[illegible] ZIA ENERGY, INC. FOR POOL
[illegible] SPECIAL POOL RULES, AND AN
[illegible] DESIGNATION, LEA COUNTY, NEW MEX.

Cont to Apr 23

Continued to
May 7

CASE NO.

6861

APPLICATION,

TRANSCRIPTS,

SMALL EXHIBITS,

ETC.

P.O. BOX 808

PHONE (505) 396-2987

ZIA ENERGY, INC.
HOBBS, NEW MEXICO 88240

August 21, 1980

Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87501

Attention: Mr. Dan Nutter
Chief Engineer NMOCD

Re: NMOCD Case No. 6861

Dear Mr. Nutter:

Tom Kellahin informed me that I had used some incorrect tax rates in my revenue calculation. Apparently the tax rates that I used were effective later in the year 1977.

Enclosed is an amended Page 20. You will note in the oil revenue calculation that I used $13.03 for the price of oil and above it was given as $13.00 per barrel. This error was corrected as well as the tax rates.

These corrections do not affect the final outcome, as you have already noted.

If there are any further questions, please call on me.

Very truly yours,

Farris Nelson

Farris Nelson

cc: Mr. Thomas Kellahin
P. O. Box 1769
Santa Fe, NM 87501

ZIA ENERGY, INC.

Revenue Calculation For New Onshore
San Andres Reservoir Well

Calculation based on the following data:

Recoverable oil	13,406 bbls
Price for Oil - April 1977	$13.00/bbl
Recoverable Gas	328,500 MCF
Price for Gas - April 1977	$0.62/MCF
Royalty rate	12.5%
Tax rate - April 1977	7.5005%

Oil Revenue:
(13406) (13.00) (.875) (.924995) = $141,055

Gas Revenue:
(328,500) (.62) (.875) (.924995) = 164,845

Total Revenue $305,900

Formula for "could have been produced in commercial quantities" test:

$$\frac{\text{Revenue}}{305{,}900} - \frac{[1.6 \times \text{Capital Exp}] + \text{Oper Costs}}{[(1.6)(112{,}230)] + 273{,}285} = \text{minus } \$146{,}953$$

Therefore, the "Behind-the-Pipe Exclusion" does not apply and this San Andres reservoir qualifies for the Sec. 102 (New Onshore Reservoir) price category.

ZIA ENERGY, INC.

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ZIA ENERGY, INC.

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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

September 24, 1980

Mr. Thomas Kellahin
Kellahin & Kellahin
Attorneys at Law
Post Office Box 1769
Santa Fe, New Mexico

Re: CASE NO. 6861
ORDER NO. R-6466-A

Applicant:

Zia Energy, 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. 6861
Order No. R-6466

APPLICATION OF ZIA ENERGY, INC.
FOR POOL CREATION, SPECIAL POOL
RULES, AND AN NGPA DETERMINATION,
LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on May 7, 1980, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 10th day of September, 1980, 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, Zia Energy, Inc., seeks the creation of a new San Andres oil pool for its State "C" Well No. 1, which is located 1980 feet from the North line and 1982 feet from the West line of Section 17, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico, and the promulgation of special rules for said pool, including a provision for a gas-oil ratio limitation of 10,000 cubic feet of gas per barrel of oil.

(3) That the applicant further seeks a determination that said State "C" Well No. 1 has discovered a new onshore reservoir and should be exempt from the behind-the-pipe exclusion, and that new wells completed in said new reservoir are entitled to the NGPA Section 102 "New Onshore Reservoir," Wellhead Price Ceiling Category, although said reservoir had been penetrated by other wells which penetrated the San Andres formation prior to April 20, 1977, alleging that oil and gas could not have been produced

in commercial quantities by such old wells prior to Arpil 20, 1977.

(4) That the evidence establishes that to have plugged back and recompleted one of said wells in the San Andres formation in April, 1977, would have cost $112,230, and that actual operating costs plus overhead expense during an estimated 15-year life for such a well would total $273,285.

(5) That the evidence establishes that the estimated oil reserves available to the subject well total 13,406 barrels, and that its gas reserves total some 328,500 Mcf, and that the oil reserves at an April, 1977, stripper oil price of $13.00 per barrel less 12.5 percent royalty and .075005 percent state taxes have a 1977 value of $141,055, and that the gas reserves at an April, 1977, price of $0.62 per Mcf less 12.5 percent royalty and .075005 percent state taxes have a 1977 value of $164,845, for a total 1977 value for the well's oil and gas reserves of $305,900.

(6) That using the subject well's reserves and applying the FERC economics test to determine whether an old well which penetrated the San Andres formation could have been economically plugged back and recompleted in the San Andres or whether it should be exempt from the "Behind-the-Pipe" exclusion (market value of the production less 1.6 times development cost plus operating costs) indicates that the economics of such a well would be:

$$\$305,900 - [1.6(\$112,230) + \$273,285] = -\$146,953$$

(7) That pursuant to the above formula, such recompletion as described above would be an uneconomic venture, and the Behind-the-Pipe exclusion does not apply.

(8) That the engineering and geological evidence presented establishes that applicant's State "C" Well No. 1 is indeed producing oil and gas from a new onshore San Andres reservoir separate and distinct from any other San Andres reservoir, and that the nearest commercial San Andres production is some 2 3/4 miles away.

(9) That a new pool for San Andres production should be created and designated as the Southwest Eunice-San Andres Pool, with vertical limits comprising the San Andres formation and

horizontal limits as follows:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
Section 17: NW/4

(10) That a special gas-oil ratio limitation for said pool should be established and a ratio of 5000 cubic feet of gas per barrel of oil is reasonable and should be adopted.

(11) That entry of an order embodying the above findings will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That a new San Andres oil pool, discovered by the Zia Energy, Inc., State "C" Well No. 1, located in Unit F of Section 17, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico, with perforations from 3830 feet to 3834 feet is hereby created and defined, said pool to bear the designation of Southwest Eunice-San Andres Pool with vertical limits comprising the San Andres formation and horizontal limits as follows:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
Section 17: NW/4

(2) That a special gas-oil ratio limitation of 5000 cubic feet of gas per barrel of oil is hereby established for said Southwest Eunice-San Andres Pool.

(3) 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
fd/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

CASE NO. 6861
Order No. R-6466-A

APPLICATION OF ZIA ENERGY, INC.
FOR POOL CREATION, SPECIAL POOL
RULES, AND AN NGPA DETERMINATION,
LEA COUNTY, NEW MEXICO.

NUNC PRO TUNC ORDER

BY THE DIVISION:

It appearing to the Division that Order No. R-6466, dated September 10, 1980, does not correctly state the intended order of the Division,

IT IS THEREFORE ORDERED:

(1) That Order No. (3) of Order No. R-6466 is hereby renumbered Order No. (4).

(2) That a new Order No. (3) be and the same is hereby inserted, reading in its entirety as follows:

"(3) That it is hereby determined that said Southwest Eunice-San Andres Pool is a new onshore reservoir pursuant to the provisions of Section 102 of the Natural Gas Policy Act of 1978 and that the Behind-the-Pipe Exclusion in Section 102(c)(1)(C)(ii) of the NGPA does not apply."

(3) That the corrections set forth in this order be entered nunc pro tunc as of September 10, 1980.

DONE at Santa Fe, New Mexico, on this 22nd day of September, 1980.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

S
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

September 12, 1980

Mr. Thomas Kellahin
Kellahin & Kellahin
Attorneys at Law
Post Office Box 1769
Santa Fe, New Mexico

Re: CASE NO. ~~6861~~
ORDER NO. ~~R-6466~~

Applicant:

~~Zia Energy, 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
7 May 1980

EXAMINER HEARING

IN THE MATTER OF:

Application of Zia Energy, Inc., for pool creation, special pool rules, and an NGPA determination, Lea County, New Mexico.

CASE 6861

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant: W. Thomas Kellahin, Esq.
KELLAHIN & KELLAHIN
500 Don Gaspar
Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

MR. NUTTER: Call next Case 6861. Which is in the matter of the application of Zia Energy, Inc., for pool creation, special pool rules, and an NGPA determination, Lea County, New Mexico.

MR. KELLAHIN: If the Examiner please, I'm Tom Kellahin of Santa Fe, New Mexico, appearing on behalf of the applicant, and I have one witness.

MR. NUTTER: We are on Case Number 6861. We will now recess the hearing until 1:30.

(Thereupon the noon recess was taken.)

MR. NUTTER: The hearing will come to order. I believe we're on Case Number 6861. It has already been called and the witness is under oath.

Please proceed, Mr. Kellahin.

FARRIS NELSON

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Nelson, will you please state your

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

full name, by whom you are employed, and in what capacity?

A. My name is Farris Nelson. I'm employed as a petroleum engineer for Zia Energy, and also a co-owner of Zia Energy.

Q. Mr. Nelson, have you previously testified before the Division and had your qualifications as a petroleum engineer accepted and made a matter of record?

A. Yes.

Q. And have you made a study of the facts surrounding this particular application?

A. Yes, I have.

MR. KELLAHIN: We tender Mr. Nelson as an expert engineer.

MR. NUTTER: Mr. Nelson is qualified.

Q. Mr. Nelson, if you'll turn to what we've marked as Zia Exhibit Number One, which is the packet of exhibits contained in the blue folder, and if you'll turn to page six of that exhibit, I would like you to commence by first of all identifying the location of the subject well that is the basis for the application.

A. All right. The basis of this case is concerning the Zia Energy State "C" Well No. 1, which is located in Unit letter F of Section 17, Township 22 South, Range 37 East, Lea County, and in this case we're seeking the creation of a new San Andres oil pool and special GOR, asking

for a limiting GOR ratio of 10,000-to-1, and in addition, we're asking for a determination that this is a new onshore reservoir, as per the NGPA regulations.

Q. All right, sir, if you'll turn to page six of your Exhibit Number One, there is a plat on that page, and would you locate for us the subject well on that plat?

A. Yes, the subject well is the one there in Section 17 circled by the red circle.

Q. All right, would you identify for us the two closest San Andres Pools in this area?

A. Okay, the closest San Andres production is the Eunice-San Andres South, which is 2-3/4 miles to the slightly northeast.

Then a second San Andres Field is the Eunice-San Andres, almost due north of the subject well.

Q. Directing your attention to the Eunice-San Andres South, is the limits of that pool identified by the red line?

A. The red line approximately is the limits of this pool.

Q. Approximately how far is the subject well from the nearest San Andres producing well?

A. Approximately 2-3/4 miles.

Q. Would you describe generally what you believe to be the reservoir configuration for the San Andres

reservoir of which the subject well is a part?

A. All right. If you'll refer to the cross section which is in the front flap of your packet there.

Q. That's Exhibit Number Two?

A. Right. There's a structure map there with the subject well shown in red. It's right there in front of you, Mr. Nutter.

In this structure map -- this structure map shows that the formation is dipping to the south/southeast, trending north/northwest to south/southeast, and the Eunice-San Andres South Field would be off the structure map approximately two miles to the east.

We feel like that this contour map will give us the trend of the subject reservoir that we're proposing as being northwest to southeast, which is found so often in the reservoirs in southeastern New Mexico.

Q. In your opinion is the subject well in a new San Andres onshore reservoir?

A. Yes. Our opinion is that it is a new San Andres reservoir. According to the definitions of a new onshore reservoir, as contained in the NGPA '78 regulations, the term reservoir means any producable natural accumulation of natural gas, crude oil, or both, confined by impermeable rock or water barriers and characterized by a single natural pressure system.

And we want to stress the water barrier and the single natural pressure system.

Q. All right. Explain to me some of the reasons behind your opinion that this is a new reservoir, Mr. Nelson. Can you describe for us the general water producing characteristics of the wells involved?

A. We've outlined -- we have a line that is a green line on the map/plat there that we are suggesting as the limits, eastern limits and the northeastern limits, of this producing formation, and that line is established by a line of wells which are shown by the blue circles that have tested the San Andres formation and have been noncommercial producers in the San Andres.

Immediately south of the Zia Energy State "C" Well No. 1 is a well that Zia Energy drilled in the early part of 1979, and we tested the San Andres formation between the intervals of 3841 and 3942 and received 100 percent water.

Then directly south of that is another well drilled several years ago. On page 34 is a tabulation of all the wells that have either tested the San Andres or penetrated the San Andres, 34 and 35 pages contain this tabulation of the wells.

Q. Now those are wells that have drilled to the San Andres prior to April 20th, 1977?

A. Yes, that's true.

The well immediately -- three locations south of the subject well was drilled by Millard Deck on his Patsy "B" lease in July of '71, and they tested the San Andres on that well and it produced 100 percent water.

Then coming across following the green line that we propose as the reservoir boundaries, to an Anadarko Production well, E. W. Walden No. 11, in the Unit letter M of Section 15, this well was drilled, let's see, referring to page 8 is a well data sheet concerning this E. W. Walden No. 11, and you'll notice there that at least three different attempts were made to produce the San Andres and in each case it produced 100 percent sulphur water.

Then coming up the line to Section 9, Unit letter M, there's a well which was drilled by Stoltz, Wagner, and Brown. Well information for this is on page 34. This well was drilled also in 1971. It was drilled and abandoned as a noncommercial well. It never produced from any formation.

Then the next well in Section 9, Unit letter P, was drilled by Morris Antweil. And this well was drilled in 1970, January of 1970. It was also drilled and abandoned as a nonproducer.

Then Gulf drilled the South Penrose-Skelly Unit Well No. 262 in Unit letter P, also, I believe, yes. No, Unit letter O of Section 8. They also tested the --

they specifically tested the San Andres and it made some gas and a large volume of water.

MR. NUTTER: Is that the No. 9?

A. That is -- no, it's the No. 262.

MR. NUTTER: Okay.

A. It's about the tenth from the top of page 34.

MR. NUTTER: Right, I found it.

A. Going on northward, then, along our proposed boundary there, to Unit number -- Section 5, Gulf South Penrose-Skelly Unit Well No. 220 also tested the San Andres and it was noncommercial there.

Amoco drilled their No. 5, Unit letter L in Section 5, in 1974. They drill stem tested the San Andres and the test showed some oil, some free oil, and some small volume of gas. The main significant point about this test is the bottom hole pressure that was reported.

The bottom hole pressure reported was approximately 1400 psi.

Then finally in the Section 36, Township 21 South, Range 36, Getty drilled -- excuse me, it's Shell, drilled the State "D" Well No. 1 in Unit letter O. This well was drilled and abandoned in all formations as noncommercial.

So we have formed a line of wells which

have tested the San Andres and in all cases these wells have shown excessive water production and have been noncommerical.

MR. NUTTER: Now how about the well that's immediately south of your well?

A. The one that Zia Energy drilled in 1979?

MR. NUTTER: Yeah. Where is it on page 34 or 35?

A. I don't believe it's on page 34 but you can find a well data sheet -- no, you don't. I'm sorry but I didn't include a well data sheet for that well.

MR. NUTTER: Can you give us -- do you have the information on it that would be equivalent to the information you've got on pages 34 and 35 for these wells?

A. Yes.

MR. NUTTER: It was drilled by Zia.

A. It was drilled by Zia.

MR. NUTTER: What's the lease name?

A. Federal Well No. 1.

MR. NUTTER: The location?

A. Unit letter is K.

MR. NUTTER: Section, township, and range?

A. Section 17, 22, 37.

MR. NUTTER: Completion date?

A. Can I give you an approximate date on that?

MR. NUTTER: Yeah.

A. It was drilled -- yes. I overlooked it, Mr. Nutter.

MR. NUTTER: Oh, it's there.

MR. KELLAHIN: On 34.

MR. NUTTER: Next to the last one, okay.

A. Next to the last item on 34.

MR. NUTTER: Okay, it is here. So as this exhibit states, it tested 100 percent salt water from the San Andres.

A. Yes, that's right.

MR. NUTTER: Okay.

Q. Can we go back for a moment, Mr. Nelson, and see if I understand you.

Your plat on page number 6, you have just described and summarized the kinds of wells encountered, each of which is circled in blue, some ten wells.

A. Right.

Q. Each of those wells penetrated the San Andres formation.

A. Right.

Q. And none of them were physically capable of producing gas from the San Andres formation. No?

A. They were capable of producing gas but not in commercial quantity.

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

Q All right.

A In some cases.

Q Your analysis of those ten wells demonstrates in your opinion, as I understand it, that it generally represents the eastern limits of this new reservoir and shows that the reservoir trends from northwest to southeast and that it is separated from the Eunice-San Andres South Pool by some 2-1/2 miles from the subject well.

A Yes, that's correct.

Q All right. Would you describe for us now the characteristics of water production encountered in the proposed new reservoir as opposed to the kinds of quality or quantity of water encountered in the Eunice-San Andres South Pool?

A The water production from the Gia Energy State "C" Well No. 1 is -- it is producing approximately 241 barrels of water per day. It includes about 12 barrels of oil and 280 Mcf per day of gas.

This is actually only about 3 percent oil.

The character of the production in the Eunice-San Andres South, the wells there are making more on the order of 10 to 15 percent oil with their production.

Q How does the pressure information, whatever pressure information you have available, how does that pressure information compare with the proposed new reservoir

as to the Eunice-San Andres South reservoir?

A All right. A drill stem test taken on the State "C" Well No. 1 indicated a bottom hole pressure of 1336 psi. Another drill stem test taken on the Gulf South Penrose-Skelly Well No. 262, that information is included on your tabulation -- excuse me, I'd rather you'd look at the well data sheet, page number 10.

On this page 10 you notice that Gulf actually drill stem tested not only the San Andres but also the Queen and the Grayburg formations and on the drill stem test in the Queen section from 3419 to 3590, they indicated a final shutin pressure of 379.

The Grayburg drill stem test between 3590 and 3800 they indicated a final shutin pressure of 589.

The drill stem test on the San Andres form 3860 to 3900 indicated a final shutin pressure of 1316.

This gives us two bottom hole pressure tests, the one on the State "C", the one on the Gulf South Penrose-Skelly 262, then finally the Amoco well up in Section 5 also reported approximately a 1400 psi bottom hole pressure in the San Andres.

Then this pressure compared to the bottom hole pressure test taken on a well which is located in Eunice-San Andres South in Section 11, Unit letter E, it is the Anadarko Woltham No. 6, this well showed up 1365 pound bottom

hole pressure, but that was reported at a depth of 4035 feet.

Correcting that back to the 4900 feet that the other wells reported, we have 1322 pounds bottom hole pressure reported on this well in 1971, in July of 1971.

We're saying that in the nine years since this well was completed there had been continuous production from four wells on this Anadarko lease, and that it's reasonable to assume that in that length of time you'd get a significant drop in bottom hole pressure. That significant drop is not reflected by the bottom hole pressure tests that we have indicated as recently as June -- no, excuse me, February of this year, I believe it was.

Q. What do you conclude by that pressure information?

A. This pressure information indicates to us that there is a definite separation of pressure; that we have two pressure systems operating here.

Q. Let me ask you about the plat on page 6, Mr. Nelson. You have indicated on that plat, I assume, all the San Andres wells that have been drilled, or all wells that have penetrated the San Andres formation regardless of the date that they did so.

A. This map indicates all wells that were drilled prior to April 20th, 1977, that penetrated the San Andres. They're indicated on this plat on page 6. Then in-

formation is included on pages 34 and 35 in the tabulation.

Q. What is the significance of those wells that have penetrated the San Andres formation that are indicated by the green circles?

A. Each of these wells that penetrated the San Andres formation are actually potentially disqualifying wells according to the NGPA '78 regulations.

Q. Did any of those wells produce gas from the San Andres formation prior to April 20th, 1977?

A. None of them produced commercial quantities of San Andres oil or gas.

Q. Let me ask you this, Mr. Nelson. I'd like to direct your attention to that part of the application that deals with the gas/oil ratio limitation and your request to increase the statewide limitation to 10,000-to-1. Would you discuss that for us?

A. Yes. We have a gas/oil ratio test on page 17. This test was taken on March the 10th of this year. The well produced 12 barrels of oil, 341 barrels of water, and 291 Mcf of gas on potential test on that date.

The indication of this test is that were we to try to restrict our production to only produce the State statutory 200-to-1 ratio, we could only produce 160 Mcf of gas per day. Were we to try to produce at this rate, we would probably not produce anything at all except water.

We're saying that we must produce it at the maximum possible rate in order for it to produce the oil and the gas.

Q. If that portion of the application that requests a special limiting gas/oil ratio of 10,000-to-1 is not granted, will oil and gas be left in the formation that would otherwise be recovered if the application was granted?

A. Yes, it will be.

Q. Now, with regards to that portion of the application dealing with the new onshore reservoir determination, the Section 102, new onshore reservoir determination for the subject well, let me see if I understand your testimony.

You have indicated a potentially new reservoir in an elliptical shape running from northwest to southeast, and that in your opinion it is confined to the area as shown on page 6, indicated with the blue and the green wells, and that represents the physical limits, as you understand them, for this reservoir. And that in addition you believe it is separated from the Eunice-San Andres South, not only because of structure but because of differences in the capacity of the wells to produce water and because of pressure differences between the two reservoirs, is that correct?

A. Yes, that's correct.

Q. All right. Now, within the area you've defined as being a potential new reservoir, you have investi-

gated some 50 or more wells that were drilled prior to April 20th, 1977, that could potentially disqualify your subject well from being declared the first well in a new reservoir, is that correct?

A. That's correct.

Q. All right, and of those wells, the ones you've identified in blue, you have determined from your testimony already that they could not economically produce the San Andres.

A. That's correct.

Q. We have remaining then all the wells left in green.

A. That's correct.

Q. All right. In your opinion do any of those wells disqualify the subject well from being declared the first well in a new reservoir?

A. In our opinion they do not. The order issued by the Federal Regulatory Commission, their Order No. 42-A, spells out the requirements for potentially disqualifying well, concerning the behind the pipe exclusion, for reserves behind the pipe, and we propose to try to show that none of these wells that penetrated the San Andres could have produced San Andres reserves in commercial quantities.

Q. Order No. 42-A of the Federal Energy Regulatory Commission sets forth some guidelines for making

the economic test to allow you to obtain an exception from this behind the pipe exclusion, and have you followed the guidelines set forth in that order in making your economic test?

A. Yes, we have. That order that you referred to presents a formula for this test, and the following formula is to be used applying the economic test.

The market price available as of April 20th, 1977, times the recoverable reserves, net of royalty producable from the subject reservoir, through the potentially disqualifying well, minus the sum of incremental operating expenses, plus 1.6 times the incremental capital costs.

If this formula comes out to be a negative number, then the behind the pipe exclusion does not apply.

If it's a positive figure, then of course, the behind the pipe exclusion does apply.

And we propose to show that in this case we come up with a negative number.

Q. All right. Let me start the discussion, then, by directing your attention to all the wells circled in green and have you explain for us how you determined the optimum reserves that could be dedicated to the best of any of those wells.

A. We took a number of logs of wells scattered throughout these wells that penetrated the San

Andres. Several of those are included in the back of the book here. And we determined that the State "C" Well No. 1 and the Texas Pacific Elliott "B" 17 Well No. 4 were perhaps two of the better wells of all of those that penetrated the San Andres formation.

Then we asked Natural Resources Evaluation and Engineering, Incorporated, in Hobbs, New Mexico, to give us a reserves evaluation based on the State "C" Well No. 1 electric logs.

Q. Where do we find your reserves calculation?

A. On page 18 is the Natural Resources Evaluation and Engineering evaluation.

You'll notice from this evaluation the assumptions that they have made, or rather I should say, beginning with porosity they have calculated at 7.5 percent porosity, connate water was 60 percent. They have assumed a shrinkage factor of -- they show here .8, but in using it in your formular you have to use the reciprocal of that, which is 1.25. They have estimated recovery efficiency of 12 percent. From the logs they were able to effectively -- to determine a net effective thickness to be 15 feet. It's a standard 40-acre proration unit, and a gas/oil ratio was 24,500.

Using these they used a standard volumetric

calculation to determine the oil in place. From this they came up with recoverable reserves of 13,406 barrels of oil.

Then applying the GOR, the measured GOR on the State "C" Well No. 1, we have 328,500 Mcf of recoverable gas reserves.

Q Let me ask you this. In your opinion, Mr. Nelson, do those reserve numbers for the gas and oil reserves represent the maximum reserves that could have been recovered from any of the wells that potentially disqualify the reservoir?

A It is our opinion that it does.

Q All right. If you'll turn to page 19 then and explain what you've done there.

A All right. Part of the formula presented in this order 42-A was that we had to determine the cost. On page 19 you see the cost for plugging back from a typical average potentially disqualifying well. We have shown a plugback, perforate, stimulate, test, and equip cost of $30,000.

Q Let me interrupt you for a moment. These are all costs based upon April, 1977, figures.

A That's correct.

Q And they represent taking an existing well that has penetrated the San Andres formation and produces from some other horizon.

A. From a deeper zone.

Q. And recompleting that well in such a way that it could produce from the San Andres formation.

A. That's correct.

Q. All right.

A. Then the other factors that you see there are capital, tangible expenditures, also based on prices in effect in April, 1977.

Q. The $30,000 cost figure is not equipment. It's labor and salaries and that sort of thing?

A. Right.

Q. They're intangibles.

A. Intangibles.

Q. All right, and the rest of the figures represent tangible costs of equipment and et cetera?

A. That's correct.

Then, as a part of the cost basis for this comparison, for this economic test, we also have shown overhead expenses, estimating $200 per well per month for a 15-year producing life for the field.

Q. Are those overhead charges of $200 a month typical in the area for San Andres wells in April of 1977?

A. Yes, they are.

Q. Is a 15-year life the 15 years used by

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FERC in their Order 42-A?

A. Yes, that order is definitely used in their examples number one and two, hypothetical cases one and two, of FERC. And then, also, based on the producing history from the Eunice South San Andres, the 15-year producing life seems like a reasonable figure.

Q. All right, sir.

A. Still on page 19, the lease operating cost we have shown on page number 33 an IBM run sheet from a well in the South Eunice-San Andres Field.

This IBM lease analysis report reports the October, November, and December operating cost by month. Then it has a year-to-date column, which you will note more or less in the center of the page that the total controllable expenses for the year-to-date was $15,819.

MR. NUTTER: Was that January through December, then?

A. That was January through December.

Q. How does that expense figure for that sample well compare to its total income?

A. The total income for that same lease was $16,867.

Q. So the well over in the Eunice-San Andres South was just marginally profitable back in April of '77?

A. That's correct. This -- this is the

lease operating cost figure then that we used, 15 times the $15,819 gives you $237,000 for a 15-year operating life.

Then page 20, we have taken the reserves presented to us by Natural Resources and have calculated the revenue to be expected from selling these reservoirs of oil and gas, reserves of oil and gas. We had to come up with the oil and gas price for April of 1977. Pages 21 and 22 show you the basis for that. Page 21 is a pipeline run statement for April of 1977 on the Zia Energy Christmas lease, which is two locations east of the State "C" Well No. 1.

Q. That's gas produced from what formation?

A. That's gas produced from the Grayburg formation.

Q. That's gas comparable to the gas that would have been produced out of the San Andres formation?

A. Yes, it is comparable. It's casinghead gas and very much the same thing that you'd be producing from the San Andres.

Q. So in your opinion you compare the prices of that formation gas with San Andres gas?

A. Yes, that's correct.

Q. Is the 62 cents an Mcf the gas price you used for April of '77?

A. Yes, it is.

Q. Is that gas price the maximum price paid

in the area which you would believe applicable to the San Andres formation if that had produced in April of '77?

A. Yes, I think it is, because you would be producing casinghead gas and this is the price that was being paid for casinghead gas at that point in time.

Q. How did you determine the oil price?

A. On page 22 is a pipeline run statement from Shell Oil Company, also on our Zia Energy Christmas lease, and from this you see that the price received was $13.03, which is the stripper price for production in April of 1977. Actually, a new completion in the San Andres would not qualify for stripper oil price that first year, but we have assumed that in the second year production that it would have qualified for a stripper price, and so we used the $13.03 throughout the 15 year or throughout the reserves calculation.

MR. NUTTER: What do they do on this oil trend statement? They give you $5.21 a barrel for 182 barrels and then they give you an adjustment for stripper over on the righthand side?

A. That's correct.

MR. NUTTER: So you add the 950 and 1427 together to get the total value paid, is that it?

A. That's it.

MR. NUTTER: Okay, and that's where this 2378.36 at the bottom comes from?

A. That's correct.

MR. NUTTER: Okay.

A. Then back on page 20 we have used the numbers for the oil and gas prices that we just established here to calculate the oil revenue and the gas revenue. In addition to the price for each oil and gas, we need to set forth that the royalty rate was 12-1/2 percent and then the tax rate for oil was 7.38 percent.

MR. NUTTER: Now where are you now?

A. Page 20.

MR. NUTTER: Okay.

A. We've used just a standard royalty of 1/8th, 4-1/2 percent, and the tax rate for oil and gas was 7.38 percent and 11.79 percent.

Q. You've not taken a credit for any over-riding royalties, have you?

A. No. The FERC regulations are a little unclear concerning that.

Q. But you've assumed a lease without over-riding royalties.

A. We've assumed a lease without overriding royalty.

Using these numbers we calculate oil revenue of $141,565. Gas revenue of $157,200. For a total revenue figure from all reserves of $298,765.

Then going back to the formula, which FERC has spelled out in their Order No. 42-A, we've included in that formula the $298,765 of revenue, subtracted from that the sum of 1.6 times your capital expenditures that you get back from page 19, $112,230, plus the total operating costs of $273,285. This gives us a minus figure of $154,088, and therefor, from this figure we conclude that the behind the pipe exclusion does not apply in this San Andres reservoir.

Q Let me go back to page 19. You've indicated your capital cost in April of '77 figures. I'd like you to summarize and tell me whether or not those items there represent the minimum items required in order to conservatively recomplete for San Andres production.

A All right. You might notice the second item there, the 2-7/8ths OD tubing. You find 2-3/8ths far more common. But lifting the volume of water that we have to handle from this well, we are going to be forced to use a 2-inch bore pump and this will require the 2-7/8ths tubing. Therefor, the larger, the heavier circle rods and the large bore pump are necessary because of the large volume of water which is necessary to be moved.

Then the free water knockout would be made necessary to separate as much of the free water as possible, and the 4x20 heater-treater is simply needed just to separate the remaining part of the water.

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Then the pumping unit which is spelled out there is sized according to American Manufacturing calculations to be the correct size and the engine supplies the correct horsepower to lift that volume of water from that depth.

I might add one more thing there.

MR. NUTTER: Are you calculating that this well would produce this 341 barrels of water per day to its depletion or is the water going to increase, or what?

A. I think --

MR. NUTTER: Or are these pumping unit sizes and pump sizes based on the present 341?

A. They're based on approximately 400 barrels per day.

MR. NUTTER: About 400.

A. Which is basically the fluid volume that is being lifted currently.

MR. NUTTER: Okay.

A. Another big item in your cost is for salt water disposal. We have salt water disposal system installation of 25,200, which is based on figures given to us by Agua, Incorporated, which is a salt water disposal company that would serve this area. Their estimate of a line that they did lay in the early part of 1977 is on pages 31 and 32. From that they have indicated 25,167 dollars of estimated

cost, and this is the figure that we used in our calculation.

Pages 23 through 32 are simply included as verification of some of the cost figures for equipment, for the April of 1977 prices.

Q. In your opinion, then, Mr. Nelson, are the items reflected on page 19 the minimum capital expenditures necessary to recomplete an existing well for production from the San Andres formation in April of '77?

A. Yes, they are.

I summary, we have shown that the State "C" Well No. 1 San Andres production is 2-3/4 miles from the closest well producing from the San Andres formation. From the map that is presented, it is apparent that noncommercial San Andres tests are located north, south, and east of the State "C" Well No. 1, separating it from both the Eunice-San Andres and the Eunice-San Andres South Pools.

Bottom hole pressure data obtained by drill stem test survey, indicate that more than 1300 psi, which indicate that this is original bottom hole pressure, and that the San Andres has not been produced in this area.

MR. NUTTER: Now, let's see, Mr. Nelson, your bottom hole pressure in this well on the original DST was 1334, was it?

A. 1336.

MR. NUTTER: 13 -- well, I thought you

said 1336 and then here on page 7, ran DST 3860 to TD. Closed in bottom hole pressure 1334.

A. Okay, that's a typographical error.

MR. NUTTER: That should be a 36, there.

A. Correct.

MR. NUTTER: Okay, that's what had me confused. I thought you said 36 and then I read 34.

Go ahead.

A. We did not go over these, but gas analysis and oil gravity information was presented to confirm that this is San Andres production, as compared to the Grayburg and Queen production of that area.

Finally, at the time that the earlier noncommercial tests in the San Andres were made, the price of oil and gas was approximately $13.03 per barrel and 62 cents per Mcf of gas.

Considering the large volume of water to be handled, these earlier tests were noncommerical. An operator can expect to produce the San Andres at a profit now provided he can sell the oil and gas at the prices specified by new onshore reservoirs and provided that the special GOR rule will make it possible to produce the well without any restriction imposed by limiting GORs.

Then in summary concerning the economic test required by FERC Order 42-A, we have supplied exhibits

listing 40 -- that should be corrected to about 54, I believe, potentially disqualifying wells due to the behind the pipe exclusion in Section 102 (c) 1 C-2 I of the NGPA. Electric log sections from several of these wells are presented to indicate the -- that the relative uniform character of the San Andres throughout the proposed new field.

Exhibits on pages 19, I believe it is, yes, 19 and 20, were presented to show the economic test prescribed by the FERC order No. 42-A, that the behind the pipe exclusion did not apply.

The Oil Conservation Division is requested to establish a new San Andres Pool with a special limiting GOR ratio of 10,000-to-1.

The Oil Conservation Division is further requested to make a determination that this is a new onshore reservoir and that this and all future wells completed in this new onshore reservoir will be eligible for the NGPA Section 102 gas pricing category.

By approving these requests the Oil Conservation Division will be promoting conservation, protecting correlative rights, and providing incentive for the production of oil and gas that would not be otherwise produced for consumption.

Q. Mr. Nelson, were Exhibits One through Eleven prepared by you directly or compiled under your direction

and supervision?

A Yes, they were.

MR. KELLAHIN: We move the introduction of Exhibits One through Eleven.

MR. NUTTER: Exhibits One through Eleven will be admitted in evidence.

CROSS EXAMINATION

BY MR. NUTTER:

Q Did you give us a log of this well so that we can determine that it is completed in the San Andres formation?

A Of the State "C"?

Q Yes, sir.

A Yes,it should be in that group. I think it's the second log. Yes, if yours are numbered the same as mine, it should be the second log.

Q Now, let's see, and where are we perforated on this log, Mr. Nelson?

A We're perforated two holes at 3830 and two holes at 3834.

Q 3830 and two holes at 3834.

A 3834.

Q 3834. Now, Mr. Nelson, I don't understand why you need a GOR limit of 10,000-to-1 in this pool.

A. The standard statewide GOR rule is 2000-to-1.

Q. Right.

A. If we applied that to an 80-barrel a day top allowable well we would only be able to produce 160 Mcf of gas per day.

Q. But you're asking for 10,000-to-1. That's going to give you 800,000 and this well will only make 341 at the most, won't it, or 280?

