Dockets Nos. 14-88 and 15-88 are tentatively set for May 11 and May 25, 1988. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - APRIL 27, 1988

8:15 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM, STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Michael E. Stogner, Examiner, or David R. Catanach, Alternate Examiner:

CASE 9356: In the matter of the hearing called by the Oil Conservation Division on its own motion to consider amending the "Special Rules For Applications For Wellhead Price Ceiling Category Determinations," pursuant to the Natural Gas Policy Act of 1978 (NGPA), as promulgated by Division Order No. R-5878-B, as amended, by revising Forms C-132 and C-132-A to reflect the Department name change.

CASE 9357: Application of El Ran, Inc. for a unit agreement, Chaves and Roosevelt Counties, New Mexico. Applicant, in the above-styled cause, seeks approval of the Chaveroo San Andres Unit Area comprising 1,120 acres, more or less, of Federal and Fee lands underlying all or portions of Sections 34 and 35, Township 7 South, Range 32 East, and Sections 3 and 10, Township 8 South, Range 32 East. This area is located on the Chaves and Roosevelt County line and 20 miles south of Elida, New Mexico.

CASE 9358: Application of El Ran, Inc. for the reclassification of a pressure maintenance project to a waterflood project and for waterflood expansion, Chaves and Roosevelt Counties, New Mexico. Applicant, in the above-styled cause, seeks to reclassify the El Ran Chaveroo Pressure Maintenance Project (Division Order No. R-7044) to a waterflood project and to expand said project to include the area underlying the proposed Chaveroo San Andres Unit Area comprising all or portions of Sections 34 and 35, Township 7 South, Range 32 East, and Sections 3 and 10, Township 8 South, Range 32 East. Applicant also seeks to expand said project by including 13 additional injection wells into the San Andres formation. Said area is located on the Chaves and Roosevelt County line and 20 miles south of Elida, New Mexico.

CASE 9318: (Continued from April 13, 1988, Examiner Hearing)

Application of Yates Drilling Company for a secondary recovery project, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a secondary recovery project by the injection of water into the Queen formation in its proposed Cactus Queen Unit Area (Division Case No. 9319) underlying portions of Sections 26, 27, 34, and 35, Township 12 South, Range 31 East, Southeast Chaves Queen Gas Area Associated Pool, (which is an area that straddles State Highway No. 172 between Milepost Nos. 26.5 and 27.5).

CASE 9319: (Continued from April 13, 1988, Examiner Hearing)

Application of Yates Drilling Company for statutory unitization, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order unitizing, for the purpose of establishing a secondary recovery project, all mineral interests in the Southeast Chaves Queen Gas Area Associated Pool underlying 560 acres, more or less, of State, Federal, and Fee lands in portions of Sections 26, 27, 34, and 35, Township 12 South, Range 31 East. Said area straddles State Highway No. 172 between Milepost Nos. 26.5 and 27.5. Said unit is to be designated the Cactus Queen Unit Area. Among the matters to be considered at the hearing will be the necessity of unit operations; the designation of a unit operator; the determination of the horizontal and vertical limits of the unit area; the determination of the fair, reasonable, and equitable allocation of production and costs of production, including capital investment, to each of the various tracts in the unit area; the determination of the credits and charges to be made among the various owners in the unit area for their investment in well and equipment; and such other matters as may be necessary and appropriate for carrying on efficient unit operations, including, but not necessarily limited to, unit voting procedures, selection, removal, or substitution of unit operator, and time of commencement and termination of unit operations.

CASE 9359: Application of Dugan Production Corporation for a non-standard oil proration unit, Sandoval County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the Special Rules and Regulations for the Rio Puerco-Mancos Oil Pool as promulgated by Division Order No. R-7471, as amended, to form a 160-acre non-standard oil spacing and proration unit for said pool comprising the NW/4 of Section 25, Township 21 North, Range 4 West, to be dedicated to the existing Husky Federal Well No. 2 located at a standard location 990 feet from the North and West lines (Unit D) of said Section 25. Said well is located approximately 3.25 miles south of Milepost 75 on New Mexico Highway No. 44.

