB = 4410')
Top Cisco 7822' (-3412')
Perforated Interval:
7825'-7835'
1 JSPF
11 holes

ENSERCH EXPLORATION, INC.

Docket No. 7072

Exhibit 6

Date 01/20/82

WELL COMPLETION DATA
ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 3
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Top of Penn Lime: 7818' (-3424') KB: 4394'

Perforated Production Interval: 7834'-7840' (1 JSPF) First stage
7841'-7850' (1 JSPF) Second stage

Stimulation Treatment:

First stage acid job: Spotted 150 gallons 15% MCA acid (2/15/81)
Pumped 250 gallons 2% KCl water. Swabbed
Pumped 500 gallons 15% MCA acid
Pumped 1000 gallons MOD 202 acid

Second stage acid job: Pumped 3200 gallons 15% NEFE acid (9/19/81)
Dropped 13 RCN ball sealers

Initial Potential Test:

Date of Test: 4/21/81 (pumping)
37 BO + 20 MCFG + 31 BW
GOR: 540:1

Current Status: Producing

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 6
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

PRODUCTION HISTORY

ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 3
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

Date	Days of Production	Oil (STB)	Gas (MCF)	Water (Bbl)	GOR (SCF/Bbl)	Water Cut (%)
04/1981	13	662	118	1,339	178	66.9
05/1981	27	1,055	278	848	264	44.6
06/1981	30	924	295	767	319	45.4
07/1981	30	866	354	939	409	52.0
08/1981	31	721	334	903	463	55.6
09/1981	18	698	303	1,169	434	62.6
10/1981	31	598	275	478	460	44.4
11/1981	30	271	127	557	469	67.3
12/1981						
Cumulative Production	210	5,795	2,084	7,000	360	54.7

PRODUCTION HISTORY
Enserch Exploration, Inc.
Amoco State No. 3
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico

46 6690

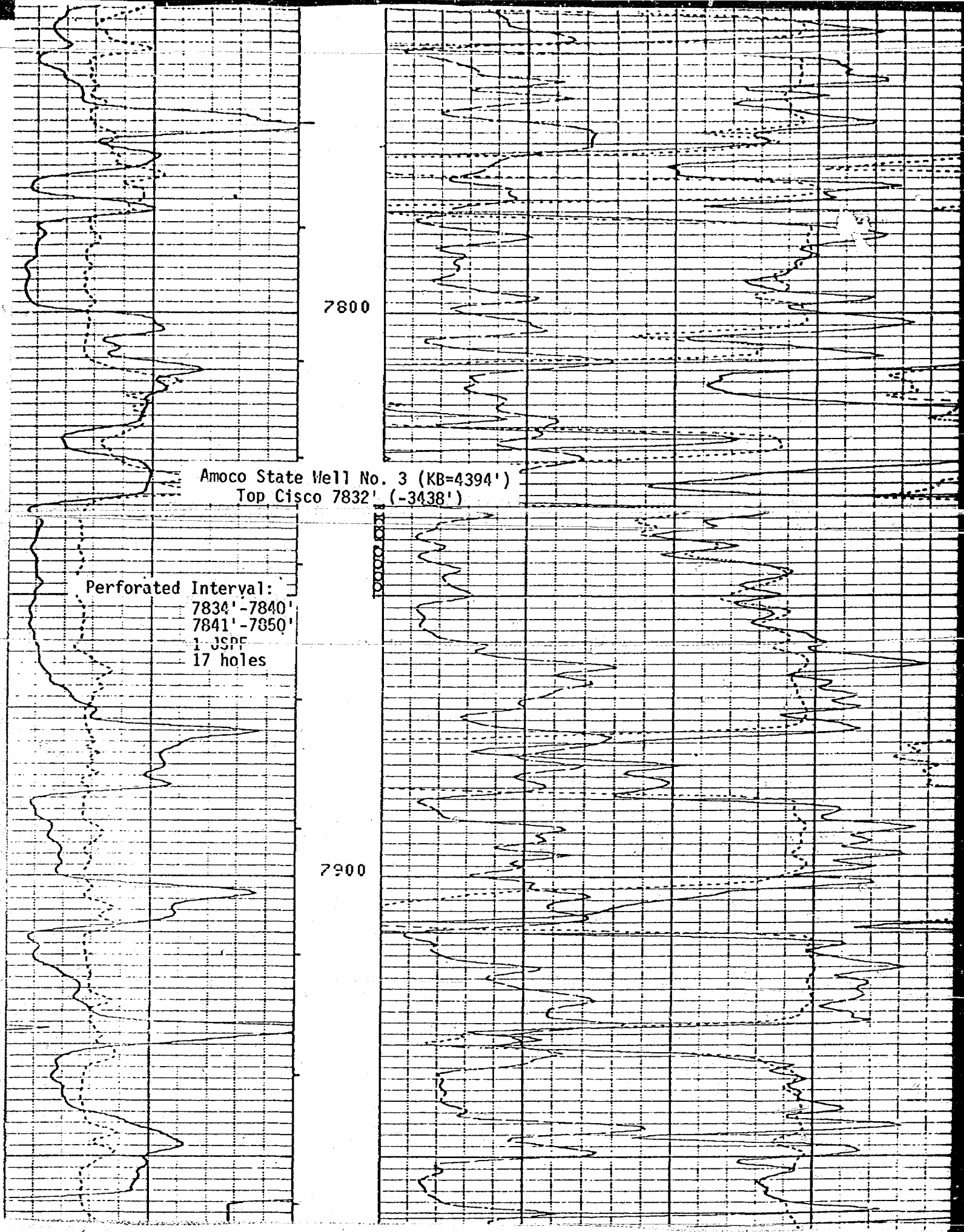
Monthly Oil Production (STB/Month)

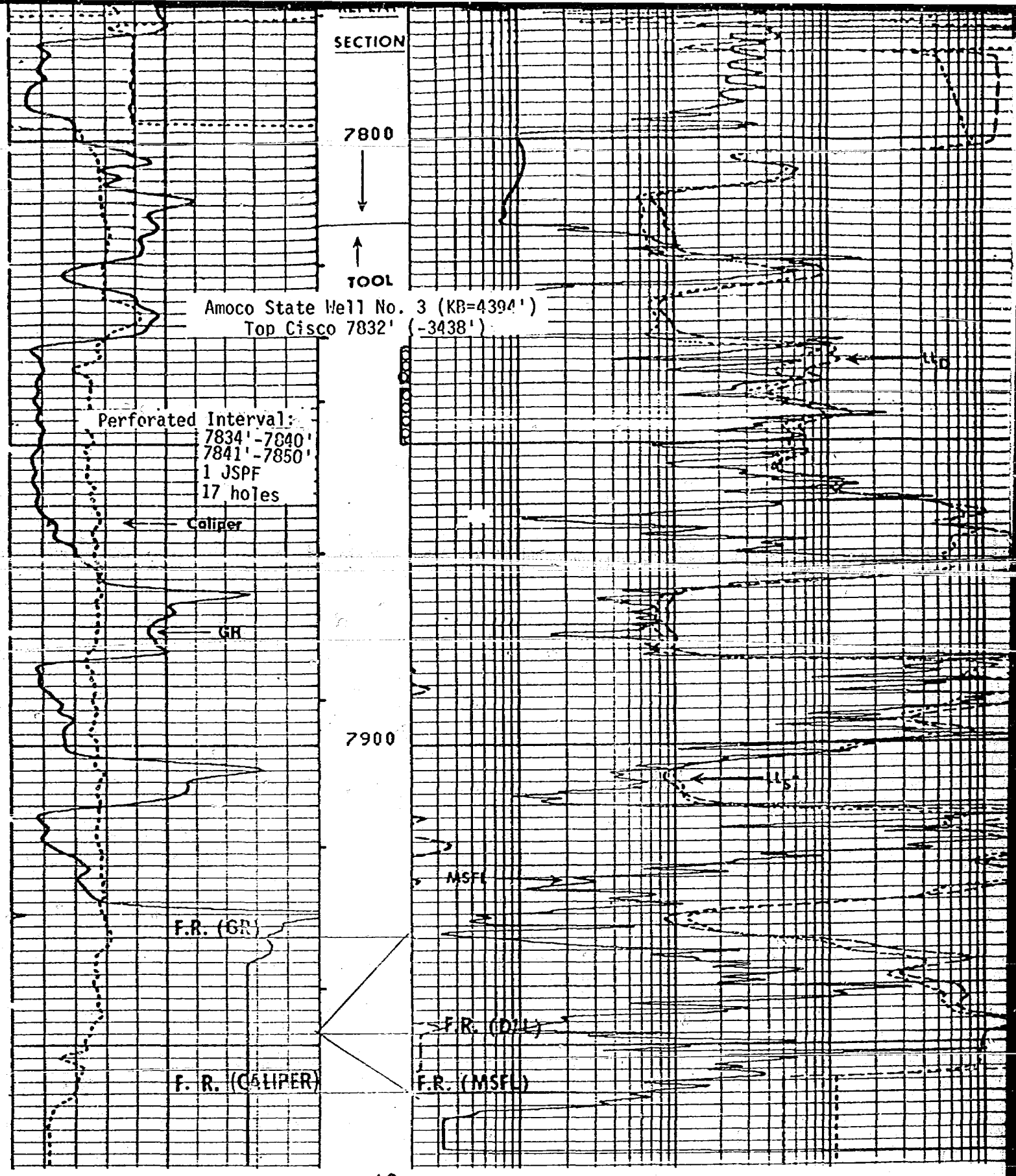
10^4 9 8 7 6 5 4 3 2 10^3 9 8 7 6 5 4 3 2 10^2 9 8 7 6 5 4 3 2 10

Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

1981 | 1982 | 1983 | 1984 | 1985

K+E 5 YEARS BY MONTHS x 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.


7800
Amoco State Well No. 3 (KB=4394')
Top Cisco 7832' (-3438')
Perforated Interval:
7834'-7840'
7841'-7850'
1 JSPF
17 holes
7900



18
18
18
18
18
18

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 7
Date 01/20/82

WELL COMPLETION DATA
ENSERCH EXPLORATION, INC.
PEARL JORDAN NO. 1
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Top of Penn Lime: 7803' (-3458') KB: 4345'

Perforated Production Interval: 8016'-8024' (2 JSPF)

Stimulation Treatment: Spotted 150 gallons 7½% MCA acid (5/5/81)
Pumped 1000 gallons 7½% MCA acid
Dropped 15 RCN ball sealers. Swabbed
Pumped 4000 gallons 15% NEFE acid (5/8/81)
Dropped 10 RCN ball sealers

Initial Potential Test:

Date of Test: 5/20/81 (pumping)
27 BO + 36 MCFG + 14 BW
GOR: 1331:1

Current Status: Producing

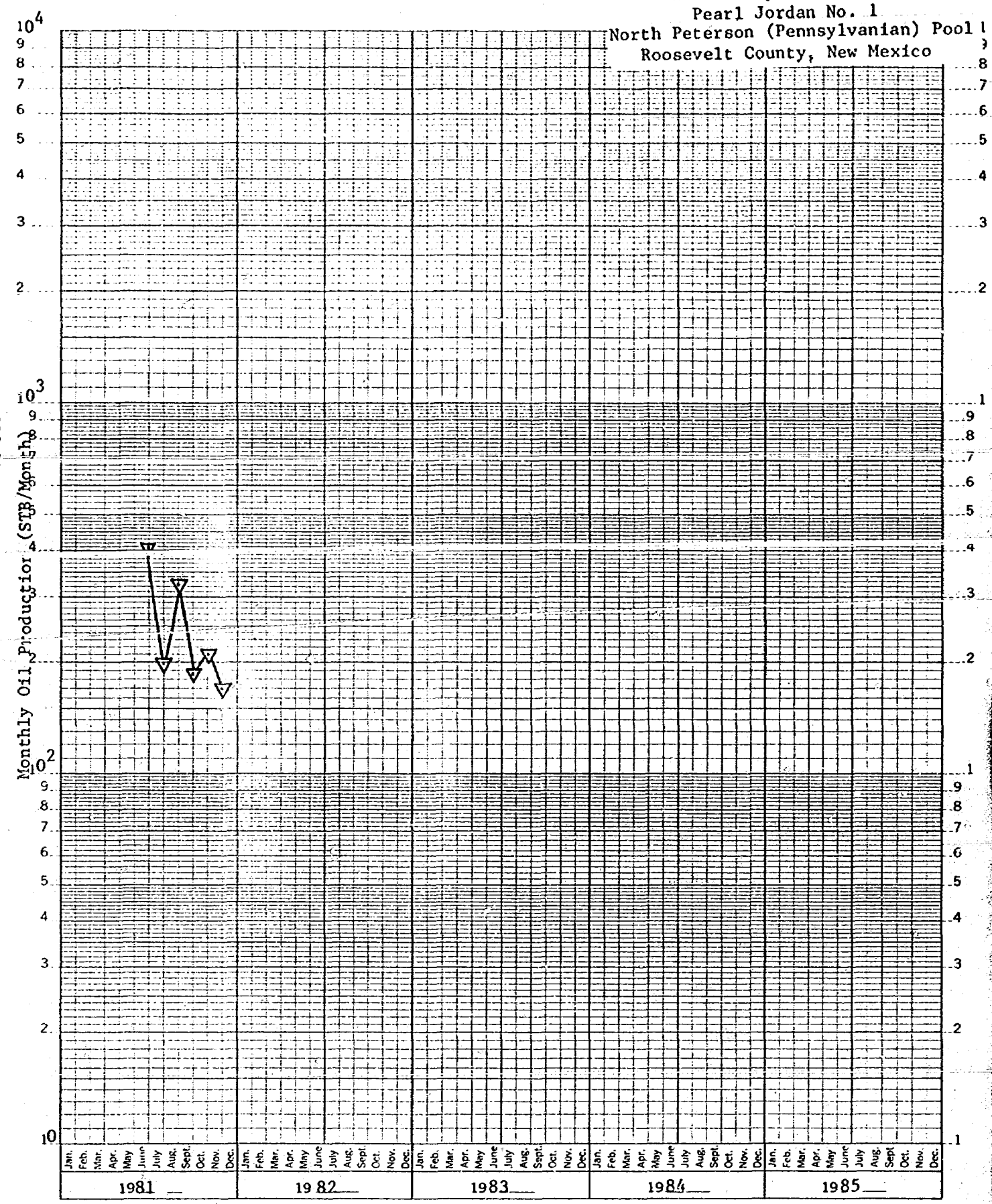
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 7
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

PRODUCTION HISTORY

ENSERCH EXPLORATION, INC.
PEARL JORDAN NO. 1
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

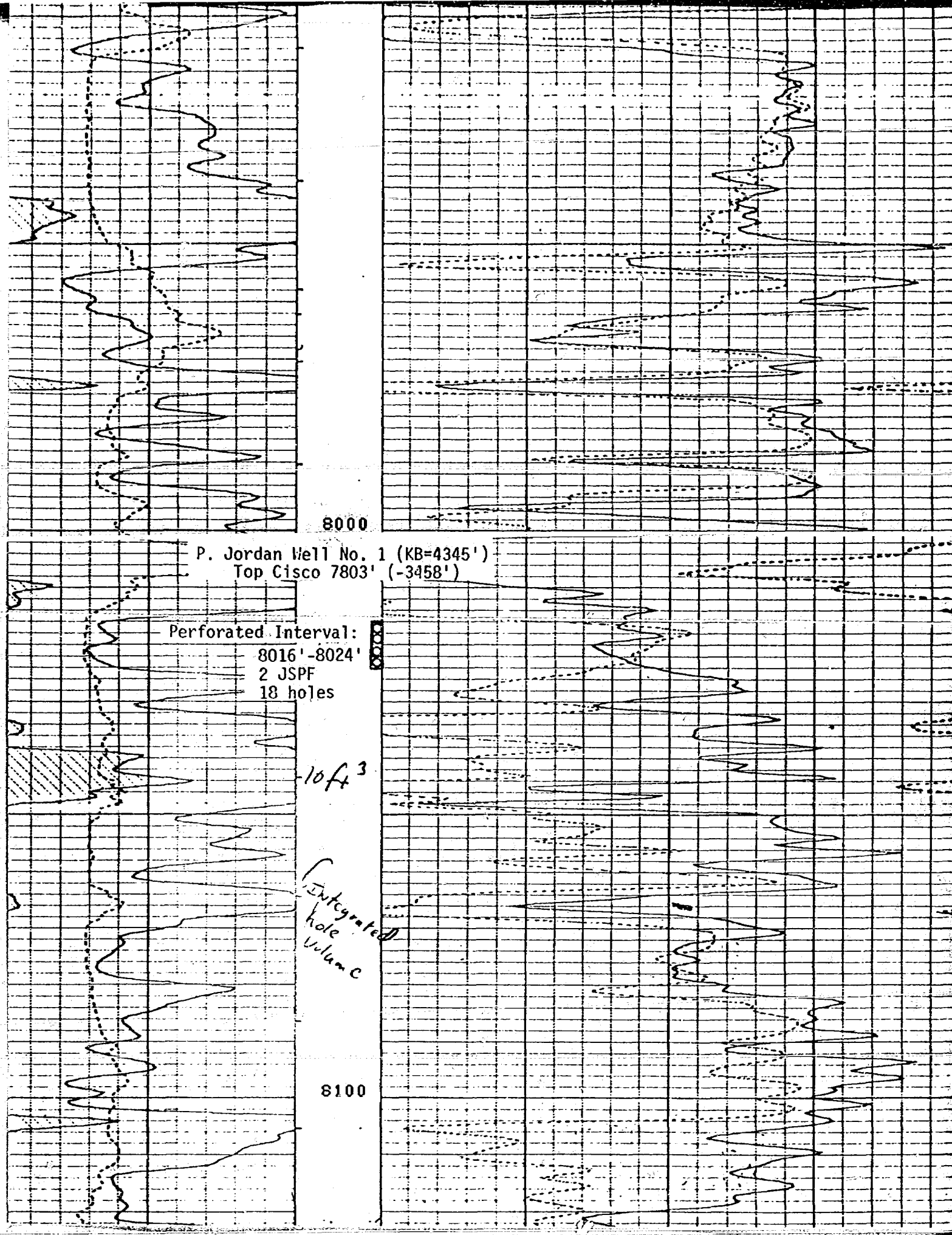
Date	Days of Production	Oil (STB)	Gas (MCF)	Water (Bbl)	GOR (SCF/Bbl)	Water Cut (%)
05/1981	0	0	825	To Test Tanks		-
06/1981	24	405	462	0	1,141	0
07/1981	8	199	281	90	1,412	31.1
08/1981	12	324	875	521	2,700	61.7
09/1981	30	183	693	119	3,787	39.4
10/1981	31	210	846	88	4,029	29.5
11/1981	30	170	642	79	3,776	31.7
12/1981						
Cumulative Production	135	1,491	4,624	897	3,101	37.6

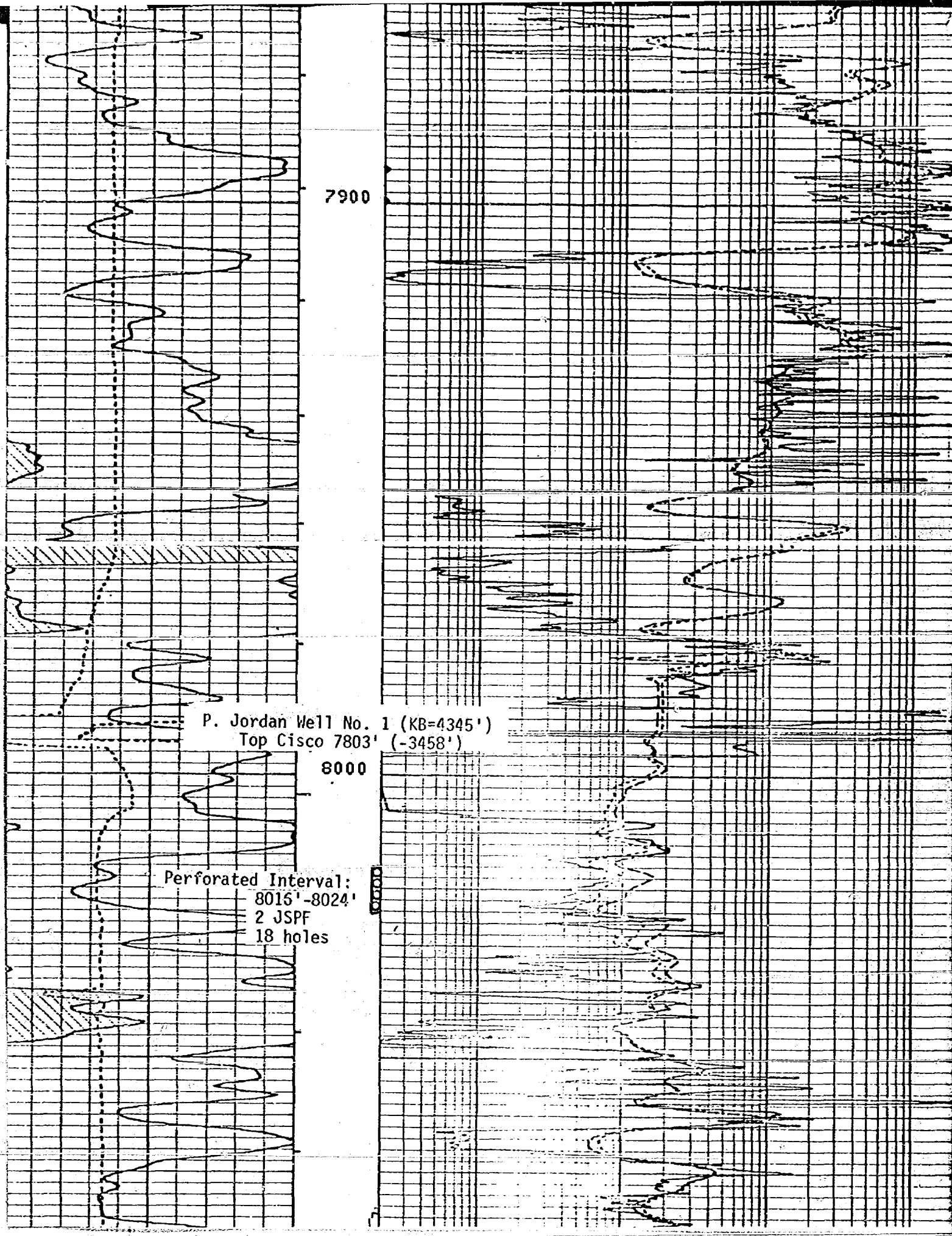
PRODUCTION HISTORY
Enserch Exploration, Inc.
Pearl Jordan No. 1
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico

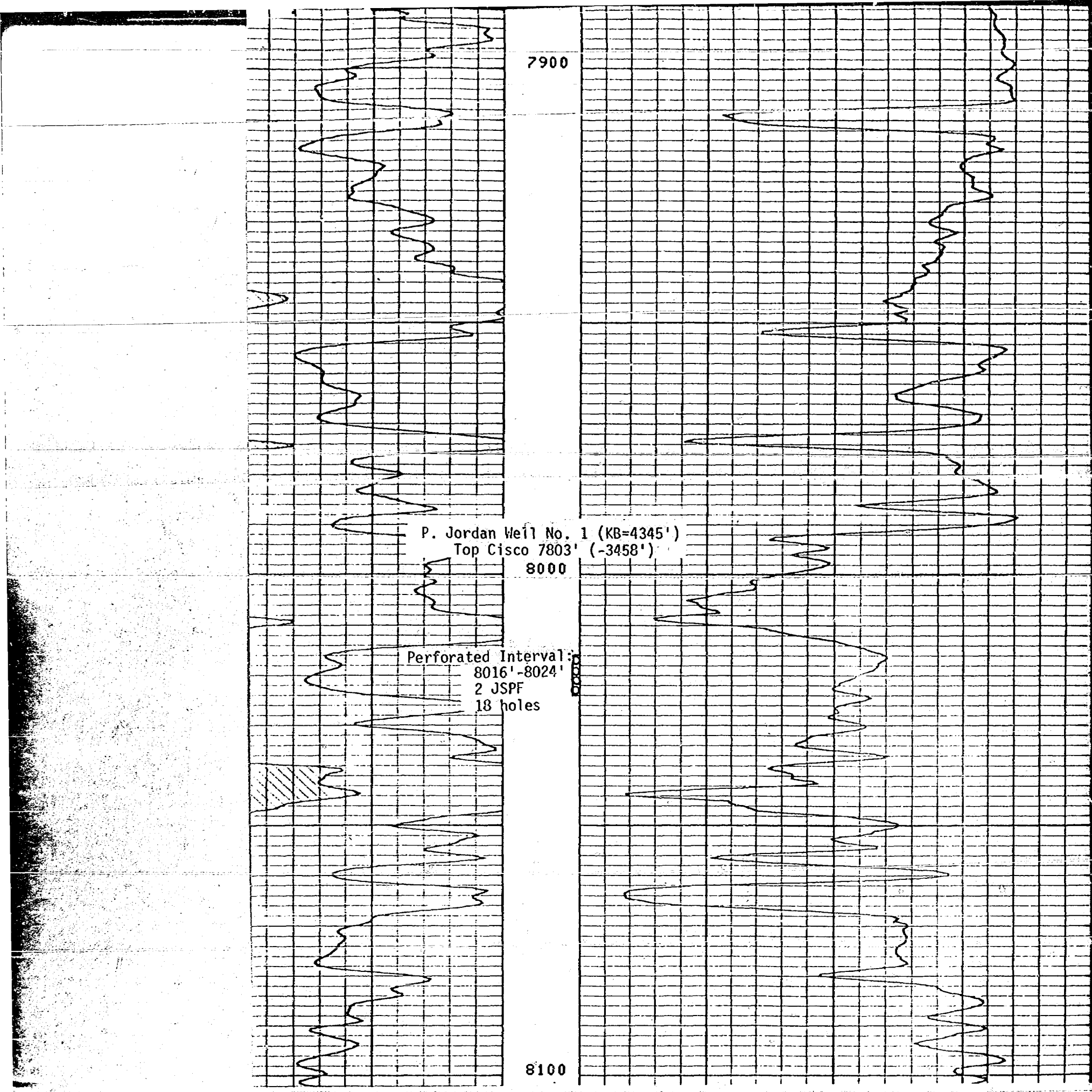


45 6690

3 CYCLES


8000
P. Jordan Well No. 1 (KB=4345')
Top Cisco 7803' (-3458')
Perforated Interval:
8016'-8024'
2 JSPF
18 holes
10 ft 3
Integrated hole volume
8100


7900
P. Jordan Well No. 1 (KB=4345')
Top Cisco 7803' (-3458')
8000
Perforated Interval:
8015'-8024'
2 JSPF
18 holes

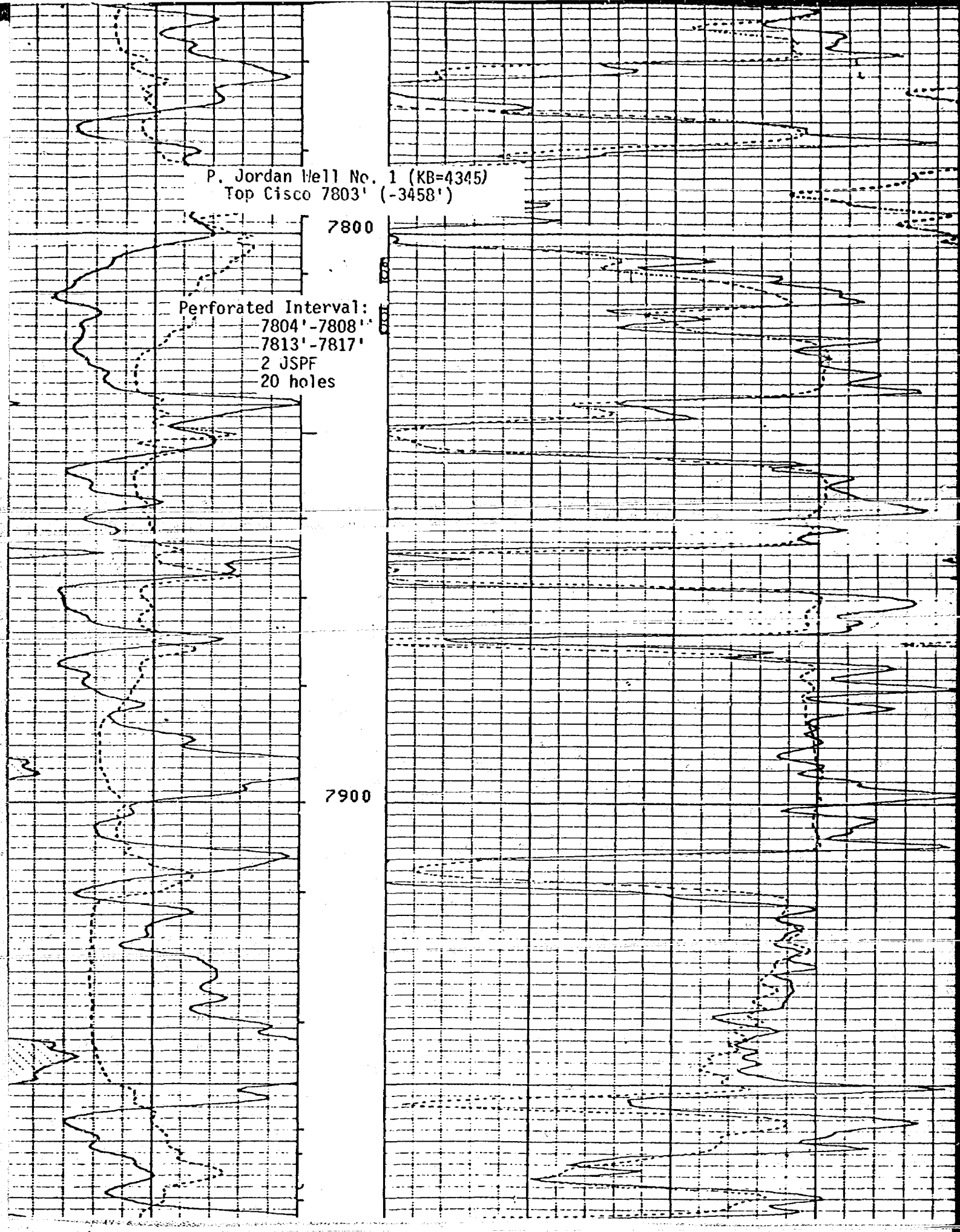

7900
P. Jordan Well No. 1 (KB=4345')
Top Cisco 7803' (-3458')
8000
Perforated Interval:
8016'-8024'
2 JSPF
18 holes
8100

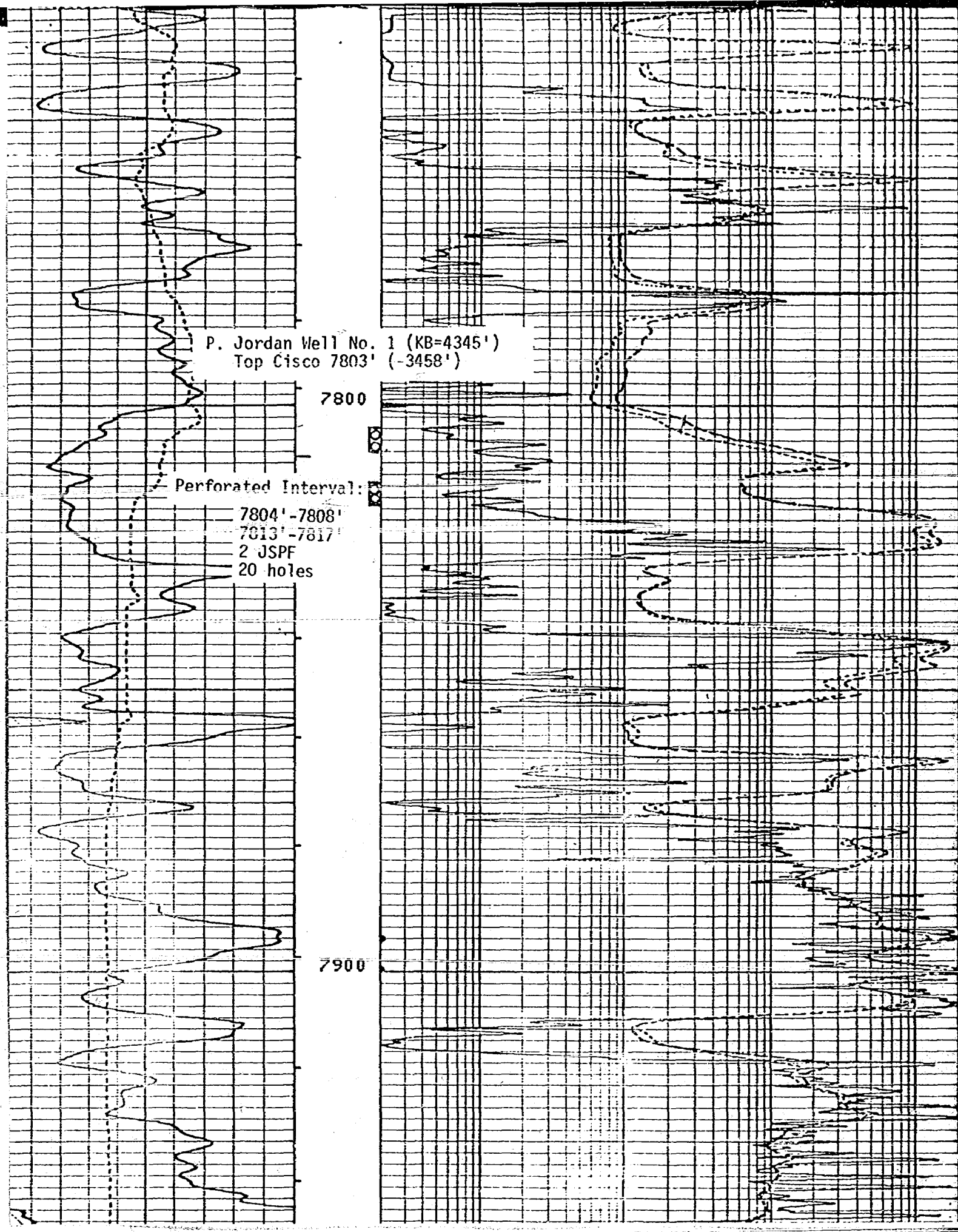
P. Jordan Well No. 1 (KB=4345)
Top Cisco 7803' (-3458')

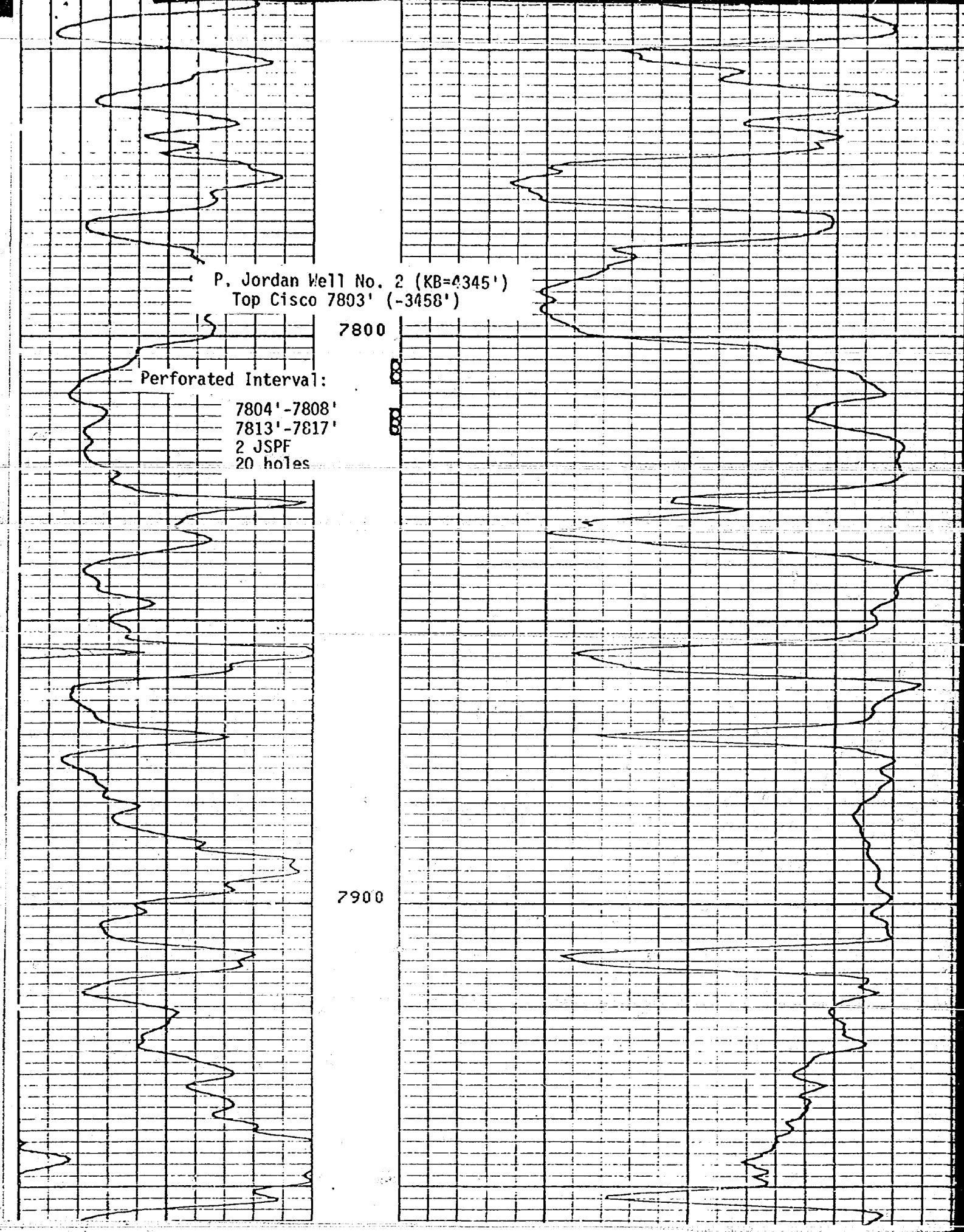
7800

Perforated Interval:
7804'-7808'
7813'-7817'
2 JSPF
20 holes

7900




P. Jordan Well No. 1 (KB=4345')
Top Cisco 7803' (-3458')
7800
Perforated Interval:
7804'-7808'
7813'-7817'
2 JSPF
20 holes
7900


P. Jordan Well No. 2 (KB=4345')
Top Cisco 7803' (-3458')
7800
Perforated Interval:
7804'-7808'
7813'-7817'
2 JSPF
20 holes
7900

ENSERCH EXPLORATION, INC.

Docket No. 7072

Exhibit 8

Date 01/20/82

WELL COMPLETION DATA
ENSERCH EXPLORATION, INC.
PEARL JORDAN NO. 2
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Top of Penn Lime: 7826' (-3412') KB: 4414'

Perforated Production Interval: 7830'-7834' (2 JSPF)
7836'-7838' (2 JSPF)
7842'-7848' (2 JSPF)

Stimulation Treatment: Spotted 150 gallons 15% MCA acid (3/7/81)
Pumped 3000 gallons 15% NEFE acid
Dropped 20 RCN ball sealers

Initial Potential Test:

Date of Test: 3/11/81 (flowing)
266 BO + 215 MCFG + 16 BW
GOR: 808:1

Current Status: Put well on pump. Producing

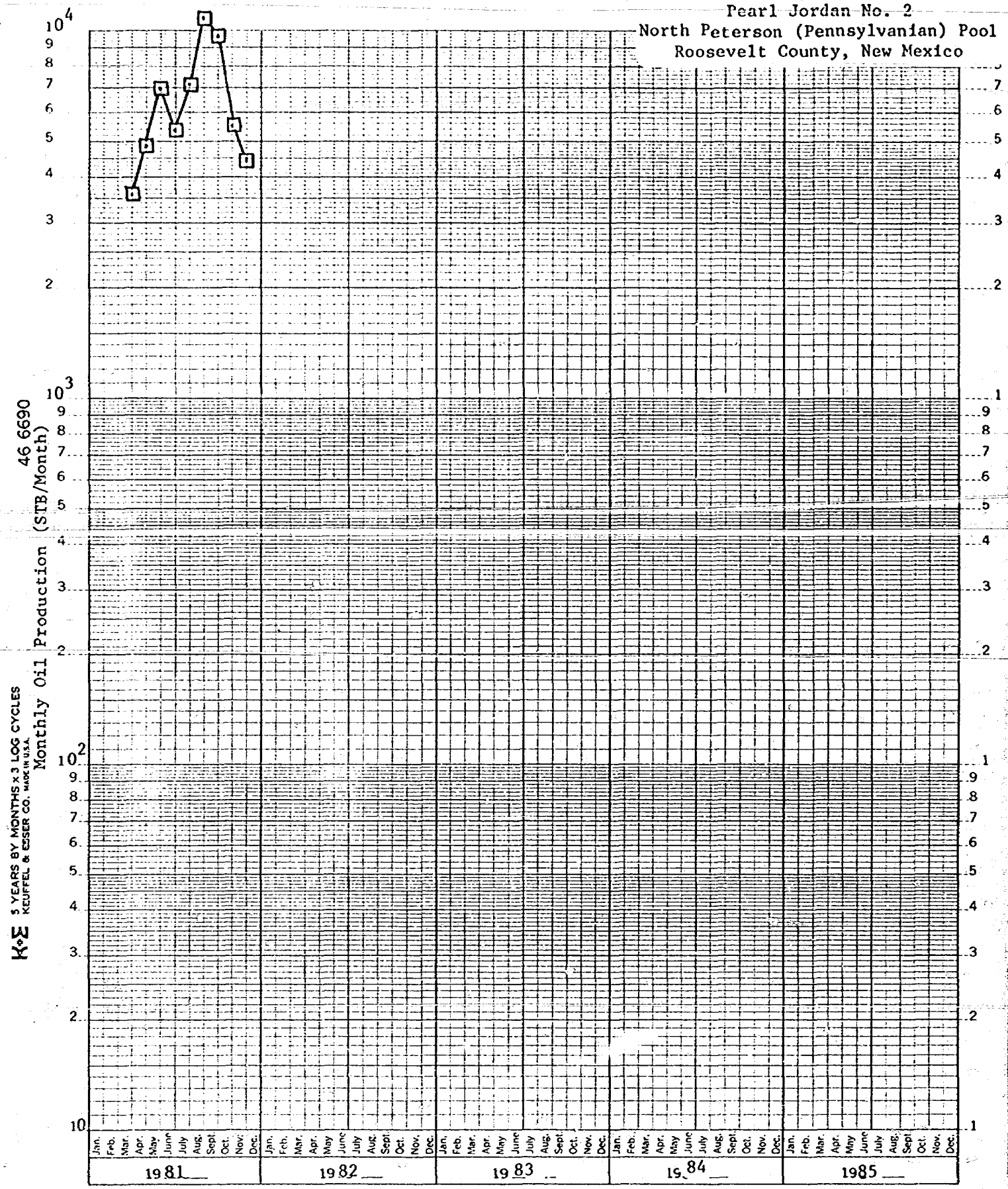
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 8
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

PRODUCTION HISTORY

ENSERCH EXPLORATION, INC.
PEARL JORDAN NO. 2
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

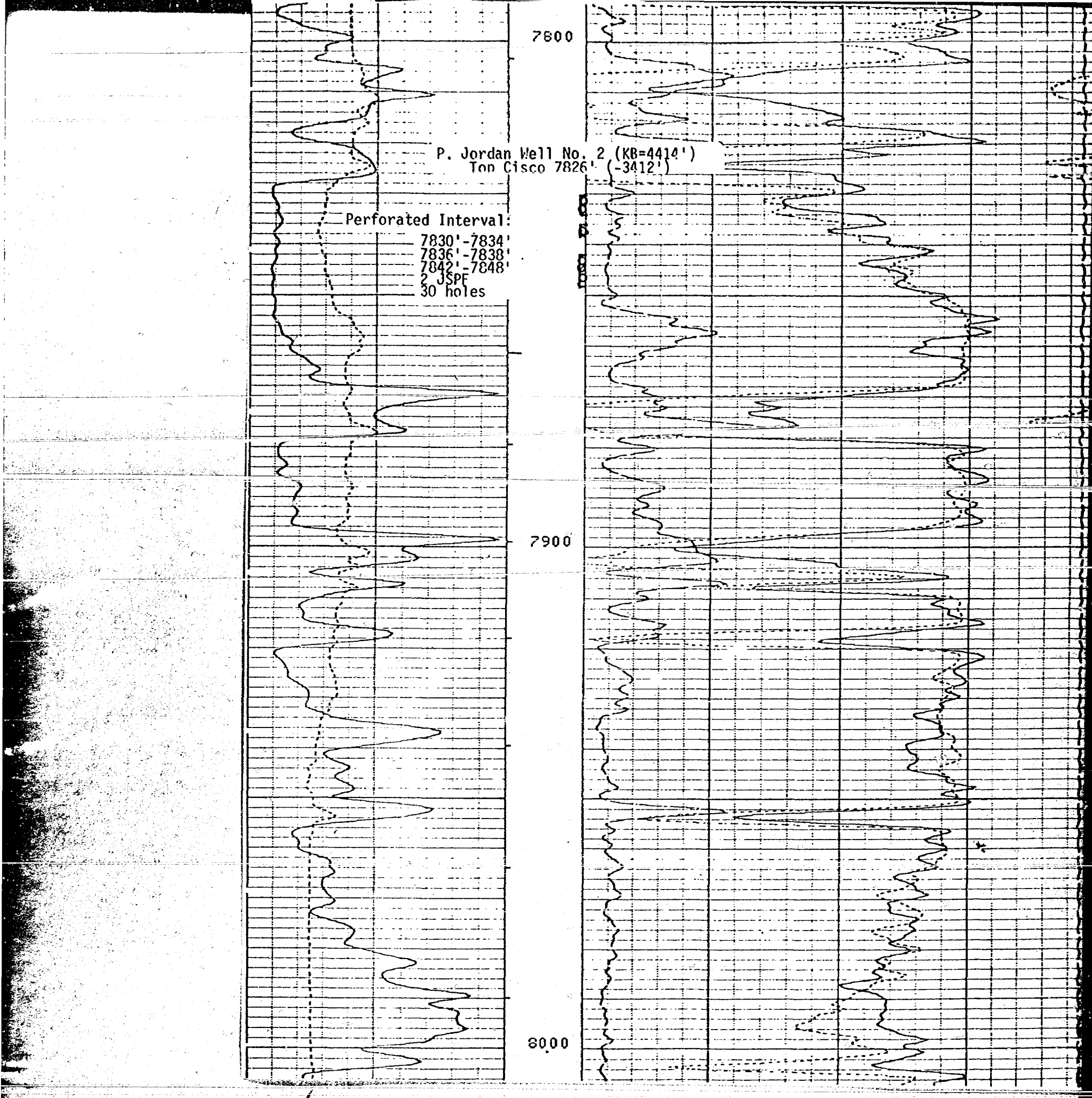
Date	Days of Production	Oil (STB)	Gas (MCF)	Water (Bbl)	GOR (SCF/Bbl)	Water Cut (%)
03/1981	17	3,595	2,904	0	808	0
04/1981	30	4,856	2,816	0	580	0
05/1981	31	6,966	2,628	0	377	0
06/1981	29	5,390	2,712	0	503	0
07/1981	31	7,162	1,055	0	147	0
08/1981	28	10,687	1,142	0	107	0
09/1981	30	9,623	2,477	36	257	3.7
10/1981	31	5,468	3,038	911	556	14.3
11/1981	30	4,440	2,290	824	516	15.6
12/1981						
Cumulative Production	257	58,187	21,062	1,771	362	2.9

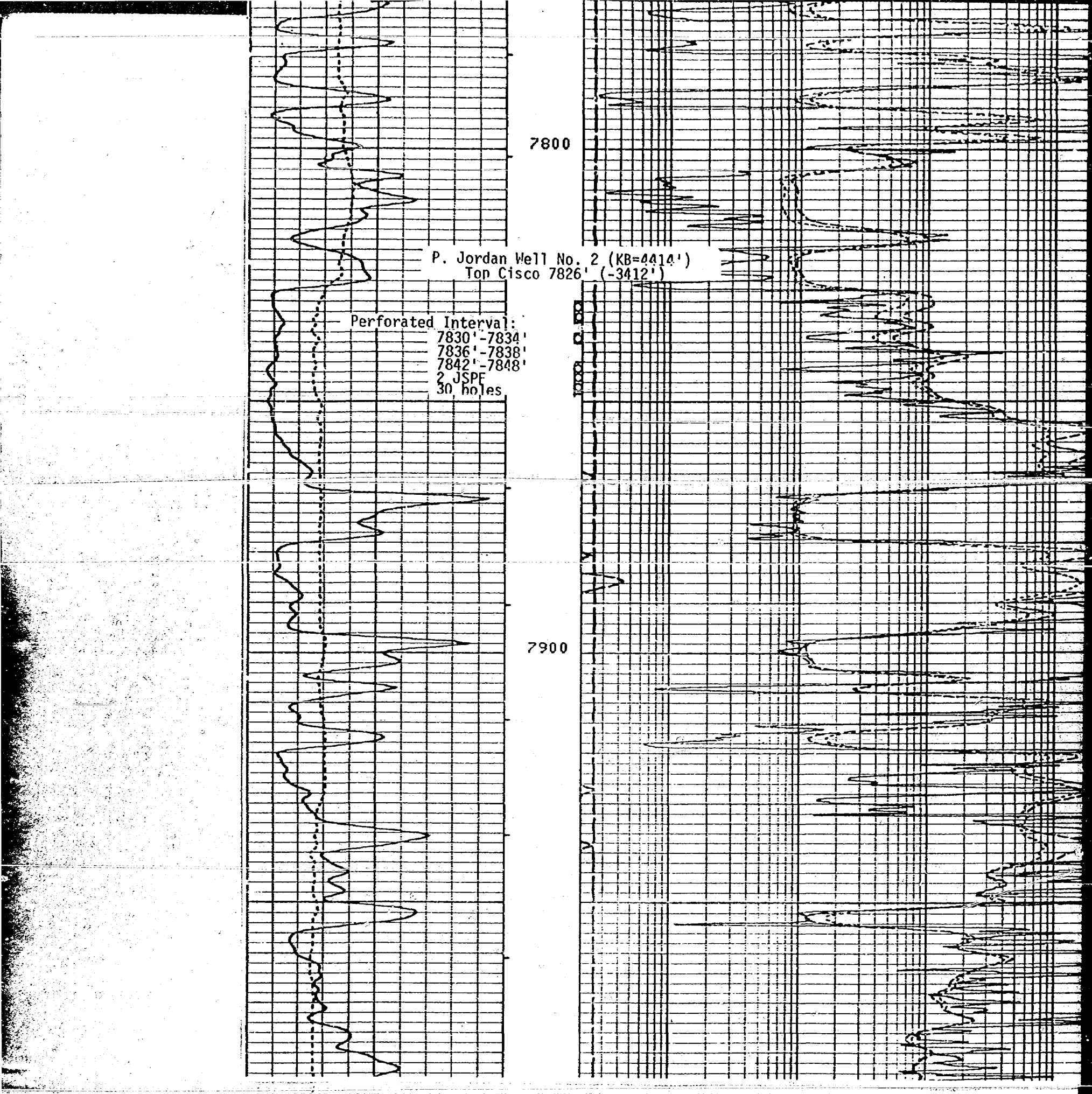
PRODUCTION HISTORY
Enserch Exploration, Inc.
Pearl Jordan No. 2
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico



K&E 5 YEARS BY MONTHS x 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.

46 6690


7800
P. Jordan Well No. 2 (KB=4414')
Top Cisco 7826' (-3412')
Perforated Interval:
7830'-7834'
7836'-7838'
7842'-7848'
2 JSPF
30 holes
7900
8000


7800
P. Jordan Well No. 2 (KB=4414')
Top Cisco 7826' (-3412')
Perforated Interval:
7830'-7834'
7836'-7838'
7842'-7848'
2 JSPF
30 holes
7900

ENSERCH EXPLORATION, INC.