A. 280 to 90 is -- has been its production rate, but we're not sure that this is going to be the top of any future well that we might complete.

Q. But as of now we know that we've got a well here that produces a ratio of 23 to 24,000-to-1.

A. Yes, that's correct.

Q. And it's in no trouble as far as making its oil allowable because it's not penalized. It's ineffective because of the low oil productivity and I just don't understand the necessity for 800,000 cubic feet of gas per day gas allowable on a 40-acre well.

A. Well, at this point in time we could probably live with a 5000-to-1 ratio.

Q. 5000 would be more than the well is capable of producing now by another 25 percent even.

A. Yes, that would give us 400, which is

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approximately 25 percent more than what it's producing.

Q. What are the GOR limits that are in effect in the Eunice-San Andres and the South Eunice-San Andres, do you know?

A. No, I'm sorry, I don't.

Q. We will take administrative notice of our GOR limits in those two pools. They're the closest San Andres pools to this discovery. Both are 5000 to 1

A. Yes, they are. The Eumont, which of course is another formation, the Queen, and the Grayburg are both 10,000-to-1.

Q. Right.

A. In that area.

Q. They're recognized as being gas pools -- gas reservoirs.

MR. NUTTER: Are there any other questions of Mr. Farris -- Mr. Nelson?

MR. PADILLA: I have one, Mr. Examiner.

CROSS EXAMINATION

BY MR. PADILLA:

Q. Mr. Nelson, I just want to clarify what's on page 6, go over that once more.

The wells circled in blue were the ones that were tested in the San Andres, is that correct?

A. Those were noncommercial in the San Andres. Some of them had specific San Andres tests. At least three of them were drilled and abandoned as dry holes, without any mention being made of specific San Andres tests.

Q. And the ones circled in green penetrated the San Andres but did not test the San Andres.

A. That is correct. They have produced at some deeper formation prior to April 20th, 1977.

Q. Do you know if any of these wells were ever perforated in the San Andres, the ones circled in green, were they ever perforated in the San Andres?

A. None that I'm aware of.

Q. Basically, the reason that these wells are noncommercial in the San Andres is too much water, is that correct?

A. That's a big part of it because that increased the equipment cost for handling the large volume of water. Then, also, it adds a lot of cost to salt water disposal costs.

MR. PADILLA: I have no further questions.

RECROSS EXAMINATION

BY MR. NUTTER:

Q. What pool are these wells producing from?

A. The green?

Q. Uh-huh.

A. Several different formations. The Drinkard predominantly, but there is some Blinebry and some Tubb.

Q. This is down into the Blinebry, Drinkard, Tubb area, then?

A. Yes, sir, it is.

Q. Okay.

MR. NUTTER: Are there any other questions of the witness? He may be excused.

Do you have anything further in this case, Mr. Kellahin?

MR. KELLAHIN: No, sir.

MR NUTTER: Does anyone have anything they wish to offer in Case Number 6861?

We'll take the case under advisement.

(Hearing concluded.)

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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. 6861 heard by me on 5/7 19 80.

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
7 May 1980

EXAMINER HEARING

IN THE MATTER OF:

Application of Zia Energy, Inc., for pool creation, special pool rules, and an NGPA determination, Lea County, New Mexico.

CASE 6861

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
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I N D E X

E X H I B I T S

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MR. NUTTER: Call next Case 6861. Which is in the matter of the application of Zia Energy, Inc., for pool creation, special pool rules, and an NGPA determination, Lea County, New Mexico.

MR. KELLAHIN: If the Examiner please, I'm Tom Kellahin of Santa Fe, New Mexico, appearing on behalf of the applicant, and I have one witness.

MR. NUTTER: We are on Case Number 6861. We will now recess the hearing until 1:30.

(Thereupon the noon recess was taken.)

MR. NUTTER: The hearing will coms to order. I believe we're on Case Number 6861. It has already been called and the witness is under oath.

Please proceed, Mr. Kellahin.

FARRIS NELSON

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Nelson, will you please state your

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full name, by whom you are employed, and in what capacity?

A. My name is Farris Nelson. I'm employed as a petroleum engineer for Zia Energy, and also a co-owner of Zia Energy.

Q. Mr. Nelson, have you previously testified before the Division and had your qualifications as a petroleum engineer accepted and made a matter of record?

A. Yes.

Q. And have you made a study of the facts surrounding this particular application?

A. Yes, I have.

MR. KELLAHIN: We tender Mr. Nelson as an expert engineer.

MR. NUTTER: Mr. Nelson is qualified.

Q. Mr. Nelson, if you'll turn to what we've marked as Zia Exhibit Number One, which is the packet of exhibits contained in the blue folder, and if you'll turn to page six of that exhibit, I would like you to commence by first of all identifying the location of the subject well that is the basis for the application.

A. All right. The basis of this case is concerning the Zia Energy State "C" Well No. 1, which is located in Unit letter F of Section 17, Township 22 South, Range 37 East, Lea County, and in this case we're seeking the creation of a new San Andres oil pool and special GOR, asking

for a limiting GOR ratio of 10,000-to-1, and in addition, we're asking for a determination that this is a new onshore reservoir, as per the NGPA regulations.

Q. All right, sir, if you'll turn to page six of your Exhibit Number One, there is a plat on that page, and would you locate for us the subject well on that plat?

A. Yes. The subject well is the one there in Section 17 circled by the red circle.

Q. All right, would you identify for us the two closest San Andres Pools in this area?

A. Okay, the closest San Andres production is the Eunice-San Andres South, which is 2-3/4 miles to the slightly northeast.

Then a second San Andres Field is the Eunice-San Andres, almost due north of the subject well.

Q. Directing your attention to the Eunice-San Andres South, is the limits of that pool identified by the red line?

A. The red line approximately is the limits of this pool.

Q. Approximately how far is the subject well from the nearest San Andres producing well?

A. Approximately 2-3/4 miles.

Q. Would you describe generally what you believe to be the reservoir configuration for the San Andres

reservoir of which the subject well is a part?

A. All right. If you'll refer to the cross section which is in the front flap of your packet there.

Q. That's Exhibit Number Two?

A. Right. There's a structure map there with the subject well shown in red. It's right there in front of you, Mr. Nutter.

In this structure map -- this structure map shows that the formation is dipping to the south/southeast, trending north/northwest to south/southeast, and the Eunice-San Andres South Field would be off the structure map approximately two miles to the east.

We feel like that this contour map will give us the trend of the subject reservoir that we're proposing as being northwest to southeast, which is found so often in the reservoirs in southeastern New Mexico.

Q. In your opinion is the subject well in a new San Andres onshore reservoir?

A. Yes. Our opinion is that it is a new San Andres reservoir. According to the definitions of a new onshore reservoir, as contained in the NGPA '78 regulations, the term reservoir means any producable natural accumulation of natural gas, crude oil, or both, confined by impermeable rock or water barriers and characterized by a single natural pressure system.

And we want to stress the water barrier and the single natural pressure system.

Q. All right. Explain to me some of the reasons behind your opinion that this is a new reservoir, Mr. Nelson. Can you describe for us the general water producing characteristics of the wells involved?

A. We've outlined -- we have a line that is a green line on the map/plat there that we are suggesting as the limits, eastern limits and the northeastern limits, of this producing formation, and that line is established by a line of wells which are shown by the blue circles that have tested the San Andres formation and have been noncommercial producers in the San Andres.

Immediately south of the Zia Energy State "C" Well No. 1 is a well that Zia Energy drilled in the early part of 1979, and we tested the San Andres formation between the intervals of 3841 and 3942 and received 100 percent water.

Then directly south of that is another well drilled several years ago. On page 34 is a tabulation of all the wells that have either tested the San Andres or penetrated the San Andres, 34 and 35 pages contain this tabulation of the wells.

Q. Now those are wells that have drilled to the San Andres prior to April 20th, 1977?

A. Yes, that's true.

The well immediately -- three locations south of the subject well was drilled by Millard Deck on his Patsy "B" lease in July of '71, and they tested the San Andres on that well and it produced 100 percent water.

Then coming across following the green line that we propose as the reservoir boundaries, to an Anadarko Production well, E. W. Walden No. 11, in the Unit letter M of Section 15, this well was drilled, let's see, referring to page 8 is a well data sheet concerning this E. W. Walden No. 11, and you'll notice there that at least three different attempts were made to produce the San Andres and in each case it produced 100 percent sulphur water.

Then coming up the line to Section 9, Unit letter M, there's a well which was drilled by Stoltz, Wagner, and Brown. Well information for this is on page 34. This well was drilled also in 1971. It was drilled and abandoned as a noncommercial well. It never produced from any formation.

Then the next well in Section 8, Unit letter P, was drilled by Morris Antweil. And this well was drilled in 1970, January of 1970. It was also drilled and abandoned as a nonproducer.

Then Gulf drilled the South Penrose-Skelly Unit Well No. 262 in Unit letter [illegible], also, I believe, yes. No, Unit letter O of Section 8. They also tested the --

they specifically tested the San Andres and it made some gas and a large volume of water.

MR. NUTTER: Is that the No. 9?

A. That is -- no, it's the No. 262.

MR. NUTTER: Okay.

A. It's about the tenth from the top of page 34.

MR. NUTTER: Right, I found it.

A. Going on northward, then, along our proposed boundary there, to Unit number -- Section 5, Gulf South Penrose-Skelly Unit Well No. 220 also tested the San Andres and it was noncommercial there.

Amoco drilled their No. 5, Unit letter L in Section 5, in 1974. They drill stem tested the San Andres and the test showed some oil, some free oil, and some small volume of gas. The main significant point about this test is the bottom hole pressure that was reported.

The bottom hole pressure reported was approximately 1400 psi.

Then finally in the Section 36, Township 21 South, Range 36, Getty drilled -- excuse me, it's Shell, drilled the State "D" Well No. 1 in Unit letter O. This well was drilled and abandoned in all formations as noncommercial.

So we have formed a line of wells which

have tested the San Andres and in all cases these wells have shown excessive water production and have been noncommerical.

MR. NUTTER: Now how about the well that's immediately south of your well?

A. The one that Zia Energy drilled in 1979?

MR. NUTTER: Yeah. Where is it on page 34 or 35?

A. I don't believe it's on page 34 but you can find a well data sheet -- no, you don't. I'm sorry but I didn't include a well data sheet for that well.

MR. NUTTER: Can you give us --- do you have the information on it that would be equivalent to the information you've got on pages 34 and 35 for these wells?

A. Yes.

MR. NUTTER: It was drilled by Zia.

A. It was drilled by Zia.

MR. NUTTER: What's the lease name?

A. Federal Well No. 1.

MR. NUTTER: The location?

A. Unit letter is K.

MR NUTTER: Section, township, and range?

A. Section 17, 22, 37.

MR NUTTER: Completion date?

A. Can I give you an approximate date on that?

MR. NUTTER: Yeah.

A. It was drilled -- yes. I overlooked it, Mr. Nutter.

MR. NUTTER: Oh, it's there.

MR. KELLAHIN: On 34.

MR. NUTTER: Next to the last one, okay.

A. Next to the last item on 34.

MR. NUTTER: Okay, it is here. So as this exhibit states, it tested 100 percent salt water from the San Andres.

A. Yes, that's right.

MR. NUTTER: Okay.

Q. Can we go back for a moment, Mr. Nelson, and see if I understand you.

Your plat on page number 6, you have just described and summarized the kinds of wells encountered, each of which is circled in blue, some ten wells.

A. Right.

Q. Each of those wells penetrated the San Andres formation.

A. Right.

Q. And none of them were physically capable of producing gas from the San Andres formation. No?

A. They were capable of producing gas but not in commercial quantity.

Q All right.

A In some cases.

Q Your analysis of those ten wells demonstrates in your opinion, as I understand it, that it generally represents the eastern limits of this new reservoir and shows that the reservoir trends from northwest to southeast and that it is separated from the Eunice-San Andres South Pool by some 2-1/2 miles from the subject well.

A Yes, that's correct.

Q All right. Would you describe for us now the characteristics of water production encountered in the proposed new reservoir as opposed to the kinds of quality or quantity of water encountered in the Eunice-San Andres South Pool?

A The water production from the Zia Energy State "C" Well No. 1 is -- it is producing approximately 241 barrels of water per day. It includes about 12 barrels of oil and 280 Mcf per day of gas.

This is actually only about 3 percent oil.

The character of the production in the Eunice-San Andres South, the wells there are making more on the order of 10 to 15 percent oil with their production.

Q How does the pressure information, whatever pressure information you have available, how does that pressure information compare with the proposed new reservoir

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as to the Eunice-San Andres South reservoir?

A. All right. A drill stem test taken on the State "C" Well No. 1 indicated a bottom hole pressure of 1336 psi. Another drill stem test taken on the Gulf South Penrose-Skelly Well No. 262, that information is included on your tabulation -- excuse me, I'd rather you'd look at the well data sheet, page number 10.

On this page 10 you notice that Gulf actually drill stem tested not only the San Andres but also the Queen and the Grayburg formations and on the drill stem test in the Queen section from 3419 to 3590, they indicated a final shutin pressure of 379.

The Grayburg drill stem test between 3590 and 3800 they indicated a final shutin pressure of 589.

The drill stem test on the San Andres form 3860 to 3900 indicated a final shutin pressure of 1316.

This gives us two bottom hole pressure tests, the one on the State "C", the one on the Gulf South Penrose-Skelly 262, then finally the Amoco well up in Section 5 also reported approximately a 1400 psi bottom hole pressure in the San Andres.

Then this pressure compared to the bottom hole pressure test taken on a well which is located in Eunice-San Andres South in Section 11, Unit letter E, it is the Anadarko Woltham No. 6, this well showed up 1365 pound bottom

hole pressure, but that was reported at a depth of 4035 feet. Correcting that back to the 4900 feet that the other wells reported, we have 1322 pounds bottom hole pressure reported on this well in 1971, in July of 1971.

We're saying that in the nine years since this well was completed there had been continuous production from four wells on this Anadarko lease, and that it's reasonable to assume that in that length of time you'd get a significant drop in bottom hole pressure. That significant drop is not reflected by the bottom hole pressure tests that we have indicated as recently as June -- no, excuse me, February of this year, I believe it was.

Q. What do you conclude by that pressure information?

A. This pressure information indicates to us that there is a definite separation of pressure; that we have two pressure systems operating here.

Q. Let me ask you about the plat on page 6, Mr. Nelson. You have indicated on that plat, I assume, all the San Andres wells that have been drilled, or all wells that have penetrated the San Andres formation regardless of the date that they did so.

A. This map indicates all wells that were drilled prior to April 20th, 1977, that penetrated the San Andres. They're indicated on this plat on page 6. Then in-

formation is included on pages 34 and 35 in the tabulation.

Q What is the significance of those wells that have penetrated the San Andres formation that are indicated by the green circles?

A Each of these wells that penetrated the San Andres formation are actually potentially disqualifying wells according to the NGPA '78 regulations.

Q Did any of those wells produce gas from the San Andres formation prior to April 20th, 1977?

A None of them produced commercial quantities of San Andres oil or gas.

Q Let me ask you this, Mr. Nelson. I'd like to direct your attention to that part of the application that deals with the gas/oil ratio limitation and your request to increase the statewide limitation to 10,000-to-1. Would you discuss that for us?

A Yes. We have a gas/oil ratio test on page 17. This test was taken on March the 10th of this year. The well produced 12 barrels of oil, 341 barrels of water, and 291 Mcf of gas on potential test on that date.

The indication of this test is that were we to try to restrict our production to only produce the State statutory 200-to-1 ratio, we could only produce 160 Mcf of gas per day. Were we to try to produce at this rate, we would probably not produce anything at all except water.

We're saying that we must produce it at the maximum possible rate in order for it to produce the oil and the gas.

Q. If that portion of the application that requests a special limiting gas/oil ratio of 10,000-to-1 is not granted, will oil and gas be left in the formation that would otherwise be recovered if the application was granted?

A. Yes, it will be.

Q. Now, with regards to that portion of the application dealing with the new onshore reservoir determination, the Section 102, new onshore reservoir determination for the subject well, let me see if I understand your testimony. You have indicated a potentially new reservoir in an elliptical shape running from northwest to southeast, and that in your opinion it is confined to the area as shown on page 6, indicated with the blue and the green wells, and that represents the physical limits, as you understand them, for this reservoir. And that in addition you believe it is separated from the Eunice-San Andres South, not only because of structure but because of differences in the capacity of the wells to produce water and because of pressure differences between the two reservoirs, is that correct?

A. Yes, that's correct.

Q. All right. Now, within the are you've defined as being a potential new reservoir, you have investi-

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gated some 50 or more wells that were drilled prior to April 20th, 1977, that could potentially disqualify your subject well from being declared the first well in a new reservoir, is that correct?

A. That's correct.

Q. All right, and of those wells, the ones you've identified in blue, you have determined from your testimony already that they could not economically produce the San Andres.

A. That's correct.

Q. We have remaining then all the wells left in green.

A. That's correct.

Q. All right. In your opinion do any of those wells disqualify the subject well from being declared the first well in a new reservoir?

A. In our opinion they do not. The order issued by the Federal Regulatory Commission, their Order No. 42-A, spells out the requirements for potentially disqualifying well, concerning the behind the pipe exclusion, for reserves behind the pipe, and we propose to try to show that none of these wells that penetrated the San Andres could have produced San Andres reserves in commercial quantities.

Q. Order No. 42-A of the Federal Energy Regulatory Commission sets forth some guidelines for making

the economic test to allow you to obtain an exception from this behind the pipe exclusion, and have you followed the guidelines set forth in that order in making your economic test?

A. Yes, we have. That order that you referred to presents a formula for this test, and the following formula is to be used applying the economic test.

The market price available as of April 20th, 1977, times the recoverable reserves, net of royalty producable from the subject reservoir, through the potentially disqualifying well, minus the sum of incremental operating expenses, plus 1.6 times the incremental capital costs.

If this formula comes out to be a negative number, then the behind the pipe exclusion does not apply.

If it's a positive figure, then of course, the behind the pipe exclusion does apply.

And we propose to show that in this case we come up with a negative number.

Q. All right. Let me start the discussion, then, by directing your attention to all the wells circled in green and have you explain for us how you determined the optimum reserves that could be dedicated to the best of any of those wells.

A. We took a number of logs of wells scattered throughout these wells that penetrated the San

Andres. Several of those are included in the back of the book here. And we determined that the State "C" Well No. 1 and the Texas Pacific Elliott "B" 17 Well No. 4 were perhaps two of the better wells of all of those that penetrated the San Andres formation.

Then we asked Natural Resources Evaluation and Engineering, Incorporated, in Hobbs, New Mexico, to give us a reserves evaluation based on the State "C" Well No. 1 electric logs.

Q. Where do we find your reserves calculation?

A. On page 18 is the Natural Resources Evaluation and Engineering evaluation.

You'll notice from this evaluation the assumptions that they have made, or rather I should say, beginning with porosity they have calculated at 7.5 percent porosity; connate water was 60 percent. They have assumed a shrinkage factor of -- they show here .8, but in using it in your formular you have to use the reciprocal of that, which is 1.25. They have estimated recovery efficiency of 12 percent. From the logs they were able to effectively -- to determine a net effective thickness to be 15 feet. It's a standard 40-acre proration unit, and a gas/oil ratio was 24,500.

Using these they used a standard volumetric

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calculation to determine the oil in place. From this they came up with recoverable reserves of 13,406 barrels of oil.

Then applying the GOR, the measured GOR on the State "C" Well No. 1, we have 328,500 Mcf of recoverable gas reserves.

Q Let me ask you this. In your opinion, Mr. Nelson, do those reserve numbers for the gas and oil reserves represent the maximum reserves that could have been recovered from any of the wells that potentially disqualify the reservoir?

A It is our opinion that it does.

Q All right. If you'll turn to page 19 then and explain what you've done there.

A All right. Part of the formula presented in this order 42-A was that we had to determine the cost. On page 19 you see the cost for plugging back from a typical average potentially disqualifying well. We have shown a plugback, perforate, stimulate, test, and equip cost of $30,000.

Q Let me interrupt you for a moment. These are all costs based upon April, 1977, figures.

A That's correct.

Q And they represent taking an existing well that has penetrated the San Andres formation and produces from some other horizon.

A. From a deeper zone.

Q. And recompleting that well in such a way that it could produce from the San Andres formation.

A. That's correct.

Q. All right.

A. Then the other factors that you see there are capital, tangible expenditures, also based on prices in effect in April, 1977.

Q. The $30,000 cost figure is not equipment. It's labor and salaries and that sort of thing?

A. Right.

Q. They're intangibles.

A. Intangibles.

Q. All right, and the rest of the figures represent tangible costs of equipment and et cetera?

A. That's correct.

Then, as a part of the cost basis for this comparison, for this economic test, we also have shown overhead expenses, estimating $200 per well per month for a 15-year producing life for the field.

Q. Are those overhead charges of $200 a month typical in the area for San Andres wells in April of 1977?

A. Yes, they are.

Q. Is a 15-year life the 15 years used by

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FERC in their Order 42-A?

A Yes, that order is definitely used in their examples number one and two, hypothetical cases one and two, of FERC. And then, also, based on the producing history from the Eunice South San Andres, the 15-year producing life seems like a reasonable figure.

Q All right, sir.

A Still on page 19, the lease operating cost, we have shown on page number 33 an IBM run sheet from a well in the South Eunice-San Andres Field.

This IBM lease analysis report reports the October, November, and December operating cost by month. Then it has a year-to-date column, which you will note more or less in the center of the page that the total controllable expenses for the year-to-date was $15,819.

MR. NUTTER: Was that January through December, then?

A That was January through December.

Q How does that expense figure for that sample well compare to its total income?

A The total income for that same lease was $16,867.

Q So the well over in the Eunice-San Andres South was just marginally profitable back in April of '77?

A That's correct. This -- this is the

lease operating cost figure then that we used, 15 times the $15,819 gives you $237,000 for a 15-year operating life.

Then page 20, we have taken the reserves presented to us by Natural Resources and have calculated the revenue to be expected from selling these reservoirs of oil and gas, reserves of oil and gas. We had to come up with the oil and gas price for April of 1977. Pages 21 and 22 show you the basis for that. Page 21 is a pipeline run statement for April of 1977 on the Zia Energy Christmas lease, which is two locations east of the State "C" Well No. 1.

Q That's gas produced from what formation?

A That's gas produced from the Grayburg formation.

Q That's gas comparable to the gas that would have been produced out of the San Andres formation?

A Yes, it is comparable. It's casinghead gas and very much the same thing that you'd be producing from the San Andres.

Q So in your opinion you compare the prices of that formation gas with San Andres gas?

A Yes, that's correct.

Q Is the 62 cents an Mcf the gas price you used for April of '77?

A Yes, it is.

Q Is that gas price the maximum price paid

in the area which you would believe applicable to the San Andres formation if that had produced in April of '77?

A Yes, I think it is, because you would be producing casinghead gas and this is the price that was being paid for casinghead gas at that point in time.

Q How did you determine the oil price?

A On page 22 is a pipeline run statement from Shell Oil Company, also on our Zia Energy Christmas lease, and from this you see that the price received was $13.03, which is the stripper price for production in April of 1977. Actually, a new completion in the San Andres would not qualify for stripper oil price that first year, but we have assumed that in the second year production that it would have qualified for a stripper price, and so we used the $13.03 throughout the 15 year or throughout the reserves calculation.

MR. NUTTER: What do they do on this oil run trend statement? They give you $5.21 a barrel for 182 barrels and then they give you an adjustment for stripper over on the righthand side?

A That's correct.

MR. NUTTER: So you add the 950 and 1427 together to get the total value paid, is that it?

A That's it.

MR. NUTTER: Okay, and that's where this 2378.36 at the bottom comes from?

A That's correct.

MR. NUTTER: Okay.

A Then back on page 20 we have used the numbers for the oil and gas prices that we just established here to calculate the oil revenue and the gas revenue. In addition to the price for each oil and gas, we need to set forth that the royalty rate was 12-1/2 percent and then the tax rate for oil was 7.38 percent.

MR. NUTTER: Now where are you now?

A Page 20.

MR. NUTTER: Okay.

A We've used just a standard royalty of 1/8th, 4-1/2 percent, and the tax rate for oil and gas was 7.38 percent and 11.79 percent.

Q You've not taken a credit for any overriding royalties, have you?

A No. The FERC regulations are a little unclear concerning that.

Q But you've assumed a lease without overriding royalties.

A We've assumed a lease without overriding royalty.

Using these numbers we calculate oil revenue of $141,565. Gas revenue of $157,200. For a total revenue figure from all reserves of $298,765.

Then going back to the formula, which FERC has spelled out in their Order No. 42-A, we've included in that formula the $298,765 of revenue, subtracted from that the sum of 1.6 times your capital expenditures that you get back from page 19, $112,230, plus the total operating costs of $273,285. This gives us a minus figure of $154,088, and therefor, from this figure we conclude that the behind the pipe exclusion does not apply in this San Andres reservoir.

Q Let me go back to page 19. You've indicated your capital cost in April of '77 figures. I'd like you to summarize and tell me whether or not those items there represent the minimum items required in order to conservatively recomplete for San Andres production.

A All right. You might notice the second item there, the 2-7/8ths OD tubing. You find 2-3/8ths far more common. But lifting the volume of water that we have to handle from this well, we are going to be forced to use a 2-inch bore pump and this will require the 2-7/8ths tubing. Therefor, the larger, the heavier ~~circle~~ sucker rods and the large bore pump are necessary because of the large volume of water which is necessary to be moved.

Then the free water knockout would be made necessary to separate as much of the free water as possible, and the 4x20 heater-treater is simply needed just to separate the remaining part of the water.

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Then the pumping unit which is spelled out there is sized according to American Manufacturing calculations to be the correct size and the engine supplies the correct horsepower to lift that volume of water from that depth.

I might add one more thing there.

MR. NUTTER: Are you calculating that this well would produce this 341 barrels of water per day to its depletion or is the water going to increase, or what?

A. I think --

MR. NUTTER: Or are these pumping unit sizes and pump sizes based on the present 341?

A. They're based on approximately 400 barrels per day.

MR. NUTTER: About 400.

A. Which is basically the fluid volume that is being lifted currently.

MR. NUTTER: Okay.

A. Another big item in your cost is for salt water disposal. We have salt water disposal system installation of 25,200, which is based on figures given to us by Agua, Incorporated, which is a salt water disposal company that would serve this area. Their estimate of a line that they did lay in the early part of 1977 is on pages 31 and 32. From that they have indicated 25,167 dollars of estimated

cost, and this is the figure that we used in our calculation.

Pages 23 through 32 are simply included as verification of some of the cost figures for equipment, for the April of 1977 prices.

Q In your opinion, then, Mr. Nelson, are the items reflected on page 19 the minimum capital expenditures necessary to recomplete an existing well for production from the San Andres formation in April of '77?

A Yes, they are.

I summary, we have shown that the State "C" Well No. 1 San Andres production is 2-3/4 miles from the closest well producing from the San Andres formation. From the map that is presented, it is apparent that noncommercial San Andres tests are located north, south, and east of the State "C" Well No. 1, separating it from both the Eunice-San Andres and the Eunice-San Andres South Pools.

Bottom hole pressure data obtained by drill stem test survey, indicate that more than 1300 psi, which indicate that this is original bottom hole pressure, and that the San Andres has not been produced in this area.

MR. NUTTER: Now, let's see, Mr. Nelson, your bottom hole pressure in this well on the original DST was 1334, was it?

A 1336.

MR. NUTTER: 13 -- well, I thought you

said 1336 and then here on page 7, ran DST 3860 to TD. Closed in bottom hole pressure 1334.

A. Okay, that's a typographical error.

MR. NUTTER: That should be a 36, there.

A. Correct.

MR. NUTTER: Okay, that's what had me confused. I thought you said 36 and then I read 34.

Go ahead.

A. We did not go over these, but gas analysis and oil gravity information was presented to confirm that this is San Andres production, as compared to the Grayburg and Queen production of that area.

Finally, at the time that the earlier noncommercial tests in the San Andres were made, the price of oil and gas was approximately $13.03 per barrel and 62 cents per Mcf of gas.

Considering the large volume of water to be handled, these earlier tests were noncommerical. An operator can expect to produce the San Andres at a profit now provided he can sell the oil and gas at the prices specified by new onshore reservoirs and provided that the special GOR rule will make it possible to produce the well without any restriction imposed by limiting GORs.

Then in summary concerning the economic test required by FERC Order 42-A, we have supplied exhibits

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listing 40 -- that should be corrected to about 54, I believe, potentially disqualifying wells due to the behind the pipe exclusion in Section 102 (c) 1 C-2 I of the NGPA. Electric log sections from several of these wells are presented to indicate the -- that the relative uniform character of the San Andres throughout the proposed new field.

Exhibits on pages 19, I believe it is, yes, 19 and 20, were presented to show the economic test prescribed by the FERC order No. 42-A, that the behind the pipe exclusion did not apply.

The Oil Conservation Division is requested to establish a new San Andres Pool with a special limiting GOR ratio of 10,000-to-1.

The Oil Conservation Division is further requested to make a determination that this is a new onshore reservoir and that this and all future wells completed in this new onshore reservoir will be eligible for the NGPA Section 102 gas pricing category.

By approving these requests the Oil Conservation Division will be promoting conservation, protecting correlative rights, and providing incentive for the production of oil and gas that would not be otherwise produced for consumption.

Q. Mr. Nelson, were Exhibits One through Eleven prepared by you directly or compiled under your direction

and supervision?

A. Yes, they were.

MR. KELLAHIN: We move the introduction of Exhibits One through Eleven.

MR. NUTTER: Exhibits One through Eleven will be admitted in evidence.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Did you give us a log of this well so that we can determine that it is completed in the San Andres formation?

A. Of the State "C"?

Q. Yes, sir.

A. Yes,it should be in that group. I think it's the second log. Yes, if yours are numbered the same as mine, it should be the second log.

Q. Now, let's see, and where are we perforated on this log, Mr. Nelson?

A. We're perforated two holes at 3830 and two holes at 3834.

Q. 3830 and two holes at 3834.

A. 3834.

Q. 3834. Now, Mr. Nelson, I don't understand why you need a GOR limit of 10,000-to-1 in this pool.

A. The standard statewide GOR rule is 2000-to-1.

Q. Right.

A. If we applied that to an 80-barrel a day top allowable well we would only be able to produce 160 Mcf of gas per day.

Q. But you're asking for 10,000-to-1. That's going to give you 800,000 and this well will only make 341 at the most, won't it, or 280?

A. 280 to 90 is -- has been its production rate, but we're not sure that this is going to be the top of any future well that we might complete.

Q. But as of now we know that we've got a well here that produces a ratio of 23 to 24,000-to-1.

A. Yes, that's correct.

Q. And it's in no trouble as far as making its oil allowable because it's not penalized. It's ineffective because of the low oil productivity and I just don't understand the necessity for 800,000 cubic feet of gas per day gas allowable on a 40-acre well.

A. Well, at this point in time we could probably live with a 5000-to-1 ratio.

Q. 5000 would be more than the well is capable of producing now by another 25 percent even.

A. Yes, that would give us 400, which is

approximately 25 percent more than what it's producing.

Q. What are the GOR limits that are in effect in the Eunice-San Andres and the South Eunice-San Andres, do you know?

A. No, I'm sorry, I don't.

Q. We will take administrative notice of our GOR limits in those two pools. They're the closest San Andres pools to this discovery. Both are 5000 to 1

A. Yes, they are. The Eumont, which of course is another formation, the Queen, and the Grayburg are both 10,000-to-1.

Q. Right.

A. In that area.

Q. They're recognized as being gas pools -- gas reservoirs.

MR. NUTTER: Are there any other questions of Mr. Farris -- Mr. Nelson?

MR. PADILLA: I have one, Mr. Examiner.

CROSS EXAMINATION

BY MR. PADILLA:

Q. Mr. Nelson, I just want to clarify what's on page 6, go over that once more.

The wells circled in blue were the ones that were tested in the San Andres, is that correct?

A. Those were noncommercial in the San Andres. Some of them had specific San Andres tests. At least three of them were drilled and abandoned as dry holes, without any mention being made of specific San Andres tests.

Q. And the ones circled in green penetrated the San Andres but did not test the San Andres.

A. That is correct. They have produced at some deeper formation prior to April 20th, 1977.

Q. Do you know if any of these wells were ever perforated in the San Andres, the ones circled in green, were they ever perforated in the San Andres?

A. None that I'm aware of.

Q. Basically, the reason that these wells are noncommercial in the San Andres is too much water, is that correct?

A. That's a big part of it because that increased the equipment cost for handling the large volume of water. Then, also, it adds a lot of cost to salt water disposal costs.

MR. PADILLA: I have no further questions.

RECROSS EXAMINATION

BY MR. NUTTER:

Q. What pool are these wells producing from?

A. The green?

Q Uh-huh.

A Several different formations. The Drinkard predominantly, but there is some Blinebry and some Tubb.

Q This is down into the Blinebry, Drinkard, Tubb area, then?

A Yes, sir, it is.

Q Okay.

MR. NUTTER: Are there any other questions of the witness? He may be excused.

Do you have anything further in this case, Mr. Kellahin?

MR. KELLAHIN: No, sir.

MR NUTTER: Does anyone have anything they wish to offer in Case Number 6861?

We'll take the case under advisement.

(Hearing concluded.)

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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.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 6861 heard by me on 5/7 1980.

Examiner
Oil Conservation Division

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CASE NO. 6861

Application of Zia Energy, Inc. for pool creation, special pool rules, and an NGPA determination, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new San Andres oil pool for its State "C" Well No. 1 located in Unit F of Section 17, Township 22 South, Range 37 East, and special rules therefor, including a provision for a limiting gas-oil ratio of 10,000 to 1. Applicant further seeks a new onshore reservoir determination for said State "C" Well No. 1.

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
Zia EXHIBIT NO. 1
CASE NO. 6861

P.O. BOX 600

PHONE (505) 393-2937

ZIA ENERGY, INC.
HOBBS, NEW MEXICO 88240

May 2, 1990

Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87501

Re: Case No. 6861

Gentlemen:

Case No. 6861 is an Application by Zia Energy, Inc. for pool creation, special pool rules and an NGPA determination. Zia Energy seeks the creation of a new San Andres oil pool for its State "C" Well No. 1 located in Unit F of Section 17, Township 22 South, Range 37 East, and special rules therefor, including a provision for a limiting gas-oil ratio of 10,000 to 1. Zia Energy further seeks a New Onshore Reservoir determination for said State "C" Well No. 1 in Lea County, New Mexico.

In support of this application, several exhibits have been prepared and are hereby offered for your consideration.

A map section has been prepared to show the existing San Andres pools which are nearest to the proposed new San Andres pool for the State "C" Well No. 1. You will note from this map that the closest well producing from the San Andres is the Gulf Oil Company Eaves No. 4 in Unit H, Sec. 10, T22S, R37E. The Gulf Eaves No. 4 is 2 3/4 miles northeast from the Zia Energy State "C" No. 1. This well, along with several other wells in Sections No.s 2, 11, and 14, is producing in the Eunice San Andres-South pool. Two other wells, the Mobil Carson No. 23-G in Section 33, T21S, R37E, and the Amoco Owens "B" No. 1-L in Section 34, T21S, R37E, have produced from the Eunice San Andres pool, located northward.