CASE 9360: Application of Penzoil Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the surface to the base of the Morrow formation underlying the E/2 of Section 33, Township 19 South, Range 34 East, forming a standard 320-acre gas spacing and proration unit for any and all formations and/or pools developed on 320-acre spacing, to be dedicated to a well to be drilled at a standard gas well 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, designation of applicant as operator of the well and a charge for risk involved in drilling said well. Said unit is located on U.S. Highway 62/180 at N.M. Milepost No. 79.

CASE 9361: Application of Primary Fuels, Inc. for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the surface to the base of the San Andres formation underlying the SE/4 SW/4 of Section 31, Township 18 South, Range 39 East, forming a standard statewide 40-acre oil spacing and proation unit, to be dedicated to a well to be drilled at a standard oil well 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, designation of applicant as operator of the well and a charge for risk involved in drilling said well. Said unit is approximately 2.25 miles east of the intersection of Marland Blvd. and Dal Paso St. in Hobbs, New Mexico.

CASE 9325: (Continued from March 30, 1988, Examiner Hearing)

Application of Enron Oil & Gas Company for amendment of special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks to amend the special pool rules promulgated by Division Order No. R-3161 for the Cinta Roja Morrow Gas Pool in Township 24 South, Range 35 East, to include a provision for 320-acre infill drilling and appropriate findings relative thereto. Said pool is located approximately 6 miles south-southeast of the San Simon Sink.

CASE 9350: (Continued from April 13, 1988, Examiner Hearing)

Application of Amerind Oil Company for a non-standard oil proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for an 80-acre non-standard oil proration unit for production from the Strawn and Atoka formations comprising the SE/4 NE/4 and NE/4 SE/4 of Section 2, Township 17 South, Range 37 East, Undesignated Shipp-Strawn Pool, Undesignated Humble City-Strawn Pool, and Undesignated Humble City-Atoka Pool, said unit to be dedicated to a well to be drilled at a standard oil well location thereon. Said unit is located approximately 4.5 miles north of Humble City, New Mexico.

CASE 9362: Application of Meridian Oil Inc. for the extension of the vertical limits of the Cedar Hill-Fruitland Basal Coal Pool and the concomitant contraction of the Mount Nebo-Fruitland Pool, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks the extension of the vertical limits of the Cedar Hill-Fruitland Basal Coal Pool to include any and all coal zones of the Fruitland formation, from approximately 2,579 feet to 2,878 feet, in Sections 3 through 6, Township 31 North, Range 10 West, and Sections 19 through 22 and 27 through 34, Township 32 North, Range 10 West. Applicant also seeks the concomitant contraction of said zones from the Mount Nebo-Fruitland Pool. Said area consists of 16 square miles in the form of a square centered approximately 5.5 miles east by north of Cedar Hill, New Mexico.

CASE 9363: Application of Anadarko Petroleum Corporation for the amendment of the special rules and regulations for the Foster-San Andres Pool, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the amendment of the Special Rules and Regulations of the Foster-San Andres Pool as promulgated by Division Order No. R-8113, as amended, to increase the gas-oil ratio limitation to 20,000 cubic feet of gas to one barrel of oil, retroactive to March 1, 1988. Said pool is in an area located approximately 3 miles east of the intersection of Marland Blvd. and Dal Paso St. in Hobbs, New Mexico.

CASE 9364: Application of Anadarko Petroleum Corporation for the amendment of Division Order No. R-7773, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Division Order No. R-7773 to increase the surface injection limitation pressure for ten certain injection wells in its Ballard GSA Unit Waterflood Project to 450 psi above the formation parting pressure as determined from step-rate tests for said ten injection wells in the Grayburg formation of the Loco Hills Pool within the project area consisting of a portion of Sections 4, 6, 7, 17, and all of Sections 5 and 8, Township 18 South, Range 29 East. Said project area is located approximately 8 miles west-southwest of Loco Hills, New Mexico.

CASE 9365: Application of Hanley Petroleum Inc. for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox oil well location 990 feet from the South line and 330 feet from the West line (Unit M) of Section 10, Township 17 South, Range 37 East, Undesignated Shipp-Strawn Pool or Undesignated Humble City-Strawn Pool, the W/2 SW/4 of said Section 10 to be dedicated to the well forming a standard 80-acre oil spacing and proration unit for either pool. Said location is approximately 3.8 miles Northwest by North of Humble City, New Mexico.