Docket No. 7072

Exhibit 9

Date 01/20/82

WELL COMPLETION DATA
ENSERCH EXPLORATION, INC.
PEARL JORDAN NO. 3
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Top of Penn Lime: 7829' (-3432') KB: 4397'

Perforated Production Interval: 7830'-7852' (2 JSPF)

Stimulation Treatment: Spotted 150 gallons 15% MCA acid (6/12/81)
Pumped 5000 gallons 15% NEFE acid
Dropped 25 RCN ball sealers

Initial Potential Test:

Date of Test: 6/17/81 (flowing)
120 BO + 170 MCFG + 10 BW
GOR: 1417:1

Current Status: Put well on pump 7/26/81. Producing

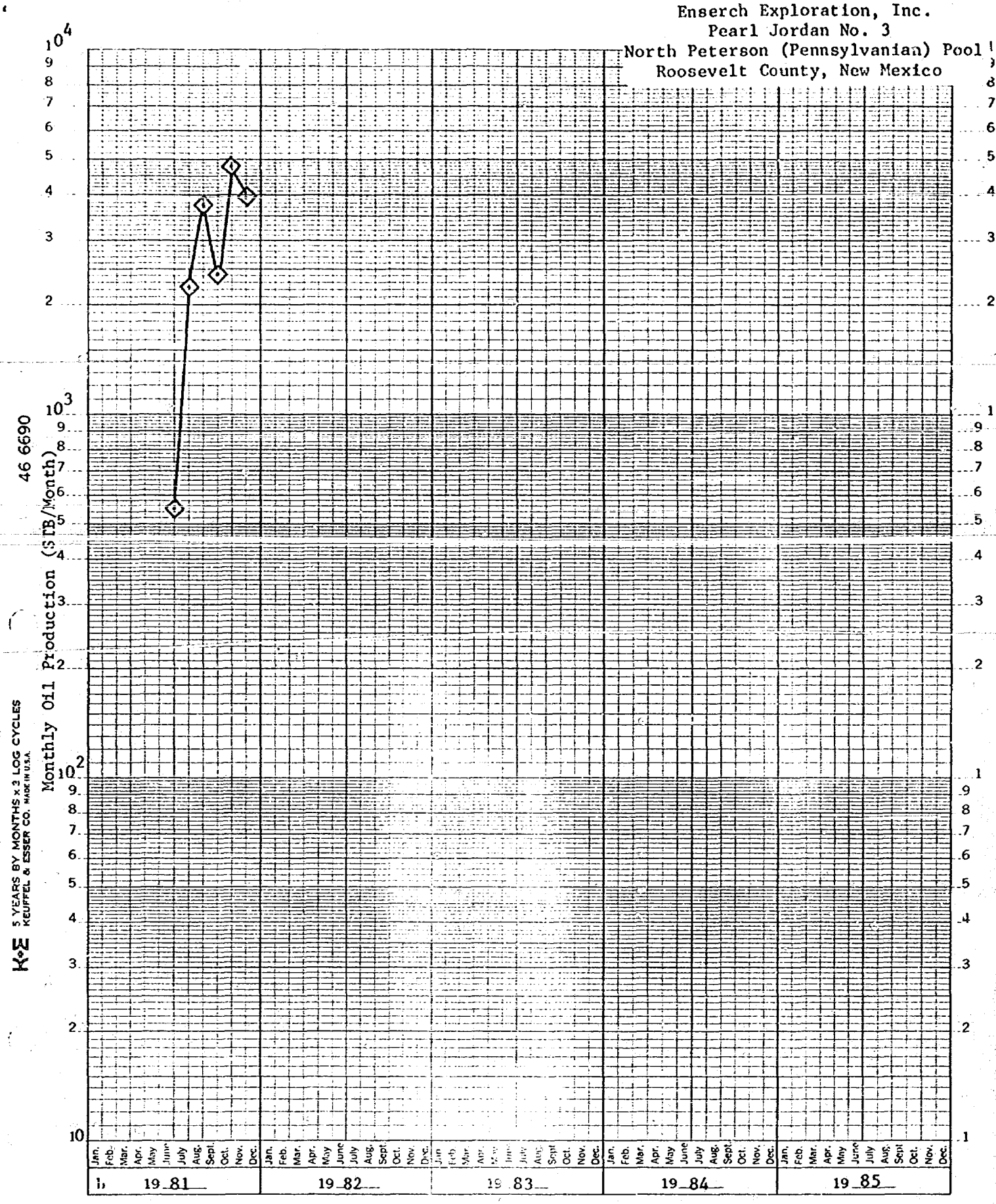
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 9
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

PRODUCTION HISTORY

ENSERCH EXPLORATION, INC.
PEARL-JORDAN NO. 3
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

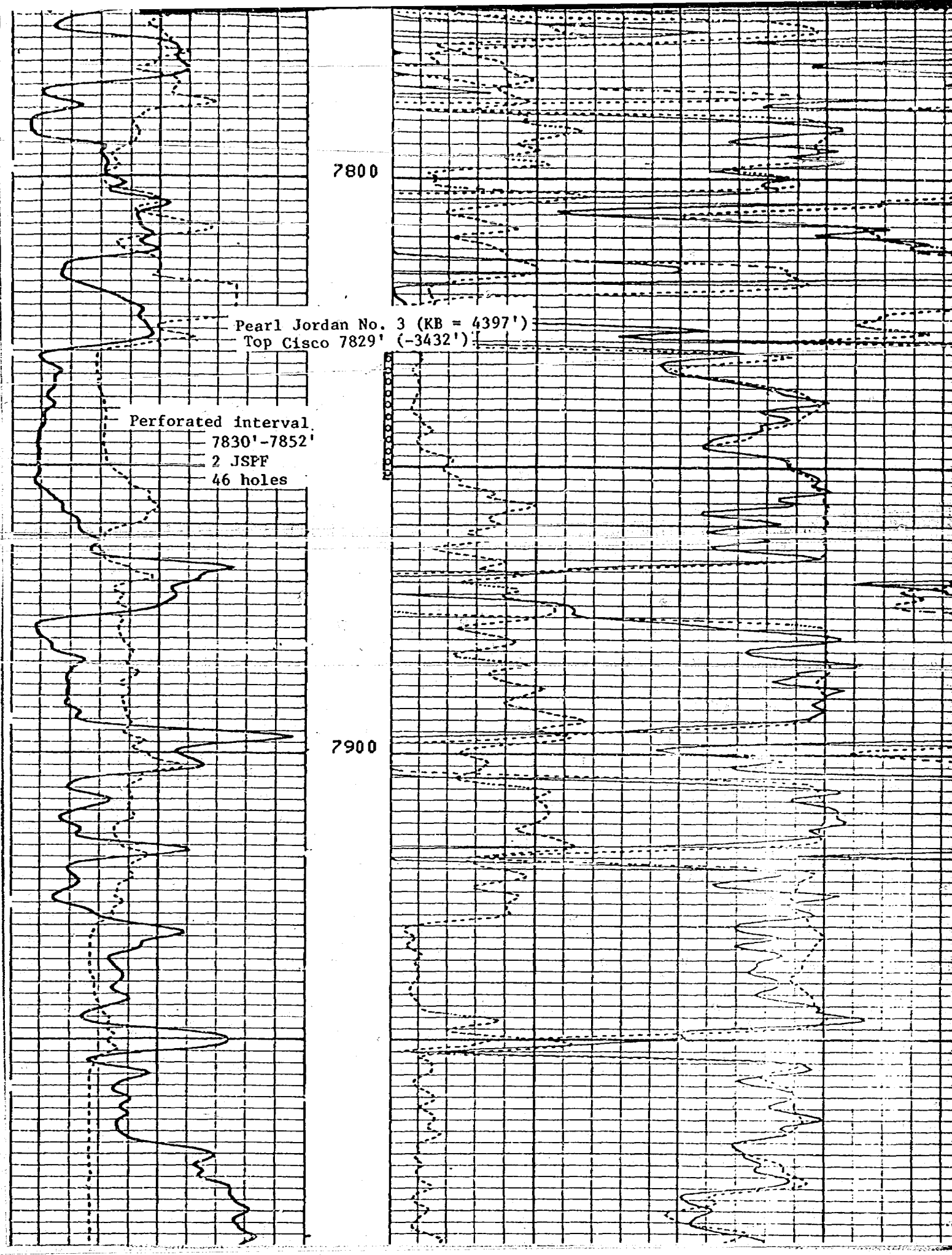
Date	Days of Production	Oil (STB)	Gas (MCF)	Water (Bbl)	GOR (SCF/Bbl)	Water Cut (%)
06/1981	2	558	1,417	0	2,539	0
07/1981	5	2,221	2,731	152	1,230	6.4
08/1981	29	3,710	237	938	62	20.2
09/1981	30	2,415	1,765	2,016	731	45.5
10/1981	31	4,837	2,164	771	447	13.7
11/1981	30	3,927	1,635	697	416	15.1
12/1981						
Cumulative Production	127	17,668	9,949	4,574	563	20.6

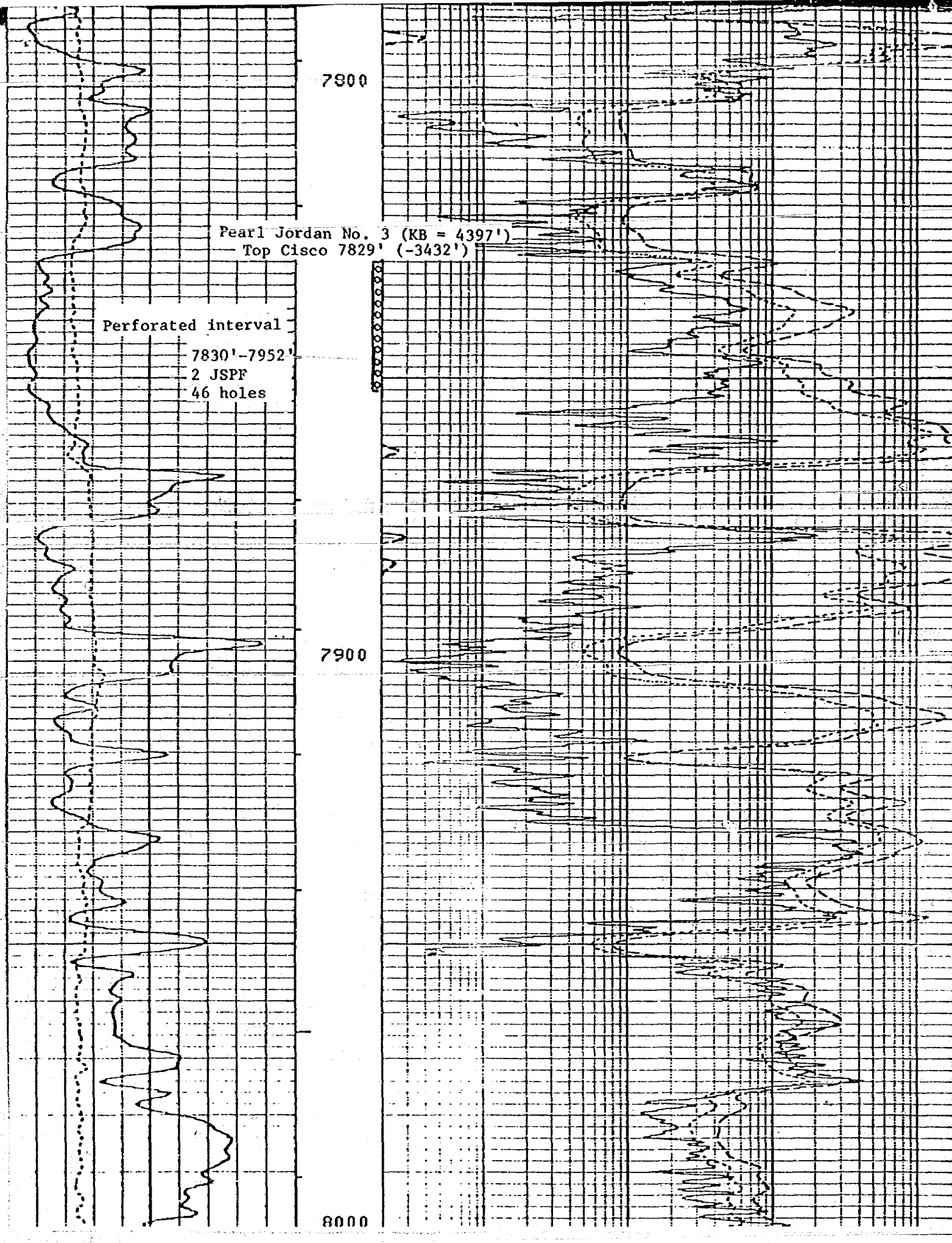
PRODUCTION HISTORY
Enserch Exploration, Inc.
Pearl Jordan No. 3
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico



46 6690

K•E 5 YEARS BY MONTHS x 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.


7800
Pearl Jordan No. 3 (KB = 4397')
Top Cisco 7829' (-3432')
Perforated interval
7830'-7852'
2 JSPF
46 holes
7900


7800
Pearl Jordan No. 3 (KB = 4397')
Top Cisco 7829' (-3432')
Perforated interval
7830'-7952'
2 JSPF
46 holes
7900
8000

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 10
Date 01/20/82

WELL DATA SHEET
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Well Name	Amoco State No. 1	Amoco State No. 2	Amoco State No. 3	Pearl Jordan No. 1	Pearl Jordan No. 2	Pearl Jordan No. 3	Average Parameters
Perforated Interval (overall)	7826'-7837'	7825'-7835'	7834'-7850'	8016'-8024'	7830'-7843'	7830'-7852'	
Estimated Pay Thickness	8'	15'	20'	8'	18'	18'	14'
Average Porosity (%)	3	3	7	12	9	6	6.6
Average Water Saturation (%)	56	56	42	49	38	59	50
Initial Potential Test (BOPD)	172.5	327	37	27	266	120	158
Initial GOR (SCF/STB)	1345:1	367:1	540:1	1333:1	808:1	1417:1	968:1
Oil Gravity (^{o}API)	45.5	45.6	45.3	45.2	43.4	45.3	45.1
Royalty & Override (%)	25.0	25.0	25.0	12.5	12.5	12.5	18.75

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 10
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

ENSERCH EXPLORATION, INC.
AMOCO STATE LEASE PRODUCTION
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 11
Date 01/20/82

Monthly Oil Production (STB/Month)

100,000
10,000
1,000
100

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS
11
CASE 7072
Submitted by ENSERCH
Hearing Date 1/20/82

Lease Decline: 70% per year
Current Cumulative Production:
105,740 STB

Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

1980 1981 1982 1983 1984

ENSERCH EXPLORATION, INC.
PEARL JORDAN LEASE PRODUCTION
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit
Date 01/20/82

Monthly Oil Production (STB/Month)

100,000
10,000
1,000
100

Lease Decline: 85% per year
Current Cumulative Production:
77,346 STB

1980 | 1981 | 1982 | 1983 | 1984

ENSERCH EXPLORATION, INC.
TOTAL OIL PRODUCTION
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

ENSERCH EXPLORATION, INC.
Docket No. 70-82
Exhibit
Date: 01/20/82

Monthly Oil Production (STB/Month)

100,000
10,000
1,000
100

Field Decline: 77.5% per year
Current Cumulative Production: 183,086 STB
Total Field Recoverable Reserves: 316,000 STB
Average Well Recoverable Reserves:
316,000/6 = 52,600 STB

Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

19 80 | 19 81 | 19 82 | 19 83 | 19 84

PRODUCTION HISTORY & FORECAST
Enserch Exploration, Inc.
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico

BEFORE EXAMINER RISTAU
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 12
CASE NO. 7072
SUBMITTED BY ENSERCH
HEARING DATE 1/20/82

Monthly Oil Production (STB/Month)

10^4 9 8 7 6 5 4 3 2 10^3 9 8 7 6 5 4 3 2 10^2 9 8 7 6 5 4 3 2 10

Amoco State No. 1 ⊙
Amoco State No. 2 ⬡
Amoco State No. 3 △
Pearl Jordan No. 1 ▽
Pearl Jordan No. 2 □
Pearl Jordan No. 3 ◇

Recoverable Reserves: 52,600 STB
50,900 MCF

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 12
Date 01/20/82

Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

Year 1 | Year 2 | Year 3 | Year 4 | ____

PRODUCTION FORECAST
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

Year	Oil Production STB	Gas Production MCF
1	40,000	38,720
2	9,600	9,300
3	2,400	2,300
4	600	580
Cumulative Production	52,600	50,900

ENSERCH EXPLORATION, INC.

Docket No. 7072

Exhibit 13

Date 01/20/82

VOLUMETRIC CALCULATIONS
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Average Formation Characteristics

Pay Thickness: 14'
Porosity: 6.6%
Water Saturation: 50%

Average Formation Fluid Characteristics

Average Initial Potential Test: 158 bopd
GOR: 968:1
Oil Gravity: 45.1° API
Initial Formation Volume Factor: 1.485

Original Oil In Place Under an 80-Acre Lease

$$OOIP = 7758 \times A \times h \times \phi \times (1-S_w)/B_o$$
$$= 7758 \times 80 \times 14 \times .066 \times (1-0.50)/1.485$$
$$= 172.4 \text{ STB/acre-ft}$$
$$= 193,100 \text{ STB}$$

Recoverable Oil Under an 80-Acre Lease

$$N_p = OOIP \times R.F.$$
$$= 193,100 \times 0.20$$
$$= 38,620 \text{ bbls}$$

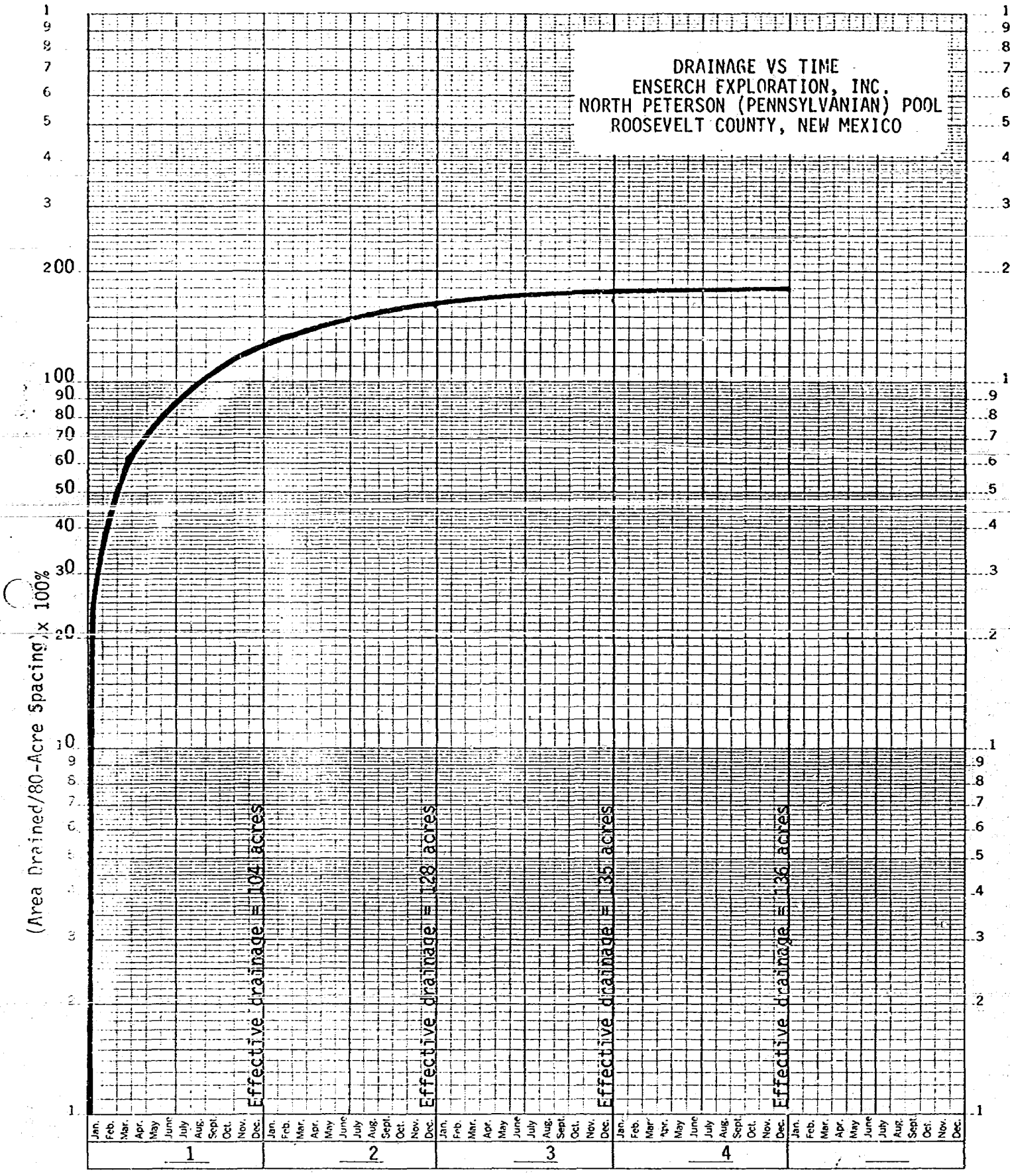
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
Applicants EXHIBIT NO. 13
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 14
Date 01/20/82

DRAINAGE CALCULATIONS
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Year	Oil Production (STB)	Cumulative Oil Production (STB)	Area Drained At Year End (Acres)	$\frac{\text{Area Drained}}{\text{80 Acre Spacing}} \times 100\%$ (%)
1	40,000	40,000	104	129
2	9,600	49,600	128	160
3	2,400	52,000	135	169
4	600	52,600	136	170
Cumulative Production	52,600	52,600	-	-

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 14
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82


DRAINAGE VS TIME
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO
(Area Drained/80-Acre Spacing) x 100%
Effective drainage = 104 acres
Effective drainage = 128 acres
Effective drainage = 135 acres
Effective drainage = 136 acres
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
1
2
3
4

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 15
Date 01/20/82

ECONOMIC EVALUATION
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

INPUT DATA

Well Cost

Tangibles:	$293,900	Total Well Cost:	$945,750
Intangibles:	$651,850		
Dry Hole Cost:	$531,950		
Salvage Value:	$113,000		

Oil Price

$35/bbl + 5% per year escalation

Casinghead Gas Price

$2.57/MCF + $0.12 per year escalation

Recoverable Hydrocarbon Reserves

52,600 STB
50,900 MCF

OUTPUT DATA

First Case: One well per 80 acres
Total Net Present Worth: $136,700
Present Worth Index: 1.15

Second Case: Two wells per 80 acres
Total Net Present Worth: $-376,900
Present Worth Index: 0.78

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 15
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1 20 82

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

ENSERCH EXPLORATION, INC.
NO. 3 PEARL JORDAN
PETERSON NORTH PENN FIELD
ROOSEVELT COUNTY, NEW MEXICO

DATE : 5-23-81
FORMATION : CISCO
DRLG. FLUID: BRINE BASE MUD
LOCATION : 660' FSL & 660' FEL, SEC. 17, T-33-E

FILE NO : 3202-12348
ANALYSTS : REINHEIMER
LABORATORY: MIDLAND TEXAS

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 16
Date 01/20/82

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH FEET	PERM MAXIMUM	PERM 90 DEG	PERM VERTICAL	HE POR	OIL% PORE	WTR% PORE	GRAIN DEN	DESCRIPTION
	CORE NO. 1	7821.0-7851.0	CUT 30'	REC 28'					
1	7821.0-22.0	0.25	0.20	<0.01	1.4	0.0	85.7	2.72	LM SL/SHY SL/F PP STY
2	7822.0-23.0	0.15	0.08	<0.01	4.3	9.3	53.3	2.72	LM SL/F PP STY
3	7823.0-24.0	2.3	2.3	0.25	8.3	6.0	47.9	2.72	LM SL/F PP V STY
4	7824.0-25.0	42.	39.	33.	12.7	8.9	45.2	2.78	LM SL/CALC V F STY
5	7825.0-26.0	80.	76.	106.	12.2	8.5	47.1	2.79	LM SL/CALC V F STY
6	7826.0-27.0	2.6	1.9	1.7	6.3	4.5	41.3	2.73	LM V SL/CALC V F STY
7	7827.0-28.0	0.88	0.79	0.98	7.1	3.5	38.6	2.75	LM V SL/F STY
8	7828.0-29.0	0.61	0.59	0.32	4.5	6.2	46.9	2.72	LM SL/V SL/F PP STY
9	7829.0-30.0	1.4	0.87	0.38	4.5	5.0	50.0	2.72	LM SL/V SL/F PP FOSS STY
10	7830.0-31.0	0.16	0.16	0.06	3.7	3.1	56.2	2.73	LM SL/V VF PP FOSS STY
11	7831.0-32.0	0.38	0.35	0.06	1.6	3.8	56.6	2.72	LM F PP
12	7832.0-33.0	0.71	0.63	0.18	5.8	7.2	36.1	2.72	LM SL/V SL/CALC F PP FOSS
13	7833.0-34.0	0.77	0.51	0.12	1.5	5.7	62.9	2.72	LM SL/CALC VF PP FOSS STY
14	7834.0-35.0	0.89	0.77	0.53	3.2	11.8	44.1	2.72	LM SL/V SL/CALC SL/F PP
15	7835.0-36.0	2.1	1.9	0.53	5.1	4.3	31.9	2.74	LM V SL/CALC STY
16	7836.0-37.0	3.6	3.5	1.3	5.8	6.5	33.9	2.75	LM V SL/CALC SL/F STY
17	7837.0-38.0	12.	7.9	3.7	6.4	2.2	36.6	2.75	LM V SL/CALC SL/F STY
18	7838.0-39.0	6.8	6.4	4.1	7.3	5.1	32.1	2.75	LM V SL/CALC SL/F STY
19	7839.0-40.0	2.1	1.8	0.76	4.5	2.9	32.9	2.74	LM V SL/CALC F STY
20	7840.0-41.0	3.0	2.7	6.9	5.0	7.7	26.9	2.75	LM V SL/CALC VF
21	7841.0-42.0	0.53	0.45	0.26	2.8	3.8	37.7	2.73	LM SL/V SL/F SL/CALC
22	7842.0-43.0	2.2	2.0	2.5	4.8	8.9	25.3	2.74	LM V SL/CALC F STY
23	7843.0-44.0	0.53	0.20	0.31	1.9	8.3	50.0	2.73	LM V SL/CALC VF PP STY
24	7844.0-45.0	0.49	0.42	0.58	2.3	0.0	51.7	2.73	LM SL/CALC VF PP STY

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

ENSERCH EXPLORATION, INC.
NO. 3 PEARL JORDON

DATE : 5-23-81
FORMATION : CISCO

FILE NO : 3202-12348
ANALYSTS : REINHEIMER

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH FEET	PERM MAXIMUM	PERM 90 DEG	PERM VERTICAL	HE FOR	OIL% PORE	WTR% PORE	GRAIN DEN	DESCRIPTION
25	7845.0-46.0	0.69	0.67	3.1	2.0	5.4	54.1	2.71	LM SL/CALC SL/V VF PP,STY
26	7846.0-47.0	0.41	0.40	9.6	2.7	4.9	53.7	2.72	LM SL/V SL/CALC VF PP STY
27	7847.0-48.0	0.53	0.32	0.11	1.3	0.0	37.5	2.73	LM SL/CALC SL/SHY SHLAM FR
* 28	7848.0-49.0	0.19		0.18	0.9	0.0	46.8	2.75	LM SL/V SL/SHY VF SHLAM FR

* INDICATES PLUG PERMEABILITY

LITHOLOGICAL ABBREVIATIONS

ANH(Y)	ANHYDRITE, ANHYDRITIC	LM(Y)	LIMESTONE, LIMY
ARK	ARKOSE, ARKOSIC	MG	MEDIUM GRAINED
BAN	BAND, BANDED	MTX	MATRIX
BREC	BRECCIA, BRECCIATED	NA	INTERVAL NOT ANALYZED (AT REQUEST OF CLIENT)
CALC	CALCITE, CALCAREOUS		
CARB	CARBONACEOUS	NOD	NODULE, NODULAR
CG	COARSE GRAINED	OOL	OOLITIC
CHK(Y)	CHALK, CHALKY	PISO	PISOLITIC
CHT(Y)	CHERT, CHERTY	PP	PINPOINT POROSITY
CONGL	CONGLOMERATE, CONGLOMERITIC	PT	PARTING
CXLN	COARSELY CRYSTALLINE	PYR	PYRITE, PYRITIC
DNS	DENSE	SD(Y)	SANDSTONE, SANDY
DOL(C)	DOLOMITE, DOLOMITIC	SH(Y)	SHALE, SHALY
→ F	RANDOMLY ORIENTED FRACTURES	SHR	SOLID HYDROCARBON RESIDUE
FG	FINE GRAINED	SL/	SLIGHTLY
FOSS	FOSSILIFEROUS	SLT(Y)	SILT, SILTY
FR	FRIABLE	STY	STYLOLITE, STYLOLITIC
FXLN	FINELY CRYSTALLINE	SUC	SUCROSIC
GAL	GALENA	SUL	SULPHUR
GLAUC	GLAUCONITE, GLAUCONITIC	TBFA	TOO BROKEN FOR ANALYSIS
GRAN	GRANITE	TRIP	TRIPOLITE
GYP	GYPSUM, GYPSIFEROUS	V/	VERY
HF	PREDOMINANTLY HORIZONTALLY FRACTURED	→ VF	PREDOMINANTLY VERTICALLY FRACTURED
INC	INCLUSION	V	VUGULAR
INTBD	INTERBEDDED	XBD	CROSSBEDDED
LAM	LAMINATED	XLN	MEDIUM CRYSTALLINE

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: ENSEARCH CORPORATION — WELL : NO. 3 PEARL JORDON
FIELD : PETERSON NORTH PENN FIELD — COUNTY, STATE: ROOSEVELT COUNTY, NEW MEXICO

MILLIDARCY-FEET OF FLOW CAPACITY LOST FOR SELECTED PERMEABILITY CUT OFF

PERMEABILITY CUT OFF	FEET LOST	CAPACITY LOST (%)		FEET REMAINING	CAPACITY REMAINING (%)	GEOM MEAN	MEDIAN
0.005	0.0	0.0		28.0	100.0	1.25	0.95
0.010	0.0	0.0		28.0	100.0	1.25	0.95
0.020	0.0	0.0		28.0	100.0	1.25	0.95
0.039	0.0	0.0		28.0	100.0	1.25	0.95
0.078	0.0	0.0		28.0	100.0	1.25	0.95
0.156	1.0	0.1		27.0	99.9	1.36	1.02
Permeability cut-off: 0.5md 0.312	4.0	0.4		24.0	99.6	1.73	1.25
0.625	11.0	2.5		17.0	97.5	2.90	2.03
1.250	16.0	4.9		12.0	95.1	4.99	3.15
2.500	21.0	10.9		7.0	89.1	9.63	7.07
5.	24.0	16.3		4.0	83.7	22.88	20.00
10.	25.0	20.4	Net Pay: 18'	3.0	79.6	34.29	56.57
20.	26.0	27.5		2.0	72.5	57.97	80.00
40.	26.0	27.5		2.0	72.5	57.97	80.00
80.	27.0	52.5		1.0	47.5	80.00	
160.	28.0	100.0		0.0	0.0		

TOTAL FLOW CAPACITY IN MILLIDARCY-FEET(ARITHMETIC) = 168.27

Flow capacity in md-ft above permeaiblity cut-off = 168.27 x 0.98 = 165 md-ft

Average formation permeability = 168/18 = 9.2 md

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or

CORE LABORATORIES, INC. *Petroleum Reservoir Engineering*

COMPANY LISEARCH CORPORATION — FILE NO. 3202-12348

WELL NO. 3 PEARL JORDON — DATE 5-23-81

FIELD PETERSON NORTH PENN FIELD — FORMATION CISCO — ELEV.

COUNTY ROOSEVELT COUNTY — STATE NEW MEXICO — DRLG. FLD. BRINE BASE MUD — CORES AMERICAN COLDSET CORP.

LOCATION 660' FSL & 660' FEL, SEC. 17, T-33-E

CORRELATION COREGRAPH

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc., (all errors or omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

Total Water
PERCENT PORE SPACE
100 80 60 40 20 0

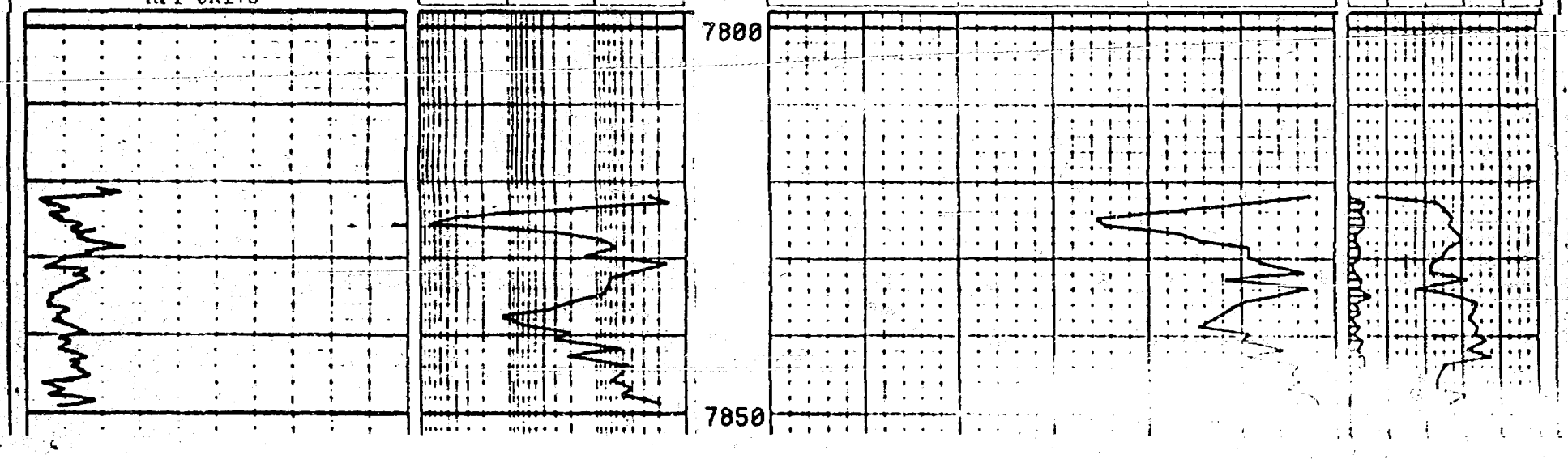
Gamma Ray
RADIATION INCREASE →
API UNITS

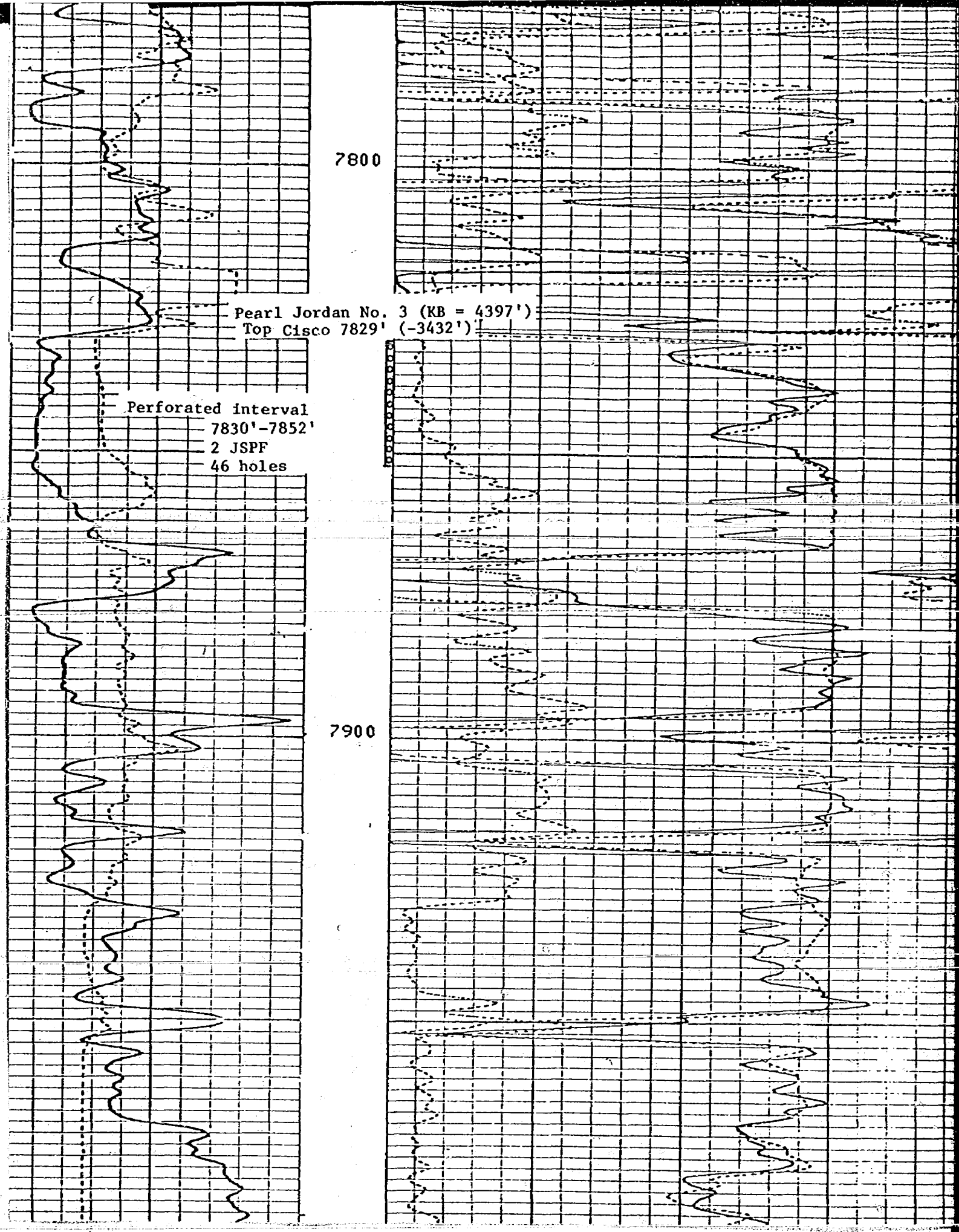
Permeability
MILLIDARCIES
100 10 1.0 .1

Depth Feet

Porosity
PERCENT
30 20 10 0

Oil Saturation
PERCENT PORE SPACE
0 20 40 60 80 100




7800
Pearl Jordan No. 3 (KB = 4397')
Top Cisco 7829' (-3432')
Perforated interval
7830'-7852'
2 JSPF
46 holes
7900

PRESSURE BUILDUP ANALYSIS
HORNER PLOT
AMOCO STATE NO. 1
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 17
Date 01/20/82

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANT'S EXHIBIT NO. 17
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

Pressure (psi)

2800
2500
2000
1400

m = 2740 − 2330

Interval tested: 7890'-7896'
Date of test: 6/7-11/1980
Permeability: 4.66 md
Reservoir pressure: 2740 psi
Pressure measured at 7832' (-3429')
KB = 3425'

$$\frac{T_p + \Delta t}{\Delta t}$$

K&E SEMI-LOGARITHMIC 46 4970
2 CYCLES X 70 DIVISIONS MADE IN U.S.A.
KEUFFEL & ESSER CO.

OIL

WELL PRESSURE ANALYSIS
West Texas District

Test Date: 6/7-11/1980 Lease: Amoco State

Formation: Pennsylvanian Lime Well No.: 1

Casing Size: 5-1/2" Field: North Peterson

Cum. Prod. Np(Bbl): 604 State: New Mexico

Prod. Rate (Bbl/Day): 173

Prod. Life = 24Np/q: 83.8 hrs

I. Calculation of kh (md-ft) and k (md):

$kh = \frac{162.6\ q\mu B}{m}$; $k = \frac{kh}{h}$

h = 8 ft μ = 0.365 cp

q = 173 B/D B = 1.49

m = 410 psi/cycle

$kh = \frac{162.6 \times (173) \times (.365) \times (1.49)}{(410)} = 37.3$

$k = \left\{\frac{37.3}{8}\right\} = 4.66$

II. Calculation of Skin Effect, s; and Pressure Loss Due to Skin, Δp_{skin} (psi):

$s = 1.151\left[\frac{p_{1\text{-}hr} - p_{wf}}{m} - \log\left(\frac{k}{\phi\mu c r_w^2}\right) + 3.23\right]$

$s = 1.151\left[\frac{(1967)-(1195)}{(410)} - \log\left[\frac{(4.66)}{(.03)(.365)(16.5\times10^{-6})(.229^2)}\right] + 3.23\right] = -4.12$

$\Delta p_{skin} = (m) \times 0.87\ (s)$ $\Delta p_{skin} = (410) \times 0.87\ (-4.12) = -1469.6$

h = 4.66 ft r_w = 0.229 ft

φ = 0.03 $p_{1\ hr}$ = 1967 psig

μ = 0.365 cp p_{wf} = 1195 psig

c = 16.5×10^{-6} psi^{-1} m = 410 psi/cycle

III. Calculation of Productivity Index (B/D-psi) and Flow Efficiency:

$J_{(actual)} = \frac{q}{p^* - p_{wf}}$ $J_{(ideal)} = \frac{q}{(p^*-p_{wf}) - \Delta p_{skin}}$

$J_{(actual)} = \frac{(173)}{(2740)-(1195)}$ $J_{(ideal)} = \frac{(173)}{[(2740)-(1195)] - (-1470)}$

$J_{(actual)} = 0.112$ $J_{(ideal)} = 0.057$

Δp_{skin} = -1470 psi p^* = 2740 psig

q = 173 B/D p_{wf} = 1195 psig

Flow Efficiency = $\frac{J_{(actual)}}{J_{(ideal)}} = \frac{(0.112)}{(0.057)} = 1.96$

PARAMETERS:

$C_t = S_w C_w + S_o C_o + C_f = (.56)(3\times10^{-6}) + (.44)(14.3\times10^{-6}) + (8.5\times10)^6 = 16.5 \times 10^{-6}$

P_c = _____ psia S_w = 56 %

T_c = _____ °R S_o = 44 %

BHT = _____ °F ρ_o = _____

BHP = _____ psia

Radius of investigation during pressure buildup:

$r_i = \left(\frac{kt}{\phi\mu C_t}\right) = 0.029\left(\frac{(4.66)(96.33)}{(.03)(.357)(16.5^{-6})}\right)^{\frac{1}{2}} = 1561.6'$ (154 acres in 96.3 hours)

PRESSURE BUILDUP ANALYSIS
HORNER PLOT
ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 2
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

NEW MEXICO OIL CONSERVATION DIVISION
APPLICANTS
CASE NO. 7072
SUBMITTED BY Enserch
HEARING DATE 1/20/82

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 18
Date 01/20/82

Pressure (psi)

2600
2550
2500

m = 2633 - 2578
= 55 psi/cycle

Interval Tested: 7825'-7841'
7848'-7855'
Date of Test: 11/3-6/1980
Permeability: 26.1
Reservoir Pressure: 2633
Pressure drop: 107 psi
Pressure measured at 7840' (-3430')
KB = 4410'

$\frac{(T + \Delta t)}{\Delta t}$

K&E SEMI-LOGARITHMIC • 3 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

OIL

WELL PRESSURE ANALYSIS
West Texas District

Test Date: 11/3-6/1980 Lease: Amoco State
Formation: Pennsylvanian Lime Well No.: 2
Casing Size: 5-1/2" Field: North Peterson
Cum. Prod. Np(Bbl): 3521 State: New Mexico
Prod. Rate (Bbl/Day): 252
Prod. Life = 24Np/q: 335.33

I. Calculation of kh (md-ft) and k (md):

$$kh = \frac{162.6\ q\mu B}{m} \; ; \; k = \frac{kh}{h}$$

h = 15 ft μ = 0.357 cp
q = 252 B/D B = 1.472
m = 55 psi/cycle

$$kh = \frac{162.6 \times (252) \times (0.357) \times (1.472)}{(55)} = 391.5$$

$$k = \left(\frac{391.5}{15}\right) = 26.1$$

II. Calculation of Skin Effect, s; and Pressure Loss Due to Skin, Δp_{skin} (psi):

$$s = 1.151\left[\frac{p_{1\text{-hr}} - p_{wf}}{m} - \log\left(\frac{k}{\phi\mu c r_w^2}\right) + 3.23\right]$$

$$s = 1.151\left[\frac{(2497)-(2398)}{(55)} - \log\left[\frac{(26.1)}{(0.03)(0.357)(16.5\times10^{-6})(2038^2)}\right] + 3.23\right] = -5.2$$

$\Delta p_{skin} = (m) \times 0.87\ (s)$ $\Delta p_{skin} = (55) \times 0.87\ (-5.2) = -248.8$

k = 26.1 md r_w = .2038 ft
φ = 0.03 $p_{1\ hr}$ = 2497 psig
μ = 0.357 cp p_{wf} = 2398 psig
c = 16.5×10^{-6} psi^{-1} m = 55 psi/cycle

III. Calculation of Productivity Index (B/D-psi) and Flow Efficiency:

$$J_{(actual)} = \frac{q}{p^* - p_{wf}}$$

$$J_{(actual)} = \frac{(252)}{(2633)-(2398)}$$

$J_{(actual)}$ = 1.072

$$J_{(ideal)} = \frac{q}{(p^*-p_{wf}) - \Delta p_{skin}}$$

$$J_{(ideal)} = \frac{(252)}{[(2633)-(2398)] - (-249)}$$

$J_{(ideal)}$ = 0.52

Δp_{skin} = -249 psi p^* = 2633 psig
q = 252 B/D p_{wf} = 2398 psig

$$\text{Flow Efficiency} = \frac{J_{(actual)}}{J_{(ideal)}} = \frac{(1.072)}{(0.52)} = 2.06$$

PARAMETERS:

$$C_t = S_w C_w + S_o C_o + C_f = (.56)(3\times10^{-6}) + (.44)(14.3\times10^{-6}) + (8.5\times10^{-6}) = 16.5 \times 10^{-6}$$

P_c = _____ psia S_w = 56
T_c = _____ °R S_o = 44
BHT = _____ °F ρ_o = 0.673
BHP = _____ psia

Radius of investigation during pressure build-up:

$$r_i = 0.029\left(\frac{kt}{\phi\mu c_t}\right)^{\frac{1}{2}} = 0.029\left(\frac{(2.62)(64)}{(.02)(.357)(16.5\times10^{-6})}\right)^{\frac{1}{2}} = 2819.5'$$

(573 acres in 64 hours)

PRESSURE BUILDUP ANALYSIS
HORNER PLOT
ENSERCH EXPLORATION, INC.
PEARL JORDAN WELL NO. 2
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Applicant's Exhibit No. 19
Case No. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 19
Date 01/20/82

Pressure (psi)

2340
2300
2250
2200

m = 2850 - 2268
= 92 psi/cycle

Interval Tested: 7830'-7848'
Date of Test: 1/11-13/1981
Permeability: 13 md
Reservoir pressure: 2350 psi
Pressure drop: 390 psi
Pressure measured at 7839' (-3425')
KB = 4414'

$\frac{T_p + \Delta t}{\Delta t}$

K&E SEMI-LOGARITHMIC • 3 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

OIL

WELL PRESSURE ANALYSIS
West Texas District

Test Date: 3/11-13/81 Lease: Pearl Jordan
Formation: Pennsylvanian Well No.: 2
Casing Size: 5-1/2" Field: North Peterson
Cum. Prod. Np(Bbl): 520 State: New Mexico
Prod. Rate (Bbl/Day): 250
Prod. Life = 24Np/q: 50 hrs

I. Calculation of kh (md-ft) and k (md):

$$kh = \frac{162.6\ q\mu B}{m} \quad ; \quad k = \frac{kh}{h}$$

h = 18 ft μ = 0.357 cp
q = 250 B/D B = 1.445
m = 92 psi/cycle

$$kh = \frac{162.6 \times (250) \times (0.357) \times (1.445)}{(92)} = 227.9$$

$$k = \left(\frac{227.9}{18}\right) = 12.7 \text{ md}$$

II. Calculation of Skin Effect, s; and Pressure Loss Due to Skin, Δp_{skin}(psi):

$$s = 1.151\left[\frac{p_{1\text{-hr}} - p_{wf}}{m} - \log\left(\frac{k}{\phi\mu c r_w^2}\right) + 3.23\right]$$

$$s = 1.151\left[\frac{(2192)-(2173)}{(92)} - \log\left[\frac{(12.7)}{(0.09)(0.357)(8.5\times10^{-6})(.2038^2)}\right] + 3.23\right] = -6.07$$

$\Delta p_{skin} = (m) \times 0.87\,(s)$ $\Delta p_{skin} = (92) \times 0.87\,(-6.07) = -485$

k = 12.7 md r_w = .2038 ft
φ = 0.09 $p_{1\ hr}$ = 2192 psig
μ = 0.357 cp p_{wf} = 2173 psig
c = 18.5×10^{-6} psi^{-1} m = 92 psi/cycle

III. Calculation of Productivity Index (B/D-psi) and Flow Efficiency:

$$J_{(actual)} = \frac{q}{p^* - p_{wf}} \qquad J_{(ideal)} = \frac{q}{(p^* - p_{wf}) - \Delta p_{skin}}$$

$$J_{(actual)} = \frac{(250)}{(2350)-(2173)} \qquad J_{(ideal)} = \frac{(250)}{[(2350)-(2173)] - (-481)}$$

$J_{(actual)}$ = 1.41 $J_{(ideal)}$ = 0.38

Δp_{skin} = 481 psi p^* = 2350 psig
q = 250 B/D p_{wf} = 2173 psig

$$\text{Flow Efficiency} = \frac{J_{(actual)}}{J_{(ideal)}} = \frac{(1.41)}{(0.38)} = 3.71$$

PARAMETERS:

$C_t = S_w C_w + S_o C_o + C_f = (.38)(3\times10^{-6}) + (.62)(4.3x) + (8.5\times10^{-6}) = 18.5 \times 10^{-6}$

P_c = ____ psia S_w = 38 %
T_c = ____ °R S_o = 62 %
BHT = 140 °F ρ_o = 0.6727 gm/cu
BHP = 2350 psia

Radius of investigation during pressure buildup

$$r_i = 0.029\left(\frac{kt}{\phi\mu c_t}\right)^{\frac{1}{2}} = 0.029\left(\frac{(12.7)(46.5)}{(.09)(.357)(18.5\times10^{-6})}\right)^{\frac{1}{2}} = 914 \text{ ft (60 acres in 46.5 hrs)}$$

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 20
Date 01/20/82

SUMMARY
PERMEABILITY AND DRAINAGE
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

I. PERMEABILITY

Amoco State Well No. 1	(PBU Analysis)	4.7 md
Amoco State Well No. 2	(PBU Analysis)	26.1 md
Pearl Jordan Well No. 2	(PBU Analysis)	12.7 md
Pearl Jordan Well No. 3	(Whole Core Analysis)	9.2 md
	Average	13.2 md

II. DRAINAGE - RADIUS OF INVESTIGATION

Amoco State Well No. 1	(t = 96 hrs)	154 acres
Amoco State Well No. 2	(t = 64 hrs)	573 acres
Pearl Jordan Well No. 2	(t = 46.5 hrs)	60 acres
	Average	262 acres

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 20
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

R - 3 3 - E

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 1
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

AMERADA
LEA
Glor # 287

7 8 9

T 4 S

18 17 16

Drlg.
DESANA
PETERSON

-3600
-3550
-3500
-3450

PETERSON, NORTH AREA

5540
-3424
ENSERCH
ANDCO-ST.

ENSERCH
JORDAN

Line of
Cross Section

-3412

1348
-3405

ROCKWOOD RES.
ENSERCH-ST.
WOCU

OWWO
WOCU
-3457
TD 8250

-3412

-3432

19 20 21

ENSERCH
SCOTT-FED

ENSERCH
KIPLEY

1320
-3458

ENSERCH
HAYS
Abnd. Loc

WOCU -3475

TD 8300
-3503

30 29

ENSERCH EXPLORATION INC.
WEST TEXAS AREA

PETERSON, NORTH AREA
ROOSEVELT COUNTY, NEW MEXICO

STRUCTURE MAP
TOP CISCO LIME

Contour Interval: 50'
Scale 1" = 2000'
1/81
TEB

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 3
Date 01/20/82

SOUTHEAST NEW MEXICO PENN POOLS
80-ACRE SPACING

Pool Name	Top Oil Allowable (Bbl)	Top Casinghead Gas Limit (MCF)	GOR Limit
Allison Penn	355	710	2000
Bagley Penn, North	400	800	2000
Dean Permo Penn	455	890	2000
Four Lakes Penn	400	800	2000
Hightower Lower Penn	400	800	2000
Hightower Upper Penn, East	355	214	2000
Inbe Permo Penn	355	710	2000
Lovington Penn, NE	534	1068	2000
Peterson Penn, North	267	534	2000
Prairie Cisco, South	355	710	2000
Ranger Lake Penn	400	800	2000
Tobac Penn	355	710	2000
Vacuum Upper Penn	400	800	2000

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 3
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

ENSERCH EXPLORATION, INC.

Docket No._____

Exhibit_____

Date_____

SOUTHEAST NEW MEXICO PENN POOLS
160-ACRE SPACING

Pool Name	Top Oil Allowable (Bbl)	Top Casinghead Gas Limit (MCF)	GOR Limit
Bar-U Penn	355	710	2000
Baum Upper Penn	355	710	2000
Cerca Upper Penn	560	1120	2000
High Plains Penn	560	1120	2000
Nonombre Upper Penn	560	1120	2000
Saunders Permo Penn, East	560	1120	2000
Tres Papalotes Penn	560	1120	2000
Tres Papalotes Penn, West	560	1120	2000
Tulk Pennsylvanian	355	710	2000

ENSERCH EXPLORATION, INC.

Docket No. 7072

Exhibit 4

Date 01/20/82

WELL COMPLETION DATA
ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 1
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Top of Penn Lime: 7808' (-3405') KB: 4402.7'

Perforated Production Interval: 7826'-7837' (1 JSPF)

Stimulation Treatment: Spotted 150 gallons 15% MCA acid (6/4/80)
Pumped 2000 gallons MOD 303 acid

Initial Potential Test:

Date of Test: 6/8/80 (flowing)
172.5 BO + 232 MCFG + 2 BW
GOR: 1345:1

Current Status: Put well on pump 1/31/81. Producing

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 4
CASE NO. 7270
Submitted by ENSERCH
Hearing Date 1/20/82

Res Press
2740 psi

8 ft pay
8½% poro
4.7 perm

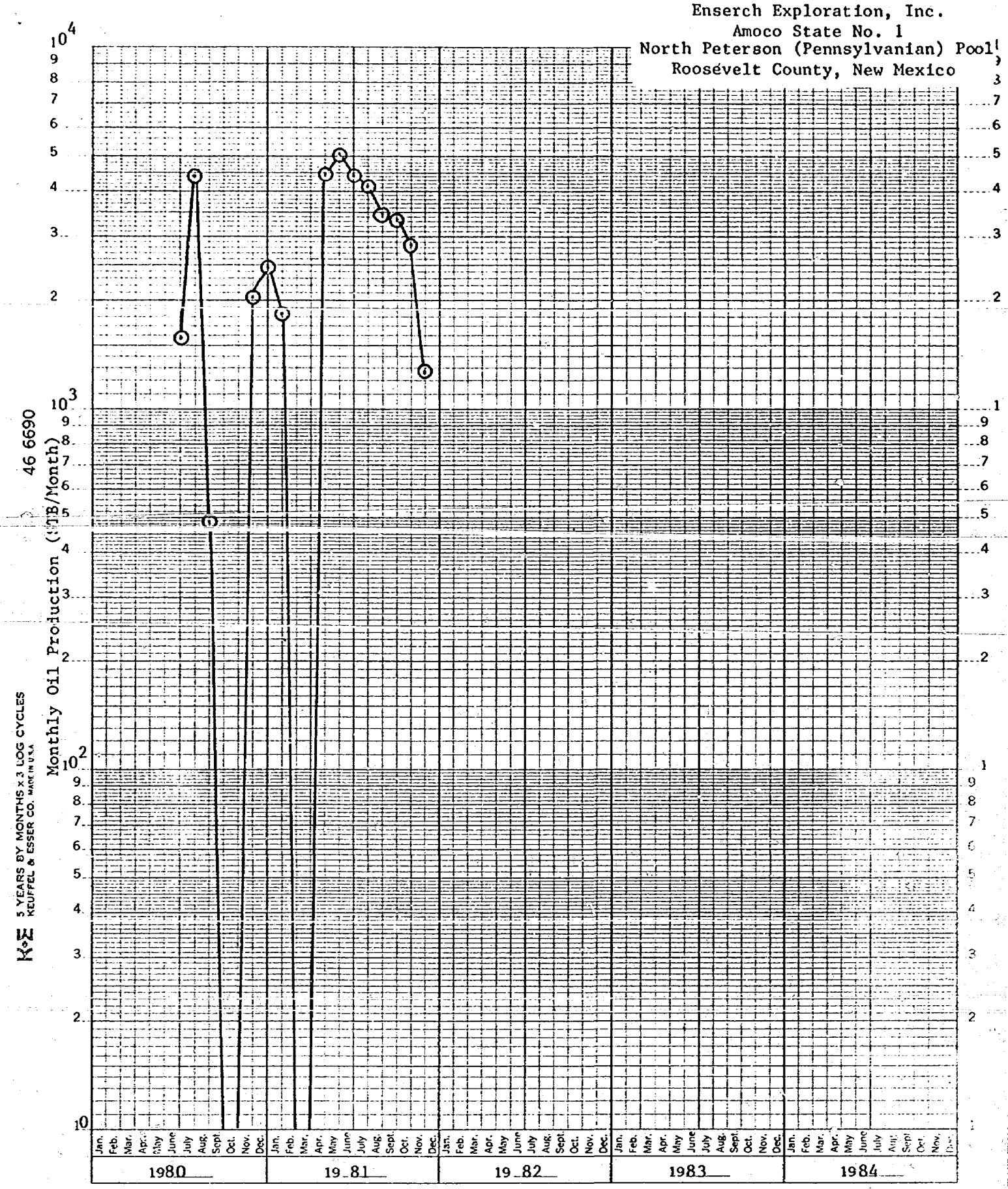
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PRODUCTION HISTORY

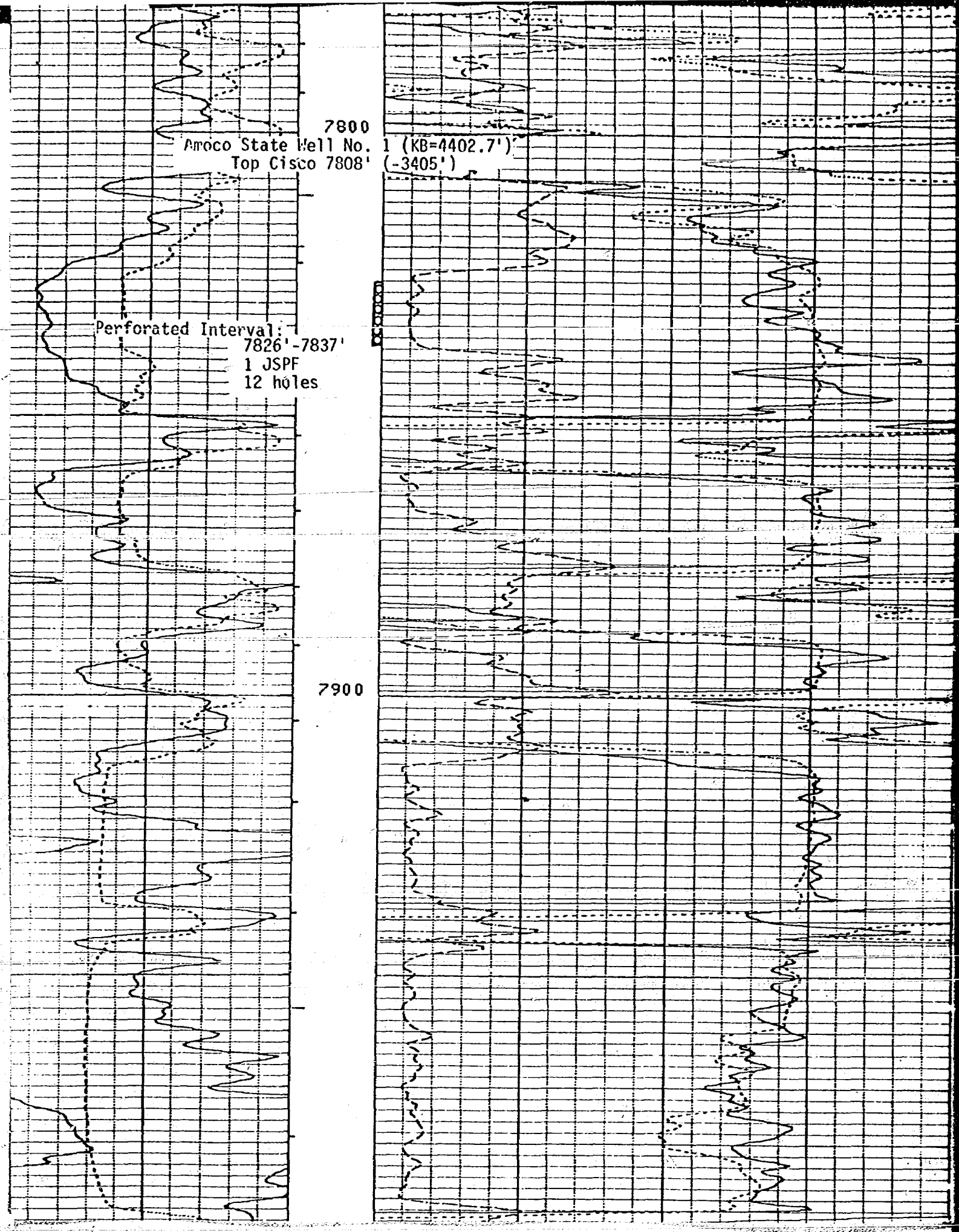
ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 1
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

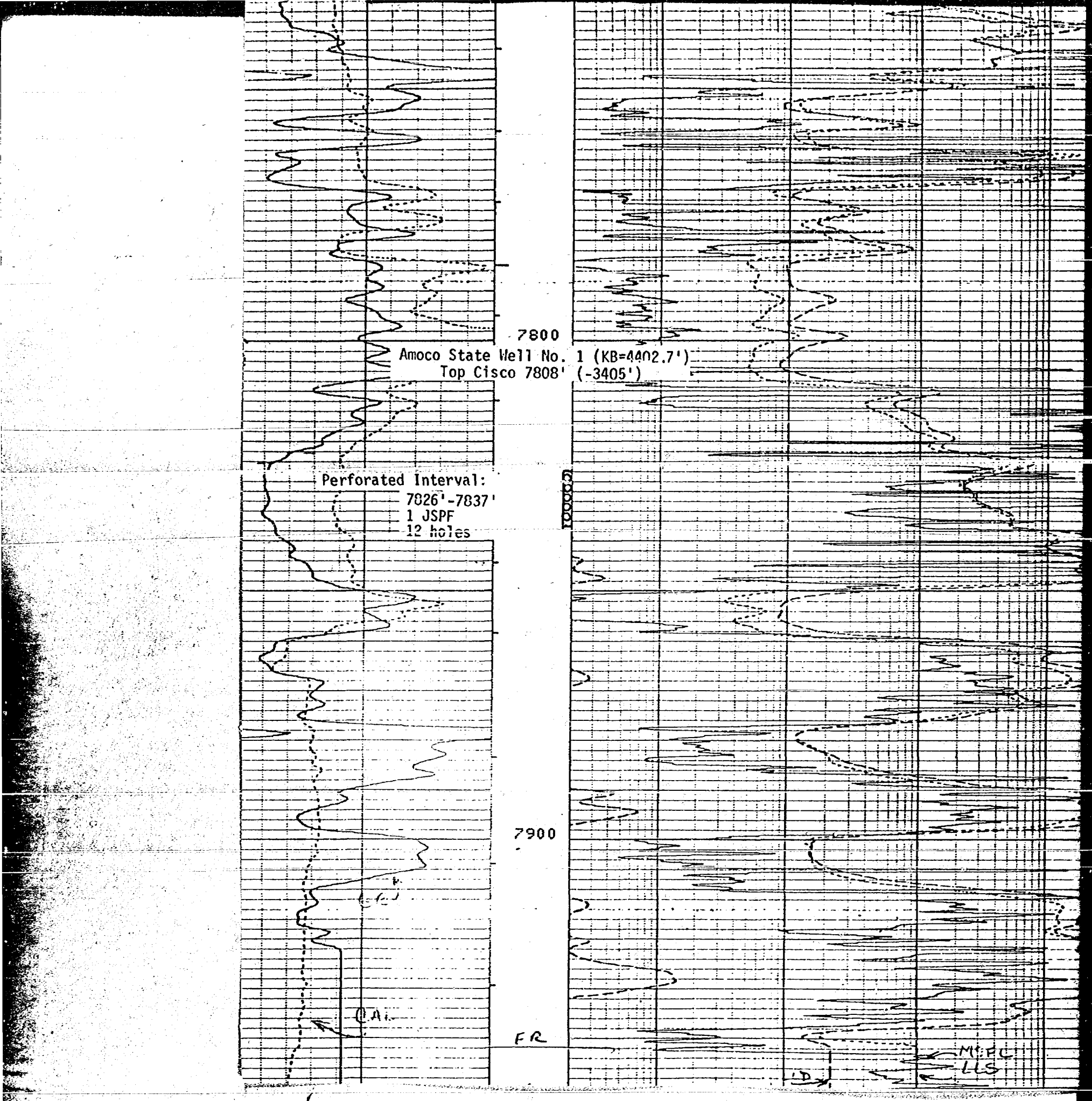
Date	Days of Production	Oil (STB)	Gas (MCF)	Water (Bbl)	GOR (SCF/Bbl)	Water Cut (%)
06/1980	21	1,578	1,954	0	1,238	0
07/1980	31	4,401	4,964	0	1,128	0
08/1980	4	488	605	0	1,240	0
09/1980	0	0	0	0	-	0
10/1980	0	0	0	0	-	0
11/1980	21	2,035	795	0	391	0
12/1980	25	2,444	1,407	41	576	2
01/1981	24	1,838	416	8	226	0.4
02/1981	0	2	0	0	-	0
03/1981	0	0	0	0	-	0
04/1981	17	4,469	662	0	148	0
05/1981	29	5,029	1,545	0	307	0
06/1981	25	4,406	1,571	0	357	0
07/1981	26	4,127	2,003	0	485	0
08/1981	31	3,483	1,858	0	533	0
09/1981	30	3,327	1,553	0	467	0
10/1981	31	2,852	1,374	0	482	0
11/1981	30	1,292	518	0	401	0
12/1981						
Cumulative Production	345	41,771	21,225	49	508	0

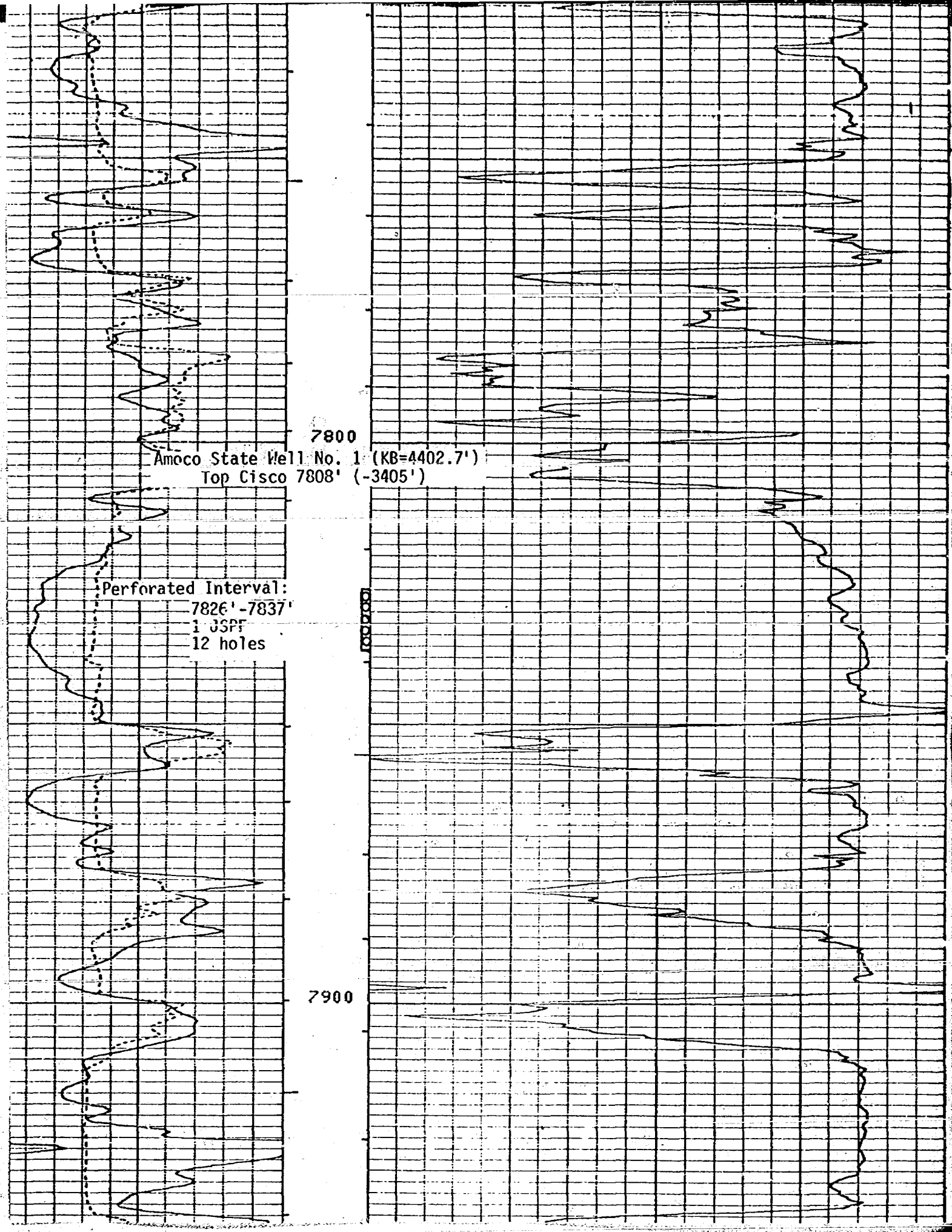
PRODUCTION HISTORY
Enserch Exploration, Inc.
Amoco State No. 1
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico



KEUFFEL & ESSER CO. MADE IN U.S.A.
5 YEARS BY MONTHS x 3 LOG CYCLES
46 6690


7800
Amoco State Well No. 1 (KB=4402.7')
Top Cisco 7808' (-3405')
Perforated Interval:
7826'-7837'
1 JSPF
12 holes
7900


7800
Amoco State Well No. 1 (KB=4402.7')
Top Cisco 7808' (-3405')
Perforated Interval:
7826'-7837'
1 JSPF
12 holes
7900
FR
M.F.C.
LLS


7800
Amoco State Well No. 1 (KB=4402.7')
Top Cisco 7808' (-3405')
Perforated Interval:
7826'-7837'
1 JSPF
12 holes
7900

ENSERCH EXPLORATION, INC.

