

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date _____

JUNE 20, 1984

Time: 8:00 A.M.

NAME	REPRESENTING	LOCATION
S.J. Talley	Penroc oil Corp	Midland, TX.
Tom Kellahan	Kellahan & Kellahan	Santa Fe
George Scott	Los Siete Explor. Inc	Roswell
Charles Soy	Consulting Engr.	Artesia
Jim Bruce	Hinkle Law Firm	Santa Fe
Paul W. Churchill	El Paso Natural Gas	El Paso, TX
R.M. Richardson	Air Petro, Ltd	Round, NM
Bob Huhn	Pyram	Santa Fe
Jerry Setz	OCU	Holls
Bruce Setzler	Amerind	Midland
Chad Dickerson	Lone Cannon Dickerson	Artesia
David Hundley	TXO Prod. Corp.	Midland
Bruce Insalaco	TXO Prod Corp	Midland
Deey Wood	TXO	"
SMother	Cities Service Oil & Gas	Midland
Robert L Bayless	self	Farmington
Via H McLeod	Robert L. Bayless	"

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

20 June 1984

EXAMINER HEARING

IN THE MATTER OF

Application of Rio Petro, Ltd. for CASE
a unit agreement, Guadalupe County, 8230
New Mexico.

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division:	W. Perry Pearce Attorney at Law Legal Counsel to the Division State Land Office Bldg. Santa Fe, New Mexico 87501
For the Applicant:	Randolph M. Richardson Attorney at Law Roswell, New Mexico 88201

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I N D E X

GEORGE L. SCOTT

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CHARLES JOY

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3 MR. STOGNER: We'll call next
4 Case Number 8230.

5 MR. PEARCE: That case is on
6 the application of Rio Petro, Limited, for a unit agreement,
7 Guadalupe County, New Mexico.

8 MR. RICHARDSON: Randolph M.
9 Richardson, Roswell, New Mexico, representing applicant.

10 I have two witnesses to be
11 sworn.

12 MR. PEARCE: Are there other
13 appearances in this matter?

14 Could I ask both prospective
15 witnesses to rise at this time, please?

16
17 (Witnesses sworn.)

18 MR. RICHARDSON: We have al-
19 ready furnished the Division a copy of the unit agreement.
20 I would now like to hand you revised Exhibits A and B, A, B,
21 and C to the Unit Agreement, which are just merely updating
22 exhibits, these are current, and also I hand you a geologic
23 report marked Exhibits One through Five.

24 GEORGE L. SCOTT,
25 being called as a witness and being duly sworn upon his
oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. RICHARDSON:

Q Mr. Scott, would you please state your name, present occupation, and town of residence?

A George L. Scott. I live in Roswell, New Mexico.

Q And your present occupation?

A Consulting geologist.

Q Have you previously testified before the Division?

A Yes, I have.

Q How recently?

A It's been many times over the recent years but probably the last appearances was when we requested the pilot steam flood.

Q How many years?

A At the -- on the T-Four Ranch; about two years ago.

MR. RICHARDSON: Would you like additional qualifications or --

MR. STOGNER: He was qualified at that time about two years ago?

MR. RICHARDSON: Yes.

MR. STOGNER: He is so qualified at this time.

Q Mr. Scott, are you familiar with the T-4

1
2 Enhanced Recovery Unit Area and the matters contained in the
3 application for approval of the unit agreement?

4 A Yes, I am.

5 Q Was the geological report handed to the
6 Division prepared by you or under your direct supervision
7 and control?

8 A Yes, it was.

9 Q Mr. Scott, without discussion would you
10 please identify by name Exhibits One through Five of the
11 geological report?

12 A Exhibit Number One consists of a brief
13 written report, together with certain exhibits, a regional
14 index map, a stratigraphic section of the shallow rocks in
15 the area, and a lease and tract map, and that consists of
16 Exhibit One.

17 Exhibit Number Two is a core analysis for
18 a type well in the proposed unit area, the No. 1 Barbara
19 Well, Public Lands Exploration No. 1 Barbara. It is now the
20 Rio Petro No. 1 Barbara.

21 Exhibit Number Two is a compensated neut-
22 ron log for the same well. That's Exhibit Number Three.

23 Exhibit Number Four is a structural map
24 contoured on top of the Ocala sandstone bed.

25 Exhibit Number Five is net pay Isopach
map of the -- in the unit area.

Those are the exhibits.

Q Would you please state for the record the

1
2 legal description of the lands contained in the unit area?