CASE 9366: Application of Exxon Corporation for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox oil well location 990 feet from the South line and 330 feet from the East line (Unit P) of Section 9, Township 17 South, Range 37 East, Undesignated Shipp-Strawn Pool, the E/2 SE/4 of said Section 9 to be dedicated to the well forming a standard 80-acre oil spacing and proration unit for said pool. Said location is approximately 3.8 miles Northwest by North of Humble City, New Mexico.

CASE 9367: Application of Marsh Operating Company for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox gas well location 660 feet from the North line and 990 feet from the East line (Unit A) of Section 34, Township 16 South, Range 34 East, to test the Undesignated South Kemnitz Atoka-Morrow Gas Pool, the N/2 of said Section 34 to be dedicated to the well. Said well is located approximately 5.5 miles North-Northwest of Buckeye, New Mexico.

CASE 9272: (Continued from April 13, 1988, Examiner Hearing)

In the matter of Case No. 9272 being reopened upon application of ARCO Oil and Gas Company to reconsider the provisions of Division Order No. R-8579, issued in said Case No. 9272, which granted the application of Mitchell Energy Corporation to compulsorily pool all mineral interests below the top of the Wolfcamp formation underlying the following described acreage in Section 3, Township 15 South, Range 35 East, Lea County, New Mexico, and in the following described manner:

Lots 1 through 4 and S/2 N/2 to form a non-standard 324.7-acre, more or less, gas spacing and proration unit for any and all formations and/or pools within said vertical limits developed on 320-acre spacing;

Lots 3 and 4 to form a non-standard 82.8-acre, more or less, oil spacing and proration unit for any and all formations and/or pools within said vertical limits developed on 80-acre spacing;

Lot 3 to form a non-standard 41.3-acre, more or less, oil spacing and proration unit for any and all formations and/or pools within said vertical limits developed on 40-acre spacing.

All of the above described units were to be dedicated to a single well to be drilled at a location (either standard or non-standard, depending on the appropriate spacing rules applicable to this well's completion horizon[s] 660 feet from the North line and 1830 feet from the West line (Unit C) of said Section 3. Said order also considered 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, designation of applicant as operator of the well and a charge for risk involved in drilling said well. Said location is approximately 5 miles west-southwest of Hillburn City, New Mexico.

CASE 9342: (Continued from March 30, 1988, Examiner Hearing)

Application of the Petroleum Corporation of Delaware for simultaneous dedication and to amend Division Administrative Order No. NSP-1290, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks to amend Division Administrative Order No. NSP-1290, dated April 28, 1982, which Order authorized a 299.84, more or less, non-standard gas spacing and proration unit for the East Burton Flat-Morrow Gas Pool comprising Lots 6 and 7, the E/2 SW/4, and the SE/4 of Section 6, Township 20 South, Range 29 East, to include the East Burton Flat-Strawn Gas Pool. Applicant further seeks authorization to simultaneously dedicate the production from both pools within said non-standard gas proration units to the existing dually completed Superior Federal Well. No. 6 located 660 feet from the South line and 1980 feet from the West line (Unit N) of said Section 6 and to the proposed Superior Federal Well No. 7 to be drilled at a standard location within the SE/4 of said Section 6. Said unit is located approximately 7.5 miles northwest of the junction of New Mexico Highway No. 31 North and U.S. 62/180.

CASE 9353: (Continued from April 13, 1988, Examiner Hearing)

Application of Read & Stevens, Inc. for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox gas well location 660 feet from the North and East lines (Unit A) of Section 19, Township 19 South, Range 29 East, Undesignated Turkey Track-Morrow Gas Pool or Undesignated West Parkway-Morrow Gas Pool, the E/2 of said Section 19 to be dedicated to said well forming a standard 320-acre gas spacing and proration unit for either pool. Said location is approximately 7.5 miles southeast by east of the old Illinois Camp.