Docket No. 7072

Exhibit 5

Date 01/20/82

WELL COMPLETION DATA
ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 2
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Top of Penn Lime: 7822' (-3412') KB: 4410'

Perforated Production Interval: 7825'-7835' (1 JSPF)

Stimulation Treatment: Spotted 150 gallons 15% MCA acid (10/16/80)
Pumped 3000 gallons MOD 303 acid
Dropped 20 RCN ball sealers

Initial Potential Test:

Date of Test: ~~10/20/81~~ 10/18/80 (flowing)
327 BO + 120 MCFG + 0 BW
GOR: 367:1

Current Status: Put well on pump 2/15/81. Producing

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 5
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

PRODUCTION HISTORY

ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 2
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

Date	Days of Production	Oil (STB)	Gas (MCF)	Water (Bbl)	GOR (SCF/Bbl)	Water Cut (%)
10/1980	11	3,083	0	0	-	0
11/1980	20	4,887	3,317	0	679	0
12/1980	9	5,871	965	252	164	4.1
01/1981	19	4,413	224	678	51	13.3
02/1981	0	3	0	0	-	0
03/1981	0	0	0	0	-	0
04/1981	16	3,042	826	271	272	8.2
05/1981	31	7,618	2,061	2,543	271	25.0
06/1981	30	6,675	2,119	2,301	317	25.6
07/1981	30	6,253	2,714	2,816	434	31.0
08/1981	26	5,008	2,495	2,735	479	34.4
09/1981	30	5,041	2.045	3,548	406	41.3
10/1981	31	4,322	1,807	5,492	418	56.0
11/1981	8	1,958	657	1,434	336	42.3
Cumulative Production	261	58,174	21,291	22,070	366	27.5

244

PRODUCTION HISTORY
Enserch Exploration, Inc.
Amoco State No. 2
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico

46 6690

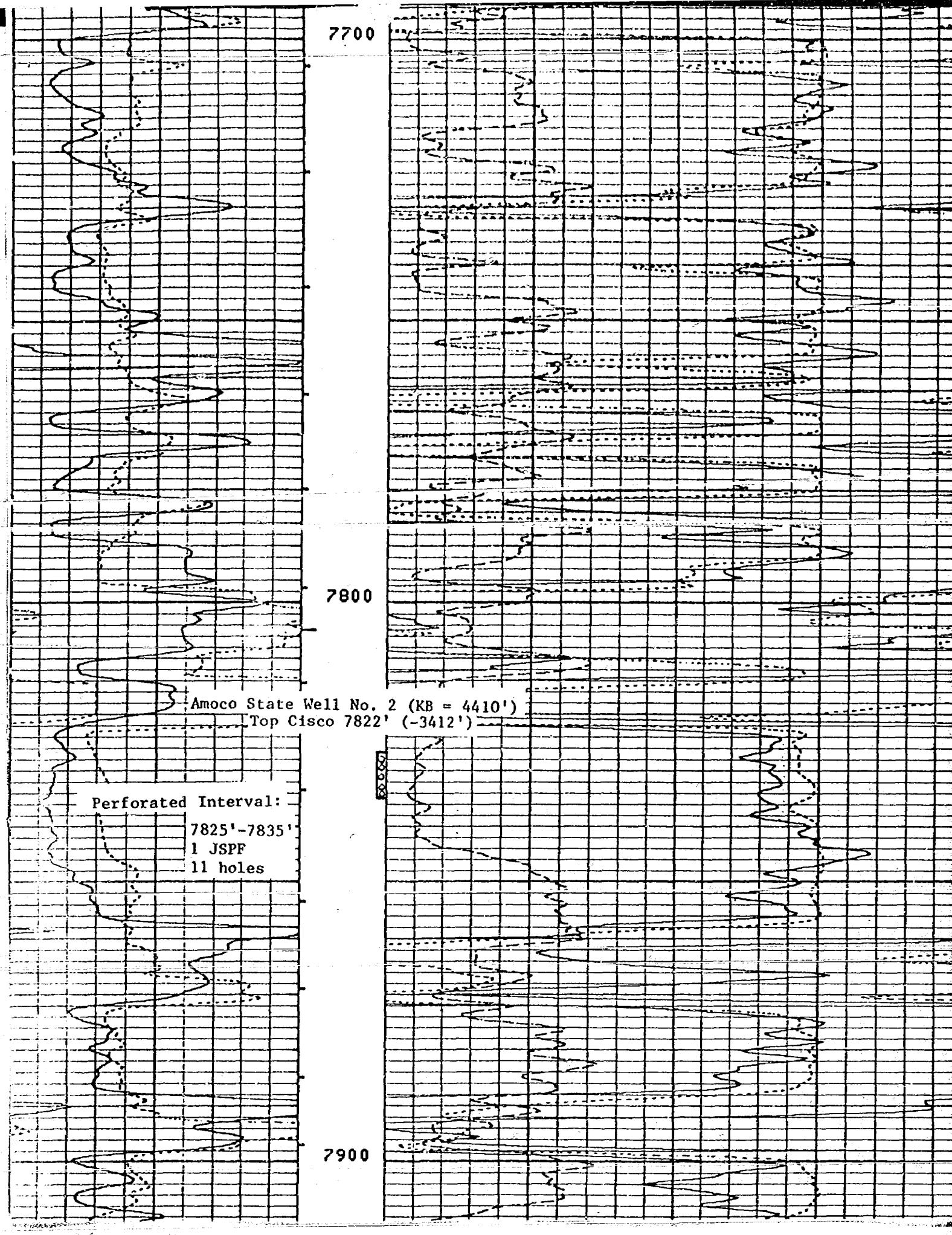
Monthly Oil Production (STB/Month)

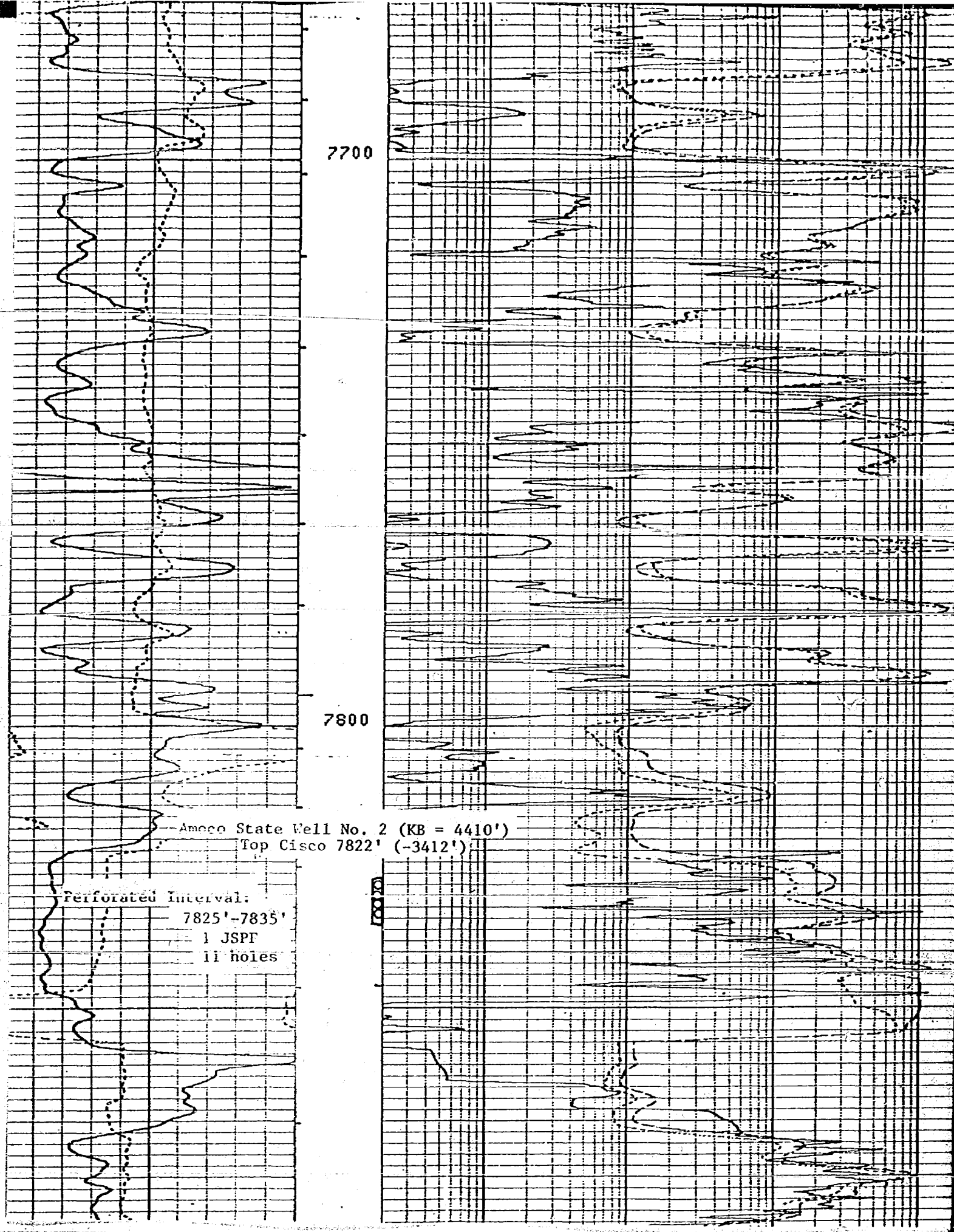
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Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

1980 | 1981 | 1982 | 1983 | 1984

K&E 5 YEARS BY MONTHS x 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.


7700
7800
Amoco State Well No. 2 (KB = 4410')
Top Cisco 7822' (-3412')
Perforated Interval:
7825'-7835'
1 JSPF
11 holes
7900


7700
7800
Amoco State Well No. 2 (KB = 4410')
Top Cisco 7822' (-3412')
Perforated Interval:
7825'-7835'
1 JSPF
11 holes

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 6
Date 01/20/82

WELL COMPLETION DATA
ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 3
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Top of Penn Lime: 7818' (-3424') KB: 4394'

Perforated Production Interval: 7834'-7840' (1 JSPF) First stage
7841'-7850' (1 JSPF) Second stage

Stimulation Treatment:

First stage acid job: Spotted 150 gallons 15% MCA acid (2/15/81)
Pumped 250 gallons 2% KCl water. Swabbed
Pumped 500 gallons 15% MCA acid
Pumped 1000 gallons MOD 202 acid

Second stage acid job: Pumped 3200 gallons 15% NEFE acid (9/19/81)
Dropped 13 RCN ball sealers

Initial Potential Test:

Date of Test: 4/21/81 (pumping)
37 BO + 20 MCFG + 31 BW
GOR: 540:1

Current Status: Producing

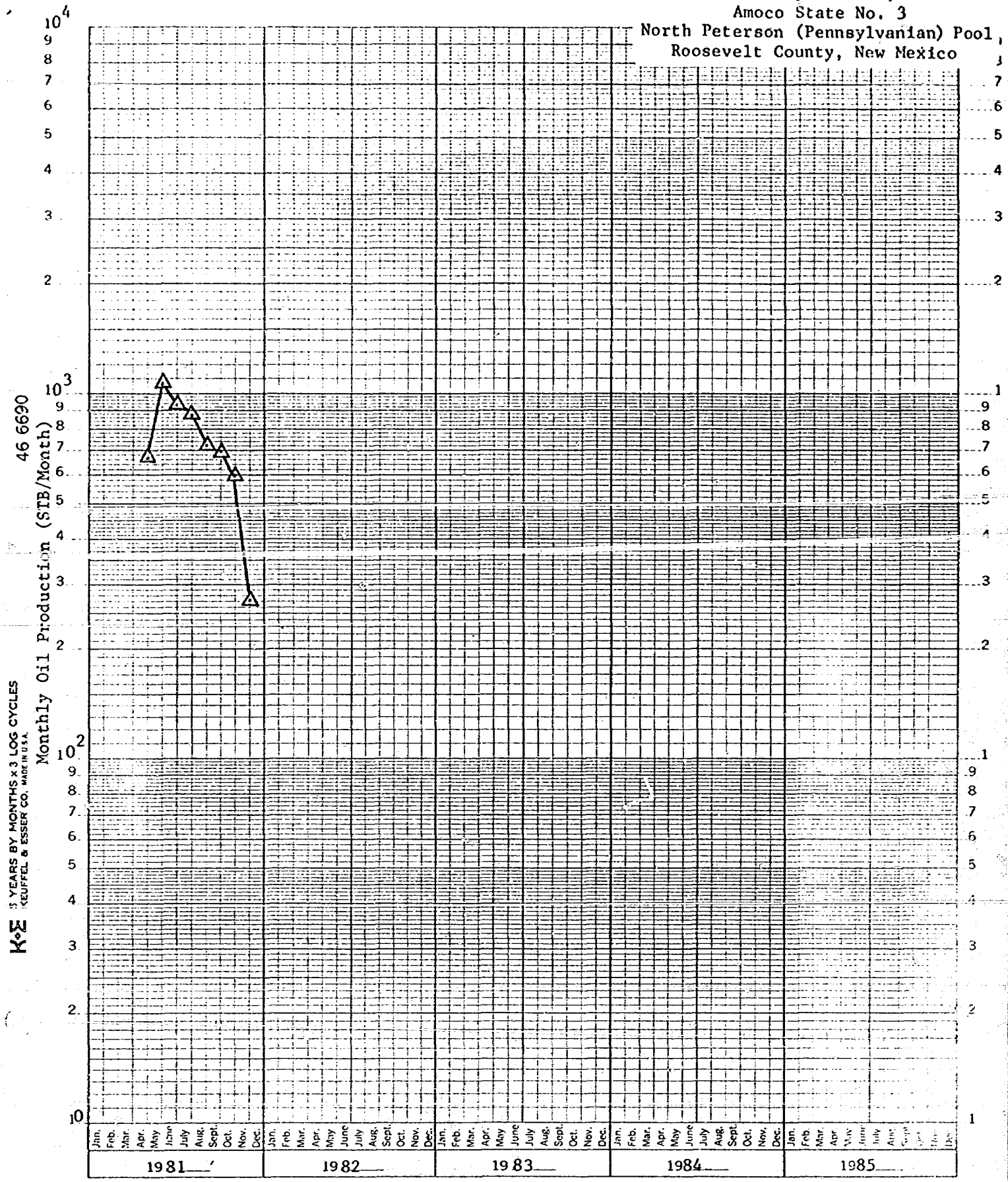
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 6
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

PRODUCTION HISTORY

ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 3
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

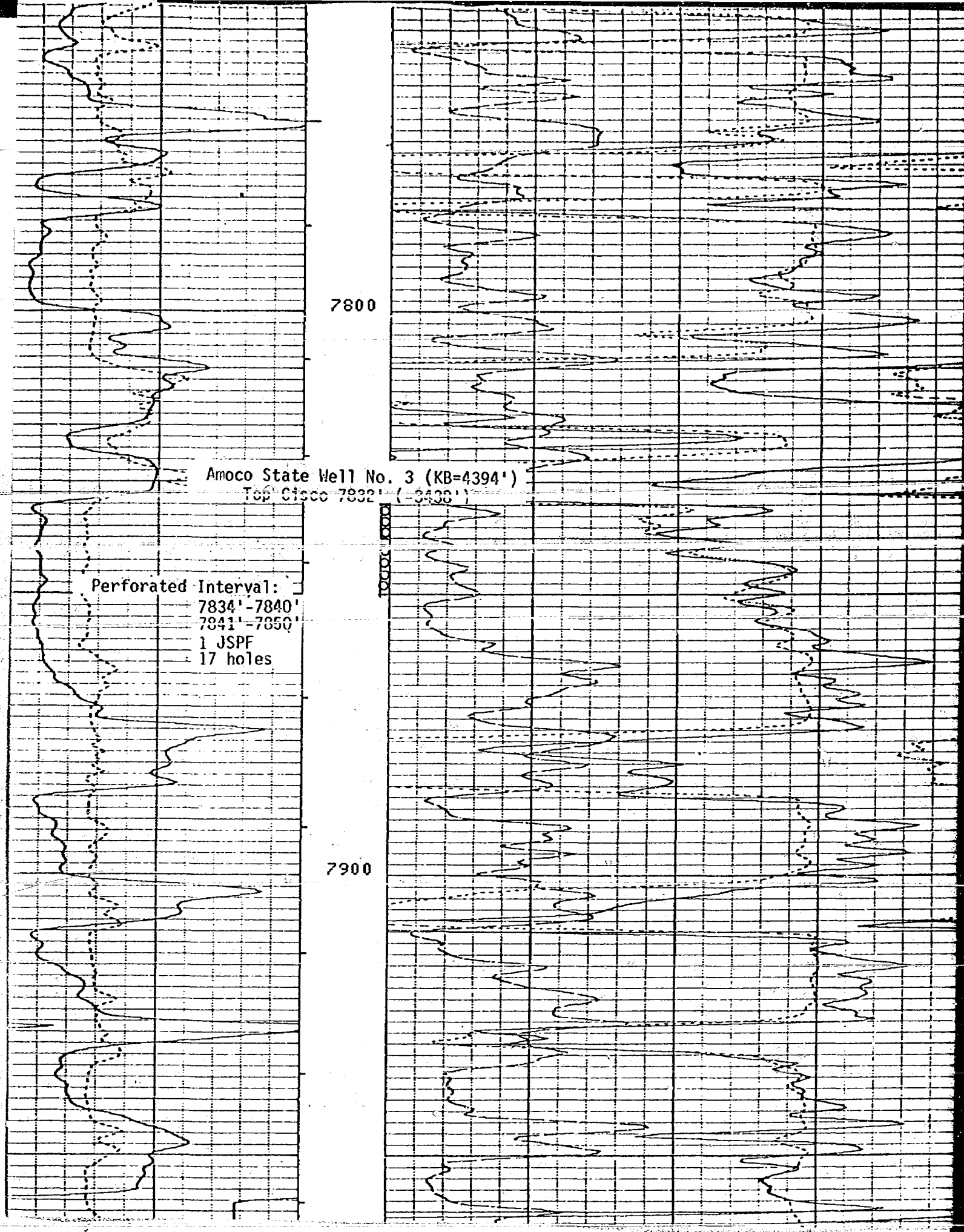
Date	Days of Production	Oil (STB)	Gas (MCF)	Water (Bbl)	GOR (SCF/Bbl)	Water Cut (%)
04/1981	13	662	118	1,339	178	66.9
05/1981	27	1,055	278	848	264	44.6
06/1981	30	924	295	767	319	45.4
07/1981	30	666	354	939	409	52.0
08/1981	31	721	334	903	463	55.6
09/1981	18	698	303	1,169	434	62.6
10/1981	31	598	275	478	460	44.4
11/1981	30	271	127	557	469	67.3
12/1981						
Cumulative Production	210	5,795	2,084	7,000	360	54.7

PRODUCTION HISTORY
Enserch Exploration, Inc.
Amoco State No. 3
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico



46 6690

K•E 5 YEARS BY MONTHS x 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.


7800
Amoco State Well No. 3 (KB=4394')
Top Cisco 7832' (-3438')
Perforated Interval:
7834'-7840'
7841'-7850'
1 JSPF
17 holes
7900

REPEAT SECTION

7800

TOOL

Amoco State Well No. 3 (KB=4394')
Top Cisco 7832' (-3438')

Perforated Interval:
7834'-7840'
7841'-7850'
1 JSPF
17 holes

Caliper

GR

7900

F.R. (GR)

F.R. (CALIPER)

F.R. (D'L)

F.R. (MSFL)

18
18
18
18
18
18

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 7
Date 9/20/82

WELL COMPLETION DATA
ENSERCH EXPLORATION, INC.
PEARL JORDAN NO. 1
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Top of Penn Lime: 7803' (-3458') KB: 4345'

Perforated Production Interval: 8016'-8024' (2 JSPF)

Stimulation Treatment: Spotted 150 gallons 7½% MCA acid (5/5/81)
Pumped 1000 gallons 7½% MCA acid
Dropped 15 RCN ball sealers. Swabbed
Pumped 4000 gallons 15% NEFE acid (5/8/81)
Dropped 10 RCN ball sealers

Initial Potential Test:

Date of Test: 5/20/81 (pumping)
27 BO + 36 MCFG + 14 BW
GOR: 1331.1

Current Status: Producing

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 7
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 11/20/82

PRODUCTION HISTORY

ENSERCH EXPLORATION, INC.
PEARL JORDAN NO. 1
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

Date	Days of Production	Oil (STB)	Gas (MCF)	Water (Bbl)	GOR (SCF/Bbl)	Water Cut (%)
05/1981	0	0	825	To Test Tanks		-
06/1981	24	405	462	0	1,141	0
07/1981	8	199	281	90	1,412	31.1
08/1981	12	324	875	521	2,700	61.7
09/1981	30	183	693	119	3,787	39.4
10/1981	31	210	846	88	4,029	29.5
11/1981	30	170	642	79	3,776	31.7
12/1981						
Cumulative Production	135	1,491	4,624	897	3,101	37.6

PRODUCTION HISTORY
Enserch Exploration, Inc.
Pearl Jordan No. 1
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico

46 6590

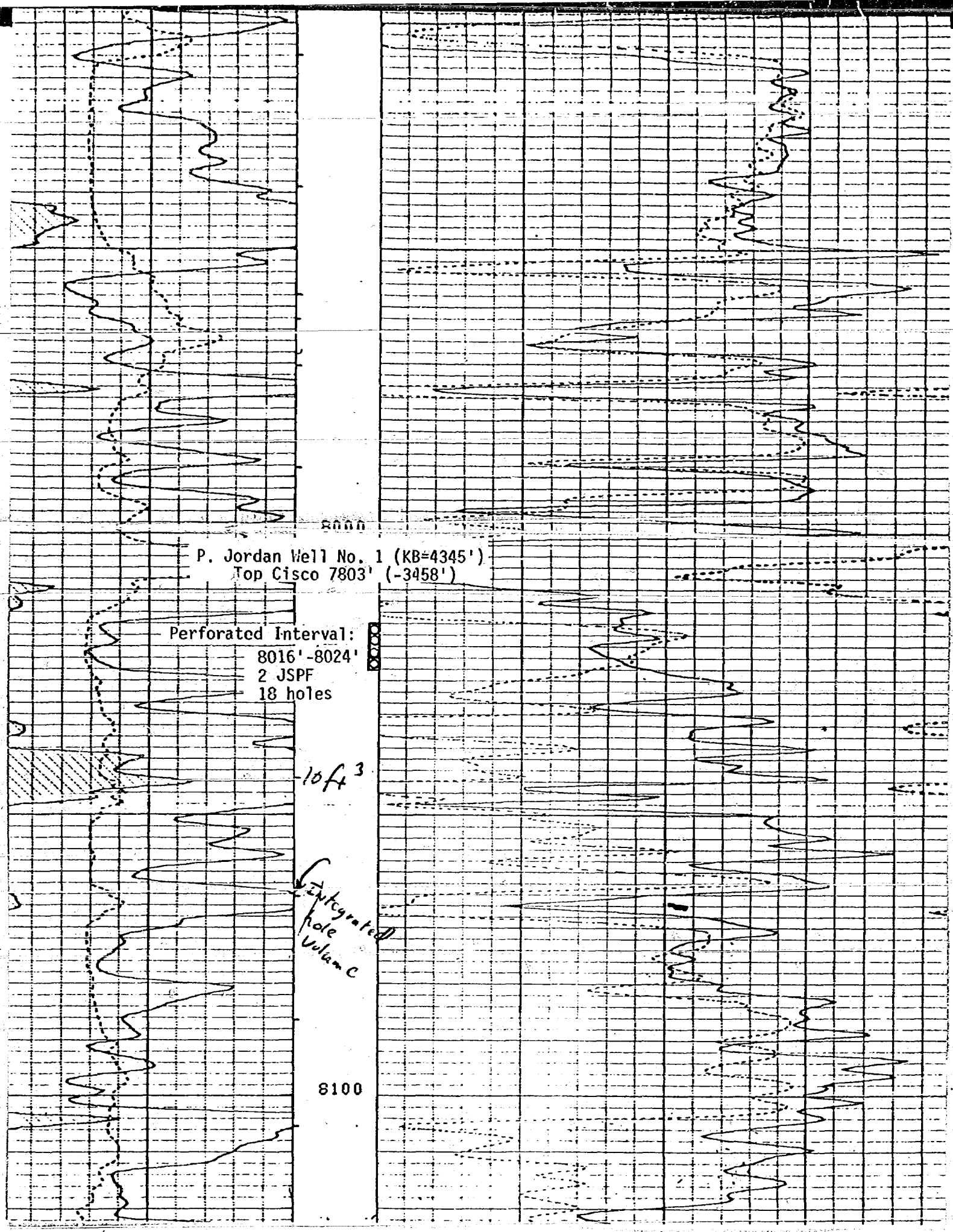
Monthly Oil Production (STB/month)

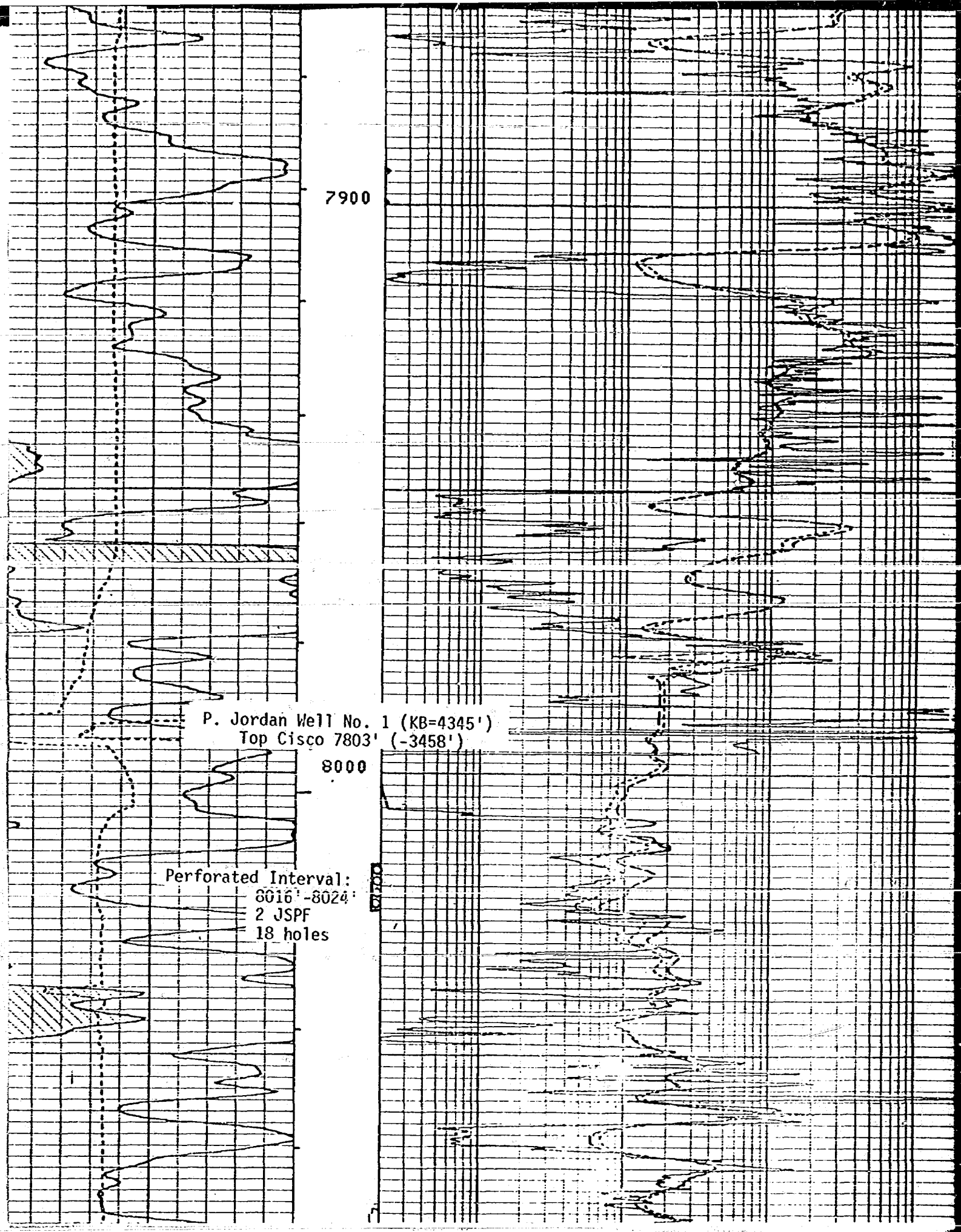
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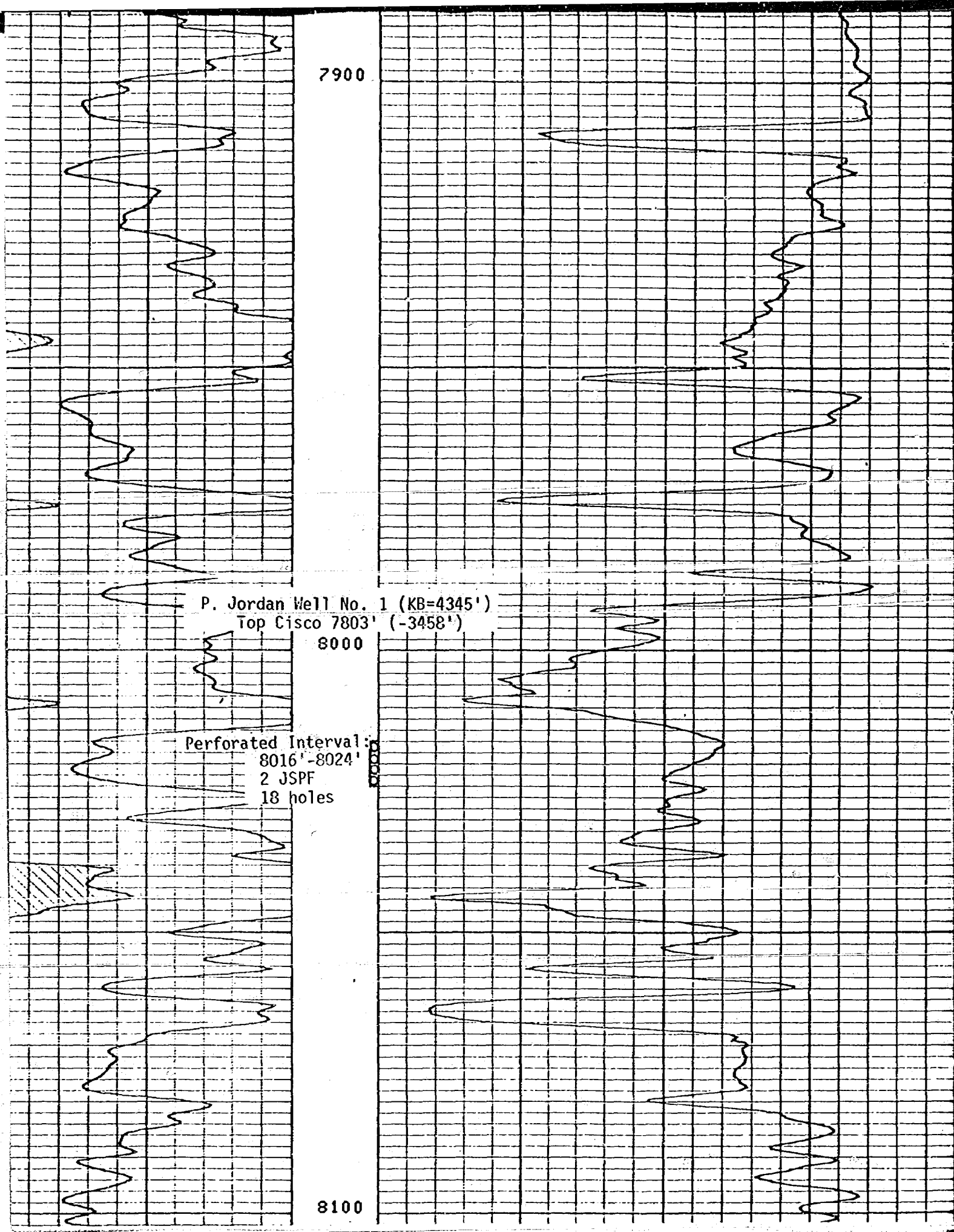
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

1981 | 1982 | 1983 | 1984 | 1985

K+E 5 YEARS BY MONTHS x 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.


8000
P. Jordan Well No. 1 (KB=4345')
Top Cisco 7803' (-3458')
Perforated Interval:
8016'-8024'
2 JSPF
18 holes
10 ft 3
Integrated
hole
Volume
8100


7900
P. Jordan Well No. 1 (KB=4345')
Top Cisco 7803' (-3458')
8000
Perforated Interval:
8016'-8024'
2 JSPF
18 holes
8100

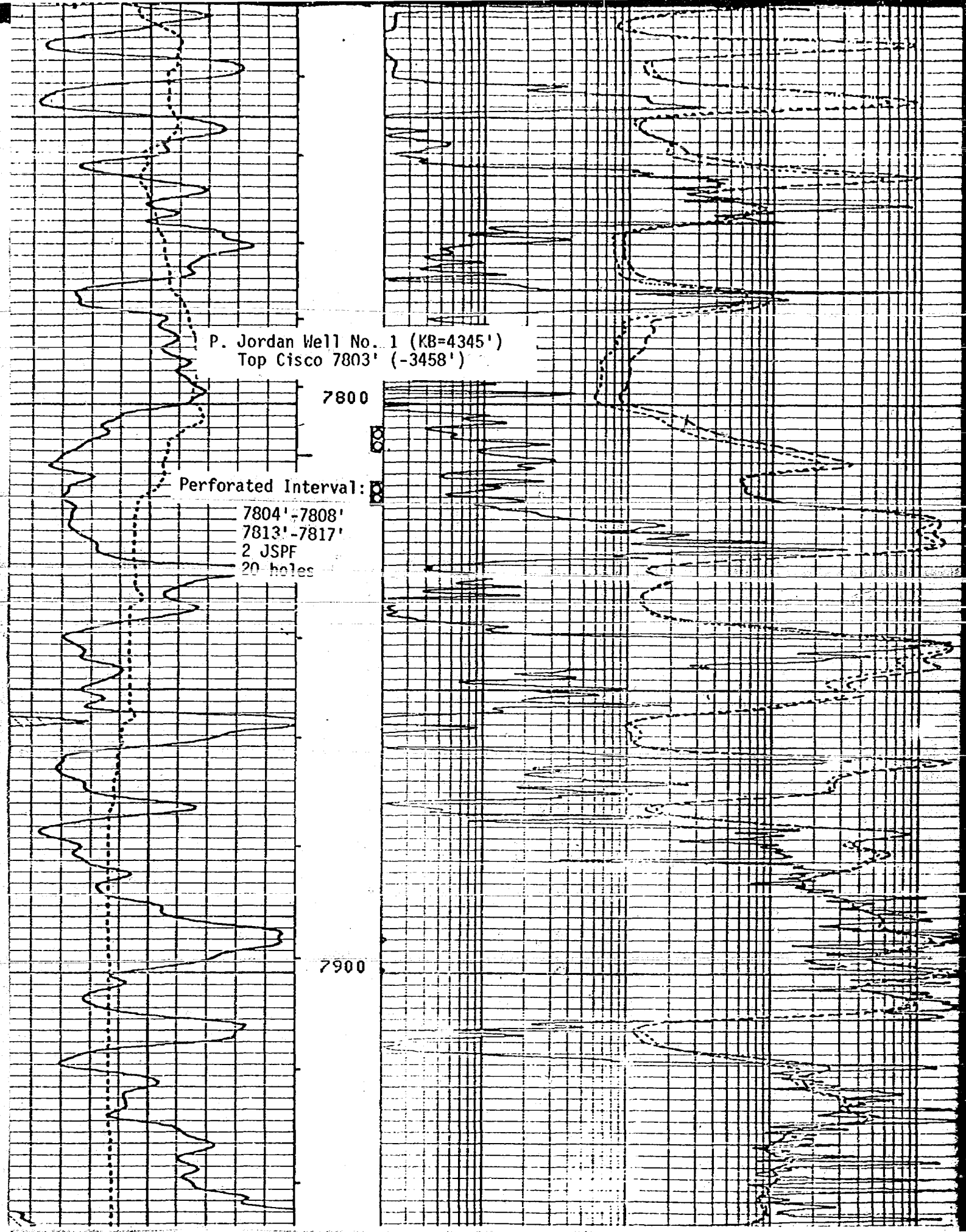

7900
P. Jordan Well No. 1 (KB=4345')
Top Cisco 7803' (-3458')
8000
Perforated Interval:
8016'-8024'
2 JSPF
18 holes
8100

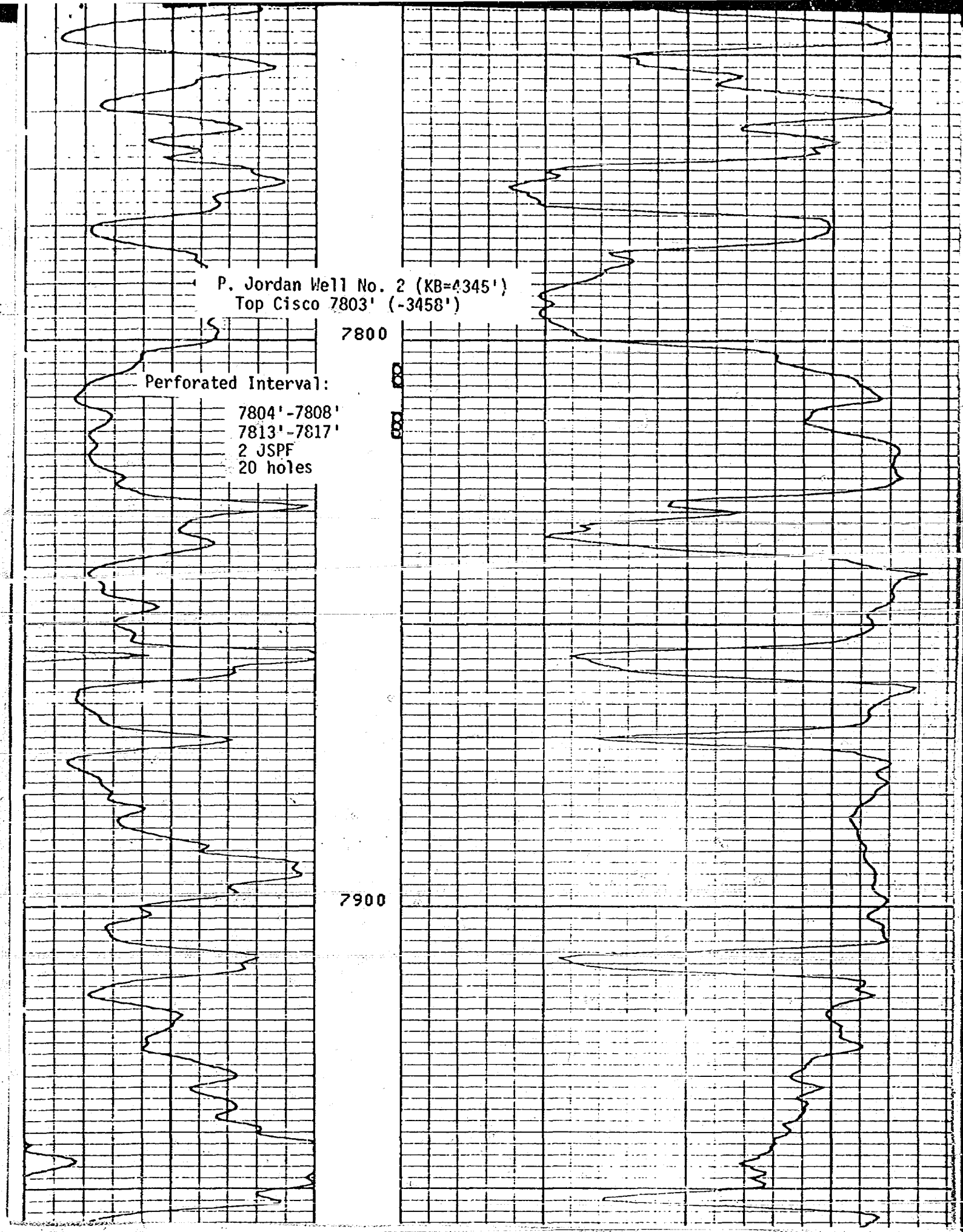
P. Jordan Well No. 1 (KB=4345)
Top Cisco 7803' (-3458')

7800

Perforated Interval:
7804'-7808'
7813'-7817'
2 JSPF
20 holes

7900


P. Jordan Well No. 1 (KB=4345')
Top Cisco 7803' (-3458')
7800
Perforated Interval:
7804'-7808'
7813'-7817'
2 JSPF
20 holes
7900


P. Jordan Well No. 2 (KB=4345')
Top Cisco 7803' (-3458')
7800
Perforated Interval:
7804'-7808'
7813'-7817'
2 JSPF
20 holes
7900

ENSERCH EXPLORATION, INC.

Docket No. 7072

Exhibit 8

Date 01/20/82

WELL COMPLETION DATA
ENSERCH EXPLORATION, INC.
PEARL JORDAN NO. 2
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Top of Penn Lime: 7826' (-3412') KB: 4414'

Perforated Production Interval: 7830'-7834' (2 JSPF)
7836'-7838' (2 JSPF)
7842'-7848' (2 JSPF)

Stimulation Treatment: Spotted 150 gallons 15% MCA acid (3/7/81)
Pumped 3000 gallons 15% NEFE acid
Dropped 20 RCN ball sealers

Initial Potential Test:

Date of Test: 3/11/81 (flowing)
266 BO + 215 MCFG + 16 BW
GOR: 808:1

Current Status: Put well on pump. Producing

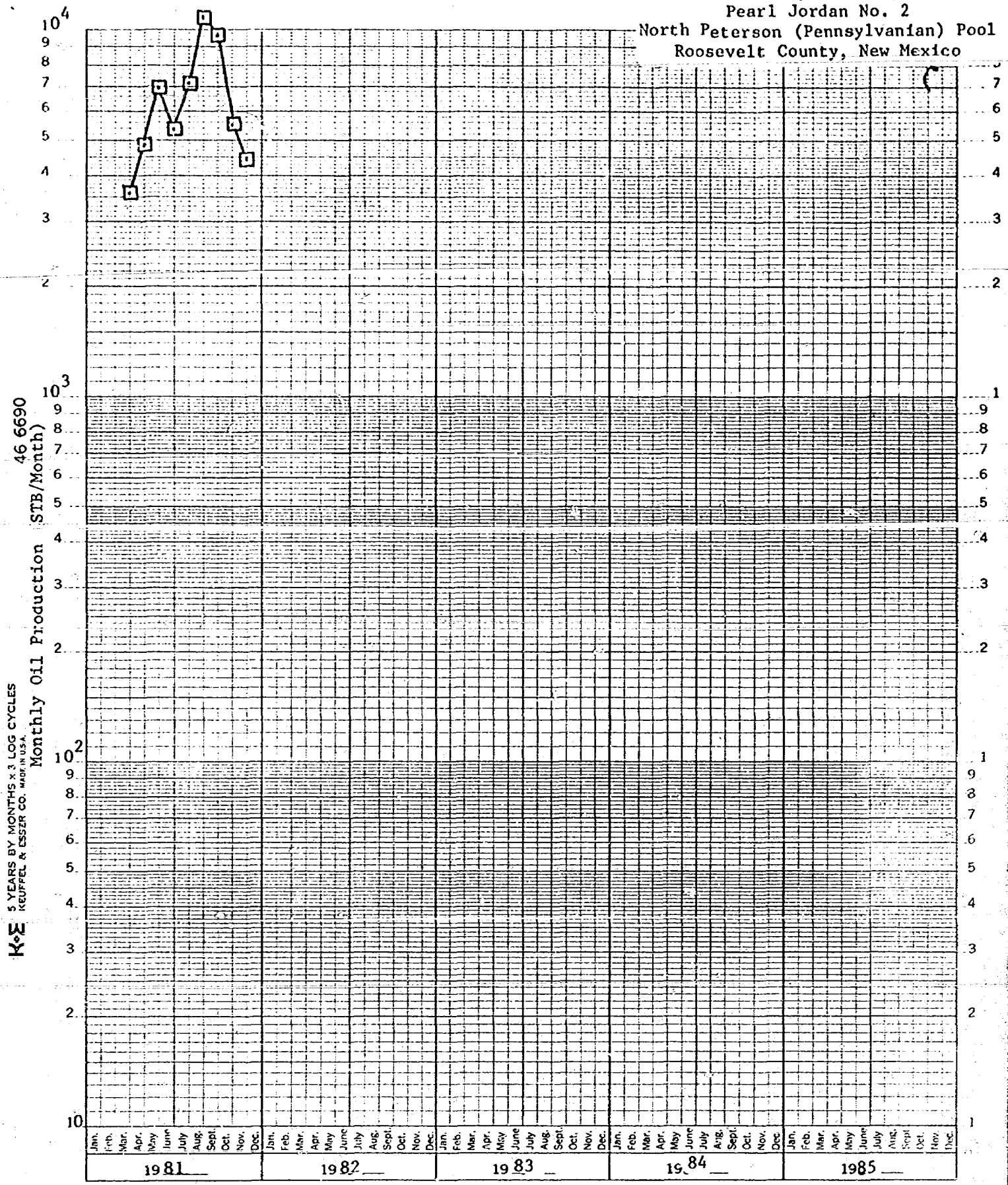
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
Applicants EXHIBIT NO. 8
CASE NO. 7072
Submitted by Enserch
Hearing Date 1/20/82

PRODUCTION HISTORY

ENSERCH EXPLORATION, INC.
PEARL JORDAN NO. 2
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

Date	Days of Production	Oil (STB)	Gas (MCF)	Water (Bbl)	GOR (SCF/Bbl)	Water Cut (%)
03/1981	17	3,595	2,904	0	808	0
04/1981	30	4,856	2,816	0	580	0
05/1981	31	6,966	2,628	0	377	0
06/1981	29	5,390	2,712	0	503	0
07/1981	31	7,162	1,055	0	147	0
08/1981	28	10,687	1,142	0	107	0
09/1981	30	9,623	2,477	36	257	3.7
10/1981	31	5,468	3,038	911	556	14.3
11/1981	30	4,440	2,290	824	516	15.6
12/1981						
Cumulative Production	257	58,187	21,062	1,771	362	2.9

PRODUCTION HISTORY
Enserch Exploration, Inc.
Pearl Jordan No. 2
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico



K&E 5 YEARS BY MONTHS x 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.