3 A Yes. The unit is located in T 11 North,
4 Range 26 East, and consists of the south half of Section 8,
5 the southwest quarter of Section 9, the northwest quarter of
6 Section 16, all of Section 17, the -- and the southeast
7 quarter and the south half of the northeast quarter of Sec-
tion 18.

8 Q Under date of October 7th, 1981 the Con-
9 servation Division, Case Number 7354, held a hearing for the
10 approval of a pilot steam injection project, and under date
11 of January 12th, 1982, by Order Number R-6868, the pilot
12 steam project was approved by the Division.

13 Mr. Scott, application for approval of
14 the pilot project was made by Corona Oil Company and please
15 identify Corona and their relationship to the present appli-
cant, Rio Petro, Limited.

16 A That is the -- essentially the same com-
17 pany. That company changed their name and went forward un-
18 der the name of Rio Petro. It's the same organization.

19 Q Were you the geologist who prepared and
20 submitted the geological report in the hearing for approval
21 of the pilot project?

22 A Yes, I was.

23 Q Could you very briefly please review the
24 geological report submitted in this present case and please
25 briefly mention any significant changes which have been made
between October the 7th, '81, and the present time?

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2 A The geologic report here, this report,
3 consists essentially of a structure map prepared on top of
4 the pay sand, which we are calling the O'Connell sandstone
5 of the Santa Rosa formation.

6 The Isopach of net pay is a fairly
7 straightforward presentation based primarily upon core ana-
8 lysis data.

9 As far as changes, we had -- we drilled a
10 few wells in the unit area and peripheral to the unit area
11 in the interim after the proposed pilot application in 1981.
12 A few more delineation wells were drilled.

13 And also, the pilot, the wells in the
14 pilot project were drilled and the pilot put into effect.

15 Q Mr. Scott, and one of the maps included
16 in the present geological report is marked Exhibit Five,
17 which is your Isopach on the net pay of the O'Connell sand-
18 stone and could you briefly describe how you arrived at net
19 pay thickness enabling you to contour this map?

20 A This map was prepared primarily from core
21 analysis data based upon certain porosity, permeability, and
22 oil saturation cutoffs taken from the core analysis.

23 Q Now you have previously advised the Divi-
24 sion as to the number of acres, or description, anyway.
25 Could you please state or restate, I missed the number of
acres, state the number of acres, please, of the surface ac-
res contained in the description you just read and the num-
ber of patented acres and the number of State of New Mexico

1
2 acres?

3 A The total number of acres within the pro-
4 posed unit is 1,520 acres of which 640 acres are State of
5 New Mexico lands and 880 acres are fee, or patented, lands.

6 Q Those are surface acres, Mr. Scott, could
7 you please now state the participation formula as set forth
8 in the unit agreement?

9 A Participation is -- will be based upon
10 net acre feet of pay in each tract.

11 Q Was the individual tract participation
12 within the unit calculated from your Isopach, Exhibit Five?

13 A Yes, it was.

14 Q Does the unit outline cover and include
15 all land directly and diagonally offsetting the pilot injection
16 well?

17 A Yes, it does.

18 Q How was the unit outline determined?

19 A The unit outline was simply drawn to encompass
20 all of the acreage that was considered prospective
21 based upon the Isopach map of net pay.

22 Q Division Order Number R-6868 approving
23 the pilot injection project provided for the use of Corona
24 Oil Company Jeannie No. 5 Well as the injection well with
25 Wells 1, 3, 4, and 6 to be drilled and completed as producing
or recovery wells.

Were these wells drilled and completed as
provided for in Order No. R-6868?

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A Yes, they were.

Q Mr. Scott, does the proposed unit area cover all or substantially all of the lands under which you believe there is economically recoverable oil?

A Yes, it does.

Q In your opinion will the operation of this area under the proposed unit plan of operation be in the interest of conservation and prevention of waste?

A Yes.

Q Will the State of New Mexico and the respective institutions to which these lands are allocated receive their fair share of production when recovered?

A Yes.

Q Will the correlative rights of all parties to the unit agreement be protected?

A Yes, they will.

MR. RICHARDSON: I'd like to move the geological report be admitted into evidence.

MR. STOGNER: Do you mean Exhibits One through Five?

MR. RICHARDSON: Exhibits One through Five.

MR. STOGNER: Exhibits One through Five will be admitted into evidence.

MR. RICHARDSON: And I have no further questions of this witness.

QUESTIONS BY MR. JOHNSON:

Q George, under your unit agreement are you under any obligation for drilling so many wells per year or expanding your present pilot flood at any time on that basis?

A I do not believe we are, Mr. Johnson.

MR. STOGNER: Thank you, Mr. Johnson.