CASE 9354: (Readvertised)

Application of Santa Fe Energy Operating Partners, L.P. for the expansion of the North Hume-Wolfcamp Pool and the amendment of Division Order No. R-8476, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Division Order No. R-8476, which promulgated 80-acre spacing in the North Hume-Wolfcamp Pool comprising portions of Townships 15 and 16 South, Ranges 33 and 34 East, to provide for 160-acre spacing and proration units. Applicant further seeks the extension of said North Hume-Wolfcamp Pool to include the SE/4 of Section 35, Township 15 South, Range 33 East, and the SE/4 and Lots 9, 10, 15, and 16 of Section 5, Township 16 South, Range 34 East. This area is located approximately 3 miles northwest of the junction of U.S. Highway 82 and New Mexico Highway 457.

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

11 May 1988

EXAMINER HEARING

IN THE MATTER OF:

Application of El Ran, Inc. for a unit agreement, Chaves and Roosevelt Counties, New Mexico. CASE 9357

BEFORE: David R. Catanach, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division: Charles E. Roybal
Attorney at Law
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

MR. CATANACH: Call next Case 9357, in the matter of El Ran, Inc., for a unit agreement, Chaves ad Roosevelt Counties, New Mexico.

This case was heard on April 27th.

Is there anyone here for additional testimony in this matter?

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 Conservation Division (Commission) was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9357, heard by me on May 11, 1989.

David R. Catanach, Examiner
Oil Conservation Division

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

27 April 1988

EXAMINER HEARING

IN THE MATTER OF:

Application of El Ran, Inc. for a unit agreement, Chaves and Roosevelt Counties, New Mexico.	CASE 9357
and	
Application of El Ran, Inc, for the reclassification of a pressure maintenance project to a waterflood project and for waterflood expansion, Chaves and Roosevelt Counties, New Mexico.	CASE 9358

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division: Charles E. Roybal
Attorney at Law
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant: James G. Bruce
Attorney at Law
HINKLE LAW FIRM
P. O. Box 2068
Santa Fe, New Mexico 87504-2068

I N D E X

E X H I B I T S

MR. STOGNER: We'll go back to the first page now and call Case Number 9357.

MR. ROYBAL: Case 9357. Application of El Ran, Inc., for unit agreement, Chaves and Roosevelt Counties, New Mexico.

MR. STOGNER: Call for appearances.

MR. BRUCE: Mr. Examiner, my name is Jim Bruce from the Hinkle Law Firm in Santa Fe, representing the applicant.

I have two witnesses to be sworn and I would request that Case 9358 be consolidated for hearing with this case.

MR. STOGNER: Are there any objections? We'll also at this time call Case Number 9358.

MR. ROYBAL: Case 9358. Application of El Ran, Inc., for the reclassification of a pressure maintenance project to a waterflood project, and for waterflood expansion of Chaves and Roosevelt Counties, New Mexico.

MR. STOGNER: Call for appearances in this matter.

MR. BRUCE: Jim Bruce again appearing for the applicant.

MR. STOGNER: Are there any other appearances in either one of these cases today?

There being none, Mr. Bruce, will you have your witnesses please stand to be sworn at this time?

(Witnesses sworn.)

ROBERT RANCK,

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

DIRECT EXAMINATION

BY MR. BRUCE:

Q Mr. Ranck, would you please state your full name and city of residence?

A My name is Robert Ranck from Lubbock, Texas.

Q And what is your occupation and who are employed by?

A I'm employed by El Ran, Incorporated. I'm a partner in El Ran and Vice President.

Q Have you previously testified before the OCD?

A No, I have not.

Q Would you please briefly discuss your employment background?

A I've been an independent oil and gas operator for about 15 years now and all in El Ran.

Q And does El Ran operate in southeast New Mexico?

A Yes. We operate in southeast New Mexico and west Texas.

Q And were you in charge of the land matters for Case Numbers 9357 and 9358?

A Yes, I was.

MR. BRUCE: Mr. Examiner, are the witness' credentials acceptable?

MR. STOGNER: Will Mr. Ranck be testifying on land matters?

MR. BRUCE: Yes, sir.

MR. STOGNER: Okay. Mr. Ranck's qualifications are so accepted.

Q Mr. Ranck, would you briefly state what El Ran seeks by its applications in Case Numbers 9357 and 9358?