This map section also locates several other wells in the area of interest which have been tested in the San Andres and determined to be non-commercial at the time of testing. Included as non-commercial are Gulf Oil Company South Penrose Skelly Unit No. 220-N (5-22-37) and No. 262-P (8-22-37), Millard Deck Patsy "B" No. 1-C (20-22-37), Anadarko Production Company E. W. Walden No. 11-M (15-22-37), Rowan Drlg. Elliott No. 1-K (17-22-37), and Zia Energy, Inc. Federal No. 1-K (17-22-37).

A contour map and a cross-section of the area of interest is presented. The cross-section commences at the Gulf SPSU No. 262-P (8-22-37) and progresses

southward through the State "C" No. 1 to the Millard Deck Patsy "B" No. 1-C (20-22-37). It will be noted from the contour map and the cross-section that the State "C" No. 1 is only slightly higher structurally than the other wells. Another well, the Anadarko Walden No. 11-M (15-22-37), which is located east and south of the State "C", is structurally lower.

From the map section and the contour map and cross-section, it is apparent that the State "C" No. 1 is isolated from other San Andres pools by non-commercial wells to the north, to the south, and to the east. There is no San Andres pool to the west and no San Andres tests have been conducted, of which we are aware.

Experience, and the information that we have, indicates that structural position has less to do with whether a well is a commercial or non-commercial producer than porosity and water saturation. Another factor that is most important in determining whether a well is commercial or not is the price to be received for the oil and gas production. San Andres production in this area can be expected to produce large volumes of water. Therefore, salt water disposal cost and price for oil and gas can determine whether a well is commercial or non-commercial.

In order to further support that this is a new San Andres pool, we present DST bottom hole pressure information, gas analysis data, and oil gravity comparisons. Enclosed is a DST on the State "C" No. 1 which indicated a bottom hole pressure of 1336 psi. A well data sheet on the Gulf Oil Company SPSU No. 262 reports DST results taken in the Queen, Grayburg, and San Andres formations. BHP in the Queen was reported as 414 psi, in the Grayburg the BHP was 810 psi, and the San Andres 1316 psi. Bottom hole pressures in excess of 1300 psi would certainly indicate the San Andres has not previously been produced in this area.

A gas analysis of the gas produced from the Queen formation and the gas produced from the San Andres in the State "C" No. 1 indicates a significant difference in BTU content. Also, a significant difference is noted in the gravity of the oil produced from the San Andres in the State "C" No. 1 and the oil produced from the Queen and the Grayburg formations. This evidence is presented to support that this is San Andres production.

A gas-oil ratio test is submitted that indicates the State "C" No. 1 is currently producing with a GOR of 24,250 to 1. The regular GOR rule would restrict gas production to 160 MCF per day while the well is currently producing 291 MCF per day. Since the well is producing 341 barrels of water per day, it would not be possible to restrict gas production to only 160 MCF. This will make it necessary that special GOR rules be adopted for the pool allowing a 10,000 to 1 GOR.

The Oil Conservation Division is further requested to make a determination that this San Andres well is in a New Onshore Reservoir as defined in NGPA Section

102(c)(1)(C). Section 102(c)(1)(C) of the NGPA applies to gas produced from New Onshore Reservoirs which are generally defined as onshore reservoirs from which natural gas was not produced in commercial quantities before April 20, 1977. Under the Behind-the-Pipe Exclusion, if an old well penetrated the subject reservoir and produced oil or gas in commercial quantities from any formation prior to April 20, 1977, the penetrated reservoir is disqualified if gas from that subject reservoir "could have been produced in commercial quantities" through such old well prior to April 20, 1977.

Federal Energy Regulatory Commission Order No. 42 originally only specified a physical capability test, meaning "could have been produced" and it ignored the later part of the test for determining the status of the Behind-the-Pipe Exclusion. This later part included the words "in commercial quantities."

FERC Order No. 42-A, issued November 29, 1979, sought to more clearly implement the intent of Congress. It was the wish of Congress to encourage the production of previously non-commercial reserves by allowing an incentive price, but Congress also wished to deny this incentive price to production withheld from the market place for purposes of price speculation. Therefore, FERC adopted regulations to implement the Behind-the-Pipe Exclusion to achieve both of these purposes.

In this case we have shown that the San Andres formation is a new field. But, in order for wells producing in this new field to qualify for Section 102 (New Onshore Reservoir) gas pricing category, we must satisfy FERC regulations concerning the Behind-the-Pipe Exclusion. In summary, the regulations state that any well which penetrated the subject reservoir prior to April 20, 1977 can be a potentially disqualifying well unless it can be shown, using an economic test outlined in Order No. 42-A, that the subject reserves from the subject reservoir "could not have been produced in commercial quantities" before April 20, 1977, through the potentially disqualifying well by perforating and recompleting in the subject reservoir. This economic test is outlined in detail in Order No. 42-A. The key components of this test are estimates of reserves, costs and the market place of the gas. The following formula is to be used in applying the economic test: (market price available as of April 20, 1977 x reserves net of royalty producible from the subject reservoir through the recompleted potentially disqualifying wells) - (incremental operating expenses) + (1.6 x incremental capital costs) . If the result is negative, then the Behind-the-Pipe Exclusion does not apply.

In order to supply the information required by the economic test, we submit a reserves estimate prepared by Natural Resources Evaluation and Engineering, Inc. wherein they estimate ultimate recovery from the sample potentially disqualifying well to be 13,406 barrels of oil and 328,500 MCF of gas. Capital

costs for recompleting and operating costs, for the sample potentially disqualifying well, were collected from numerous sources and are summarized in Exhibit No. ____. All prices for material and labor are those in effect in April 1977, and these were obtained through CE-Natco, Mid-Continent Supply, Pumping Units Services, Cooper Energy Services, Hobbs Repair Services, Lone Star Steel Co., Agua, Inc., B. F. Walker, The Western Company, Packer Sales and Rental, and Dresser-Atlas. The formula outlined by FERC Order No. 42-A allowed 1.6 x incremental capital costs plus incremental operating expenses. The total for both of these is $452,853. The market price of the reserves is shown in Exhibit No. ____ to be $298,765. The market price used for oil and gas was the price being paid in April 1977 by Shell and Getty for oil and gas of similar quality two locations away on our Christmas lease. The royalty rate was assumed to be 12½ per cent. The tax rate used was the rate which applied to oil and gas in 1977.

Using the information from these exhibits and the formula adopted by FERC in Order No. 42-A we are able to show that a negative value of $154,088 is obtained and, therefore, the Behind-the-Pipe Exclusion in Section 102(c)(1)(C)(ii) of the NGPA does not apply to the potentially disqualifying wells and, furthermore, this new San Andres reservoir will qualify for Section 102 gas pricing category.

In summary, we have shown that the State "C" No. 1 San Andres production is 2 3/4 miles from the closest well producing from the San Andres formation. From the map that is presented, it is apparent that non-commercial San Andres tests are located north, south, and east of the State "C" No. 1, separating it from both the Eunice San Andres and the Eunice San Andres-South pools. Bottom hole pressure data obtained by DST surveys indicate more than 1300 psi, which indicates that this is original BHP and that the San Andres has not been produced in this area. Then, gas analysis and oil gravity information was presented to confirm that this is San Andres production. Finally, at the time that earlier non-commercial tests in the San Andres were made, the price of oil and gas was approximately $13.03 per barrel and $0.62 per MCF, respectively. Considering the large volume of water to be handled, these earlier tests were non-commercial. An operator can expect to produce the San Andres at a profit now, provided he can sell the oil and gas at the prices specified for new onshore reservoirs and provided that a special GOR rule will make it possible to produce the well without any restriction imposed by limiting GORs.

Then, in summary concerning the economic test required by FERC Order No. 42-A, we have supplied an Exhibit No. ____ listing 40 (50) potentially disqualifying wells due to the Behind-the-Pipe Exclusion in Section 102(c)(1)(C)(ii) of the NGPA. Electrical log sections from several of these wells are presented to indicate the relative uniform character of the San Andres formation throughout this proposed new field. Exhibit Nos. ____ and ____ were presented to show by the economic

test prescribed by FERC Order No. 42-A that the Behind-the Pipe Exclusion did not apply.

The Oil Conservation Division is requested to establish a new San Andres pool with a special rule for GOR limiting it to a 10,000 to 1 ratio. The Division is further requested to make a determination that this is a new onshore reservoir and that this and all future wells completed in this New Onshore Reservoir will be eligible for the NGPA Section 102 gas pricing category.

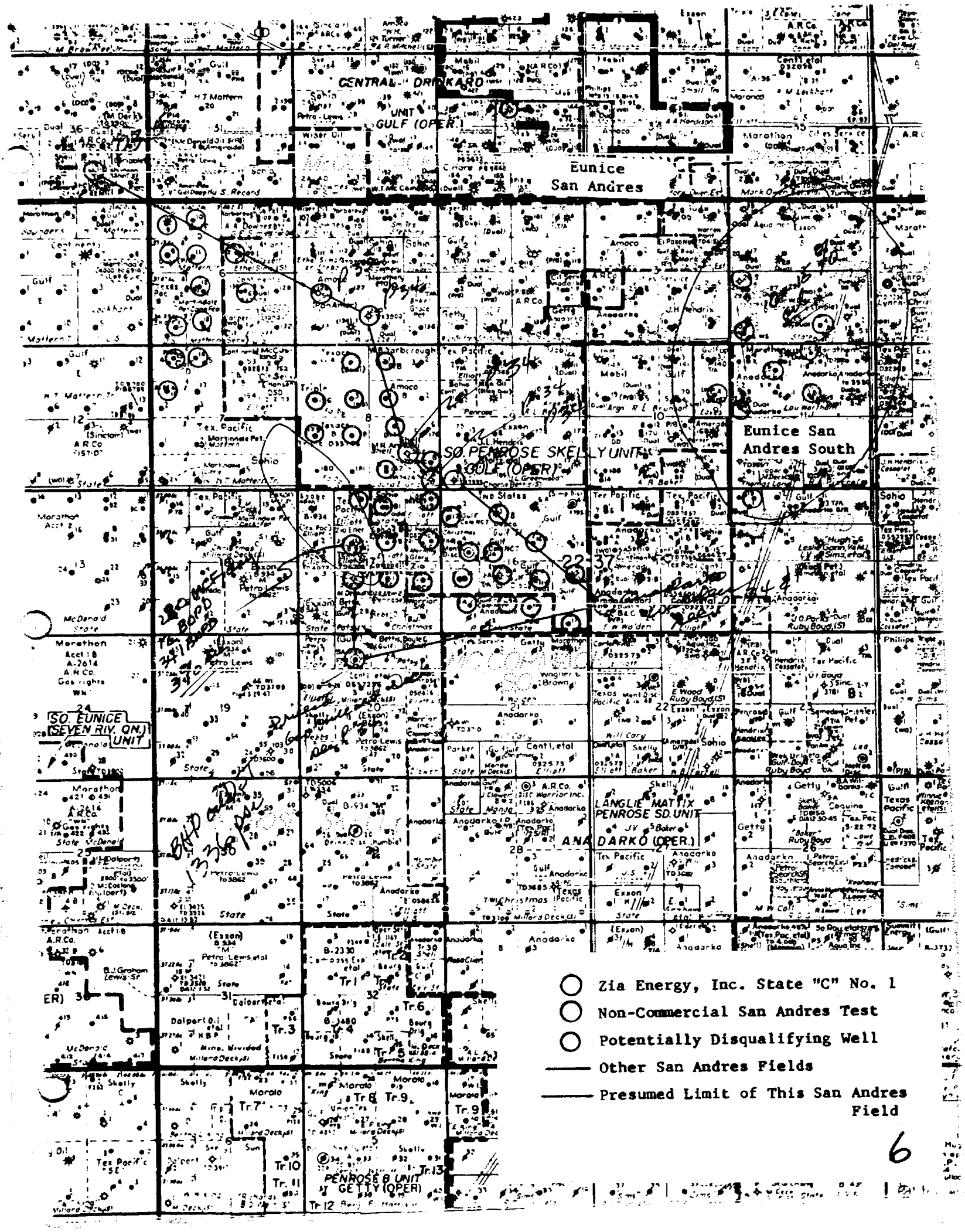
By approving these requests the Oil Conservation Division will be promoting conservation, protecting correlative rights, and providing incentive for the production of oil and gas that would not be otherwise produced for consumption by energy hungry consumers.

Yours very truly,

ZIA ENERGY, INC.

M. F. Nelson

M. F. Nelson


CENTRAL DRINKARD UNIT
GULF (OPER.)
Eunice San Andres
SO. PENROSE SKELLY UNIT
GULF (OPER.)
Eunice San Andres South
SO. EUNICE (SEVEN RIV. QN.) UNIT
LANGLIE MATTIX PENROSE SD. UNIT
ANADARKO (OPER.)
PENROSE B UNIT
GETTY (OPER.)
Zia Energy, Inc. State "C" No. 1
Non-Commercial San Andres Test
Potentially Disqualifying Well
Other San Andres Fields
Presumed Limit of This San Andres Field
6

WELL DATA SHEET

Company: Zia Energy, Inc.
Lease: State "C" Well No. 1
Field: Undesignated San Andres
Unit Letter F Sec. 17, T 22 S, R 37 E

Lea County, New Mexico

Date Completed 1/23/80 Total Depth 3929' Elevation 3405' GR

Intermediate Casing: Size 8 5/8" Depth 315' Cement 210 sx

Production Casing: Size 5 1/2" Depth 3435' Cement 300 sx

Perforation: 3830'-34' Open Hole: _____

Formation Tops: TA_____ TS_____ BS_____ TY_____

T7R_____ TQu_____ TGb_____

Stimulation: _____

Initial Potential: BOPD 12 BWPD 341 MCF/D 291

Cumulative Production to_____: BO_____ MCF_____

Remarks: 10/25/79: ~~1334~~ 1336 Deepened from 3542' to 3929'. Ran DST 3860'-TD, closed in BHP ~~1334~~ psi. Ran CNL-GR logs. Ran 525' 4" OD 12.5# FJ liner. Cmtd using 70 sx Cl "C" cmt. Rev. out 15 sx. Perf 3 JS at 3864'. Trt w/100 GA. Swb 100% wtr. Set cmt ret at 3856'. Sqzd perfs with 10 sx cmt, rev. out 150 sx. Perf 2 JS at 3830' & 2 JS at 3834'. Trt perfs w/1000 GA. Stimulate w/5000 GGBW frac pad & 4500 G of 20% HCL. Production test 3/10/80 12 BO w/341 BWPD & 291 MCF/day of gas.

7

WELL DATA SHEET

Company: Anadarko Production Company
Lease: E. W. Walden Well No. 11
Field: Penrose-Skelly
Unit Letter M Sec. 15, T 22 S, R 37 E

Lea County, New Mexico

Date Completed 2/3/74 Total Depth 4600' Elevation 3408' RKB

Intermediate Casing: Size 8 5/8" Depth 351' Cement 150 sx

Production Casing: Size 5 1/2" Depth 4600' Cement 315 sx

Perforation: See below Open Hole: _____

Formation Tops: TA 1124' TS 1220' BS 2418' TY 2563'

T7R 2782' TQu 3335' TGb 3650' TSA 3905'

Stimulation: See below

Initial Potential: BOPD 160 BWPD 275 MCF/D 350

Cumulative Production to _____: BO _____ MCF _____

Remarks:

1/6/74 Perf 4307-12', 4419-22', 4500-05', 4524-28'. Breakdown perfs w/500 GA 15% reg. Treat w/3000 gals 20% acid. Swab 100% sulfur water. Set retainer at 4000' and squeezed w/400 sks cmt. Drld out to 4260'.

1/15/74 Perf 4207-12', 4222-26'. Breakdown perfs w/500 GA 15% reg. Swab tested 100% sulfur with fluid level @ 2000'. Set retainer @ 4161' and squeezed w/275 sks.

1/17/74 Perf 4070-79', 4094-98', 4121-28'. Breakdown perfs w/250 GA 15% reg. Swab tested 100% sulfur water. Set retainer @ 4058'. Squeezed w/11 sks cmt.

1/22/74 Perf 3944-50', 3975-78', 3988-93', 4002-05', 4012-16'. Breakdown perfs w/1000 GA 15% reg. Swab tested 100% sulfur water. Set retainer @ 3930'. Squeezed w/150 sks cmt.

1/25/74 Perf w/1 JS @ each 3735', 3753', 3778', 3780', 3791', 3797', 3801', 3804', 3839', 3857', 3867', 3871', 3876' & 3885'. Breakdown perfs w/700 GA 15% reg. & 12 ball sealers. Fracture treat using 60,000 gals 9# gelled brine and 62,000# sand in 3 stages.

8

WELL DATA SHEET

Company: Millard Deck
Lease: Patsy "B" Well No. 1
Field: Langlie Mattix
Unit Letter C Sec. 20, T 22 S, R 37 E

Lea County, New Mexico

Date Completed 7/28/71 Total Depth 4412' Elevation 3378' RKB

Intermediate Casing: Size 8 5/8" Depth 300' Cement 250 sx

Production Casing: Size 5 1/2" Depth 4225' Cement 500 sx

Perforation: See below Open Hole: _____

Formation Tops: TA 1020' TS 1070' BS 2400' TY 2605'

T7R 2810' TQu 3315' TGb 3608' TSA 3845'

Stimulation: See below

Initial Potential: BOPD 90 BWPD 75 MCF/D 289

Cumulative Production to _____: BO _____ MCF _____

Remarks:
6/28/71: TD 305'; Prep drill
7/6/71: Drlg. 4304'
7/13/71: TD 4412'; WOC
Lost Circ @ 4408'
7/19/71: TD 4412'; PBD 4225'; WO Comp
8/9/71: TD 4412'; PBD 3800'; Tstg
Perf 4053'93' w/8 shots (overall)
Acid (4054'93') 1000 gals
Swbd wtr (4054-93')
Sqzd 4053-93'w/100 sx
Perf 3973-95' w/5 shots (overall)
Acid (3973-95') 2000 gals
Swbd wtr (3973-95')
BP @ 3800'

WELL DATA SHEET

Company: Gulf Oil Company
Lease: South Penrose Skelly Unit Well No. 262
Field: Penrose Skelly
Unit Letter P Sec. 8, T 22 S, R 37 E

Lea County, New Mexico

Date Completed 9/26/75 Total Depth 3900' Elevation 3407' GR

Intermediate Casing: Size 8 5/8" Depth 1182' Cement 600 sx

Production Casing: Size 5 1/2" Depth 3900' Cement 475 sx

Perforation: See below Open Hole: _____

Formation Tops: TA 1122' TS _____ BS _____ TY 2560'

T7R 2815' TQu 3320' TGb 3590' TSA 3816'

Stimulation: See below

Initial Potential: BOPD _____ BWPD _____ MCF/D _____

Cumulative Production to _____: BO _____ MCF _____

Remarks: Comp Info: Cored (Queen) 3416-76, rec 60', no desc; Cored (Queen) 3476-3536', rec 60', no desc; Cored (Queen 3536-45', rec 8', no desc; Cored (Queen) 3545-90', rec 44', no desc; DST (Queen) 3419-3590', op 2 hrs, rec 390' DM, ISIP 414#/2 hrs, FP 150-196#, FSIP 379#/2 hrs, HP 1741-1729#; Cored (Grayb 3590-3650', rec 60', no desc; Cored (Grayb) 3650-3710', rec 60', no desc; Cored (Grayb) 3710-70', rec 60', no desc; Cored (Grayb) 3770-3800', rec 30', no desc; DST (Grayb) 3590-3800', op 2 hrs, rec 210' mud + 450' sulf wtr, ISIP 810#/2 hrs, FP 400-442#, FSIP 589#/2 hrs, HP 2036#, BHT 88 deg. Cored (San And) 3800-60', rec 60', no desc; Cored (San And) 3860-3900', rec 40', no desc; DST (San And) 3860-3900', op 1 hr 30 mins, GTS/28 mins @ TSTM, rec 2860' gulf wtr, ISIP 1316#/1 hr, FP 826-1121#, FSIP 1316#/2 hrs, HP 2041-2041#, BHT 88 deg. Perf (Grayb) 3780-82', 3789-91', 3800-02' w/4 SPF; A/200 gals; S/16 BW/tr oil/8 hrs & S/dry; Perf (Grayb) 3698-3708' w/2 SPF; A/300 gals; S/5 BW/tr oil/6 hrs & S/dry; Perf (Grayb) 3663-67' w/2 SPF; A/1000 gals; S/ BL W/10 hrs & S/dry; A/750 gals; S/4 BLS w/tr oil/3 hrs & S/dry; C/Cactus Drlg.

WELL DATA SHEET

Company: Gulf Oil Corporation
Lease: Eaves Well No. 4
Field: Eunice San Andres - South
Unit Letter H Sec. 10, T 22 S, R 37 E

Lea County, New Mexico

Date Completed 5/16/72 Total Depth 5182' Elevation _____

Intermediate Casing: Size 9 5/8" Depth 2850' Cement 1300 sx

Production Casing: Size 7" Depth 5182' Cement 500 sx

Perforation: See below Open Hole: _____

Formation Tops: TA _____ TS _____ BS _____ TY _____

T7R _____ TQu _____ TGb _____

Stimulation: See below

Initial Potential: BOPD 42 BWPD 8 MCF/D _____

Cumulative Production to _____: BO _____ MCF _____

Remarks: F.R.C. 6/10/72: Opr's Elev. 3375' GL
PD 4162' WO (San Andres)
(Orig. comp 1/16/47 thru Glorieta) Perfs 5050-5115'
OTD 5182'; OPB 5118')

6/5/72 TD 5182'; PBD 4162'; COMPLETE
PB to 4993'
Perf 4018-20', 4046-48', 4084-86', 4103-05',
4200-02' w/2 SPF
Acid (4018-4202') 4000 gals (15% NE)
Non-Commercial (4018-4202')
Acid (4018-4202') 2500 gals (15% NE)
Non-Commercial (4018-4202')
PB to 4162'
Perf 4136-38' w/2 SPF

11

NEW-TEX LAB
P. O. BOX 1161
HOBBS, N.M. 88240

No. 2300
Run No.
Date of Run 3-10-80
Date Secured 3-10-80

CERTIFICATE OF ANALYSIS

A Sample of Zia State C #1
Secured from Zia Energy
At Box 603
Hobbs, NM 88240
Secured by Date
Time
Sampling conditions Press
Temp

FRACTIONAL ANALYSIS

	Percentage Composition MOL %	LIQ. %	G.P.M.
Carbon Dioxide	10.445		
Air	2.309		
Oxygen			
Hydrogen sulfide			
Hydrogen			
Methane	76.838		1.153
Ethane	4.325		.972
Propane	3.529		
Butanes			.161
Iso-Butane	.492		.349
N-Butane	1.110		
Pentanes			.156
iso-Pentane	.426		.111
N-Pentane	.307		.064
Hexanes	.155		.027
Heptanes Plus	.064		
Octanes			
TOTAL	100.000		2.993

Calc. Sp. Gr. 0.7623
Calc. A.P.I.
Calc. Vapor Press. PSIA
Sp. Gr.
Mol. Wt. 22.10

LIQUID CONTENT (GAL./MCF)

Propane Calc. G.P.M.	.972
Butanes Calc. G.P.M.	.510
Pentanes Plus. G.P.M.	.358
Ethane Calc. G.P.M.	1.153
*RVP Gasoline G.P.M.	

B.T.U./Cu. Ft. @ 14.696 P.S.I.A.	
Dry Basis	1034
Wet Basis	1016

Sulfur Analysis by Titration Gr./100 Cu. Ft.

Hydrogen Sulfide	135 Gr H_2S/100 SCF
Mercaptans	2133 PPM
Sulfides	0.2133 Mol%
Residual Sulfur	
Total Sulfur	

Run by Deane Simpson Checked by Approved by Deane Simpson

Additional Data and Remarks

H_2S run on location-Mol% H_2S not included in Gas Analysis Mol%.

12

EL PASO NATURAL GAS COMPANY
CHROMATOGRAPHIC GAS ANALYSIS REPORT

RPT-ASL 83

RPT DATE 10 29 79
ANAL DATE 10 16 79

METER STATION NAME
STATE C #1

METER STA 68119
OPER 9887

TYPE CODE 42 | SAMPLE DATE 10 09 79 | EFF. DATE 10 29 79 | USE MOS. 01 | SCALE | H2S GRAINS 0000* | LOCATION 1 M 13

	NORMAL MOL%	GPM
	00.00	0.000
C O 2	00.00*	0.000
H 2 S	02.11	0.000
N2	80.74	0.000
METHANE	09.32	2.491
ETHANE	04.83	1.329
PROPANE	00.31	0.101
ISO-BUTANE	01.48	0.466
NORM-BUTANE	00.29	0.106
ISO-PENTANE	00.43	0.156
NORM-PENTANE	00.49	0.214
HEXANE PLUS	100.00	4.863
TOTALS		0.710

SPECIFIC GRAVITY

MIXTURE HEATING VALUE (BTU/CF @ 14.73 PSIA,60 DEGREES,DRY) 1220

RATIO OF SPECIFIC HEATS 1.284

* NO TEST SECURED FOR DETERMINATION H2S CONTENT.

13

11-48 BAKS
REV. 9-1-64

NAVAJO CRUDE OIL PURCHASING CO.
RUN TICKET

OPERATOR: ZIA ENERGY

LEASE NAME: ST. C

NO.	DAY	YEAR	DISTRICT NO.	TICKET NO.
3	12	80	#15	738

TANK NO.: 11498-3 | LEASE NO.: 8987

OFFICE CODES:

TANK SIZE: 15' 210

GAUGE	FT.	IN.	½ IN.	TEMP.
1ST.	13	11	3/14	68
2ND.	1	3	3/14	68

HEIGHT OF CONNECTION: 1 0 0/14

B. S. & W. LEVEL

1ST.	0	0	0/14
2ND.	0	0	0/14

OBSERVED QTY. & TEMP.: 31.0 | 66 | TRUE QTY.: 30.6

POWER: B. S. & W. 3/10 %

TRUCK:

OIL MOVED BY: PUMP ☐ GRAVITY ☐ TRUCK ☒ | TO (NAME OF LINE OR STATION): BRB | CODE:

POWER FURNISHED BY OR TRUCKED BY: PLCO. ☐ OTHER ☐ | CODE:

CALCULATIONS:

TURNED ON

GAUGER: Jim Gooch | TIME: 1110 AM

OPERATOR'S WITNESS (OR WAIVER NO.): | OFF SEAL: —

SHUT OFF

GAUGER: Jim Gooch | TIME: 1220 AM | DATE: 3/12

OPERATOR'S WITNESS (OR WAIVER NO.): | ON SEAL: —

REMARKS:

This ticket covers all claims for allowance. The oil represented by this ticket was received and run as the property of Navajo Crude Oil Purchasing Company.

11-48 BAKS
REV. 9-1-64

NAVAJO CRUDE OIL PURCHASING CO.
RUN TICKET

OPERATOR: ZIA ENERGY

LEASE NAME: ST C

NO.	DAY	YEAR	DISTRICT NO.	TICKET NO.
10	24	79	15	524

TANK NO.: 11499-1 | LEASE NO.: 8987

OFFICE CODES:

TANK SIZE: 15' 210

GAUGE	FT.	IN.	½ IN.	TEMP.
1ST.	14	6	0/14	68
2ND.	1	6	3/14	68

HEIGHT OF CONNECTION: 1 0 0/14

B. S. & W. LEVEL

1ST.	0	0	0/14
2ND.	0	0	0/14

OBSERVED QTY. & TEMP.: 35.6 | 66 | TRUE QTY.: 35.6

POWER: B. S. & W. 3/10 %

TRUCK: X

OIL MOVED BY: PUMP ☐ GRAVITY ☐ TRUCK ☒ | TO (NAME OF LINE OR STATION): BRB | CODE: 52

POWER FURNISHED BY OR TRUCKED BY: PLCO. ☐ OTHER ☐ | CODE:

CALCULATIONS:

TURNED ON

GAUGER: Jim Gooch | TIME: 155

OPERATOR'S WITNESS (OR WAIVER NO.): | OFF SEAL: —

SHUT OFF

GAUGER: Jim Gooch | TIME: 240 PM | DATE: 10/2

OPERATOR'S WITNESS (OR WAIVER NO.): | ON SEAL: —

REMARKS:

This ticket covers all claims for allowance. The oil represented by this ticket was received and run as the property of Navajo Crude Oil Purchasing Company.

FORM SP-300 REV. 7/1/65 **SHELL PIPE LINE CORPORATION**

OPERATOR OR FIELD LOCATION: Zia Energy Inc N-560

LEASE OR COMPANY NAME: Christman

DELIVERY ☐ RECEIPT ☑

FOR ACCOUNT OF: Shell Oil Co

CRUDE GRADE: Crude

CONSIGNEE (IF DELIVERED TO CONNECTING CARRIER)

CREDIT

TANK SIZE: 210

REMARKS

MO.	DAY	YR.	DISTRICT NO.	TICKET NO.
12	24	79		8

TANK, METER OR TRUCK NO.	OFFICE CODE	LEASE NO.
19669	Y85043-A00	

GAUGE	OIL LEVEL FT.	IN.	FRACT.	TEMP.	TANK BOTTOM IN.
1 ST	14	1	1/2	49	4
2 ND	1	2	1/4	—	—

OBS. GTY. & TEMP.: 41.0 48

CODES | B S & W %: 0.10 ☐

GROSS BARRELS

METER OR DUMP

TRANSACTION NO. | PRINTING HEAD NO. | ☒ BARRELS | ☐ GALLONS | 10THS

AVG. METER PRESS. PSI | METER FACTOR/DUMP SIZE | METERED BARRELS/NO. DUMPS

TEMP. COMPENSATED ☐ YES ☐ NO | AVG. LINE TEMP. | COMPRESSIBILITY FACTOR | NET BARRELS

ON — GAUGER: R E Skipper | TIME: 11 10 AM | DATE: 12/24

OPERATOR'S WITNESS OR WAIVER NO.: None | SEAL OFF: R501639

OFF — GAUGER: R E Skipper | TIME: 9 15 AM | DATE: 12/25

OPERATOR'S WITNESS OR WAIVER NO.: None | SEAL ON: R517796

11-48 BAXS REV. 9-1-64

NAVAJO CRUDE OIL PURCHASING CO.
RUN TICKET

OPERATOR: ZIA Energy

LEASE NAME: Fed

MO.	DAY	YEAR	DISTRICT NO.	TICKET NO.
2	27	80	#15	715

TANK NO.: 11507-1 | LEASE NO.: 8998

OFFICE CODES

TANK SIZE: 15' 210

GAUGE	OIL LEVEL FT.	IN.	1/4 IN.	TEMP.
1ST.	14	7	1/4	102
2ND.	1	10	2/4	102

HEIGHT OF CONNECTION: 1 | 0 | 0/4

B. S. & W. LEVEL	FT.	IN.	1/4 IN.
1ST.	0	4	0/4
2ND.	0	4	0/4

OBSERVED GTY. & TEMP.		TRUE GTY.
41.6	100	38.9

POWER / TRUCK | B. S. & W.: 2/10 %

CALCULATIONS

OIL MOVED BY PUMP ☐ GRAVITY ☐ TRUCK ☐ | TO (NAME OF LINE OR STATION): BRB | CODE

POWER FURNISHED BY OR TRUCKED BY PLCO. ☐ OTHER ☐ | CODE

TURNED ON

GAUGER: Jim Gooch | TIME: 730 A M

OPERATOR'S WITNESS (OR WAIVER NO.) | OFF SEAL

SHUT OFF

GAUGER: Jim Gooch | TIME: 810 PM | DATE: 2/2

OPERATOR'S WITNESS (OR WAIVER NO.) | ON SEAL

REMARKS

This ticket covers all claims for allowance. The oil represented by this ticket was received and run as the property of Navajo Crude Oil Purchasing Company.

FORMATION TEST DATA

FLUID SAMPLE DATA

Sampler Pressure 350 P.S.I.G. at Surface

Recovery: Cu. Ft. Gas

cc. Oil

cc. Water 2050

cc. Mud

Tot. Liquid cc.

Gravity ° API @ °F.

Gas/Oil Ratio cu. ft./bbl.

	RESISTIVITY	CHLORIDE CONTENT
Recovery Water	@ °F.	ppm
Recovery Mud	@ °F.	ppm
Recovery Mud Filtrate	@ °F.	ppm
Mud Pit Sample	@ °F.	ppm
Mud Pit Sample Filtrate	@ °F.	ppm

Mud Weight 9.2 vis cp

Date 11-8-79 Ticket Number 619022

Kind of Job OPEN HOLE TEST Halliburton District HOBBS

Tester D. JENNINGS Witness FARRIS NELSON

Drilling Contractor EUNICE WELL SERVICE TJH

EQUIPMENT & HOLE DATA

Formation Tested Seven Rivers

Elevation Ft.

Net Productive Interval 69' Ft.

All Depths Measured From Ground Level

Total Depth 3929' Ft.

Main Hole/Casing Size 5 1/2"

Drill Collar Length 425' I.D. 1.50"

Drill Pipe Length 3417' I.D. 2.441"

Packer Depth(s) 3855' - 3860' Ft.

Depth Tester Valve 3830' Ft.

	TYPE	AMOUNT	Depth Back Pres. Valve	Surface Choke	Bottom Choke
Cushion		Ft.		Adj.	.62"

Recovered 2230 Feet of water.

Recovered Feet of

Recovered Feet of

Recovered Feet of

Recovered Feet of

Meas. From Tester Valve

Remarks SEE PRODUCTION TEST DATA SHEET . . .

TEMPERATURE	Gauge No. 7563		Gauge No. 7562		Gauge No.		TIME	
	Depth: 3845 Ft.		Depth: 3925 Ft.		Depth: Ft.		Tool Opened 1036 P.M.	
Calc. Est. 110 °F.	12 Hour Clock		12 Hour Clock		Hour Clock		Opened A.M.	
Actual °F.	Blanked Off NO		Blanked Off YES		Blanked Off		Bypass 1255 P.M.	
	Pressures		Pressures		Pressures		Reported	Computed
	Field	Office	Field	Office	Field	Office	Minutes	Minutes
Initial Hydrostatic	1855	1790.0	1888	1894.3				
First Period Flow Initial	461	628.5	851	904.2			25	
First Period Flow Final	1184	1203.4	1232	1298.1			116	
First Period Closed in	1247	1238.0	1274	1336.1				
Second Period Flow Initial								
Second Period Flow Final								
Second Period Closed in								
Third Period Flow Initial								
Third Period Flow Final								
Third Period Closed in								
Final Hydrostatic	1855	1803.0	1888	1883.7				

Legal Location Sec. - Twp. - Rng.