I have no questions of this witness.

Are there any other questions?

MR. RICHARDSON: I'd like to call Mr. Chuck Joy.

MR. STOGNER: Mr. Scott may be excused.

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

DIRECT EXAMINATION

BY MR. RICHARDSON:

Q Mr. Joy, would you please state your name, town of residence, and present occupation?

A Charles Joy. Residence, Artesia, New Mexico; consulting engineer.

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Q Have you previously testified before the Division and if so, how recently?

A Yes, approximately two years ago.

Q Are you familiar with the T-4 Unit Area and the matters contained in the application to the Division for approval of the unit agreement?

A Yes.

MR. RICHARDSON: Will you -- he is previously qualified.

MR. STOGNER: He is so qualified at this time today.

Q Mr. Joy, you have heard Mr. Scott previously testify that the participation formula as provided for in the unit agreement was based on net acre feet of O'Connell sandstone and as such net acre feet were shown by Isopach, Exhibit Five, of Mr. Scott's report.

Did you, as a petroleum engineer, calculate individual tract participation?

A Yes, I did.

Q Would you please tell the Division the method of calculation you used in arriving at the individual tract participation?

A Yes. I planimetered the area within each contour on Mr. Scott's Isopachous map and for the lower areas I used the trapezoidal formula until the base exceeded the top by double and then I used the formula a frustum of a cone, and then on the top areas I used a pyramidal formula.

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2 Q Mr. Joy, you've heard Mr. Scott testify
3 that the unit area contains 1,520 acres of land, such being
4 640 acres of State of New Mexico land, or 42 percent; 880
5 acres of fee land, 57 percent.

6 Would you please tell the Division the
7 percentage of unit participation which has been allocated or
8 assigned to the State land and assigned to the fee land?

9 A All right. The State land would have
10 48.9253 percent and fee land would have 51.0747 percent.

11 Q Could you please tell the Division the
12 percentage of total production which has been assigned to
13 the royalty interest owned by the State?

14 A Yes. 6.11566 percent.

15 Q In other words, the total participation
16 of the State's royalty is 6.something percent of the unit
17 area.

18 A Correct.

19 Q Would you please refer to the written
20 portion of Mr. Scott's geological report, Exhibit Cne, in
21 which the calculations as to oil in place and recoverable
22 oil are shown and footnoted as having been made by you?

23 Could you please review this portion of
24 the geological report, stating your estimates and method of
25 calculation in arriving at such calculations?

26 A Yes. I worked this up and based on the
27 total acres within the unit and the net acre feet, I've ar-
28 rived at the area underneath the State land will recover ap-

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proximately 7,748,673 barrels and the fee land will recover 8,089,090 barrels.

MR. STOGNER: Excuse me, Mr. Joy, is that in any of our exhibits this morning? I can't seem to find it.

A Yes.

MR. RICHARDSON: That --

A I don't have that exhibit.

MR. RICHARDSON; -- footnoted part is in the written there about the --

MR. STOGNER: Here's the written.

A Yeah.

MR. STOGNER: Mr. Joy, could you back up and go over those numbers again?

A All right. I was figuring the total oil in place within the unit boundaries would be 32,995,340 barrels, and I estimate the recoverable oil would be 15,837,763 barrels.

Did you have any more questions on that, Mr. Stogner?

MR. STOGNER: This is total. This is not --

A Yeah, I broke it down in tracts. Now if you want the recoverable oil from each tract I can give that to you, also.

MR. STOGNER: Why don't you

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furnish that subsequent to this hearing, Mr. Joy?

A All right, I'll give that to Roy.

MR. STOGNER: As the addition
to Exhibit One.

A All right.

MR. STOGNER: That should be
sufficient.

A I'll do that, yes.

Q Mr. Joy, using the participation factor
based on net acre feet, what percentage of the working
interests are presently committed?

A 90.11 percent.

Q And what percentage do you anticipate
will ultimately be committed?

A 96.59 percent.

Q Also, using your net acre feet of parti-
cipation factor, what percentage of the royalty and over-
riding royalty is presently committed?

A 80 percent.

Q And what percentage do you anticipate
will ultimately be committed?

A 98 percent.

Q Could you please state briefly the reason
why such a percentage is -- why there are such percentages
of uncommitted acres?

A Well, the T-4 has not been committed yet
and I believe you had that letter of intent where he defin-

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itely states he would consider including his acreage in the unit.

Q Real fine. In the event it beccmes impossible to obtain 100 percent voluntary commitment, would you propose that applicant, Rio Petro, Limited, request a hearing before the Division seeking statutory unitization as provided by State law?