A In Case 9357 El Ran has applied for unitization of a portion of the Chaveroo-San Andres Unit -- Pool, underlying 1120 acres of Federal and fee land, comprised of the east half southwest quarter and the southeast

quarter of the Section 30 -- Section 34, and the southwest quarter of 35, Township 7 South, Range 32 East, Roosevelt County, and all of Section 3, the north half northwest quarter of Section 10 in 8 South, 32 East, Chaves County.

El Ran seeks to unitize this area for the purpose of establishing a secondary recovery waterflood project which is the subject of Case 9358.

Q Would you please refer to Exhibit Number One and describe its contents, please?

A Okay. Exhibit One is a land plat which outlines the proposed unit area and identifies the separate tracts which comprise the unit area. The tracts are formed according to common mineral ownership.

There are nine tracts in the unit area and El Ran operates all nine tracts.

All the working interest owners in the field have consented to El Ran operating the unit.

Q Would you please describe what the unitized formation is?

A The unitized formation is the San Andres formation underlying the unit area with the vertical limits found in the interval from 4169 to 4276 feet in El Ran's Roberts No. 1 Well, located in Unit B of Section 3, Township 8 South, 32 East, Chaves County.

The formation includes both P-1 and P-2

San Andres zones. The unitized formation will include all subsurface points throughout the unit area correlative to this depth.

Q Would you please give a brief description of the pool's history?

A The pool was discovered in 1977 by El Ran and in '82 El Ran applied for a waterflood project over a portion of the pool. By Order No. R-7044 the OCD approved a pressure maintenance project covering the south half of 34, 7 South, 32 East, and the north half of Section 3, 8 South, 32 East.

El Ran has conducted operations under this order but due to continued depletion of the -- of primary production, El Ran believes a waterflood project should be instituted over a larger area to extend the productive life of this portion of the pool and recover additional reserves.

Q Would you please refer to Exhibit Number Two and describe the unit agreement briefly?

A Exhibit Number Two is a copy of the unit agreement for the proposed Chaveroo-San Andres Unit. The unit agreement was drafted based on other similar agreements which have previously been approvd by the Federal government and the Oil Conservation Commission.

The unit agreement describes the unit

area, the unitizied formation, the unitized substances, including all oil and gas produced in the unitized formation; however, even though the small amounts of gas may be recovered, the secondary project is aimed primarily at recovering additional oil.

The designated unit operator is El Ran, Incorporated, and the unit agreement provides for a method of removal of the unit operator.

The agreement also provides for expansion of the unit area.

Q Would you please now discuss Exhibit Number Three briefly?

A Exhibit Three is a copy of the unit operating agreement for the proposed unit area. It sets forth the authorities and duties of the unit operator as well as apportioning of expenses by and between the working interest owners.

Q Would you please refer to Exhibit Number Four and Exhibit Five and describe tract ownership and how you determined the names of these interest owners?

A Okay. Exhibit Four is a summary, a tract-by-tract listing of working interest owners for the 9 tracts, and then page -- it also includes royalty, a summary of royalty owners, also.

Q How many royalty owners and overriding

royalty owners are there?

A 53 royalty owners and overriding royalty.

Q And how many working interest owners?

A 36 working interest owners.

Q Now, Exhibit Number Five is a summary of -- what is the approximate numer of working interest and royalty interest owners who have at this time approved the --

A We have 100 percent ratification of the unit operating agreement and the unit agreement, and of the unit agreement we have 85 percent of the royalty interest owners.

Q Would you please briefly describe your attempts to obtain the voluntary commitment of the interest owners?

A Okay. We started in -- after we got preliminary approval from the BLM on our unit agreement and unit operating agreement, we started March 1st of this year. We've sent out three letters to the royalty interest owners. The only ones that have not responded are in estates that have not been probated yet on the royalty interest owners.

Q So the probate has slowed down any potential approval of the unit?

A Yes, that's correct.

Q In your opinion have you made a good faith

effort to secure voluntary unitization of the portion of the pool being unitized?

A Yes, we have.

Q And you indicated that the federal government has preliminarily approved the waterflood and unitization?

A We have preliminary approval from the BLM. That's clear.

Q Where will water for the proposed waterflood be obtained?