Lease Name STATE "C"

Well No. 1

Test No. 1

Tested Interval 3860' - 3929'

Field Area SOUTH EUNICE

County LEA

State NEW MEXICO

Lease Owner/Company Name ZIA ENERGY INCORPORATED

FORM 101-R1—PRINTED IN U.S.A. LITTLE'S 80871 10M 8/74

ENERGY AND MINERALS DEPARTMENT

Revised 10-1-78

12

GAS-OIL RATIO TESTS

Operator	Pool	County
ZIA ENERGY, INC.	San Andres Wildcat	Lea

Address: P. O. Box 603, Hobbs, NM 88240

TYPE OF TEST - (X): Scheduled ☐ Completion ☒ Special: ☐

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	TYPE	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS - OIL RATIO CU.FT/BBL.
State "C" B-934	1	F	17	22S	37E	3/10/80	F	32/64	120	8	24	341	30.6	12	291	24,250

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Division in accordance with Rule 301 and appropriate pool rules.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

M F Nelson
(Signature)

Engineer
(Title)

3/12/80

Natural Resources Evaluation and Engineering Inc.

(505) 393-6364 • SUITE 240 • BROADMOOR BUILDING
POST OFFICE BOX 2188 • HOBBS, NEW MEXICO 88240

April 25, 1980

Zia Energy, Inc.
P. O. Box 603
Hobbs, NM 88240

Dear Mr. Nelson:

At your request I have estimated reserves on your State "C" #1 well located 1981' FWL & 1980' FNL, Section 17, T-25-S, R-37-E. Since there is very little history on San Andres production in the near vicinity of your well, the decision was made to go on volumetric calculations. This method is probably the best way to calculate reserves in the early life of a well or field, as there is no production history and few reservoir properties are known. The following parameters were used in the reserve calculations:

Porosity	7.5%	calculated (log)
Connate water	60.0%	calculated (log)
Shrinkage factor	.80	estimated
Recovery efficiency	12.0%	estimated
Net effective thickness	15.0 feet	calculated (log)
Drainage area	40.0 ac.	proration unit
G.O.R.	24,500:1	actual test

The estimated ultimate recovery on this well is 13406 BBLS of oil and based on a gas oil ratio of 24,500:1. The gas reserves are 328.5 MMCFG.

I hope this meets your requirements and if I can be of any further assistance feel free to contact me.

Very truly yours,

Joe T. Janica
PE 20097

JTJ/kg

ZIA ENERGY, INC.

Cost Analysis To Plug Back and Recomplete, Equip and Operate a New Onshore San Andres Reservoir Well

Cost Basis For All Figures - April 1977

Item	Cost	
Plug back, perforate, stimulate. test & equip	$ 30,000	intangibles
2 7/8" OD EUE J-55 tubing - 3800'	9,430	
7/8" Gr. 40 sucker rods - 1300'	1,200	
3/4" Gr. 40 sucker rods - 2500'	1,800	
2½" x 2" x 16' subsurface pump	632	
1 - 4' x 20' heater treater - installed	10,000	tangibles
1 - 4' x 10' free water knockout - installed	3,500	
Miscellaneous well head connections	1,500	
1 - pumping unit - Amcot T20F86-20-D228Z	18,530	
1 - Ajax engine - EA-30	9,050	
1 - pumping unit concrete base plus installation	1,388	
Salt Water Disposal System installation (from P31 & 32)	25,200	
TOTAL CAPITAL COST	$112,230	
Overhead Expense - $200/well/month - 15 yrs	$ 36,000	
Lease operating costs - 15 yrs	237,285	
TOTAL OPERATING COST	$273,285	

need 2⅞" instead of 2⅜ because of large pump & large vol of wtr

15819/yr from P33 x 15 yrs

ZIA ENERGY, INC.

Revenue Calculation For New Onshore
San Andres Reservoir Well

Calculation based on the following data:

Recoverable oil	13,406 bbls
Price for Oil - April 1977	$13.00/bbl
Recoverable Gas	328,500 MCF
Price for Gas - April 1977	$0.62/MCF
Royalty rate	12.5%
Tax rate - Oil	7.38%
Tax rate - Gas	11.79%

Oil Revenue:
(13406) (13.03) (.875) ~~(.9262)~~ = 141,381 ~~$141,805~~

Gas Revenue:
(328,500) (.62) (.875) ~~(.8821)~~ = 164,845 ~~157,200~~

Total Revenue 306,226 ~~$298,765~~

Formula for "could have been produced in commercial quantities" test:

306,226 ~~298,765~~ - [(1.6) (112,230)] + 273,285 =

306,226 ~~298,765~~ - (179,568 + 273,285) =

306,226 ~~298,765~~ - 452,853 = minus ~~$154,088~~ 146,627

Therefore, the "Behind-the-Pipe Exclusion" does not apply and this San Andres reservoir qualifies for the Sec. 102 (New Onshore Reservoir) price category.

Getty Oil Company

P.O. BOX 3000 TULSA, OKLAHOMA 74102

KEEP ALL STATEMENTS. DUPLICATES WILL NOT BE FURNISHED.

STATEMENT OF GAS PURCHASED

FORM 13-875 2-77

PLANT NAME	PLANT NO.	STATE	COUNTY	STATION NUMBER	METER NUMBER	DATE MO.	DATE YEAR
EUNICE	41	NEW MEXICO	LEA	08950		04	1977

PRODUCER	LEASE	WELLS NO.	NO. COPIES
ZIA ENERGIES INC	CHRISTMAS		

GASOLINE CONTENT VALUE

TOTAL GAS PURCHASED-M. C. F.	TEST GALS. PER M. C. F.	TOTAL TEST GALS.	CORRECTED TEST GALS.	PRICE/M.C.F. OR PRICE/GAL.	CONTRACT PERCENT	ALTERNATE PRESSURE BASE	CORRECTED M. C. F.	GASOLINE CONTENT VALUE
1,153	1.015	1,170		.1473219	33.33	15.025	1,124	57.45

BUTANE/PROPANE SALES VALUE OF THE GAS

GALLONS SOLD	AVERAGE PRICE/GAL.	VALUE DUE ALL LEASES	CONTRACT PERCENT	TOTAL TEST GALS. INTO THE PLANT				BUTANE/PROPANE VALUE DUE LEASE
11,560,269	.1357805	523,167.54	33	2,150,225				278.71

RESIDUE VALUE OF THE GAS

PERCENTAGE RESIDUE REM.	VOLUME RESIDUE REM.	RESIDUE GAS RETURNED TO LSE.	REPRESSURE GAS LEASE	AVAILABLE FOR SALE FROM LSE.	TOTAL FOR SALE FROM PLANT	TOTAL SOLD FROM PLANT	NET PROCEEDS DUE ALL LEASES	RESIDUE GAS VALUE DUE LEASE
82.86	761			761	1,884,214	1,884,214	937.423	378.41

STATION SUMMARY AND TAX VALUES

PLANT FACTOR	% COVERED BY THIS SUMMARY	TOTAL GROSS VALUE	TAX EXEMPT ROYALTY VALUE	TAXABLE VALUE	PRODUCTION TAX	EXCISE TAX	TOTAL TAX	NET VALUE DUE LEASE
.797230C		714.77		714.77	26.60	.0019 1.29	33.61	661.16
.0102050			NEW MEXICO AD VALOREM TAX		.010199 7.24	SCH TAX	16.23	
							.0255	

Gas Price

$\frac{714.77}{1153} = .62$

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-12 (REV. 11-73)

SHELL OIL COMPANY

STATEMENT OF RUNS

OPERATOR	BATTERY	FIELD	COUNTY	STATE	MO.
ZIA ENERGY INC	CHRISTMAS	PENROSE SKELLY	LEA	N MEX	04

MO.	DAY	TICKET NO.	GRAV.	BARRELS	PRICE	VALUE
4	15	5	34.4	182.53 X	5.2100	= 950.98

MO.	DAY	TICKET NO.	GRAV.	BARRELS	PRICE	VALUE
+		4/77	STRIPPER-WELL VALUE		ADJ.	1,427.38

Oil Price

$\frac{2378.36}{182.53} = 13.03$

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IDENTIFICATION CODE	PURCHASER	TOTAL BARRELS	TOTAL VALUE	COPY MAILED TO:
X85043A00	SHELL OIL	182.53	= 2,378.36	ZIA22000

C-E Natco Chemicals
A Subsidiary of
Combustion Engineering, Inc.
Post Office Box 447
Hobbs, New Mexico 88240

Tel. 505/393-6126

NATCO CHEMICALS

29 April, 1980

TO WHOM IT MAY CONCERN

To the best of my knowledge the following prices on material specified were in effect on or about April, 1977:

A. 210 barrel flat bottom welded steel stock tank	$2,250.00
B. 4' x 20' Vertical ASME Code Emulsion Treater	$8,952.00
C. 4' x 10' Horizontal Free Water Knockout	$2,630.00

Max V. Land
MAX V. LAND
Office Manager

23

PUMPING UNITS SERVICES, INC.

P. O. BOX 356 PHONE 505 393-3101
HOBBS, NEW MEXICO 88240

April 24, 1980

Zia Energy
P. O. Box 603
Hobbs, New Mexico 88240
Attention: Mr. Farris Nelson

Regarding: Prices in effect April 1977

Mr. Nelson:

Attached is a copy of our pumping unit foundation and labor price list dated November 1, 1976 and in effect April 1977.

Estimate labor and trucking to go to your location, set and level foundation, and assemble the 228 pumping unit and gas engine.

10 hrs @65.60 per hr.	656.00
1 Pumping Units Services, Inc. foundation for 228 unit w/gas engine drive. F.O.B. Hobbs yard	570.00
Bolts and tiedowns	109.32
	$1,335.32
4% Sales TAx	53.41
	$1,388.73

Should you need further information, please feel free to contact our office.

Sincerely;

Marion Hightower

Pumping Units Services, Inc.
Marion Hightower
President

Encls.

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Expired 10/1/77

III. A.P.I. CONVENTIONAL PUMPING UNITS

A. PUMPING UNITS SERVICES, INC. Precast Concrete Foundations only for A.P.I. Conventional pumping units (F.O.B. Hobbs Plant):

API Unit Size	Electric Motor Drive	Gas Engine Drive
40	$260.00	$ 300.00
57	285.00	325.00
80	300.00	335.00
114	330.00	405.00
160	415.00	490.00
228	505.00	570.00
320	540.00	635.00
456	675.00	780.00
640	775.00	925.00
912	910.00	1,070.00

B. Contract prices for furnishing labor, tools, equipment and a PUMPING UNITS SERVICES, INC. Precast Concrete Foundation, erect pumping unit complete:

API Unit Size	Electric Motor Drive	Gas Engine Drive
40	$ 430.00	$ 555.00
57	525.00	595.00
80	540.00	635.00
114	585.00	690.00
160	815.00	945.00
228	975.00	1,115.00
320	1,130.00	1,275.00
456	1,275.00	1,430.00
640	1,430.00	1,585.00
912	1,635.00	1,855.00

PUMPING UNITS SERVICES, INC.

Box 356 - Phone 505/393-3191
Hobbs, New Mexico 88240

PRICE LIST EFFECTIVE NOVEMBER 1, 1976

I. HOURLY RATES

A. Skilled Personnel:

Construction Foreman	$ 8.60 per hour
Construction Workman	6.50 per hour
Field Superintendent	12.00 per hour
Shop Machinist	11.50 per hour
Welder	16.00 per hour

Air Compressor w/Jack Hammer less Operator 9.50 per hour

B. Trucking:
Operating in New Mexico under authority of NMSCC Permit No. 7379, Tariff 30-E.
Operating in Texas under authority of RRC Permit No. 27167, Tariff 6-R. Hourly rates will be charged as per published OILFIELD HAULERS ASSOCIATION Rate Schedule.

C. Outside Services:
Outside Services for material, labor and fabricating will be charged at local prices in effect at time of delivery.

II. SPECIAL PRECAST CONCRETE FOUNDATIONS

A. Heater Treater & Separator Foundations:

3' diameter	$ 55.00
42" diameter	60.00
4' diameter	65.00
5' diameter	75.00
6' diameter	105.00
7' diameter	130.00
9' diameter	200.00
11' diameter	325.00

B. Sills & Piers:

3 x 6	150.00
4' x 12' x 10"	$135.00
3' x 8'6" x 16"	160.00
3' x 10' x 16"	215.00
5' x 12' x 16"	325.00
5' x 10' s 22"	327.00
13' Dia Tank Ring	405.00
4' x 8'6" x 16"	240.00
4' x 10" x 16"	275.00

FROM

HOBBS REPAIR SERVICE

BOX 1076
EUNICE, NEW MEXICO 88231
Phone: 394-2506

TO Zia Energy, Inc.
Box 603, Hobbs, New Mexico 88240

DATE: 4-16-80

SUBJECT: ATTN: FARRIS NELSON 1977 Pump price (2½x2x16)

POLO	222 K 16	barrel	167.40	60-252 K 4	plgr.	190.25
	11 L 4	ball & seat	46.21	113 L 6	cage	15.09
	11 K 4	ditto	40.96	156 L 1	lock nut	5.63
3	190 L 70	cups	10.32	95 L 1	body	29.13
	91 K 4	adapter	11.43	232 K 134	pull tube	68.66
	110 L 6	cage	13.76			613.03
	81 K 1	adapter	14.19		tax	24.52
						637.55

PLEASE REPLY TO ——— SIGNED James N. Evans /mk

DATE SIGNED

THIS COPY FOR PERSON ADDRESSED

COOPER ENERGY SERVICES

AJAX HORIZONTAL GAS ENGINES
PRICE SCHEDULE

	All Units	EA-22	EA-30	E-42	DP-60	DP-80A	DP-125	DP-165	DP-250	DP-325
Base Engine with Clutch	-	$8280	$8570	$9530	$13230	$15760	$23950	$30000	$44910	$55340
Base Engine without Clutch	-	-	-	9170	12790	15090	22750	28800	43260	53670
Optional Equipment										
Governor Air Motor	320	-	-	-	-	-	-	-	-	-
Gas Injection Fuel System	-	O.A.	O.A.	1040	1170	1230	Std.	Std.	Std.	Std.
Shielded Ignition Systems										
Altronic I	O.A.	-	-	-	-	-	-	-	-	-
Altronic III	-	N.A.	N.A.	N.A.	790	900	900	900	1270	1270
[1]Explosion Proof Shutdowns - Add	360	-	-	-	-	-	-	-	-	-
[2]Electric Starting Equipment	-	460	460	460	870	N.A.	N.A.	N.A.	N.A.	N.A.
Air Gas Starting Equipment	-	110	110	110	Std.	Std.	Std.	Std.	Std.	Std.
Deductions										
Standard Engine Radiator	-	O.A.	O.A.	O.A.	O.A.	O.A.	O.A.	O.A.	1880	1880

1. Explosion proof overspeed, water temperature and oil level shutdowns.
2. Battery and cable not included.

O.A. - On Application
N.A. - Not Available
Std. - Standard Equipment

LONE STAR STEEL COMPANY

OIL COUNTRY TUBULAR GOODS
PRICE LIST EFFECTIVE MARCH 01, 1977

PRICES DOLLARS PER 100 FEET - F.O.B. MILL, LONE STAR, TEXAS

SIZE O.D. INCHES	WEIGHT LBS. PER FT.	WALL INCHES	GRADE	T&C END FINISH	MFG. SPECS.	MILL PRICE
5.000	15.00	.296	S-105	LONG	LSS	673.63
			S-105	BUTTRESS	LSS	720.26
5.000	18.00	.362	N-80	LONG	API	713.21
			N-80	BUTTRESS	API	762.50
			L-80	LONG	API	783.63
			L-80	BUTTRESS	API	837.85
			SS-95	LONG	LSS	881.50
			SS-95	BUTTRESS	LSS	942.58
			S-95	LONG	LSS	801.43
			S-95	BUTTRESS	LSS	856.90
			CYS-95	LONG	LSS	880.67
			CYS-95	BUTTRESS	LSS	941.69
			C-95	LONG	API	955.78
			C-95	BUTTRESS	API	1022.05
			S-105	LONG	LSS	809.31
			S-105	BUTTRESS	LSS	865.33
5.000	23.20	.478	N-80	LONG	API	919.23
			N-80	BUTTRESS	API	982.76
			L-80	LONG	API	1009.99
			L-80	BUTTRESS	API	1079.88
			SS-95	LONG	LSS	1185.77
			SS-95	BUTTRESS	LSS	1269.03
			S-95	LONG	LSS	1103.75
			S-95	BUTTRESS	LSS	1180.20
			CYS-95	LONG	LSS	1212.97
			CYS-95	BUTTRESS	LSS	1297.07
			S-105	LONG	LSS	1114.60
			S-105	BUTTRESS	LSS	1191.81
5.500	14.00	.244	K-55	SHORT	API	414.85
5.500	15.50	.275	K-55	SHORT	API	450.96
			K-55	LONG	API	473.12
			K-55	BUTTRESS	API	505.70
5.500	17.00	.304	K-55	SHORT	API	485.92
			K-55	LONG	API	509.79
			K-55	BUTTRESS	API	544.88
			N-80	LONG	API	653.02
			N-80	BUTTRESS	API	698.14
			L-80	LONG	API	717.47
			L-80	BUTTRESS	API	767.10
			SS-95	LONG	LSS	807.49
			SS-95	BUTTRESS	LSS	863.42
			S-95	LONG	LSS	732.67
			S-95	BUTTRESS	LSS	783.36
			CYS-95	LONG	LSS	805.09

PRICE IN EFFECT AT TIME OF SHIPMENT WILL APPLY

OCTG- 3

LONE STAR STEEL COMPANY

OIL COUNTRY TUBULAR GOODS
PRICE LIST EFFECTIVE MARCH 01, 1977

OLD PRICE 3-1-77 TO 8-1-77

PRICES DOLLARS PER 100 FEET - F.O.B. MILL, LONE STAR, TEXAS

SIZE O.D. INCHES	WEIGHT LBS. PER FT.	WALL INCHES	GRADE	T&C END FINISH	MFG. SPECS.	MILL PRICE
2.375	4.60	.190	H-40	NUE	API	170.50
			J-55	NUE	API	174.81
			C-75	NUE	API	258.48
			N-80	NUE	API	235.19
2.375	4.70	.190	H-40	EUE	API	179.98
			J-55	EUE	API	184.53
			C-75	EUE	API	272.88
			N-80	EUE	API	248.29
2.875	6.40	.217	H-40	NUE	API	221.50
			J-55	NUE	API	227.10
			C-75	NUE	API	335.70
			N-80	NUE	API	305.47
2.875	6.50	.217	H-40	EUE	API	231.28
			J-55	EUE	API	237.13
			C-75	EUE	API	350.56
			N-80	EUE	API	318.99
3.500	9.20	.254	H-40	NUE	API	314.87
			J-55	NUE	API	322.83
			C-75	NUE	API	477.17
			N-80	NUE	API	434.21
3.500	9.30	.254	H-40	EUE	API	327.39
			J-55	EUE	API	335.67
			C-75	EUE	API	496.22
			N-80	EUE	API	451.53
4.500	9.50	.205	K-55	SHORT	API	299.00
4.500	10.50	.224	K-55	SHORT	API	326.04
			K-55	BUTTRESS	API	365.66
4.500	11.60	.250	K-55	SHORT	API	353.49
			K-55	LONG	API	370.87
			K-55	BUTTRESS	API	396.42
			N-80	LONG	API	475.18
			N-80	BUTTRESS	API	508.04
			L-80	LONG	API	522.12
			L-80	BUTTRESS	API	558.26
			SS-95	LONG	LSS	581.86
			SS-95	BUTTRESS	LSS	622.18
			S-95	LONG	LSS	549.89
			S-95	BUTTRESS	LSS	587.98
			CYS-95	LONG	LSS	604.30
			CYS-95	BUTTRESS	LSS	646.20
			C-95	LONG	API	636.86

PRICE IN EFFECT AT TIME OF SHIPMENT WILL APPLY

OCTG- 1

30

AFE No. 157

TOTAL FOR LINES	$	19630
TOTAL FOR VALVES	$	—
TOTAL FOR FITTINGS	$	1097 ✓
TOTAL FOR CONTRACT LABOR	$	4450 ✓
TOTAL	$	25167

Miscellaneous:	✓ % of $ 25,167		= $	503 ✓
Right-of-Way: Texas-NM 1212	94.161 rods @	$ 5 /rd	= $	50 473
Damages: Charlie Bettis 1561'	94.161 rods @	$ 5 /rd	= $	473
Supervision:	3 days @	$ 200 /day	= $	600
Sales Tax:	4 % of $ 29387		= $	1175 ✓
Engineering:	5 % of $ 37,210		= $	1177
Office Overhead:	6 %	$ 25,670	= $	1540

AFE No. 157 TOTAL $ 37,158

$ 37,160

Initials	Date
Prepared By	
Approved By	

B-D AFE 157

Line Loop

Jct. H-22-1 to Jct. N-15

~~[illegible]~~

ITEM	Est. Cost	August 1977	Sept. 1977	Oct 1977	Nov. 1977	
Lines	19630	—	15980 98			
Valves	—	—	—			
Fittings	1087	—	793 75	[illegible]		
Contract Labor	4450	328 55	[illegible]	255 13	1805 11	
Misc. & sales tax	1680	35 57	3 00	6 14		
R-O-W & Damages	996	—	—	1456 20	937 92	
Supv. & Engr.	2777	35 38	[illegible]	156 88	228 22	
CCH	1540	62 26	[illegible]	62 57		
	32160	461 66	19716 17	2039 26	2971 25	

DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

B-934

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work: DRILL [ ] DEEPEN [X] PLUG BACK [ ]

b. Type of Well: OIL WELL [X] GAS WELL [ ] OTHER SINGLE ZONE [X] MULTIPLE ZONE [ ]

8. Farm or Lease Name: State "C"

9. Well No.: 1

2. Name of Operator: Zia Energy, Inc.

3. Address of Operator: P. O. Box 603, Hobbs, NM 88240

4. Location of Well: UNIT LETTER F LOCATED 1981.5 FEET FROM THE West LINE AND 1980 FEET FROM THE North LINE OF SEC. 17 TWP. 22S RGE. 37E NMPM

12. County: Lea

3405' GR	Blanket on file		10/29/79

19. Proposed Depth: 3925' | 20. Formation: San Andres | 21. Rotary or C.T.: Reverse Circu t

23. PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
3 3/4" reamed to 6 1/4"	4 1/2"	11.60#	3925'	100	

1. Rig up well servicing unit and reverse circulation equipment.
2. Pull 2 3/8" tubing and rods. Run 2 7/8" tubing, drill collars & bit.
3. Mix mud and circulate hole.
4. Drill 4 3/4" hole from 3542' to 3925'.
5. Log, DST, test as necessary to evaluate.
6. Ream 4 3/4" hole to 6 1/4".
7. Run 500' - 4½" OD 11.60 FJ liner. Cement using 100 sacks.
8. Perforate, treat and evaluate San Andres.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed [signature] Title Engineer Date 10/23/79

(This space for State Use)

APPROVED BY [signature] TITLE SUPERVISOR DISTRICT I DATE OCT 25 1979

CONDITIONS OF APPROVAL, IF ANY:

36

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
Zia Energy, Inc.	State "C" B-934	1

Unit Letter	Section	Township	Range	County
F	17	22 South	37 East	Lea

Actual Footage Location of Well:
1981.5 feet from the S West line and 1980 feet from the North line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3405'	San Andres	Undesignated	40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

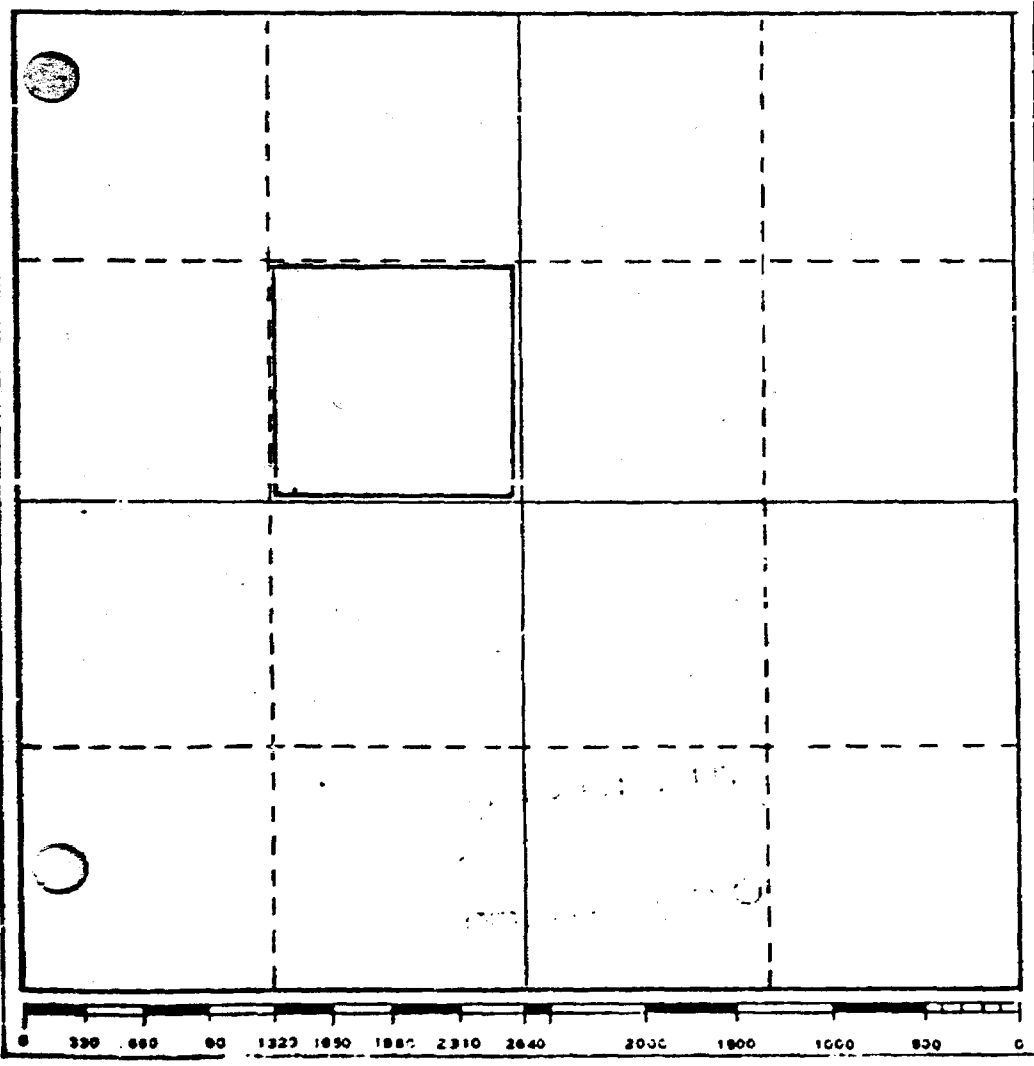
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name: M. T. Nelson

Position: Engineer

Company: Zia Energy, Inc.

Date: 10/24/79

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

Certificate No.

37

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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OPERATOR		

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-78

5a. Indicate Type of Lease: State [X] Fee [ ]

5. State Oil & Gas Lease No.: B-934

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL [X] GAS WELL [ ] OTHER-

7. Unit Agreement Name:

2. Name of Operator: ZIA ENERGY, INC.

8. Farm or Lease Name: State "C"

3. Address of Operator: P. O. Box 603, Hobbs, NM 88240

9. Well No.: 1

4. Location of Well: UNIT LETTER F, 1981.5 FEET FROM THE West LINE AND 1980 FEET FROM THE North LINE, SECTION 17, TOWNSHIP 22 S, RANGE 37 E, NMPM.

10. Field and Pool, or Wildcat: San Andres Wildcat

15. Elevation (Show whether DF, RT, GR, etc.): 3405' GR

12. County: Lea

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK [ ]	PLUG AND ABANDON [ ]	REMEDIAL WORK [ ]	ALTERING CASING [ ]
TEMPORARILY ABANDON [ ]		COMMENCE DRILLING OPNS. [ ]	PLUG AND ABANDONMENT [ ]
PULL OR ALTER CASING [ ]	CHANGE PLANS [ ]	CASING TEST AND CEMENT JOB [ ]	
OTHER [ ]		OTHER Deepen & set liner [ ]	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

1. Rig up pulling unit. Pulled tubing and rods 10/25/79.
2. Rig up reverse circulation equipment & commence deepening using 4 3/4" bit. Deepened from 3542' to 3929'. Attempted to ream; reamer failed. Ran GR-CNL log.
3. Ran 525' of 4" OD 12.5# FJ liner. Cemented using 70 sacks Class "C" cement. Reversed out 15 sacks cement. SI 11/17/79.
4. Tested liner top to 1500# on 11/19/79.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED M. D. Nelson TITLE Engineer DATE 2/29/80

APPROVED BY Orig. Signed by Jerry Sexton TITLE DATE MAR 6 1980

CONDITIONS OF APPROVAL, IF ANY:

38

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

Form C-104
Revised 10-1-78

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

Operator
ZIA ENERGY, INC.

Address
P. O. Box 603, Hobbs, NM 88240

Reason(s) for filing (Check proper box)
New Well [ ]
Recompletion [X]
Change in Ownership [ ]
Change in Transporter of: Oil [ ] Dry Gas [ ] Casinghead Gas [ ] Condensate [ ]
Other (Please explain)

If change of ownership give name and address of previous owner

DESCRIPTION OF WELL AND LEASE

Lease Name	Well No.	Pool Name, Including Formation	Kind of Lease (State, Federal or Fee)	Lease No.
State "C"	1	San Andres Wildcat	State	B-934

Location
Unit Letter F : 1981.5 Feet From The West Line and 1980 Feet From The North
Line of Section 17 Township 22 S Range 37 E NMPM Lea

DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil [X] or Condensate [ ]
Navajo Crude Oil Purchasing
Address (Give address to which approved copy of this form is to be sent)
P. O. Drawer 159, Artesia, NM 88210

Name of Authorized Transporter of Casinghead Gas [X] or Dry Gas [ ]
El Paso Natural Gas Company
Address (Give address to which approved copy of this form is to be sent)
P. O. Box 1492, El Paso, TX 79978

If well produces oil or liquids, give location of tanks.	Unit	Sec.	Twp.	Rge.	Is gas actually connected?	When
	F	17	22 S	37 E	Yes	10/10/79

If this production is commingled with that from any other lease or pool, give commingling order number:

COMPLETION DATA

Designate Type of Completion – (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'v.	Diff. Res'v.
					X			X

Date Spudded	Date Compl. Ready to Prod.	Total Depth	P.B.T.D.
10/25/79	1/23/80	3929'	3856'

Elevations (DF, RKB, RT, GR, etc.)	Name of Producing Formation	Top Oil/Gas Pay	Tubing Depth
3405' GR	San Andres	3830'	3650'

Perforations	Depth Casing Shoe
3830'-2 JS, 3834'-2 JS	3929'

TUBING, CASING, AND CEMENTING RECORD

HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT
	8 5/8"	315'	210
	5 1/2"	3435'	300
	4" OD liner	3400'-3929'	70

TEST DATA AND REQUEST FOR ALLOWABLE

(Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

OIL WELL

Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
1/23/80	2/27/80	Flow	
Length of Test	**Tubing Pressure**	**Casing Pressure**	**Choke Size**
24	120#	Packer	32/64"
Actual Prod. During Test	**Oil-Bbls.**	**Water-Bbls.**	**Gas-MCF**
389	0	301	283

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GAS WELL

Actual Prod. Test-MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
Method (pitot, back pr.)	Tubing Pressure (Shut-in)	Casing Pressure (Shut-in)	Choke Size

CATE OF COMPLIANCE

ify that the rules and regulations of the Oil Conservation e been complied with and that the information given and complete to the best of my knowledge and belief.

d Nelson
(Signature)
er
(Title)
(Date)

OIL CONSERVATION DIVISION

APPROVED _____, 19__
BY _____
TITLE SUPERVISOR DISTRICT II

This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.

Separate Forms C-104 must be filed for each pool in multiply completed wells.

STATE OF NEW MEXICO
ENERGY and MINERALS DEPARTMENT

Form C-104
Revised 10-1-78

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

Operator
ZIA ENERGY, INC.

Address
P. O. Box 603, Hobbs, NM 88240

Reason(s) for filing (Check proper box)
New Well [ ]
Recompletion [X]
Change in Ownership [ ]
Change in Transporter of: Oil [ ] Dry Gas [ ] Casinghead Gas [ ] Condensate [ ]
Other (Please explain)

If change of ownership give name and address of previous owner

DESCRIPTION OF WELL AND LEASE

Lease Name	Well No.	Pool Name, Including Formation	Kind of Lease	Lease No.
State "C"	1	San Andres Wildcat	State, Federal or Fee State	B-934

Location
Unit Letter F, 1981.5 Feet From The West Line and 1980 Feet From The North
Line of Section 17 Township 22 S Range 37 E NMPM, Lea County

DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil [X] or Condensate [ ]	Address (Give address to which approved copy of this form is to be sent)
Navajo Crude Oil Purchasing	P. O. Drawer 159, Artesia, NM 88210
Name of Authorized Transporter of Casinghead Gas [X] or Dry Gas [ ]	Address (Give address to which approved copy of this form is to be sent)
El Paso Natural Gas Company	P. O. Box 1492, El Paso, TX 79978

If well produces oil or liquids, give location of tanks.	Unit	Sec.	Twp.	Rge.	Is gas actually connected?	When
	F	17	22 S	37 E	Yes	10/10/79

If this production is commingled with that from any other lease or pool, give commingling order number:

COMPLETION DATA

Designate Type of Completion – (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Restv.	Diff. Restv.
					X			X

Date Spudded	Date Compl. Ready to Prod.	Total Depth	P.B.T.D.
10/25/79	1/23/80	3929'	3856'
Elevations (DF, RKB, RT, GR, etc.)	**Name of Producing Formation**	**Top Oil/Gas Pay**	**Tubing Depth**
3405' GR	San Andres	3830'	3650'
Perforations			**Depth Casing Shoe**
3830'-2 JS, 3834'-2 JS			3929'

TUBING, CASING, AND CEMENTING RECORD

HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT
	8 5/8"	315'	210
	5 1/2"	3435'	300
	4" OD liner	3400'-3929'	70

TEST DATA AND REQUEST FOR ALLOWABLE (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

OIL WELL

Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
1/23/80	2/27/80	Flow	
Length of Test	**Tubing Pressure**	**Casing Pressure**	**Choke Size**
24	120#	Packer	32/64"
Actual Prod. During Test	**Oil-Bbls.**	**Water-Bbls.**	**Gas-MCF**
389	8	381	283

39

GAS WELL

Actual Prod. Test-MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
Testing Method (pitot, back pr.)	**Tubing Pressure (Shut-in)**	**Casing Pressure (Shut-in)**	**Choke Size**

CERTIFICATE OF COMPLIANCE

I certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

M J Nelson
(Signature)

Engineer
(Title)

2/29/80
(Date)

OIL CONSERVATION DIVISION

APPROVED _____, 19__

BY _____

TITLE SUPERVISOR DISTRICT II

This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.

Separate Forms C-104 must be filed for each pool in multiply completed wells.