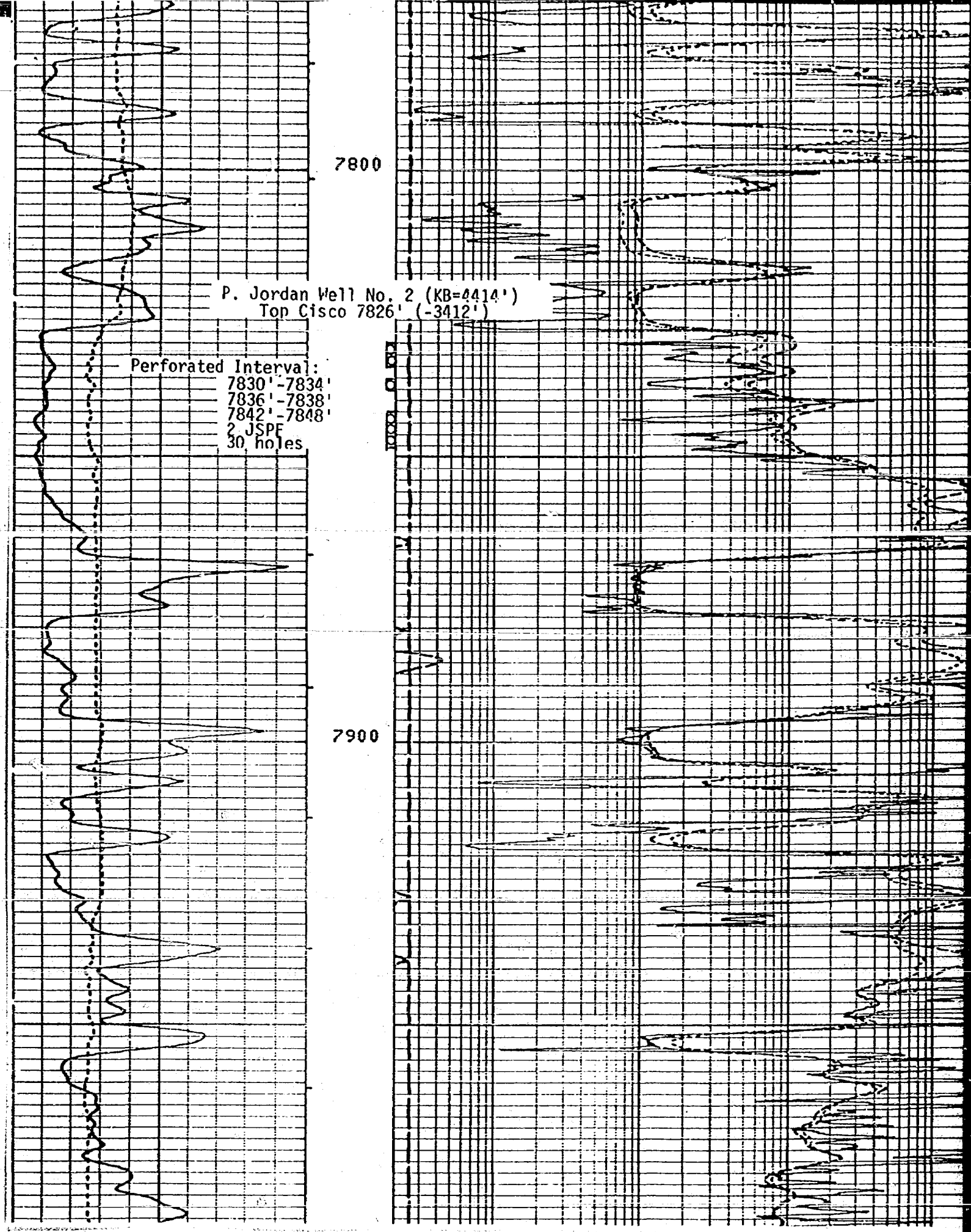
7800

P. Jordan Well No. 2 (KB=4414')
Top Cisco 7826' (-3412')

Perforated Interval:
7830'-7834'
7836'-7838'
7842'-7848'
2 JSPF
30 holes

7900

8000


7800
7900
P. Jordan Well No. 2 (KB=4414')
Top Cisco 7826' (-3412')
Perforated Interval:
7830'-7834'
7836'-7838'
7842'-7848'
2 JSPF
30 holes

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 9
Date 01/20/82

WELL COMPLETION DATA
ENSERCH EXPLORATION, INC.
PEARL JORDAN NO. 3
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Top of Penn Lime: 7829' (-3432') KB: 4397'

Perforated Production Interval: 7830'-7852' (2 JSPF)

Stimulation Treatment: Spotted 150 gallons 15% MCA acid (6/12/81)
Pumped 5000 gallons 15% NEFE acid
Dropped 25 RCN ball sealers

Initial Potential Test:

Date of Test: 6/17/81 (flowing)
120 BO + 170 MCFG + 10 BW
GOR: 1417:1

Current Status: Put well on pump 7/26/81. Producing

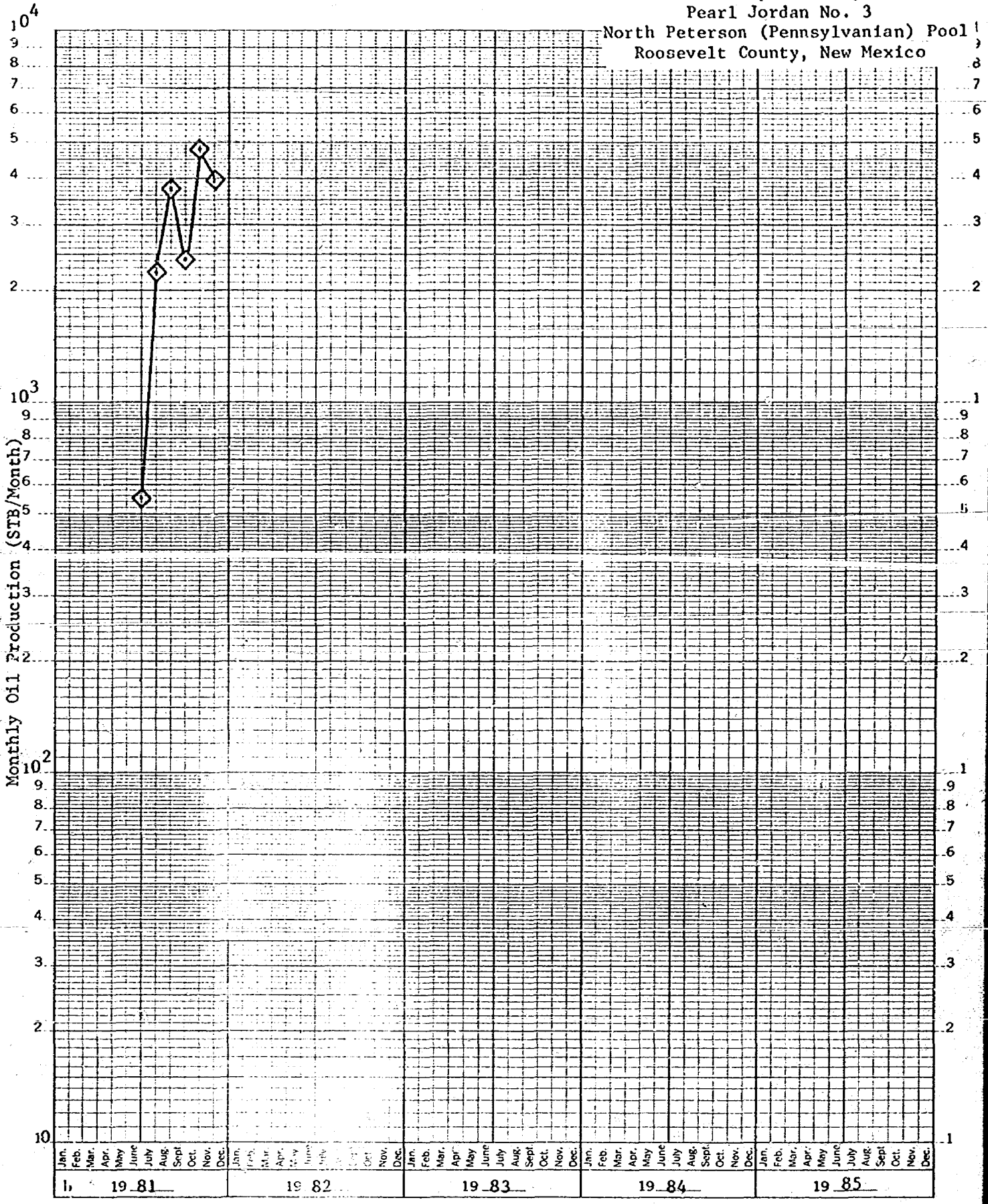
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 9
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

PRODUCTION HISTORY

ENSERCH EXPLORATION, INC.
PEARL JORDAN NO. 3
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

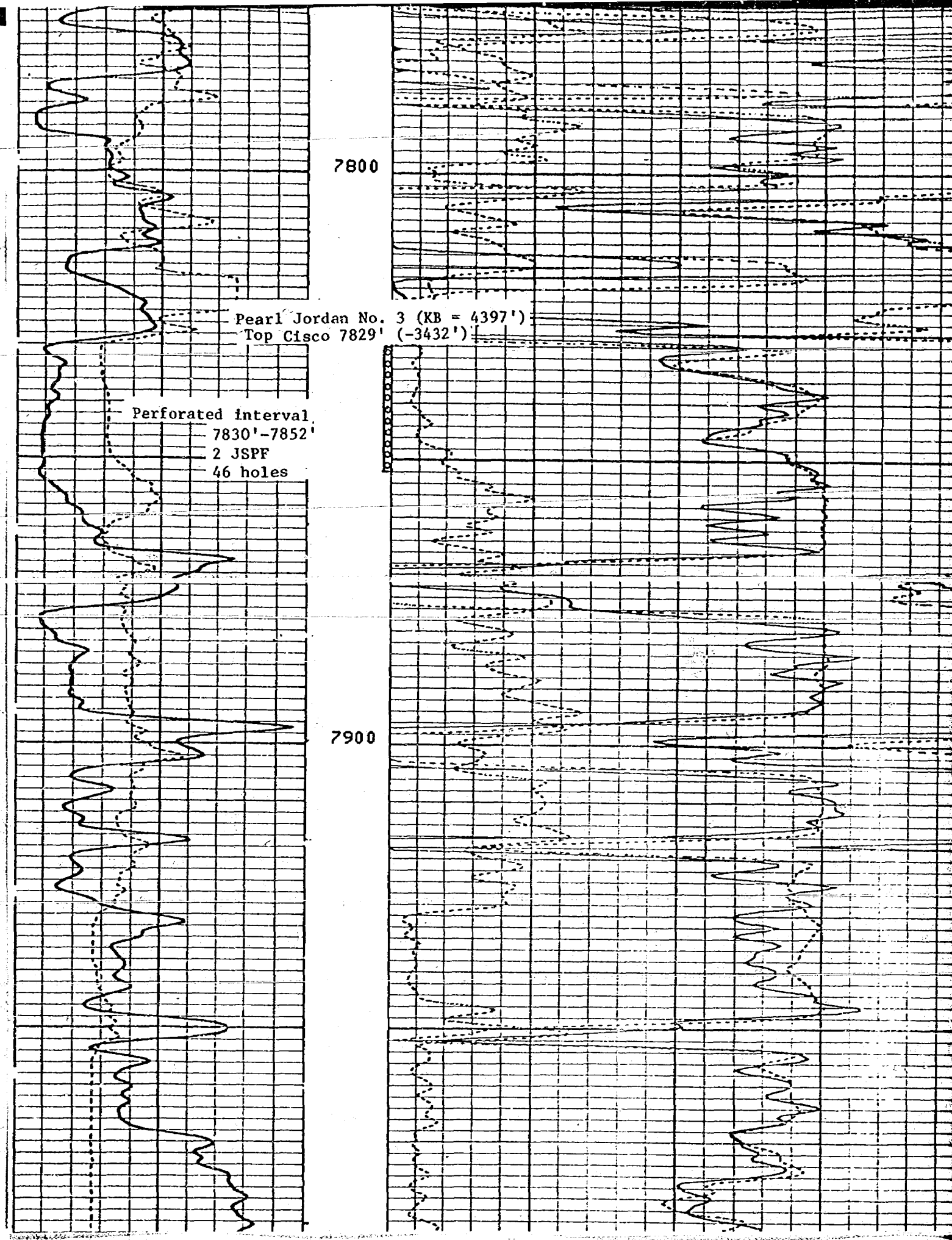
Date	Days of Production	Oil (STB)	Gas (MCF)	Water (Bbl)	GOR (SCF/Bbl)	Water Cut (%)
06/1981	2	558	1,417	0	2,539	0
07/1981	5	2,221	2,731	152	1,230	6.4
08/1981	29	3,710	237	938	62	20.2
09/1981	30	2,415	1,765	2,016	731	45.5
10/1981	31	4,837	2,164	771	447	13.7
11/1981	30	3,927	1,635	697	416	15.1
12/1981						
Cumulative Production	127	17,668	9,949	4,574	563	20.6

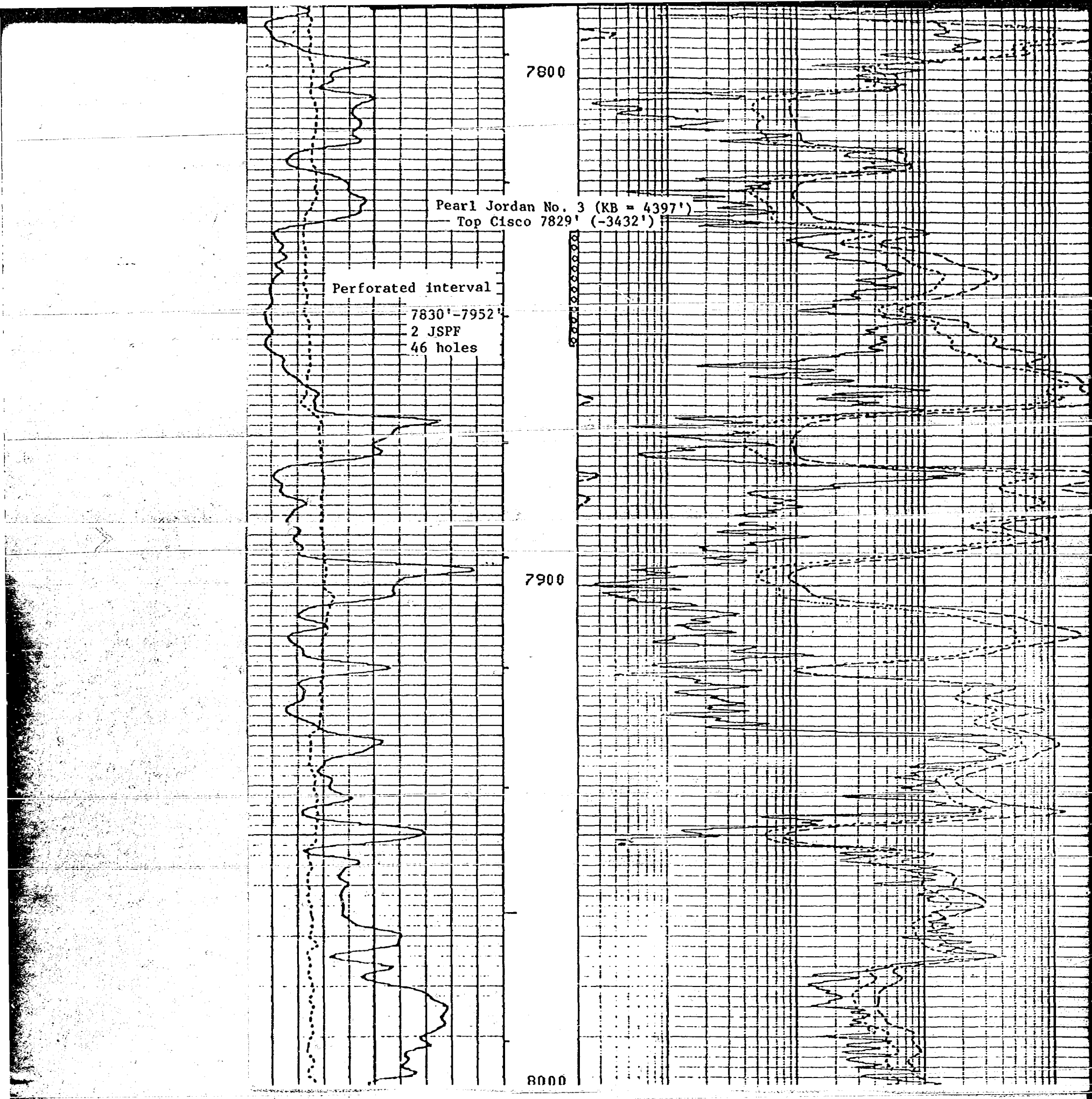
PRODUCTION HISTORY
Enserch Exploration, Inc.
Pearl Jordan No. 3
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico



46 6690

K+E 5 YEARS BY MONTHS x 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.


7800
Pearl Jordan No. 3 (KB = 4397')
Top Cisco 7829' (-3432')
Perforated interval
7830'-7852'
2 JSPF
46 holes
7900


7800
Pearl Jordan No. 3 (KB = 4397')
Top Cisco 7829' (-3432')
Perforated interval
7830'-7952'
2 JSPF
46 holes
7900
8000

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 10
Date 01/20/82

WELL DATA SHEET
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Well Name	Amoco State No. 1	Amoco State No. 2	Amoco State No. 3	Pearl Jordan No. 1	Pearl Jordan No. 2	Pearl Jordan No. 3	Average Parameters
Perforated Interval (overall)	7826'-7837'	7825'-7835'	7834'-7850'	8016'-8024'	7830'-7848'	7830'-7852'	
Estimated Pay Thickness	8'	15'	20'	8'	18'	18'	14'
Average Porosity (%)	3	3	7	12	9	6	6.6
Average Water Saturation (%)	56	56	42	49	38	59	50
Initial Potential Test (BOPD)	172.5	327	37	27	266	120	158
Initial GOR (SCF/STB)	1345:1	367:1	540:1	1333:1	808:1	1417:1	968:1
Oil Gravity (°API)	45.5	45.6	45.3	45.2	43.4	45.2	45.1
Royalty & Override (%)	25.0	25.0	25.0	12.5	12.5	12.5	18.75

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 10
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

ENSERCH EXPLORATION, INC.
AMOCO STATE LEASE PRODUCTION
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 11
Date 01/20/82

Monthly Oil Production (STB/Month)

100,000
10,000
1,000
100

Lease Decline: 70% per year
Current Cumulative Production:
105,740 STB

1980 1981 1982 1983 1984

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
AMOCO'S 11
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

ENSERCH EXPLORATION, INC.
PEARL JORDAN LEASE PRODUCTION
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit
Date 01/20/82

Monthly Oil Production (STB/Month)

100,000
10,000
1,000
100

Lease Decline: 85% per year
Current Cumulative Production: 77,346 STB

Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

1980 | 1981 | 1982 | 1983 | 1984

ENSERCH EXPLORATION, INC.
TOTAL OIL PRODUCTION
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

ENSERCH EXPLORATION, INC.
Docket No. 70-72
Exhibit
Date 01/20/82

Monthly Oil Production (STB/Month)

100,000
10,000
1,000
100

Field Decline: 77.5% per year
Current Cumulative Production: 183,086 STB
Total Field Recoverable Reserves: 316,000 STB
Average Well Recoverable Reserves:
316,000/6 = 52,600 STB

Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

19 80 | 19 81 | 19 82 | 19 83 | 19 84

PRODUCTION HISTORY & FORECAST
Enserch Exploration, Inc.
North Peterson (Pennsylvanian) Pool
Roosevelt County, New Mexico

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
Applicant's
Case 7072
Submitted by Enserch
Hearing Date 1/20/82

Monthly Oil Production (STB/Month)

10^4 9 8 7 6 5 4 3 2 10^3 9 8 7 6 5 4 3 2 10^2 9 8 7 6 5 4 3 2 10

Amoco State No. 1 ⊙
Amoco State No. 2 ⬡
Amoco State No. 3 △
Pearl Jordan No. 1 ▽
Pearl Jordan No. 2 □
Pearl Jordan No. 3 ◇

Recoverable Reserves: 52,600 STB
50,900 MCF

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 12
Date 01/20/82

Year 1	Year 2	Year 3	Year 4	
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.	Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.	Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.	Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.	Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

PRODUCTION FORECAST
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) FIELD
ROOSEVELT COUNTY, NEW MEXICO

Year	Oil Production STB	Gas Production MCF
1	40,000	38,720
2	9,600	9,300
3	2,400	2,300
4	600	580
Cumulative Production	52,600	50,900

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 13
Date 01/20/82

VOLUMETRIC CALCULATIONS
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Average Formation Characteristics

Pay Thickness: 14'
Porosity: 6.6%
Water Saturation: 50%

Average Formation Fluid Characteristics

Average Initial Potential Test: 158 bopd
GOR: 968:1
Oil Gravity: 45.1° API
Initial Formation Volume Factor: 1.485

Original Oil In Place Under an 80-Acre Lease

$$OOIP = 7758 \times A \times h \times \phi \times (1-S_w)/B_o$$
$$= 7758 \times 80 \times 14 \times .066 \times (1-0.50)/1.485$$
$$= 172.4 \text{ STB/acre-ft}$$
$$= 193,100 \text{ STB}$$

Recoverable Oil Under an 80-Acre Lease

$$N_p = OOIP \times R.F.$$
$$= 193,100 \times 0.20$$
$$= 38,620 \text{ bbls}$$

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 13
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 14
Date 01/20/82

DRAINAGE CALCULATIONS
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

Year	Oil Production (STB)	Cumulative Oil Production (STB)	Area Drained At Year End (Acres)	$\frac{\text{Area Drained}}{\text{80 Acre Spacing}} \times 100\%$ (%)
1	40,000	40,000	104	129
2	9,600	49,600	128	160
3	2,400	52,000	135	169
4	600	52,600	136	170
Cumulative Production	52,600	52,600	-	-

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 14
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

DRAINAGE VS TIME
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

(Area Drained/80-Acre Spacing) x 100%

Effective drainage = 104 acres

Effective drainage = 128 acres

Effective drainage = 135 acres

Effective drainage = 136 acres

Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

1 2 3 4

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 15
Date 01/20/82

ECONOMIC EVALUATION
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

INPUT DATA

Well Cost

Tangibles:	$293,900	Total Well Cost:	$945,750
Intangibles:	$651,850		
Dry Hole Cost:	$531,950		
Salvage Value:	$113,000		

Oil Price

$35/bbl + 5% per year escalation

Casinghead Gas Price

$2.57/MCF + $0.12 per year escalation

Recoverable Hydrocarbon Reserves

52,600 STB
50,900 MCF

OUTPUT DATA

First Case: One well per 80 acres
Total Net Present Worth: $136,700
Present Worth Index: 1.15

Second Case: Two wells per 80 acres
Total Net Present Worth: $-376,900
Present Worth Index: 0.78

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 15
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

	[illegible]	[illegible]		
	[illegible]	[illegible]		
	[illegible]	[illegible]		
	[illegible]	31.10	3.11	11.40
	[illegible]	227.00	12.00	321.16
	[illegible]	15.57		
	[illegible]	0.40		
	[illegible]	3.00		
	[illegible]	40.60	9.60	2.40
	[illegible]	968.00		
	[illegible]	100.00		
	[illegible]	18.75		
	[illegible]	18.75		
	[illegible]	75.00		
	[illegible]	971.95		

PRODUCTION

YEAR	GROSS LIQUIDS MBBLS	GROSS GAS MMCF	NET LIQUIDS MBBLS	NET GAS MMCF
1	40.0	38.7	32.5	31.5
2	9.6	9.3	7.8	7.6
3	2.4	2.3	1.9	1.8
4	0.4	0.6	0.5	0.5
TOTALS	52.4	50.9	42.7	41.4

MEASURES OF PROFITABILITY

TOTAL PROJECT NET PRESENT WORTH	[illegible]	124.7
TOTAL PROJECT PRESENT WORTH INDEX	[illegible]	1.[illegible]
TOTAL PROJECT RATE OF RETURN (DCF)	[illegible]	25.[illegible]
PAYOUT - YEARS FROM START OF PROJ.	[illegible]	1.[illegible]

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

ENSERCH EXPLORATION, INC.
NO. 3 PEARL JORDON
PETERSON NORTH PENN FIELD
ROOSEVELT COUNTY, NEW MEXICO

DATE : 5-23-81
FORMATION : CISCO
DRLG. FLUID: BRINE BASE MUD
LOCATION : 660' FSL & 660' FEL, SEC. 17, T-33-E

FILE NO : 3202-12348
ANALYSTS : REINHEIMER
LABORATORY: MIDLAND TEXAS

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 16
Date 01/20/82

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH FEET	PERM MAXIMUM	PERM 90 DEG	PERM VERTICAL	HE POR	OIL% PORE	WTR% PORE	GRAIN DEN	DESCRIPTION
	CORE NO. 1	7821.0-7851.0	CUT 30'	REC 28'					
1	7821.0-22.0	0.25	0.20	<0.01	1.4	0.0	85.7	2.72	LM SL/SHY SL/F PP STY
2	7822.0-23.0	0.15	0.08	<0.01	4.3	9.3	53.3	2.72	LM SL/F PP STY
3	7823.0-24.0	2.3	2.3	0.25	8.3	6.0	47.9	2.72	LM SL/F PP V STY
4	7824.0-25.0	42.	39.	33.	12.7	8.9	45.2	2.78	LM SL/CALC V F STY
5	7825.0-26.0	80.	76.	106.	12.2	8.5	47.1	2.79	LM SL/CALC V F STY
6	7826.0-27.0	2.6	1.9	1.9	8.3	4.6	41.3	2.74	LM V SL/CALC V F STY
7	7827.0-28.0	0.88	0.79	0.98	7.1	3.5	38.6	2.75	LM V SL/F STY
8	7828.0-29.0	0.61	0.59	0.32	4.5	6.2	46.9	2.72	LM SL/V SL/F PP STY
9	7829.0-30.0	1.4	0.87	0.38	4.5	5.0	50.0	2.72	LM SL/V SL/F PP FOSS STY
10	7830.0-31.0	0.16	0.16	0.06	3.7	3.1	54.2	2.73	LM SL/V VF PP FOSS STY
11	7831.0-32.0	0.38	0.35	0.06	1.6	3.8	56.6	2.72	LM F PP
12	7832.0-33.0	0.71	0.63	0.18	5.8	7.2	36.1	2.72	LM SL/V SL/CALC F PP FOSS
13	7833.0-34.0	0.77	0.51	0.12	1.5	5.7	62.9	2.72	LM SL/CALC VF PP FOSS STY
14	7834.0-35.0	0.89	0.77	0.53	3.2	11.8	44.1	2.72	LM SL/V SL/CALC SL/F PP
15	7835.0-36.0	2.1	1.9	0.53	5.1	4.3	31.9	2.74	LM V SL/CALC STY
16	7836.0-37.0	3.6	3.5	1.3	5.8	6.5	33.9	2.75	LM V SL/CALC SL/F STY
17	7837.0-38.0	12.	7.9	3.7	6.4	2.2	36.6	2.75	LM V SL/CALC SL/F STY
18	7838.0-39.0	6.8	6.4	4.1	7.3	5.1	32.1	2.75	LM V SL/CALC SL/F STY
19	7839.0-40.0	2.1	1.8	0.76	4.5	2.9	32.9	2.74	LM V SL/CALC F STY
20	7840.0-41.0	3.0	2.7	6.9	5.0	7.7	26.9	2.75	LM V SL/CALC VF
21	7841.0-42.0	0.53	0.45	0.26	2.8	3.8	37.7	2.73	LM SL/V SL/F SL/CALC
22	7842.0-43.0	2.2	2.0	2.5	4.8	8.9	25.3	2.74	LM V SL/CALC F STY
23	7843.0-44.0	0.53	0.20	0.31	1.9	8.3	50.0	2.73	LM V SL/CALC VF PP STY
24	7844.0-45.0	0.49	0.42	0.58	1.3	0.0	51.7	2.73	LM SL/CALC VF PP STY

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

ENSERCH EXPLORATION, INC. — DATE : 5-23-81 — FILE NO : 3202-12348
NO. 3 PEARL JORDON — FORMATION : CISCO — ANALYSTS : REINHEIMER

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH FEET	PERM MAXIMUM	PERM 90 DEG	PERM VERTICAL	HE POR	OIL% PORE	WTR% PORE	GRAIN DEN	DESCRIPTION
25	7845.0-46.0	0.69	0.67	3.1	2.0	5.4	54.1	2.71	LM SL/CALC SL/V VF PP STY
26	7846.0-47.0	0.41	0.40	9.6	2.7	4.9	53.7	2.72	LM SL/V SL/CALC VF PP STY
27	7847.0-48.0	0.53	0.32	0.11	1.3	0.0	37.5	2.73	LM SL/CALC SL/SHY SHLAM FR
* 28	7848.0-49.0	0.19		0.18	0.9	0.0	46.8	2.75	LM SL/V SL/SHY VF SHI AM FR

* INDICATES PLUG PERMEABILITY

LITHOLOGICAL ABBREVIATIONS

ANH(Y)	ANHYDRITE, ANHYDRITIC
ARK	ARKOSE, ARKOSIC
BAN	BAND, BANDED
BREC	BRECCIA, BRECCIATED
CALC	CALCITE, CALCAREOUS
CARB	CARBONACEOUS
CG	COARSE GRAINED
CHK(Y)	CHALK, CHALKY
CHT(Y)	CHERT, CHERTY
CONGL	CONGLOMERATE, CONGLOMERITIC
CXLN	COARSELY CRYSTALLINE
DNS	DENSE
DOL(C)	DOLOMITE, DOLOMITIC
→ F	RANDOMLY ORIENTED FRACTURES
FG	FINE GRAINED
FOSS	FOSSILIFEROUS
FR	FRIABLE
FXLN	FINELY CRYSTALLINE
GAL	GALENA
GLAUC	GLAUCONITE, GLAUCONITIC
GRAN	GRANITE
GYP	GYPSUM, GYPSIFEROUS
HF	PREDOMINANTLY HORIZONTALLY FRACTURED
INC	INCLUSION
INTBD	INTERBEDDED
LAM	LAMINATED
LM(Y)	LIMESTONE, LIMY
MG	MEDIUM GRAINED
MTX	MATRIX
NA	INTERVAL NOT ANALYZED (AT REQUEST OF CLIENT)
NOD	NODULE, NODULAR
OOL	OOLITIC
PISO	PISOLITIC
PP	PINPOINT POROSITY
PT	PARTING
PYR	PYRITE, PYRITIC
SD(Y)	SANDSTONE, SANDY
SH(Y)	SHALE, SHALY
SHR	SOLID HYDROCARBON RESIDUE
SL/	SLIGHTLY
SLT(Y)	SILT, SILTY
STY	STYLOLITE, STYLOLITIC
SUC	SUCROSIC
SUL	SULPHUR
TBFA	TOO BROKEN FOR ANALYSIS
TRIP	TRIPOLITE
V/	VERY
→ VF	PREDOMINANTLY VERTICALLY FRACTURED
V	VUGULAR
XBD	CROSSBEDDED
XLN	MEDIUM CRYSTALLINE

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: ENSEARCH CORPORATION — WELL : NO. 3 PEARL JORDON
FIELD : PETERSON NORTH PENN FIELD — COUNTY, STATE: ROOSEVELT COUNTY, NEW MEXICO

MILLIDARCY-FEET OF FLOW CAPACITY LOST FOR SELECTED PERMEABILITY CUT OFF

PERMEABILITY CUT OFF	FEET LOST	CAPACITY LOST (%)		FEET REMAINING	CAPACITY REMAINING (%)	GEOM MEAN	MEDIAN
0.005	0.0	0.0		28.0	100.0	1.25	0.95
0.010	0.0	0.0		28.0	100.0	1.25	0.95
0.020	0.0	0.0		28.0	100.0	1.25	0.95
0.039	0.0	0.0		28.0	100.0	1.25	0.95
0.078	0.0	0.0		28.0	100.0	1.25	0.95
0.156	1.0	0.1		27.0	99.9	1.36	1.02
Permeability cut-off: 0.5md 0.312	4.0	0.4		24.0	99.6	1.73	1.25
0.625	11.0	2.5		17.0	97.5	2.90	2.03
1.250	16.0	4.9		12.0	95.1	4.99	3.15
2.500	21.0	10.9		7.0	89.1	9.63	7.07
5.	24.0	16.3		4.0	83.7	22.88	20.00
10.	25.0	20.4	Net Pay:	3.0	79.6	34.29	56.57
20.	26.0	27.5	18'	2.0	72.5	57.97	80.00
40.	26.0	27.5		2.0	72.5	57.97	80.00
80.	27.0	52.5		1.0	47.5	80.00	
160.	28.0	100.0		0.0	0.0		

TOTAL FLOW CAPACITY IN MILLIDARCY-FEET(ARITHMETIC) = 168.27

Flow capacity in md-ft above permeaiblity cut-off = 168.27 x 0.98 = 165 md-ft

Average formation permeability = 168/18 = 9.2 md

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees

CORE LABORATORIES, INC. *Petroleum Reservoir Engineering*

COMPANY LASEARCH CORPORATION FILE NO. 3202-12348

WELL NO. 3 PEARL JORDON DATE 5-23-81

FIELD PETERSON NORTH PENN FIELD FORMATION CISCO ELEV.

COUNTY ROOSEVELT COUNTY STATE NEW MEXICO DRLG. FLD. BRINE BASE MUD CORES AMERICAN COLDSET CORP.

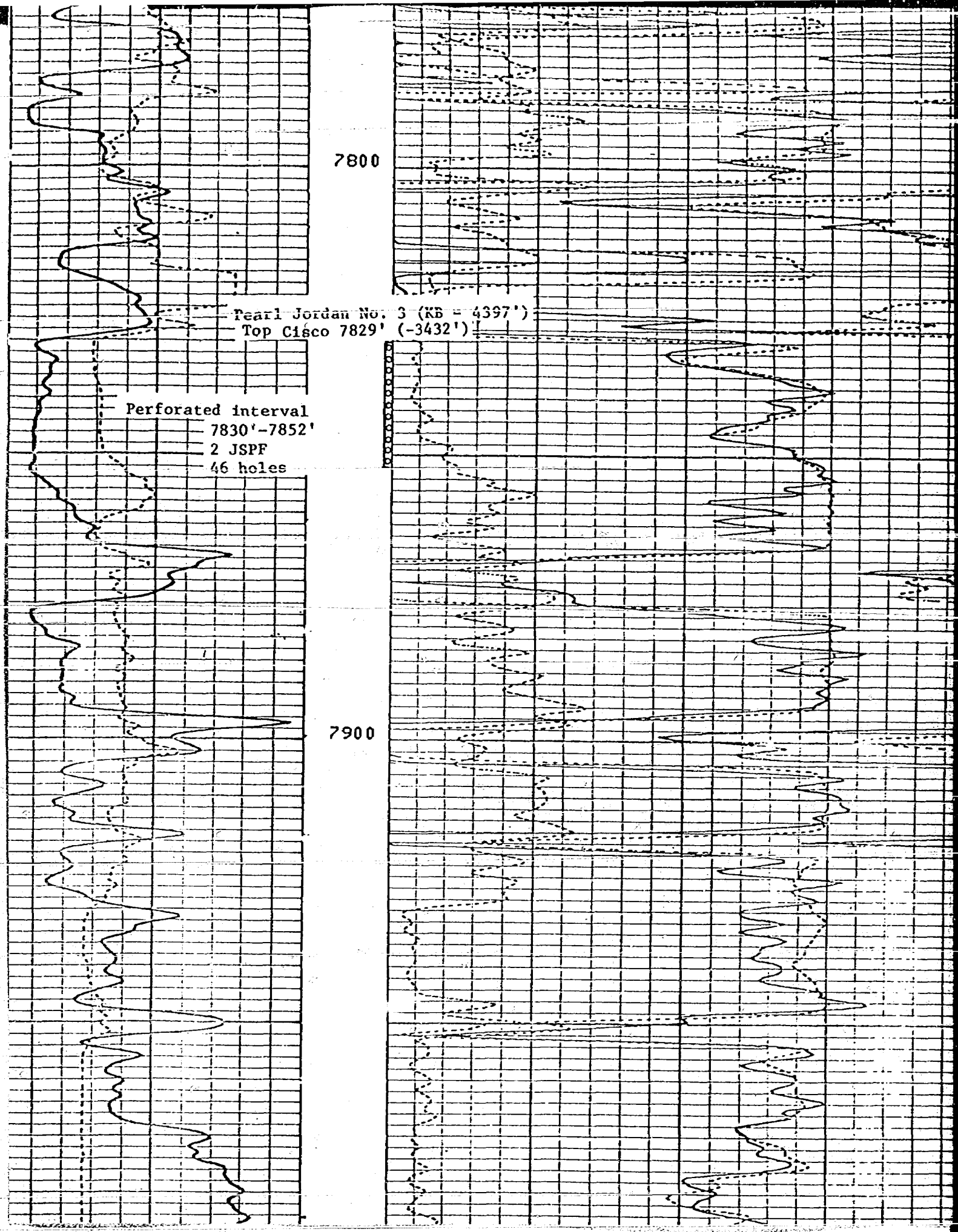
LOCATION 660' FSL & 660' FEL, SEC. 17, T-33-E

CORRELATION COREGRAPH

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc., (all errors or omissions excepted); but Core Laboratories, Inc., and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

Total Water ___
PERCENT PORE SPACE
100 80 60 40 20 0

Gamma Ray	Permeability ___		Porosity ___		Oil Saturation ▤
RADIATION INCREASE →	MILLIDARCIES		PERCENT		PERCENT PORE SPACE
API UNITS	100 10 1.0 .1	Depth Feet	30 20 10 0		0 20 40 60 80 100
		7800			
		7850			


7800
Pearl Jordan No. 3 (KB = 4397')
Top Cisco 7829' (-3432')
Perforated interval
7830'-7852'
2 JSPF
46 holes
7900

PRESSURE BUILDUP ANALYSIS
HORNER PLOT
AMOCO STATE NO. 1
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 17
Date 01/20/82

BEFORE THE OIL CONSERVATION DIVISION
APPLICANT'S
CASE 7072
Submitted by ENSERCH
Hearing Date 1/20/82

Pressure (psi)

2800
2500
2000
1400

m = 2740 - 2330
= 410 psi/cycle

Interval tested: 7890'-7896'
Date of test: 6/7-11/1980
Permeability: 4.66 md
Reservoir pressure: 2740 psi
Pressure measured at 7832' (-3429')
KB = 3425'

$$\frac{T_p + \Delta t}{\Delta t}$$

K&E SEMI-LOGARITHMIC 46 4970
2 CYCLES X 70 DIVISIONS MADE IN U.S.A.
KEUFFEL & ESSER CO.

OIL

WELL PRESSURE ANALYSIS
West Texas District

Test Date: 6/7-11/1980 Lease: Amoco State

Formation: Pennsylvanian Lime Well No.: 1

Casing Size: 5-1/2" Field: North Peterson

Cum. Prod. Np(Bbl): 604 State: New Mexico

Prod. Rate (Bbl/Day): 173

Prod. Life = 24Np/q: 83.8 hrs

I. Calculation of kh (md-ft) and k (md):

$kh = \frac{162.6\ q\mu B}{m}$; $k = \frac{kh}{h}$

h = 8 ft μ = 0.365 cp

q = 173 B/D B = 1.49

m = 410 psi/cycle

$kh = \frac{162.6 \times (173) \times (.365) \times (1.49)}{(410)} = 37.3$

$k = \left(\frac{37.3}{8}\right) = 4.66$

II. Calculation of Skin Effect, s; and Pressure Loss Due to Skin, Δp_{skin} (psi):

$s = 1.151\left[\frac{p_{1\text{-}hr} - p_{wf}}{m} - \log\left(\frac{k}{\phi\mu c r_w^2}\right) + 3.23\right]$

$s = 1.151\left[\frac{(1967)-(1195)}{(410)} - \log\left[\frac{(4.66)}{(.03)(.365)(16.5\times10^{-6})(1.229^2)}\right] + 3.23\right] = -4.12$

$\Delta p_{skin} = (m) \times 0.87\ (s)$ $\Delta p_{skin} = (410) \times 0.87\ (-4.12) = -1469.6$

k = 4.66 md r_w = 0.229 ft

φ = 0.03 $p_{1\ hr}$ = 1967 psig

μ = 0.365 cp p_{wf} = 1195 psig

c = 16.5×10^{-6} psi^{-1} m = 410 psi/cycle

III. Calculation of Productivity Index (B/D-psi) and Flow Efficiency:

$J_{(actual)} = \frac{q}{p^* - p_{wf}}$ $J_{(ideal)} = \frac{q}{(p^*-p_{wf}) - \Delta p_{skin}}$

$J_{(actual)} = \frac{(173)}{(2740)-(1195)}$ $J_{(ideal)} = \frac{(173)}{[(2740)-(1195)] - (-1470)}$

$J_{(actual)}$ = 0.112 $J_{(ideal)}$ = 0.057

Δp_{skin} = -1470 psi p* = 2740 psig

q = 173 B/D p_{wf} = 1195 psig

Flow Efficiency = $\frac{J_{(actual)}}{J_{(ideal)}} = \frac{(0.112)}{(0.057)} =$ 1.96

PARAMETERS:

$C_t = S_w C_w + S_o C_o + C_f = (.56)(3\times10^{-6}) + (.44)(14.3\times10^{-6}) + (8.5\times10)^6 =$ 16.5×10^{-6}

P_c = psia S_w = 56 %

T_c = °K S_o = 44 %

BHT = °F P_o =

BHP = psia

Radius of investigation during pressure buildup:

$r_i = \left(\frac{kt}{\phi\mu C_t}\right) = 0.029\left(\frac{(4.66)(96.33)}{(.03)(.357)(16.5^{-6})}\right)^{\frac{1}{2}} = 1561.6'$ (154 acres in 96.3 hours)

PRESSURE BUILDUP ANALYSIS
HORNER PLOT
ENSERCH EXPLORATION, INC.
AMOCO STATE NO. 2
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

OIL CONSERVATION DIVISION
APPLICANT'S EXHIBIT 18
Case 7072
Submitted by Enserch
Hearing Date 1/20/82

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 18
Date 01/20/82

Pressure (psi)

2600
2550
2500

m = 2633 - 2578
= 55 psi/cycle

Interval Tested: 7825'-7841'
7848'-7855'
Date of Test: 11/3-6/1980
Permeability: 26.1
Reservoir Pressure: 2633
Pressure drop: 107 psi
Pressure measured at 7840' (-3430')
KB = 4410'

$\frac{(T + \Delta t)}{\Delta t}$

10 9 8 7 6 5 4 3 2 1 9 8 7 6 5 4 3 2 1 9 8 7 6 5 4 3 2 1

K&E SEMI-LOGARITHMIC • 3 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

OIL

WELL PRESSURE ANALYSIS
West Texas District

V

Test Date: 11/3-6/1980 Lease: Amoco State
Formation: Pennsylvanian Line Well No.: 2
Casing Size: 5-1/2" Field: North Peterson
Cum. Prod. Np(Bbl): 3521 State: New Mexico
Prod. Rate (Bbl/Day): 252
Prod. Life = 24Np/q: 335.33

I. Calculation of kh (md-ft) and k (md):

$$kh = \frac{162.6\ q\mu B}{m} \; ; \; k = \frac{kh}{h}$$

h = 15 ft μ = 0.357 cp
q = 252 B/D B = 1.472
m = 55 psi/cycle

$$kh = \frac{162.6 \times (252) \times (0.357) \times (1.472)}{(55)} = 391.5$$

$$k = \left\{\frac{(391.5)}{(15)}\right\} = 26.1$$

II. Calculation of Skin Effect, s; and Pressure Loss Due to Skin, Δp_{skin}(psi):

$$s = 1.151\left[\frac{p_{1\text{-hr}} - p_{wf}}{m} - \log\left(\frac{k}{\phi\mu c r_w^2}\right) + 3.23\right]$$

$$s = 1.151\left[\frac{(2497)-(2398)}{(55)} - \log\left[\frac{(26.1)}{(0.03)(0.357)(16.5 \times 10^{-6})(2038^2)}\right] + 3.23\right] = -5.2$$

$\Delta p_{skin} = (m) \times 0.87\,(s)$ $\Delta p_{skin} = (55) \times 0.87\,(-5.2) = -248.8$

k = 26.1 md r_w = .2038 ft
φ = 0.03 $p_{1\ hr}$ = 2497 psig
μ = 0.357 cp p_{wf} = 2398 psig
c = 16.5×10^{-6} psi^{-1} m = 55 psi/cycle

III. Calculation of Productivity Index (B/D-psi) and Flow Efficiency:

$$J_{(actual)} = \frac{q}{p^* - p_{wf}}$$

$$J_{(actual)} = \frac{(252)}{(2633)-(2398)}$$

$J_{(actual)}$ = 1.072

$$J_{(ideal)} = \frac{q}{(p^*-p_{wf}) - \Delta p_{skin}}$$

$$J_{(ideal)} = \frac{(252)}{[(2633)-(2398)] - (-249)}$$

$J_{(ideal)}$ = 0.52

Δp_{skin} = -249 psi p^* = 2633 psig
q = 252 B/D p_{wf} = 2398 psig

$$\text{Flow Efficiency} = \frac{J_{(actual)}}{J_{(ideal)}} = \frac{(1.072)}{(0.52)} = 2.06$$

PARAMETERS:

$C_t = S_w C_w + S_o C_o + C_f = (.56)(3\times10^{-6}) + (.44)(14.3\times10^{-6}) + (8.5\times10^{-6}) = 16.5 \times 10^{-6}$

P_c = _____ psia S_w = .56
T_c = _____ °R S_o = .44
BHT = _____ °F ρ_o = 0.673
BHP = _____ psia

Radius of investigation during pressure build-up:

$$r_i = 0.029\left(\frac{kt}{\phi\mu c_t}\right)^{\frac{1}{2}} = 0.029\left(\frac{(2.62)(64)}{(.02)(.357)(16.5 \times 10^{-6})}\right)^{\frac{1}{2}} = 2919.5'$$

(573 acres in 64 hours)

PRESSURE BUILDUP ANALYSIS
HORNER PLOT
ENSERCH EXPLORATION, INC.
PEARL JORDAN WELL NO. 2
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

BEFORE EXAMINERS
OIL CONSERVATION DIVISION
APPLICANTS 19
CASE 7072
Submitted by ENSERCH
Hearing Date 1/20/82

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 19
Date 01/20/82

Pressure (psi)

2340
2300
2250
2200

m = 2350 - 2258

Interval Tested: 7830'-7848'
Date of Test: 1/11-13/1981
Permeability: 13 md
Reservoir pressure: 2350 psi
Pressure drop: 390 psi
Pressure measured at 7839' (-3425')
KB = 4414'

1000 9 8 7 6 5 4 3 2 100 9 8 7 6 5 4 3 2 10 9 8 7 6 5 4 3 2 1

$\frac{T_p + \Delta t}{\Delta t}$

K&E SEMI-LOGARITHMIC • 3 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

OIL

WELL PRESSURE ANALYSIS
West Texas District

Test Date: 3/11-13/81 Lease: Pearl Jordan
Formation: Pennsylvanian Well No.: 2
Casing Size: 5-1/2" Field: North Peterson
Cum. Prod. Np(Bbl): 500 State: New Mexico
Prod. Rate (Bbl/Day): 250
Prod. Life = 24Np/q: 50 hrs

I. Calculation of kh (md-ft) and k (md):

$kh = \frac{162.6\ q\mu B}{m}$; $k = \frac{kh}{h}$

h = 18 ft μ = 0.357 cp
q = 250 B/D B = 1.445
m = 92 psi/cycle

$kh = \frac{162.6 \times (250) \times (0.357) \times (1.445)}{(92)} = 227.9$

$k = \left(\frac{227.9}{18}\right) = 12.7$ md

II. Calculation of Skin Effect, s; and Pressure Loss Due to Skin, Δp_{skin}(psi):

$s = 1.151\left[\frac{p_{1\,hr} - p_{wf}}{m} - \log\left(\frac{k}{\phi\mu c r_w^2}\right) + 3.23\right]$

$s = 1.151\left[\frac{(2192)-(2173)}{(92)} - \log\left[\frac{(12.7)}{(0.09)(0.357)(8.5\times10^{-6})(.2038^2)}\right] + 3.23\right] = -6.07$

$\Delta p_{skin} = (m) \times 0.87\ (s)$ $\Delta p_{skin} = (92) \times 0.87\ (-6.07) = -485$

k = 12.7 md r_w = .2038 ft
φ = 0.09 $p_{1\,hr}$ = 2192 psig
μ = 0.357 cp p_{wf} = 2173 psig
c = 18.5×10^{-6} psi^{-1} m = 92 psi/cycle

III. Calculation of Productivity Index (B/D-psi) and Flow Efficiency:

$J_{(actual)} = \frac{q}{p^* - p_{wf}}$ $J_{(ideal)} = \frac{q}{(p^* - p_{wf}) - \Delta p_{skin}}$

$J_{(actual)} = \frac{(250)}{(2350)-(2173)}$ $J_{(ideal)} = \frac{(250)}{[(2350)-(2173)] - (-481)}$

$J_{(actual)}$ = 1.41 $J_{(ideal)}$ = 0.38

Δp_{skin} = 481 psi p^* = 2350 psig
q = 250 B/D p_{wf} = 2173 psig

Flow Efficiency = $\frac{J_{(actual)}}{J_{(ideal)}} = \left(\frac{1.41}{0.38}\right) = 3.71$

PARAMETERS:

$C_t = S_w C_w + S_o C_o + C_f = (.38)(3\times10^{-6}) + (.62)(4.3\times) + (8.5\times10)^{-6} = 18.5 \times 10^{-6}$

P_c = ____ psia S_w = 38 %
T_c = ____ °R S_o = 62 %
BHT = 140 °F ρ_o = 0.6727 gm/cu
BHP = 2350 psia

Radius of investigation during pressure buildup

$r_i = 0.029\left(\frac{kt}{\phi\mu C_t}\right)^{\frac{1}{2}} = 0.029\left(\frac{(12.7)(46.5)}{(.09)(.357)(18.5\times10^{-6})}\right)^{\frac{1}{2}} = 914$ ft (60 acres in 46.5 hrs)

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 20
Date 01/20/82

SUMMARY
PERMEABILITY AND DRAINAGE
ENSERCH EXPLORATION, INC.
NORTH PETERSON (PENNSYLVANIAN) POOL
ROOSEVELT COUNTY, NEW MEXICO

I. PERMEABILITY

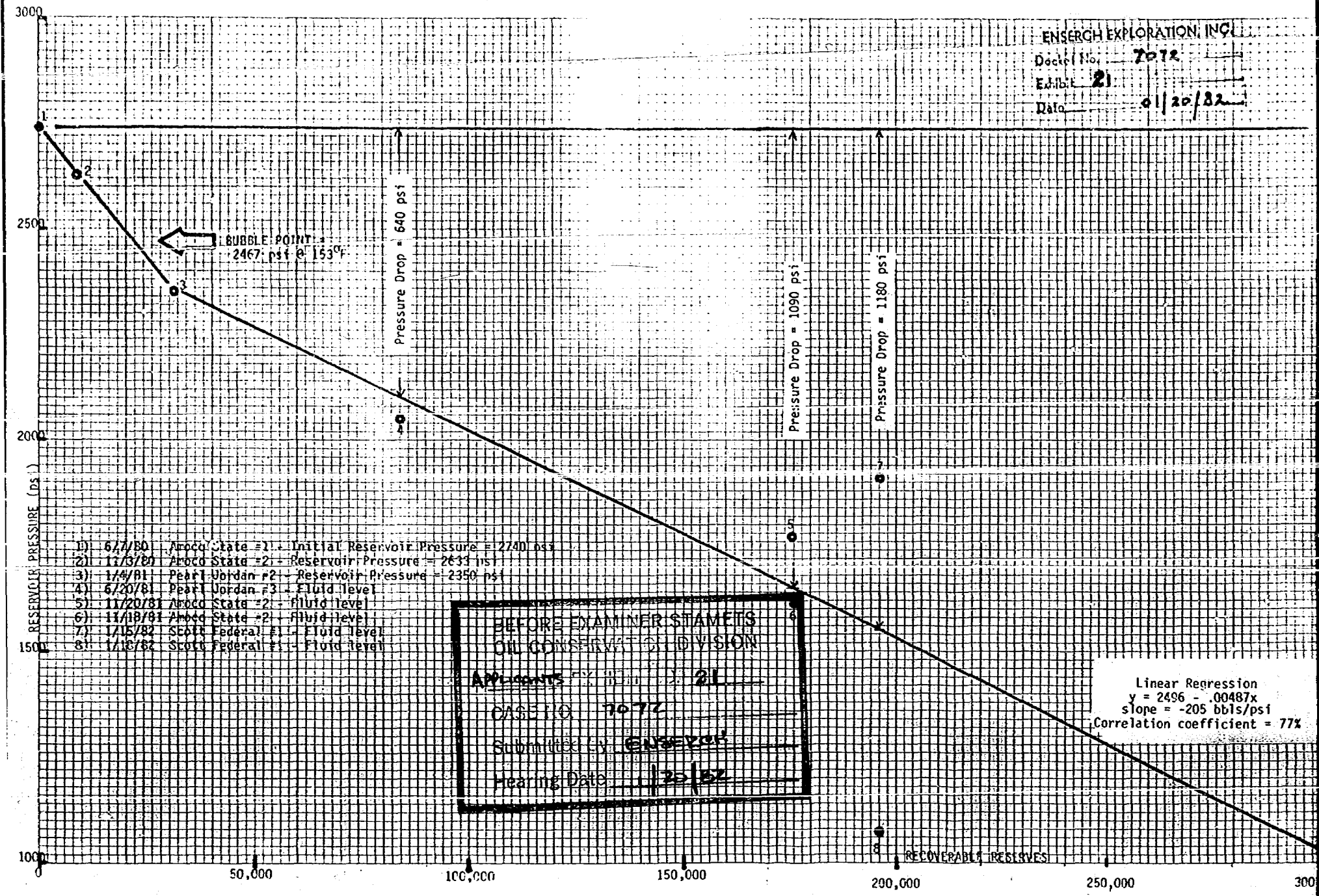
Amoco State Well No. 1	(PBU Analysis)	4.7 md
Amoco State Well No. 2	(PBU Analysis)	26.1 md
Pearl Jordan Well No. 2	(PBU Analysis)	12.7 md
Pearl Jordan Well No. 3	(Whole Core Analysis)	9.2 md
	Average	13.2 md

II. DRAINAGE - RADIUS OF INVESTIGATION

Amoco State Well No. 1	(t = 96 hrs)	154 acres
Amoco State Well No. 2	(t = 64 hrs)	573 acres
Pearl Jordan Well No. 2	(t = 46.5 hrs)	60 acres
	Average	262 acres

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
APPLICANTS EXHIBIT NO. 20
CASE NO. 7072
Submitted by ENSERCH
Hearing Date 1/20/82

ENSERCH EXPLORATION, INC.
Docket No. 7072
Exhibit 21
Date 01/20/82



Dockets Nos. 4-82 and 5-82 are tentatively set for February 3 and February 17, 1982. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - JANUARY 20, 1982

9 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

ALLOWABLE: (1) Consideration of the allowable production of gas for February, 1982, from fifteen prorated pools in Lea, Eddy, and Chaves Counties, New Mexico.

(2) Consideration of the allowable production of gas for February, 1982, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

CASE 7462: Application of Marathon Oil Company for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of the Drinkard and Blinebry production in the wellbore of its C. J. Saunders Well No. 3, located in Unit C of Section 1, Township 22 South, Range 36 East.

CASE 7463: Application of Texaco Inc. for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its C. H. Weir "A" Well No. 12 located in Unit G of Section 12, Township 20 South, Range 37 East, to produce oil from the Skaggs-Drinkard and an undesignated Abo pool.

CASE 7464: Application of Exxon Corporation for two unorthodox oil well locations, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for two unorthodox oil well locations in Section 4, Township 19 South, Range 35 East, Scharb-Bone Spring Pool, as follows: State DD Well No. 1 to be drilled in the center of the SE/4 SW/4 and State DD Well No. 3 to be drilled in the center of the NW/4 NE/4. Pool rules require wells to be drilled in the NE/4 or SW/4 of a quarter section.

CASE 7465: Application of Superior Oil Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 1980 feet from the South line and 660 feet from the East line of Section 26, Township 24 South, Range 29 East, Wolfcamp-Pennsylvanian formations, the S/2 of said Section 26 to be dedicated to the well.

CASE 7466: Application of Conoco Inc. for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority for it and Southland Royalty Company to each institute a cooperative waterflood project in the Blinebry Oil and Gas Pool by the injection of water into the Blinebry formation through nine injection wells located on Conoco's Warren Unit and Hawk B-3 Leases and Southland's State Lease in Sections 33 and 34 of Township 20 South, Range 38 East, and Sections 2 and 3 of Township 21 South, Range 37 East.

CASE 7072: In the matter of Case No. 7072 being reopened on the motion of the Oil Conservation Division and pursuant to the provisions of Order No. R-6554 which order promulgated temporary special rules and regulations for the North Peterson-Pennsylvanian Pool in Roosevelt County, New Mexico, including a provision for 80-acre spacing units. Operators in said pool may appear and show cause why said pool should not be developed on 40-acre proration units.

CASE 7460: (Continued from January 6, 1982, Examiner Hearing)

Application of Northwest Pipeline Corporation for 13 non-standard gas proration units, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for 13 non-standard Pictured Cliffs gas proration units ranging in size from 142.39 acres to 176.77 acres and each comprised of various contiguous lots or tracts in Sections 4,5,6,7, and 18 of Township 31 North, Range 7 West. Said proration units result from corrections in the survey lines on the North and West sides of Township 31 North, Range 7 West and overlap seven non-standard Mesaverde proration units previously approved by Order No. R-1066.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 7072
Order No. R-6554

APPLICATION OF ENSERCH EXPLORATION,
INC. FOR POOL CREATION AND SPECIAL
POOL RULES, ROOSEVELT COUNTY, NEW
MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on October 29, 1980, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 14th day of January, 1981, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Enserch Exploration, Inc., is the owner and operator of its Amoco State Well No. 1, located in Unit L of Section 16, Township 4 South, Range 33 East, Roosevelt County, New Mexico.

(3) That the applicant requests dismissal of that portion of this case relating to creation of a new pool for the subject well inasmuch as a new pool for said well has been previously created and defined by Division Order No. R-6420, but applicant does seek the promulgation of special pool rules therefor, including a provision for 80-acre spacing.

(4) That applicant's Amoco State Well No. 1 discovered a new common source of supply in the Pennsylvanian formation which has been designated the North Peterson-Pennsylvanian Pool.

(5) That the evidence presently available appears to justify 80-acre spacing and proration units for said pool, at least on a temporary basis for a period of one year.

(6) That such temporary rules will not cause waste nor impair correlative rights and should be approved.

(7) That during the one-year period in which this order is in effect, applicant should gather all available information relative to drainage and recoverable reserves in the subject pool.

(8) That this case should be reopened at an examinerhhearing in January, 1982, at which time operators in the subject pool should appear and show cause why the subject pool should not be developed on 40-acre spacing and proration units.

IT IS THEREFORE ORDERED:

(1) That special rules and regulations for the North Peterson-Pennsylvanian Pool in Roosevelt County, New Mexico, are hereby promulgated as follows, effective December 1, 1980.

SPECIAL RULES AND REGULATIONS
FOR THE
NORTH PETERSON-PENNSYLVANIAN POOL

RULE 1. Each well completed or recompleted in the North Peterson-Pennsylvanian Pool or in the Pennsylvanian formation within one mile of the North Peterson-Pennsylvanian Pool, and not nearer to or within the limits of another designated Pennsylvanian pool shall be spaced, drilled, operated, and prorated in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well completed or recompleted in the North Peterson-Pennsylvanian Pool shall be located on a unit containing 80 acres, more or less, which consists of the N/2, S/2, E/2, or W/2 of a single governmental quarter section; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.

RULE 3. For good cause shown, the Director may grant an exception to the requirements of Rule 2 without notice and hearing when the application is for a non-standard unit comprising a single quarter-quarter section or lot. All operators offsetting the proposed non-standard unit shall be notified of

the application by registered or certified mail, and the application shall state that such notice has been furnished. The Director may approve the application if, after a period of 30 days, no offset operator has entered an objection to the formation of such non-standard unit.

The allowable assigned to any such non-standard unit shall bear the same ratio to a standard allowable in the North Peterson-Pennsylvanian Pool as the acreage in such non-standard unit bears to 80 acres.

RULE 4. Each well drilled in the North Peterson-Pennsylvanian Pool shall be located within 150 feet of the center of a governmental quarter-quarter section.

RULE 5. An 80-acre proration unit (79 through 81 acres) in the North Peterson-Pennsylvanian Pool shall be assigned an 80-acre depth bracket allowable of 267 barrels per day and in the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

IT IS FURTHER ORDERED:

(1) That the locations of all wells presently drilling to or completed in the North Peterson-Pennsylvanian Pool or in the Pennsylvanian formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Hobbs District Office of the Division in writing of the name and location of the well on or before February 1, 1981.