A We have made an agreement with Murphy Operating from water -- come from fresh water wells, approximately six miles away.

MR. STOGNER: Mr. Bruce, before we continue on with the questioning, we need to get some things lined up.

I understood by your advertisement and several conversations with you that this was not a statutory unit agreement and it sound like you're giving testimony as such today.

MR. BRUCE: No, it's not --

MR. STOGNER: What is the nature of this unit?

MR. BRUCE: It's a voluntary unit.

MR. STOGNER: It is a voluntary, okay, because you -- your line of questioning sounded like --

MR. BRUCE: Oh, I'm just covering all the bases, Mr. Examiner.

MR. STOGNER: Oh. Okay. This line of questioning that you're now, are you still on land matters?

MR. BRUCE: Yeah, we're basically done.

MR. STOGNER: Well, okay, why don't you continue with your questioning, then.

MR. BRUCE: Okay.

A The water will come from some water wells, 6 South, 32 East, Section 25; 7 South, 32, Section 3.

Q In your opinion will the granting of this -- of these two applications be in the interest of conservation and the prevention of waste?

A I believe so, yes.

Q And were Exhibits One througyh Five prepared by you or under your direction?

A Yes, they were.

MR. BRUCE: At this time I move the admission of Exhibits One through Five, Mr. Examiner.

MR. STOGNER: Exhibits One

through Five will be admitted into evidence at this time.

CROSS EXAMINATION

BY MR. STOGNER:

Q Okay, do I understand that this unit is just for the San Andres formation on this, is that correct?

A That's correct.

Q Now when I look at Exhibit Number One I show the cross hatched area a little bit different than what we were advertised and also that Exhibit One is a little bit different from the portion of your unit agreement that contains a map as Exhibit Number Two that I was referring to. It contains the other map.

A Okay, the --

Q Do you want to straighten me out on that?

A Okay. We didn't include the -- are you talking about the difference between the pressure maintenance system and the --

Q Okay, well, maybe you ought to explain what number -- Exhibit Number One is for me again. What is that cross hatched area -- or with the cross hatched boundary on Exhibit One?

A The cross hatched was the -- the pressure maintenance system.

Q Okay, I'm sorry.

A And then --

Q And that's the pressure maintenance system that was approved by Order Number R- --

MR. BRUCE: 7044.

Q Yeah.

A And then the dark outline is the unit area, that we're going to unitize.

Q And that is the same as was advertised. All righty.

A Yes.

Q Thank you for straightening me out on that.

Okay, you said that you have 85 percent of your royalty interest covered. Which -- could you direct me to a listing of those that have't agreed?

A On the U.S. lease there's an override.

Q And where are you looking at now?

MR. BRUCE: It would be on Exhibit Four, Mr. Examiner.

MR. STOGNER: Exhibit Four. Is there any particular page we need to go to?

A Probably -- probably, I guess -- you want to see it by tract or do you want to see it by --

Q Well, what would be easier?

A Probably by tract.

Q Okay, well, let's refer to Exhibit Number Five. Tract I, everybody has ratified, both working interest and -- and royalty, is that correct?

A Yes.

Q Okay, and Tract Numbaer I-A, I read that everybody has agreed.

A That's correct.

Q Okay, there's no problem with Tract No. 1-A. Let's see, you show 62 percent of the royalty interest owners have agreed, so that means there's what, 38 percent still outstanding?

A Of course that's an override by Celsius Energy.

Q Celsius Energy.

A And there's really no -- we're working with them and they just needed some more clarification on --

Q Okay.

A -- the unit agreement.

Q Now Tract No. 3,, who hasn't ratified that yet?

A TCN, although we're not sure if they're still in business or not, and then Durwood Terrill, he has died and his interest is in probate.

Q Okay, Tract 4?

A It's 100 percent working interest. It's

the same interest, Durwood Terrill, his interest is in probate.

Q Now Tract 5, it doesn't look like any of the royalty interest owners have agreed.

A Okay, the Griffin lease, that's correct.

Q And who owns that 100 percent of the royalty interest?

A The Griffin family, which consists of Mary Griffin is the mother, and then her offspring, the Mitchells, and they haven't decided what to do so we would like to, of course, unitize the working interest and we'll just pay them actual production off the lease.