Form C-105

ENERGY AND MINERALS DEPARTMENT

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OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease: State [X] Fee [ ]

5b. State Oil & Gas Lease No.: B-934

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] OTHER

b. TYPE OF COMPLETION: NEW WELL [ ] WORK OVER [ ] DEEPEN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] OTHER

7. Unit Agreement Name:

8. Farm or Lease Name: State "C"

2. Name of Operator: ZIA ENERGY, INC.

9. Well No.: 1

3. Address of Operator: P. O. Box 603, Hobbs, NM 88240

10. Field and Pool, or Wildcat: San Andres Wildcat

4. Location of Well: UNIT LETTER F LOCATED 1981.5 FEET FROM THE West LINE AND 1980 FEET FROM THE North LINE OF SEC. 17 TWP. 22 S RGE. 37 E NMPM

12. County: Lea

15. Date Spudded	16. Date T.D. Reached	17. Date Compl. (Ready to Prod.)	18. Elevations (DF, RKB, RT, GR, etc.)	19. Elev. Casinghead
10/25/79	11/7/79	1/23/80	3405' GR	3405'

20. Total Depth	21. Plug Back T.D.	22. If Multiple Compl., How Many	23. Intervals Drilled By	Rotary Tools	Cable Tools
3929'	3856'				

24. Producing Interval(s), of this completion — Top, Bottom, Name

25. Was Directional Survey Made: No

26. Type Electric and Other Logs Run: GR - CNL

27. Was Well Cored: No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"		315'		210 sx	
5 1/2"	15.5#	3435'		300 sx	

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN
4"	3400'	3929'	70	none

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2 3/8"	3650'	3650'

31. Perforation Record (Interval, size and number)

3830' - 2 JS (.375")
3834' - 2 JS (.375")

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
3830'-34'	1000 gal. 15% HCL
	4500 gal. 20% HCL

33. PRODUCTION

Date First Production	Production Method (Flowing, gas lift, pumping — Size and type pump)	Well Status (Prod. or Shut-in)
1/23/80	Flowing	Prod.

Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil — Bbl.	Gas — MCF	Water — Bbl.	Gas — Oil Ratio
2/27/80	24	32/64"		8	283	381	35375

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil — Bbl.	Gas — MCF	Water — Bbl.	Oil Gravity — API (Corr.)
120	Pkr		8	283	381	35.4

34. Disposition of Gas (Sold, used for fuel, vented, etc.): Sold to El Paso Natural Gas Company

Test Witnessed By:

35. List of Attachments: GR - CNL

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED M. T. Nelson TITLE Engineer DATE 2/29/80

40

CASE NO. 6861

Application of Zia Energy, Inc. for pool creation, special pool rules, and an NGPA determination, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new San Andres oil pool for its State "C" Well No. 1 located in Unit F of Section 17, Township 22 South, Range 37 East, and special rules therefor, including a provision for a limiting gas-oil ratio of 10,000 to 1. Applicant further seeks a new onshore reservoir determination for said State "C" Well No. 1.

P. O. BOX 608

PHONE (505) 393-2907

ZIA ENERGY, INC.
HOBBS, NEW MEXICO 88240

May 2, 1980

Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87501

Re: Case No. 6861

Gentlemen:

Case No. 6861 is an Application by Zia Energy, Inc. for pool creation, special pool rules and an NGPA determination. Zia Energy seeks the creation of a new San Andres oil pool for its State "C" Well No. 1 located in Unit F of Section 17, Township 22 South, Range 37 East, and special rules therefor, including a provision for a limiting gas-oil ratio of 10,000 to 1. Zia Energy further seeks a New Onshore Reservoir determination for said State "C" Well No. 1 in Lea County, New Mexico.

In support of this application, several exhibits have been prepared and are hereby offered for your consideration.

A map section has been prepared to show the existing San Andres pools which are nearest to the proposed new San Andres pool for the State "C" Well No. 1. You will note from this map that the closest well producing from the San Andres is the Gulf Oil Company Eaves No. 4 in Unit H, Sec. 10, T22S, R37E. The Gulf Eaves No. 4 is 2 3/4 miles northeast from the Zia Energy State "C" No. 1. This well, along with several other wells in Sections No.s 2, 11, and 14, is producing in the Eunice San Andres-South pool. Two other wells, the Mobil Carson No. 23-G in Section 33, T21S, R37E, and the Amoco Owens "B" No. 1-L in Section 34, T21S, R37E, have produced from the Eunice San Andres pool, located northward.

This map section also locates several other wells in the area of interest which have been tested in the San Andres and determined to be non-commercial at the time of testing. Included as non-commercial are Gulf Oil Company South Penrose Skelly Unit No. 220-N (5-22-37) and No. 262-P (8-22-37), Millard Deck Patsy "B" No. 1-C (20-22-37), Anadarko Production Company E. W. Walden No. 11-M (15-22-37), Rowan Drlg. Elliott No. 1-K (17-22-37), and Zia Energy, Inc. Federal No. 1-K (17-22-37).

A contour map and a cross-section of the area of interest is presented. The cross-section commences at the Gulf SPSU No. 262-P (8-22-37) and progresses

southward through the State "C" No. 1 to the Millard Deck Patsy "B" No. 1-C (20-22-37). It will be noted from the contour map and the cross-section that the State "C" No. 1 is only slightly higher structurally than the other wells. Another well, the Anadarko Walden No. 11-M (15-22-37), which is located east and south of the State "C", is structurally lower.

From the map section and the contour map and cross-section, it is apparent that the State "C" No. 1 is isolated from other San Andres pools by non-commercial wells to the north, to the south, and to the east. There is no San Andres pool to the west and no San Andres tests have been conducted, of which we are aware.

Experience, and the information that we have, indicates that structural position has less to do with whether a well is a commercial or non-commercial producer than porosity and water saturation. Another factor that is most important in determining whether a well is commercial or not is the price to be received for the oil and gas production. San Andres production in this area can be expected to produce large volumes of water. Therefore, salt water disposal cost and price for oil and gas can determine whether a well is commercial or non-commercial.

In order to further support that this is a new San Andres pool, we present DST bottom hole pressure information, gas analysis data, and oil gravity comparisons. Enclosed is a DST on the State "C" No. 1 which indicated a bottom hole pressure of 1336 psi. A well data sheet on the Gulf Oil Company SPSU No. 262 reports DST results taken in the Queen, Grayburg, and San Andres formations. BHP in the Queen was reported as 414 psi, in the Grayburg the BHP was 810 psi, and the San Andres 1316 psi. Bottom hole pressures in excess of 1300 psi would certainly indicate the San Andres has not previously been produced in this area.

A gas analysis of the gas produced from the Queen formation and the gas produced from the San Andres in the State "C" No. 1 indicates a significant difference in BTU content. Also, a significant difference is noted in the gravity of the oil produced from the San Andres in the State "C" No. 1 and the oil produced from the Queen and the Grayburg formations. This evidence is presented to support that this is San Andres production.

A gas-oil ratio test is submitted that indicates the State "C" No. 1 is currently producing with a GOR of 24,250 to 1. The regular GOR rule would restrict gas production to 160 MCF per day while the well is currently producing 291 MCF per day. Since the well is producing 341 barrels of water per day, it would not be possible to restrict gas production to only 160 MCF. This will make it necessary that special GOR rules be adopted for the pool allowing a 10,000 to 1 GOR.

The Oil Conservation Division is further requested to make a determination that this San Andres well is in a New Onshore Reservoir as defined in NGPA Section

102(c)(1)(C). Section 102(c)(1)(C) of the NGPA applies to gas produced from New Onshore Re-ervoirs which are generally defined as onshore reservoirs from which natural gas was not produced in commercial quantities before April 20, 1977. Under the Behind-the-Pipe Exclusion, if an old well penetrated the subject reservoir and produced oil or gas in commercial quantities from any formation prior to April 20, 1977, the penetrated reservoir is disqualified if gas from that subject reservoir "could have been produced in commercial quantities" through such old well prior to April 20, 1977.

Federal Energy Regulatory Commission Order No. 42 originally only specified a physical capability test, meaning "could have been produced" and it ignored the later part of the test for determining the status of the Behind-the-Pipe Exclusion. This later part included the words "in commercial quantities."

FERC Order No. 42-A, issued November 29, 1979, sought to more clearly implement the intent of Congress. It was the wish of Congress to encourage the production of previously non-commercial reserves by allowing an incentive price, but Congress also wished to deny this incentive price to production withheld from the market place for purposes of price speculation. Therefore, FERC adopted regulations to implement the Behind-the-Pipe Exclusion to achieve both of these purposes.

In this case we have shown that the San Andres formation is a new field. But, in order for wells producing in this new field to qualify for Section 102 (New Onshore Reservoir) gas pricing category, we must satisfy FERC regulations concerning the Behind-the-Pipe Exclusion. In summary, the regulations state that any well which penetrated the subject reservoir prior to April 20, 1977 can be a potentially disqualifying well unless it can be shown, using an economic test outlined in Order No. 42-A, that the subject reserves from the subject reservoir "could not have been produced in commercial quantities" before April 20, 1977, through the potentially disqualifying well by perforating and recompleting in the subject reservoir. This economic test is outlined in detail in Order No. 42-A. The key components of this test are estimates of reserves, costs and the market place of the gas. The following formula is to be used in applying the economic test: (market price available as of April 20, 1977 x reserves net of royalty producible from the subject reservoir through the recompleted potentially disqualifying wells) - (incremental operating expenses) + (1.6 x incremental capital costs). If the result is negative, then the Behind-the-Pipe Exclusion does not apply.

In order to supply the information required by the economic test, we submit a reserves estimate prepared by Natural Resources Evaluation and Engineering, Inc. wherein they estimate ultimate recovery from the sample potentially disqualifying well to be 13,406 barrels of oil and 328,500 MCF of gas. Capital

costs for recompleting and operating costs, for the sample potentially disqualifying well, were collected from numerous sources and are summarized in Exhibit No. ____. All prices for material and labor are those in effect in April 1977, and these were obtained through CE-Natco, Mid-Continent Supply, Pumping Units Services, Cooper Energy Services, Hobbs Repair Services, Lone Star Steel Co., Agua, Inc., B. F. Walker, The Western Company, Packer Sales and Rental, and Dresser-Atlas. The formula outlined by FERC Order No. 42-A allowed 1.6 x incremental capital costs plus incremental operating expenses. The total for both of these is $452,853. The market price of the reserves is shown in Exhibit No. ____ to be $298,765. The market price used for oil and gas was the price being paid in April 1977 by Shell and Getty for oil and gas of similar quality two locations away on our Christmas lease. The royalty rate was assumed to be 12½ per cent. The tax rate used was the rate which applied to oil and gas in 1977.

Using the information from these exhibits and the formula adopted by FERC in Order No. 42-A we are able to show that a negative value of $154,088 is obtained and, therefore, the Behind-the-Pipe Exclusion in Section 102(c)(1)(C)(ii) of the NGPA does not apply to the potentially disqualifying wells and, furthermore, this new San Andres reservoir will qualify for Section 102 gas pricing category.

In summary, we have shown that the State "C" No. 1 San Andres production is 2 3/4 miles from the closest well producing from the San Andres formation. From the map that is presented, it is apparent that non-commercial San Andres tests are located north, south, and east of the State "C" No. 1, separating it from both the Eunice San Andres and the Eunice San Andres-South pools. Bottom hole pressure data obtained by DST surveys indicate more than 1300 psi, which indicates that this is original BHP and that the San Andres has not been produced in this area. Then, gas analysis and oil gravity information was presented to confirm that this is San Andres production. Finally, at the time that earlier non-commercial tests in the San Andres were made, the price of oil and gas was approximately $13.03 per barrel and $0.62 per MCF, respectively. Considering the large volume of water to be handled, these earlier tests were non-commercial. An operator can expect to produce the San Andres at a profit now, provided he can sell the oil and gas at the prices specified for new offshore reservoirs and provided that a special GOR rule will make it possible to produce the well without any restriction imposed by limiting GORs.

Then, in summary concerning the economic test required by FERC Order No. 42-A, we have supplied an Exhibit No. ____ listing 40 potentially disqualifying wells due to the Behind-the-Pipe Exclusion in Section 102(c)(1)(C)(ii) of the NGPA. Electrical log sections from several of these wells are presented to indicate the relative uniform character of the San Andres formation throughout this proposed new field. Exhibit Nos. ____ and ____ were presented to show by the economic

test prescribed by FERC Order No. 42-A that the Behind-the-Pipe Exclusion did not apply.

The Oil Conservation Division is requested to establish a new San Andres pool with a special rule for GOR limiting it to a 10,000 to 1 ratio. The Division is further requested to make a determination that this is a new onshore reservoir and that this and all future wells completed in this New Onshore Reservoir will be eligible for the NGPA Section 102 gas pricing category.

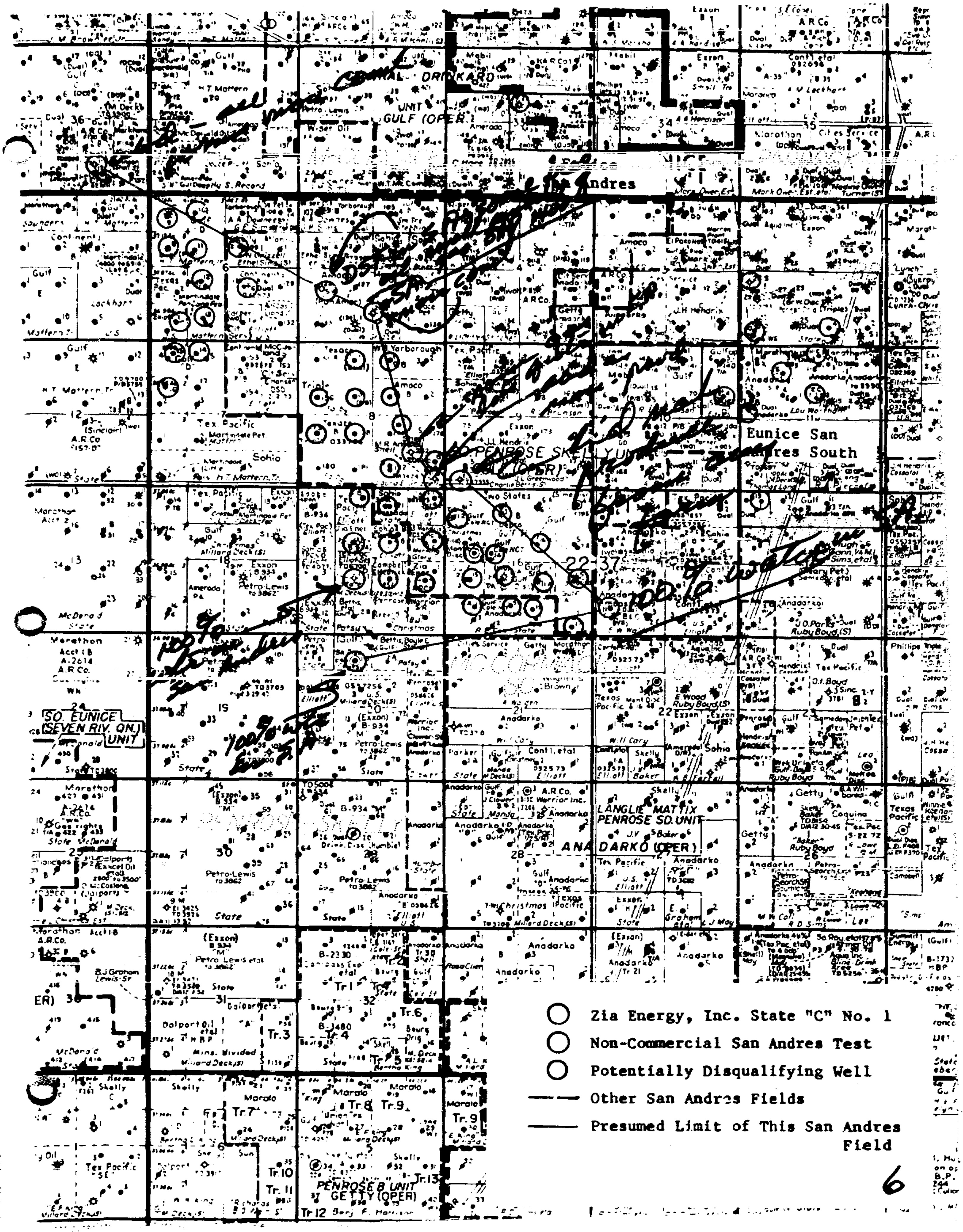
By approving these requests the Oil Conservation Division will be promoting conservation, protecting correlative rights, and providing incentive for the production of oil and gas that would not be otherwise produced for consumption by energy hungry consumers.

Yours very truly,

ZIA ENERGY, INC.

M. F. Nelson

M. F. Nelson



Eunice San Andres South
DRINKARD UNIT GULF (OPER.)
SO. EUNICE (SEVEN RIV. QN.) UNIT
LANGLIE MATTIX PENROSE SD. UNIT
ANADARKO (OPER.)
PENROSE B UNIT GETTY (OPER)
Zia Energy, Inc. State "C" No. 1
Non-Commercial San Andres Test
Potentially Disqualifying Well
Other San Andres Fields
Presumed Limit of This San Andres Field

WELL DATA SHEET

Company: Zia Energy, Inc.
Lease: State "C" Well No. 1
Field: Undesignated San Andres
Unit Letter F Sec. 17, T 22 S, R 37 E

Lea County, New Mexico

Date Completed 1/23/80 Total Depth 3929' Elevation 3405' GR

Intermediate Casing: Size 8 5/8" Depth 315' Cement 210 sx

Production Casing: Size 5 1/2" Depth 3435' Cement 300 sx

Perforation: 3830'-34' Open Hole: _____

Formation Tops: TA _____ TS _____ BS _____ TY _____

T7R _____ TQu _____ TGb _____

Stimulation: _____

Initial Potential: BOPD 12 BWPD 341 MCF/D 291

Cumulative Production to _____: BO _____ MCF _____

Remarks: 10/25/79: Deepened from 3542' to 3929'. Ran DST 3860'-TD, closed in BHP 1334 psi. Ran CNL-GR logs. Ran 525' 4" OD 12.5# FJ liner. Cmtd using 70 sx Cl "C" cmt. Rev. out 15 sx. Perf 3 JS at 3864'. Trt w/100 GA. Swb 100% wtr. Set cmt ret at 3856'. Sqzd perfs with 10 sx cmt, rev. out 150 sx. Perf 2 JS at 3830' & 2 JS at 3834'. Trt perfs w/1000 GA. Stimulate w/5000 GGBW frac pad & 4500 G of 20% HCL. Production test 3/10/80 12 BO w/341 BWPD & 291 MCF/day of gas.

should be 1336 psi

7

WELL DATA SHEET

Company: Anadarko Production Company
Lease: E. W. Walden Well No. 11
Field: Penrose-Skelly
Unit Letter M Sec. 15, T 22 S, R 37 E

Lea County, New Mexico

Date Completed 2/3/74 Total Depth 4600' Elevation 3408' RKP

Intermediate Casing: Size 8 5/8" Depth 351' Cement 150 sx

Production Casing: Size 5 1/2" Depth 4600' Cement 315 sx

Perforation: See below Open Hole:

Formation Tops: TA 1124' TS 1220' BS 2418' TY 2563'
T7R 2782' TQu 3336' TGb 3650' TSA 3905'

Stimulation: See below

Initial Potential: BOPD 160 BWPD 275 MCF/D 350

Cumulative Production to _____: BO _____ MCF _____

Remarks:

1/6/74 Perf 4307-12', 4419-22', 4500-05', 4524-28'. Breakdown perfs w/500 GA 15% reg. Treat w/3000 gals 20% acid. Swab 100% sulfur water. Set retainer at 4000' and squeezed w/400 sks cmt. Drld out to 4260'.

1/15/74 Perf 4207-12', 4222-26'. Breakdown perfs w/500 GA 15% reg. Swab tested 100% sulfur with fluid level @ 2000'. Set retainer @ 4161' and squeezed w/275 sks.

1/17/74 Perf 4070-79', 4094-98', 4121-28'. Breakdown perfs w/250 GA 15% reg. Swab tested 100% sulfur water. Set retainer @ 4058'. Squeezed w/11 sks cmt.

1/22/74 Perf 3944-50', 3975-78', 3988-93', 4002-05', 4012-16'. Breakdown perfs w/1000 GA 15% reg. Swab tested 100% sulfur water. Set retainer @ 3930'. Squeezed w/150 sks cmt.

1/25/74 Perf w/1 JS @ each 3735', 3753', 3778', 3780', 3791', 3797', 3801', 3804', 3839', 3857', 3867', 3871', 3876' & 3885'. Breakdown perfs w/700 GA 15% reg. & 12 ball sealers. Fracture treat using 60,000 gals 9# gelled brine and 62,000# sand in 3 stages.

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WELL DATA SHEET

Company: Millard Deck
Lease: Patsy "B" Well No. 1
Field: Langlie Mattix
Unit Letter C Sec. 20, T 22 S, R 37 E

Lea County, New Mexico

Date Completed 7/28/71 Total Depth 4412' Elevation 3378' RKB

Intermediate Casing: Size 8 5/8" Depth 300' Cement 250 sx

Production Casing: Size 5 1/2" Depth 4225' Cement 500 sx

Perforation: See below Open Hole:

Formation Tops: TA 1020' TS 1070' BS 2400' TY 2605'
T7R 2810' TOu 3315' TGb 3608' TSA 3845'

Stimulation: See below

Initial Potential: BOPD 90 BWPD 75 MCF/D 289

Cumulative Production to _____: BO _____ MCF _____

Remarks:
6/28/71: TD 305'; Prep drill
7/6/71: Drlg. 4304'
7/13/71: TD 4412'; WOC
Lost Circ @ 4408'
7/19/71: TD 4412'; PBD 4225'; WO Comp
8/9/71: TD 4412'; PBD 3800'; Tstg
Perf 4053'93' w/8 shots (overall)
Acid (4054'93') 1000 gals
Swbd wtr (4054-93')
Sqzd 4053-93'w/100 sx
Perf 3973-95' w/5 shots (overall)
Acid (3973-95') 2000 gals
Swbd wtr (3973-95')
BP @ 3800'

WELL DATA SHEET

Company: Gulf Oil Company
Lease: South Penrose Skelly Unit Well No. 262
Field: Penrose Skelly
Unit Letter P Sec. 8, T 22 S, R 37 E

Lea County, New Mexico

Date Completed 9/26/75 Total Depth 3900' Elevation 3407' GR

Intermediate Casing: Size 8 5/8" Depth 1182' Cement 600 sx

Production Casing: Size 5 1/2" Depth 3900' Cement 475 sx

Perforation: See below Open Hole: _____

Formation Tops: TA 1122' TS _____ BS _____ TY 2560'

T7R 2815' TQu 3320' TGb 3590' TSA 3816'

Stimulation: See below

Initial Potential: BOPD _____ BWPD _____ MCF/D _____

Cumulative Production to _____: BO _____ MCF _____

Remarks: Comp Info: Cored (Queen) 3416-76, rec 60', no desc; Cored (Queen) 3476-3536', rec 60', no desc; Cored (Queen 3536-45', rec 8', no desc; Cored (Queen) 3545-90', rec 44', no desc; DST (Queen) 3419-3590', op 2 hrs, rec 390' DM, ISIP 414#/2 hrs, FP 150-196#, FSIP 379#/2 hrs, HP 1741-1729#; Cored (Grayb 3590-3650', rec 60', no desc; Cored (Grayb) 3650-3710', rec 60', no desc; Cored (Grayb) 3710-70', rec 60', no desc; Cored (Grayb) 3770-3800', rec 30', no desc; DST (Grayb) 3590-3800', op 2 hrs, rec 210' mud + 450' sulf wtr, ISIP 810#/2 hrs, FP 400-442#, FSIP 589#/2 hrs, HP 2036#, BHT 88 deg. Cored (San And) 3800-60', rec 60', no desc; Cored (San And) 3860-3900', rec 40', no desc; DST (San And) 3860-3900', op 1 hr 30 mins, GTS/28 mins @ TSTM, rec 2860' gulf wtr, ISIP 1316#/1 hr, FP 826-1121#, FSIP 1316#/2 hrs, HP 2041-2041#, BHT 88 deg. Perf (Grayb) 3780-82', 3789-91', 3800-02' w/4 SPF; A/200 gals; S/16 BW/tr oil/8 hrs & S/dry; Perf (Grayb) 3698-3708' w/2 SPF; A/300 gals; S/5 BW/tr oil/6 hrs & S/dry; Perf (Grayb) 3663-67' w/2 SPF; A/1000 gals; S/ BL W/10 hrs & S/dry; A/750 gals; S/4 BLS w/tr oil/3 hrs & S/dry; C/Cactus Drlg.

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WELL DATA SHEET

Company: Gulf Oil Corporation
Lease: Eaves **Well No.** 4
Field: Eunice San Andres - South
Unit Letter H Sec. 10, T 22 S, R 37 E

Lea County, New Mexico

Date Completed 5/16/72 Total Depth 5192' Elevation _____

Intermediate Casing: Size 9 5/8" Depth 2850' Cement 1300 sx

Production Casing: Size 7" Depth 5182' Cement 500 sx

Perforation: See below Open Hole: _____

Formation Tops: TA _____ TS _____ BS _____ TY _____

T7R _____ TQu _____ TGb _____

Stimulation: See below

Initial Potential: BOPD 42 BWPD 8 MCF/D _____

Cumulative Production to _____: BO _____ MCF _____

Remarks: F.R.C. 6/10/72; Opr's Elev. 3375' GL
PD 4162' WO (San Andres)
(Orig. comp 1/16/47 thru Glorieta) Perfs 5050-5115'
OTD 5182'; OPB 5118')

6/5/72 TD 5182'; PBD 4162'; COMPLETE
PB to 4993'
Perf 4018-20', 4046-48', 4084-86', 4103-05',
4200-02' w/2 SPF
Acid (4018-4202') 4000 gals (15% NE)
Non-Commercial (4018-4202')
Acid (4018-4202') 2500 gals (15% NE)
Non-Commercial (4018-4202')
PB to 4162'
Perf 4136-38' w/2 SPF

//

NEW-TEX LAB
P. O. BOX 1161
HOBBS, N.M. 88240

No. 2300
Run No.
Date of Run 3-10-80
Date Secured 3-10-80

CERTIFICATE OF ANALYSIS

A Sample of Zia State C #1
Secured from Zia Energy
At Box 603 Secured by
Hobbs, NM 88240 Time Date
Sampling conditions Press
Temp.

FRACTIONAL ANALYSIS

	Percentage Composition MOL %	LIQ. %	G.P.M.
.....			
.....			
.....			
Carbon Dioxide	10.445		
Air			
Nitrogen	2.309		
Oxygen			
Hydrogen sulfide			
Hydrogen			
Methane	76.838		
Ethane	4.325		1.153
Propane	3.529		.972
Butanes			
Iso-Butane	.492		.161
N-Butane	1.110		.349
Pentanes			
iso-Pentane	.426		.156
N-Pentane	.307		.111
Hexanes	.155		.064
Heptanes ..... Plus	.064		.027
Octanes			
TOTAL	100.000		2.993

Calc. Sp. Gr.— 0.7623
Calc. A.P.I.—
Calc. Vapor Press.— PSIA
Sp. Gr.
Mol. Wt. 22.10

LIQUID CONTENT (GAL./MCF)

Propane Calc. G.P.M.	.972
Butanes Calc. G.P.M.	.510
Pentanes Plus. G.P.M.	.358
Ethane Calc. G.P.M.	1.153
____ RVP Gasoline G.P.M.	

B.T.U./Cu. Ft. @ 14.696 P.S.I.A.

Dry Basis	1034
Wet Basis	1016

Sulfur Analysis by Titration Gr./100 Cu. Ft.

Hydrogen Sulfide	135 Gr H_2S/100 SCF
Mercaptans	2133 PPM
Sulfides	0.2133 Mol%
Residual Sulfur	
Total Sulfur	

Run by Deane Simpson Checked by Approved by Deane Simpson

Additional Data and Remarks

H_2S run on location-Mol% H_2S not included in Gas Analysis Mol%.

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EL PASO NATURAL GAS COMPANY

RPT-ASL 83 CHROMATOGRAPHIC GAS ANALYSIS REPORT

RPT DATE 10 29 79 METER STA 68119
ANAL DATE 10 16 79 METER STATION NAME OPER 9887
STATE C #1

TYPE CODE	SAMPLE DATE	EFF. DATE	USE MOS.	SCALE	H2S GRAINS	LOCATION
42	10 09 79	10 29 79	01		0000*	1 M 13

	NORMAL MOL%	GPM
C O 2	00.00	0.000
H 2 S	00.00*	0.000
N2	02.11	0.000
METHANE	80.74	0.000
ETHANE	09.32	2.491
PROPANE	04.83	1.329
ISO-BUTANE	00.31	0.101
NORM-BUTANE	01.48	0.466
ISO-PENTANE	00.29	0.106
NORM-PENTANE	00.43	0.156
HEXANE PLUS	00.49	0.214
TOTALS	100.00	4.863

SPECIFIC GRAVITY 0.710

MIXTURE HEATING VALUE
(BTU/CF @ 14.73 PSIA,60 DEGREES,DRY) 1220

RATIO OF SPECIFIC HEATS 1.284

* NO TEST SECURED FOR DETERMINATION H2S CONTENT.

11-48 BAXS
REV. 9-1-64

NAVAJO CRUDE OIL PURCHASING CO.
RUN TICKET

OPERATOR: ZIA Energy

LEASE NAME: ST. C

MO.	DAY	YEAR	DISTRICT NO.	TICKET NO.
3	12	80	#15	738

TANK NO.: 1498-3 | LEASE NO.: 8987

OFFICE CODES:

TANK SIZE: 15' 210

GAUGE	FT.	IN.	½ IN.
HEIGHT OF CONNECTION	1	0	0/4
B. S. & W. LEVEL 1ST.	0	0	0/4
B. S. & W. LEVEL 2ND.	0	0	0/4

GAUGE	OIL LEVEL FT.	IN.	½ IN.	TEMP.
1ST.	13	11	3/4	68
2ND.	1	3	3/4	68

OBSERVED QTY. & TEMP.: 31.0 66 | TRUE QTY.: 30.6

POWER / TRUCK: B. S. & W. 3/10 %

CALCULATIONS

OIL MOVED BY PUMP ☐ GRAVITY ☐ TRUCK ☒ | TO (NAME OF LINE OR STATION): BRB | CODE:

POWER FURNISHED BY OR TRUCKED BY PLCO. ☐ OTHER ☐ | CODE:

TURNED ON
GAUGER: Jim Gooch | TIME: 1110 AM | OFF SEAL:

OPERATOR'S WITNESS (OR WAIVER NO.):

SHUT OFF
GAUGER: Jim Gooch | TIME: 1220 AM | DATE: 3/12 | ON SEAL:

OPERATOR'S WITNESS (OR WAIVER NO.):

REMARKS

This ticket covers all claims for allowance. The oil represented by this ticket was received and run as the property of Navajo Crude Oil Purchasing Company.

11-48 BAXS
REV. 9-1-64

NAVAJO CRUDE OIL PURCHASING CO.
RUN TICKET

OPERATOR: ZIA Energy

LEASE NAME: ST- C

MO.	DAY	YEAR	DISTRICT NO.	TICKET NO.
10	24	79	15	524

TANK NO.: 1499-1 | LEASE NO.: 8987

OFFICE CODES:

TANK SIZE: 15' 210

GAUGE	FT.	IN.	½ IN.
HEIGHT OF CONNECTION	1	0	0/4
B. S. & W. LEVEL 1ST.	0	0	0/4
B. S. & W. LEVEL 2ND.	0	0	0/4

GAUGE	OIL LEVEL FT.	IN.	½ IN.	TEMP.
1ST.	14	6	0/4	68
2ND.	1	6	3/4	68

OBSERVED QTY. & TEMP.: 35.6 66 | TRUE QTY.: 35.6

POWER / TRUCK X: B. S. & W. 3/10 %

CALCULATIONS

OIL MOVED BY PUMP ☐ GRAVITY ☐ TRUCK ☒ | TO (NAME OF LINE OR STATION): BRB | CODE: 58

POWER FURNISHED BY OR TRUCKED BY PLCO. ☐ OTHER ☐ | CODE:

TURNED ON
GAUGER: Jim Gooch | TIME: 155 | OFF SEAL:

OPERATOR'S WITNESS (OR WAIVER NO.):

SHUT OFF
GAUGER: Jim Gooch | TIME: 240 PM | DATE: 10/2 | ON SEAL:

OPERATOR'S WITNESS (OR WAIVER NO.):

REMARKS

This ticket covers all claims for allowance. The oil represented by this ticket was received and run as the property of Navajo Crude Oil Purchasing Company.

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FORM SP-266 REV. 7/1/68

SHELL PIPE LINE CORPORATION

OPERATOR OR FIELD LOCATION: Zia Energy, Inc. N-560

LEASE OR COMPANY NAME: Chrystman #0

DELIVERY [ ] RECEIPT [✓]

FOR ACCOUNT: Shell Oil Co

CRUDE GRADE OR PRODUCT: Crude

CONSIGNEE (IF DELIVERED TO CONNECTING CARRIER)

CREDIT

N. V. P.

REMARKS

TANK SIZE: 210

MO.	DAY	YR.	DISTRICT NO.	TICKET NO.
12	24	79		8

TANK, METER OR TRUCK NO.: 19669 OFFICE CODE: X85043-A00 LEASE NO.:

GAUGE	OIL LEVEL FT.	IN.	FRACT.	TEMP.	TANK BOTTOM IN.
1 ST	14	1	1/2	49	4
2 ND	1	2	1/4	-	-

OBS. GVT. & TEMP.: 24.0 / 48 TRUE GVT. CHECK IF LOAD SAMPLED

CODES: POWER TRUCK

B S & W %: 0 0 1 0

GROSS BARRELS

METER OR DUMP

TRANSACTION NO. PRINTING HEAD NO. ☒ BARRELS ☐ GALLONS 10THS

AVG. METER PRESS. PSI METER FACTOR/DUMP SIZE METERED BARRELS/NO. DUMPS

TEMP. COMPENSATED ☐ YES ☐ NO AVG. LINE TEMP. ° COMPRESSIBILITY FACTOR NET BARRELS

	GAUGER	TIME	DATE
ON	R E Sluss	11 A M	12/24
	OPERATOR'S WITNESS OR WAIVER NO.	TICKET OFF	
	None	R501639	
OFF	R E Sluss	9 15 A M	12/25
	OPERATOR'S WITNESS OR WAIVER NO.	SEAL OFF	
	None	R517796	

11-48 BAX5 REV. 9-1-64

NAVAJO CRUDE OIL PURCHASING CO. RUN TICKET

OPERATOR: ZIA ENERGY

LEASE NAME: Fed

MO.	DAY	YEAR	DISTRICT NO.	TICKET NO.
2	27	80	#15	715

TANK NO.: 11507-1 LEASE NO.: 8998

OFFICE CODES

TANK SIZE: 15' 210

GAUGE	FT.	IN.	¼ IN.
HEIGHT OF CONNECTION	1	0	0/4
B. S. & W. LEVEL 1ST.	0	4	0/4
2ND.	0	4	0/4

GAUGE	OIL LEVEL FT.	IN.	¼ IN.	TEMP.
1ST.	14	7	1/4	102
2ND.	1	10	2/4	102

OBSERVED QTY. & TEMP.: 41.6 / 100 TRUE QTY.: 38.9

POWER B. S. & W. / TRUCK: 2/10 %

CALCULATIONS

OIL MOVED BY PUMP ☐ GRAVITY ☐ TRUCK ☐ TO (NAME OF LINE OR STATION): BRB CODE

POWER FURNISHED BY OR TRUCKED BY PLCO. ☐ OTHER ☐ CODE

TURNED ON

GAUGER: Jim Gooch TIME: 730

OPERATOR'S WITNESS (OR WAIVER NO.) OFF SEAL

SHUT OFF

GAUGER: Jim Gooch TIME: 810 P M DATE: 2/2

OPERATOR'S WITNESS (OR WAIVER NO.) ON SEAL

REMARKS

This ticket covers all claims for allowance. The oil represented by this ticket was received and run as the property of Navajo Crude Oil Purchasing Company.