(2) That, pursuant to Paragraph A. of Section 70-2-18, NMSA 1978, contained in Chapter 271, Laws of 1969, existing wells in the North Peterson-Pennsylvanian Pool shall have dedicated thereto 80 acres in accordance with the foregoing pool rules; or, pursuant to Paragraph C. of said Section 70-2-18, existing wells may have non-standard spacing or proration units established by the Division and dedicated thereto.

Failure to file new Forms C-102 with the Division dedicating 80 acres to a well or to obtain a non-standard unit approved by the Division within 60 days from the date of this order shall subject the well to cancellation of allowable. Until said Form C-102 has been filed or until a non-standard unit has been approved, and subject to said 60-day limitation, each well presently drilling to or completed in the North

Peterson-Pennsylvanian Pool or in the Pennsylvanian formation within one mile thereof shall receive no more than one-half of a standard allowable for the pool.

(3) That this case shall be reopened at an examiner hearing in January, 1982, at which time the operators in the subject pool may appear and show cause why the North Peterson-Pennsylvanian Pool should not be developed on 40-acre proration units.

(4) That that portion of Case No. 7072 relating to creation of a new Pennsylvanian oil pool is hereby dismissed.

(5) That 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 DIVISION

JOE D. RAMEY
Director

S E A L

fd/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

January 16, 1981

Mr. William F. Carr
Campbell and Black
Attorneys at Law
Post Office Box 2208
Santa Fe, New Mexico

Re: CASE NO. 7072
ORDER NO. R-6554

Applicant:

Enserch Exploration, Inc.

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCD x
Artesia OCD x
Aztec OCD

Other

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
29 October 1980

EXAMINER HEARING

IN THE MATTER OF:

Application of Enserch Exploration Inc., for pool creation and special pool rules, Roosevelt County, New Mexico.

CASE 7072

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division:

W. Perry Pearce, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant:

William F. Carr, Esq.
CAMPBELL & BLACK P. A.
Jefferson Place
Santa Fe, New Mexico 87501

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THOMAS E. BROWN

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JOHN A. MONRO

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MR. NUTTER: We'll call next Case Number 7072.

MR. PEARCE: Application of Enserch Exploration, Inc., for pool creation and special pool rules, Roosevelt County, New Mexico.

MR. CARR: May it please the Examiner, I'm William F. Carr, Campbell and Black, P. A., Santa Fe, appearing on behalf of the applicant.

I have two witnesses.

(Witnesses sworn.)

THOMAS E. BROWN

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. CARR:

MR. CARR: Initially, Mr. Examiner, I would like the record to note that we are no longer requesting pool creation, inasmuch as the North Peterson Pennsylvanian Pool was created by the Commission by Order R-6420, dated August 24, 1980.

MR. NUTTER: That portion of Case 7072

relating to creation of a new pool will be dismissed.

Proceed.

Q. Will you state your name?

A. I am Thomas E. Brown.

Q. Where do you reside?

A. Midland, Texas.

Q. By whom are you employed and in what capacity?

A. Enserch Exploration as an area staff geologist.

Q. Have you previously testified before the Commission?

A. Yes, I have.

Q. Are you familiar with the application in this case and the general area?

A. Yes, I am.

MR. CARR: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, they are.

Q. Mr. Brown, will you briefly state what Enserch is seeking with this application?

A. We're seeking field spacing of 80 acres in the Peterson North Field, Penn.

Q. Have you prepared certain exhibits for

introduction in this case?

A. Yes, I have.

Q. Will you refer to what has been marked for identification as Enserch Exhibit Number One and review this for Mr. Nutter?

A. All right. Exhibit ONe is a structure map on the top of the Cisco formation. It covers an area of roughly 3-1/2 miles radius around the discovery well, the Enserch No. 1 Amoco State.

It has a contour interval of 50 foot. It's on a 1-to-2000 scale. The pale blue shading in there is Enserch acreage. It roughly shows the structure, two control points. One control point approximately 3 miles north. And those are the only wells that penetrated that depth in that area.

Q. Does it show separation between the subject area and other pools in the area?

A. Yes.

Q. Will you now refer to what has been marked as Enserch Exhibit Number Two and review this for Mr. Nutter?

A. Exhibit Number Two is a type log in the discovery well, the Enserch No. 1 Amoco State. It has all the correlation points picked from the Wolfcamp all the way

down to the Granite.

At 7808 on thelog is the top of the Cisco Penn formation, and this is the producing zone in the well.

Q. Do you have anything to add to your testimony?

A. No.

Q. Were Exhibits One and Two prepared by you or under your direction?

A. They were.

MR. CARR: At this time we would offer Applicant Exhibits One and Two.

MR. NUTTER: Applicant Exhibits One and Two will be admitted in evidence.

MR. CARR: I have nothing further on direct.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Now, this is a -- this is a Pennsylvanian Pool, is that correct?

A. That's correct.

Q. Now where -- where is the -- where is the Peterson Penn Pool with respect to these pools?

A. It's the same one, same one that's marked here. Same pay zone.

Q. Well, I mean geographically where is it with respect to this?

A. Six and a half miles south of the, -- south southwest.

Q. So it's down off the exhibit.

A. One township further south. It's in Section 19 and one well's in Section 18, and one township south.

Q. Do the characteristics in this reservoir look similar to the Peterson-Penn Pool?

A. Yes, they do. Probably a little bit better porosity.

MR. NUTTER: Are there any other questions of the witness? He may be excused.

MR. CARR: I'd like to call John Monro.

JOHN A. MONRO

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. CARR:

Q. Will you state your full name and place

of residence?

A. John A. Monro. I'm residing in Midland, Texas.

Q. By whom are you employed?

A. I'm employed by Enserch Exploration.

Q. In what capacity?

A. As a Senior Petroleum Engineer.

Q. Have you previously testified before this Commission, had your credentials accepted and made a matter of record?

A. No, sir.

Q. Will you briefly summarize your educational background and your work experience?

A. I was graduated with a Bachelor of Science degree in petroleum engineering from Texas Tech University in August of 1972.

Since that time I've been employed by U. S. Geological Survey, El Paso Natural Gas, Shamrock, Aremco (sic), and Enserch Exploration.

Q. How long have you been employed by Enserch?

A. Approximately eight months.

Q. Are you familiar with the application filed in this case?

A. Yes, sir.

Q. Are you familiar with the subject area?

A. Uh-huh.

MR. CARR: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, they are.

Q. Have you prepared certain exhibits for introduction in this case?

A. Yes, sir, I have.

Q. Will you refer to what has been marked for identification as Applicant's Exhibit Number Three, and review this for the Examiner?

A. Yes. This exhibit is presented to -- Exhibit Number Three, as a pertinent data sheet on the discovery well, Amoco State No. 1, completed on June the 4th, 1980, in the interval 7826 through 37, and it was initially potentialed on June the 6th of 1980 for 172 barrels -- 172-1/2 barrels of oil and 220 Mcf of gas with a GOR of 1275 standard cubic feet per barrel and a flowing tubing pressure of 150 psig.

The maximum bottom hole pressure determined from a bottom hole pressure survey, detailed in a subsequent exhibit to be put into evidence, was 2745 psia.

The cumulative production on this well

as of August 15, 1980, the date that the well was shut-in awaiting pipeline connection, was 676 barrels of oil.

MR. NUTTER: 6076.

A. 6076.

Q. What is the reservoir drive mechanism in this reservoir?

A. This is a solution gas drive.

Q. Is there additional development of the pool in the immediate area?

A. Yes, sir, the Amoco State No. 2.

Q. And where is that located?

A. It's located 1320 feet directly to the south of the Amoco State No. 1.

Q. And have you included well data on the Amoco State No. 2 Well?

A. Yes, sir, attached to the previous pertinent data sheet indicated.

Q. Will you now refer to what has been marked as Enserch Exhibit Number Four and review this?

A. Okay. Exhibit Number Four is a bottom hole pressure survey analysis on the Amoco State No. 1, dated June 11 of 1980. The exhibit will consist of a chronological pressure and production data survey. A graph illustrating an extrapolated maximum bottom hole pressure of 2745 psia.

A middle (inaudible) slope of 430 psi per cycle. And the attached analysis sheet will also show a permeability of 3.7 millidarcies; a kick factor of -4.03, and a flow efficiency of 1.99.

The reservoir log data, including porosity of 4 percent and a water saturation of 34 percent, a net thickness of 11 feet, were used to arrive at these figures.

Q. Would you testify as to what the radius of investigation --

A. Okay, well --

Q. -- was on this well?

A. Okay. The build-up survey will show a calculated radius of investigation to be 1112 feet, which is in excess to the figure 1053 feet know to be the radius of drainage to a standard 80-acre spacing unit, and based on these findings, and the fact that no boundary conditions were encountered during the time of investigation, we conclude that the well, which is completed in North Petterson Penn Pool, will effect a drainage in excess to 80 acres.

Q. Will you now refer to what has been marked for identification as Enserch Exhibit Number Five and identify this for Mr. Nutter?

A. This exhibit is merely to show certain Penn Pools which are developed on 80-acre spacing in the

district area containing the North Peterson Penn Pool.

Q. And these are copies of proration schedules?

A. Yes, sir.

Q. What acreage do you propose to dedicate to the subject well?

A. We propose to dedicate the north half of the southwest quarter of Section 16, Township 4 South, Range 33 East.

Q. And what acreage has been included in the new pool by the Oil Conservation Division?

A. The Commission has included in the new pool the entire southwest quarter of Section 16 of Township 4 South and Range 33 East.

Q. Do you believe that the entire acreage which you're proposing to dedicate to the subject well has been proven productive of hydrocarbons in the Pennsylvanian formation?

A. Yes, sir.

Q. Are you prepared to make a recommendation to the Examiner as to special pool rules for the North Peterson Pennsylvanian Pool?

A. Yes, sir, we ask for the special pool rules to include provision that each well be located on a

standard unit containing 80 acres, more or less, consisting of two contiguous governmental quarter quarter sections; that the well be located in the outer component of the spacing unit and that the well be located within 150 feet of the center of a governmental quarter quarter section.

Q. In your opinion will granting this application avoid the drilling of unnecessary wells?

A. Yes, sir.

Q. Will it reduce the risk that would result from the drilling of an excessive number of wells?

A. Yes, sir.

Q. Are all wells currently drilled in the area such a pattern as to conform with your proposed spacing pattern?

A. Yes, they are.

Q. Will granting this application be in the best interests of conservation, the prevention of waste, and the protection of correlative rights?

A. Yes, sir.

Q. Were Exhibits Three through Five prepared by or compiled under your direction and supervision?

A. Yes, they are.

MR. CARR: At this time, Mr. Nutter, we would offer Enserch Three through Five.

MR. NUTTER: Exhibits Three through Five will be admitted in evidence.

MR. CARR: I have nothing further on direct.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Monro, the bottom hole pressure build-up survey on Exhibit Number Four is on your Amoco State Well NO. 1, is that correct?

A. That's correct, sir.

Q. And subsequent to completion of that well and taking this test, you drilled and completed the No. 2 Well.

A. That's correct.

Q. And I realize it's only been completed for two weeks.

A. Yes, sir.

Q. I don't suppose you've had time to make any comparable study on it.

A. No, sir, we sure haven't.

Q. It appears from the production data that it's a better well than the first one was.

A. It sure does.

Q. And you haven't made any calculations as to porosity and permeability on that well yet.

A. Well, we have made calculations. The porosity is -- it's similar to the porosity -- same porosity values that are encountered at the Amoco State No. 1. We believe, however, that the Amoco State No. 2 may have a better fracture system, resulting in higher permeability figures.

Q. Permeability --

A. Yes, sir.

Q. -- results will probably be better on it, then.

A. Yes, sir.

Q. And I see on the last page of this Exhibit Number Three that it's currently shut-in with -- for a pressure build-up survey?

A. Well, we were not able to obtain the pressure build-up survey, since we could not find someone to run the bomb element, so we turned the well back to production without recording bottom hole pressure on this well.

Q. I see. And the pressure analysis on the No. 1 indicates 3.7 millidarcies permeability on that well.

A. Yes, sir.

Q. Have you made any calculations as to

reservesoon 80-acre tracts on the No. 1 Well?

A. Yes, sir, but I -- I can't remember an exact figure. It seemed fairly reasonable considering the porosity of the value of 4 percent and a water saturation value of 34 percent, as indicated in the exhibits; however, I can't readily recall what the exact reserve figure is.

Q. Okay.

MR. NUTTER: Are there any other questions of the witness? He may be excused.

Do you have anything further, Mr. Carr?

MR. CARR: Nothing further in this case.

MR. NUTTER: Does anyone have anything they wish to offer in Case Number 7072?

We'll take the case under advisement.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 7073 heard by me on 10/29 1980.

, Examiner
Oil Conservation Division

SALLY W. BOYD, C.S.R.
R. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
29 October 1980

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A. This is a solution gas drive.

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Q. And where is that located?

A. It's located 1320 feet directly to the south of the Amoco State No. 1.

Q. And have you included well data on the Amoco State No. 2 Well?

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Q. -- was on this well?

A. Okay. The build-up survey will show a calculated radius of investigation to be 1112 feet, which is in excess to the figure 1053 feet know to be the radius of drainage to a standard 80-acre spacing unit, and based on these findings, and the fact that no boundary conditions were encountered during the time of investigation, we conclude that the well, which is completed in North Petterson Penn Pool, will effect a drainage in excess to 80 acres.

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Q And these are copies of proration schedules?

A. Yes, sir.

Q What acreage do you propose to dedicate to the subject well?

A. We propose to dedicate the north half of the southwest quarter of Section 16, Township 4 South, Range 33 East.

Q. And what acreage has been included in the new pool by the Oil Conservation Division?

A. The Commission has included in the new pool the entire southwest quarter of Section 16 of Township 4 South and Range 33 East.

Q Do you believe that the entire acreage which you're proposing to dedicate to the subject well has been proven productive of hydrocarbons in the Pennsylvanian formation?

A. Yes, sir.

Q Are you prepared to make a recommendation to the Examiner as to special pool rules for the North Peterson Pennsylvanian Pool?

A. Yes, sir, we ask for the special pool rules to include provision that each well be located on a

standard unit containing 80 acres, more or less, consisting of two contiguous governmental quarter quarter sections; that the well be located in the outer component of the spacing unit and that the well be located within 150 feet of the center of a governmental quarter quarter section.

Q. In your opinion will granting this application avoid the drilling of unnecessary wells?

A. Yes, sir.

Q. Will it reduce the risk that would result from the drilling of an excessive number of wells?

A. Yes, sir.

Q. Are all wells currently drilled in the area such a pattern as to conform with your proposed spacing pattern?

A. Yes, they are.

Q. Will granting this application be in the best interests of conservation, the prevention of waste, and the protection of correlative rights?

A. Yes sir.

Q. Were Exhibits Three through Five prepared by or compiled under your direction and supervision?

A. Yes, they are.

MR. CARR: At this time, Mr. Nutter, we would offer Enserch Three through Five.

MR. NUTTER: Exhibits Three through Five will be admitted in evidence.

MR. CARR: I have nothing further on direct.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Monro, the bottom hole pressure build-up survey on Exhibit Number Four is on your Amoco State Well NO. 1, is that correct?

A. That's correct, sir.

Q. And subsequent to completion of that well and taking this test, you drilled and completed the No. 2 Well.

A. That's correct.

Q. And I realize it's only been completed for two weeks.

A. Yes, sir.

Q. I don't suppose you've had time to make any comparable study on it.

A. No, sir, we sure haven't.

Q. It appears from the production data that it's a better well than the first one was.

A. It sure does.

Q. And you haven't made any calculations as to porosity and permeability on that well yet.

A. Well, we have made calculations. The porosity is -- it's similar to the porosity -- same porosity values that are encountered at the Amoco State No. 1. We believe, however, that the Amoco State No. 2 may have a better fracture system, resulting in higher permeability figures.

Q. Permeability --

A. Yes, sir.

Q. Results will probably be better on it, then.

A. Yes, sir.

Q. And I see on the last page of this Exhibit Number Three that it's currently shut-in with -- for a pressure build-up survey?

A. Well, we were not able to obtain the pressure build-up survey, since we could not find someone to run the bomb element, so we turned the well back to production without recording bottom hole pressure on this well.

Q. I see. And the pressure analysis on the No. 1 indicates 3.7 millidarcies permeability on that well.

A. Yes, sir.

Q. Have you made any calculations as to

reservesion 80-acre tracts on the No. 1 Well?

A. Yes, sir, but I -- I can't remember an exact figure. It seemed fairly reasonable considering the porosity of the value of 4 percent and a water saturation value of 34 percent, as indicated in the exhibits; however, I can't readily recall what the exact reserve figure is.

Q. Okay.

MR. NUTTER: Are there any other questions of the witness? He may be excused.

Do you have anything further, Mr. Carr?

MR. CARR: Nothing further in this case.

MR. NUTTER: Does anyone have anything they wish to offer in Case Number 7072?

We'll take the case under advisement.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

_____

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 7072 heard by me on 10/29 1980.

_____, Examiner
Oil Conservation Division

Enserch Exploration, Inc.
Amoco State No. 1
Roosevelt County, New Mexico

Date of Completion:	6-4-80
Elevation (GR):	4387.7'
Perforated Production Interval:	7826'-37'
Date of Potential:	6-6-80
Initial Potential:	172.5 BO + 220 MCFG + 2 BW, GOR = 1275, FTP = 150 psig
Original Bottom Hole Pressure:	2745 psia @ 7832' 6-11-80
Oil Gravity:	45.5° API
Cumulative Production:	6076 BO 8-5-80
Current Status:	Shut-in; awaiting pipeline connection

solu gas drive

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
ENSERCH EXHIBIT NO. 3
CASE NO. 7072

Enserch Exploration, Inc.
Amoco State No. 2
Roosevelt County, New Mexico

Date of Completion:	10-16-80
Elevation (GR):	4394.6'
Perforated Production Interval:	7825'-41', 7848'-55'
Date of Potential:	10-18-80
Initial Potnetial:	327 BO + 120 MCFG + 0 BW, GOR = 367, FTP = 200 psig
Original Bottom Hole Pressure:	currently testing
Oil Gravity:	45.6° API
Cumulative Production:	538 BO 10-20-80
Current Status:	Shut-in; pressure build-up survey

ENSERCH EXPLORATION, INC.
BHPBU Survey
June 7/11, 1980
Midland, Texas

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
ENSERCH EXHIBIT NO. 4
CASE NO. 7072

Well : AMOCO STATE NO. 1

Field : NORTH PETERSON - PENNSYLVANIAN POOL

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1980 Date	Status of Well	Time	Elapsed Time Hrs.	Min.	LOG T + dt / dt	Daily Rate Oil B/D	Wellhead Pressure Tubing	BHP @ 7750' Psig	BHP @ 7832' Psig
6-7	Arrived location								
"	Flowing 20/64" pos. ck	08:30							
"	Gradient Traverse	09:00							
"	Inst. @ 7750'	10:30					121	1185	1203
"	" " "	11:30						1189	1207
"	" " "	12:30				210		1177	1195
"	Shut in for build up	12:30	0	00					
"	" " " " "	12:36	0	06	2.839			1196	1220
"	" " " " "	12:42	0	12	2.539			1211	1235
"	" " " " "	12:48	0	18	2.364			1225	1249
"	" " " " "	12:54	0	24	2.239			1237	1261
"	" " " " "	13:00	0	30	2.143			1250	1274
"	" " " " "	13:06	0	36	2.064			1262	1286
"	" " " " "	13:12	0	42	1.998			1278	1302
"	" " " " "	13:18	0	48	1.940			1295	1319
"	" " " " "	13:24	0	54	1.890			1307	1331
"	" " " " "	13:30	1	00	1.845			1322	1346
"	" " " " "	13:42	1	12	1.767			1348	1372
"	" " " " "	13:54	1	24	1.701			1371	1395
"	" " " " "	14:06	1	36	1.645			1398	1422
"	" " " " "	14:18	1	48	1.595			1423	1447
"	" " " " "	14:30	2	00	1.550			1447	1471
"	" " " " "	15:00	2	30	1.456			1505	1529
"	" " " " "	15:30	3	00	1.380			1560	1584

ENSERCH EXPLORATION, INC.
BHPBU Survey
June 7/11, 1980
Midland, Texas

Well : AMOCO STATE NO. 1

Field : NORTH PETERSON - PENNSYLVANIAN POOL

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1980 Date	Status of Well	Time	Elapsed Time Hrs.	Min.	LOG T + dt / dt	Daily Rate Oil B/D	Wellhead Pressure Tubing	BHP @ 7750' Psig	BHP @ 7832' Psig
6-7	Continued Shut-in	16:00	3	30	1.316			1616	1640
"	" " "	16:30	4	00	1.261			1667	1691
"	" " "	17:00	4	30	1.213			1717	1741
"	" " "	17:30	5	00	1.170			1766	1790
"	" " "	18:30	5	00	1.097			1857	1881
"	" " "	19:30	7	00	1.036			1941	1965
"	" " "	20:30	8	00	0.983			2013	2037
"	" " "	21:30	9	00	0.938			2079	2103
"	" " "	22:30	10	00	0.898			2136	2160
6-8	" " "	00:30	12	00	0.829			2230	2254
"	" " "	02:30	14	00	0.773			2300	2324
"	" " "	04:30	16	00	0.725			2347	2371
"	" " "	06:30	18	00	0.684			2382	2406
"	" " "	08:30	20	00	0.648			2407	2431
"	" " "	10:30	22	00	0.617			2429	2453
"	" " "	12:30	24	00	0.588			2446	2470
"	" " "	14:30	26	00	0.563			2458	2482
"	" " "	16:30	28	00	0.540			2470	2494
"	" " "	18:30	30	00	0.519			2481	2505
"	" " "	20:30	32	00	0.499			2489	2513
"	" " "	22:30	34	00	0.481			2497	2521
6-9	" " "	00:30	36	00	0.465			2505	2529
"	" " "	02:30	38	00	0.450			2512	2536
"	" " "	04:30	40	00	0.435			2518	2542

ENSERCH EXPLORATION, INC.
BHPBU Survey
June 7/11, 1980
Midland, Texas

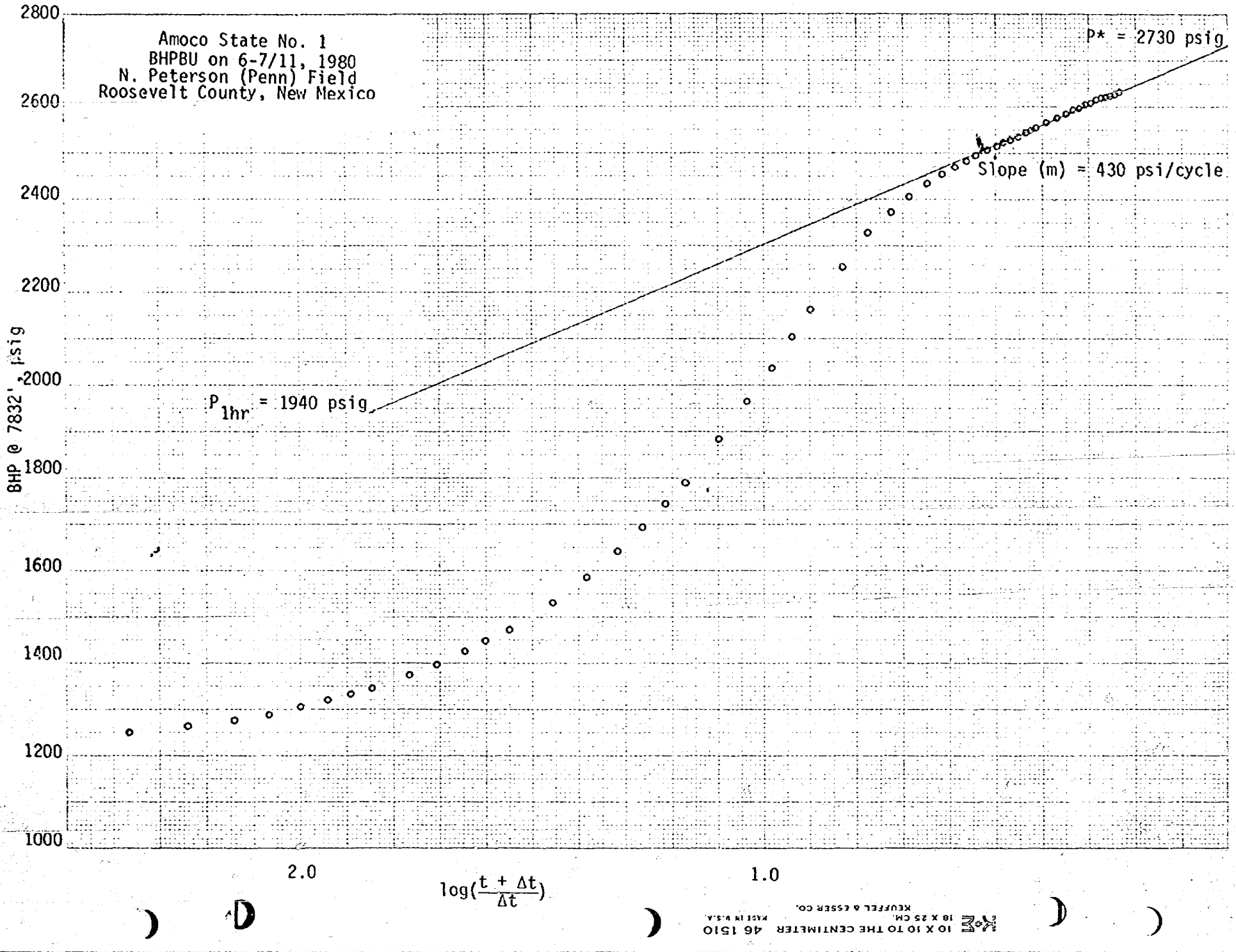
Well : AMOCO STATE NO. 1

Field : NORTH PETERSON - PENNSYLVANIAN POOL

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1980 Date	Status of Well	Time	Elapsed Time Hrs.	Min.	LOG T + dt / dt	Daily Rate Oil B/D	Wellhead Pressure Tubing	BHP @ 7750' Psig	BHP @ 7832' Psig
6-9	Continued Shut-in	06:30	42	00	0.422			2524	2548
"	Pulled Instrument	08:00	43	30	0.413			2528	2552
"	Instrument @ 7750'	12:00	47	30	0.390		744	2542	2566
"	"	12:30	48	00	0.387			2545	2569
"	"	16:30	52	00	0.367			2551	2575
"	"	20:30	56	00	0.349			2559	2583
6-10	"	00:30	60	00	0.332			2567	2591
"	"	04:30	64	00	0.318			2573	2597
"	"	08:30	68	00	0.304			2580	2604
"	"	12:30	72	00	0.292			2585	2609
"	"	16:30	76	00	0.281			2589	2613
"	"	20:30	80	00	0.270			2593	2617
6-11	"	00:30	84	00	0.260			2596	2620
"	"	04:30	88	00	0.251			2599	2623
"	"	08:30	92	00	0.243			2602	2626
"	Off bottom	10:06	93	36	0.240			2603	2627
"	Gradient Traverse	12:50	96	20	0.235		760	2606	2630
"	Off location	14:45							

Amoco State No. 1
BHPBU on 6-7/11, 1980
N. Peterson (Penn) Field
Roosevelt County, New Mexico



K+E 10 X 10 TO THE CENTIMETER 46 1510
18 X 25 CM. MADE IN U.S.A.
KEUFFEL & ESSER CO.

OIL

WELL PRESSURE ANALYSIS
West Texas District

Test Date: June 7/11, 1980 — Lease: Amoco State

Formation: Pennsylvanian — Well No.: 1

Casing Size: 5-1/2", 15.5# — Field: N. Peterson (Penn)

Cum. Prod. Np(Bbl): 604 — State: New Mexico

Prod. Rate (Bbl/Day): 210

Prod. Life = 24Np/q: 69 hrs.

I. Calculation of kh (md-ft) and k (md):

$$kh = \frac{162.6\ q\mu B}{m} \quad ; \quad k = \frac{kh}{h}$$

h = 11 ft — μ = 0.363 cp

q = 210 B/D — B = 1.411

m = 430 psi/cycle

$$kh = \frac{162.6 \times (\ 210\ ) \times (0.363) \times (1.411\ )}{(\ 430\ )} = 40.67$$

$$k = \frac{(\ 40.67\ )}{(\ 11\ )} = 3.7 \text{ md}$$ ✓

II. Calculation of Skin Effect, s; and Pressure Loss Due to Skin, Δp_{skin} (psi):

$$s = 1.151\left[\frac{p_{1\text{-hr}} - p_{wf}}{m} - \log\left(\frac{k}{\phi\mu c r_w^2}\right) + 3.23\right]$$

$$s = 1.151\left[\frac{(1940\ )-(1195\ )}{(\ 430\ )} - \log\left[\frac{(\ 3.7\ )}{(\ 0.04)(0.363)(16.7 \times 10^{-6})(0.229^2)}\right] + 3.23\right] = -4.03$$

$\Delta p_{skin} = (m) \times 0.87\ (s)$ — $\Delta p_{skin} = (\ 430\ ) \times 0.87\ (-4.03) = -1{,}508$ psi

k = 3.7 md — r_w = 0.229 ft

ϕ = 0.04 — $p_{1\ hr}$ = 1,940 psig

μ = 0.363 cp — p_{wf} = 1,195 psig

c = 16.7×10^{-6} psi^{-1} — m = 430 psi/cycle

III. Calculation of Productivity Index (B/D-psi) and Flow Efficiency:

$$J_{(actual)} = \frac{q}{p^* - p_{wf}} \qquad J_{(ideal)} = \frac{q}{(p^* - p_{wf}) - \Delta p_{skin}}$$

$$J_{(actual)} = \frac{(\ 210\ )}{(2730\ )-(\ 1195)} \qquad J_{(ideal)} = \frac{(\ 210\ )}{[(\ 2730)-(\ 1195)] - (-1508)}$$

$J_{(actual)}$ = 0.137 — $J_{(ideal)}$ = 0.069

Δp_{skin} = -1508 psi — p^* = 2730 psig

q = 210 B/D — p_{wf} = 1195 psig

$$\text{Flow Efficiency} = \frac{J_{(actual)}}{J_{(ideal)}} = \frac{(\ 0.137\ )}{(\ 0.069\ )} = 1.99$$ ✓

PARAMETERS:

PENN POOLS DEVELOPED ON 80-ACRE SPACING

DISTRICT I PRORATION SCHEDULE, SEPT. THRU DEC., 1980

COMPANY LEASE	WELL UNIT	S.T.R.	SEPT. THRU DEC. DAILY	GOR
A	EFFECTIVE GAS-OIL RATIO			
**	NON-EFFECTIVE GAS-OIL RATIO			
()	AMOUNT OF PRODUCTION OF LATEST GAS-OIL RATIO TEST			

ANTELOPE RIDGE - BONE SPRING
Top Allowable 320 GOR Limit 2,000
Top Casinghead Gas Limit 640 MCF
AW [illegible] Corporation Co.
State FJ 3 E 25-18-34 51

BASS ENTERPRISES PROD. CO.
Airstrip State
" 2 P 25-18-34 32

AIRSTRIP NORTH BONE SPRING
Top Allowable 275 GOR Limit 2,000
Top Casinghead Gas Limit 550 MCF
AMOCO PRODUCTION CO.
State FU(276) 1 K 25-18-34 275 500
" (279) 2 K " 275 387
" (280) 1 O " 15 1933
State [illegible](283) 1 P 24-18-34 275 756

TOTAL 4 840
BASS ENTERPRISES PROD. CO.
Airstrip State
" 1 D 31-18-35 121
Acreage factor .955

GULF OIL CORPORATION
Lea NM State
" (277) 1 O 25-18-34 275 759
" (278) 2 P " 275 600
" (281) 3 I " 275 327
" (282) 4 I " 275 345

TOTAL 4 1965

POOL TOTAL 9 2656

AIRSTRIP NORTHEAST
Top Allowable 1505 GOR Limit 2,000
Top Casinghead Gas Limit 640 MCF

AMOCO PRODUCTION CO.
State H(283) 1 P 26-18-34 75 1800

ALLISON PENN
(80 Acre Spacing)
Top Allowable 355 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 710 MCF
SEARS, HARRIS L. CO.
Merrill 1 H 10-9-36 45
" 2 E " 50

TOTAL 2 95
DISCOVERY OPERATING
Mobil Atlantic Federal
" 1 D 10-9-36 15

FARREN, DAVID
Federal A 1 L 33-6-37 8
K.Dav.Fed. 3 L 27-6-37 Gas Well

FLR COMPANY
Atlantic Fed. 1 N 28-8-37 Gas Well

COMPANY LEASE	WELL UNIT	S.T.R.	SEPT. THRU DEC. DAILY	GOR
GETTY OIL CO.				
Las Cruces B	1 D	30-8-37	132	
"	2 E	"	Gas Well	
"	3 H	"	Gas Well	
"	4 F	"	218	
TOTAL	2		350	
GULF ENERGY PRODUCING CO.				
Hays Fed.	1 N	19-8-37	Gas Well	
INGRAM, TOM L.				
K.Davis Fed.	2 F	28-8-37	Gas Well	
"	3 H	"	1	
H.L.Hayes et al				
"	3 L	29-8-37	1	
"	4 N	"	Gas Well	
TOTAL	2		2	
HARVARD OIL CO.				
State BPA	1 O	32-8-37	135	
"	2 F	"	100	
TOTAL	2		235	
M & M OPERATING COMPANY				
Hayes Fed.	2 P	30-8-37	16	
"	3 N	"	120	
TOTAL	2		136	
MOBIL PRODUCING TEXAS & N. M., INC.				
Cox Fed.	1 N	1-9-36	23	
O'NEILL, JOSEPH I., JR.				
Federal K	1 O	34-8-37	80	
[illegible]				
Shearn Fed.	1 P	13-8-36	17	
YATES DRILLING CO.				
Ltl Yates	1 N	31-8-37	6	
"	3 F	"	14	
Lyn	1 O	33-8-37	Gas Well	
"	2 F	"	Gas Well	
TOTAL	2		20	
POOL TOTAL 17			984	

ALLISON SAN ANDRES, EAST
Top Allowable 80 GOR Limit 2,000
Top Casinghead Gas Limit 160 MCF
WAINOCO OIL & GAS CO.
Ingram 26 Fed.
" (6) 1 O 26-8-37 6 **2000
Ingram 35 Fed.
" (35) 1 G 35-8-37 35 **2000

POOL TOTAL 2 41

ANDERSON RANCH DEVONIAN
Top Allowable 355 GOR Limit 2,000
No Gas Test Required
Top Casinghead Gas Limit 910 MCF
CONOCO INC.
A.R.Unit (75) 1 G 11-16-32 75
" (66) 14 Q 2-16-32 66

TOTAL 2 141

ANDERSON RANCH DEVONIAN CONT'D

GULF OIL CORP.
Lea CL State NCT-A
" (16) 1 G 2-16-32 30

POOL TOTAL 3 171

ANDERSON RANCH WOLFCAMP
Top Allowable 275 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 550 MCF
(Waterflood Project)
CONOCO INC.
Anderson Ranch Unit
" 2 G 11-16-32 150
" 11 F " 50
" 12 V 2-16-32 41
" 13 K 11-16-32 45
" 17 R 2-16-32 25
" 3 A 11-16-32 Input
" 6 X 2-16-32 "
" 10 E 11-16-32 "

TOTAL 5 311
PHILLIPS PETROLEUM CO.
Aggie A 1 Q 3-16-32 18

POOL TOTAL 6 329

ANDERSON RANCH WOLFCAMP, EAST
Top Allowable 305 GOR Limit 2,000
Top Casinghead Gas Limit 750 MCF
HOLLY ENERGY, INC.
Pogo St.(100) 1 H 15-16-33 100 1600

ANDERSON RANCH WOLFCAMP, NORTH
(80 Acre Spacing)
Top Allowable 355 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 710 MCF
GULF OIL CORP.
Lea R State NCT-A Com.
" 1 A 2-16-32 80
Acreage 30
" 2 D 1-16-32 6
Acreage 101

TOTAL 2 86
MOBIL PRODUCING TEXAS & N. M., INC.
N.M.St. A 1 B 2-16-32 110
Acreage 50

UNION OIL CO. OF CALIFORNIA
North Anderson Ranch Unit
" 1 E 33-15-32 76
" 3 K " 225
State A 1 M " 50
" 2 I 26-15-32 15

TOTAL 4 366

POOL TOTAL 7 562

ANTELOPE RIDGE BONE SPRINGS
Top Allowable 320 GOR Limit 2,000
Top Casinghead Gas Limit 640 MCF
THE SUPERIOR OIL CO.
State R(4) 1 N 25-23-34 4 TSTM

ARKANSAS JUNCTION PENN
Top Allowable 320 GOR Limit 2,000
Top Casinghead Gas Limit 640 MCF
ALCORN, REX
Babbi (6) 1Y J 20-18-36 6 **5580

ARKANSAS JUNCTION SAN ANDRES
Top Allowable 80 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 160 MCF
C & C OPERATING CORP.
Lea OR State 1 K 12-18-36 10
" 2 O " 10

POOL TOTAL 2 20

ARKANSAS JUNCTION SAN ANDRES, WEST
Top Allowable 107 GOR Limit 2,000
Top Casinghead Gas Limit 214 MCF
ALCORN, REX
Babbi 2 O 20-18-36 30

WESTBROOK, V. N.
State of New Mexico
" (35) 1 B 29-18-36 35 1171
State of New Mexico W.
" (6) 2 D 28-18-36 8 6875

TOTAL 2 43

POOL TOTAL 3 73

ARROWHEAD GRAYBURG
Top Allowable 80 GOR Limit 3,500
Top Casinghead Gas Limit 280 MCF
AMERADA HESS CORP.
State PA(16) 1 K 16-22-37 16 1750

ARCO OIL & GAS CO.
St. 137-D(10) 1 L 12-22-36 10 100
St. D-DE(20) 1 O 36-21-36 20 **4650

TOTAL 2 30
CITIES SERVICE CO.
State M(46) 1 N 36-21-36 46 1087
" (7) 2 L " 7 371
State N (3) 3 D 2-22-36 3 **13333
" (2) 4 M " 2 **14000

TOTAL 4 58
CONOCO INC.
L'Nt.B-1(16) 1 E 1-22-36 16 **4700
" (8) 2 F " 8 **12500
" (8) 3 J " 8 **5625
" (6) 5 O " 6 **6667
State B-2(18) 1 B 2-22-36 18 2111
" (15) 2 I " 16 1333
" (38) 3 N " 38 395
" (18) 5 P " 18 2000
" (11) 6 O " 11 2182
" (13) 8 F " 13 1923
" (26) 11 C " 26 1115

TOTAL 11 180
GULF OIL CORP.
Ark.Christmas NCT-C
" (3) 8 A 28-22-37 5 1000
H.Leonard NCT-C
" (32) 1 N 36-21-36 32 1656
" (36) 2 K " 36 583
" (16) 3 E " 16 7375
" (26) 4 D " 26 346
" (11) 5 C " 11 2364
" (62) 6 F " 62 1130
" (2) 7 G " 2 **9000
" (2) 8 H " 2 **6500
H.T.Mattern NCT-D
" (5) 2 E 7-22-37 5 1000
" (17) 4 D " 17 294
" NCT-E (5) 1 L " 5 **5400
" (12) 2 K " 12 417
" (12) 3 D 12-22-36 12 2250
" (12) 4 M 1-22-36 12 417

ARROWHEAD GRAYBURG CONT'D

GULF OIL CORP. CONT'D
H.T.Mattern NCT-E
" (10) 6 F 12-22-36 10 300
" (11) 7 G " 10 500
" (12) 9 C " 12 333
" (13) 12 A " 12 333
" NCT-F (5) 1 B 1-22-36 5 800
" (15) 2 A " 15 333
M.A.Ramsay NCT-A
" (30) 4 P 35-21-36 30 **3500
" (37) 5 I " 37 2946
" (28) 8 J " 28 2714
" (22) 11 A " 22 2500

TOTAL 25 436

MARATHON OIL COMPANY
McDonald State A/c-2
" (6) 13 G 13-22-36 8 1250
" (7) 14 D " 7 1714
C.J.Saunders
" (26) 2 D 1-22-36 26 1154

TOTAL 3 41

TEXAS PACIFIC OIL CO., INC.
Elliott A-6
" (10) 1 M 6-22-37 10 **3500
State A A/c-2
" (7) 13 A 31-22-36 7 **39286
" (3) 16 I " 3 3333

TOTAL 3 20

POOL TOTAL 49 781

BAGLEY PENN
Top Allowable 275 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 550 MCF
AMERADA HESS CORP.
W.E.Mathers A 1 B 5-12-33 13
" 2 F " 97

TOTAL 2 110

TEXAS PACIFIC OIL CO., INC.
St. C A/c-1 4 M 4-12-33 11

POOL TOTAL 3 121

BAGLEY PENN, EAST
Top Allowable 275 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 550 MCF
J & W OPERATING CO.
Pan Am. St. 1 L 5-12-34 30

ROBERTS & HANNACK, INC.
Boren Barbara A State
" 1 P 6-12-34 8

POOL TOTAL 2 38

BAGLEY PENN, NORTH
(40 Acre Spacing)
Top Allowable 400 GOR Limit 2,000
Top Casinghead Gas Limit 800 MCF
AMERADA HESS CORP.
W.E.Mathers B
" 1 F 33-11-33 51
Mathers St. Com.
" (30) 1 D " 30 **12333
State B?M(25) 2 H " 25 **16960
State B?R(38) 1 D 10-12-33 38 921

TOTAL 3 93

ANOCO PRODUCTION CO.
State DC(44) 1 P 16-11-33 44 **12205
State DG(13) 1 F " 13 154
State MI(23) 1 I 21-11-33 23 1087
" (6) 2 P " 6 **5833
State DK(8) 1 A 17-11-33 8 **4625
" (8) 2 C " 8 **8125

TOTAL 6 102

BELCO PET. CORP.
Bagley St.(2) 1 D 14-11-33 2 **29650
Acreage factor .500
Bagley State Com.
" (2) 1 F " 2 TSTM
Cabot St.(1) 1 H 15-11-33 1 **72800
Cabot A State
" (5) 1 L 14-11-33 5 **10300
" B St.(11) 1 D " 11 **6291
" C St.(20) 1 E " 20 1960
Dallas (21) 1 J 15-11-33 21 **3967
Shell H State
" (12) 1 A 8-12-33 12 **14167
State 34(2) 1 B 34-11-33 2 TSTM
Warren American State Com.
" (3) 1 N 27-11-33 3 1213

TOTAL 10 79

BROWN, TOM, INC.
Lovington Trust
" (17) 1 D 28-11-33 17 **6412
" (32) 2 E " 32 **6500
Warren 27 State
" (5) 1 L 27-11-33 5 **16600
Warren 28 State
" (23) 1 A 28-11-33 23 **13217

TOTAL 4 77

BTA OIL PRODUCERS
Bagley (12) 1 A 9-11-33 12 1750
Brewer 689-C
" (6) 2 H 6-12-33 6 **12000
Brewer 689-C Ltd.
" (3) 1 A 6-12-33 8 **11130
" (9) 3 C " 9 **11780
Hugh 689-C
" (19) 1 I " 19 **5420
" (16) 2 K " 16 **5560
" (17) 3 N " 17 **6470
" (18) 4 O " 18 **6440
LCH 689 Ltd.
" (5) 1 F 31-11-33 9 **2780
LCH 689-C Ltd.
" (17) 2 N " 17 1180
Acreage factor .500
Myrtle 689 Ltd.
" (12) 2 P " 12 **5830
Penn 7514 JV-D
" (38) 3 G 7-12-33 38 470

TOTAL 12 181

CABOT CORP.
M.E.Dallus(16) 1 P 15-11-32 16 **4563

CONINE, J. H., JR.
J.D.Guye(16) 1 H 22-11-33 16 **4375

COX, JOHN L.
Amerada State
" (9) 1 I 29-11-33 9 **9507
Maxie (22) 1 A 1-12-32 22 **3996
" (14) 2 H " 14 **4050
Shell B State Com.
" (8) 1 A 5-12-33 8 **2066

BAGLEY PENN, NORTH

COX, JOHN L.
Shell E State
" (11) 1 C 5-12-33 11 **7980
Shell F State
" (30) 1 O " 30 **2251
Shell G State
" 1 N 4-12-33 P&A
State C(28) 2 E 11-11-33 28 **3940
State 7(29) 1 C 7-12-33 29 **2377
" (21) 2 B " 21 **2401
SUP 1 F " P&A

TOTAL 9 172

CROWN CENTRAL PETROLEUM CORP.
T.P. A State
" (21) 1 J 10-11-33 21 **6905
" (14) 2 O " 14 **5857

TOTAL 2 35

ELK OIL COMPANY
Bagley State
" (25) 1 P 36-11-32 25 1320

FASKEN, DAVID
Felmont Collier
" (17) 1 H 9-11-33 17 **4049

GOODRICH, JOHN S.
Amerada State
" (10) 2 G 33-11-33 10 **5000
Mathers(22) 2 O " 22 **3060

TOTAL 2 32

GULF OIL CORP.
Lea CG St.(14) 1 K 9-11-33 14 **2500

KERN COMPANY
Federal 10(9) 1 F 10-12-33 9 **2111
St. BTQ(14) 1 P 34-11-33 14 **4143
State 34(31) 1 G " 31 **4032

TOTAL 3 54

MGF OIL CORP.
Amerada Federal
" (14) 1 M 3-12-33 14 **10071
Champlin State
" (5) 1 F 8-11-33 5 **3400
Gulf Sohio State
" (10) 1 G " 10 1690
Huber (8) 1 A 9-12-33 8 **2150
" (5) 2 B " 5 1220
Huber A (8) 1 C " 8 **3275
Stan (5) 1 I " 5 **4060
Stan A Com.
" (10) 1 J " 10 1790

TOTAL 8 65

NATIONAL COOP. REFINERY ASSOC.
Bagley St.(8) 1 H 16-11-33 8 **2125
" (8) 2 B " 8 1375
" (20) 3 C " 20 900

TOTAL 3 36

READ & STEVENS, INC.
Shell St.(14) 1 A 18-11-33 14 **3900
" (16) 2 H " 16 **3100
" (28) 3 C " 28 **3400
" (13) 4 F " 13 **3550
State E(14) 1 N 7-11-33 14 1715
Sun St.(11) 1 P " 11 1910

TOTAL 6 96

ROBERTS & HANNACK, INC.
Blankeney State
" (9) 1 C 31-11-33 9 833
Champlin State
" (9) 1 P 8-11-33 9 TSTM
Collier(11) 1 D 9-11-33 11 573
Gulf Sohio State
" (10) 1 H 8-11-33 10 570
Graham St.(14) 1 K " 14 514
Graham B State
" (8) 1 A 30-11-33 8 1183
" (10) 2 H " 10 1170
" (10) 3 I " 10 1540
" (11) 4 P " 11 493
Graham C State Com.
" (14) 1 E 17-11-33 14 1917
Mathers A(14) 1 C 30-11-33 14 1175
Mathers B(9) 1 F " 9 1133
Mathers C(10) 1 K " 10 550
Mathers D(10) 1 N " 10 920
Shea Climenko
" (10) 1 N 8-11-33 10 **2300

TOTAL 15 159

SABINE PRODUCTION CO.
State K(41) 1 K 21-11-33 41 **2829
" (28) 2 L " 28 **2857

TOTAL 2 69

SOUTHLAND ROYALTY CO.
Graham St.(16) 1 O 3-11-33 16 1125
Acreage factor 1.117

TENNECO OIL CO.
Tenneco Sunshine
" (25) 1 I 1-12-36 25 1600

TEXACO INC.
F.B.Gist(12) 1 A 31-11-33 12 **4687
" (5) 2 H " 5 **4453

TOTAL 2 17

TEXAS PACIFIC OIL CO., INC.
J.P.Collier
" (19) 4Y G 10-11-33 19 **7053
Mathers(33) 1 L 33-11-33 33 **7213
" (30) 2 N " 30 **3696
State AK(14) 1 N 10-11-33 14 **3571
State AO(19) 1 C 4-12-33 19 **4263
State B A/c-1
" (16) 4 J " 26 **3375
" (8) 5 L 10-12-33 8 1375
State C A/c-2
" (22) 2 H 4-12-33 22 **5909

TOTAL 8 161

TIPPERARY OIL & GAS CORP.
Andover Federal
" (19) 1 P 17-11-33 19 **6043
Audrey (35) 1 P 20-11-33 39 **5897
Bell (19) 1 H 21-11-33 19 **5694
" (30) 3 A " 30 **5790
Bell A (16) 1 C " 16 **20500
Bell B (27) 1 E " 27 **6581
Chaney Federal
" (22) 1 L 17-11-33 22 **8136
Christensen State
" (26) 1 L 16-11-33 25 **5145
Clark St.(19) 1 D 27-11-33 19 **16263
Collier(22) 1 F 9-11-33 22 **5591
Dolly (28) 1 J 17-11-33 28 **7179
Enfield(33) 1 I 16-11-33 33 **5030
Eva Com.(16) 1 J 20-11-33 16 **14125

CAPROCK QUEEN (CONT'D

GREAT WESTERN DRILLING CO. (CONT'D
Rock Queen Unit
36 8 H 36-13-31 Input
" 10 J " "
" 12 L " "
" 14 N " "
" 16 P " "

TOTAL 39 710

KYLE, POWELL
Gulf St.A(5) 1 H 23-13-31 4
Hinkle Holloway State
" (3) 1 F 36-13-31 3
North Caprock Queen Unit #1
*Tr. 27(12) 3E E 27-13-32 12

TOTAL 3 19

LARUE, C. E. & B. N. MONEY, JR.
Federal V Waterflood Project
Federal V-34 2 O 34-13-31 2
" 4 I " 2
" 1 P " Input
" 3 J " "

TOTAL 2 4

LARUE, C. E. & B. N. MONEY, JR.
Trigg Federal Waterflood Project
Trigg Fed. 1 I 9-14-31 2
" 4 A " 2
" 6 I 4-14-31 4
" 8 A " 3
" 9 O 9-14-31 2
" 11 G " 3
" 13 O 4-14-31 3
" 15 G " 3
" 16 K 9-14-31 3
" 17 F 4-14-31 3
" 24 C " 2
" 25 N 9-14-31 4
" 27 E " 4
" 31 E 4-14-31 3
" 2 P 9-14-31 Input
" 5 P 4-14-31 "
" 8 H " "
" 12 B 9-14-31 "
" 14 B 4-14-31 "
" 17 N 9-14-31 "
" 19 F " "
" 20 C " "
" 23 F 4-14-31 "
" 26 L 9-14-31 "
" 32 D 4-14-31 "
" 37 B " "

TOTAL 34 41
(Waterflood Project)
LAYTON ENTERPRISES, INC.
North Caprock Queen Unit #1
Tr. 6 7 G 32-12-32 2
Tr. 12 13 M " 2
Tr. 19 7 O 6-13-32 2
Tr. 22 11 K " 2
Tr. 23 15 O " 2
Tr. 26 2Y B 7-13-32 1
" 7 G " 1
Tr. 27 4Y D 6-13-32 1
" 5 E " 1
" 9 I 7-13-32 1
" 10Y J " 2
Tr. 28 11 K " 2
Tr. 6 6 F 33-12-32 Input
" 14 N " "
Tr. 12 10 J " "

LAYTON ENTERPRISES, INC. (CONT'D
North Caprock Queen Unit #1
Tr. 24 12 L 5-13-32 Input

TOTAL 12 20

TENNECO OIL CO.
Pena Oil Co. Federal
" (3) 2 N 3-15-31 3
" (5) 3 N " 5
" (7) 4 N " 5

TOTAL 3 13
(Waterflood Project)
TEXAS AMERICAN OIL CORP.
Northwest Caprock Queen Unit
" 4 I 16-12-32 7
" 16 A 20-12-32 3
" 20 A 21-12-32 5
" 22 C 22-12-32 7
" 27 G 20-12-32 2
" 29 E 21-12-32 4
" 1 L 16-12-32 Input
" 3 J " "
" 14 N 14-12-32 "
" 21 D 22-12-32 "
" 26 C 23-12-32 "
" 31 H 22-12-32 "

TOTAL 6 28
(Waterflood Project)
UNION OIL CO. OF CALIFORNIA
South Caprock Queen Unit
Tr. 49 3 C 31-15-31 2
Tr. 67 12 L 32-14-31 3
Tr. 68 3 C " 3
Tr. 70 14 N " 5
Tr. 54 15 G " Input

TOTAL 4 13

POOL TOTAL 134 1060
*Kyle & Layton on same 40 Acres.

CAPROCK MISSISSIPPIAN, EAST
Top Allowable 365 GOR Limit 2,000
No Gas Test Required
Top Casinghead Gas Limit 730 MCF
ANADARKO BASS CORP.
H.C.Posey A
" (26) 3 J 11-12-32 28
" (47) 5 A " 47
" (73) 6 H " 75
St. ECG(74) 1 G " 74
" 2 B " 51
St. ECH(58) 1 P " 58

TOTAL 5 282
WAGNER & BAUCH
Cleveland(37) 1 G 23-12-32 37

POOL TOTAL 6 319
CAPROCK MISSISSIPPIAN, NORTH
(160 Acre Spacing)
Top Allowable 650 GOR Limit 2,000
Top Casinghead Gas Limit 1300 MCF
ANTWEIL, MORRIS R.
Landlady(38) 1 B 8-12-32 38 **12658

CAPROCK PENN, EAST
Top Allowable 320 GOR Limit 2,000
Top Casinghead Gas Limit 640 MCF
NUCORP ENERGY, INC.
State 23(150) 1 K 23-12-32 102 *6326

CAPROCK SAN ANDRES
Top Allowable 80 GOR Limit 2,000
Top Casinghead Gas Limit 160 MCF
ELK OIL CO.
State 30(15) 1 H 2-12-32 15 TSTM

CAPROCK WOLFCAMP, EAST
Top Allowable 230 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 460 MCF
AMERADA HESS CORP.
L.Hutchins A 1 L 1-12-32 45

CASEY SAN ANDRES, SOUTH
Top Allowable 44 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 88 MCF
GREAT WESTERN DRILLING CO.
Burton 1 O 5-18-39 17
Acreage factor .658
E.Carter 1 J " 11
Acreage factor .650
" 2 N " 30
" 3 K " 28
S.Johnson 1 D 5-18-39 28
" 2 C " 12
Acreage factor .650
" 3 O " 21
McQuein 2 F " 30

TOTAL 8 177
MARTINGALE PET. CORP.
Carter 1 A 7-18-39 5

MCPHERSON, MARGARET M.
S.P.Johnson 2 M 5-18-39 15

POOL TOTAL 10 197
CASEY MONTOYA
Top Allowable 187 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 374 MCF
GULF OIL CORP.
New Gore Nct-A
" 10 E 10-22-37 14

CASEY SAN ANDRES
Top Allowable 80 GOR Limit 2,000
Top Casinghead Gas Limit 160 MCF
ZIA ENERGY, INC.
State C(12) 1 F 17-22-37 7 *24250

CASEY SIMMS
(80 Acre Spacing)
Top Allowable 445 GOR Limit 2,000
Top Casinghead Gas Limit 890 MCF
C & K PETROLEUM, INC.
Shipp 27(105) 1 O 27-16-37 108 657
Shipp 34-A
" (84) 1 C 34-16-37 84 714
" (84) 2 F " 84 654

TOTAL 3 276
MESA PETROLEUM CO.
West Knowles
" (159) 4 B 34-16-37 189 1024

POOL TOTAL 4 465
CASS PENN
(80 Acre Spacing)
Top Allowable 276 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 534 MCF
CONOCO INC.
SEMU Penn 4 G 23-20-37 85
" 95 J " 7A

CATO SAN ANDRES
Top Allowable 80 GOR Limit 2,000
Top Casinghead Gas Limit 160 MCF
ADOBE OIL & GAS CORP.
Peterson Federal
" (6) 1 J 6-9-30 6 181

AMOCO PRODUCTION CO.
ASCO Fed.(1) 2 O 10-8-30 1 TSTM
" (1) 4 B " 1 TSTM
Barbara (1) 1 M 4-8-30 1 TSTM
Baskett C(1) 2 J 10-8-30 1 TSTM
Baskett F(2) 1 A 15-8-30 2 TSTM
Cato A Fed.(1) 2 K " 1 TSTM
" (1) 2 L " 1 TSTM
" (1) 3 N " 1 TSTM
Cato B Fed.(1) 2 N 34-8-30 1 TSTM
" (1) 3 D 23-8-30 1 TSTM
" (2) 4 N 34-8-30 2 TSTM
" (1) 5 E 23-8-30 1 TSTM
" (1) 6 N 14-8-30 1 TSTM
" (1) 7 C 23-8-30 1 TSTM
" (1) 8 F " 1 TSTM
Cato C Fed.(1) 1 J 14-8-30 1 TSTM
" (1) 2 C " 1 TSTM
Cato D Fed.(1) 1 E 23-8-30 1 TSTM
" (1) 3 A " 1 TSTM
Crosby A Fed.
" (1) 2 I 8-8-30 1 TSTM
Crosby B(2) 1 I 3-8-30 2 TSTM
" (1) 2 P " 1 TSTM
Crosby E Fed.
" (3) 1 G 9-8-30 3 TSTM
" (1) 2 B " 1 TSTM
Crosby C Fed.
" (1) 1 C 22-8-30 1 TSTM
Crosby D(1) 1 C 17-8-30 1 TSTM
Crosby F(1) 2Y L " 1 TSTM
Crosby G(2) 1 N 9-8-30 2 TSTM
" (2) 2 K " 2 TSTM
Crosby H(9) 1 E " 9 TSTM
" (2) 2 D " 2 TSTM
Grimm Fed.(10) 1 O 9&8-30 10 TSTM
" (6) 2 J " 6 TSTM
Queen (2) 1 C 10-8-30 2 TSTM
" (4) 2 E " 4 TSTM
" (1) 3 F " 1 TSTM

TOTAL 36 70
AMOCO PRODUCTION CO.
Cato Baskett Waterflood Project
Baskett 1 L 11-8-30 2
" 2 N " 1
Baskett B 1 F " 16
Baskett D 5 J " 3
" 6 B " 21
" 7 P " 3
" 8 R " 5
Fischer Fed. 1 M 12-8-30 2
Cato Baskett P
" 3 O 11-8-30 Input
" 5 C " "
" 6 C 14-8-30 "
" 7 A " "

TOTAL 8 53
AMOCO PRODUCTION CO.
Cato Wasley Waterflood Project
Wasley 2 E 14-8-30 3
" 4 D " 3
" 5 G " 1
" 7 B " 4
" 8 H " 1

TOTAL 5 12

CRIT DELAWARE CONT'D

CONOCO INC. CONT'D

Marshall(114)	7	C	19-23-33	107		
" (35)	8	L	"	35		

Acreage factor .950

POOL TOTAL 7 319

CLEGG LANGO PENN

Top Allowable 275 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 550 MCF
SEVAN, TOM, INC.