Q Okay, Tract 6?

A 100 percent of the working interest and we haven't heard back from these two interest owners.

Q And who are they?

A Cherie Summers Walcot and Theodore Summers.

And we've heard back from their sister, Ms. Patricia Sanchez, so -- but we haven't been able to track these other two down.

Q Okay, how about Tract 7?

A Okay, Tract 7 is Durwood Terrill again, estate is in probate, and that's the only interest that's outstanding.

Q And Tract 8.

A Okay, Eight. There are two interest owners, Laura Lodewick and her brother, Richard Lodewick.

Q How do you spell that?

A L-O-D-E-W-I-C-K. And we just haven't heard back from them. We've got -- one of their sisters has returned the ratification but that's the only one.

Q And is there a Tract 9 or what's on the second page? That's a summary of the total.

A Yeah, that's a summary.

Q How long have you been in communication with the working interest owners that haven't participated yet?

A We have 100 percent working interest.

Q How about the royalty interest?

A Since, probably the first letters went out March 1st. We had approval from the BLM on February 28th, I believe, or 29th.

MR. STOGNER: I have no further questions of this witness at this time.

Mr. Bruce?

MR. BRUCE: Nothing further with this witness, Mr. Examiner.

JERRY ILSENG,

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

DIRECT EXAMINATION

BY MR. BRUCE:

Q Would you please state your full name and city of residence?

A My name is Jerry Ilseng. I'm from Lubbock, Texas.

Q And who are you employed by and in what capacity?

A I'm employed by El Ran, Incorporated, and I'm the engineering manager.

Q All right. Have you previously testified before the OCD?

A No, I have not.

Q Would you please state your educational and work experience.

A I've got a Bachelor of Science degree in natural gas engineering from Texas A & I University, located in Kingville, Texas; graduated in 1981.

I worked for Amoco Production Company in Levelland, Texas, for 5-1/2 years. At Amoco I was the pro-

ject engineer over three major waterfloods, consisting of over 1000 injection wells and 1000 producing wells.

I left Amoco and was a petroleum engineer consultant in Texas for over 15 months before I started work for El Ran, Incorporated.

Q And are you familiar with the engineering matters related to the proposed unitization and waterflood?

A Yes, I am.

MR. BRUCE: Mr. Examiner, are the witness' credentials acceptable?

MR. STOGNER: Mr. Ilseng's qualifications are so accepted.

Q Would you please briefly describe the pool's production history?

A The first production from the San Andres reservoir in the study area occurred in December of 1977 on -- upon the completion of the El Ran, Incorporated, Byron Well No. 1.

The well potentialed for 35 barrels of oil per day. The well was completed in the P-1 and the P-2 zones and encountered the top of the P-1 pay at a subsea depth of +302 feet.

The subsequent development program has resulted in the completion of 27 wells on approximately 40-acre spacing.

With the exception of the Carroll Well No. 1, which is completed in the P-2 zone only, all wells have been completed in the San Andres P-1 and the San Andres P-2 reservoirs, and have been commingled since completion.

The area of interest herein referred to, you know. the study area, includes Byron, Carroll, Dachner, Federal, Griffin, Roberts, Sarah, U.S., and the Yeager leases, owned by El Ran, Incorporated.

The cumulative oil and gas production for the properties, as of April 1st, 1988, was 975,933 stock tank barrels adn 1.3-million MCF of gas.

The remaining primary reserves are projected to be 2,659 stock tank barrels of oil and 50,000 MCF of gas for the 8/8ths working interest based on the economic limits.

Ultimate primary reserves would therefore be 978,592 stock tank barrels of oil and 1.3 MCF of gas from the area.

MR. STOGNER: Now, where are those numbers at? You're going a little fast for me now; those numbers that you just give us, the total?

A Okay.

MR. BRUCE: I don't think we've submitted an exhibit yet.

MR. STOGNER: Oh, okay, no won-

der I couldn't find them, then.

Okay, while we're here, what -- what are those totals, primaries, again?

A Primary, sir, was 975,933 barrels -- stock tank barrels of oil.

And the gas was 1,308,350 MCF of gas. That's as of April 1st, 1988.