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FLUID SAMPLE DATA

Sampler Pressure 350 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas
cc. Oil
cc. Water 2050
cc. Mud
Tot. Liquid cc.
Gravity ° API @ °F.
Gas/Oil Ratio cu. ft./bbl.

		RESISTIVITY		CHLORIDE CONTENT
Recovery Water	@ °F.			ppm
Recovery Mud	@ °F.			ppm
Recovery Mud Filtrate	@ °F.			ppm
Mud Pit Sample	@ °F.			ppm
Mud Pit Sample Filtrate	@ °F.			ppm

Mud Weight 9.2 vis cp

Date 11-8-79 Ticket Number 619022
Kind of Job OPEN HOLE TEST Halliburton District HOBBS
Tester D. JENNINGS Witness FARRIS NELSON
Drilling Contractor EUNICE WELL SERVICE TJH

EQUIPMENT & HOLE DATA

Formation Tested Seven Rivers
Elevation Ft.
Net Productive Interval 69' Ft.
All Depths Measured From Ground Level
Total Depth 3929' Ft.
Main Hole/Casing Size 5 1/2"
Drill Collar Length 425' I.D. 1.50"
Drill Pipe Length 3417' I.D. 2.441"
Packer Depth(s) 3855' - 3860' Ft.
Depth Tester Valve 3830' Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve Surface Choke Adj. Bottom Choke .62"

Recovered 2230 Feet of water.
Recovered Feet of
Recovered Feet of
Recovered Feet of
Recovered Feet of

Remarks SEE PRODUCTION TEST DATA SHEET . . .

TEMPERATURE	Gauge No. 7563		Gauge No. 7562		Gauge No.		TIME	
Calc.	Depth: 3845 Ft.		Depth: 3925 Ft.		Depth: Ft.		Tool Opened 1036	A.M. P.M.
Est. 110 °F.	12 Hour Clock		12 Hour Clock		Hour Clock		Opened	A.M.
Actual °F.	Blanked Off NO		Blanked Off YES		Blanked Off		Bypass 1255	P.M.
	Pressures		Pressures		Pressures		Reported Minutes	Computed Minutes
	Field	Office	Field	Office	Field	Office		
Initial Hydrostatic	1855	1790.0	1888	1894.3				
First Period Flow Initial	461	628.5	851	904.2			———	———
First Period Flow Final	1184	1203.4	1232	1298.1			25	
First Period Closed in	1247	1238.0	1274	1336.1			116	
Second Period Flow Initial							———	———
Second Period Flow Final								
Second Period Closed in								
Third Period Flow Initial							———	———
Third Period Flow Final								
Third Period Closed in								
Final Hydrostatic	1855	1803.0	1888	1883.7			———	———

Legal Location Sec. - Twp. - Rng.
Field Area SOUTH EUNICE
Meas. From Tester Valve
County LEA
State NEW MEXICO
Lease Name STATE "C" Well No. 1 Test No. 1
Tested Interval 3860' - 3929'
Lease Owner/Company Name ZIA ENERGY INCORPORATED

FORM 501-R—PRINTED IN U.S.A.

FORMATION TEST DATA

LITTLE'S POSTITION 6/74

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Revised 10-1-78

ENERGY AND MINERALS DEPARTMENT

GAS - OIL RATIO TESTS

Operator: ZIA ENERGY, INC.

Pool: San Andres Wildcat

County: Lea

Address: P. O. Box 603, Hobbs, NM 88240

TYPE OF TEST - (X): Scheduled ☐ Completion ☒ Special ☐

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST: WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS - OIL RATIO CU.FT/BBL
State "C" B-934	1	F	17	22S	37E	3/10/80	F	32/64	120	8	24	341	30.6	12	291	24,250

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Division in accordance with Rule 301 and appropriate pool rules.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

M E Nelson
(Signature)

Engineer
(Title)

3/12/80

Natural Resources Evaluation and Engineering Inc.

(505) 393-6364 • SUITE 240 • BROADMOOR BUILDING
POST OFFICE BOX 2188 • HOBBS, NEW MEXICO 88240

April 25, 1980

Zia Energy, Inc.
P. O. Box 603
Hobbs, NM 88240

Dear Mr. Nelson:

At your request I have estimated reserves on your State "C" #1 well located 1981' FWL & 1980' FNL, Section 17, T-25-S, R-37-E. Since there is very little history on San Andres production in the near vicinity of your well, the decision was made to go on volumetric calculations. This method is probably the best way to calculate reserves in the early life of a well or field, as there is no production history and few reservoir properties are known. The following parameters were used in the reserve calculations:

Porosity	7.5%	calculated (log)
Connate water	60.0%	calculated (log)
Shrinkage factor	.80	estimated
Recovery efficiency	12.0%	estimated
Net effective thickness	15.0 feet	calculated (log)
Drainage area	40.0 ac.	proration unit
G.O.R.	24,500:1	actual test

The estimated ultimate recovery on this well is 13406 BBLS of oil and based on a gas oil ratio of 24,500:1. The gas reserves are 328.5 MMCFG.

I hope this meets your requirements and if I can be of any further assistance feel free to contact me.

Very truly yours,

Joe T Janica

Joe T. Janica
PE 20097

JTJ/kg

ZIA ENERGY, INC.

Cost Analysis To Plug Back and Recomplete, Equip and Operate a New Onshore San Andres Reservoir Well

Cost Basis For All Figures - April 1977

Item	Cost
Plug back, perforate, stimulate, test & equip	$ 30,000
2 7/8" OD EUE J-55 tubing - 3800'	9,430
7/8" Gr. 40 sucker rods - 1300'	1,200
3/4" Gr. 40 sucker rods - 2500'	1,800
2½" x 2" x 16' subsurface pump	632
1 - 4' x 20' heater treater - installed	10,000
1 - 4' x 10' free water knockout - installed	3,500
Miscellaneous well head connections	1,500
1 - pumping unit - Amcot T20F86-20-D228Z	18,530
1 - Ajax engine - EA-30	9,050
1 - pumping unit concrete base plus installation	1,388
Salt Water Disposal System installation	25,200
TOTAL CAPITAL COST	$112,230
Overhead Expense - $200/well/month - 15 yrs	$ 36,000
Lease operating costs - 15 yrs	237,285
TOTAL OPERATING COST	$273,285

ZIA ENERGY, INC.

Revenue Calculation For New Onshore San Andres Reservoir Well

Calculation based on the following data:

Recoverable oil	13,406 bbls
Price for Oil - April 1977	$13.00/bbl
Recoverable Gas	328,500 MCF
Price for Gas - April 1977	$0.62/MCF
Royalty rate	12.5%
Tax rate - Oil	7.38%
Tax rate - Gas	11.79%

Oil Revenue: (13406) (13.03) (.875) (.9262)	=	$141,565
Gas Revenue: (328,500) (.62) (.875) (.8821)	=	157,200
Total Revenue		$298,765

Formula for "could have been produced in commercial quantities" test:

298,765 - [(1.6) (112,230)] + 273,285 =

298,765 - (179,569 + 273,285) =

298,765 - 452,853 = minus $154,088

Therefore, the "Behind-the-Pipe Exclusion" does not apply and this San Andres reservoir qualifies for the Sec. 102 (New Onshore Reservoir) price category.

Getty Oil Company

P.O. BOX 3000 TULSA, OKLAHOMA 74102

KEEP ALL STATEMENTS. DUPLICATES WILL NOT BE FURNISHED.

STATEMENT OF GAS PURCHASED

FORM 13-875 2-77

PLANT NAME	PLANT NO.	STATE	COUNTY	STATION NUMBER	METER NUMBER	DATE MO.	DATE YEAR
EUNICE	21	NEW MEXICO	LEA	08950		04	1977

PRODUCER	LEASE	WELLS NO.	NO. COPIES
ZIA ENERGIES INC	CHRISTMAS		

GASOLINE CONTENT VALUE

TOTAL GAS PURCHASED-M. C. F.	TEST GALS. PER M. C. F.	TOTAL TEST GALS.	CORRECTED TEST GALS.	PRICE/M.C.F. OR PRICE/GAL.	CONTRACT PERCENT	ALTERNATE PRESSURE BASE	CORRECTED M. C. F.	GASOLINE CONTENT VALUE
1,153	1.015	1,170		.1473219	33.33	15.025	1,124	57.45

BUTANE/PROPANE SALES VALUE OF THE GAS

GALLONS SOLD	AVERAGE PRICE/GAL.	VALUE DUE ALL LEASES	CONTRACT PERCENT	TOTAL TEST GALS. INTO THE PLANT				BUTANE/PROPANE VALUE DUE LEASE
11,560,269	.1357805	523,167.54	33	2,150,225				278.71

RESIDUE VALUE OF THE GAS

PERCENTAGE RESIDUE REM.	VOLUME RESIDUE REM.	RESIDUE GAS RETURNED TO LSE.	REPRESSURE GAS LEASE	AVAILABLE FOR SALE FROM LSE.	TOTAL FOR SALE FROM PLANT	TOTAL SOLD FROM PLANT	NET PROCEEDS DUE ALL LEASES	RESIDUE GAS VALUE DUE LEASE
82.86	761			761	1,884,214	1,884,214	937,42[illegible]	378.61

STATION SUMMARY AND TAX VALUES

PLANT FACTOR	% COVERED BY THIS SUMMARY	TOTAL GROSS VALUE	TAX EXEMPT ROYALTY VALUE	TAXABLE VALUE	PRODUCTION TAX	EXCISE TAX	TOTAL TAX	NET VALUE DUE LEASE
.7972360		714.77		714.77	26.80	.0019 1.29	33.61	661.16
.0102050			NEW MEXICO AD VALOREM TAX		.010199 7.29	SCH TAX	18.23	
							.0255	

12

Gas Price

$\frac{714.77}{1153} = .62$

12 (REV. 8-73)

SHELL OIL COMPANY

STATEMENT OF RUNS

OPERATOR	BATTERY	FIELD	COUNTY	STATE	MO.
ZIA ENERGY INC	CHRISTMAS	PENROSE SKELLY	LEA	N MEX	04

MO.	DAY	TICKET NO.	GRAV.	BARRELS	PRICE	VALUE	MO.	DAY	TICKET NO.	GRAV.	BARRELS	PRICE	VALUE
4	15	5	34.4	182.53	5.2100	950.98			4/77	STRIPPER-WELL VALUE		ADJ.	1,427.3

Oil Price

$\frac{2378.36}{182.53} = 13.03$

22

IDENTIFICATION CODE	PURCHASER	TOTAL BARRELS	TOTAL VALUE	COPY MAILED TO
X85043A00	SHELL OIL	182.53	2,378.36	ZIA22000

C-E Natco Chemicals
A Subsidiary of
Combustion Engineering, Inc.
Post Office Box 447
Hobbs, New Mexico 88240

Tel. 505/393-6126

NATCO CHEMICALS

29 April, 1980

TO WHOM IT MAY CONCERN

To the best of my knowledge the following prices on material specified were in effect on or about April, 1977:

A. 210 barrel flat bottom welded steel stock tank	$2,250.00
B. 4' x 20' Vertical ASME Code Emulsion Treater	$8,952.00
C. 4' x 10' Horizontal Free Water Knockout	$2,630.00

Max V. Land
MAX V. LAND
Office Manager

PUMPING UNITS SERVICES, INC.

"THE PUMPING UNIT SPECIALISTS"

P. O. BOX 396 PHONE 505 393-3191
HOBBS, NEW MEXICO 88240

April 24, 1980

Zia Energy
P. O. Box 603
Hobbs, New Mexico 88240
Attention: Mr. Farris Nelson

Regarding: Prices in effect April 1977

Mr. Nelson:

Attached is a copy of our pumping unit foundation and labor price list dated November 1, 1976 and in effect April 1977.

Estimate labor and trucking to go to your location, set and level foundation, and assemble the 228 pumping unit and gas engine.

10 hrs @65.60 per hr.	656.00
1 Pumping Units Services, Inc. foundation for 228 unit w/gas engine drive. F.O.B. Hobbs yard	570.00
Bolts and tiedowns	109.32
	$1,335.32
4% Sales TAx	53.41
	$1,388.73

Should you need further information, please feel free to contact our office.

Sincerely;

Marion Hightower

Pumping Units Services, Inc.
Marion Hightower
President

Encls.

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Expired 10/1/77

III. A.P.I. CONVENTIONAL PUMPING UNITS

A. PUMPING UNITS SERVICES, INC. Precast Concrete Foundations only for A.P.I. Conventional pumping units (F.O.B. Hobbs Plant):

API Unit Size	Electric Motor Drive	Gas Engine Drive
40	$260.00	$ 300.00
57	285.00	325.00
80	300.00	335.00
114	330.00	405.00
160	415.00	490.00
228	505.00	570.00
320	540.00	635.00
456	675.00	780.00
640	775.00	925.00
912	910.00	1,070.00

B. Contract prices for furnishing labor, tools, equipment and a PUMPING UNITS SERVICES, INC. Precast Concrete Foundation, erect pumping unit complete:

API Unit Size	Electric Motor Drive	Gas Engine Drive
40	$ 490.00	$ 555.00
57	525.00	595.00
80	540.00	635.00
114	585.00	690.00
160	815.00	945.00
228	975.00	1,115.00
320	1,130.00	1,275.00
456	1,275.00	1,430.00
640	1,430.00	1,585.00
912	1,635.00	1,855.00

PUMPING UNITS SERVICES, INC.

Box 356 - Phone 505/393-3191
Hobbs, New Mexico 88240

PRICE LIST EFFECTIVE NOVEMBER 1, 1976

I. HOURLY RATES

A. Skilled Personnel:

Construction Foreman	$ 8.60 per hour
Construction Workman	6.50 per hour
Field Superintendent	12.00 per hour
Shop Machinist	11.50 per hour
Welder	16.00 per hour

Air Compressor w/Jack Hammer less Operator 9.50 per hour

B. Trucking:
Operating in New Mexico under authority of NMSCC Permit No. 7379, Tariff 30-E.
Operating in Texas under authority of RRC Permit No. 27167, Tariff 6-R. Hourly rates will be charged as per published OILFIELD HAULERS ASSOCIATION Rate Schedule.

C. Outside Services:
Outside Services for material, labor and fabricating will be charged at local prices in effect at time of delivery.

II. SPECIAL PRECAST CONCRETE FOUNDATIONS

A. Heater Treater & Separator Foundations:

3' diameter	$ 55.00
42" diameter	60.00
4' diameter	65.00
5' diameter	75.00
6' diameter	105.00
7' diameter	130.00
9' diameter	200.00
11' diameter	325.00

B. Sills & Piers:

3 x 6	[illegible]
4' x 12' x 10"	$135.00
3' x 8'6" x 16"	160.00
3' x 10' x 16"	215.00
5' x 12' x 16"	325.00
5' x 10' s 22"	327.00
13' Dia Tank Ring	405.00
4' x 8'6" x 16"	240.00
4' x 10" x 16"	275.00

TO Zia Energy, Inc.
Box 603, Hobbs, New Mexico 88240

FROM
HOBBS REPAIR SERVICE
BOX 1076
EUNICE, NEW MEXICO 88231
Phone: 394-2506

DATE: 4-16-80

SUBJECT: ATTN: FARRIS NELSON 1977 Pump price (2½x2x16)

POLO	222 K 16	barrel	167.40	60-252 K 4	plgr.	190.25
	11 L 4	ball & seat	46.21	113 L 6	cage	15.09
	11 K 4	ditto	40.96	156 L 1	lock nut	5.63
3	190 L 70	cups	10.32	95 L 1	body	29.13
	91 K 4	adapter	11.43	232 K 134	pull tube	68.66
	110 L 6	cage	13.76			613.03
	81 K 1	adapter	14.19		tax	24.52
						637.55

PLEASE REPLY TO SIGNED James N. Evans / mh

DATE SIGNED

THIS COPY FOR PERSON ADDRESSED

COOPER ENERGY SERVICES

AJAX HORIZONTAL GAS ENGINES
PRICE SCHEDULE

	All Units	EA-22	EA-30	E-42	DP-60	DP-80A	DP-125	DP-165	DP-250	DP-325
Base Engine with Clutch	-	$8280	$8570	$9530	$13230	$15760	$23950	$30000	$44910	$55340
Base Engine without Clutch	-	-	-	9170	12790	15090	22750	28800	43260	53670
Optional Equipment										
Governor Air Motor	320	-	-	-	-	-	-	-	-	-
Gas Injection Fuel System	-	O.A.	O.A.	1040	1170	1230	Std.	Std.	Std.	Std.
Shielded Ignition Systems										
Altronic I	O.A.	-	-	-	-	-	-	-	-	-
Altronic III	-	N.A.	N.A.	N.A.	790	900	900	900	1270	1270
[1]Explosion Proof Shutdowns - Add	360	-	-	-	-	-	-	-	-	-
[2]Electric Starting Equipment	-	460	460	460	870	N.A.	N.A.	N.A.	N.A.	N.A.
Air Gas Starting Equipment	-	110	110	110	Std.	Std.	Std.	Std.	Std.	Std.
Deductions										
Standard Engine Radiator	-	O.A.	O.A.	O.A.	O.A.	O.A.	O.A.	O.A.	1880	1880

1. Explosion proof overspeed, water temperature and oil level shutdowns.
2. Battery and cable not included.

O.A. - On Application
N.A. - Not Available
Std. - Standard Equipment

LONE STAR STEEL COMPANY

OIL COUNTRY TUBULAR GOODS
PRICE LIST EFFECTIVE MARCH 01, 1977

PRICES DOLLARS PER 100 FEET - F.O.B. MILL, LONE STAR, TEXAS

SIZE O.D. INCHES	WEIGHT LBS. PER FT.	WALL INCHES	GRADE	T&C END FINISH	MFG. SPECS.	MILL PRICE
5.000	15.00	.296	S-105	LONG	LSS	673.63
			S-105	BUTTRESS	LSS	720.26
5.000	18.00	.362	N-80	LONG	API	713.21
			N-80	BUTTRESS	API	762.50
			L-80	LONG	API	783.63
			L-80	BUTTRESS	API	837.85
			SS-95	LONG	LSS	881.50
			SS-95	BUTTRESS	LSS	942.58
			S-95	LONG	LSS	801.43
			S-95	BUTTRESS	LSS	856.90
			CYS-95	LONG	LSS	880.67
			CYS-95	BUTTRESS	LSS	941.69
			C-95	LONG	API	955.78
			C-95	BUTTRESS	API	1022.05
			S-105	LONG	LSS	809.31
			S-105	BUTTRESS	LSS	865.33
5.000	23.20	.478	N-80	LONG	API	919.23
			N-80	BUTTRESS	API	982.76
			L-80	LONG	API	1009.99
			L-80	BUTTRESS	API	1079.88
			SS-95	LONG	LSS	1188.77
			SS-95	BUTTRESS	LSS	1269.03
			S-95	LONG	LSS	1103.75
			S-95	BUTTRESS	LSS	1180.20
			CYS-95	LONG	LSS	1212.97
			CYS-95	BUTTRESS	LSS	1297.07
			S-105	LONG	LSS	1114.60
			S-105	BUTTRESS	LSS	1191.81
5.500	14.00	.244	K-55	SHORT	API	414.85
5.500	15.50	.275	K-55	SHORT	API	450.96
			K-55	LONG	API	473.12
			K-55	BUTTRESS	API	505.70
5.500	17.00	.304	K-55	SHORT	API	485.92
			K-55	LONG	API	509.79
			K-55	BUTTRESS	API	544.88
			N-80	LONG	API	653.02
			N-80	BUTTRESS	API	698.14
			L-80	LONG	API	717.47
			L-80	BUTTRESS	API	767.10
			SS-95	LONG	LSS	807.49
			SS-95	BUTTRESS	LSS	863.42
			S-95	LONG	LSS	732.67
			S-95	BUTTRESS	LSS	783.36
			CYS-95	LONG	LSS	805.09

PRICE IN EFFECT AT TIME OF SHIPMENT WILL APPLY

OCTG- 3

LONE STAR STEEL COMPANY

OIL COUNTRY TUBULAR GOODS
PRICE LIST EFFECTIVE MARCH 01, 1977

OLD PRICE 3-1-77 TO 8-1-77

PRICES DOLLARS PER 100 FEET - F.O.B. MILL, LONE STAR, TEXAS

SIZE O.D. INCHES	WEIGHT LBS. PER FT.	WALL INCHES	GRADE	T&C END FINISH	MFG. SPECS.	MILL PRICE
2.375	4.60	.190	H-40	NUE	API	170.50
			J-55	NUE	API	174.81
			C-75	NUE	API	258.48
			N-80	NUE	API	235.19
2.375	4.70	.190	H-40	EUE	API	179.98
			J-55	EUE	API	184.53
			C-75	EUE	API	272.88
			N-80	EUE	API	248.29
2.875	6.40	.217	H-40	NUE	API	221.50
			J-55	NUE	API	227.10
			C-75	NUE	API	335.70
			N-80	NUE	API	305.47
2.875	6.50	.217	H-40	EUE	API	231.28
			J-55	EUE	API	237.13
			C-75	EUE	API	350.56
			N-80	EUE	API	318.99
3.500	9.20	.254	H-40	NUE	API	314.87
			J-55	NUE	API	322.83
			C-75	NUE	API	477.17
			N-80	NUE	API	434.21
3.500	9.30	.254	H-40	EUE	API	327.39
			J-55	EUE	API	335.67
			C-75	EUE	API	496.22
			N-80	EUE	API	451.53
4.500	9.50	.205	K-55	SHORT	API	299.00
4.500	10.50	.224	K-55	SHORT	API	326.04
			K-55	BUTTRESS	API	365.66
4.500	11.60	.250	K-55	SHORT	API	353.49
			K-55	LONG	API	370.87
			K-55	BUTTRESS	API	396.42
			N-80	LONG	API	475.18
			N-80	BUTTRESS	API	508.04
			L-80	LONG	API	522.12
			L-80	BUTTRESS	API	558.26
			SS-95	LONG	LSS	581.86
			SS-95	BUTTRESS	LSS	622.18
			S-95	LONG	LSS	549.89
			S-95	BUTTRESS	LSS	587.98
			CYS-95	LONG	LSS	604.30
			CYS-95	BUTTRESS	LSS	646.20
			C-95	LONG	API	636.86

PRICE IN EFFECT AT TIME OF SHIPMENT WILL APPLY

OCTG- 1

30

AFE No. 157

TOTAL FOR LINES	$	19630
TOTAL FOR VALVES	$	--
TOTAL FOR FITTINGS	$	1057 ✓
TOTAL FOR CONTRACT LABOR	$	4450 ✓
TOTAL	$	25167

Miscellaneous: ✓ % of $ 25,167 = $ 503

Right-of-Way: Texas-NM 1612 — 94.161 rods @ $ 5 /rd = $ 473 (50)

Charlie Betts 1561' — 94.161 rods @ $ 5 /rd = $ 473

Damages: 3 days @ $ 200 /day = $ 600

Supervision: 4 % of $ 29387 = $ 1175 ✓

Sales Tax: 5 % of $ 27,210 = $ 1177

Engineering: 6 % $ 25,670 = $ 1540

Office Overhead:

AFE No. 157 TOTAL $ ~~31,158~~ $ 31,160

	Initials	Date
Prepared By		
Approved By		

B-D AFE 157 Line Loop

Jct. H-[illegible] to Jct. N-15

~~Jct. [illegible] to Jct. N-16~~

ITEM	Est. Cost	August 1977	Sept. 1977	Oct 1977	Nov. 1977	
Lines	19630	—	15920 98			
Valves	—	—	—			
Fittings	1087	—	793 75	[illegible]		
Contract Labor	4450	[illegible] 55	[illegible]	[illegible] 13	1805 11	
Misc. & sales tax	1680	35 57	3 [illegible]	[illegible]		
R-O-W & Damages	996	—	—	1456 [illegible]	937 [illegible]	
Supv. & Engr.	2777	35 38	[illegible] 83	[illegible]	[illegible]	
CCH	1540	[illegible]	[illegible]	[illegible] 57		
	32160	461 66	19716 17	[illegible]	2971 35	

LEASE ANALYSIS REPORT AS OF 12-31-77

APC PAYMENT COMPANY IS OPERATOR
APC WI 1.000000
OIL RI .632813 VARIABLE
GAS RI .000000

DIVISION HOUSTON - ONSHORE
AREA 30
FLD 160 EUNICE SOUTH-SAN ANDRES

PROJECT 0501
COMPANY OPERATED

LSE CODE 3023797
LSE NAME HUGH 13
COUNTY LEA

DESCRIPTION	OCT	NOV	DEC	CURRENT QUARTER	YR-TO-DATE	MONTHLY AVG PREV-YR-QTR	MONTHLY AVG CURR-YR
COMPLETIONS - OIL		1	1	1			
GAS							
TOTAL ACTIVE COMPL		1	1	1			
INACTIVE COMPLETIONS							
SERVICE WELLS - ACTIVE							
INACTIVE							
GROSS SALES VOLUMES - LIQ (BBL)	429	215	416	1,057	2,984	266	
GAS (MCF)	1,120	1,448	1,385	3,953	12,762	331	
NET SALES VOLUMES - OIL/COND (BBL)	296	149	289	734	2,074	199	
GAS (MCF)	784	1,002	964	2,750	8,899	235	
VALUE - OIL/COND $	1,572	796	1,551	3,919	10,534	1,116	
GAS $	476	627	653	1,796	6,333	235	
OTHER INCOME $							
TOTAL INCOME	2,048	1,423	2,204	5,705	16,867	1,351	
CONTROLLABLE EXPENSE - GROSS							
PUMPING	166	295	246	657	1,724	77	
POWER & FUEL	82	132		194	1,033	69	
LUBRICANTS							
CHEMICALS - OIL TREATING		454		454	914		
CHEMICALS - WATER TREATING							
WATER PURCHASED OR DISPOSED		311	195	506	2,186	47	
SUPPLIES, TOOLS, MISC EXPENSE							
FACILITIES/SYSTEMS - OTHER							
COMPRESSOR MAINTENANCE							
SPECIAL SURVEYS							
LEASE EQPT MAINT & REPAIRS	709	696	35	1,440	2,959		
WELL EQPT - SURFACE MAINT	117		298	415	538		
PUMP REPAIRS - SUBSURFACE			250	289	1,502		
WELL WORKOVER - OTHER SUBSURFACE	775	910	291	1,974	4,963	633	
WORKOVER - MAJOR MECHANICAL							
WORKOVER - FORM STIMULATION							
TOTAL CONTROLLABLE EXP - GROSS	1,827	2,748	1,334	5,909	15,819	823	
NON-CONTROLLABLE EXPENSE - GROSS							
OVHD PAID TO OUTSIDE OPERATORS							
MISC INCOME							
TOTAL NON-CONTR EXPS - GROSS							
JOINT OWNERS PORTION							
NET EXPENSES							
JOINT OPERATIONS BY OTHERS							
FACILITY CHARGE							
PRODUCTION & SEVERANCE TAX	168	124	21	313	1,287	101	
AD VALOREM TAX							
TOTAL NET EXPENSE	168	124	21	313	1,287	101	
OVERHEAD EXPENSE	67	187	118	372	1,277	108	
TOTAL APC EXPENSE	2,062	3,059	1,473	6,594	18,383	1,032	
APC CASH FLOW - NET	14-	1,636-	761	889-	1,516-	319	
GROSS LSE OR FACILITY EXPENSE	2,062	3,059	1,473	6,594	18,383	1,032	
AVG SALES PRICE/BBL $	5.311	5.342	5.367	5.339	5.079	5.608	
/MCF	.607	.626	.709	.649	.712	1.000	
CONTR EXP/COMPL (GROSS)	1,827	2,748	1,334	1,969	1,313	823	
APC CONTR EXP/$ INCOME	.892	1.931	.597	1.036	.937	.609	
TOTAL APC EXPS / $ INCOME	1.007	2.149	.659	1.156	1.089	.763	
APC GROSS INVESTMENT	104,232	104,232	104,232	104,232	104,232	104,232	
ANNUALIZED CASH FLOW/INVESTMENT	.002-	.188-	.089	.036-	.015-	.037	

LEASE ANALYSIS REPORT AS OF 12-31-77

DIV #6 HOUSTON - ONSHORE — PROJECT #501 COMPANY OPERATED — LSE CODE 3023797

ARTS 30 — LSE NAME HUGH 13

FLD 160 EUNICE SOUTH-SAN ANDRES — COUNTY LEA

TOR	OCT	NOV	DEC	CURRENT QUARTER	YR-TO-DATE	---MONTHLY AVERAGES--- PREV-YR-QTR	CURR-YR-QTR	YR-TO-DATE
	1	1	1					
COMPL	1	1	1					
(BBL) (MCF)	426 1,120	215 1,448	416 1,385	1,057 3,953	2,984 12,762	266 331	352 1,31[illegible]	249 1,26[illegible]
	296 784	149 1,002	289 96[illegible]	734 2,750	2,074 8,899	170 235	2[illegible] 917	173 742
	1,572 476	796 627	1,551 683	3,919 1,786	10,534 6,333	1,116 235	1,30[illegible] 595	878 523
	2,048	1,423	2,234	5,705	16,667	1,351	1,902	1,403
SS								
	166 62	245 132	246	657 194	1,729 1,033	77 69	219 65	144 86
		454		454	914		151	76
SE		311	195	506	2,186	47	169	182
	709 117	696	35 298	1,440 415	2,959 538		48[illegible] 138	247 45
RFACE	770	910	269 291	269 1,974	1,502 4,963	630	9[illegible] 658	12[illegible] 410
GROSS	1,827	2,748	1,334	5,909	15,819	823	1,970	1,318
GROSS								
ORS								
SS								
	168	124	21	313	1,287	101	104	107
	168	124	21	313	1,287	101	104	107
	67	187	118	372	1,277	108	124	106
	2,062	3,059	1,473	6,594	18,383	1,032	2,198	1,532
	14-	1,636-	761	889-	1,516-	319	296-	126-
E	2,062 5.311 .507 1,827 .892 1.[illegible]	3,059 5.342 .626 2,748 1.931 2.149	1,473 5.367 .709 1,234 .597 .659	6,594 5.339 .649 1,969 1.035 1.155	18,383 5.079 .712 1,313 .937 1.069	1,032 5.608 1.000 823 .609 .763	2,198 5.331 .649 1,970 1.035 1.155	1,531 5.075 .712 1,318 .937 1.069
ENT	104,232 .032-	104,232 .189-	104,232 .[illegible]	104,232 .034-	104,232 .015-	104,232 .037	104,232 .034-	104,232 .015-

ZIA ENERGY, INC.

Tabulation of Wells That Penetrated San Andres Prior to April 20, 1977

Company	Lease	Well No.	Unit Letter	S-T-R	Completion Date	Total Depth	Completion Interval	Reported TSA	Remarks
Oil Corp.	S.P.S.U.	220	O	5-22-37	5/15/75	3900'	Shut-in	3837'	SA tstd non-comm
ls Antwell	Shell "G"	1	P	8-22-37	1/5/70	7424'	D & A	3984'	Drilled & aband
o	Grizzell "B"	1	G	8-22-37	4/28/69	6580'	5498'-5907'		
co	Falby "A"	1	C	8-22-37	6/23/75	6570'	5508'-5840'		
co	Falby "A"	3	F	8-22-37	7/17/71	6558'	5532'-5939'		
co	Falby "A"	4	E	8-22-37	6/10/61	6555'	6455'-6518'	3980'	
co	Falby "B"	1	K	8-22-37	7/4/62	6549'	6490'-6538'		
co	Falby "B"	4	L	8-22-37	11/25/60	6550'	6484'-6536'	3978'	
	Grizzell	7	J	8-22-37	8/28/52	6537'	6450'-6515'		
	Grizzell	8	P	8-22-37	9/30/52	6513'	6420'-6500'		
	Grizzell	9	O	8-22-37	7/27/63	6575'	6459'-6509'		
rough	Grizzell	1	B	8-22-37	4/28/50	6576'	6425'-6560'	3820'	
Oil Corp.	S.P.S.U.	262	P	8-22-37	6/2/75	3900'	Shut-in	3816'	SA tstd non-comm
, Wagner & Brown	Greenwood	1	M	9-22-37	2/28/71	7335'	D & A		Drilled & aband
arko Production Co.	Walden	11	M	15-22-37	2/3/74	4600'	3735'-3885'	3905'	SA tstd 100% wtr
, Inc.	Gulf State	1	C	16-22-37	4/26/59	6602'	5492'-5522'	3830'	
Oil Corp.	R. E. Cole	5	I	16-22-37	10/30/47	8066'	7941'-8066'		
Oil Corp.	R. E. Cole	7	H	16-22-37	4/3/48	8042'	7865'-8042'		
Oil Corp.	R. E. Cole	8	K	16-22-37	6/15/67	7302'	7186'-7210'	3984' ?	
Oil Corp.	R. E. Cole	9	N	16-22-37	10/11/67	7335'	6770'-6887'	4006'	
Oil Corp.	R. E. Cole	10	E	16-22-37	7/25/67	7383'	7312'-7325'	4013'	
Oil Corp.	R. E. Cole	11	J	16-22-37	2/1/68	7260'	7204'-7229'	3986'	
Oil Corp.	R. E. Cole	12	D	16-22-37	4/29/68	7350'	7134'-7216'	3997'	
Oil Corp.	R. E. Cole	13	O	16-22-37	3/30/69	7340'	7120'-7204'	3994'	
Oil Corp.	R. E. Cole	14	F	16-22-37	9/1/71	7402'	7127'-7336'	4011'	
Oil Corp.	R. E. Cole	15	L	16-22-37	8/14/74	6700'	6398'-6572'	4010'	
Oil Corp.	R. E. Cole	16	G	16-22-37	8/20/76	6650'	6338'-6602'		
Oil Corp.	R. E. Cole	17	P	16-22-37	1/17/77	7338'	6308'-6517'	3988'	
ada Less	State "P"	3	B	17-22-37	3/11/76	6650'	6470'-6533'	3840'	
	Christmas	4	I	17-22-37	7/11/73	6650'	6370'-6637'	3885'	
, Boyle & Stovall	Patsy "B"	2	N	17-22-37	1/20/72	4030'	3480'-3778'	3906'	SA tstd all water
bell & Hedrick	Christmas	1	J	17-22-37	2/4/46	6550'	Drilled & abandoned		
co	Elliott	1	K	17-22-37	6/12/35	4075'	Drilled & abandoned		
co	Elliott	2	A	17-22-37	12/1/74	6650'	6396'-6507'		
Hendrix Corp.	Morning Glory	1	H	17-22-37	10/24/74	6600'	6357'-6479'	3906'	
Pacific Oil Co.	Elliott State	1	F	17-22-37	9/24/74	6700'	Drilled & aband SA DST--18 MCF--no free oil		
Pacific Oil Co.	Elliott B-17	3	C	17-22-37	11/29/62	6577'	6465'-6529'		
Pacific Oil Co.	Elliott B-17	4	G	17-22-37	3/31/74	7442'	6378'-6484'	3925'	
nergy, Inc.	Federal	1	K	17-22-37	7/16/79	4310'	2652'-3614'	3823'	SA tstd 100% water
d Deck	Patsy "B"	1	C	20-22-37	7/28/71	4412'	3451'-3757'	3845'	SA tstd 100% water

Tabulation of Wells That Penetrated San Andres Prior to April 20, 1977 - Continued

Company	Lease	Well No.	Unit Letter	S-T-R	Completion Date	Total Depth	Completion Interval	Reported TSA	Remarks
[illegible] Oil Corp.	Mattern	14	C	7-22-37	8/23/75		6488'-6644'	3895'	
[illegible] Oil Corp.	Mattern	15	D	7-22-37	9/4/75		6516'-6658'	3899'	
[illegible] Oil Corp.	Mattern	16	E	7-22-37	9/15/75		6510'-6670'		
[illegible]	Elliott "B"	6	J	6-22-37	5/21/74		6595'-6710'		
[illegible]	Grizzell	2	G	6-22-37	8/3/76		6558'-6682'	3963'	
[illegible] Oil Corp.	Mattern	8	E	6-22-37	5/24/76		6520'-6668'		
[illegible] Oil Corp.	Mattern	9	D	6-22-37	10/7/74		6433'-6675'		
[illegible] Oil Corp.	Mattern	10	C	6-22-37	5/28/75		6456'-6700'		
[illegible] Oil Corp.	Mattern	11	F	6-22-37	6/8/75		6506'-6643'		
[illegible] Oil Corp.	Mattern	12	K	6-22-37	7/17/75		6548'-6657'	3908'	
[illegible] Oil Corp.	Mattern	13	N	6-22-37	8/2/75		6484'-6660'	3900'	
[illegible]rtindale	Pan Cand	1	M	6-22-37	12/22/76		6462'-6654'	3898'	
[illegible]ell	State "D"	1	O	36-21-36	10/10/63		D & A		
[illegible]	Grizzell	5	L	5-22-37	5/29/79		6458'-6644'	3851'	DST SA 112 MCFPD -- some free oil

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NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work

b. Type of Well: DRILL [ ] DEEPEN [X] PLUG BACK [ ]

OIL WELL [X] GAS WELL [ ] OTHER SINGLE ZONE [X] MULTIPLE ZONE [ ]

2. Name of Operator: Zia Energy, Inc.

3. Address of Operator: P. O. Box 603, Hobbs, NM 88240

4. Location of Well: Unit Letter F, Located 1981.5 Feet From The West Line

And 1980 Feet From The North Line of Sec. 17 Twp. 22S Rge. 37E

County: Lea

3405' GR	Blanket on file	3925'	San Andres	Reverse Circu t
			10/29/79

23.