St. 593	1	N	25-20-32	42		

DOK 233

Top Allowable 187 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 374 MCF
MERIDIAN OIL CO.

Conoco Fed.	1	J	30-20-39	40		
Ralph Est.	2	G	"	20		
"	3	H	"	15		
Wilshire Fed.	1	P	"	9		
"	2	K	"	15		
"	3	I	"	22		

TOTAL 6 121

TEXAS CRUDE OIL CO.

Federal	12	E	30-20-39	5		

POOL TOTAL 7 129

DOT GRAYBURG

Top Allowable 142 GOR Limit 10,000
No Test Required
Top Casinghead Gas Limit 1420 MCF
HELBURN, JOHN H. CORP.

Jones Fed.	1	L	30-20-39	9		

MERIDIAN OIL CO.

Ralph Estate	1	A	30-20-39	7		

DANIEL ZAC STRONG

Carter 1-30	1	C	30-20-39	18		

TEXAS CRUDE OIL CO.

Federal	12	E	30-20-39	6		

POOL TOTAL 4 40

DARBY WOLFCAMP

Top Allowable 275 GOR Limit 2,000
Top Casinghead Gas Limit 550 MCF
MATHIS, SPENCER & HUDSON

Clayton (5)	1	L	22-15-33	6	TSTM	

DEAN DEVONIAN

Top Allowable 455 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 910 MCF
ARCO OIL & GAS CO.

J.P.Dean	1	N	35-15-36	33		

DEAN PERMO PENN
(80 Acre Spacing)

Top Allowable 445 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 890 MCF
ARCO OIL & GAS CO.

Dow Fed.Com.	1	C	5-16-37	43		

Acreage factor 1.149

Lea 356 St.	2	F	35-15-36	15		

POOL TOTAL 2 58

DENTON DEVONIAN

Top Allowable 365 GOR Limit 2,000
Top Casinghead Gas Limit 730 MCF
ARCO OIL & GAS CO.

B.C.Dickinson B						
" (16)	3	E	35-14-37	16		188
T.D.Pope(21)	1	M	36-14-37	21		TSTM
" (23)	2	N	"	23		TSTM
" (21)	4	L	"	21		TSTM
" (18)	5	E	"	18		TSTM
State T(35)	2	F	2-15-37	35		771
" (120)	3	K	"	120		1500
" (65)	9-7	N	"	65		1369

TOTAL 9 319

DINERO OPERATING CO.

Denton (75)	1	O	11-15-37	75		1103

GETTY OIL CO.

Nex. F (14)	1	C	2-15-37	14		571
" (9)	2	G	"	9		773
" (13)	3	E	"	13		769
" (9)	5	B	"	9		778
" (17)	10	A	"	17		824

TOTAL 5 62

GULF OIL CORP.

L.R.Chamb.(27)	1	D	14-15-37	27		**2667
Lea G St.(96)	2	O	2-15-37	96		1281
" (33)	3	I	"	33		1576
" (132)	4	P	"	132		**2098

W.A.Simpson et al

" (54)	2	P	3-15-37	54		315

TOTAL 5 342

MARATHON OIL CO.

J.M.Denton

" (145)	3	J	11-15-37	145		1379
" (40)	4	K	"	40		1250
" (43)	6	P	"	43		1047
" (64)	7	I	"	64		1109

TOTAL 4 292

McALESTER FUEL CO.

P.H.McClure A

" (102)	1	G	14-15-37	102		933
State A(53)	1	H	2-15-37	53		769

TOTAL 2 155

MOBIL PRODUCING TEXAS & N. M., INC.

T.D.Pope(43)	3	P	35-14-37	43		1050
" (28)	5	G	"	28		1420
" (1)	10	P	26-14-37	1		**2000
" (52)	13	B	35-14-37	52		1550

TOTAL 4 124

PHILLIPS PETROLEUM CO.

Denton(445)	1	F	11-15-37	365		502
" (120)	2	H	"	120		432
" (68)	3	B	"	68		78
" (160)	6	C	"	160		727
" (248)	17-7	G	"	248		669
" (138)	9	A	"	138		652
" (56)	13	D	"	56		926

TOTAL 8 1155

POLARIS PRODUCTION CORP.

Argo (3)	1	A	3-15-37	3	TSTM	
" (31)	2	H	"	31	1290	
" (5)	3	G	"	5	TSTM	
Buckley A(16)	1	N	25-14-37	16	1250	
" (2)	4	N	"	2	TSTM	
Priest (50)	2	D	1-15-37	50	1111	

DENTON DEVONIAN CONT'D

POLARIS PRODUCTION CORP. CONT'D

Shelton (2)	1	F	26-14-37	2	TSTM	
" (2)	4	E	"	2	TSTM	
" (26)	6	D	"	26	961	
State A (2)	1	L	2-15-37	2	TSTM	

TOTAL 10 139

SKELTON OIL COMPANY

Pat H. McClure B						
" (36)	1	J	14-15-37	36		655
Pat H. McClure C						
" (33)	1	A	"	33		550

TOTAL 2 69

POOL TOTAL 50 2732

DENTON DEVONIAN, SOUTH

Top Allowable 455 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 910 MCF
THORNTON, ERNEST W. & JOHN R. PARISH

State SDA	1	M	36-15-37	25		
Kelly State	1	P	35-15-37	100		

POOL TOTAL 2 125

DENTON PENNSYLVANIAN

Top Allowable 320 GOR Limit 2,000
Top Casinghead Gas Limit 640 MCF
POLARIS PRODUCTION CORP.

Buckley A(2)	3	L	25-14-37	2	TSTM	

DENTON WOLFCAMP

Top Allowable 275 GOR Limit 2,000
Top Casinghead Gas Limit 550 MCF
ARCO OIL & GAS CO.

B.C.Dickinson A-1						
" (8)	1	L	1-15-37	8		125
State T(16)	1	N	2-15-37	16		250
" (15)	5	K	"	15		200
" (22)	6	F	"	22		136
" (60)	8	N	"	60		367

TOTAL 5 121

ARMOND, LTD.

Buckley(57)	1	N	25-14-37	57	TSTM	

GETTY OIL CO.

Nex. F (8)	9	E	2-15-37	8		750

GULF OIL CORP.

L.R.Chamb.(39)	2	C	14-15-37	39		435
" (18)	3	F	"	18	TSTM	
" (21)	4	K	"	21	TSTM	
" (27)	5	B	"	27	TSTM	
Lea G St.(20)	5	I	2-15-37	20		650
" (18)	7	P	"	18		666
" (30)	8	O	"	30		400

W.A.Simpson et al

" (33)	4	I	3-15-37	33	TSTM	
" (9)	5	P	"	9	TSTM	

TOTAL 9 215

MARATHON OIL COMPANY

J.M.Denton(14)	1	K	11-15-37	14		500
" (16)	8	J	"	16		500
" (10)	11	P	"	10		600
" (52)	12	N	"	52		173
" (14)	13	N	"	14		571

TOTAL 5 106

McALESTER FUEL CO.

J.M.Denton A

" (69)	2	O	11-15-37	69		225

McALESTER FUEL CO. CONT'D

P.H.McClure A

" (12)	2	G	14-15-37	12		735
" B (38)	2	J	"	38		225
State A (14)	2	H	2-15-37	14		556

TOTAL 4 133

(Waterflood Project)

MOBIL PRODUCING TEXAS & N. M., INC.

Denton North Wolfcamp Unit

Tr. 1	3	M	35-14-37	45		
"	4	P	34-14-37	35		
Tr. 2	3	I	"	45		
Tr. 4	1	O	35-14-37	30		
Tr. 5	8	L	"	18		
"	9	C	"	20		
"	12	E	"	24		
Tr. 6	11	P	"	47		
"	22	B	"	54		
"	26	J	"	9		
"	29	A	"	69		
"	31	L	26-14-37	50		
Tr. 7	3	M	36-14-37	19		
"	11	D	"	35		
"	13	C	"	30		
Tr. 8	1	O	"	9		
"	5	B	"	8		
Tr. 9	6	J	"	12		
Tr. 12	5	K	25-14-37	54		
Tr. 13	4	I	27-14-37	18		
"	7	A	"	15		
Tr. 14	2	C	26-14-37	2		
"	7	D	"	4		
Tr. 15	3	G	"	19		
Tr. 19	8	P	23-13-37	17		
"	9	O	"	34		
Tr. 2	1	N	34-14-37	Input		
Tr. 5	10	K	35-14-37	"		
Tr. 6	18	N	26-14-37	"		
"	30	H	35-14-37	"		
Tr. 12	2	M	25-14-37	"		
Tr. 13	2	I	27-14-37	"		
"	6	H	"	"		
Tr. 14	3	F	26-14-37	"		
Tr. 15	6	H	"	"		
Tr. 18	1	N	23-14-37	"		

TOTAL 26 722

PHILLIPS PETROLEUM CO.

Denton (45)	4	C	11-15-37	48		610
" (38)	5	F	"	38		679
" (75)	10	H	"	75		472
" (36)	14	C	"	36		1047
" (51)	15	D	"	51		67
" (46)	16	E	"	46		977

TOTAL 6 295

POLARIS PRODUCTION CORP.

Pacific Royalty						
" (10)	3	A	10-15-37	10		1000
" (18)	5	H	"	18		889
Priest	4	D	1-15-37	No C-116		
"	5	C	"	"		
State A(20)	2	L	2-15-37	20		1000

TOTAL 3 48

POOL TOTAL 69 1706

DENTON WOLFCAMP, SOUTH

Top Allowable 275 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 550 MCF
THORNTON, ERNEST W. & JOHN R. PARISH

N.M. M	1	L	36-15-37	20		

EUNICE SEVEN RIVERS QUEEN SOUTH CONT'D

TEXAS PACIFIC OIL CO., INC. CONT'D
State "A" A/c-2
" 32Y L 9-22-36 Input
" 51 F 8-22-36 "
" 55 P " "
" 61 J " "

TOTAL 15 42

THE WISER OIL CO.
Shell A St. 1 D 16-22-36 Gas Well

POOL TOTAL 163 2691

FEATHER VOLCANO
Top Allowable 275 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 550 MCF
FEATHERSTONE DEVELOPMENT CORP.
Cabot St. 1 C 19-15-32 35

FLYING M AB)
(80 Acre Spacing)
Top Allowable 310 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 620 MCF
COASTAL OIL & GAS CORP.
Flying M St. 1 D 15-9-33 16
St.Mtn.St. 1 J 16-9-33 47

TOTAL 2 65

HANSEN OIL CORPORATION
Amoco St. 3 I 10-9-33 45

HESS PETROLEUM COMPANY
Robinson 1 E 23-9-33 18

TIPTON & DENTON
Tapp St. 1 O 22-9-33 15

TIPTON, DENTON & DENTON
Ainsworth 1 F 25-9-33 115

POOL TOTAL 6 258

FLYING M SAN ANDRES SOUTH
(40 Acre Spacing)
Top Allowable 355 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 710 MCF
PETRO-LEWIS CORP.
Welch Grouse 1 C 25-9-32 34

REAL OIL COMPANY
Alice Ann 1 A 25-9-33 60

STARWORTH OIL & GAS, INC.
Pellahin 14 State
" 1 I 14-9-32 9

POOL TOTAL 3 103

FLYING M SAN ANDRES
(80 Acre Spacing)
Top Allowable 160 GOR Limit 2,000
No Gas Test Required
Top Casinghead Gas Limit 320 MCF
ADAMS EXPLORATION CO.
Wright (5) 1Y I 30-9-33 5

APCO OIL & GAS CO.
Flying M State
" (21) 2-M,1 N 20-9-33 81
" (10) 3 L " 10

TOTAL 3 91

BELCO PETROLEUM CORP.
Fed. 31 (9) 1 N 31-9-33 9
Read & Stevens State
" (9) 1 D 5-10-33 9
Warren Am. St.
" (7) 2 M 32-9-33 7

TOTAL 3 25

BRIDWELL OIL CO.
N.M.7 St.(14) 1 H 7-9-33 14
N.M.8 St.(14) 1 N 8-9-33 14
" (5) 3 F " 5

TOTAL 3 33

COASTAL OIL & GAS CORP.
Flying M San Andres Unit
Tr. 27(13) 2 O 28-9-33 13
Acreage factor .630
Tr. 31(14) 1 P 33-9-33 14
Tr. 32(17) 1 B 4-10-33 17
Tr. 34(29) 1 L 29-9-33 29
Gonzales 31 Federal
" (43) 1 J 31-9-33 43
" (5) 2 H " 5
" (16) 5-3 P " 16
" (6) 4 B " 6
McGuffin
" (102) 3-C,1 F 29-9-33 102
" (81) 4-D,2 E " 81
State 9(19) 1 L 9-9-33 19

TOTAL 14 345

(Waterflood Project)
COASTAL OIL & GAS CORP.
Flying M San Andres Unit
Tr. 1-A(26) 2 H 29-9-33 26
" (13) 6 G " 13
" (9) 7 O " 9
" (16) 8 I " 16
" (46) 9 A " 46
Tr. 3 (4) 1 N 17-9-33 4
" (8) 2 L " 8
Tr. 4(7) 4-I,1 P " 7
" (1) 3 H " 1
Tr. 5 (7) 1 G 16-9-33 7
" (5) 3 E " 5
Tr. 6 (6) 1 F " 6
Tr. 9(34) 4-O,3 J " 34
Tr. 10 (3) 2 L " 3
Tr. 13(75) 1 F 21-9-33 75
" (12) 2 C " 12
Tr. 13 (1) 4 B 20-9-33 1
Tr. 14 (1) 4 I " 1
" (27) 5 O " 27
Tr. 15(21) 1 B 21-9-33 21
Tr. 17(34)3-O,1 J " 34
" (25) 4-N,2 L " 25
Tr. 24(88)1-K,2 N 29-9-33 88
Tr. 25(43)5-E,1 D 28-9-33 43
Tr. 26(10) 1 B " 10
Tr. 27(18) 1 J " 18
Tr. 30(12) 7 B 33-9-33 12
Tr. 1-A 1 B 29-9-33 Input
" 5 J " "
Tr. 3 3 F 17-9-33 "
Tr. 5 2 D 16-9-33 "
Tr. 7 1 H " "
Tr. 8 1 N " "
Tr. 10 4 K " "
Tr. 13 5 F 20-9-33 "
Tr. 14 1 P " "
Tr. 15 2 N 21-9-33 "
" 3 P " "

FLYING N SAN ANDRES CONT'D

COASTAL OIL & GAS CORP., CONT'D
Flying N. San Andres Unit
Tr. 16 4 H 21-9-33 Input
Tr. 20 1 F 32-9-33 "
Tr. 25 2 F 28-9-33 "
" 3 L " "
Tr. 30 9 H 33-9-33 "

TOTAL 33 552

E. L. LATHAM, JR. & ROY G. BARTON, JR.
Cash(20) 1 A 30-9-33 20

LESON, HULEN H.
Grace Dodd 1 J 30-9-33 No C-115

SOUTHERN UNION EXPL. CO.
Shell Grocbli et al
" (10) 1 B 30-9-33 10
SUSCO-State
" (65) 5-I,1 P 19-9-33 65
" (38) 4-O,2 J " 38
" (14) 6-H,7 G " 14

TOTAL 7 147

TENNECO OIL CO.
Coastal A States
" (17) 3 N 9-9-33 17

UNION TEXAS PETROLEUM CORP.
New Mexico 4
" (10) 1 J 4-10-33 10
" (7) 2 P " 7

TOTAL 2 17

WESTLAND OIL DEV. CORP.
N.M.S St.(4) 1 J 8-9-33 4
" (33) 2 L " 33
" (3) 3 N " 3
N.M. L-61 State
" (6) 1 B 6-10-33 6

TOTAL 4 46

POOL TOTAL 72 1290

FOSTER SAN ANDRES
Top Allowable 80 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 160 MCF
MARTINDALE PETROLEUM CORP.
Foster 1 D 5-19-39 7

FOUR LAKES PENN
(80 Acre Spacing)
Top Allowable 400 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 800 MCF
EXXON CORPORATION
South Four Lakes Unit
" 1 B 2-12-34 27
" 2 G " 84

POOL TOTAL 2 111

FOWLER DEVONIAN
Top Allowable 187 GOR Limit 2,000
Top Casinghead Gas Limit 374 MCF
CONOCO INC.
Mattix (13) 2 J 10-24-37 13 **21462
" (24) 3 G " 24 **3417

POOL TOTAL 2 37

FOWLER FRIEMARD
Top Allowable 142 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 284 MCF
AMOCO PRODUCTION CO.
South Mattix Unit Fed.
" 35 F 15-24-37 2
" 35 B 22-24-37 3
" 37 I " 46
" 39 G 15-24-37 15

POOL TOTAL 4 66

FOWLER GLORIETA
(160 Acre Spacing)
Top Allowable 355 GOR Limit 2,000
No Gas Test Required
Top Casinghead Gas Limit 710 MCF
AMOCO PRODUCTION CO.
South Mattix Unit Federal
" (122) 1 J 15-24-37 122
" (20) 4 F " 20
" (9) 5 N 22-24-37 9
" (33) 25 C 15-24-37 33
" (42) 24-O,8 P " 42
" (25) 15 A 22-24-37 25
Acreage factor .75
" (63) 17 G 15-24-37 68
" (9) 21 K " 9

TOTAL 9 333

GULF OIL CORP.
Lillie (60) 3 E 23-24-37 60
Plains Knight
" (130) 1 L " 130

TOTAL 2 190

POOL TOTAL 11 523

FOWLER TUBB (OIL)
Top Allowable 142 GOR Limit 2,000
Top Casinghead Gas Limit 284 MCF
GULF OIL CORPORATION
J.R.Holt (NCT-A)
" (23) 4 J 16-24-37 23 1609

FOWLER UPPER PENN
(80 Acre spacing)
Top Allowable 187 GOR Limit 6,000
Top Casinghead Gas Limit 1122 MCF
AMOCO PRODUCTION CO.
South Mattix Unit Federal
" (45) 20-M,1 N 9-24-37 45 **10233
" (13) 28-A,3 B 22-24-37 13 **4769
" (71) 22-C,7 D 15-24-37 71 4549
" (22) 36-C,9 E " 22 **5273
" (39)35-A,10 H " 39 5513
" (33) 12 P 22-24-37 33 605
Acreage factor .500
" (8) 13 I " 8 **33625
" (39) 6-L,14 K 15-24-37 39 **9305
" (9) 32-H,18 G 22-24-37 9 **44000
" (48) 34-F,19 C " 48 455
" (60) 27-F,20 E 15-24-37 60 1067
" 16-23 O " Gas Well
" (15) 30 P " 15 **28000
State D(4) 2 P 16-24-37 4 7577
Acreage factor .500

TOTAL 22 406

CONOCO INC.
Mattix (14) 1 O 19-24-37 14 5857

HIGH PLAINS PENN
(160 Acre Spacing)
Top Allowable 560 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 1120 MCF
CANYON OIL CORP.
Cities Service State
" 1 E 26-14-34 180

ELK OIL CO.
Cities Service State
" 2 K 26-14-34 125

NATOMAS NORTH AMERICA, INC.
High Plains 1 A 22-14-34 38

DAVIS TIPTON, ET AL
State 1 M 23-14-34 20

POOL TOTAL 4 363

NIGHTOWER PENN, PENN
Top Allowable 320 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 460 MCF
AMERADA HESS CORP.
E.C.Reach 1 L 26-12-33 2
State B73 1 D " 4

TOTAL 2 6

HOF OIL CORP.
Hope State 1 P 22-12-33 Gas Well

POOL TOTAL 2 6

NIGHTOWER LOWER PENN, EAST
(80 Acre Spacing)
Top Allowable 400 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 800 MCF
ENERGY RESOURCES OIL & GAS CORP.
State 1-30 1 B 30-12-34 17
Acreage factor .500

NIGHTOWER UPPER PENN, EAST
(80 Acre Spacing)
No Test Required
Top Casinghead Gas Limit 214 MCF
HARPER OIL COMPANY
Frier 1 L 29-12-34 50

PETROLEUM CORP. OF TEXAS
State HT 1 P 25-12-33 48
State HT A 1 B 36-12-33 32

TOTAL 2 80

POOL TOTAL 3 130

HOBBS BLINEBRY
Top Allowable 107 GOR Limit 2,000
Top Casinghead Gas Limit 214 MCF
AMERADA HESS CORP.
State A (33) 4 B 32-18-38 33 1515
" (14) 5 A " 14 **9857

TOTAL 2 47

AMOCO PRODUCTION CO.
State G (7) 5 E 33-18-38 7 **13429
" (18) 6 F " 18 **5222

TOTAL 2 25

CHEVRON USA INC.
State 1(27) 5 O 29-18-38 27 1782
" (61) 6 P " 61 1197

TOTAL 2 88

CONOCO INC.
State A-29(24)7 N 29-18-38 24 **5167
" (22) 8 K " 22 273

TOTAL 2 46

EXXON CORPORATION
Bowers A Federal
" (50) 1 I 30-18-38 50 112
" (70) 28 M 29-18-38 70 240
" (42) 29 L " 42 259
" (27) 30 P 30-19-38 27 159

TOTAL 4 189

GETTY OIL CO.
H.D.McKinley
" (30) 8 H 30-18-38 30 333
" (6) 9 G " 6 1950
" (9) 10 B " 9 555

TOTAL 3 45

GULF OIL CORP.
W.D.Grimes NCT-A
" (30) 16 D 32-18-38 30 967
" (27) 17 C " 27 926
" (15) 18 F " 15 1667
" NCT-B(27) 7 B 33-18-38 27 **2111

TOTAL 4 99

PENROC OIL CORP.
Conoco St.(32)1 G 33-18-38 32 **2688

SHELL OIL CO.
Grimes (8) 9 M 28-18-38 8 **7833
" (4) 11 N " 4 **26000
Shell A State
" (55) 6 G 32-18-38 55 982

TOTAL 3 67

POOL TOTAL 23 638

HOBBS BLINEBRY, EAST
Top Allowable 142 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 284 MCF
CHEVRON PETROLEUM CORP.
Davis 2 J 29-18-39 15
Acreage factor .650

HOBBS DRINKARD
(80 Acre Spacing)
Top Allowable 222 GOR Limit 5,000
Top Casinghead Gas Limit 1110 MCF
AMERADA HESS CORP.
State A 5 A 32-18-38 Gas Well

AMOCO PRODUCTION CO.
Byers A(14) 31 D 3-19-34 14 **15214
Byers B(18) 34 B 4-19-38 18 466
" (7) 35 H " 7 1714
Capps 32 L 3-19-38 Gas Well
State A(19) 37 J 4-19-38 19 **13000
State G(15) 5 E 33-18-38 15 **8357
State NF Com.
" (115) 1 P 33-18-38 115 4330
Turner Tr. 2
" (22) 30 E 34-18-38 22 **7273
" (76) 31 L " 24 **6513

TOTAL 8 234

CHEVRON USA INC.
State 1 5 O 29-18-38 Gas Well

CONOCO INC.
St.A-32(13) 12 L 33-18-38 13 **24365

HOBBS DRINKARD CONT'D
GETTY OIL CO.
W.D.Grimes(6) 6 I 29-18-38 6 **31667
H.H.McKinley
" (14) 9 G 30-18-38 14 1950

TOTAL 2 20

GULF OIL CORP.
W.D.Grimes NCT-B
" (38) 8 H 33-18-38 38 **9263

PENROC OIL CORP.
Conoco St.(41)1 G 33-18-38 41 **14220
" (32) 2 N " 32 **12615
Conoco A State
" (40) 1 O " 40 3587
Acreage factor .500

TOTAL 3 113

PONTOTOC OIL CORP.
Hobbs St.(8) 1 F 29-18-38 8 2270
Acreage factor .500
Hobbs St.(9) 2 G " 9 2908

TOTAL 2 17

SHELL OIL CO.
Grimes (4) 9 M 28-18-38 4 **7333
State B(39) 6 C 33-18-38 39 4205

TOTAL 2 43

POOL TOTAL 19 478

HOBBS (G-SA)
Top Allowable 80 GOR Limit 3,500
Top Casinghead Gas Limit 280 MCF
AMOCO PRODUCTION CO.
R-4934
South Hobbs (G-SA) P. U. Project
South Hobbs Grayburg San Andres Unit
" 1 D 34-18-38 106
" 2 E " 121
" 3 L " 117
" 4 K " 441
" 5 P 33-18-38 142
" 6 N 34-18-38 101
" 7 N " 83
" 8 D 6-19-38 11
Acreage factor .975
" 9 C " 13
" 10 B " 35
" 11 A " 10
" 12 D 5-19-38 52
" 13 C " 55
" 14 B " 95
" 15 A " 105
" 16 D 4-19-38 150
" 17 C " 64
" 18 B " 118
" 19 A " 188
" 20 D 3-19-38 78
" 22-21 C " 98
" 23 B " 20
" 24 A " 3
" 25 F 6-19-38 13
" 26 H " 2
" 27 E 5-19-38 37
" 28 F " 28
" 29 G " 82
" 30 H " 130
" 32 F 4-19-38 64
" 34 H " 131
" 36 F 3-19-38 30
" 38 H " 22
" 39 L 5-19-38 42

AMOCO PRODUCTION CO. CONT'D
South Hobbs Grayburg San Andres Unit
" 40 N 5-19-38 52
" 42 L 4-19-38 49
" 124-44 J " 141
" 44 L 3-19-38 25
" 48 J " 93
" 50 M 5-19-38 16
" 51 N " 29
" 52 P " 33
" 54 N 4-19-38 71
" 56 P " 57
" 57 N 3-19-38 63
" 58 N " 93
" 60 P " 6
" 61 A 8-19-38 2
" 62 D 9-19-38 23
" 64 B " 36
" 66 D 10-19-38 405
" 69 B " 260
" 70 M 8-19-38 16
" 72 M 9-19-38 15
" 74 G " 21
" 75 M " 37
" 77 F 10-19-38 217
" 79 M " 96
" 81 L 9-19-38 3
" 83 J " 1
" 85 L 10-19-38 3
" 86 N " 23
" 88 J " 78
" 91 F 9-19-38 7
" 94-95 N 10-19-38 9
" 96-95 O " 19
" 99 D 15-19-38 2
" 102 B " 28
" 104 A " 15
" 106 F " 12
" 108 N " 5
" 109 J " 38
" 113 G 6-19-38 12
" 114 O " 14
" 115 I " 17
" 116 J " 5
" 117 P " 20
" 118 D 8-19-38 3
" 119 C " 9
" 120 E 3-19-38 35
" 31 E 4-19-38 Input
" 33 G " "
" 35 E 3-19-38 "
" 37 G " "
" 43 K 4-19-38 "
" 45 I " "
" 47 K 3-19-38 "
" 49 I " "
" 53 M 4-19-38 "
" 55 G " "
" 59 O 3-19-38 "
" 63 C 5-19-38 "
" 65 A " "
" 67 C 10-19-38 "
" 69 A " "
" 71 E 9-19-38 "
" 73 G " "
" 76 E 19-19-38 "
" 78 G " "
" 82 K 9-19-38 "
" 84 I " "
" 87 K 10-19-38 "
" 89 I " "
" 90 O 9-19-38 "
" 92 M 10-19-38 "
" 41 I 5-19-38 56

BOSS PADDOCK
Top Allowable 107 GOR Limit 2,000
Top Casinghead Gas Limit 214 MCF
SHELL OIL CO.
Fahl A St.
" (27) 7 H 32-18-38 27 370
State B(104) 5 D 33-18-38 104 462

POOL TOTAL 2 131

MESS SAN ANDRES, EAST
Top Allowable 80 GOR Limit 2,000
Top Casinghead Gas Limit 160 MCF
CONTINENTAL-ENSCO CO.
Pearl Goode
" (30) 1 B 31-18-39 30 **2033
" (34) 2 A " 34 **2735

TOTAL 2 64

EXXON CORPORATION
S.E.Cain(4) 2 K 30-18-39 4 **3336
" (3) 3 N " 3 **2670

TOTAL 2 7

MARTINDALE PETROLEUM CORP.
C.W.Davis(1) 1 N 29-18-39 1 1300
" (1) 2 L " 1 1600
" (2) 3 M " 2 1950
Ferguson(4) 1 H 30-18-39 4 1950
S.Lowe St.(26) 1 C 32-18-39 26 1962
" (26) 2 D " 26 1923
Rocket Cain
" (2) 1 L 30-18-39 2 600
" (2) 2 M " 2 900

TOTAL 8 64

PENNZOIL-ZACHARY OPERATING CO.
Davis (6) 1 K 29-18-38 8 TSTM

STALLWORTH OIL & GAS, INC.
Laney Reese
" (36) 1 I 30-18-39 36 1056

WIESON, SAM K.
[illegible] 1 I 30-18-38 8 **2616
" (36) 2 O " 36 1165
" (28) 3 P " 28 1515

TOTAL 3 72

POOL TOTAL 17 251

HOUSE DRINKARD
Top Allowable 142 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 284 MCF
ANOCO PRODUCTION CO.
Cone A 1 F 12-20-38 4
Cone B 1 J " 8
House C 1 H 11-20-38 4
State U 1 P 2-20-38 9

TOTAL 4 25
GIL-MC OIL CORP.
Blankenship 2 L 12-20-38 6
" 3 M " 4

TOTAL 2 10
MALLARD EXPLORATION, INC.
Phillips House State
" 1 O 2-20-38 6

READ & STEVENS, INC.
Crown 1 B 11-20-38 35

WESTERN EQUIPMENT CO.
Hester 12 1 K 12-20-38 5
" 2 N " 7
" 3 O " 8

TOTAL 3 20

POOL TOTAL 11 96

HOUSE SAN ANDRES
Top Allowable 80 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 160 MCF
ANOCO PRODUCTION CO.
House A 1 I 11-20-38 7
House B 1 P " 6

TOTAL 2 13
GIL-MC OIL CORP.
Blankenship 1 E 12-20-38 4
" A 1 L " 6

TOTAL 2 10
PIERCE, RAY A.
House 1 D 13-20-38 6

UNION OIL CO. OF CALIFORNIA
S.B.Fletcher A
" 2 F 5-20-39 1
Kyte,C.H. 1 L " 3
" 2 K " 3

TOTAL 3 7

POOL TOTAL 8 36

HOUSE TUBB, EAST
Top Allowable 142 GOR Limit 2,000
Top Casinghead Gas Limit 284 MCF
ANOCO PRODUCTION CO.
Cone A (2) 1 F 12-20-38 2 **4167

HUMBLE CITY ATOKA
(40 Acre Spacing)
Top Allowable 445 GOR Limit 2,000
Top Casinghead Gas Limit 890 MCF
TEXAS AMERICAN OIL CORP.
Shipp (13) 4 I 11-17-37 13 **2230

HUMBLE CITY STRAWN
(80 Acre Spacing)
Top Allowable 534 GOR Limit 2,000
Top Casinghead Gas Limit 1068 MCF
TEXAS AMERICAN OIL CORP.
Shaw (20) 1 B 15-17-37 20 **19000
Shipp 1 K 11-17-37 Gas Well

HUNT DEVONIAN
Top Allowable 455 GOR Limit 2,000
Top Casinghead Gas Limit 910 MCF
W. A. MONCRIEF, JR.
State 8 (59) 1 G 8-16-34 50 TSTM

HUNT QUEEN, WEST
Top Allowable 80 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 160 MCF
BAXTER, MURPHY H.
Pure St. 1 G 15-16-33 6
" 2 I " 6

POOL TOTAL 2 12

IMPERIAL TUBB DRINKARD
Top Allowable 142 GOR Limit 2,000
Top Casinghead Gas Limit 284 MCF
ARCEE OIL COMPANY
E.C.Hill A(3) 4 J 27-23-37 3 **4266

IMPERIAL TUBB DRINKARD CONT'D
DAWSON EXPLORATION CORP.
Sutemount(18) 2 O 21-21-37 18 1300

GULF OIL CORP.
C.E.LaMunyon
" (5) 46 K 22-23-37 5 **14200

PETRO-LEWIS CORP.
Timmins B(5) 1 A 31-23-37 5 **2215

POOL TOTAL 4 31

INEZ PERMO PENNSYLVANIAN
(80 Acre Spacing)
Top Allowable 355 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 710 MCF
ANOCO PRODUCTION CO.
Dallas 1 H 26-11-33 11

RAINES, J. C. OIL CO.
So.Natural Gas Co.
" 1 I 1-11-33 Gas Well
Acreage factor 1.360

BROWN, THE MAURICE L. CO.
Murphy St. 2 J 13-10-33 3

KAISER-FRANCIS OIL CO.
Murphy A State
" 1 J 24-10-33 No C-115
" 2 I 21-10-33 "

TOTAL
LAYTON ENTERPRISES, INC.
St. EF Com. 1 P 6-11-34 22
Acreage factor 1.175
" 3 K " 31
Acreage factor 1.162
" 4 L " 58
Acreage factor 1.025
" 5 M 5-11-34 30

[illegible] 141

MCF OIL CORP.
Nine Ranch Inc. State
" 1 C 22-10-33 43
" 2 F " 30
Shell St. 3 N " 79

TOTAL 3 152
PENNZOIL COMPANY
Harris St. 1 L 5-11-34 12
Acreage factor .675

READ & STEVENS, INC.
State D 1 A 28-10-33 17
State CF 1 A 33-10-33 45

TOTAL 2 62
SOUTHLAND ROYALTY CO.
Epperson 3 O 24-11-33 12
Farrar A 1 A 13-11-33 23
Farrar B 1 O " 35
State A 1 O 5-11-34 34

TOTAL 4 104

POOL TOTAL 16 485

JAL DELAWARE, WEST
Top Allowable 107 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 214 MCF
GETTY OIL CO.
West Jal A 1 K 21-25-36 6
West Jal Ut. 1 H 20-25-36 12

POOL TOTAL 2 18

JAL SERAN, WEST
Top Allowable 320 GOR Limit 2,000
Top Casinghead Gas Limit 640 MCF
TEXACO INC.
C.Elliott Federal
" (11) 1 J 8-25-36 11 1364

JAL-MAT SATES SEVEN RIVERS
Top Allowable 80 GOR Limit 10,000
Top Casinghead Gas Limit 800 MCF
ANTWEIL, MORRIS R.
Federal(2) 1 N 24-25-36 2 6950
M.Forrest(9) 2 M " 9 1353
" (7) 3 I 23-25-36 7 1657

TOTAL 3 18
APOLLO OIL CO.
Brown (1) 2 D 25-25-36 1 3000
" (2) 4 F " 2 3500
Brown A/c-1
" (7) 3 C " 7 2143
W.T.Joyner(4) 2 I 26-25-36 4 7518

TOTAL 4 14
ARCO OIL & GAS CO.
B.Davis ARC
" (8) 3 K 34-23-36 8 **10625
W.B.Guthrie WN
" (22) 3 J 31-23-36 12 **[illegible]
W.F.Hanagan
" 5 N 12-25-36 6
State 157-8(10) 3 D 7-22-36 10 3900
Acreage factor .950
" (22) 4 L " 12 1609
Acreage factor .900

TOTAL 5 58
ARCO, SAM B.
Everett(16) 1 K 35-24-36 16 2500
" (5) 2 N " 5 800
Arnott Ramsay A
" (8) 5 G 2-25-36 8 2125
State M(7) 3-1 P 36-24-36 7 **22714
" (18) 2 O " 18 8778

TOTAL 6 54
BERRY, O. H.
J.L.Isbell 7 H 25-24-36 No C-116

BETTIS, BOYLE & STOVALL
Johns Fed.(15) 1 A 20-25-37 15 1467
Justis, B. M. "A"
" (6) 3 B " 6 8167
" (9) 6 H " 9 1111
Justis, B. M. "B"
" (45) 4 A 29-25-37 45 956
" (16) 7 F 20-25-36 10 9000
" (3) 8 G " 3 **21667
Justis, B. M. "C"
" (15) 5 C " 15 800
*Justis, V. H.
" (55) 2 D 20-25-36 55 1236
B.T.Lanehart
" (10) 2 F 21-25-37 10 3100
" (8) 3 C " 8 3250

PETERSON EISENMAN, SOUTH
(40 Acre Spacing)
Top Allowable 247 GOR Limit 2,000
Top Casinghead Gas Limit 534 MCF
ENERGY EXPLORATION, INC.
Lansdale(135) 1 K 31-5-33 247 482
" (210) 6 D " 210 1414
" (264) 7 P 30-5-33 247 795
" (217) 8 L " 209 553
" (42) 9 P 25-5-32 43 605

TOTAL 5 996
PHILLIPS PETROLEUM CO.
Lansdale A
" (220) 1 J 31-5-33 200 440
" (317) 2 F " 267 290
" (42) 3 N " 42 1665
" (270) 4 A " 267 460
Lansdale State
" (33) 1 B 36-5-32 33 30

TOTAL 5 809

POOL TOTAL 10 1805
PETERSON, SOUTH
Spacing Oil - 40 Gas - 320
Top Oil Allowable 427 GOR Limit 4,000
Top Gas Allowable MCFD
Oil - 1208 Gas - 3416
AMOCO PRODUCTION CO.
Peterson A Gas Com.
" 1 B 19-5-33 GW AF 1,000
Peterson C
" (12) 1 I 18-5-33 22 3864
Paddock(42) 1 M 17-5-33 42 3143
Swearingen A Gas Com.
" (6) 1 J 19-5-32 6 2167
Swearingen B
" (6) 4 E 20-5-32 52 3346
Swearingen C
" (31) 1 N 18-5-32 33 **5061
Swearingen D
" (36) 1 L 20-5-33 35 **4257

POOL TOTAL 6 199
PENASCO DRAW, NORTH
Top Allowable 247 GOR Limit 2,000
Top Casinghead Gas Limit 494 MCF
ENERGY EXPLORATION, INC.
Aroco St.(154) 1 L 16-4-33 168 1233

PENASCO DRAW, SOUTH
Top Allowable 197 GOR Limit 4,000
Top Casinghead Gas Limit 788 MCF
ENERGY EXPLORATION, INC.
Lansdale(31) 3 G 31-5-33 36 1513
" (94) 4 C " 96 **2319

TOTAL 2 132
PHILLIPS PETROLEUM CO.
Lansdale A
" (33) 5 N 30-5-33 33 30

POOL TOTAL 3 165
PENASCO DRAW, SOUTH
(80 Acre Spacing)
Top Allowable 355 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 710 MCF
AMERICAN PETROFINA CO. OF TEXAS
Federal E 1 K 20-8-36 60
" 2 N " 100
Federal J 1 K 23-8-36 10

TOTAL 3 170

HUBER, J. M. CORP.
Perry Fed. 1 O 17-8-36 15

O'NEILL, JOSEPH T., JR.
Federal H 1 I 17-8-36 6

PETROLEUM CORP. OF TEXAS
Bates Fed. 1 B 22-8-36 10

READ & STEVENS, INC.
H.S.Hatch 1 F 20-8-36 25

POOL TOTAL 7 226
PRAIRIE DEVONIAN, SOUTH
(40 Acre Spacing)
Top Allowable 490 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 980 MCF
MONUMENT ENERGY CORP.
Petrofina Federal
" 1 N 20-8-36 43

NEELY, CARROLL
Lone Star Federal
" 1 A 20-8-36 No C-115

POOL TOTAL 1 43
PRAIRIE SAN ANDRES, SOUTH
Top Allowable 80 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 160 MCF
HUBER, J. M. CORP.
Perry Fed. 2 P 17-8-36 TA

O'NEILL, JOSEPH T., JR.
State L 1 M 16-8-36 15

PRAIRIE WOLFCAMP, SOUTH
Top Allowable 230 GOR Limit 2,000
Top Casinghead Gas Limit 460 MCF
AMERICAN PETROFINA CO. OF TEXAS
Federal C(2) 1 G 20-8-36 2 TSTM

SNB OPERATING CO.
New Mexico Federal
" 1 I 20-8-36 No C-116

POOL TOTAL 1 2
QUAIL RIDGE
Top Allowable 107 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 214 MCF
READ & STEVENS, INC.
Atlantic Richfield
" 1 L 13-19-34 20
Federal A 1 J 14-19-34 11
Hooper B 1 M 7-19-34 10
Pennzoil St. 1 G 11-19-34 14
Quail State 1 C " 23
" 2 J " 107
" 3Y I " 23
" 4 P " 10
State BG 1 H 14-19-34 10
" 2 G " 24
" 3 B " 19
State C 1 K 11-19-34 8
Waiteco St. 1 D " 48
" 2 H " 25

POOL TOTAL 14 362

QUAIL RIDGE DEEP SERIES
Top Allowable 120 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 640 MCF
ARCO OIL & GAS CO.
Mescalero Ridge Unit
" 1 D 21-19-34 98
Mescalero Ridge Unit
" 22 C 21-19-34 32

TOTAL 2 130
GULF OIL CORP.
Lea ED St. NCT-A
" 1 M 16-19-34 110

UNION OIL CO. OF CALIFORNIA
Pipeline 16 State
" 1 G 16-19-34 320

POOL TOTAL 4 560
QUAIL RIDGE YATES, SOUTH
Top Allowable 80 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 160 MCF
ARCO OIL & GAS CO.
Mescalero Ridge Unit
" 32 D 28-19-34 12

QUERECHO PLAINS BONE SPRINGS
Top Allowable 230 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 460 MCF
MEWBOURNE OIL CO.
Federal C 1 K 27-18-32 115

PETROLEUM DEVELOPMENT CORP.
McKay West Fed.
" 1 F 34-18-32 122

POOL TOTAL 2 237
QUERECHO PLAINS DELAWARE
Top Allowable 142 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 284 MCF
YATES PETROLEUM CORP.
Sweeney Fed. 1 C 25-18-32 6

QUERECHO PLAINS PENN
Top Allowable 365 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 730 MCF
PETROLEUM CORP. OF TEXAS
Quer.Pl.Un. 1 K 22-18-32 29

QUERECHO PLAINS QUEEN ASSOCIATED
Spacing Oil - 40 Gas - 160
Top Oil Allowable 80 GOR Limit 2,000
Top Gas Allowable MCFD
Oil - 1:0 Gas - 640
BURLESON, INC., LEWIS B.
Querecho Plains Queen Waterflood Project
Anadarko Fed. 1 N 27-18-32 SI
" 2 K " 24
" 3 L " 19
" 4 M " 26
" 6 N " Input

TOTAL 3 69
ESPERANZA ENERGY CORP.
Edith Fed.(10) 2 J 23-18-32 10 **2200
Marshall Federal
" (12) 1 N " 12 1167

TOTAL 2 22

MEWBOURNE OIL CO.
Federal E(14) 2 I 27-18-32 14 571
" (17) 3 E " 17 535
Federal F 1 L 23-18-32 GW AF 1,75

TOTAL 2 31
THE SUPERIOR OIL CO.
Government K
" (6) 1 K 23-18-32 8 1375

TEXACO OIL CO.
Cedar Lake(6) 1 F 23-18-32 6 500

POOL TOTAL 9 136
QUERECHO PLAINS YATES
Top Allowable 80 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 160 MCF
BURLESON, INC., LEWIS B.
Berry Fed. 1 E 35-18-32 7

RANGER LAKE HIGH
(80 Acre Spacing)
Top Allowable 355 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 710 MCF
PHILLIPS PETROLEUM CO.
Ranger 7 L 26-12-34 36

RANGER LAKE PENN
(80 Acre Spacing)
Top Allowable 400 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 800 MCF
PHILLIPS PETROLEUM CO.
Ranger 7 D 26-12-34 90
" 13 G 23-12-34 45

TOTAL 2 135
RAPID COMPANY, INC.
Ranger Lake 1 N 11-12-34 70

POOL TOTAL 3 205
RANGER LAKE SAN ANDRES
Top Allowable 80 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 160 MCF
RAPID COMPANY, INC.
Ranger Lake 3 N 11-12-34 10

REEVES QUEEN
Top Allowable 80 GOR Limit 2,000
Top Casinghead Gas Limit 160 MCF
ARCO OIL & GAS CO.
Lea 403 State
" (12) 3 N 22-18-35 12 333

HARVEY E. YATES CO.
Mobil 27 State
" (8) 1 A 27-18-35 8 **14000
State 22(57) 1 P 22-18-35 57 **2315

TOTAL 2 65

POOL TOTAL 3 77
RHODES YATES SEVEN RIVERS
Top Allowable 80 GOR Limit 10,000
Top Casinghead Gas Limit 800 MCF
EL PASO NATURAL GAS CO.
Lineberry(2) 1 C 28-26-37 2 6897

EL PASO NATURAL GAS CO.
Moberly Rhodes Waterflood Project
Moberly 1 F 21-26-37 6

VACUUM MIDDLE PENN
Top Allowable 320 GOR Limit 2,000
Top Casinghead Gas Limit 640 MCF
MOBIL PRODUCING TEXAS & N. M., INC.
Bridges State

"	(43)	126 J	11-17-34	40		900
"	(11)	133 B	12-17-34	11		1091
TOTAL		2		51		

MOBIL PRODUCING TEXAS & N. M., INC.
Vacuum Middle Penn Waterflood Project
Bridges State

"	120 N	13-17-34	7		
"	121 L	"	5		
"	145 D	"	134		
"	147 F	"	Input		
TOTAL		3	146		
POOL TOTAL		5	197		

VACUUM PENN, NORTHWEST
Top Allowable 355 GOR Limit 2,000
Top Casinghead Gas Limit 710 MCF
PENNZOIL COMPANY
Gallagher "B" State

"	(6)	1 D	8-17-34	6	1650

VACUUM UPPER PENN
(80 Acre Spacing)
Top Allowable 400 GOR Limit 2,000
Top Casinghead Gas Limit 800 MCF
GETTY OIL CO.

State BA(12)		6 D	36-17-34	12		**8292
"	(23)	8 B	"	23		**3729
TOTAL		2		35		

MARATHON OIL CO.
McCallister State

"	(28)	7 N	25-17-34	26	**3571

Warn State A/c-1

"	(31)	3 F	31-17-35	31	**6285
TOTAL		2		57	

MOBIL PRODUCING TEXAS & N. M., INC.
Bridges State

"	(43)	126 B	25-17-34	45	**5911
"	(43)	103 F	"	43	**4933
"	(45)	130 N	13-17-34	45	**2003
TOTAL		3		133	

TEXACO INC.
N.M. O State NCT-1

"	(7)	18 H	36-17-34	7	**2714

N.M. Q State

"	(31)	4 P	25-17-34	31	**11490

Texaco Mobil State Com.

"	(13)	1 H	"	10	1410

Texaco Shell State Com.

"	(3)	1 J	"	3	1367
TOTAL		4		51	
POOL TOTAL		11		276	

VACUUM WOLFCAMP
(80 Acre Spacing)
Top Allowable 355 GOR Limit 2,000
Top Casinghead Gas Limit 710 MCF
CONOCO INC.
State H-35(28) 7 B 35-17-34 28 **2466

GETTY OIL CO.

State BA(6)		6 D	36-17-34	6		**8292
"	(11)	8 B	"	11		**3729
TOTAL		2		17		

MARATHON OIL CO.
McCallister State

"	(1)	5 M	25-17-34	1	**4300
"	(4)	7 N	"	4	**3571

Warn State A/c-1

"	(11)	3 F	31-17-35	11	**6295
TOTAL		3		16	

MOBIL PRODUCING TEXAS & N. M., INC.
Bridges State

"	(24) 93	J	26-17-34	24	**4019
"	(84) 108	F	25-17-34	84	1357

State CC Com.

"	(1)	1 L	36-17-34	1	**2614
TOTAL		3		109	

PHILLIPS PETROLEUM CO.
Santa Fe(35) 57 L 31-17-35 35 **2816
Acreage factor .938

TEXACO INC.

N.M.L St.(6)		6 B	1-18-34	6	**28233
N.M.M St.(3)		5 D	"	3	**3767
"	(5)	7 F	"	5	**29120
N.M.N St.(15)		6 L	30-17-35	15	**5253

Acreage factor .938

"	(26)	8 D	"	24	379

Acreage factor .938
N.M. O State NCT-1

"	(1)	11 F	36-17-34	1	**5100
"	(25)	14 J	"	25	**6656
"	(2)	17 N	"	1	**71200
"	(62)	18 H	"	62	**2763
N.M.Q St.(9)		4 P	25-17-34	9	**11300

Texaco Mobil State Com.

"	(3)	1 N	"	5	1420

Texaco Shell St. Com.

"	(4)	1 J	25-17-34	4	1550
TOTAL		12		160	
POOL TOTAL		22		368	

VACUUM WOLFCAMP, EAST
Top Allowable 275 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 550 MCF
TEXAS PACIFIC OIL CO., INC.
State AF 3 L 8-18-35 70

VACUUM LOWER WOLFCAMP, NORTH
(80 Acre Spacing)
Top Allowable 400 GOR Limit 2,000
Top Casinghead Gas Limit 800 MCF
KOCH EXPLORATION CO.
Pennzoil Koch B

"	(10)	2 F	4-17-34	10	1080

PENNZOIL COMPANY
Gallagher State

"	(19)	1 A	3-17-34	19	**3842
Mobil St.(33)		1 G	"	33	1545

Rock Island State

"	(5)	2 E	"	5	**2444

Rock Island B State

"	(10)	1 A	4-17-34	10	**6837

Acreage factor 1.038

TOTAL		4		67	
POOL TOTAL		5		77	

VACUUM WOLFCAMP, NORTHWEST
Top Allowable 320 GOR Limit 2,000
Top Casinghead Gas Limit 640 MCF
BARNES, J. C. OIL CO.
Lea-Nex State

"	(30)	1 L	5-17-34	30	**3400
"	(10)	2 J	"	10	**2305

Lea St. (20) 1 F " 20 **2476

"	(10)	2 H	"	10	**2239
TOTAL		4		70	

PENNZOIL COMPANY
Gallagher "8" State

"	(5)	1 D	8-17-34	5	1650

Sinclair "6" State

"	(7)	1 P	6-17-34	7	735
TOTAL		2		12	
POOL TOTAL		6		82	

VACUUM YATES
Top Allowable 80 GOR Limit 2,000
Top Casinghead Gas Limit 160 MCF
MARATHON OIL CO.
Warn State A/c-3

"	(2)	4 H	33-17-35	2	**12500

MOBIL PRODUCING TEXAS & N. M., INC.

State M(5)		5 C	34-17-35	5	**9800
"	(1)	6 D	"	1	**45000
"	(1)	7 E	"	1	**7000
"	(1)	8 F	"	1	TSTM
TOTAL		4		8	

PHILLIPS PETROLEUM CO.

Santa Fe(3)		97 N	33-17-35	3	**2573
"	(7)	113 B	34-17-35	7	**2984
"	(7)	127 G	"	7	1175
TOTAL		3		17	
POOL TOTAL		8		27	

VADA PENNSYLVANIAN
(160 Acre Spacing)
Top Allowable 382 GOR Limit 10,000
Top Casinghead Gas Limit 3820
AMOCO PRODUCTION CO.

Ainsworth(66)		1 H	35-9-33	66	1182
"	(14)	2 C	"	14	4847

Ainsworth A

"	(14)	1 P	26-9-33	14	1429

Ainsworth B Oil Com.

"	(8)	1 G	26-9-33	8	**11875

Ainsworth C Oil Com.

"	(6)	1 O	23-9-33	6	5167

Cross Oil Com.

"	(38)	1 O	35-9-33	38	6816
Hutcherson(8)		1 H	9-9-34	8	**12625

Midwest E Fed. Oil Com.

"	(86)	1 E	25-9-33	86	**10409

Midwest G Fed. Oil Com.

"	(22)	1 F	31-9-34	22	6000
Pruitt A(1)		2 G	17-9-34	1	TSTM
Pruitt B(1)		1 J	18-9-34	1	TSTM
Pruitt D(1)		1 D	17-9-34	1	TSTM
State K(66)		2 A	2-10-33	66	2712
State L(44)		1 K	2-10-33	44	2409
"	(55)	2 C	"	55	2709
Tankersley(8)		3 F	30-9-34	8	**15375

Wilson Oil Com.

"	(10)	1 B	25-9-33	10	7000
TOTAL		17		448	

BELCO PET. CORP.

Henry	(22)	1 A	5-9-35	22	TSTM

BROWN, THE MAURICE L. CO.
S.E.Anderson B

"		1 B	9-9-35	No C-116	
Barnes A(4)		2 J	7-9-35	6	5833

Barnes 687 Ltd.

"	(36)	1 I	7-9-36	36	1022

Bates Fed. Com.

"	(3)	1 I	11-9-34	3	750

Bond State Com.

"	(14)	1 M	32-8-35	14	3500

Duncan Fed. Com.

"	(5)	1 G	7-9-34	6	**18667

Holt St. Com.

"	(47)	1 D	4-10-34	47	2056

Hooper (2) 1 H 11-9-35 2 1550

Hugo 695 Ltd.

"	(11)	2 L	15-9-35	11	727

Humble State

"	(41)	2 I	16-9-35	41	2561

Hutch 7101 JV-D

"	(11)	1 D	10-9-34	11	4091

Lane B 694 Ltd.

"	(2)	3 C	1-10-33	2	2500

McNulty 7101 JV-D

"	(15)	1 L	3-9-34	15	526
"	(6)	2 F	"	6	500

Milo 702 JV-D

"	(19)	1 N	33-8-35	19	4789

Star 695 Ltd.

"	(53)	1 F	4-9-35	53	125

Starman 694 Ltd.

"	(28)	1 H	"	28	1429

State S(14) 1 A 8-10-34 14 2000

State 17(28) 1 K 17-10-34 28 1429

Sunoco Fed.

"	(11)	1 K	5-9-34	11	**8727

Sunray 693 Ltd.

"	(146)	1 N	36-9-33	146	1849
"	(41)	3 H	"	41	4341

Walker 693 Ltd.

"	(25)	1 M	6-9-36	25	480

Acreage factor .975
Will 693 Ltd.

"	(38)	3 N	34-8-35	38	833
Willie (11)		2 I	4-9-34	11	455
TOTAL		24		626	

BROWN, TOM, INC.
Cities Fed.

"	(53)	1 J	26-8-36	53	133
"	(17)	2 C	"	17	2195

Federal 1 D 33-8-36 Gas Well

"	(36)	2 B	"	36	2841

Federal C(9) 1 L 28-8-36 9 7666

Federal D 1 L 27-8-36 No C-116

Federal E(76) 1 J 28-8-36 76 133

TOTAL		5		191	

BURNS, R. L., CORP.
Vada Pruitt

"	(41)	1 K	1-9-34	41	TSTM

CHAMPLIN PETROLEUM CORP.

State 15(33)		3 O	18-10-34	33	4697

COQUINA OIL CORP.

Carter (11)		1 N	25-8-35	11	1818

DAMSON OIL CORP.