A Yes.

Q According to the records of the Division you are the engineer who testified in connection with the previously mentioned pilot project in Case Number 7354, Division Order No. 6868.

Could you please tell the Division the approximate date on which the operator actually began injecting steam into the O'Connell sand?

A October the 10th, 1982.

Q Order No. 6868 provided for several different requirements, notices, and so forth, in connection with operations on the pilot project, including compliance with Division Rules 702 through 708.

To the best of your knowledge have all such requirements been met?

A Yes.

Q The operator has been injecting steam into the O'Connell sand for approximately twenty months. Can you tell at this time whether or not this enhanced recovery project will result in recovering economical oil?

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A No, not at this time.

Q Has the Commissioner of Public Lands approved the form of unit agreement?

A Yes.

Q In your opinion will the operation of this area under the proposed unit agreement be in the interest of conservation and prevention of waste?

A Yes.

Q Will the State of New Mexico and respective institutions to which this land is allocated receive their fair share of production when recovered?

A Yes.

Q Will the correlative rights of all parties to the unit agreement be protected?

A Yes.

MR. RICHARDSON: And I have no further questions.

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. Joy, if you'll refer to Exhibit C, and correct me if I'm wrong, --

MR. RICHARDSON: That is of Exhibit C to the unit agreement?

MR. STOGNER: Yes, sir, I'm sorry.

MR. RICHARDSON: He might not

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2 even have one, I don't think.

3 A I don't have it.

4 MR. STOGNER: I'm confused of
5 who has not participated yet.

6 A I'll have to let Mr. Richardson cover
7 that.

8 MR. RICHARDSON: I maybe should
9 better explain that.

10 The southwest quarter of Sec-
11 tion 9 belongs to T-4 Cattle Company, which was under a
12 lease to Amoco Production Company and the initial base lease
13 covered 164,000 acres, and contained some real weird back-in
14 type -- not back-in but working interest, released to back
15 to the base lease, as well as selecting drilling blocks and
16 had development provisions in it, and there has been some
17 discussion between the lessor, T-4 Cattle Company, and the
18 lessee, Amoco, as to whether that lease was still valid as
19 to that particular 160 acres, and as a result Rio Petro will
20 ultimately I'll say wind up with that particular 160.

21 And Amoco has some additional
22 acreage in the unit area that has been committed and will be
23 committed in Tracts 7 and 9.

24 And also there are some un-
25 leased mineral interests under the south half of Section 17
which I have calculated both ways. One as a royalty inter-
est and one as a working interest. Those percentages are
not exactly accurate. They are within probably two or three

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2 points.

3 MR. PEARCE: But as I under-
4 stand what we're talking about here, Mr. Richardson, appli-
5 cant does believe that, you know, without the T-4 Cattle
6 Company interest yet participating, he has sufficient con-
7 trol of the unit area to operate this unit as a unit.

8 MR. RICHARDSON: Yes.

9 MR. PEARCE: Thank you, sir.

10 MR. RICHARDSON: That commit-
11 ment should be, if everything that is actually promised
12 should actually get close to 100 percent. Every day I've
13 been getting royalty lists.

14 The only real, say, bug-a-boo
15 area is the unleased acreage in Section 17, and there are
16 some real hardheaded professionals in there that just don't
17 want to do a damned thing.

18 MR. STOGNER: I have --

19 MR. RICHARDSON: A very small
20 percentage.

21 MR. STOGNER: Thank you, Mr.
22 Richardson.

23 I have no questions for this
24 witness.

25 Are there any other questions
of Mr. Joy? If not, he may be excused.

Mr. Richardson, do you have
anything further in Case Number 8230 this morning?

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MR. RICHARDSON: I have nothing further.

MR. STOGNER: Is there anybody else that has anything further in Case Number 8230?

If not, this case will be taken under advisement.

MR. RICHARDSON: I would like to mention that we are batting a July the 1st deadline on this. Probably will submit to to Ray, the Land Commissioner, for final approval shortly before July the 1st. I think Ray will, however, if the Commissioner will, approve the unit subject to you all's order.

MR. STOGNER: Thank you, Mr. Richardson.

MR. RICHARDSON: Thank you.

MR. STOGNER: Is there anything further in Case Number 8230 today?

If not, this case will be taken under advisement.

(Hearing concluded.)

C E R T I F I C A T E

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

Sally W. Boyd CSR

I do hereby certify that the foregoing is
a complete and correct transcript of the
the Examiner hearing of case no. 8230,
heard by me on June 20, 1984.
Michael E. Reynolds, Examiner
Oil Conservation Division