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
4 3/4" reamed to 6 1/4"	4 1/2"	11.60#	3925'	100	

1. Rig up well servicing unit and reverse circulation equipment.
2. Pull 2 3/8" tubing and rods. Run 2 7/8" tubing, drill collars & bit.
3. Mix mud and circulate hole.
4. Drill 4 3/4" hole from 3542' to 3925'.
5. Log, DST, test as necessary to evaluate.
6. Ream 4 3/4" hole to 6 1/4".
7. Run 500' - 4½" OD 11.60 FJ liner. Cement using 100 sacks.
8. Perforate, treat and evaluate San Andres.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed [signature] Title Engineer Date 10/23/79

(This space for State Use)

APPROVED BY [signature] TITLE SUPERVISOR DISTRICT II DATE OCT 25 1979

CONDITIONS OF APPROVAL, IF ANY:

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NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 14-65

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
Zia Energy, Inc.	State "C" B-934	1

Unit Letter	Section	Township	Range	County
F	17	22 South	37 East	Lea

Actual Footage Location of Well:
1981.5 feet from the West line and 1980 feet from the North line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3405'	San Andres	Undesignated	40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

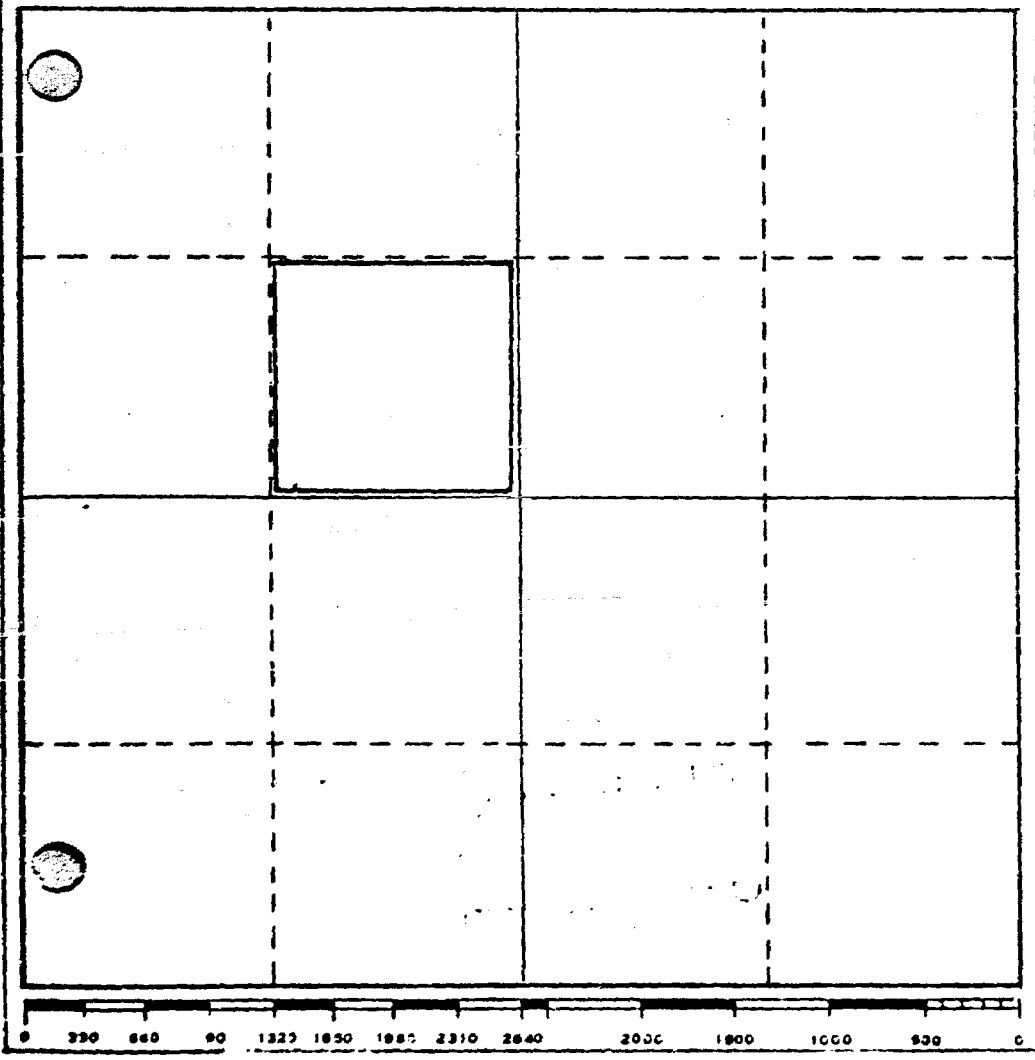
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name: M. T. Nelson

Position: Engineer

Company: Zia Energy, Inc.

Date: 10/24/79

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

Certificate No.

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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-78

5a. Indicate Type of Lease: State [X] Fee [ ]

5. State Oil & Gas Lease No.: B-934

SUNDRY NOTICES AND REPORTS ON WELLS

DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" FORM C-101) FOR SUCH PROPOSALS.

1. OIL WELL [X] GAS WELL [ ] OTHER-

7. Unit Agreement Name:

2. Name of Operator: ZIA ENERGY, INC.

8. Farm or Lease Name: State "C"

3. Address of Operator: P. O. Box 603, Hobbs, NM 88240

9. Well No.: 1

4. Location of Well: UNIT LETTER F, 1981.5 FEET FROM THE West LINE AND 1980 FEET FROM THE North LINE, SECTION 17, TOWNSHIP 22 S, RANGE 37 E, NMPM.

10. Field and Pool, or Wildcat: San Andres Wildcat

15. Elevation (Show whether DF, RT, GR, etc.): 3405' GR

12. County: Lea

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK [ ]	PLUG AND ABANDON [ ]	REMEDIAL WORK [ ]	ALTERING CASING [ ]
TEMPORARILY ABANDON [ ]		COMMENCE DRILLING OPNS. [ ]	PLUG AND ABANDONMENT [ ]
PULL OR ALTER CASING [ ]	CHANGE PLANS [ ]	CASING TEST AND CEMENT JOB [ ]	
OTHER [ ]		OTHER Deepen & set liner [ ]	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

1. Rig up pulling unit. Pulled tubing and rods 10/25/79.
2. Rig up reverse circulation equipment & commence deepening using 4 3/4" bit. Deepened from 3542' to 3929'. Attempted to ream; reamer failed. Ran GR-CNL log.
3. Ran 525' of 4" OD 12.5# FJ liner. Cemented using 70 sacks Class "C" cement. Reversed out 15 sacks cement. SI 11/17/79.
4. Tested liner top to 1500# on 11/19/79.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED M. J. Nelson TITLE Engineer DATE 2/29/80

APPROVED BY Orig. Signed by Jerry Sexton TITLE DATE MAR 6 1980

CONDITIONS OF APPROVAL, IF ANY:

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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

Form C-104
Revised 10-1-78

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

Operator
ZIA ENERGY, INC.

Address
P. O. Box 603, Hobbs, NM 88240

Reason(s) for filing (Check proper box)
New Well [ ]
Recompletion [X]
Change in Ownership [ ]
Change in Transporter of: Oil [ ] Dry Gas [ ] Casinghead Gas [ ] Condensate [ ]
Other (Please explain)

If change of ownership give name and address of previous owner

DESCRIPTION OF WELL AND LEASE

Lease Name	Well No.	Pool Name, Including Formation	Kind of Lease	Lease No.
State "C"	1	San Andres Wildcat	State, Federal or Fee State	B-934

Location
Unit Letter F : 1981.5 Feet From The West Line and 1980 Feet From The North
Line of Section 17 Township 22 S Range 37 E NMPM, Lea County

DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil [X] or Condensate [ ]	Address (Give address to which approved copy of this form is to be sent)
Navajo Crude Oil Purchasing	P. O. Drawer 159, Artesia, NM 88210
Name of Authorized Transporter of Casinghead Gas [X] or Dry Gas [ ]	Address (Give address to which approved copy of this form is to be sent)
El Paso Natural Gas Company	P. O. Box 1492, El Paso, TX 79978

If well produces oil or liquids, give location of tanks.	Unit	Sec.	Twp.	Rge.	Is gas actually connected?	When
	F	17	22 S	37 E	Yes	10/10/79

If this production is commingled with that from any other lease or pool, give commingling order number:

COMPLETION DATA

Designate Type of Completion – (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Resv.	Diff. Resv.
					X			X

Date Spudded	Date Compl. Ready to Prod.	Total Depth	P.B.T.D.
10/25/79	1/23/80	3929'	3856'
Elevations (DF, RKB, RT, GR, etc.)	**Name of Producing Formation**	**Top Oil/Gas Pay**	**Tubing Depth**
3405' GR	San Andres	3830'	3650'
Perforations			**Depth Casing Shoe**
3830'-2 JS, 3834'-2 JS			3929'

TUBING, CASING, AND CEMENTING RECORD

HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT
	8 5/8"	315'	210
	5 1/2"	3435'	300
	4" OD liner	3400'-3929'	70

TEST DATA AND REQUEST FOR ALLOWABLE

(Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

OIL WELL

Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)
1/23/80	2/27/80	Flow
Length of Test	**Tubing Pressure**	**Casing Pressure**	**Choke Size**
24	120#	Packer	32/64"
Actual Prod. During Test	**Oil-Bbls.**	**Water-Bbls.**	**Gas-MCF**
389	8	381	283

GAS WELL

Actual Prod. Test-MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
Testing Method (pilot, back pr.)	**Tubing Pressure (Shut-in)**	**Casing Pressure (Shut-in)**	**Choke Size**

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CERTIFICATE OF COMPLIANCE

I certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

M J Nelson
(Signature)

Engineer
(Title)

2/29/80
(Date)

OIL CONSERVATION DIVISION

APPROVED _____, 19__

BY _____

TITLE SUPERVISOR DISTRICT II

This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.

Separate Forms C-104 must be filed for each pool in multiply completed wells.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-105
Revised 10-1-78

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease: State [X] Fee [ ]
5. State Oil & Gas Lease No.: B-934

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] OTHER
b. TYPE OF COMPLETION: NEW WELL [ ] WORK OVER [ ] DEEPEN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] OTHER
7. Unit Agreement Name:
8. Farm or Lease Name: State "C"
2. Name of Operator: ZIA ENERGY, INC.
9. Well No.: 1
3. Address of Operator: P. O. Box 603, Hobbs, NM 88240
10. Field and Pool, or Wildcat: San Andres Wildcat
4. Location of Well: UNIT LETTER F LOCATED 1981.5 FEET FROM THE West LINE AND 1980 FEET FROM THE North LINE OF SEC. 17 TWP. 22 S RGE. 37 E NMPM
12. County: Lea

15. Date Spudded	16. Date T.D. Reached	17. Date Compl. (Ready to Prod.)	18. Elevations (DF, RKB, RT, GR, etc.)	19. Elev. Casinghead
10/25/79	11/7/79	1/23/80	3405' GR	3405'

20. Total Depth	21. Plug Back T.D.	22. If Multiple Compl., How Many	23. Intervals Drilled By	Rotary Tools	Cable Tools
3929'	3856'				

24. Producing Interval(s), of this completion — Top, Bottom, Name
25. Was Directional Survey Made: No

26. Type Electric and Other Logs Run: GR - CNL
27. Was Well Cored: No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"		315'		210 sx	
5 1/2"	15.5#	3435'		300 sx	

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN
4"	3400'	3929'	70	none

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2 3/8"	3650'	3650'

31. Perforation Record (Interval, size and number)

3830' - 2 JS (.375")
3834' - 2 JS (.375")

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
3830'-34'	1000 gal. 15% HCL
	4500 gal. 20% HCL

33. PRODUCTION

Date First Production	Production Method (Flowing, gas lift, pumping - Size and type pump)	Well Status (Prod. or Shut-in)
1/23/80	Flowing	Prod.

Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period →	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
2/27/80	24	32/64"		8	283	381	35375

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate →	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API (Corr.)
120	Pkr		8	283	381	35.4

34. Disposition of Gas (Sold, used for fuel, vented, etc.): Sold to El Paso Natural Gas Company
Test Witnessed By:

35. List of Attachments: GR - CNL

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED M. A. Nelson TITLE Engineer DATE 2/29/80

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INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radioactivity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 30 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except in those instances where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico				Northwestern New Mexico			
T. Anhy		T. Canyon		T. Ojo Alamo		T. Penn. "B"	
T. Salt		T. Strawn		T. Kirtland-Fruitland		T. Penn. "C"	
B. Salt	2436'	T. Atoka		T. Pictured Cliffs		T. Penn. "D"	
T. Yates	2572'	T. Miss		T. Cliff House		T. Leadville	
T. 7 Rivers	2926'	T. Devonian		T. Menefee		T. Madison	
T. Queen	3342'	T. Silurian		T. Point Lookout		T. Elbert	
T. Grayburg	3634'	T. Montoya		T. Mancos		T. McCracken	
T. San Andres	3819'	T. Simpson		T. Gallup		T. Ignacio Qtzte	
T. Glorieta		T. McKee		Base Greenhorn		T. Granite	
T. Paddock		T. Ellenburger		T. Dakota		T.	
T. Blinebry		T. Gr. Wash		T. Morrison		T.	
T. Tubb		T. Granite		T. Todilto		T.	
T. Drinkard		T. Delaware Sand		T. Entrada		T.	
T. Abo		T. Bone Springs		T. Wingate		T.	
T. Wolfcamp		T.		T. Chinle		T.	
T. Penn.		T.		T. Permian		T.	
T. Cisco (Bough C)		T.		T. Penn. "A"		T.	

OIL OR GAS SANDS OR ZONES

No. 1, from ..... to ..... No. 4, from ..... to .....

No. 2, from ..... to ..... No. 5, from ..... to .....

No. 3, from ..... to ..... No. 6, from ..... to .....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from ..... to ..... feet. .....

No. 2, from ..... to ..... feet. .....

No. 3, from ..... to ..... feet. .....

No. 4, from ..... to ..... feet. .....

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
3542	3929	387	Dolomite & lime stringers				

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
23 April 1980

EXAMINER HEARING

IN THE MATTER OF:

Application of Zia Energy, Inc., for pool creation, special pool rules, and an NGPA determination, Lea County, New Mexico.

CASE 6861

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

MR. STAMETS: Call next Case 6661.

MR. PADILLA: Application of Zia Energy, Inc., for pool creation, special pool rules, and an NGPA determination, Lea County, New Mexico.

MR. STAMETS: The applicant in this case has requested it be continued to the May 7th Examiner Hearing and it shall be.

(Hearing concluded.)

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 435-7409

REPORTER'S CERTIFICATE

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.

_____

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.
Rt. 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
23 April 1980

EXAMINER HEARING

IN THE MATTER OF:

Application of Zia Energy, Inc., for pool creation, special pool rules, and an NGPA determination, Lea County, New Mexico.

CASE 6861

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division:

Ernest L. Padilla, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

MR. STAMETS: Call next Case 6861.

MR. PADILLA: Application of Zia Energy, Inc., for pool creation, special pool rules, and an NGPA determination, Lea County, New Mexico.

MR. STAMETS: The applicant in this case has requested it be continued to the May 7th Examiner Hearing and it shall be.

(Hearing concluded.)

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

REPORTER'S CERTIFICATE

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

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. 6861, heard by me on 4-23, 1980.

Richard L. Stamets, Examiner
Oil Conservation Division

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
9 April 1980

EXAMINER HEARING

IN THE MATTER OF:

Application of Zia Energy, Inc. for pool creation, special pool rules, and an NGPA determination, Lea County, New Mexico. CASE 6861

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

MR. NUTTER: Call Case Number 6861.

MR. PADILLA: Application of Zia Energy, Inc., for pool creation, special pool rules, and an NGPA determination, Lea County, New Mexico.

MR. KELLAHIN: If the Examiner please, I'm Tom Kellahin, appearing on behalf of the applicant.

We'd like to continue that case to the next Examiner Hearing on April 23rd.

MR. NUTTER: Case Number 6861 will be continued to the Examiner Hearing scheduled to be held at this same place at 9:00 o'clock a. m. April 23rd, 1980.

(Hearing concluded.)

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

REPORTER'S CERTIFICATE

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing and attached 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 report of the proceedings in the Examiner hearing of Case No. 6861, heard by me on 4/9, 1980.

, Examiner
Oil Conservation Division

SALLY W. BOYD, C.S.R.
Rt. 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
9 April 1980

EXAMINER HEARING

IN THE MATTER OF:

Application of Zia Energy, Inc. for pool creation, special pool rules, and an NGPA determination, Lea County, New Mexico.

CASE 6861

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

MR. NUTTER: Call Case Number 6861.

MR. PADILLA: Application of Zia Energy, Inc., for pool creation, special pool rules, and an NGPA determination, Lea County, New Mexico.

MR. KELLAHIN: If the Examiner please, I'm Tom Kellahin, appearing on behalf of the applicant.

We'd like to continue that case to the next Examiner Hearing on April 23rd.

MR. NUTTER: Case Number 6861 will be continued to the Examiner Hearing scheduled to be held at this same place at 9:00 o'clock a. m. April 23rd, 1980.

(Hearing concluded.)

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

REPORTER'S CERTIFICATE

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing and attached 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.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 7864 heard by me on 4/9 1980.

Examiner
Oil Conservation Division

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

Dockets Nos. 14-80 and 15-80 are tentatively set for May 21 and June 4, 1980. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - MAY 7, 1980

9 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM, STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Richard L. Stamets, Alternate Examiner:

CASE 6880: Application of Union Oil Company of California for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the West Lynch Deep Unit Area, comprising 1,280 acres, more or less, of fee and federal lands in Township 20 South, Range 34 East.

CASE 6857: (Readvertised)

Application of Holly Energy, Inc. for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Wolfcamp-Pennsylvanian test well to be drilled 660 feet from the South line and 990 feet from the East line of Section 14, Township 18 South, Range 28 East, the E/2 of said Section 14 to be dedicated to the well.

CASE 6881: Application of Yates Petroleum Corporation 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 1980 feet from the North line and 660 feet from the East line of Section 30, Township 17 South, Range 26 East, the N/2 of said Section 30 to be dedicated to the well.

CASE 6843: (Continued from April 9, 1980, Examiner Hearing)

Application of Yates Petroleum Corporation for two compulsory poolings, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Yeso formation underlying two 40-acre proration units, the first being the SE/4 SE/4 and the second being the SW/4 SE/4 of Section 6, Township 19 South, Range 25 East, Penasco Draw Field, each unit to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the wells and a charge for risk involved in drilling said wells.

CASE 6882: Application of Amoco Production Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the W/2 of Section 1, Township 19 South, Range 25 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6883: Application of Amoco Production Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Indian Draw-Delaware Pool by the injection of water into the Delaware formation through its Old Indian Draw Unit Wells Nos. 4 located in Unit I of Section 18 and 11 located in Unit A of Section 19, both in Township 22 South, Range 28 East.

CASE 6884: Application of Supron Energy Corporation for compulsory pooling and a dual completion, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Mesaverde and Dakota formations underlying the N/2 of Section 4, Township 30 North, Range 11 West, to be dedicated to a proposed dual completion to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6885: Application of Supron Energy Corporation for compulsory pooling and a dual completion, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Mesaverde and Pictured Cliffs formations underlying the E/2 of Section 8, Township 25 North, Range 3 West, to be dedicated to a proposed dual completion to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6876: (Continued from April 23, 1980, Examiner Hearing)

Application of Maurice L. Brown Co. for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Vada-Pennsylvanian Pool underlying the SW/4 of Section 5, Township 9 South, Range 34 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6886: Application of Aminoil USA, Inc. for compulsory pooling and an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp and Pennsylvanian formations underlying the S/2 of Section 10, Township 24 South, Range 28 East, to be dedicated to a well to be drilled at an unorthodox location 2080 feet from the South line and 1773 feet from the East line of said Section 10. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6887: Application of General Crude Processing for an oil treating plant permit, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority for the construction and operation of an oil treating plant for the purpose of treating and reclaiming sediment oil at a site in the SE/4 SE/4 of Section 21, Township 30 North, Range 12 West.

CASE 6888: Application of Conoco Inc. for a non-standard gas proration unit and an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 120-acre non-standard Eumont gas proration unit comprising the S/2 SE/4 and NE/4 SE/4 of Section 12, Township 19 South, Range 36 East, to be dedicated to its State KN-12 Well No. 7 drilled at an unorthodox location 330 feet from the South line and 1650 feet from the East line of said Section 12.

CASE 6889: Application of Belco Petroleum Corporation for directional drilling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to directionally drill a well, the surface location of which is 1980 feet from the North line and 920 feet from the West line of Section 36, Township 22 South, Range 30 East, in such a manner as to bottom it at an unorthodox location within 100 feet of a point 1320 feet from the North line and 2640 feet from the West line of said Section 36 in the Morrow formation, the N/2 of said Section 36 to be dedicated to the well.

CASE 6861: (Continued from April 23, 1980, Examiner Hearing)

Application of Zia Energy, Inc. for pool creation, special pool rules, and an NGPA determination, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new San Andres oil pool for its State "C" Well No. 1 located in Unit F of Section 17, Township 22 South, Range 37 East, and special rules therefor, including a provision for a limiting gas-oil ratio of 10,000 to 1. Applicant further seeks a new onshore reservoir determination for said State "C" Well No. 1.

CASE 6890: Application of Tenneco Oil Company for a thermal enhanced recovery project, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks authority to initiate a pilot in situ combustion enhanced recovery project in the South Hospah Upper Sand and South Hospah Lower Sand Oil Pools by the completion of an injection/ignition well at a point 1474 feet from the North line and 2725 feet from the East line of Section 12, Township 17 North, Range 9 West, and by the drilling of up to six producing wells, all at unorthodox locations in close proximity to the injection/ignition well, and all located in Units F or G of said Section 12.

Dockets Nos. 13-80 and 14-80 are tentatively set for May 7 and 21, 1980. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - APRIL 23, 1980

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:

CASE 6803: (Continued from February 13, 1980, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Division on its own motion to permit EPROC Associates, Hartford Accident and Indemnity Company, and all other interested parties to appear and show cause why its Monsanto State H Well No. 1 located in Unit E of Section 2, Township 30 North, Range 16 West, San Juan County, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6866: In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Hare and McCoy and all other interested parties to appear and show cause why the H. L. Hare Well No. 2 located in Unit B of Section 23, Township 29 North, Range 11 West, San Juan County, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6867: In the matter of the hearing called by the Oil Conservation Division on its own motion to permit all interested parties to appear and show cause why the following abandoned wells drilled by unknown party or parties and located in Township 29 North, Range 11 West, San Juan County, should not be plugged and abandoned in accordance with a Division-approved plugging program: a well in the SW/4 of Section 24, a well in the SE/4 of Section 22, and a well in the SE/4 of Section 28.

CASE 6850: (Continued from April 9, 1980, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Jack F. Grimm, N. B. Hunt, George R. Brown, Am-Arctic, Ltd., The Travelers Indemnity Company, and all other interested parties to appear and show cause why the Mobil 32 Well No. 1 located in Unit D of Section 32, Township 25 South, Range 1 East, Dona Ana County, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6870: Application of Bass Enterprises Production Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Bass State 36 Well No. 1 located in Unit E of Section 36, Township 15 South, Range 34 East, to produce oil from the Townsend-Wolfcamp Pool and gas from an undesignated Morrow pool thru the tubing and casing-tubing annulus, respectively, by means of a cross-over assembly.

CASE 6871: Application of Bass Enterprises Production Company to amend Order No. R-5693, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks to amend Order No. R-5693 to remove the restriction as to the time limit in which salt water may be disposed into Big Eddy Unit Well No. 56 located in Unit G of Section 35, Township 21 South, Range 28 East.

CASE 6872: Application of Amoco Production Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its State "HQ" Well No. 1 located in Unit P of Section 26, Township 18 South, Range 34 East, Airstrip Field, to produce Bone Springs and Wolfcamp oil thru parallel strings of tubing.

CASE 6873: Application of Harvey E. Yates Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Travis Deep Well No. 5, a Morrow test to be drilled 660 feet from the South line and 1650 feet from the East line of Section 12, Township 18 South, Range 28 East, the S/2 of said Section 12 to be dedicated to the well.

CASE 6874: Application of HNG Oil Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the E/2 of Section 6, Township 22 South, Range 35 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6853: (Continued from April 9, 1980, Examiner Hearing)

Application of Caribou Four Corners, Inc. for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Cha Cha-Gallup Pool underlying the N/2 NE/4 of Section 18, Township 29 North, Range 14 West, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6875: Application of Maurice L. Brown Co. for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the San Andres formation underlying the SE/4 NW/4 of Section 4, Township 9 South, Range 34 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6876: Application of Maurice L. Brown Co. for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Vada-Pennsylvanian Pool underlying the SW/4 of Section 5, Township 9 South, Range 34 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6467: (Reopened and Readvertised)

In the matter of Case 6467 being reopened pursuant to the provisions of Order No. R-5958 which order created the Grama Ridge-Bone Spring Pool in Lea County with temporary special rules therefor providing for 160-acre spacing. All interested parties may appear and show cause why the Grama Ridge-Bone Spring Pool should not be developed on 40-acre spacing units.

CASE 6877: Application of Florida Exploration Company for compulsory pooling and unorthodox well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp thru Ellenburger formations underlying the N/2 of Section 11, Township 25 South, Range 35 East, to be dedicated to a well to be drilled at an unorthodox location 1200 feet from the North and West lines of said Section 11. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6878: Application of Stevens Oil Company for a non-standard gas proration unit, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard gas proration unit comprising the N/2 SW/4 and S/2 NW/4 of Section 25, Township 8 South, Range 28 East, Twin Lakes-San Andres Associated Pool, to be dedicated to its O'Brien "F" Well No. 4 located in Unit K of said Section 25.

CASE 6879: Application of Jake L. Hamon for a tubingless completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to produce his Amerada Federal Well No. 2 located in Unit F of Section 17, Township 20 South, Range 36 East, North Osudo-Morrow Gas Pool, thru 4 1/2-inch drill pipe cemented in the hole.

CASE 6861: (Continued from April 9, 1980, Examiner Hearing)

Application of Zia Energy, Inc. for pool creation, special pool rules, and an NGPA determination, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new San Andres oil pool for its State "C" Well No. 1 located in Unit F of Section 17, Township 22 South, Range 37 East, and special rules therefor, including a provision for a limiting gas-oil ratio of 10,000 to 1. Applicant further seeks a new onshore reservoir determination for said State "C" Well No. 1.

CASE 6837: (Continued from April 9, 1980, Examiner Hearing)

Application of Curtis Little for compulsory pooling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Dakota formation underlying the W/2 of Section 7, Township 25 North, Range 3 West, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6487: (Continued from February 13, 1980, Examiner Hearing)

Application of El Paso Natural Gas Company for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Shell E State Com Well No. 2 located in Unit N of Section 6, Township 21 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6868: In the matter of the hearing called by the Oil Conservation Division on its own motion for an order contracting and extending certain pools in San Juan, Rio Arriba, Sandoval, and McKinley Counties, New Mexico:

(a) CONTRACT the Bisti-Farmington Pool in San Juan County, New Mexico, by deleting:

TOWNSHIP 26 NORTH, RANGE 12 WEST, NMPM
Section 20: W/2

(b) CONTRACT the Blanco-Pictured Cliffs Pool in San Juan and Rio Arriba Counties, New Mexico, by deleting:

TOWNSHIP 30 NORTH, RANGE 10 WEST, NMPM
Section 35: NW/4

(c) EXTEND the Albino-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 32 NORTH, RANGE 8 WEST, NMPM
Section 24: W/2
Section 25: W/2
Section 26: SE/4
Section 36: W/2

(d) EXTEND the Aztec-Fruitland Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 10 WEST, NMPM
Section 17: S/2

(e) EXTEND the Aztec-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 9 WEST, NMPM
Section 34: NW/4

TOWNSHIP 30 NORTH, RANGE 10 WEST, NMPM
Section 6: SE/4

TOWNSHIP 31 NORTH, RANGE 11 WEST, NMPM
Section 7: SW/4
Section 17: S/2

TOWNSHIP 31 NORTH, RANGE 12 WEST, NMPM
Section 23: NE/4

(f) EXTEND the Ballard-Pictured Cliffs Pool in Rio Arriba, Sandoval, and San Juan Counties, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 8 WEST, NMPM
Section 15: NW/4

(g) EXTEND the Bisti-Farmington Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 12 WEST, NMPM
Section 29: S/2
Section 30: SE/4 and W/2

(h) EXTEND the Bisti-Lower Gallup Oil Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 25 NORTH, RANGE 12 WEST, NMPM
Section 22: NW/4

(i) EXTEND the Blanco-Fruitland Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 9 WEST, NMPM
Section 1: SW/4
Section 2: SE/4

TOWNSHIP 30 NORTH, RANGE 9 WEST, NMPM
Section 10: SW/4
Section 16: NW/4

(j) EXTEND the Blanco Mesaverde Pool in Rio Arriba and San Juan Counties, New Mexico, to include therein:

TOWNSHIP 25 NORTH, RANGE 3 WEST, NMPM
Section 3: N/2
Section 5: N/2
Section 6: All
Section 7: All
Section 8: W/2

TOWNSHIP 26 NORTH, RANGE 2 WEST, NMPM
Section 4: All

TOWNSHIP 27 NORTH, RANGE 2 WEST, NMPM
Section 17: E/2

(k) EXTEND the Blanco-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 8 WEST, NMPM
Section 10: NE/4 and S/2

TOWNSHIP 29 NORTH, RANGE 9 WEST, NMPM
Section 20: NE/4

TOWNSHIP 30 NORTH, RANGE 8 WEST, NMPM
Section 19: All
Section 29: NW/4
Section 30: N/2

TOWNSHIP 30 NORTH, RANGE 9 WEST, NMPM
Section 10: SW/4
Section 24: E/2

TOWNSHIP 30 NORTH, RANGE 10 WEST, NMPM
Section 8: NW/4

TOWNSHIP 31 NORTH, RANGE 9 WEST, NMPM
Section 7: NE/4
Section 19: NW/4

TOWNSHIP 31 NORTH, RANGE 10 WEST, NMPM
Section 24: E/2 and SW/4

TOWNSHIP 31 NORTH, RANGE 11 WEST, NMPM
Section 15: SW/4
Section 18: NE/4
Section 21: NE/4
Section 22: NE/4

TOWNSHIP 31 NORTH, RANGE 12 WEST, NMPM
Section 1: N/2

TOWNSHIP 32 NORTH, RANGE 10 WEST, NMPM
Section 33: S/2

TOWNSHIP 32 NORTH, RANGE 12 WEST, NMPM
Section 10: E/2
Section 11: All
Section 13: SW/4
Section 14: All
Section 24: NW/4
Section 25: N/2
Section 26: NE/4
Section 35: E/2 and SW/4

(l) EXTEND the South Blanco-Pictured Cliffs Pool in Rio Arriba, San Juan, and Sandoval Counties, New Mexico, to include therein:

TOWNSHIP 23 NORTH, RANGE 1 WEST, NMPM
Section 19: E/2
Section 30: NE/4

TOWNSHIP 23 NORTH, RANGE 2 WEST, NMPM
Section 26: NE/4

TOWNSHIP 24 NORTH, RANGE 3 WEST, NMPM
Section 36: NW/4

TOWNSHIP 27 NORTH, RANGE 7 WEST, NMPM
Section 12: SE/4

TOWNSHIP 28 NORTH, RANGE 6 WEST, NMPM
Section 34: NE/4

(m) EXTEND the East Blanco-Pictured Cliffs Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 30 NORTH, RANGE 4 WEST, NMPM
Section 4: W/2

TOWNSHIP 31 NORTH, RANGE 4 WEST, NMPM
Section 33: SW/4

(n) EXTEND the Bloomfield-Farmington Oil Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 11 WEST, NMPM
Section 25: SE/4

(o) EXTEND the Campo-Gallup Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 4 WEST, NMPM
Section 12: SE/4
Section 13: NE/4

(p) EXTEND the Cha Cha-Gallup Oil Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 14 WEST, NMPM
Section 18: N/2 SW/4 and NW/4 SE/4