Sheridan(25)		1 M	13-9-33	25	1600

Sheridan A

"	(35)	1 C	24-9-33	35	1000
TOTAL		2		60	

Enserch Exploration, Inc.
Amoco State No. 1
Roosevelt County, New Mexico

Date of Completion:	6-4-80
Elevation (GR):	4387.7'
Perforated Production Interval:	7826'-37'
Date of Potential:	6-6-80
Initial Potential:	172.5 BO + 220 MCFG + 2 BW, GOR = 1275, FTP = 150 psig
Original Bottom Hole Pressure:	2745 psia @ 7832' 6-11-80
Oil Gravity:	45.5° API
Cumulative Production:	6076 BO 8-5-80
Current Status:	Shut-in; awaiting pipeline connection

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
ENSERCH EXHIBIT NO. 3
CASE NO. 7072

Enserch Exploration, Inc.
Amoco State No. 2
Roosevelt County, New Mexico

Date of Completion:	10-16-80
Elevation (GR):	4394.6'
Perforated Production Interval:	7825'-41', 7848'-55'
Date of Potential:	10-18-80
Initial Potnetial:	327 BO + 120 MCFG + 0 BW, GOR = 367, FTP = 200 psig
Original Bottom Hole Pressure:	currently testing
Oil Gravity:	45.6° API
Cumulative Production:	538 BO 10-20-80
Current Status:	Shut-in; pressure build-up survey

ENSERCH EXPLORATION, INC.
BHPBU Survey
June 7/11, 1980
Midland, Texas

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
ENSERCH EXHIBIT NO. 4
CASE NO. 7072

Well : AMOCO STATE NO. 1

Field : NORTH PETERSON - PENNSYLVANIAN POOL

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1980 Date	Status of Well	Time	Elapsed Time Hrs.Min.	LOG T + dt / dt	Daily Rate Oil B/D	Wellhead Pressure Tubing	BHP @ 7750' Psig	BHP @ 7832' Psig
6-7	Arrived location							
"	Flowing 20/64" pos. ck	08:30						
"	Gradient Traverse	09:00						
"	Inst. @ 7750'	10:30				121	1185	1203
"	" " "	11:30					1189	1207
"	" " "	12:30			210		1177	1195
"	Shut-in for build up	12:30	0 00					
"	" " " " "	12:36	0 06	2.839			1196	1220
"	" " " " "	12:42	0 12	2.539			1211	1235
"	" " " " "	12:48	0 18	2.364			1225	1249
"	" " " " "	12:54	0 24	2.239			1237	1261
"	" " " " "	13:00	0 30	2.143			1250	1274
"	" " " " "	13:06	0 36	2.064			1262	1286
"	" " " " "	13:12	0 42	1.998			1278	1302
"	" " " " "	13:18	0 48	1.940			1295	1319
"	" " " " "	13:24	0 54	1.890			1307	1331
"	" " " " "	13:30	1 00	1.845			1322	1346
"	" " " " "	13:42	1 12	1.767			1348	1372
"	" " " " "	13:54	1 24	1.701			1371	1395
"	" " " " "	14:06	1 36	1.645			1398	1422
"	" " " " "	14:18	1 48	1.595			1423	1447
"	" " " " "	14:30	2 00	1.550			1447	1471
"	" " " " "	15:00	2 30	1.456			1505	1529
"	" " " " "	15:30	3 00	1.380			1560	1584

ENSERCH EXPLORATION, INC.
BHPBU Survey
June 7/11, 1980
Midland, Texas

Well : AMOCO STATE NO. 1

Field : NORTH PETERSON - PENNSYLVANIAN POOL

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1980 Date	Status of Well	Time	Elapsed Time Hrs.	Min.	LOG T + dt / dt	Daily Rate Oil B/D	Wellhead Pressure Tubing	BHP @ 7750' Psig	BHP @ 7832' Psig
6-7	Continued Shut-in	16:00	3	30	1.316			1616	1640
"	" " "	16:30	4	00	1.261			1667	1691
"	" " "	17:00	4	30	1.213			1717	1741
"	" " "	17:30	5	00	1.170			1766	1790
"	" " "	18:30	5	00	1.097			1857	1881
"	" " "	19:30	7	00	1.036			1941	1965
"	" " "	20:30	8	00	0.983			2013	2037
"	" " "	21:30	9	00	0.938			2079	2103
"	" " "	22:30	10	00	0.898			2136	2160
6-8	" " "	00:30	12	00	0.829			2230	2254
"	" " "	02:30	14	00	0.773			2300	2324
"	" " "	04:30	16	00	0.725			2347	2371
"	" " "	06:30	18	00	0.684			2382	2406
"	" " "	08:30	20	00	0.648			2407	2431
"	" " "	10:30	22	00	0.617			2429	2453
"	" " "	12:30	24	00	0.588			2446	2470
"	" " "	14:30	26	00	0.563			2458	2482
"	" " "	16:30	28	00	0.540			2470	2494
"	" " "	18:30	30	00	0.519			2481	2505
"	" " "	20:30	32	00	0.499			2489	2513
"	" " "	22:30	34	00	0.481			2497	2521
6-9	" " "	00:30	36	00	0.465			2505	2529
"	" " "	02:30	38	00	0.450			2512	2536
"	" " "	04:30	40	00	0.435			2518	2542

ENSERCH EXPLORATION, INC.
BHPBU Survey
June 7/11, 1980
Midland, Texas

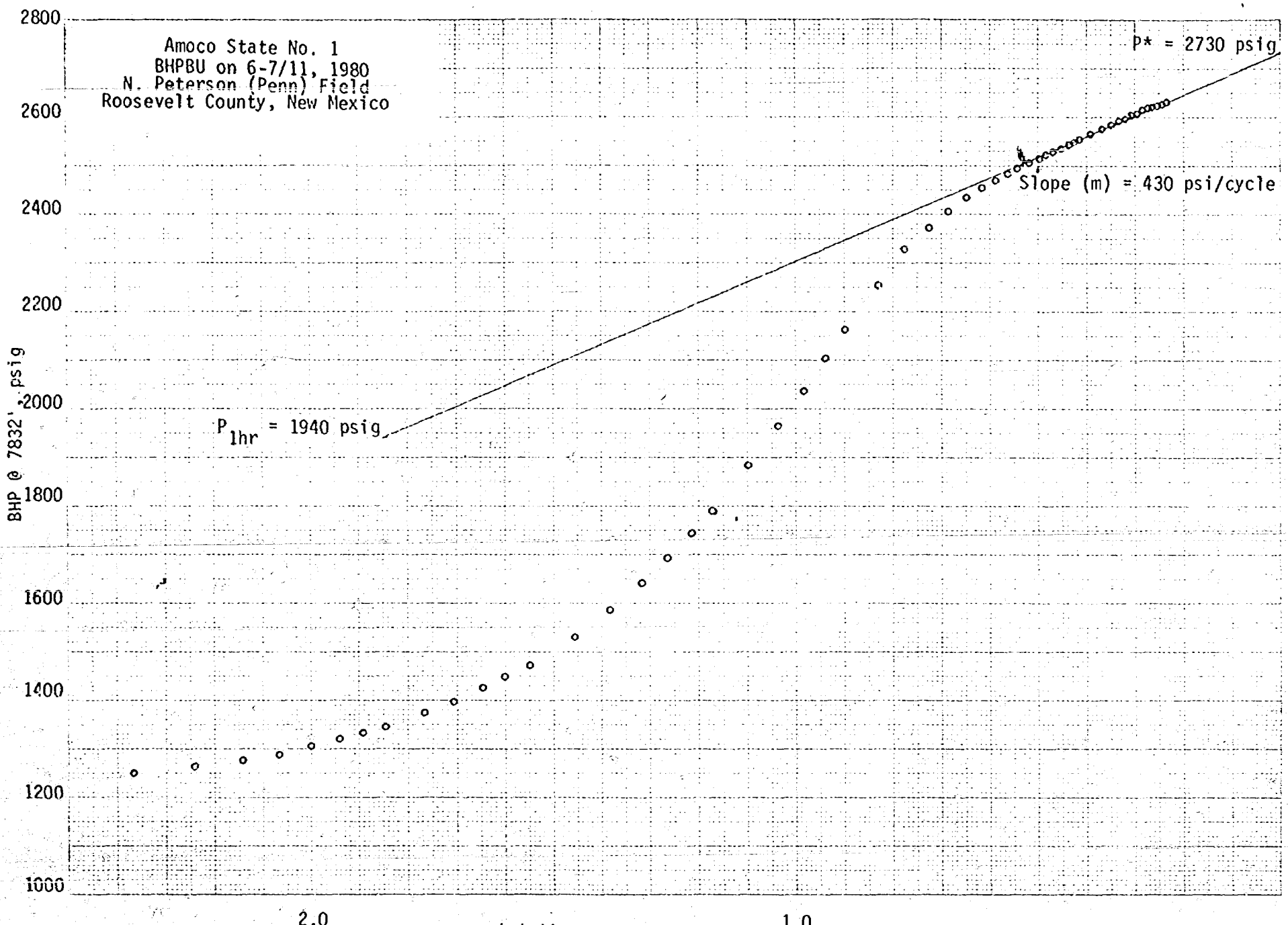
Well : AMOCO STATE NO. 1

Field : NORTH PETERSON - PENNSYLVANIAN POOL

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1980 Date	Status of Well	Time	Elapsed Time Hrs.	Min.	LOG T + dt / dt	Daily Rate Oil B/D	Wellhead Pressure Tubing	BHP @ 7750' Psig	BHP @ 7832' Psig
6-9	Continued Shut-in	06:30	42	00	0.422			2524	2548
"	Pulled Instrument	08:00	43	30	0.413			2528	2552
"	Instrument @ 7750'	12:00	47	30	0.390		744	2542	2566
"	"	12:30	48	00	0.387			2545	2569
"	"	16:30	52	00	0.367			2551	2575
"	"	20:30	56	00	0.349			2559	2583
6-10	"	00:30	60	00	0.332			2567	2591
"	"	04:30	64	00	0.318			2573	2597
"	"	08:30	68	00	0.304			2580	2604
"	"	12:30	72	00	0.292			2585	2609
"	"	16:30	76	00	0.281			2589	2613
"	"	20:30	80	00	0.270			2593	2617
6-11	"	00:30	84	00	0.260			2596	2620
"	"	04:30	88	00	0.251			2599	2623
"	"	08:30	92	00	0.243			2602	2626
"	Off bottom	10:06	93	36	0.240			2603	2627
"	Gradient Traverse	12:50	96	20	0.235		760	2606	2630
"	Off location	14:45							

Amoco State No. 1
BHPBU on 6-7/11, 1980
N. Peterson (Penn) Field
Roosevelt County, New Mexico



K&E 10 X 10 TO THE CENTIMETER 46 1510
10 X 25 CM. MADE IN U.S.A.
KEUFFEL & ESSER CO.

OIL

WELL PRESSURE ANALYSIS
West Texas District

Test Date: June 7/11, 1980 — Lease: Amoco State

Formation: Pennsylvanian — Well No.: 1

Casing Size: 5-1/2", 15.5# — Field: N. Peterson (Penn)

Cum. Prod. Np(Bbl): 604 — State: New Mexico

Prod. Rate (Bbl/Day): 210

Prod. Life = 24Np/q: 69 hrs.

I. Calculation of kh (md-ft) and k (md):

$$kh = \frac{162.6\, q\mu B}{m} \; ; \quad k = \frac{kh}{h}$$

h = 11 ft — μ = 0.363 cp

q = 210 B/D — B = 1.411

m = 430 psi/cycle

$$kh = \frac{162.6 \times (\ 210\ ) \times (0.363) \times (1.411\ )}{(\ 430\ )} = 40.67$$

$$k = \frac{(\ 40.67\ )}{(\ 11\ )} = 3.7 \text{ md}$$

II. Calculation of Skin Effect, s; and Pressure Loss Due to Skin, Δp_{skin} (psi):

$$s = 1.151\left[\frac{p_{1\text{-hr}} - p_{wf}}{m} - \log\left(\frac{k}{\phi\mu c r_w^2}\right) + 3.23\right]$$

$$s = 1.151\left[\frac{(1940\ )-(1195\ )}{(\ 430\ )} - \log\left[\frac{(\ 3.7\ )}{(0.04)(0.363)(16.7_{\times 10^{-6}})(0.229^2)}\right] + 3.23\right] = -4.03$$

$\Delta p_{skin} = (m) \times 0.87\ (s)$ — $\Delta p_{skin} = (\ 430\ ) \times 0.87\ (-4.03) = -1{,}508$ psi

k = 3.7 md — r_w = 0.229 ft

ϕ = 0.04 — $p_{1\ hr}$ = 1,940 psig

μ = 0.363 cp — p_{wf} = 1,195 psig

c = 16.7×10^{-6} psi^{-1} — m = 430 psi/cycle

III. Calculation of Productivity Index (B/D-psi) and Flow Efficiency:

$$J_{(actual)} = \frac{q}{p^* - p_{wf}} \qquad J_{(ideal)} = \frac{q}{(p^* - p_{wf}) - \Delta p_{skin}}$$

$$J_{(actual)} = \frac{(\ 210\ )}{(2730\ )-(\ 1195)} \qquad J_{(ideal)} = \frac{(\ 210\ )}{[(\ 2730)-(\ 1195)] - (-1508)}$$

$J_{(actual)}$ = 0.137 — $J_{(ideal)}$ = 0.069

Δp_{skin} = -1508 psi — p^* = 2730 psig

q = 210 B/D — p_{wf} = 1195 psig

$$\text{Flow Efficiency} = \frac{J_{(actual)}}{J_{(ideal)}} = \frac{(\ 0.137\ )}{(\ 0.069\ )} = 1.99$$

PARAMETERS:

PENN POOLS DEVELOPED ON 80-ACRE SPACING

DISTRICT I PRORATION SCHEDULE, SEPT. THRU DEC., 1930

COMPANY LEASE	WELL	UNIT	S.T.R.	SEPT. THRU DEC. DAILY	GOR
* EFFECTIVE GAS-OIL RATIO					
** NON-EFFECTIVE GAS-OIL RATIO					
() AMOUNT OF REDUCTION OF LATEST GAS-OIL RATIO TEST					
AIRCRAFT 1-A-1 ANDRES SPRING					
Top Allowable 330 GOR Limit 2,000					
Top Casinghead Gas Limit 660 MCF					
[illegible]					
State F-2	3	E	25-18-34	51	
BASS ENTERPRISES PROD. CO.					
Aircraft State					
"	2	P	25-18-34	22	
AIRCRAFT UPPER ANDRES SPRING					
Top Allowable [illegible] GOR Limit 2,000					
Top Casinghead Gas Limit 550 MCF					
AMOCO PRODUCTION CO.					
State 32(274)	1	K	25-18-34	275	500
" (274)	2	N	"	275	387
" (274)	4	O	"	15	1933
State [illegible]	3	P	26-18-34	275	758
TOTAL	4			840	
BASS ENTERPRISES PROD. CO.					
Aircraft State					
"	1	D	31-18-35	121	
Acreage factor .950					
GULF OIL CORPORATION					
Lea "A" State					
" (273)	1	O	25-18-34	275	759
" (273)	2	P	"	275	600
" (273)	3	I	"	275	527
" (273)	4	K	"	275	345
TOTAL	4			1044	
POOL TOTAL	9			2056	
ANDRES PENN					
Top Allowable 165 GOR Limit 2,000					
Top Casinghead Gas Limit 660 MCF					
AMOCO PRODUCTION CO.					
State M(273)	1	P	26-18-34	75	1600
ANDRES PENN (80 Acre Spacing)					
Top Allowable 355 GOR Limit 2,000 No Test Required					
Top Casinghead Gas Limit 710 MCF					
BASS, ENLOE L. JR.					
Merrill	2	M	10-9-36	46	
"	2	E	"	52	
TOTAL	2			98	
DISCOVERY OPERATING					
Mobil Atlantic Federal					
"	1	D	10-9-36	15	
FAIREN, DAVID					
Federal A	1	L	35-E-37	3	
K. Fed.	3	L	27-S-37	Gas Well	
FLA COMPANY					
Atlantic Fed.	1	N	28-S-37	Gas Well	

COMPANY LEASE	WELL	UNIT	S.T.R.	SEPT. THRU DEC. DAILY	GOR
GETTY OIL CO.					
Las Cruces B	1	D	30-S-37	132	
"	2	S	"	Gas Well	
"	3	H	"	Gas Well	
"	4	F	"	218	
TOTAL	2			350	
GULF REFINING PRODUCING CO.					
Hays Fed.	1	N	19-S-37	Gas Well	
INTRAN, TOM L.					
K.Davis Fed.	2	F	28-S-37	Gas Well	
"	3	H	"	1	
H.L.Hayes et al					
"	3	L	29-S-37	1	
"	4	N	"	Gas Well	
TOTAL	2			2	
MARATHON OIL CO.					
State BPA	1	D	32-S-37	135	
"	2	F	"	100	
TOTAL	2			235	
M & M OPERATING COMPANY					
Hayes Fed.	2	P	30-S-37	16	
"	3	N	"	120	
TOTAL	2			136	
MOBIL PRODUCING TEXAS & N. M., INC.					
Cox Fed.	1	M	1-S-36	23	
O'NEILL, JOSEPH T., JR.					
Federal K	1	D	34-S-37	80	
TIPTON, DAPHNE A.					
Shearn Fed.	1	P	13-S-36	17	
YATES DRILLING CO.					
LM Yates	1	N	31-S-37	6	
"	3	F	"	14	
Lea	1	O	33-S-37	Gas Well	
"	2	F	"	Gas Well	
TOTAL	2			20	
POOL TOTAL	17			984	
ALLISON SAN ANDRES, EAST					
Top Allowable 80 GOR Limit 2,000					
Top Casinghead Gas Limit 160 MCF					
NATIONCO OIL & GAS CO.					
Ingram 28 Fed.					
" (6)	1	O	28-S-37	6	**2000
Ingram 33 Fed.					
" (35)	1	O	33-S-37	35	**2000
POOL TOTAL	2			41	
ANDERSON RANCH DEVONIAN					
Top Allowable 455 GOR Limit 2,000 No Gas-Test Required					
Top Casinghead Gas Limit 910 MCF					
CONOCO INC.					
A.R.Unit (75)	1	G	11-16-32	75	
" (66)	14	Q	2-16-32	66	
TOTAL	2			141	

ANDERSON RANCH DEVONIAN CONT'D

GULF OIL CORP.					
Lea CL State NCT-A					
" (36)	1	G	2-16-32	30	
POOL TOTAL	3			171	
ANDERSON RANCH WOLFCAMP					
Top Allowable 275 GOR Limit 2,000 No Test Required					
Top Casinghead Gas Limit 550 MCF					
(Waterflood Project)					
CONOCO INC.					
Anderson Ranch Unit					
"	2	G	11-16-32	150	
"	11	F	"	50	
"	12	V	2-16-32	41	
"	13	K	11-16-32	45	
"	17	R	2-16-32	25	
"	3	A	11-16-32	Input	
"	6	N	2-16-32	"	
"	10	E	11-16-32	"	
TOTAL	5			311	
PHILLIPS PETROLEUM CO.					
Aggie A	1	Q	3-16-32	18	
POOL TOTAL	6			329	
ANDERSON RANCH WOLFCAMP, EAST					
Top Allowable 305 GOR Limit 2,000					
Top Casinghead Gas Limit 750 MCF					
HOLLY ENERGY, INC.					
Pogo St.(200)	1	H	19-16-33	100	1600
ANDERSON RANCH WOLFCAMP, NORTH (80 Acre Spacing)					
Top Allowable 355 GOR Limit 2,000 No Test Required					
Top Casinghead Gas Limit 710 MCF					
GULF OIL CORP.					
Lea R State NCT-A Com.					
	1	A	2-16-32	80	
Acreage 90					
"	2	D	1-16-32	6	
Acreage 101					
TOTAL	2			86	
MOBIL PRODUCING TEXAS & N. M., INC.					
N.M.St. A	1	B	2-16-32	110	
Acreage 50					
UNION OIL CO. OF CALIFORNIA					
North Anderson Ranch Unit					
"	1	E	33-15-32	76	
"	3	K	"	225	
State A	1	M	"	50	
"	2	I	28-15-32	15	
TOTAL	4			366	
POOL TOTAL	7			562	
ANTELOPE RIDGE BONE SPRINGS					
Top Allowable 320 GOR Limit 2,000					
Top Casinghead Gas Limit 640 MCF					
THE SUPERIOR OIL CO.					
State S(4)	1	N	25-23-34	4	TSTM
ARKANSAS JUNCTION PENN					
Top Allowable 320 GOR Limit 2,000					
Top Casinghead Gas Limit 640 MCF					
ALCORN, REX					
Ebbet (8)	1	Y	20-16-36	6	**5580

ARKANSAS JUNCTION SAN ANDRES

Top Allowable 80 GOR Limit 2,000 No Test Required					
Top Casinghead Gas Limit 160 MCF					
C & C OPERATING CORP.					
Lea OR State	1	K	12-16-36	10	
"	2	O	"	10	
POOL TOTAL	2			20	
ARKANSAS JUNCTION SAN ANDRES, WEST					
Top Allowable 107 GOR Limit 2,000					
Top Casinghead Gas Limit 214 MCF					
ALCORN, REX					
Sobbi	2	O	20-16-36	30	
WESTBROOK, V. H.					
State of New Mexico					
" (35)	1	B	29-13-36	35	1171
State of New Mexico "A"					
" (6)	2	D	26-15-36	8	TSTM
TOTAL	2			43	
POOL TOTAL	3			73	
ASHMEAD GRAYBURG					
Top Allowable 80 GOR Limit 3,500					
Top Casinghead Gas Limit 280 MCF					
AMERADA HESS CORP.					
State PA(16)	1	K	18-22-37	16	1750
ARCO OIL & GAS CO.					
St. 137-B(20)	1	L	12-22-36	10	100
St. B-DE(20)	1	O	36-21-36	20	**4650
TOTAL	2			30	
CITIES SERVICE CO.					
State M(46)	1	N	36-21-36	46	1087
" (7)	2	L	"	7	571
State N (3)	3	L	2-22-36	3	**23333
" (2)	4	M	"	2	**4000
TOTAL	4			58	
CONOCO INC.					
L'Fee.B-1(16)	1	E	1-22-36	16	**4000
" (8)	2	F	"	8	**12500
" (8)	3	I	"	8	**5625
" (6)	5	O	"	6	**5667
State B-2(18)	1	B	2-22-36	18	2111
" (18)	2	I	"	18	1388
" (38)	3	H	"	38	395
" (18)	5	P	"	18	TSTM
" (11)	6	O	"	11	2682
" (13)	8	F	"	13	1923
" (26)	11	C	"	26	1115
TOTAL	11			180	
GULF OIL CORP.					
A.L.Christmas NCT-C					
" (5)	5	A	18-22-37	5	1000
H.Leonard NCT-C					
" (32)	1	N	36-21-36	32	1656
" (36)	2	K	"	36	583
" (16)	3	E	"	16	TSTM
" (26)	4	D	"	26	731
" (11)	5	C	"	11	2364
" (62)	6	F	"	62	1630
" (2)	7	G	"	2	**9000
" (2)	8	H	"	2	**6500
H.T.Mattern NCT-D					
" (5)	2	E	7-22-37	5	1000
" (17)	4	D	"	17	294
" NCT-E (5)	1	L	"	5	**4400
" (12)	2	K	"	12	417
" (12)	3	D	12-22-36	12	2250
" (12)	4	M	1-22-36	12	417

ARROWHEAD GRAYBURG CONT'D

GULF OIL CORP. CONT'D
H.T.Mattern NCT-E
" (10) 6 F 12-22-36 10 300
" (11) 7 G " 10 500
" (22) 9 C " 12 333
" (12) 12 A " 12 333
" NCT-F (5) 1 B 1-22-36 5 800
" (15) 2 A " 15 333
W.A.Ramsay NCT-A
" (30) 4 P 35-21-36 30 **3500
" (37) 5 I " 33 2946
" (25) 8 J " 28 2714
" (22) 11 A " 22 2500

TOTAL 25 436

MARATHON OIL COMPANY
McDonald State A/c-2
" (8) 13 C 13-22-36 8 1250
" (7) 14 D " 7 1714
C.J.Saunders
" (26) 2 D 1-22-36 26 1154

TOTAL 3 41

TEXAS PACIFIC OIL CO., INC.
Elliott 5-6
" (10) 1 N 6-22-37 10 **3500
State A A/c-2
" (7) 13 A 11-22-36 7 **39286
" (3) 16 I " 3 3333

TOTAL 3 20

POOL TOTAL 49 781

EATLEY PENN
Top Allowable 275 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 550 MCF
AMERADA HESS CORP.
W.E.Mathers A 1 B 3-12-33 13
" 2 F " 97

TOTAL 2 110

TEXAS PACIFIC OIL CO., INC.
[illegible] 11

POOL TOTAL 3 121

EATLEY PENN, EAST
Top Allowable 275 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 550 MCF
M & W OPERATING CO.
Pan Am. St. 1 L 3-12-34 30

ROBERTS & HANNACK, INC.
Boren Barbara A State
" 1 P 6-12-34 8

POOL TOTAL 2 38

EATLEY PENN, NORTH
(40 Acre Spacing)
Top Allowable 400 GOR Limit 2,000
Top Casinghead Gas Limit 800 MCF
AMERADA HESS CORP.
W.E.Mathers B
" 1 F 33-11-33 SI
Mathers St. Com.
" (10) 1 D " 30 **12333
State B2R(25) 2 H " 25 **16960
State B2R(38) 1 D 10-12-33 38 921

TOTAL 3 93

(5)

AMOCO PRODUCTION CO.
State DC(44) 1 P 16-11-33 44 **12205
State DG(13) 1 F " 13 154
State DH(23) 1 I 21-11-33 23 1087
" (6) 2 P " 6 **5833
State DK(8) 1 A 17-11-33 8 **4625
" (8) 2 C " 8 **6125

TOTAL 6 102

BEICO PET. CORP.
Bagley St.(2) 1 D 34-11-33 2 **29650
Acreage factor .500
Bagley State Com.
" (2) 1 F " 2 TSTM
Cabot St.(1) 1 H 15-11-33 1 **72500
Cabot A State
" (5) 1 L 14-11-33 5 **10300
" B St.(11) 1 D " 11 **6291
" C St.(20) 1 E " 20 1900
Dallas (21) 1 J 15-11-33 21 **3967
Shell H State
" (12) 1 A 8-12-33 12 **14167
State 34(2) 1 B 34-11-33 2 TSTM
Warren American State Com.
" (3) 1 M 27-11-33 3 1213

TOTAL 10 79

BROWN, TOM, INC.
Lovington Trust
" (17) 1 D 28-11-33 17 **6412
" (32) 2 E " 32 **6500
Warren 27 State
" (5) 1 L 27-11-33 5 **16600
Warren 28 State
" (23) 1 A 28-11-33 23 **13217

TOTAL 4 77

BTA OIL PRODUCERS
Bagley (12) 1 A 9-11-33 12 1750
Brewer 689-C
" (6) 2 H 6-12-33 6 **12000
Brewer 689-C Ltd.
" (3) 1 A 6-12-33 8 **11120
" [illegible] 9 **[illegible]
Hugh 689-C
" (9) 1 I " 19 **5420
" (16) 2 K " 16 **5560
" (17) 3 N " 17 **6470
" (18) 4 O " 18 **5440
LCH 689 Ltd.
" (9) 1 F 31-11-33 9 **2780
LCH 689-C Ltd.
" (17) 2 N " 17 1180
Acreage factor .500
Myrtle 689 Ltd.
" (12) 2 P " 12 **5830
Penn 7514 JV-D
" (38) 3 G 7-12-33 38 470

TOTAL 12 181

CABOT CORP.
M.E.Dallas(16) 1 P 15-11-33 16 **4563

CONINE, J. H., JR.
J.D.Guye(16) 1 H 22-11-33 16 **4375

COX, JOHN L.
Amerada State
" (9) 1 I 29-11-33 9 **9507
Mazie (22) 1 A 1-12-32 22 **3996
" (14) 2 H " 14 **4050
Shell B State Com.
" (8) 1 A 5-12-33 8 **2066

BAGLEY PENN, NORTH
COX, JOHN L.
Shell E State
" (11) 1 C 5-12-33 11 **7980
Shell F State
" (10) 1 O " 30 **2251
Shell G State
" 1 N 4-12-33 P&A
State C(28) 2 E 11-11-33 28 **3940
State J(29) 1 G 7-12-33 29 **2377
" (21) 2 B " 21 **2401
SUP 1 F " P&A

TOTAL 9 172

CROWN CENTRAL PETROLEUM CORP.
T.P. A State
" (21) 1 J 10-11-33 21 **6905
" (14) 2 O " 14 **5857

TOTAL 2 35

ELK OIL COMPANY
Bagley State
" (25) 1 P 36-11-32 25 1320

FASKEN, DAVID
Felmont Collier
" (17) 1 H 9-11-36 17 **4049

GOODRICH, JOHN S.
Amerada State
" (10) 2 G 33-11-33 10 **5000
Mathers(22) 2 O " 22 **3000

TOTAL 2 32

GULF OIL CORP.
Lea GC St.(14) 1 K 9-11-33 14 **2500

KERN COMPANY
Federal 10(9) 1 F 10-12-33 9 **2111
St. BTQ(14) 1 P 34-11-33 14 **4143
State 34(31) 1 G " 31 **4032

TOTAL 3 54

MGF OIL CORP.
[illegible]
" (14) 1 M 3-12-33 14 **10071
Champlin State
" (5) 1 F 8-11-33 5 **3500
Gulf Sohio State
" (10) 1 G " 10 1690
Huber (8) 1 A 9-12-33 8 **2150
" (5) 2 B " 5 1220
Huber A (8) 1 C " 8 **3275
Stan (5) 1 I " 5 **4060
Stan A Com.
" (10) 1 J " 10 1790

TOTAL 8 65

NATIONAL COOP. REFINERY ASSOC.
Bagley St.(8) 1 H 16-11-33 8 **2125
" (8) 2 B " 8 1375
" (20) 3 C " 20 900

TOTAL 3 36

READ & STEVENS, INC.
Shell St.(14) 1 A 18-11-33 14 **3900
" (16) 2 H " 16 **3100
" (28) 3 C " 28 **3400
" (13) 4 F " 13 **3650
State E(14) 1 N 7-11-33 14 1715
Sun St.(11) 1 P " 11 1910

TOTAL 6 96

(6)

ROBERTS & HANNACK, INC.
Blankeney State
" (9) 1 C 31-11-33 9 833
Champlin State
" (9) 1 P 8-11-33 9 [illegible]
Collier(11) 1 D 9-11-33 11 573
Gulf Sohio State
" (10) 1 H 8-11-33 10 570
Graham St.(14) 1 K " 14 514
Graham B State
" (8) 1 A 30-11-33 8 1183
" (10) 2 H " 10 1170
" (10) 3 I " 10 1540
" (11) 4 P " 11 492
Graham C State Com.
" (14) 1 E 17-11-33 14 1617
Mathers A(14) 1 C 30-11-33 14 1175
Mathers B(9) 1 F " 9 1133
Mathers C(10) 1 K " 10 550
Mathers D(10) 1 N " 10 920
Shea Climenko
" (10) 1 N 8-11-33 1[illegible] **2500

TOTAL 15 159

SABINE PRODUCTION CO.
State K(41) 1 K 21-11-33 41 **2829
" (28) 2 L " 28 **2857

TOTAL 2 69

SOUTHLAND ROYALTY CO.
Graham St.(16) 1 O 3-11-33 16 1125
Acreage factor 1.117

TENNECO OIL CO.
Tenneco Sunshine
" (25) 1 I 1-12-36 25 1600

TEXACO INC.
F.B.Gist(12) 1 A 31-11-33 12 **4667
" (5) 2 H " 5 **2450

TOTAL 2 17

TEXAS PACIFIC OIL CO., INC.
[illegible]
" (19) 4Y G 10-11-33 19 **7055
Mathers(33) 1 L 33-11-33 33 **[illegible]
" (30) 2 N " 30 **5096
State AK(14) 1 N 10-11-33 14 **3572
State AU(19) 1 C 4-12-33 19 **[illegible]
State B A/c-1
" (16) 4 J " 16 **3375
" (8) 5 L 10-12-33 8 1375
State C A/c-2
" (22) 2 H 4-12-33 22 **3909

TOTAL 8 161

TIPPERARY OIL & GAS CORP.
Andover Federal
" (19) 1 P 17-11-33 19 **[illegible]
Audrey (39) 1 P 21-11-33 39 **[illegible]
Bell (19) 1 H 21-11-33 19 **[illegible]
" (30) 3 A " 30 **5700
Bell A (16) 1 C " 16 **[illegible]
Bell B (27) 1 E " 27 **6481
Chaney Federal
" (22) 1 L 17-11-33 22 **6136
Christensen State
" (28) 1 L 16-11-33 28 **5143
Clark St.(19) 1 D 27-11-33 19 **16263
Collier(22) 1 F 9-11-33 22 **5591
Dolly (28) 1 J 17-11-33 28 **7179
Enfield(33) 1 I 16-11-33 33 **8630
Eva Com.(16) 1 J 20-11-33 16 **14125

CAPROCK QUEEN CONT'D

GREAT WESTERN DRILLING CO. CONT'D
Rock Queen Unit
36 8 H 36-13-31 Input
" 10 J " "
" 12 L " "
" 14 N " "
" 16 P " "

TOTAL 55 710

WOLF, [illegible]
Gulf St.A(45) 1 H 29-13-31 4
Harris Railway State
" (3) 1 F 36-12-31 3
North Caprock Queen Unit #1
*Tr. 27(12) 39 E 6-13-32 12

TOTAL 5 19

LARUE, C. E. & B. N. HENRY, JR.
Federal V Waterflood Project
Federal V-34 2 O 34-13-31 2
" 4 I " 2
" 2 P " Input
" 3 J " "

TOTAL 2 4

LARUE, C. E. & B. N. HENRY, JR.
Trigg Federal Waterflood Project
Trigg Fed. 1 I 9-14-31 2
" 2 A " 2
" 6 I 4-14-31 4
" 8 A " 3
" 9 O 9-14-31 2
" 11 O " 3
" 13 O 4-14-31 3
" 15 O " 3
" 16 K 9-14-31 3
" 22 K 4-14-31 3
" 24 O " 2
" 25 M 9-14-31 4
" 27 E " 4
" 31 E 4-14-31 3
" 2 P 9-14-31 Input
" 5 P 4-14-31 "
" 8 H " "
" 14 B 4-14-31 "
" 16 B 4-14-31 "
" 17 N 9-14-31 "
" 19 K " "
" 20 C " "
" 23 F 4-14-31 "
" 26 L 9-14-31 "
" 32 D 4-14-31 "
" 37 A " "

TOTAL 24 41

(Waterflood Project)
LAYTON ENTERPRISES, INC.
North Caprock Queen Unit #1
Tr. 6 7 G 32-12-32 3
Tr. 18 13 M " 2
Tr. 19 7 G 6-13-32 2
Tr. 22 11 E " 2
Tr. 23 15 O " 2
Tr. 26 2Y B 7-13-32 1
" 7 G " 1
Tr. 27 4Y D 6-13-32 1
" 5 E " 1
" 9 I 7-13-32 1
" 10Y J " 2
Tr. 28 11 K " 2
Tr. 6 6 F 33-12-32 Input
" 14 N " "
Tr. 12 10 J " "

LAYTON ENTERPRISES, INC. CONT'D
North Caprock Queen Unit #1
Tr. 24 12 L 5-13-32 Input

TOTAL 12 20

TENNECO OIL CO.
Reno Oil Co. Federal
" (3) 2 N 3-15-31 3
" (5) 3 K " 5
" (7) 4 N " 5

TOTAL 3 13

(Waterflood Project)
TEXAS AMERICAN OIL CORP.
Northwest Caprock Queen Unit
" 4 I 16-12-32 7
" 16 A 20-12-32 3
" 20 A 21-12-32 5
" 22 C 22-12-32 7
" 27 G 20-12-32 2
" 29 E 21-12-32 4
" 1 L 26-12-32 Input
" 3 J " "
" 14 N 14-12-32 "
" 21 D 22-12-32 "
" 26 C 23-12-32 "
" 31 H 22-12-32 "

TOTAL 6 28

(Waterflood Project)
UNION OIL CO. OF CALIFORNIA
South Caprock Queen Unit
Tr. 49 3 C 31-15-31 2
Tr. 67 12 L 33-14-31 3
Tr. 68 3 C " 3
Tr. 70 14 N " 5
Tr. 54 15 O " Input

TOTAL 4 13

POOL TOTAL 134 1080
*Kyle & Layton on same 40 Acres.

CAPROCK PENNSYLVANIAN, EAST
[illegible] 500 GOR Limit 2,000
No Gas Test Required
Top Casinghead Gas Limit 730 MCF
AMERADA HESS CORP.
H.C.Posey A
" (28) 3 J 11-12-32 28
" (47) 5 A " 47
" (73) 6 H " 75
St. ECG(74) 1 G " 74
" 2 B " 51
St. ECH(58) 1 P " 56

TOTAL 5 282

WAGNER & BROWN
Cleveland(37) 1 G 23-12-32 37

POOL TOTAL 6 319

CAPROCK MISSISSIPPIAN, NORTH
(160 Acre Spacing)
Top Allowable 650 GOR Limit 2,000
Top Casinghead Gas Limit 1300 MCF
ANTWEIL, MORRIS R.
Landlady(38) 1 B 8-12-32 38 **12658

CAPROCK PENN, EAST
Top Allowable 320 GOR Limit 2,000
Top Casinghead Gas Limit 640 MCF
NUCORP ENERGY, INC.
State 23(190) 1 K 23-12-32 102 *6326

CAPROCK SAN ANDRES
Top Allowable 80 GOR Limit 2,000
Top Casinghead Gas Limit 160 MCF
ELK OIL CO.
State B(15) 1 H 2-12-32 15 TSTM

CAPROCK WOLFCAMP, EAST
Top Allowable 230 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 460 MCF
AMERADA HESS CORP.
L.H.Clarke, A 1 K 1-14-32 45

CASEY SAN ANDRES, SOUTH
Top Allowable 44 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 88 MCF
GREAT WESTERN DRILLING CO.
Burton 1 O 5-18-39 17
Acreage factor .653
T.Carter 1 J " 11
Acreage factor .650
" 2 N " 30
" 3 K " 28
S.Johnson 1 B 8-18-39 28
" 2 C " 12
Acreage factor .650
" 3 D " 21
McQuein 2 F " 30

TOTAL 8 177

MARTINDALE PET. CORP.
Carter 1 A 7-18-39 5

McMERON, MARGARET M.
S.P.Johnson 2 M 5-18-39 15

POOL TOTAL 16 197

(SAN ANDRES)
Top Allowable 187 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 374 MCF
GULF OIL CORP.
S.E.Cole NCT-A
" 10 E 16-22-37 14

CASEY SAN ANDRES
Top Allowable 90 GOR Limit 2,000
Top Casinghead Gas Limit 160 MCF
ZIA ENERGY, INC.
State C(12) 1 F 17-22-37 7 *24250

CASEY STRAWN
(640 Acre Spacing)
Top Allowable 445 GOR Limit 2,000
Top Casinghead Gas Limit 890 MCF
C & K PETROLEUM, INC.
Shipp 27(108) 1 O 27-16-37 108 657
Shipp 34-A
" (84) 1 C 34-16-37 84 714
" (84) 2 F " 84 654

TOTAL 3 276

MESA PETROLEUM CO.
West Knowles
" (159) 4 B 34-16-37 189 1024

POOL TOTAL 4 465

CASS PENN
(80 Acre Spacing)
Top Allowable 276 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 534 MCF
CONOCO INC.
SEMU Penn 4 G 23-20-37 85
" 95 J " ZA

CATO SAN ANDRES
Top Allowable 80 GOR Limit 2,000
Top Casinghead Gas Limit 160 MCF
ADOBE OIL & GAS CORP.
Peterson Federal
" (6) 1 J 6-9-30 6 181

AMOCO PRODUCTION CO.
ASKO Fed.(1) 2 O 10-8-30 1 TSTM
" (1) 4 B " 1 TSTM
Barbata (1) 1 M 4-8-30 1 TSTM
Baskett C(1) 2 J 10-8-30 1 TSTM
Baskett E(2) 1 A 15-8-30 2 TSTM
Cato A Fed.(1) 2 K " 1 TSTM
" (1) 2 L " 1 TSTM
" (1) 3 N " 1 TSTM
Cato B Fed.(1) 2 N 14-8-30 1 TSTM
" (1) 3 D 23-8-30 1 TSTM
" (2) 4 N 14-8-30 2 TSTM
" (1) 5 E 23-8-30 1 TSTM
" (1) 6 K 14-8-30 1 TSTM
" (1) 7 C 23-8-30 1 TSTM
" (1) 8 F " 1 TSTM
Cato C Fed.(1) 1 J 14-8-30 1 TSTM
" (1) 2 O " 1 TSTM
Cato D Fed.(1) 1 B 23-8-30 1 TSTM
" (1) 3 A " 1 TSTM
Crosby A Fed.
" (1) 2 I 8-8-30 1 TSTM
Crosby B(2) 1 I 3-8-30 2 TSTM
" (1) 2 P " 1 TSTM
Crosby E Fed.
" (3) 1 G 9-8-30 3 TSTM
" (1) 2 B " 1 TSTM
Crosby C Fed.
" (1) 1 C 22-8-30 1 TSTM
Crosby K(1) 1 C 27-8-30 1 TSTM
Crosby E(1) 2Y L " 1 TSTM
Crosby G(2) 1 N 9-8-30 2 TSTM
" (2) 2 K " 2 TSTM
Crosby H(9) 1 E " 9 TSTM
" (2) 2 D " 2 TSTM
Grimm Fed.(10) 1 O 9-8-30 10 TSTM
" (6) 2 J " 6 TSTM
Queen (2) 1 C 10-8-30 2 TSTM
" (3) 2 F " 3 TSTM
" (1) 3 F " 1 TSTM

TOTAL 36 70

AMOCO PRODUCTION CO.
Cato Baskett Waterflood Project
Baskett 1 L 11-8-30 2
" 2 N " 1
Baskett B 1 F " 16
Baskett D 5 J " 3
" 6 B " 21
" 7 P " 3
" 8 H " 5
Fischer Fed. 1 N 12-8-30 2
Cato Baskett EUP
" 3 O 11-8-30 Input
" 5 C " "
" 6 C 14-8-30 "
" 7 A " "

TOTAL 8 53

AMOCO PRODUCTION CO.
Cato Wasley Waterflood Project
Wasley 2 E 14-8-30 3
" 4 D " 3
" 5 G " 1
" 7 B " 4
" 8 H " 1

TOTAL 5 12

CRIT, DELAWARE CONT'D
CONOCO INC. CONT'D
Marshall(114) 7 C 19-23-33 107
" (33) 8 L " 35
Acreage factor .930

POOL TOTAL 7 319

CLEAR LAKE PENN
Top Allowable 275 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 550 MCF
SHEAN, TOM, INC.
Stu 543 1 N 25-20-32 42

DOG BAR
Top Allowable 187 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 374 MCF
MEASURE OIL CO.
Conoco Fed. 1 J 30-20-39 40
Ralph Est. 2 G " 20
" 3 H " 15
Wilshire Fed. 1 P " 9
" 2 K " 15
" 3 I " 22

TOTAL 6 124
TEXAS CRUDE OIL CO.
Federal 12 E 30-20-39 5

POOL TOTAL 7 129
DOT DRIVER
Top Allowable 142 GOR Limit 10,000
No Test Required
Top Casinghead Gas Limit 1420 MCF
REPSOL, JOHN H. CORP.
Jones Fed. 1 L 20-20-39 9

MEASURE OIL CO.
Ralph Estate 1 A 30-20-39 7

DANIEL deG STRONG
Carper 1-30 1 C 30-20-39 18

TEXAS CRUDE OIL CO.
Federal 12 F 30-20-39 6

POOL TOTAL 4 40
DAWKINS WOLFCAMP
Top Allowable 275 GOR Limit 2,000
Top Casinghead Gas Limit 550 MCF
MATHIS, SPEITER & HUDSON
Clayton (9) 1 L 22-15-33 6 TSTM

DEAN DEVONIAN
Top Allowable 455 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 910 MCF
ARCO OIL & GAS CO.
J.P.Dean 1 N 35-15-36 33

DEAN PERMO PENN
(80 Acre Spacing)
Top Allowable 445 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 890 MCF
ARCO OIL & GAS CO.
Dow Fed.Com. 1 C 5-16-37 43
Acreage factor 1.149
Lea 356 St. 2 F 35-15-36 15

POOL TOTAL 2 58

DENTON DEVONIAN
Top Allowable 365 GOR Limit 2,000
Top Casinghead Gas Limit 730 MCF
ARCO OIL & GAS CO.
B.C.Dickinson D
" (16) 3 E 35-14-37 16 188
T.D.Pope(21) 1 M 36-14-37 21 TSTM
" (23) 2 N " 23 TSTM
" (21) 4 L " 21 TSTM
" (18) 5 E " 18 TSTM
State T(35) 2 F 2-15-37 35 771
" (120) 3 K " 120 1500
" (65) 9-7 N " 65 1369

TOTAL 9 319
DINERO OPERATING CO.
Denton (75) 1 O 11-15-37 75 1103

GETTY OIL CO.
Nox. F (14) 1 C 2-15-37 14 571
" (9) 2 G " 9 773
" (13) 3 E " 13 769
" (9) 5 B " 9 778
" (17) 10 A " 17 824

TOTAL 5 62
GULF OIL CORP.
L.R.Cravens(27) 1 B 14-15-37 27 **2667
Lea G St.(96) 2 O 2-15-37 96 1281
" (33) 3 I " 33 1576
" (132) 4 P " 132 **2098
W.A.Simpson et al
" (54) 2 P 3-15-37 54 315

TOTAL 5 342
MARATHON OIL CO.
J.M.Denton
" (145) 3 J 11-15-37 145 1379
" (40) 4 K " 40 1250
" (43) 6 P " 43 1047
" (64) 7 I " 64 1109

TOTAL 4 292
McALESTER FUEL CO.
Denton A
" (102) 1 G 14-15-37 102 933
State A(53) 1 H 2-15-37 53 769

TOTAL 2 155
MOBIL PRODUCING TEXAS & N. M., INC.
T.D.Pope(43) 3 P 35-14-37 43 1050
" (28) 5 G " 28 1420
" (1) 10 P 26-14-37 1 **2000
" (52) 13 B 35-14-37 52 1550

TOTAL 4 124
PHILLIPS PETROLEUM CO.
Denton(445) 1 F 11-15-37 365 502
" (120) 2 H " 120 432
" (63) 3Y B " 68 78
" (160) 6 C " 160 727
" (248) 17-7 G " 248 669
" (138) 9 A " 138 652
" (56) 13 D " 56 926

TOTAL 8 1155
POLARIS PRODUCTION CORP.
Argo (3) 1 A 3-15-37 3 TSTM
" (31) 2 H " 31 1290
" (5) 3 G " 5 TSTM
Buckley A(16) 1 M 25-14-37 16 1250
" (2) 4 N " 2 TSTM
Priest (50) 2 D 1-15-37 50 1111

DENTON DEVONIAN CONT'D
POLARIS PRODUCTION CORP. CONT'D
Shelton (2) 1 F 26-14-37 2 TSTM
" (2) 4 E " 2 TSTM
" (26) 6 D " 26 961
State A (2) 1 L 2-15-37 2 TSTM

TOTAL 10 139
SKELTON OIL COMPANY
Pat H. McClure B
" (36) 1 J 14-15-37 36 655
Pat H. McClure C
" (33) 1 A " 33 550

TOTAL 2 69

POOL TOTAL 50 2732
DENTON DEVONIAN, SOUTH
Top Allowable 455 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 910 MCF
THORNTON, ERNEST W. & JOHN R. PARISH
State SDA 1 N 36-15-37 25
Kelly State 1 P 35-15-37 100

POOL TOTAL 2 125
DENTON PENNSYLVANIAN
Top Allowable 320 GOR Limit 2,000
Top Casinghead Gas Limit 640 MCF
POLARIS PRODUCTION CORP.
Buckley A(2) 3 L 25-14-37 2 TSTM

DENTON WOLFCAMP
Top Allowable 275 GOR Limit 2,000
Top Casinghead Gas Limit 550 MCF
ARCO OIL & GAS CO.
B.C.Dickinson A-1
" (8) 1 L 1-15-37 8 125
State T(26) 1 N 2-15-37 16 250
" (15) 5 K " 15 200
" (22) 6 F " 22 136
" (60) 8 M " 60 367

TOTAL 5 121
[illegible]
Buckley(57) 1 N 25-14-37 57 TSTM

GETTY OIL CO.
Nox. F (8) 9 E 2-15-37 8 750

GULF OIL CORP.
L.R.Cravens(39) 2 C 14-15-37 39 435
" (18) 3 F " 18 TSTM
" (21) 4 K " 21 TSTM
" (27) 5 B " 27 TSTM
Lea G St.(20) 5 I 2-15-37 20 650
" (18) 7 P " 18 666
" (30) 8 O " 30 400
W.A.Simpson et al
" (33) 4 I 3-15-37 33 TSTM
" (9) 5 P " 9 TSTM

TOTAL 9 215
MARATHON OIL COMPANY
J.M.Denton(14) 1 K 11-15-37 14 500
" (16) 8 J " 16 500
" (10) 11 P " 10 600
" (52) 12 N " 52 173
" (14) 13 M " 14 571

TOTAL 5 106
McALESTER FUEL CO.
J.M.Denton A
" (69) 2 O 11-15-37 69 225

McALESTER FUEL CO. CONT'D
P.H.McClure A
" (12) 2 G 14-15-37 12 735
" B (38) 2 J " 38 229
State A (14) 2 H 2-15-37 14 586

TOTAL 4 133
(Waterflood Project)
MOBIL PRODUCING TEXAS & N. M., INC.
Denton North Wolfcamp Unit
Tr. 1 3 M 35-14-37 45
" 4 P 34-14-37 35
Tr. 2 3 I " 45
Tr. 4 1 D 35-14-37 30
Tr. 5 8 L " 18
" 9 C " 20
" 12 E " 24
Tr. 6 11 P " 47
" 22 B " 54
" 26 J " 9
" 29 A " 69
" 31 L 26-14-37 50
Tr. 7 3 M 36-14-37 19
" 11 D " 35
" 13 C " 30
Tr. 8 1 O " 9
" 5 B " 6
Tr. 9 6 J " 12
Tr. 12 5 K 25-14-37 54
Tr. 13 4 I 27-14-37 18
" 7 A " 15
Tr. 14 2 C 26-14-37 2
" 7 D " 4
Tr. 15 3 G " 19
Tr. 19 8 P [illegible] 17
" 9 O " 34
Tr. 2 1 H 34-14-37 Input
Tr. 5 10 K 35-14-37 "
Tr. 6 18 N 26-14-37 "
" 30 H 35-14-37 "
Tr. 12 2 M 25-14-37 "
Tr. 13 2 P 27-14-37 "
" 6 N " "
Tr. 14 3 F 26-14-37 "
Tr. 15 6 N " "
Tr. 18 1 N 23-14-37 "

TOTAL 26 722
PHILLIPS PETROLEUM CO.
Denton (45) 4 G 11-15-37 48 610
" (38) 8 F " 38 879
" (75) 10 H " 75 492
" (36) 14 C " 36 1047
" (51) 15 D " 51 67
" (48) 16 E " 46 977

TOTAL 6 296
POLARIS PRODUCTION CORP.
Pacific Royalty
" (10) 3 A 10-15-37 10 1000
" (18) 5 H " 18 889
Priest 4 D 1-15-37 No C-116
" 5 C " "
State A(20) 2 L 2-15-37 20 1000

TOTAL 3 48

POOL TOTAL 69 1706
DENTON WOLFCAMP, SOUTH
Top Allowable 275 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 550 MCF
THORNTON, ERNEST W. & JOHN R. PARISH
N.M. M 1 L 36-15-37 20

EUNICE SEVEN RIVERS QUEEN SOUTH CONT'D

TEXAS PACIFIC OIL CO., INC. CONT'D
State "A" A/c-2
" 32Y L 9-22-36 Input
" 51 F 6-22-36 "
" 55 P " "
" 61 J " "

TOTAL 15 42

THE WISER OIL CO.
Shell A St. 1 D 16-22-36 Gas Well

POOL TOTAL 193 2691

FEATHERSTONE VOLCANO
Top Allowable 115 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 550 MCF
FEATHERSTONE DEVELOPMENT CORP.
Cabot St. 1 C 29-15-32 35

FLYING M ABO
(80 Acre Spacing)
Top Allowable 310 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 620 MCF
COASTAL OIL & GAS CORP.
Flying M St. 1 D 15-9-33 18
St.Min.St. 1 J 16-9-33 47

TOTAL 2 65

MARTIN OIL CORPORATION
Ames St. 3 I 10-9-33 45

MESA PETROLEUM COMPANY
Robinson 1 E 23-9-33 18

TIPTON & DENTON
Tipp St. 1 O 22-9-33 15

TIPTON, DENTON & DENTON
Ainsworth 1 F 25-9-33 115

POOL TOTAL 6 258

FLYING M SOUTH, SOUTH
(80 Acre Spacing)
Top Allowable 555 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 710 MCF
PETRO-LEWIS CORP.
Keith Crouse 1 C 25-9-32 34

REAL OIL COMPANY
Allen Ann 1 A 25-9-33 60

STELLMORTH OIL & GAS, INC.
Kellahan 14 State
" 1 I 14-9-32 9

POOL TOTAL 3 103

FLYING M SAN ANDRES
(640 Acre Spacing)
Top Allowable 160 GOR Limit 2,000
No Gas Test Required
Top Casinghead Gas Limit 320 MCF
ADAMS EXPLORATION CO.
Artesia (5) 1Y I 30-9-33 5

APCO OIL & GAS CO.
Flying M State
" (81) 2-M,1 N 20-9-33 81
" (10) 3 L " 10

TOTAL 3 91

BELCO PETROLEUM CORP.
Fed. 31 (9) 1 N 31-9-33 9
Read & Stevens State
" (9) 1 D 5-10-33 9
Warren Am. St.
" (7) 2 M 32-9-33 7

TOTAL 3 25

BRIDWELL OIL CO.
N.M.7 St.(14) 1 H 7-9-33 14
N.M.8 St.(14) 1 N 6-9-33 14
" (5) 3 F " 5

TOTAL 3 33

COASTAL OIL & GAS CORP.
Flying M San Andres Unit
Tr. 27(13) 2 O 28-9-33 13
Acreage factor .600
Tr. 21(14) 1 P 33-9-33 14
Tr. 32(17) 1 B 4-10-33 17
Tr. 34(29) 1 L 29-9-33 29
Gonzales 31 Federal
" (43) 1 J 31-9-33 43
" (5) 2 H " 5
" (16) 5-3 P " 16
" (6) 4 B " 6
McGriffin
" (102) 3-C,1 F 29-9-33 102
" (81) 4-D,2 E " 81
State 9(39) 1 L 9-9-33 19

TOTAL 14 345
(Waterflood Project)
COASTAL OIL & GAS CORP.
Flying M San Andres Unit
Tr. 1-A(26) 2 H 29-9-33 26
" (13) 6 G " 13
" (9) 7 O " 9
" (16) 8 I " 16
" (46) 9 A " 46
Tr. 3 (4) 1 N 17-9-33 4
" (8) 2 L " 8
Tr. 4(7) 4-I,1 P " 7
" " 2 H " 4
Tr. 5 (7) 1 G 16-9-33 7
" (5) 3 E " 5
Tr. 6 (6) 1 F " 6
Tr. 9(34) 4-O,3 J " 34
Tr. 10 (3) 2 L " 3
Tr. 11(75) 1-F 21-9-33 75
" (12) 2 C " 12
Tr. 13 (1) 4 B 20-9-33 1
Tr. 14 (1) 4 I " 1
" (27) 5 O " 27
Tr. 15(21) 1 B 21-9-33 21
Tr. 17(34)3-O,1 J " 34
" (25) 4-M,2 L " 25
Tr. 24(88)1-K,2 N 29-9-33 88
Tr. 25(43)5-E,1 D 28-9-33 43
Tr. 26(10) 1 B " 10
Tr. 27(18) 1 J " 18
Tr. 30(12) 7 B 33-9-33 12
Tr. 1-A 1 B 29-9-33 Input
" 5 J " "
Tr. 3 3 F 17-9-33 "
Tr. 5 2 D 16-9-33 "
Tr. 7 1 H " "
Tr. 8 1 N " "
Tr. 10 4 K " "
Tr. 13 5 F 20-9-33 "
Tr. 14 1 P " "
Tr. 15 2 N 21-9-33 "
" 3 P " "

FLYING M SAN ANDRES CONT'D
COASTAL OIL & GAS CORP. CONT'D
Flying M. San Andres Pool
Tr. 16 4 H 21-9-33 Input
Tr. 20 1 F 32-9-33 "
Tr. 23 2 F 28-9-33 "
" 3 L " "
Tr. 30 9 H 33-9-33 "

TOTAL 33 552

E. L. LATHAM, JR. & ROY G. BARTON, JR.
Cash(20) 1 A 30-9-33 20

LESSON, EULEN H.
Gregg Dodd 1 J 30-9-33 No C-115

SOUTHERN UNION EXPL. CO.
Shell Grotbli et al
" (10) 1 B 30-9-33 10
SUSCO-State
" (85) 5-I,1 P 29-9-33 85
" (38) 4-O,2 J " 38
" (14) 6-M,7 G " 14

TOTAL 7 147

TENNECO OIL CO.
Coastal A States
" (17) 3 N 9-9-33 17

UNION TEXAS PETROLEUM CORP.
New Mexico 4
" (10) 1 J 4-10-33 10
" (7) 2 P " 7

TOTAL 2 17

WESTLAND OIL DEV. CORP.
N.M.S St.(4) 1 J 8-9-33 4
" (33) 2 L " 33
" (3) 3 N " 3
N.M. 1-61 State
" (6) 1 B 6-10-33 6

TOTAL 4 46

POOL TOTAL 72 1496

FOSTER SAN ANDRES
Top Allowable 80 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 160 MCF
MARTINDALE PETROLEUM CORP.
Foster 1 D 5-10-39 7

FOUR LAKES PENN
(80 Acre Spacing)
Top Allowable 400 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 800 MCF
EXXON CORPORATION
South Four Lakes Unit
" 1 B 2-12-34 27
" 2 G " 84

POOL TOTAL 2 111

FOWLER DEVONIAN
Top Allowable 187 GOR Limit 2,000
Top Casinghead Gas Limit 374 MCF
CONOCO INC.
Mattix (13) 2 J 10-24-37 13 **21462
" (24) 3 G " 24 **3417

POOL TOTAL 2 37

FOSTER PENNSIAN
Top Allowable 142 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 284 MCF
AMOCO PRODUCTION CO.
South Mattix Unit Fed.
" 35 F 15-24-37 2
" 36 B 22-24-37 3
" 37 I " 46
" 39 G 15-24-37 15

POOL TOTAL 4 66

FOWLER PENNSYLVANIAN
(40 Acre Spacing)
Top Allowable 355 GOR Limit 2,000
No Gas Test Required
Top Casinghead Gas Limit 710 MCF
AMOCO PRODUCTION CO.
South Mattix Unit Federal
" (127) 1 J 15-24-37 127
" (20) 4 F " 20
" (9) 5 H 22-24-37 9
" (33) 25 G 15-24-37 33
" (42) 24-O,8 P " 42
" (25) 15 A 22-24-37 25
Acreage factor .75
" (68) 17 G 15-24-37 68
" (9) 21 K " 9

TOTAL 9 333

GULF OIL CORP.
Lillie (66) 3 E 23-24-37 60
Plains Knight
" (130) 1 L " 130

TOTAL 2 190

POOL TOTAL 11 523

FOWLER TUBB (OIL)
Top Allowable 142 GOR Limit 2,000
Top Casinghead Gas Limit 284 MCF
GULF OIL CORPORATION
J.R.Holt (NCT-A)
" (23) 1 J 16-24-37 23 1609

FOWLER UPPER WOLFCAMP
(40 Acre Spacing)
Top Allowable 187 GOR Limit 6,000
Top Casinghead Gas Limit 1122 MCF
AMOCO PRODUCTION CO.
South Mattix Unit Federal
" (45) 20-M,2 N 9-24-37 45 **10233
" (13) 26-A,3 B 22-24-37 13 **2769
" (71) 22-O,7 D 15-24-37 71 4579
" (22) 30-G,9 B " 22 **8273
" (39)35-A,10 H " 39 5513
" (33) 12 P 22-24-37 33 606
Acreage factor .500
" (6) 13 I " 6 **31625
" (39) 6-L,14 K 15-24-37 39 **9305
" (9) 32-H,18 G 22-24-37 9 **44500
" (48) 31-F,19 C " 48 455
" (60) 27-F,20 E 15-24-37 60 1467
" 16-23 O " Gas Well
" (15) 30 P " 15 **10000
State B(4) 2 P 16-24-37 4 7577
Acreage factor .500

TOTAL 22 406

CONOCO INC.
Mattix (14) 1 O 19-24-37 14 5557

HIGH PLAINS PENN
(160 Acre Spacing)
Top Allowable 560 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 1120 MCF
CHISHA OIL CORP.
Cities Service State
" 1 E 26-14-34 180

ELK OIL CO.
Cities Service State
" 2 K 26-14-34 225

NATOMAS NORTH AMERICA, INC.
High Plains 1 A 22-14-34 38

DAIGHT TIPTON, ET AL
State 1 M 23-14-34 20

POOL TOTAL 4 363

NIGHTOWER PENN PENN
Top Allowable 280 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 460 MCF
AMERADA HESS CORP.
E.C.Roach 1 L 26-12-33 2
State B73 1 D " 4

TOTAL 2 6
MCF OIL CORP.
Hope State 1 P 22-12-33 Gas Well

POOL TOTAL 2 6
NIGHTOWER LOWER PENN, EAST
(80 Acre Spacing)
Top Allowable 400 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 800 MCF
ENERGY RESOURCES OIL & GAS CORP.
State 1-30 1 B 30-12-34 17
Acreage factor .500

NIGHTOWER UPPER PENN, EAST
(80 Acre Spacing)
Top Allowable 356 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 214 MCF
HARPER OIL COMPANY
Frier 1 L 29-12-34 50

PETROLEUM CORP. OF TEXAS
State HT 1 P 25-12-33 48
State HT A 1 B 36-12-33 52

TOTAL 2 80

POOL TOTAL 3 130
HOBBS BLINEBRY
Top Allowable 207 GOR Limit 2,000
Top Casinghead Gas Limit 214 MCF
AMERADA HESS CORP.
State A (33) 4 B 32-18-38 33 1515
" (14) 5 A " 14 **9857

TOTAL 2 47
AMOCO PRODUCTION CO.
State G (7) 5 E 33-18-38 7 **13429
" (18) 6 F " 18 **5222

TOTAL 2 25
CHEVRON USA INC.
State I(27) 5 O 29-18-38 27 1782
" (61) 6 P " 61 1197

TOTAL 2 88

CONOCO INC.
State A-29(24) 7 N 29-18-38 24 **5167
" (22) 8 K " 22 273

TOTAL 2 46
EXXON CORPORATION
Bowers A Federal
" (50) 1 I 30-18-38 50 112
" (70) 28 M 29-18-38 70 240
" (43) 29 L " 42 259
" (27) 30 P 30-19-38 27 159

TOTAL 4 189
GETTY OIL CO.
H.D.McKinley
" (30) 8 H 30-18-38 30 333
" (6) 9 G " 6 1950
" (9) 10 B " 9 555

TOTAL 3 45
GULF OIL CORP.
W.D.Grimes NCT-A
" (30) 16 D 32-18-38 30 967
" (27) 17 C " 27 926
" (15) 18 F " 15 1667
" NCT-5(27) 7 B 33-18-38 27 **2111

TOTAL 4 99
PENROC OIL CORP.
Conoco St.(32) 1 G 33-18-38 32 **2688

SHELL OIL CO.
Grimes (8) 9 M 28-18-38 8 **7333
" (4) 11 N " 4 **26000
Shell A State
" (55) 6 G 32-18-38 55 982

TOTAL 3 67

POOL TOTAL 23 638
HOBBS BLINEBRY, EAST
Top Allowable 142 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit [illegible]
MERIDIAN PETROLEUM CORP.
Davis 2 J 29-18-39 15
Acreage factor .650

HOBBS DRINKARD
(80 Acre Spacing)
Top Allowable 222 GOR Limit 5,000
Top Casinghead Gas Limit 1110 MCF
AMERADA HESS CORP.
State A 5 A 32-18-38 Gas Well

AMOCO PRODUCTION CO.
Byers A(14) 31 D 3-19-34 14 **15214
Byers B(18) 34 B 4-19-38 18 466
" (7) 35 H " 7 1714
Capps 32 L 3-19-38 Gas Well
State A(19) 37 J 4-19-38 19 **13000
State G(15) 5 E 33-18-38 15 **8357
State HF Com.
" (115) 1 P 33-18-38 115 4330
Turner Tr. 2
" (22) 30 E 34-18-38 22 **7273
" (76) 31 L " 24 *46513

TOTAL 8 234
CHEVRON USA INC.
State 1 5 O 29-18-38 Gas Well

CONOCO INC.
St.A-33(13) 12 L 33-18-38 13 **24365

HOBBS DRINKARD CONT'D
GETTY OIL CO.
W.D.Grimes(6) 6 I 29-18-38 6 **31667
E.H.McKinley
" (14) 9 G 30-18-38 14 1950

TOTAL 2 20
GULF OIL CORP.
W.D.Grimes NCT-B
" (35) 8 H 33-18-38 38 **9263

PENROC OIL CORP.
Conoco St.(41) 1 G 33-18-38 41 **14220
" (32) 2 K " 32 **12615
Conoco A State
" (40) 1 O " 40 3587
Acreage factor .500

TOTAL 3 113
PONTOTOC OIL CORP.
Hobbs St.(8) 1 F 29-18-38 8 2270
Acreage factor .500
Hobbs St.(9) 2 G " 9 2908

TOTAL 2 17
SHELL OIL CO.
Grimes (4) 9 M 28-18-38 4 **7333
State B(39) 6 C 33-18-38 39 4205

TOTAL 2 43

POOL TOTAL 19 478
HOBBS (G-SA)
Top Allowable 80 GOR Limit 3,500
Top Casinghead Gas Limit 280 MCF
AMOCO PRODUCTION CO.
R-4934
South Hobbs (G-SA) P. M. Project
South Hobbs Grayburg San Andres Unit
" 1 D 34-18-38 106
" 2 E " 121
" 3 L " 117
" 4 K " 111
" 5 P 33-18-38 142
" 6 M 34-18-38 101
" 7 N " 83
" 8 D 6-19-38 11
Acreage factor .975
" 9 C " 13
" 10 B " 35
" 11 A " 10
" 12 D 5-19-38 52
" 13 C " 55
" 14 B " 95
" 15 A " 105
" 16 D 4-19-38 150
" 17 C " 64
" 18 B " 118
" 19 A " 188
" 20 D 3-19-38 76
" 22-21 C " 98
" 23 B " 20
" 24 A " 3
" 25 F 6-19-38 13
" 26 H " 2
" 27 E 5-19-38 37
" 28 F " 28
" 29 G " 82
" 30 H " 130
" 32 F 4-19-38 64
" 34 H " 131
" 36 F 3-19-38 30
" 38 H " 22
" 39 L 5-19-38 42

AMOCO PRODUCTION CO. CONT'D
South Hobbs Grayburg San Andres Unit
" 40 K 5-19-38 52
" 42 L 4-19-38 49
" 124-44 J " 141
" 46 L 3-19-38 25
" 48 J " 93
" 50 N 5-19-38 16
" 51 N " 29
" 52 P " 33
" 54 N 4-19-38 71
" 56 P " 57
" 57 M 3-19-38 63
" 58 N " 93
" 60 P " 6
" 61 A 8-19-38 5
" 62 D 9-19-38 25
" 64 B " 36
" 66 D 10-19-38 425
" 69 B " 280
" 70 M 8-19-38 10
" 72 F 9-19-38 15
" 74 G " 21
" 75 K " 37
" 77 F 10-19-38 217
" 79 N " 96
" 81 L 9-19-38 3
" 83 J " 1
" 85 L 10-19-38 3
" 86 K " 23
" 88 J " 28
" 91 P 9-19-38 7
" 94-93 N 10-19-38 9
" 96-95 O " 19
" 99 D 15-19-38 2
" 102 B " 28
" 104 A " 25
" 106 F " 12
" 108 K " 5
" 109 J " 34
" 113 G 6-19-38 12
" 114 I " 12
" 115 I " 17
" 116 O " 5
" 118 P " 10
" 118 D 8-19-38 3
" 119 C " 9
" 120 E 3-19-38 33
" 31 E 4-19-38 Input
" 33 G " "
" 35 E 3-19-38 "
" 37 G " "
" 43 K 4-19-38 "
" 45 I " "
" 47 K 3-19-38 "
" 49 I " "
" 53 M 4-19-38 "
" 55 O " "
" 59 O 3-19-38 "
" 63 C 5-19-38 "
" 65 A " "
" 67 C 10-19-38 "
" 69 A " "
" 71 E 9-19-38 "
" 73 G " "
" 76 E 19-19-38 "
" 78 G " "
" 82 K 9-19-38 "
" 84 I " "
" 87 K 10-19-38 "
" 89 I " "
" 90 O 9-19-38 "
" 92 M 10-19-38 "
" 41 I 5-19-38 56

BOBBS PADDOCK
Top Allowable 107 GOR Limit 2,000
Top Casinghead Gas Limit 214 MCF
SHELL OIL CO.
Scott A St.
" (27) 7 H 32-18-38 27 570
State S(104) 5 D 33-18-38 104 462

POOL TOTAL 2 131

WOOD SAN ANDRES, EAST
Top Allowable 80 GOR Limit 2,000
Top Casinghead Gas Limit 160 MCF
CONTINENTAL-EMSCO CO.
Pearl Goode
" (30) 1 B 31-18-39 30 **2033
" (34) 2 A " 34 **2735

TOTAL 2 64
EXXON CORPORATION
S.E.Cain(4) 2 K 30-18-39 4 **3386
" (3) 3 N " 3 **2670

TOTAL 2 7
MARTINDALE PETROLEUM CORP.
C.O.Davis(1) 1 N 29-18-39 1 1300
" (1) 2 L " 1 1650
" (2) 3 M " 2 1850
Ferguson(4) 1 H 30-18-39 4 1950
Rolene St.(26) 1 C 32-18-39 25 1962
" (26) 2 D " 26 1923
Rocket Cain
" (3) 1 L 30-18-39 2 600
" (2) 2 M " 2 900

TOTAL 8 64
PENROSE-HACHARY OPERATING CO.
Davis (5) 1 K 27-18-38 8 TSTM

STANDARD OIL & GAS, INC.
Laney Reese
" (36) 1 I 30-18-39 36 1056

WIERMAN, SAM K.
Laney (8) 1 J 30-18-39 8 **12616
" (36) 2 J " 36 1165
" (28) 3 P " 28 1515

TOTAL 3 72

POOL TOTAL 17 251

HOUSE DRINKARD
Top Allowable 142 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 284 MCF
ANOCO PRODUCTION CO.
Cone A 1 F 12-20-38 4
Cone B 1 J " 8
Rouse C 1 H 11-20-38 4
State C 1 P 2-20-38 9

TOTAL 4 25
GIL-Mc OIL CORP.
Blankenship 2 L 12-20-38 6
" 3 M " 4

TOTAL 2 10
MALLARD EXPLORATION, INC.
Phillips House State
" 1 O 2-20-38 6

READ & STEVENS, INC.
Crown 1 B 11-20-38 35

WESTERN EQUIPMENT CO.
Hester 12 1 K 12-20-38 5
" 2 N " 7
" 3 O " 8

TOTAL 3 20

POOL TOTAL 11 96

HOUSE SAN ANDRES
Top Allowable 80 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 160 MCF
ANOCO PRODUCTION CO.
Rouse A 1 I 11-20-38 7
Rouse B 1 P " 6

TOTAL 2 13
GIL-Mc OIL CORP.
Blankenship 1 E 12-20-38 4
" A 1 L " 6

TOTAL 2 10
PIERCE, RAY A.
House 1 D 13-20-38 6

UNION OIL CO. OF CALIFORNIA
S.B.Fletcher A
" 2 F 5-20-39 1
Kyle,C.H. 1 L " 3
" 2 K " 3

TOTAL 3 7

POOL TOTAL 8 36

HOUSE TUBB, EAST
Top Allowable 142 GOR Limit 2,000
Top Casinghead Gas Limit 284 MCF
ANOCO PRODUCTION CO.
Cone A (2) 1 F 12-20-38 2 **4167

HUMBLE CITY AREA
(641 Acre Spacing)
Top Allowable 445 GOR Limit 2,000
Top Casinghead Gas Limit 890 MCF
TEXAS AMERICAN OIL CORP.
Shipp (13) 4 I 11-17-37 13 **2230

HUMBLE CITY STRAWN
(320 Acre Spacing)
Top Allowable 534 GOR Limit 2,000
Top Casinghead Gas Limit 1068 MCF
TEXAS AMERICAN OIL CORP.
Shaw (20) 1 B 15-17-37 20 **19000
Shipp 1 K 11-17-37 Gas Well

HUNT DEVONIAN
Top Allowable 455 GOR Limit 2,000
Top Casinghead Gas Limit 910 MCF
W. A. MONCRIEF, JR.
State B (50) 1 G 8-16-34 50 TSTM

HUNT QUEEN, WEST
Top Allowable 80 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 160 MCF
BAXTER, MURPHY H.
Pure St. 1 G 15-16-33 6
" 2 I " 6

POOL TOTAL 2 12
IMPERIAL TUBB DRINKARD
Top Allowable 142 GOR Limit 2,000
Top Casinghead Gas Limit 284 MCF
ARGEE OIL COMPANY
E.C.Hill A(3) 4 J 27-21-37 3 **4266

IMPERIAL TUBB DRINKARD CONT'D
DAWSON EXPLORATION CORP.
Saltmount(18) 2 O 21-21-37 18 1300

GULF OIL CORP.
C.E.LaMotte
" (5) 46 K 22-23-37 5 **14200

PETRO-LEWIS CORP.
Fannins B(5) 1 A 33-23-37 5 **2215

POOL TOTAL 4 31

INDE PERMO PENNSYLVANIAN
(640 Acre Spacing)
Top Allowable 355 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 710 MCF
ANOCO PRODUCTION CO.
Dallas 1 H 26-11-33 11

BARNES, J. C. OIL CO.
So.Natural Gas Co.
" 1 I 1-11-33 Gas Well
Acreage factor 1.300

BROWN, THE MAURICE L. CO.
Murphy St. 2 J 13-10-33 3

KAISER-FRANCIS OIL CO.
Murphy A State
" 1 J 24-10-33 No C-115
" 2 I 21-10-33 "

TOTAL
LAYTON ENTERPRISES, INC.
St. EF Com. 1 P 6-11-34 22
Acreage factor 1.175
" 3 K " 31
Acreage factor 1.162
" 4 L " 58
Acreage factor 1.025
" 5 N 5-11-34 30

TOTAL 4 141
MCF OIL CORP.
Nine Ranch Inc. State
" 1 C 22-10-33 43
" 2 F " 30
Snell St. 3 H " 79

TOTAL 3 152
PENNZOIL COMPANY
Harris St. 1 L 5-11-34 12
Acreage factor .675

READ & STEVENS, INC.
State D 1 A 28-10-33 17
State CF 1 A 33-10-33 45

TOTAL 2 62
SOUTHLAND ROYALTY CO.
Epperson 3 O 24-11-33 12
Farrar A 1 A 13-11-33 23
Farrar B 1 O " 35
State A 1 O 5-11-34 34

TOTAL 4 104

POOL TOTAL 16 485

JAL DELAWARE, WEST
Top Allowable 167 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 334 MCF
GETTY OIL CO.
West Jal A 1 K 21-25-36 6
West Jal St. 1 H 20-25-36 12

POOL TOTAL 2 18

JAL STRAWN, WEST
Top Allowable 320 GOR Limit 2,000
Top Casinghead Gas Limit 640 MCF
TEXACO INC.
C.Elliott Federal
" (11) 1 J 8-25-36 11 1364

JALMAT YATES SEVEN RIVERS
Top Allowable 80 GOR Limit 10,000
Top Casinghead Gas Limit 800 MCF
ANTWEIL, MORRIS R.
Federal(2) 1 N 24-25-36 2 6300
M.Forrest(9) 2 M " 9 1355
" (7) 3 I 23-25-36 7 1857

TOTAL 3 18
APOLLO OIL CO.
Brown (1) 2 D 25-25-36 1 7000
" (2) 4 F " 2 3503
Brown A/c-1
" (7) 3 C " 7 2143
W.T.Joyner(4) 2 I 26-25-36 4 TSTM

TOTAL 4 14
ARCO OIL & GAS CO.
B.Davis ASC
" (8) 3 K 34-23-36 S **10625
W.B.Guthrie WN
" (12) 3 J 34-23-36 12 **25167
W.F.Hanagan
" 5 N 12-25-36 6
State 157-5(10)3 D 7-22-36 10 3900
" (22) 4 E " 22 1939
Acreage factor .900

TOTAL 5 58
ARCO, SAM D.
Everett(16) 1 K 35-24-36 16 2500
" (5) 2 N " 5 800
Arnott Ramsay A
" (8) 5 G 2-25-36 S 2125
State W(7) 3-1 P 36-24-36 7 **22714
" (18) 2 O " 18 8778

TOTAL 6 54
BERRY, O. H.
J.L.Isbell 7 R 15-24-36 No C-116

BETTIS, BOYLE & STOVALL
Johns Fed.(15)1 A 20-25-37 15 1467
Justis, S. M. "A"
" (6) 3 B " 6 8167
" (9) 6 N " 9 1111
Justis, B. M. "B"
" (45) 4 A 19-25-37 45 956
" (10) 7 F 20-25-36 10 9000
" (3) 8 G " 3 **21657
Justis, B. M. "C"
" (15) 5 C " 15 800
*Justis, V. H.
" (55) 2 D 20-25-36 55 1236
B.T.Lanehart
" (10) 2 F 21-25-37 10 3100
" (8) 3 C " 8 3250

PETERSON PENNSYLVANIAN, SOUTH
(40 Acre Spacing)
Top Allowable 247 GOR Limit 2,000
Top Casinghead Gas Limit 494 MCF
ENTERPRISE EXPLORATION, INC.
Lambirth(135) 1 K 31-5-33 247 682
" (139) 6 D " 249 1414
" (143) 7 P 33-5-33 249 395
" (147) 8 L " 249 553
" (43) 9 P 35-5-32 43 605

TOTAL 5 996
PHILLIPS PETROLEUM CO.
Lambirth A
" (30C) 1 J 31-5-33 200 440
" (31F) 2 F " 267 290
" (42) 3 N " 42 1665
" (27E) 4 A " 267 460
Lambirth State
" (33) 1 R 36-5-32 33 30

TOTAL 5 869

POOL TOTAL 10 1865
PETERSON PENN ASSOCIATED
Spacing Oil - 160 Gas - 320
Top Oil Allowable 427 GOR Limit 4,000
Top Gas Allowable MCFD
Oil - 1708 Gas - 3416
AMOCO PRODUCTION CO.
Peterson A Gas Com.
" 1 B 19-5-33 GW AF 1.00
Peterson C
" (12) 1 E 18-5-33 22 3854
Pasteiff(42) 1 M 17-5-33 42 3143
Swearingen A Gas Com.
" (6) 1 J 19-5-33 6 2167
Swearingen B
" (52) 4 E 20-5-33 52 3346
Swearingen C
" (33) 1 N 18-5-33 33 **5061
" (36) 1 L 20-5-33 35 **4257

POOL TOTAL 6 190
PETERSON PENN, NORTH
Top Allowable 147 GOR Limit 2,000
Top Casinghead Gas Limit 324 MCF
ENTERPRISE EXPLORATION, INC.
Arco St.(156) 1 O 16-4-33 168 1238

PETERSON PENN, SOUTH
Top Allowable 197 GOR Limit 4,000
Top Casinghead Gas Limit 788 MCF
ENTERPRISE EXPLORATION, INC.
Lambirth(35) 3 G 31-5-33 38 1513
" (34) 4 O " 94 **2319

TOTAL 2 132
PHILLIPS PETROLEUM CO.
Lambirth A
" (33) 5 M 30-5-33 33 30

POOL TOTAL 3 165
PRAIRIE MESA, SOUTH
(80 Acre Spacing)
Top Allowable 355 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 710 MCF
AMERICAN PETROFINA CO. OF TEXAS
Federal E 1 K 20-8-36 60
" 2 N " 100
Federal J 1 K 23-8-36 10

TOTAL 3 170

HUBER, J. M. CORP.
Perry Fed. 1 O 17-8-36 15

O'NEILL, JOSEPH I., JR.
Federal H 1 I 17-8-36 6

PETROLEUM CORP. OF TEXAS
Bates Fed. 1 B 22-8-36 10

REID & STEVENS, INC.
H.S.Hatch 1 F 20-8-36 25

POOL TOTAL 7 226
PRAIRIE DEVONIAN, SOUTH
(40 Acre Spacing)
Top Allowable 490 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 980 MCF
MONUMENT ENERGY CORP.
Petrofina Federal
" 1 N 20-8-36 43

NEELY, CARROL
Lone Star Federal
" 1 A 20-8-36 No Cmlt5

POOL TOTAL 1 48
PRAIRIE SAN ANDRES, SOUTH
Top Allowable 80 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 160 MCF
HUBER, J. M. CORP.
Perry Fed. 2 P 17-8-36 TA

O'NEILL, JOSEPH I., JR.
State L 1 M 19-8-36 15

PRAIRIE WOLFCAMP, SOUTH
Top Allowable 230 GOR Limit 2,000
Top Casinghead Gas Limit 460 MCF
AMERICAN PETROFINA CO. OF TEXAS
[illegible] 1-O 20-8-36 2 TEMP

SNB OPERATING CO.
New Mexico Federal
" 1 I 20-8-36 No C-116

POOL TOTAL 1 2
QUAIL QUEEN
Top Allowable 107 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 214 MCF
REID & STEVENS, INC.
Atlantic Richfield
" 1 L 13-19-34 30
Federal A 1 J 14-19-34 22
Hooper B 1 M 7-19-34 10
Pennzoil St. 1 G 11-19-34 14
Quail State 1 O " 23
" 2 J " 107
" 3Y I " 23
" 4 P " 10
State BC 1 H 14-19-34 10
" 2 G " 24
" 3 B " 19
State C 1 K 11-19-34 8
Walnoco St. 1 D " 48
" 2 H " 25

POOL TOTAL 14 362

QUAIL RIDGE DOCK SPRINGS
Top Allowable 120 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 640 MCF
ARCO OIL & GAS CO.
Mescalero Ridge Unit DC
" 1 D 21-19-34 98
Mescalero Ridge Unit
" 22 O 21-19-34 32

TOTAL 2 130
GULF OIL CORP.
Lea ED St. NCT-A
" 1 M 16-19-34 110

UNION OIL CO. OF CALIFORNIA
Pipeline 16 State
" 1 G 16-19-34 320

POOL TOTAL 4 560
QUAIL RIDGE YATES, SOUTH
Top Allowable 60 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 160 MCF
ARCO OIL & GAS CO.
Mescalero Ridge Unit
" 32 D 26-19-34 12

QUERECHO PLAINS BONE SPRINGS
Top Allowable 230 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 460 MCF
MERIDIAN OIL CO.
Federal C 1 K 27-18-32 115

PETROLEUM DEVELOPMENT CORP.
McKay West Fed.
" 1 F 34-18-32 122
"
POOL TOTAL 2 237
QUERECHO PLAINS DELAWARE
[illegible] 1-O [illegible] 2 [illegible]
No Test Required
Top Casinghead Gas Limit 284 MCF
YATES PETROLEUM CORP.
Sweeney Fed. 1 C 25-18-32 6

QUERECHO PLAINS PENN
Top Allowable 365 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 730 MCF
PETROLEUM CORP. OF TEXAS
Quer.Pl.St. 1 K 22-18-32 29

QUERECHO PLAINS QUEEN ASSOCIATED
Spacing Oil - 40 Gas - 160
Top Oil Allowable 80 GOR Limit 2,000
Top Gas Allowable MCFD
Oil - 160 Gas - 640
BURLESON, INC., LEWIS B.
Querecho Plains Queen Waterflood Project
Anadarko Fed. 1 N 27-18-32 SI
" 2 K " 24
" 3 L " 19
" 4 M " 26
" 6 N " Input

TOTAL 3 69
ESPERANZA ENERGY CORP.
Edith Fed.(10) 2 J 23-18-32 10 **2200
Marshall Federal
" (12) 1 N " 12 1167

TOTAL 2 22

MERIDIAN OIL CO.
Federal E(14) 2 F 27-18-32 14 371
" (17) 3 E " 17 535
Federal F 1 L 23-18-32 GW AF 1.75

TOTAL 2 31
THE SUPERIOR OIL CO.
Government K
" (8) 1 K 23-18-32 8 1375

TENNECO OIL CO.
Cedar Lake(6) 1 F 23-18-32 6 500

POOL TOTAL 9 136
QUERECHO PLAINS YATES
Top Allowable 80 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 160 MCF
BURLESON, INC. LEWIS B.
Berry Fed. 1 E 35-18-32 7

RANGER LAKE BONE
(80 Acre Spacing)
Top Allowable 355 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 710 MCF
PHILLIPS PETROLEUM CO.
Ranger 7 L 26-12-34 36

RANGER LAKE PENN
(80 Acre Spacing)
Top Allowable 400 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 800 MCF
PHILLIPS PETROLEUM CO.
Ranger 7 L 26-12-34 90
" 13 B 23-12-34 45

TOTAL 2 135
RAPID COMPANY, INC.
Ranger Lake 1 N 11-12-34 70

POOL TOTAL 3 205
RANGER LAKE SAN ANDRES
Top Allowable 80 GOR Limit 2,000
No Test Required
Top Casinghead Gas Limit 160 MCF
RAPID COMPANY, INC.
Ranger Lake 3 N 11-12-34 10

REEVES QUEEN
Top Allowable 80 GOR Limit 2,000
Top Casinghead Gas Limit 160 MCF
ARCO OIL & GAS CO.
Lea 403 State
" (12) 3 N 22-18-35 12 333

HARVEY E. YATES CO.
Mobil 27 State
" (3) 1 A 27-18-35 8 **14000
State 22(57) 1 P 22-18-35 57 **2315

TOTAL 2 65

POOL TOTAL 3 77
RHODES YATES SEVEN RIVERS
Top Allowable 80 GOR Limit 10,000
Top Casinghead Gas Limit 800 MCF
EL PASO NATURAL GAS CO.
Lineberry(2) 1 C 28-26-37 2 6897

EL PASO NATURAL GAS CO.
Moberly Rhodes Waterflood Project
Moberly 1 F 21-26-37 6

VACUUM MIDDLE PENN
Top Allowable 320 GOR Limit 2,000
Top Casinghead Gas Limit 640 MCF
MOBIL PRODUCING TEXAS & N. M., INC.
Bridges State
" (40) 126 J 11-17-34 40 500
" (11) 183 E 12-17-34 11 1091

TOTAL 2 51
MOBIL PRODUCING TEXAS & N. M., INC.
Vacuum Middle Penn Waterflood Project
Bridges State
" 130 N 13-17-34 7
" 121 L " 5
" 185 D " 134
" 147 F " Input

TOTAL 3 146

POOL TOTAL 5 197

VACUUM PENN, NORTHEAST
Top Allowable 355 GOR Limit 2,000
Top Casinghead Gas Limit 710 MCF
PENNZOIL COMPANY
Gallagher "S" State
" (6) 1 D 8-17-34 6 1650

VACUUM UPPER PENN
(40 Acre Spacing)
Top Allowable 400 GOR Limit 2,000
Top Casinghead Gas Limit 800 MCF
GETTY OIL CO.
State BA(12) 6 D 36-17-34 12 **8292
" (23) 5 B " 23 **3729

TOTAL 2 35
MARATHON OIL CO.
McCallister State
" (36) 7 N 25-17-34 26 **3571
Warn State A/c-1
" (31) 3 F 31-17-35 31 **6286

TOTAL 2 57
[illegible]
Bridges State
" (45) 124 B 25-17-34 45 **5911
" (43) 123 F " 43 **4583
" (45) 120 N 13-17-34 45 **2003

TOTAL 3 133
TEXACO INC.
N.M. O State NCT-1
" (7) 13 P 36-17-34 7 **2714
N.M. Q State
" (31) 4 P 25-17-34 31 **11430
Texaco Mobil State Com.
" (10) 1 H " 10 1410
Texaco Shell State Com.
" (3) 1 J " 3 1367

TOTAL 4 51

POOL TOTAL 11 276

VACUUM WOLFCAMP
(80 Acre Spacing)
Top Allowable 355 GOR Limit 2,000
Top Casinghead Gas Limit 710 MCF
CONOCO INC.
State H-35(28) 7 B 35-17-34 28 **2466

GETTY OIL CO.
State ZA(6) 6 D 36-17-34 6 **8292
" (11) 8 B " 11 **3729

TOTAL 2 17

MARATHON OIL CO.
McCallister State
" (1) 5 H 25-17-34 1 **4300
" (4) 7 N " 4 **3571
Warn State A/c-1
" (11) 3 F 31-17-35 11 **6296

TOTAL 3 16
MOBIL PRODUCING TEXAS & N. M., INC.
Bridges State
" (24) 93 J 26-17-34 24 **4019
" (56) 108 F 25-17-34 84 3357
State CO Com.
" (1) 1 L 36-17-34 1 **2614

TOTAL 3 109
PHILLIPS PETROLEUM CO.
Santa Fe(36) 87 L 31-17-35 33 **2816
Acreage factor .938

TEXACO INC.
N.M.L St.(6) 6 B 1-18-34 6 **28233
N.M.M St.(3) 5 D " 3 **3767
" (5) 7 F " 5 **29120
N.M.N St.(15) 6 L 30-17-35 15 **5253
Acreage factor .938
" (24) 8 D " 24 379
Acreage factor .938
N.M. O State NCT-1
" (1) 11 F 36-17-34 1 **5100
" (25) 14 J " 25 **6656
" (1) 17 N " 1 **71200
" (62) 18 H " 62 **2763
N.M.Q St.(9) 4 P 25-17-34 9 **11300
Texaco Mobil State Com.
" (5) 1 H " 5 1420
Texaco Shell St. Com.
" (4) 1 J 25-17-34 4 1550

TOTAL 12 160

POOL TOTAL 22 368

VACUUM WOLFCAMP, EAST
[illegible] No Test Required
Top Casinghead Gas Limit 550 MCF
TEXAS PACIFIC OIL CO., INC.
State AF 3 L 8-18-35 70

VACUUM LOWER WOLFCAMP, NORTH
(80 Acre Spacing)
Top Allowable 400 GOR Limit 2,000
Top Casinghead Gas Limit 800 MCF
KOCH EXPLORATION CO.
Pennzoil Koch B
" (10) 2 F 4-17-34 10 1080

PENNZOIL COMPANY
Gallagher State
" (19) 1 A 3-17-34 19 **3842
Mobil St.(33) 1 G " 33 1545
Rock Island State
" (5) 2 E " 5 **2444
Rock Island B State
" (10) 1 A 4-17-34 10 **6837
Acreage factor 1.038

TOTAL 4 67

POOL TOTAL 5 77

VACUUM WOLFCAMP, NORTHWEST
Top Allowable 320 GOR Limit 2,000
Top Casinghead Gas Limit 640 MCF
BARNES, J. C. OIL CO.
Lea-Nox State
" (30) 1 L 5-17-34 30 **3400
" (10) 2 J " 10 **2305
Lea St. (20) 1 F " 20 **2476
" (10) 2 H " 10 **2239

TOTAL 4 70
PENNZOIL COMPANY
Gallagher "S" State
" (5) 1 D 8-17-34 5 1650
Sinclair "6" State
" (7) 1 P 6-17-34 7 735

TOTAL 2 12

POOL TOTAL 6 82

VACUUM YATES
Top Allowable 80 GOR Limit 2,000
Top Casinghead Gas Limit 160 MCF
MARATHON OIL CO.
Warn State A/c-3
" (2) 4 H 33-17-35 2 **12500

MOBIL PRODUCING TEXAS & N. M., INC.
State M(5) 5 C 34-17-35 5 **9500
" (1) 6 D " 1 **45000
" (1) 7 E " 1 **7000
" (1) 8 F " 1 TSTM

TOTAL 4 8
PHILLIPS PETROLEUM CO.
Santa Fe(3) 97 N 33-17-35 3 **2573
" (7) 113 B 34-17-35 7 **2984
" (7) 127 G " 7 1175

TOTAL 3 17

POOL TOTAL 8 27

VADA PENNSYLVANIAN
(160 Acre Spacing)
Top Allowable 382 GOR Limit 10,000
Top Casinghead Gas Limit 3820
AMOCO PRODUCTION CO.
Ainsworth(66) 1 H 35-9-33 66 1182
" (14) 2 C " 14 4847
Ainsworth A
" (14) 1 P 26-9-33 14 1429
Ainsworth B Oil Com.
" (8) 1 G 26-9-33 8 **11875
Ainsworth C Oil Com.
" (6) 1 O 23-9-33 6 5167
Cross Oil Com.
" (35) 1 O 35-9-33 38 6816
Hutcherson(8) 1 M 9-9-34 8 **12625
Midwest E Fed. Oil Com.
" (86) 1 E 25-9-33 86 **10409
Midwest G Fed. Oil Com.
" (22) 1 F 31-9-34 22 6000
Pruitt A(1) 2 G 17-9-34 1 TSTM
Pruitt B(1) 1 J 18-9-34 1 TSTM
Pruitt D(1) 1 D 17-9-34 1 TSTM
State K(66) 2 A 2-10-33 66 2712
State L(44) 1 K 2-10-33 44 2409
" (55) 2 C " 55 2709
Tankersley(8) 3 F 30-9-34 8 **15375
Wilson Oil Com.
" (10) 1 B 25-9-33 10 7000

TOTAL 17 448
BELCO PET. CORP.
Henry (22) 1 A 5-9-35 22 TSTM

BROWN, THE MAURICE L. CO.
S.E.Anderson B
" 1 B 9-9-35 No C-116
Barnes A(4) 2 J 7-9-35 6 5833
Barnes 637 Ltd.
" (36) 1 I 7-9-36 36 1022
Bates Fed. Com.
" (8) 1 I 11-9-34 8 750
Bond State Com.
" (14) 1 H 32-8-35 14 3550
Duncan Fed. Com.
" (5) 1 G 7-9-34 6 **15667
Holt St. Com.
" (47) 1 D 4-10-34 47 2064
Hooper (2) 1 H 11-9-35 2 1500
Hugo 695 Ltd.
" (11) 2 L 15-9-35 11 727
Humble State
" (41) 2 I 16-9-35 41 2561
Huth 7101 JV-D
" (11) 1 D 10-9-34 11 4001
Lane B 674 Ltd.
" (2) 3 C 1-10-33 2 2500
McNulty 7101 JV-D
" (15) 1 L 3-9-34 15 526
" (6) 2 F " 6 500
Nilo 702 JV-D
" (19) 1 N 33-8-35 19 4783
Star 695 Ltd.
" (53) 1 F 4-9-35 53 121
Starnes 694 Ltd.
" (28) 1 R " 28 1429
State B(14) 1 A 8-10-34 14 2000
State 17(28) 1 K 17-10-34 28 1429
Sunoco Fed.
" (11) 1 K 5-9-34 11 **8727
Sunray 693 Ltd.
" (146) 1 N 36-9-33 146 1849
" (41) 3 H " 41 4241
Walker 695 Ltd.
" (25) 1 M 6-9-36 25 480
Acreage factor .975
Will 693 Ltd.
" [illegible] [illegible]
Willis (11) 2 I 4-9-34 11 455

TOTAL 24 626
BROWN, TOM, INC.
Cities Fed.
" (55) 1 J 29-8-36 53 133
" (17) 2 C " 17 2165
Federal 1 D 22-8-36 Gas Well
" (35) 2 B " 36 2841
Federal C(9) 1 L 28-8-36 9 7666
Federal D 1 L 27-S-36 No C-116
Federal E(76) 1 J 25-S-36 76 133

TOTAL 5 191
BURNS, E. L. CORP.
Vada Pruitt
" (41) 1 K 1-9-34 41 TSTM

CHANDLER PETROLEUM CORP.
State 15(33) 3 O 18-10-34 33 4697

COQUINA OIL CORP.
Carter (11) 1 N 25-S-35 11 1818

DAWSON OIL CORP.
Sheridan(25) 1 M 11-9-33 25 1333
Sheridan A
" (35) 1 C 24-9-33 35 1000

TOTAL 2 60

CASE 7065: Application of El Paso Natural Gas Company for twelve non-standard proration units, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the establishment of eight non-standard proration units for Pictured Cliffs wells to be drilled in the W/2 of partial Sections 6, 7, 18, 19, 30 and 31 of Township 30 North, Range 4 West, and four non-standard proration units for Pictured Cliffs wells in partial Sections 7, 8, and 9 of Township 28 North, Range 4 West.

CASE 7066: Application of Conoco Inc. for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Britt "B" Well No. 27 located in Unit G of Section 15, Township 20 South, Range 37 East, to produce oil from the Weir-Drinkard or an undesignated Blinebry pool and an undesignated Abo pool.

CASE 7067: Application of Conoco Inc. for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Dagger Draw Com. Well No. 4 located in Unit J of Section 25, Township 19 South, Range 24 East, to produce oil from the North Dagger Draw-Upper Penn Pool and gas from an undesignated Morrow pool.

CASE 7068: Application of Conoco Inc. for a dual completion and an unorthodox well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Penny Federal Com. Well No. 2 at an unorthodox location 1650 feet from the North line and 1980 feet from the East line of Section 23, Township 20 South, Range 24 East, to produce oil from the South Dagger Draw-Upper Penn Pool and gas from an undesignated Morrow pool.

CASE 7069: Application of Anadarko Production Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Morrow test well to be drilled 660 feet from the South and East lines of Section 4, Township 19 South, Range 25 East, the S/2 of said Section 4 to be dedicated to the well.

CASE 7070: Application of Tesoro Petroleum Corporation for a pilot caustic flood project, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a one-acre pilot caustic flood project in the Hospah Field by the injection of caustic fluid into the Seven Lakes Sand of the Upper Hospah Field at an approximate depth of 300-500 feet through four injection wells in Unit K of Section 1, Township 17 North, Range 9 West.

CASE 7071: Application of Jake L. Hamon for an unorthodox well location and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the simultaneous dedication of a 640-acre proration unit comprising all of Section 17, Township 20 South, Range 36 East, North Osudo-Morrow Pool, to its Amerada Federal Well No. 2 located in Unit F and its Amerada Federal Well No. 3, to be drilled at an unorthodox location 1650 feet from the South line and 660 feet from the East line of said Section 17.

CASE 6668: (Reopened and Readvertised)

In the matter of Case 6668 being reopened pursuant to the provisions of Order No. R-6139 which order promulgated temporary special rules and regulations for the South Culebra Bluff-Bone Spring Pool in Eddy County, New Mexico, including a provision for 80-acre spacing units. Operators in said pool may appear and show cause why the pool should not be developed on 40-acre spacing units.

CASE 7005: (Continued from September 17, 1980, Examiner Hearing)

Application of Sol West III for an NGPA determination, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir determination in the Morrow formation for his Turkey Track-Morrow Sand Well No. 1 in Unit I of Section 26, Township 18 South, Range 28 East.

CASE 7072: Application of Enserch Exploration, Inc. for pool creation and special pool rules, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Pennsylvanian oil pool for its Enserch Amoco State Well No. 1 located in Unit L of Section 16, Township 4 South, Range 33 East, and the promulgation of special pool rules therefor, including a provision for 80-acre spacing.

CASE 7073: Application of Enserch Exploration, Inc. for pool creation, temporary special pool rules, and assignment of a discovery allowable, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Fusselman oil pool for its J. G. O'Brien Well No. 1 located 1980 feet from the North line and 660 feet from the West line of Section 31, Township 7 South, Range 29 East, with special rules therefor, including provisions for 80-acre spacing, a limiting gas-oil ratio of 3000 to one and special well location requirements providing for the drilling of wells within 150 feet of the center of a quarter-quarter section. Applicant further seeks approval of a 74.24-acre proration and spacing unit and a discovery allowable for said J. G. O'Brien Well No. 1.

CAMPBELL AND BLACK, P.A.
LAWYERS

JACK M. CAMPBELL
BRUCE C. BLACK
MICHAEL B. CAMPBELL
WILLIAM F. CARR

POST OFFICE BOX 2208
JEFFERSON PLACE
SANTA FE, NEW MEXICO 87501
TELEPHONE (505) 988-4421

October 10, 1980

RECEIVED
OCT 10 1980
OIL CONSERVATION DIVISION
SANTA FE

Mr. Joe D. Ramey
Division Director
Oil Conservation Division
New Mexico Department of
Energy and Minerals
Post Office Box 2088
Santa Fe, New Mexico 87501

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

Dear Mr. Ramey:

Enclosed in triplicate is the application of Enserch Exploration, Inc. in the above-referenced matter.

The applicant requests that this matter be included on the docket for the examiner hearing scheduled to be held on October 29, 1980.

Very truly yours,

William F. Carr

WFC:lr

Enclosures

cc: Mr. Leonard Kersh

BEFORE THE

OIL CONSERVATION DIVISION

NEW MEXICO DEPARTMENT OF ENERGY AND MINERALS

IN THE MATTER OF THE APPLICATION OF ENSERCH EXPLORATION, INC. FOR OIL POOL CREATION AND SPECIAL POOL RULES, ROOSEVELT COUNTY, NEW MEXICO.

Case 7972

RECEIVED
OCT 10 1980
OIL CONSERVATION DIVISION
SANTA FE

APPLICATION

Comes now ENSERCH EXPLORATION, INC., by their undersigned attorneys, and hereby makes application for an order designating a new pool as a result of the discovery of hydrocarbons in the Pennsylvanian formation in the Enserch Amoco State No. 1 Well located in Unit L of Section 16, Township 4 South, Range 33 East, Roosevelt County, New Mexico and for promulgation of special pool rules, including (1) 80-acre spacing or proration units on a permanent basis or, in the alternative, on a temporary basis, (2) the dedication of all of the north half of the southwest quarter of said Section 16 to the Enserch Amoco State No. 1 Well and (3) special well location requirements, and in support of this application would show the Commission:

1. That applicant has recently completed the Enserch Amoco State No. 1 Well in the Pennsylvanian formation capable of producing oil and gas in paying quantities located 1980 feet from the south and 660 feet from the west line of Section 16, Township 4 South, Range 33 East, Roosevelt County, New Mexico. Said well is producing through perforations from 7826 feet to 7837 feet and was potentialed as capable of producing 172.5 barrels of oil per day, 220 mcf of gas per day and 2 barrels of produced water per day.

2. Applicant believes that the following described lands are reasonably proven to be productive of oil and gas in paying quantities from the Pennsylvanian formation and should be included in the original definition of the new pool to be created because of said discovery:

Township 4 South, Range 33 East, N.M.P.M.
Section 16: N/2 SW/4

3. In order to prevent economic loss caused by the drilling of unnecessary wells, to avoid augmentation of risk arising from the drilling of an excessive number of wells and to otherwise prevent waste and protect correlative rights, special pool rules and regulations providing for 80-acre spacing units should be promulgated for the new pool.

4. Applicant respectfully requests that the special pool rules provide that each well should be located on a standard unit containing 80 acres more or less, consisting of two contiguous governmental quarter quarter sections and that the well may be located in either component of the 80-acre spacing unit. Applicant further requests that each well shall be located within 150 feet of the center of a governmental quarter quarter section or lot.

WHEREFORE, Enserch Exploration, Inc. requests that this application be set for hearing before a duly appointed Examiner of the Oil Conservation Division on October 29, 1980, that notice be given as required by law and the rules of the Division, and that the application be approved.

Respectfully submitted,

CAMPBELL AND BLACK, P.A.

By William F. Carr

William F. Carr
Post Office Box 2208
Santa Fe, New Mexico 87501
Attorney for Applicant

BEFORE THE

OIL CONSERVATION DIVISION

NEW MEXICO DEPARTMENT OF ENERGY AND MINERALS

IN THE MATTER OF THE APPLICATION OF ENSERCH EXPLORATION, INC. FOR OIL POOL CREATION AND SPECIAL POOL RULES, ROOSEVELT COUNTY, NEW MEXICO.

RECEIVED
OCT 10 1980
OIL CONSERVATION DIVISION
SANTA FE

Case 7072

APPLICATION

Comes now ENSERCH EXPLORATION, INC., by their undersigned attorneys, and hereby makes application for an order designating a new pool as a result of the discovery of hydrocarbons in the Pennsylvanian formation in the Enserch Amoco State No. 1 Well located in Unit L of Section 16, Township 4 South, Range 33 East, Roosevelt County, New Mexico and for promulgation of special pool rules, including (1) 80-acre spacing or proration units on a permanent basis or, in the alternative, on a temporary basis, (2) the dedication of all of the north half of the southwest quarter of said Section 16 to the Enserch Amoco State No. 1 Well and (3) special well location requirements, and in support of this application would show the Commission:

1. That applicant has recently completed the Enserch Amoco State No. 1 Well in the Pennsylvanian formation capable of producing oil and gas in paying quantities located 1980 feet from the south and 660 feet from the west line of Section 16, Township 4 South, Range 33 East, Roosevelt County, New Mexico. Said well is producing through perforations from 7826 feet to 7837 feet and was potentialed as capable of producing 172.5 barrels of oil per day, 220 mcf of gas per day and 2 barrels of produced water per day.

2. Applicant believes that the following described lands are reasonably proven to be productive of oil and gas in paying quantities from the Pennsylvanian formation and should be included in the original definition of the new pool to be created because of said discovery:

Township 4 South, Range 33 East, N.M.P.M.
Section 16: N/2 SW/4

3. In order to prevent economic loss caused by the drilling of unnecessary wells, to avoid augmentation of risk arising from the drilling of an excessive number of wells and to otherwise prevent waste and protect correlative rights, special pool rules and regulations providing for 80-acre spacing units should be promulgated for the new pool.

4. Applicant respectfully requests that the special pool rules provide that each well should be located on a standard unit containing 80 acres more or less, consisting of two contiguous governmental quarter quarter sections and that the well may be located in either component of the 80-acre spacing unit. Applicant further requests that each well shall be located within 150 feet of the center of a governmental quarter quarter section or lot.

WHEREFORE, Enserch Exploration, Inc. requests that this application be set for hearing before a duly appointed Examiner of the Oil Conservation Division on October 29, 1980, that notice be given as required by law and the rules of the Division, and that the application be approved.

Respectfully submitted,

CAMPBELL AND BLACK, P.A.

By William F. Carr

William F. Carr
Post Office Box 2208
Santa Fe, New Mexico 87501
Attorney for Applicant

BEFORE THE

OIL CONSERVATION DIVISION

NEW MEXICO DEPARTMENT OF ENERGY AND MINERALS

IN THE MATTER OF THE APPLICATION OF ENSERCH EXPLORATION, INC. FOR OIL POOL CREATION AND SPECIAL POOL RULES, ROOSEVELT COUNTY, NEW MEXICO.

Case 7072

RECEIVED
OCT 10 1980
OIL CONSERVATION DIVISION
SANTA FE

APPLICATION

Comes now ENSERCH EXPLORATION, INC., by their undersigned attorneys, and hereby makes application for an order designating a new pool as a result of the discovery of hydrocarbons in the Pennsylvanian formation in the Enserch Amoco State No. 1 Well located in Unit L of Section 16, Township 4 South, Range 33 East, Roosevelt County, New Mexico and for promulgation of special pool rules, including (1) 80-acre spacing or proration units on a permanent basis or, in the alternative, on a temporary basis, (2) the dedication of all of the north half of the southwest quarter of said Section 16 to the Enserch Amoco State No. 1 Well and (3) special well location requirements, and in support of this application would show the Commission:

1. That applicant has recently completed the Enserch Amoco State No. 1 Well in the Pennsylvanian formation capable of producing oil and gas in paying quantities located 1980 feet from the south and 660 feet from the west line of Section 16, Township 4 South, Range 33 East, Roosevelt County, New Mexico. Said well is producing through perforations from 7826 feet to 7837 feet and was potentialed as capable of producing 172.5 barrels of oil per day, 220 mcf of gas per day and 2 barrels of produced water per day.

2. Applicant believes that the following described lands are reasonably proven to be productive of oil and gas in paying quantities from the Pennsylvanian formation and should be included in the original definition of the new pool to be created because of said discovery:

Township 4 South, Range 33 East, N.M.P.M.
Section 16: N/2 SW/4

3. In order to prevent economic loss caused by the drilling of unnecessary wells, to avoid augmentation of risk arising from the drilling of an excessive number of wells and to otherwise prevent waste and protect correlative rights, special pool rules and regulations providing for 80-acre spacing units should be promulgated for the new pool.

4. Applicant respectfully requests that the special pool rules provide that each well should be located on a standard unit containing 80 acres more or less, consisting of two contiguous governmental quarter quarter sections and that the well may be located in either component of the 80-acre spacing unit. Applicant further requests that each well shall be located within 150 feet of the center of a governmental quarter quarter section or lot.

WHEREFORE, Enserch Exploration, Inc. requests that this application be set for hearing before a duly appointed Examiner of the Oil Conservation Division on October 29, 1980, that notice be given as required by law and the rules of the Division, and that the application be approved.

Respectfully submitted,

CAMPBELL AND BLACK, P.A.

By William F. Carr

William F. Carr
Post Office Box 2208
Santa Fe, New Mexico 87501
Attorney for Applicant

Case _____

Application of Enserch Exploration, Inc. for Pool Creation and Special Pool Rules, Roosevelt County, New Mexico.

Applicant, in the above-styled cause, seeks the creation of a new Pennsylvanian Oil Pool for its Enserch Amoco State No. 1 Well located in Unit L of Section 16, Township 4 South, Range 33 East, and the promulgation of special pool rules therefor, including a provision for 80-acre spacing.

ROUGH

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 7072

Order No. R-6554

APPLICATION OF ENSERCH EXPLORATION, INC. FOR POOL CREATION AND SPECIAL POOL RULES, ROOSEVELT COUNTY, NEW MEXICO

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on October 29 19 80, at Santa Fe, New Mexico, before Examiner Daniel S Nutter.

NOW, on this _____ day of December, 19 80, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Enserch Exploration, Inc., is the owner and operator of its Amoco State Well No. 1, located in Unit L of Section 16, Township 4 South, Range 33 East, Roosevelt County, New Mexico.

(3) That the applicant requests dismissal of that portion of this case relating to creation of a new pool for the subject well inasmuch as a new pool for said well has been previously created and defined by Division Order No. R-6420, but applicant does seek

the promulgation of special pool rules therefor, including a provision for 80-spacing.

(4) That applicant's Landes State Well No. 1 discovered a new common source of supply in the Pennsylvanian formation which has been designated the North Peterson-Pennsylvanian Pool

(5) That the evidence presently available appears to justify 80-acre spacing and proration units for said pool, at least on a temporary basis for a period of one year.

(7) That during the one-year period in which this order is in effect, applicant should gather all available information relative to drainage and recoverable reserves in the subject pool

(6) That such temporary rules will not cause waste nor impair correlative rights and should be approved. 1939 4/75

(8) That this case should be reopened 4/6/84 at an examiner hearing in January, 1982, at which time operators in the subject pool should appear and show cause why the subject pool should not be developed on 40-acre spacing and proration units.

IT IS THEREFORE ORDERED:

(1) That special rules and regulations for the North Peterson-Pennsylvanian Pool in Roosevelt County, New Mexico, are hereby promulgated as follows, effective December 1, 1980.

SPECIAL RULES AND REGULATIONS

FOR THE

NORTH PETERSON-PENNSYLVANIAN POOL

RULE 1. Each well completed or recompleted in the North Peterson-Pennsylvanian Pool or in the Pennsylvanian formation within one mile of the ~~Stingray~~-Pennsylvanian Pool, and not nearer to or within the limits of another designated Pennsylvanian pool shall be spaced, drilled, operated, and prorated in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well completed or recompleted in the ~~Stingray~~ North Peterson-Pennsylvanian Pool shall be located on a unit containing 80 acres, more or less, which consists of the N/2, S/2, E/2, or W/2 of a single governmental quarter section; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.

RULE 3. For good cause shown, the Director may grant an exception to the requirements of Rule 2 without notice and hearing when the application is for a non-standard unit comprising a single quarter-quarter section or lot. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Director may approve the application if, after a period of 30 days, no offset operator has entered an objection to the formation of such non-standard unit.

The allowable assigned to any such non-standard unit shall bear the same ratio to a standard allowable in the ~~Stingray~~ North Peterson-Pennsylvanian Pool as the acreage in such non-standard unit bears to 80 acres.

RULE 4. Each well drilled in the ~~Stingray~~ North Peterson-Pennsylvanian Pool shall be located within 150 feet of the center of a governmental quarter-quarter section.

RULE 5. An 80-acre proration unit (79 through 81 acres) in the ~~Stingray~~ North Peterson-Pennsylvanian Pool shall be assigned an 80-acre depth bracket allowable of 267 barrels per day and in the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

IT IS FURTHER ORDERED:

(1) That the locations of all wells presently drilling to or completed in the ~~North Bell Lake-Devonian Gas~~ Pennsylvanian North Peterson-Pennsylvanian Pool or in the ~~Devonian~~ formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Hobbs District Office of the Division in writing of the name and location of the well on or before ~~February~~ January 1, 198~~2~~1.

(2) That, pursuant to Paragraph A. of Section 70-2-18, NMSA 1978, contained in Chapter 271, Laws of 1969, existing wells in the North ~~Bell Lake-Devonian Gas~~ Peterson-Pennsylvanian Pool shall have dedicated thereto ~~6~~80 acres in accordance with the foregoing pool rules; or, pursuant to Paragraph C. of said Section 70-2-18, existing wells may have non-standard spacing or proration units established by the Division and dedicated thereto.

Failure to file new Forms C-102 with the Division dedicating ~~6~~80 acres to a well or to obtain a non-standard unit approved by the Division within 60 days from the date of this order shall subject the well to cancellation of allowable. Until said Form C-102 has been filed or until a non-standard unit has been approved, and subject to said 60-day limitation, each well presently drilling to or completed in the North ~~Bell Lake Devonian Gas~~ Peterson-Pennsylvanian Pool or in the ~~Devonian~~ Pennsylvanian formation within one mile thereof shall receive no more than one-half of a standard allowable for the pool.

(3) That this case shall be reopened at an examiner hearing in ~~October~~ January, 198~~2~~1, at which time the operators in the subject pool may appear and show cause why the ~~Stingray~~ North Peterson-Pennsylvanian Pool should not be developed on 40-acre proration units.

(~~3~~4) That 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 herein-above designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY,
Director

S E A L

dr/

(4) That that portion of Case No. 7072 relating to creation of a new Pennsylvanian oil pool is hereby dismissed.

HERBIE
DICK

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

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

CASE NO. 7072 6554-A
Order No. R- ~~6892~~

IN THE MATTER OF CASE 7072 BEING REOPENED
PURSUANT TO THE PROVISIONS OF ORDER
NO. R-6554, WHICH ORDER PROMULGATED TEMPORARY
SPECIAL RULES AND REGULATIONS FOR THE
NORTH PETERSON-PENNSYLVANIAN POOL,
ROOSEVELT COUNTY, NEW MEXICO, INCLUDING
A PROVISION FOR 80-ACRE SPACING UNITS.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on January 20, 1982, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this_____day of January, 1982, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That by Order No. R-6554, dated January 14, 1981, temporary special rules and regulations were promulgated for the North Peterson-Pennsylvanian Pool, Roosevelt County, New Mexico, establishing temporary 80-acre spacing units.

(3) That pursuant to the provisions of Order No. R-6554, this case was reopened to allow the operators in the subject pool to appear and show cause why the North Peterson-Pennsylvanian Pool should not be developed on 40-acre spacing units.

(4) That the evidence establishes that one well in the North Peterson-Pennsylvanian Pool can efficiently and economically drain and develop 80 acres.

(5) That the Special Rules and Regulations promulgated by Order No. R-6554 have afforded and will afford to the owner of each property in the pool the opportunity to produce his just and equitable share of the gas in the pool.

(6) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, the Special Rules and Regulations promulgated by Order No. R-6554 should be continued in full force and effect until further order of the Commission.

IT IS THEREFORE ORDERED:

(1) That the Special Rules and Regulations governing the North Peterson-Pennsylvanian Pool, Roosevelt County, New Mexico, promulgated by Order No. R-6554, are hereby continued in full force and effect until further order of the Division.

(2) That 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 DIVISION

JOE D. RAMEY,
Director