TOWNSHIP 29 NORTH, RANGE 15 WEST, NMPM
Section 13: NE/4 and N/2 SE/4

(q) EXTEND the Chacon-Dakota Associated Pool in Rio Arriba and Sandoval Counties, New Mexico, to include therein:

TOWNSHIP 23 NORTH, RANGE 3 WEST, NMPM
Section 25: NW/4
Section 26: NE/4
Section 34: SW/4
Section 35: NE/4
Section 36: NW/4

TOWNSHIP 24 NORTH, RANGE 3 WEST, NMPM
Section 20: E/2
Section 34: NW/4

(r) EXTEND the Chora Mesa-Pictured Cliffs Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 28 NORTH, RANGE 3 WEST, NMPM
Section 19: S/2
Section 30: N/2

TOWNSHIP 28 NORTH, RANGE 4 WEST, NMPM
Section 9: E/2
Section 10: All
Section 16: E/2
Section 21: NE/4

(s) EXTEND the Escrito-Gallup Oil Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 24 NORTH, RANGE 7 WEST, NMPM
Section 21: SW/4

(t) EXTEND the Fulcher Kutz-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 11 WEST, NMPM
Section 25: SE/4
Section 36: NE/4 and S/2

(u) EXTEND the Gobernador-Pictured Cliffs Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 5 WEST, NMPM
Section 4: N/2 and SE/4
Section 5: N/2
Section 6: N/2
Section 15: S/2
Section 23: NW/4 and SE/4
Section 25: NW/4

TOWNSHIP 29 NORTH, RANGE 6 WEST, NMPM
Section 1: NE/4

TOWNSHIP 30 NORTH, RANGE 5 WEST, NMPM
Section 31: SW/4

(v) EXTEND the Harper Hill Fruitland-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 30 NORTH, RANGE 14 WEST, NMPM
Section 27: SE/4
Section 34: NE/4
Section 35: SW/4

(w) EXTEND the Harris Mesa-Chacra Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 27 NORTH, RANGE 9 WEST, NMPM
Section 11: S/2
Section 12: SW/4
Section 13: N/2
Section 14: NE/4

(x) EXTEND the West Kutz-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 13 WEST, NMPM
Section 24: S/2

(y) EXTEND the Largo-Chacra Pool in Rio Arriba and San Juan Counties, New Mexico, to include therein:

TOWNSHIP 27 NORTH, RANGE 7 WEST, NMPM
Section 28: SE/4

(z) EXTEND the South Lindrith Gallup-Dakota Oil Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 24 NORTH, RANGE 4 WEST, NMPM
Section 21: SW/4
Section 27: N/2

(aa) EXTEND the West Lindrith Gallup-Dakota Oil Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 24 NORTH, RANGE 3 WEST, NMPM
Section 17: NW/4

TOWNSHIP 24 NORTH, RANGE 4 WEST, NMPM
Section 3: SW/4
Section 5: S/2
Section 6: S/2
Section 7: N/2 and SW/4
Section 8: N/2
Section 11: SW/4
Section 14: NE/4
Section 24: SW/4

TOWNSHIP 25 NORTH, RANGE 4 WEST, NMPM
Section 23: NW/4
Section 30: SW/4
Section 31: SE/4

(bb) EXTEND the South Los Pinos Fruitland-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 31 NORTH, RANGE 7 WEST, NMPM
Section 1: W/2
Section 10: SE/4
Section 11: N/2

TOWNSHIP 32 NORTH, RANGE 7 WEST, NMPM
Section 26: SE/4
Section 34: SE/4

(cc) EXTEND the Otero-Chacra Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 7 WEST, NMPM
Section 23: N/2
Section 25: N/2 and SE/4

(dd) EXTEND the Otero-Gallup Oil Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 24 NORTH, RANGE 5 WEST, NMPM
Section 2: N/2 NW/4

TOWNSHIP 25 NORTH, RANGE 5 WEST, NMPM
Section 22: NE/4
Section 23: NW/4
Section 34: W/2 SW/4 and SE/4
Section 35: SW/4 SW/4

(ee) EXTEND the Rusty-Chacra Pool in Sandoval County, New Mexico, to include therein:

TOWNSHIP 22 NORTH, RANGE 6 WEST, NMPM
Section 18: SW/4
Section 19: All
Section 20: SW/4
Section 28: NW/4
Section 29: N/2
Section 30: NE/4

TOWNSHIP 22 NORTH, RANGE 7 WEST, NMPM
Section 10: S/2
Section 11: SW/4
Section 14: W/2
Section 15: SE/4
Section 20: NE/4

(ff) EXTEND the Star-Mesaverde Oil Pool in McKinley County, New Mexico, to include therein:

TOWNSHIP 19 NORTH, RANGE 6 WEST, NMPM
Section 16: N/2 NE/4

(gg) EXTEND the Ute Dome-Dakota Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 32 NORTH, RANGE 14 WEST, NMPM
Section 25: W/2

(hh) EXTEND the WAW Fruitland-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 12 WEST, NMPM
Section 19: S/2 and NW/4
Section 30: NW/4
Section 31: NE/4
Section 36: NW/4

TOWNSHIP 26 NORTH, RANGE 13 WEST, NMPM
Section 2: S/2
Section 3: S/2
Section 9: NE/4
Section 10: N/2
Section 11: All
Section 12: W/2
Section 13: NW/4
Section 14: N/2
Section 24: E/2

TOWNSHIP 27 NORTH, RANGE 13 WEST, NMPM
Section 7: W/2 and SE/4
Section 17: W/2 and SE/4
Section 20: E/2
Section 21: W/2
Section 28: All

CASE 6869: In the matter of the hearing called by the Oil Conservation Division on its own motion for an order creating, contracting and extending the vertical and horizontal limits of certain pools in Chaves, Eddy, Lea, and Roosevelt Counties, New Mexico:

(a) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Wolfcamp production and designated as the East Anderson Ranch-Wolfcamp Pool. The discovery well is Holly Energy, Inc. Pogo State Well No. 1 located in Unit H of Section 19, Township 16 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 16 SOUTH, RANGE 33 EAST, NMPM
Section 19: NE/4

(b) CREATE a new pool in Chaves County, New Mexico, classified as an oil pool for San Andres production and designated as the Bull's Eye-San Andres Pool. The discovery well is Ralph Nix Union Happy Well No. 1 located in Unit O of Section 1, Township 8 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 8 SOUTH, RANGE 28 EAST, NMPM
Section 1: SE/4 and S/2 NE/4
Section 12: NE/4

TOWNSHIP 8 SOUTH, RANGE 29 EAST, NMPM
Section 6: W/2 SW/4
Section 7: W/2 NW/4

(c) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for San Andres Production and designated as the Cary-San Andres Pool. The discovery well is Zia Energy, Inc. State C Well No. 1 located in Unit F of Section 17, Township 22 South, Range 37 East, NMPM. Said pool would comprise:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
Section 17: NW/4

(d) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Grayburg production and designated as the Diamond Mound-Grayburg Gas Pool. The discovery well is Mesa Petroleum Company Sink Federal Well No. 1 located in Unit I of Section 9, Township 16 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSHIP 16 SOUTH, RANGE 27 EAST, NMPM
Section 9: SE/4

(e) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the Diamond Mound-Morrow Gas Pool. The discovery well is Mesa Petroleum Company Derrick Federal Com Well No. 1 located in Unit K of Section 5, Township 16 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 16 SOUTH, RANGE 28 EAST, NMPM
Section 5: Lots 3, 4, 5, 6, 11, 12, 13, and 14

(f) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Abo production and designated as the Gopher-Abo Gas Pool. The discovery well is Mesa Petroleum Company Catclaw State Well No. 1 located in Unit G of Section 31, Township 17 South, Range 24 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 24 EAST, NMPM
Section 31: NE/4

(g) CREATE a new pool in Eddy County, New Mexico, classified as an oil pool for Upper Pennsylvanian production and designated as the Grayburg-Upper Pennsylvanian Pool. The discovery well is Depco, Inc. Conoco State Well No. 1 located in Unit K of Section 15, Township 17 South, Range 29 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 29 EAST, NMPM
Section 15: SW/4

(h) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Drinkard production and designated as the Hardy-Drinkard Pool. The discovery well is Amoco Production Company State C Tr. 11 Well No. 11 located in Unit X of Section 2, Township 21 South, Range 36 East, NMPM. Said pool would comprise:

TOWNSHIP 21 SOUTH, RANGE 36 EAST, NMPM
Section 2: SE/4
Section 11: NE/4

(i) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Atoka production and designated as the Logan Draw-Atoka Gas Pool. The discovery well is Mesa Petroleum Company Maralo Federal Com Well No. 1 located in Unit L of Section 22, Township 17 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 27 EAST, NMPM
Section 22: W/2

(j) CREATE a new pool in Chaves County, New Mexico, classified as an oil pool for Queen production and designated as the Rabbit Flats-Queen Pool. The discovery well is Rapid Company, Inc. Copelan State Well No. 1 located in Unit C of Section 31, Township 10 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSHIP 10 SOUTH, RANGE 27 EAST, NMPM
Section 31: NE/4 NW/4 and N/2 NE/4

(k) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Wolfcamp production and designated as the Ross Draw-Wolfcamp Gas Pool. The discovery well is Florida Gas Exploration Company Ross Draw Unit Well No. 7 located in Unit J of Section 26, Township 26 South, Range 30 East, NMPM. Said pool would comprise:

TOWNSHIP 26 SOUTH, RANGE 30 EAST, NMPM
Section 26: S/2
Section 27: All

(l) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the Sand Point-Morrow Gas Pool. The discovery well is Perry R. Bass Big Eddy Unit Well No. 72 located in Unit R of Section 3, Township 21 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 21 SOUTH, RANGE 28 EAST, NMPM
Section 3: S/2

(m) CREATE a new pool in Chaves County, New Mexico, classified as a gas pool for Mississippian production and designated as the Sand Ranch-Mississippian Gas Pool. The discovery well is MGF Oil Corporation Bikar Federal Well No. 1 located in Unit G of Section 14, Township 10 South, Range 29 East, NMPM. Said pool would comprise:

TOWNSHIP 10 SOUTH, RANGE 29 EAST, NMPM
Section 14: N/2

(n) CREATE a new pool in Chaves County, New Mexico, classified as an oil pool for San Andres production and designated as the North Tom Tom-San Andres Pool. The discovery well is NRM Petroleum Corporation Mooney Well No. 1 located in Unit A of Section 17, Township 7 South, Range 31 East, NMPM. Said pool would comprise:

TOWNSHIP 7 SOUTH, RANGE 31 EAST, NMPM
Section 17: NE/4

(o) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Bone Springs production and designated as the Tonto-Bone Springs Pool. The discovery well is Amoco Production Company Nellis A Federal Well No. 1 located in Unit E of Section 8, Township 19 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 19 SOUTH, RANGE 33 EAST, NMPM
Section 8: NW/4

(p) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Mississippian production and designated as the Townsend-Mississippian Gas Pool. The discovery well is Allen K. Trobaugh Eidson Com Well No. 1 located in Unit G of Section 28, Township 16 South, Range 35 East, NMPM. Said pool would comprise:

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM
Section 28: NE/4

(q) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Fusselman production and designated as the Wantz-Fusselman Pool. The discovery well is N. B. Hunt Mittie Weatherly Well No. 8 located in Unit G of Section 21, Township 21 South, Range 37 East, NMPM. Said pool would comprise:

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM
Section 21: NE/4

(r) EXTEND the Airstrip-Lower Bone Springs Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM
Section 23: NW/4

(s) EXTEND the West Arkansas Junction-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 36 EAST, NMPM
Section 28: NW/4

(t) EXTEND the Avalon-Atoka Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 26 EAST, NMPM
Section 5: S/2

(u) EXTEND the Bar U-Pennsylvanian Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 33 EAST, NMPM
Section 31: N/2

(v) EXTEND the Blinebry Oil and Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM
Section 20: NE/4

(w) EXTEND the Boyd-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 25 EAST, NMPM
Section 11: All

(x) EXTEND the East Caprock-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 12 SOUTH, RANGE 32 EAST, NMPM
Section 14: SW/4
Section 23: W/2

(y) CONTRACT the horizontal limits of the Cato-San Andres Pool in Chaves County, New Mexico, by the deletion of the following described area:

TOWNSHIP 8 SOUTH, RANGE 31 EAST, NMPM
Section 5: NW/4

and EXTEND the horizontal limits of said pool to include therein:

TOWNSHIP 8 SOUTH, RANGE 30 EAST, NMPM
Section 4: SE/4

(z) EXTEND the Chaveroo-San Andres Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 7 SOUTH, RANGE 32 EAST, NMPM
Section 34: NW/4

(aa) EXTEND the Comanche Stateline Tansill-Yates Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 26 SOUTH, RANGE 36 EAST, NMPM
Section 21: NW/4

(bb) EXTEND the South Culebra Bluff-Bone Springs Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 28 EAST, NMPM
Section 22: NE/4
Section 23: NW/4

(cc) EXTEND the Custer-Devonian Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 36 EAST, NMPM
Section 25: W/2

(dd) EXTEND the Double L-Queen Associated Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 29 EAST, NMPM
Section 1: W/2, SW/4 NE/4 and W/2 SE/4

(ee) EXTEND the Eagle Creek Permo-Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 25 EAST, NMPM
Section 3: All

(ff) EXTEND the South Eunice-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
Section 10: SE/4

(gg) EXTEND the East Gem-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 33 EAST, NMPM
Section 26: S/2

(hh) EXTEND the East Grama Ridge-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 34 EAST, NMPM
Section 1: W/2

(ii) EXTEND the Grama Ridge-Wolfcamp Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 34 EAST, NMPM
Section 36: N/2 and SE/4

(jj) EXTEND the Hobbs-Drinkard Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 38 EAST, NMPM
Section 34: W/2

TOWNSHIP 19 SOUTH, RANGE 38 EAST, NMPM
Section 3: NW/4

(kk) EXTEND the Jalmat Yates-Seven Rivers Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 36 EAST, NMPM
Section 28: S/2 NW/4

(ll) EXTEND the Justis-Paddock Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 25 SOUTH, RANGE 37 EAST, NMPM
Section 25: S/2

TOWNSHIP 25 SOUTH, RANGE 38 EAST, NMPM
Section 30: SW/4

(mm) EXTEND the Langley-Devonian Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 36 EAST, NMPM
Section 17: S/2
Section 28: N/2

(nn) EXTEND the Langley-Ellenburger Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 36 EAST, NMPM
Section 17: S/2

(oo) EXTEND the Leamex-Wolfcamp Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 33 EAST, NMPM
Section 21: N/2 N/2

(pp) EXTEND the Logan Draw-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 27 EAST, NMPM
Section 20: All
Section 21: S/2
Section 28: E/2
Section 33: E/2

(qq) EXTEND the Northeast Lovington-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM
Section 18: NE/4

(rr) EXTEND the Parkway-Strawn Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 29 EAST, NMPM
Section 25: SW/4

(ss) EXTEND the West Parkway-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 29 EAST, NMPM
Section 21: S/2
Section 22: All

(tt) EXTEND the South Peterson-Fusselman Pool in Roosevelt County, New Mexico, to include therein:

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

(uu) EXTEND the North Quail Ridge-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 33 EAST, NMPM
Section 12: E/2

TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM
Section 7: W/2

(vv) EXTEND the South Salt Lake-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 32 EAST, NMPM
Section 25: SW/4
Section 36: NW/4

(ww) EXTEND the Scoggin Draw-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 27 EAST, NMPM
Section 3: E/2
Section 10: E/2

(xx) EXTEND the Shugart Yates-Seven Rivers Queen-Grayburg Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 30 EAST, NMPM
Section 35: N/2 NE/4

(yy) EXTEND the vertical limits of the Sioux-Yates Pool in Lea County, New Mexico, to include the Tansill formation and redesignate said pool as the Sioux Tansill-Yates Pool, and extend the horizontal limits of said pool to include therein:

TOWNSHIP 26 SOUTH, RANGE 36 EAST, NMPM
Section 16: N/2 and SE/4

(zz) EXTEND the Tom-Tom San Andres Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 7 SOUTH, RANGE 31 EAST, NMPM
Section 25: NW/4
Section 26: SE/4
Section 28: SW/4

TOWNSHIP 8 SOUTH, RANGE 31 EAST, NMPM
Section 5: NW/4 and N/2 SW/4

(aaa) EXTEND the West Tonto-Pennsylvanian Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 33 EAST, NMPM
Section 18: NE/4

(bbb) EXTEND the Turkey Track-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 29 EAST, NMPM
Section 11: All
Section 14: E/2

(ccc) EXTEND the North Turkey Track-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 29 EAST, NMPM
Section 27: S/2

(ddd) EXTEND the Warren-Tubb Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM
Section 20: NE/4

(eee) EXTEND the White Ranch-Mississippian Gas Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 11 SOUTH, RANGE 29 EAST, NMPM
Section 34: E/2

(fff) EXTEND the Wilson-Strawn Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 34 EAST, NMPM
Section 12: SE/4
Section 13: NE/4

Dockets Nos. 12-80 and 13-80 are tentatively set for April 23 and May 7, 1980. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - APRIL 9, 1980

9 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Richard L. Stamets, Alternate Examiner:

CASE 6850: In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Jack F. Grimm, N. B. Hunt, George R. Brown, Am-Arctic, Ltd., The Travelers Indemnity Company, and all other interested parties to appear and show cause why the Mobil 32 Well No. 1 located in Unit D of Section 32, Township 25 South, Range 1 East, Dona Ana County, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6851: In the matter of the hearing called by the Oil Conservation Division on its own motion to consider amendments to its SPECIAL RULES FOR APPLICATIONS FOR WELLHEAD PRICE CEILING CATEGORY DETERMINATIONS as promulgated by Division Order No. R-5878 and amended by R-5878-A. The proposed amendments would make said SPECIAL RULES conform to FERC Order No. 65 which promulgated final regulations implementing filing requirements of the Natural Gas Policy Act of 1978.

CASE 6852: In the matter of the hearing called by the Oil Conservation Division on its own motion to consider special rules and procedures for the designation of "tight formations" or "tight sands" as outlined in the FERC interim rules and regulations issued February 20, 1980, relating to Section 107(b) of the Natural Gas Policy Act of 1978.

CASE 6853: Application of Caribou Four Corners, Inc. for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Cha Cha-Gallup Pool underlying the N/2 NE/4 of Section 18, Township 29 North, Range 14 West, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6854: Application of Jack A. Cole for an unorthodox gas well location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of his Apache Hills Well No. 6, 1326 feet from the North line and 1843 feet from the West line of Section 17, Township 23 North, Range 3 West, Ballard-Pictured Cliffs Pool, the NW/4 of said Section 17 to be dedicated to the well.

CASE 6841: (Continued from March 26, 1980, Examiner Hearing)

Application of CIG Exploration, Inc. for two non-standard gas proration units, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of two non-standard gas proration units in Township 16 South, Range 28 East, the first being 219.6 acres comprising Lots 1 thru 8 of Section 1 and the second being 219.92 acres comprising Lots 1 thru 8 of Section 2, for the Wolfcamp, Pennsylvanian, and Mississippian formations, each unit to be dedicated to a well to be drilled at a standard location thereon.

CASE 6855: Application of Dome Petroleum Corporation for an unorthodox well location, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Santa Fe 3 Well No. 1 to be drilled 1220 feet from the North line and 900 feet from the West line of Section 3, Township 21 North, Range 10 West.

CASE 6856: Application of Texaco Inc. for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Blinebry, Tubb-Drinkard, and Fusselman production in the wellbore of its B. T. Phillips "B" Federal NCT-2 Well No. 6 located in Unit H of Section 34, Township 24 South, Range 37 East, Justis Field.

CASE 6857: Application of Holly Energy, Inc. for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its State 14 Well No. 1, a Morrow test to be drilled 660 feet from the South line and 990 feet from the East line of Section 14, Township 18 South, Range 28 East, the S/2 of said Section 14 to be dedicated to the well.

CASE 6843: (Continued from March 26, 1980, Examiner Hearing)

Application of Yates Petroleum Corporation for two compulsory poolings, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Yeso formation underlying two 40-acre proration units, the first being the SE/4 SE/4 and the second being the SW/4 SE/4 of Section 6, Township 19 South, Range 25 East, Penasco Draw Field, each unit to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the wells and a charge for risk involved in drilling said wells.

CASE 6858: Application of H. L. Brown, Jr. for gas well commingling, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Bluitt-Wolfcamp gas and condensate production from ten federal wells located as follows: Units K and P of Section 33 and L of 34, Township 7 South, Range 37 East; Units D and L of Section 3, C and J of 4, I of 5, C of 9 and G of 10; and one fee well in D of 10, all in Township 8 South, Range 37 East. Applicant would separate and meter the gas and condensate production from each well, then recombine the well's stream and commingle all wells into a small gasoline plant. Allocation of gas and condensate to each well would be on the basis of wellhead meter readings and allocation of gasoline plant production would be on the basis of gas production and BTU content at each well.

CASE 6859: Application of R & G Drilling Company for an unorthodox gas well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 1890 feet from the North line and 1830 feet from the East line of Section 28, Township 28 North, Range 11 West, Kutz-Fruitland Pool, the NE/4 of said Section 28 to be dedicated to the well.

CASE 6860: Application of Flag-Redfern Oil Company for an exception to Order No. R-3221, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221 to permit disposal of produced brine into an unlined surface pit located in Unit P of Section 3, Township 19 South, Range 31 East.

CASE 6861: Application of Zia Energy, Inc. for pool creation, special pool rules, and an NGPA determination, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new San Andres oil pool for its State "C" Well No. 1 located in Unit F of Section 17, Township 22 South, Range 37 East, and special rules therefor, including a provision for a limiting gas-oil ratio of 10,000 to 1. Applicant further seeks a new onshore reservoir determination for said State "C" Well No. 1.

CASE 6837: (Continued from March 26, 1980, Examiner Hearing)

Application of Curtis Little for compulsory pooling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Dakota formation underlying the W/2 of Section 7, Township 25 North, Range 3 West, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6862: Application of ARCO Oil and Gas Company for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its State 157 "D" Well No. 11 drilled 2123 feet from the South line and 1044 feet from the East line of Section 12, Township 22 South, Range 36 East, Drinkard Pool, the NW/4 SE/4 of said Section 12 to be dedicated to the well.

CASE 6863: Application of Bass Enterprises Production Co. for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Big Eddy Unit Well No. 72 located in Unit H of Section 3, Township 21 South, Range 28 East, to produce undesignated Atoka and Morrow gas thru parallel strings of tubing.

CASE 6864: Application of Grace Petroleum Corporation for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Smith Ranch Well No. 11, to be drilled 1980 feet from the North line and 660 feet from the West line of Section 11, Township 20 South, Range 33 East, Teas-Penn Gas Pool, the N/2 of said Section 11 to be dedicated to the well.

Docket No. 9-80

CASE 6846: (Amended)

In the matter of Case No. 6846 being amended to reflect that the location for the unorthodox location of the well on the second unit is 330 feet from the North line and 2310 feet from the East line of Section 13, Township 21 South, Range 36 East, Lea County.

CASE 6846: (Continued from March 26, 1980, Examiner Hearing)

Application of Doyle Hartman for two compulsory poolings, two non-standard gas proration units, and two unorthodox well locations, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Eumont Gas Pool underlying two 80-acre non-standard gas proration units, the first being the S/2 NE/4 of Section 13, Township 21 South, Range 36 East, to be dedicated to a well to be drilled at an unorthodox location 1650 feet from the North line and 2310 feet from the East line of said Section 13, and the second being the N/2 NE/4 of said Section 13 to be dedicated to a well to be drilled at an unorthodox location 330 feet from the North line and 2310 feet from the East line of said Section 13. Also to be considered will be the cost of drilling and completing said wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the wells and a charge for risk involved in drilling said wells.

CASE 6865: Application of Getty Oil Company to reopen Case No. 6608, Lea County, New Mexico. Applicant, in the above-styled cause, seeks to reopen Case No. 6608 for consideration of the establishment of maximum efficient rates of withdrawal from the Grama Ridge-Wolfcamp Gas Pool.

****

Docket No. 10-80

DOCKET: EXAMINER HEARING - WEDNESDAY - APRIL 16, 1980

8:45 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard befor Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

ALLOWABLE: (1) Consideration of the allowable production of gas for May, 1980, from fifteen prorated pools in Lea, Eddy, and Chaves Counties, New Mexico.

(2) Consideration of the allowable production of gas for May, 1980, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

****

Docket No. 11-80

DOCKET: COMMISSION HEARING - WEDNESDAY - APRIL 16, 1980

OIL CONSERVATION COMMISSION - 9 A.M. - ROOM 205
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

CASE 6609: (DE NOVO) (Continued from March 11, 1980, Commission Hearing)

Application of Napeco Inc. for pool creation and special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Strawn oil pool for its Benson Deep Unit Well No. 1 located in Unit O of Section 33, Township 18 South, Range 30 East, and special rules therefor, including 160-acre spacing and standard well locations.

Upon application of Yates Petroleum Corporation and Napeco Inc. this case will be heard De Novo pursuant to the provisions of Rule 1220. Applicants allege this is not an "oil" pool but is a "volatile" oil pool.

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ATTORNEYS AT LAW
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P. O. BOX 1769
SANTA FE, NEW MEXICO 87501

TELEPHONE 983-4285
AREA CODE 505

JASON W. KELLAHIN
W. THOMAS KELLAHIN
KAREN AUBREY

RECEIVED
MAR 13 1980
OIL CONSERVATION DIVISION
SANTA FE

March 10, 1980

Mr. Joe D. Ramey
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Case 6861

re: Zia Energy, Inc.

Dear Joe:

I would appreciate you setting the enclosed Application for hearing on April 9, 1980.

Very truly yours,

W. Thomas Kellahin

cc: Farris Nelson
encl.
WTK:msf

COPY

KELLAHIN and KELLAHIN
ATTORNEYS AT LAW
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SANTA FE, NEW MEXICO 87501

JASON W. KELLAHIN
W. THOMAS KELLAHIN
KAREN AUBREY

TELEPHONE 982-4285
AREA CODE 505

March 10, 1980

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Very truly yours,

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STATE OF NEW MEXICO

DEPARTMENT OF ENERGY AND MINERALS

OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION OF ZIA ENERGY, INC., FOR NGPA NEW ONSHORE RESERVOIR DETERMINATION; FOR CREATION OF A NEW POOL; AND FOR SPECIAL POOL RULES, INCLUDING A SPECIAL GOR LIMITATION OF 10,000-1, LEA COUNTY, NEW MEXICO.

No. 6861

APPLICATION

COMES NOW ZIA ENERGY, INC., and applies to the New Mexico Oil Conservation Division for New Onshore Reservoir Determination, for the creation of a new pool for San Andres production with special pool rules providing for a gas-oil ratio of 10,000 to 1 for its Zia Energy, Inc. State "C" Well No. 1, located in Unit F, Section 17, T22S, R37E, NMPM, Lea County, New Mexico, and in support thereof would show:

1. That Applicant has recompleted its State "C" Well No. 1, 1981.5 feet from the west line and 1980 feet from the north line of Section 17, T22S, R37E, NMPM.

2. That Applicant has dedicated the Se/4NW/4 of said Section to the well.

3. That Applicant requests a hearing to determine that the San Andres production from the subject well constitutes a new onshore reservoir pursuant to Section 102 of the Natural Gas Policy Act, and the appropriate advertisement for such findings and hearing.

4. That Applicant further seeks the creation of a new pool for the San Andres production including a provision for a gas-oil ratio of 10,000 to 1.

5. That the Application is in the best interests of conservation, the prevention of waste, and the protection of correlative rights.

WHEREFORE, Applicant requests that this matter be set for hearing and that after notice and hearing, the Application be granted as requested.

ZIA ENERGY, INC.

By _____
W. Thomas Kellahin

KELLAHIN & KELLAHIN
P. O. Box 1769
Santa Fe, New Mexico 87501
Phone: (505) 982-4285
ATTORNEYS FOR APPLICANT

STATE OF NEW MEXICO

DEPARTMENT OF ENERGY AND MINERALS

OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION OF ZIA ENERGY, INC., FOR NGPA NEW ONSHORE RESERVOIR DETERMINATION; FOR CREATION OF A NEW POOL; AND FOR SPECIAL POOL RULES, INCLUDING A SPECIAL GOR LIMITATION OF 10,000-1, LEA COUNTY, NEW MEXICO.

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STATE OF NEW MEXICO

DEPARTMENT OF ENERGY AND MINERALS

OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION OF
ZIA ENERGY, INC., FOR NGPA NEW
ONSHORE RESERVOIR DETERMINATION;
FOR CREATION OF A NEW POOL; AND
FOR SPECIAL POOL RULES, INCLUDING
A SPECIAL GOR LIMITATION OF 10,000-1,
LEA COUNTY, NEW MEXICO.

No. 6861

RECEIVED
MAR 12 1980
OIL CONSERVATION DIVISION

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1. That Applicant has recompleted its State "C" Well No. 1, 1981.5 feet from the west line and 1980 feet from the north line of Section 17, T22S, R37E, NMPM.

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WHEREFORE, Applicant requests that this matter be set for hearing and that after notice and hearing, the Application be granted as requested.

ZIA ENERGY, INC

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STATE OF NEW MEXICO

DEPARTMENT OF ENERGY AND MINERALS

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ZIA ENERGY, INC., FOR NGPA NEW
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FOR SPECIAL POOL RULES, INCLUDING
A SPECIAL GOR LIMITATION OF 10,000-1,
LEA COUNTY, NEW MEXICO.

No. 6861

A P P L I C A T I O N

COMES NOW ZIA ENERGY, INC., and applies to the New Mexico Oil Conservation Division for New Onshore Reservoir Determination, for the creation of a new pool for San Andres production with special pool rules providing for a gas-oil ratio of 10,000 to 1 for its Zia Energy, Inc. State "C" Well No. 1, located in Unit F, Section 17, T22S, R37E, NMPM, Lea County, New Mexico, and in support thereof would show:

1. That Applicant has recompleted its State "C" Well No. 1, 1981.5 feet from the west line and 1980 feet from the north line of Section 17, T22S, R37E, NMPM.

2. That Applicant has dedicated the Se/4NW/4 of said Section to the well.

3. That Applicant requests a hearing to determine that the San Andres production from the subject well constitutes a new onshore reservoir pursuant to Section 102 of the Natural Gas Policy Act, and the appropriate advertisement for such findings and hearing.

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5. That the Application is in the best interests of conservation, the prevention of waste, and the protection of correlative rights.

WHEREFORE, Applicant requests that this matter be set for hearing and that after notice and hearing, the Application be granted as requested.

ZIA ENERGY, INC.

By _____
W. Thomas Kellahin
KELLAHIN & KELLAHIN
P. O. Box 1769
Santa Fe, New Mexico 87501
Phone: (505) 982-4285
ATTORNEYS FOR APPLICANT

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. 6861

Order No. R-6466

APPLICATION OF ZIA ENERGY, INC.
FOR POOL CREATION, SPECIAL POOL
RULES, AND AN NGPA DETERMINATION,
LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on May 7, 19 80, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of August, 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, Zia Energy, Inc., seeks the creation of a new San Andres oil pool for its State "C" Well No. 1, which is located 1980 feet from the North line and 1982 feet from the West line of Section 17, Township 22 South, Range 37 East, NMPM, Lea

County, New Mexico, and the promulgation of special rules for said pool, including a provision for a gas-oil ratio limitation of 10,000 cubic feet of gas per barrel of oil.

(3) That the applicant further seeks a determination that said State "C" Well No. 1 has discovered a new onshore reservoir and should be exempt from the behind-the-pipe exclusion, and that new wells completed in said new reservoir are entitled to the NGPA Section 102 "New Onshore Reservoir," Wellhead Price Ceiling Category, although said reservoir had been penetrated by other wells which penetrated the San Andres formation prior to April 20, 1977, alleging that oil and gas could not have been produced in commercial quantities by such old wells prior to April 20, 1977.

(4) That the evidence establishes that to have plugged back and recompleted one of said wells in the San Andres formation in April, 1977, would have cost $112,230, and that actual operating costs plus overhead expense during an estimated 15-year life for such a well would ~~be~~ total $273,285.

(5) That the evidence establishes that the estimated oil reserves available to the subject well total 13,406 barrels, and that its gas reserves total some 328,500 Mcf, and that the oil reserves at an April, 1977, stripper oil price of $13.00 per barrel less 12.5 percent royalty and .075005 percent state taxes have a 1977 value of $141,055, and that the gas reserves at an April, 1977, price of $0.42 per MCF less 12.5 percent royalty and .075005 percent state taxes have a 1977 value of $164,845, for a total 1977 value for the well's oil and gas reserves of $305,900.

(6) That using the subject well's reserves and applying the FERC economics test to determine whether an old well which penetrated the San Andres formation could have been economically plugged back and recompleted in the San Andres or whether it should be exempt from the "Behind-the-Pipe" exclusion (market value of

the production less 1.6 times development cost plus operating costs) indicates that the economics of such a well would be:

$305,900 -[1.6($112,230) + $273,285] = -$146,953

(7) That pursuant to the above formula, such recompletion as described above would be an uneconomic venture, and the Behind-the-Pipe exclusion does not apply.

(8) That the engineering and geological evidence presented establishes that applicant's State "C" Well No. 1 is indeed producing oil and gas from a new onshore San Andres reservoir separate and distinct from any other San Andres reservoir, and that the nearest commercial San Andres production is some 2 3/4 miles away.

(9) That a new pool for San Andres production should be created and designated as the Southwest Eunice-San Andres Pool, with vertical limits comprising the San Andres formation and horizontal limits as follows:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
Section 17: NW/4

(10) That a special gas-oil ratio limitation for said pool should be established and a ratio of 5000 cubic feet of gas per barrel of oil is reasonable and should be adopted.

(11) That entry of an order embodying the above findings will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That a new San Andres oil pool, discovered by the Zia Energy, Inc., State "C" Well No. 1, located in Unit F of Section 17, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico, with perforations from 3830 feet to 3834 feet is hereby created and defined, said pool to bear the designation Southwest Eunice-San Andres Pool with vertical limits comprising the San Andres formation and horizontal limits as follows:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
Section 17: NW/4

(2) That a special gas-oil ratio limitation of 5000 cubic feet of gas per barrel of oil is hereby established for said Southwest Eunice San Andres Pool.

(3) 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.

DRAFT

RJL

EP

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

CASE NO. 6861

Order No. R- 6466-A

APPLICATION OF ZIA ENERGY, INC. FOR POOL CREATION, SPECIAL POOL RULES, AND AN NGPA DETERMINATION, LEA COUNTY, NEW MEXICO.

NUNC PRO TUNC ORDER

BY THE DIVISION:

It appearing to the Division that Order No. R- 6466, dated September 10, 1980, does not correctly state the intended order of the Division,

IT IS THEREFORE ORDERED:

(1) That ~~Paragraph~~ Order No. (3) of Order No. R-6466 is hereby renumbered Order No. (4).

(2) That a new Order No. (3) be inserted, and the same is hereby reading in its entirety as follows:

"(3) That it is hereby determined that said Southwest Eunice - San Andres Pool is a new onshore reservoir pursuant to the provisions of Section 102 of the Natural Gas Policy Act of 1978 and is applicable that the Behind-the-Pipe Exclusion in Section 102(c)(1)(C)(ii) of the NGPA does not apply."