MR. STOGNER: Okay, you may continue, Mr. Bruce.

Q Referring to Exhibit Number Six, Mr. Ilseng, would you discuss the geological and reservoir data?

A The San Andres reservoir is characteristically located by a distinct marker commonly known as the "pi" marker. In most instances the top of the San Andres P-1 zone can be found 150 feet below this -- this "pi" marker.

The reservoir rock occurs at approximately 330 feet above sea level with an average gross thickness of 48 feet, inclusive of both the P-1 and the P-2 zones. There is no obvious oil/water contact in the productive zone. The reservoir boundaries are not clearly defined in the study area but have been estimated as depicted herein on the gross pay isopachous map in your Exhibit Six, analyzing permeability and porosity trends at wells by completion reports.

Since no obvious oil/water contact exists in the study area, we're of the opinion that stratigraphic trapping has restricted the reservoir limits.

The reservoir characteristics are as follows: The average porosity for the P-1 zone is 8.6 percent porosity; P-2 zone has an average porosity of 12.2.

Connate water saturation for the P-1 zone averages 17.1; P-2 zone, 20.3.

The residual oil saturation, percent of pore space, is 25 percent.

Original reservoir pressure, which was estimated, was around 1800 psi.

Original reservoir temperature was 105 degrees Fahrenheit, with a current oil formation volume factor of 1.03 with an oil gravity, API of 15.

The gas gravity, 0.8.

We are of the opinion that the San Andres P-1 zone consists primarily of a gas cap as indicated from completion reports.

The availability of a suite of the open hole logs does not definitely prove this; however, the various completion reports, as well as our recovery calculations, indicate the zone to be primarily gas productive.

For this reason, no secondary reserves have been included for the San Andres P-1 zone.

The geological data from which we have determined geological structure and the isopach map is included herein on the well records and a geological data tabulation on Exhibit Seven.

Okay, the gross pay isopachous maps were planimetered over the entire study area, yielding gross reservoir volumes of 39,182 acre feet in the P-1 zone and 37,523 acre feet in the P-2 zone. As previously mentioned these reservoir volumes represent gross payable log data in determining the reservoir volumes; however, the specific suite of logs that were run do not distinguish between the typical San Andres pay and anhydrite.

As anhydrite is not hydrocarbon productive, the previously mentioned reservoir volumes are considered gross volumes.

Net reservoir volumes were determined by assuming a 14 percent primary recovery or 57.6 stock tank barrels per acre-foot. Dividing hte primary ultimate recovery of 978,592 stock tank barrels of oil results in a net pay volume of 17,443 acre-feet and a gross to net adjustment of .46.

It follows that the net pay volume of 17,443 acre-feet can be attributed to the San Andres P-2 zone.

Q Does the proposed unit area include the

entire Chaveroo-San Andres Pool?

A No, it does not, because some of the offset operators do not want to come into this unit.

Q And was this portion of the pool defined by drilling one well on approximately every 40 acres?

A Yes, it was.

Q Would you please now discuss the primary reserves in the unit?

A Okay. Primary reserves. Recovery calculations reveal that normal primary recovery from the San Andres reservoir producing as a result of the solution gas drive mechanism should be approximately 14 percent of the original oil in place.

As previously discussed earlier, this primary recovery figure was estimate volumetrically assuming normal reservoir conditions. From extrapolation of production decline trend to economic limits we have estimated future reserve to be 2,659 stock tank barrels of oil and 50,000 MCF of gas.

Assuming original solution gas/oil ratio of 200 cubic feet per barrel, we have estimated the ultimate solution gas recovery from the P-2 zone to be 1,358,350 MCF of gas, leaving 303,861 MCF from the P-1 gas cap.

Q And is this portion of the pool in an advanced state of depletion insofar as primary production is

concerned?

A Yes. In the current state this reservoir is depleted insofar as primary production is concerned.

Q As part of the -- you engineering study, were secondary reserves calculated?

A Yes, they were. From resistivity and porosity log data and knowledge of the area, the original oil in place was calculated to be 384.2 stock tank barrels per acre-foot.

The residual oil remaining in the reservoir after waterflooding was to be 25 percent of the pore volume, or 96.1 stock tank barrels per acre-foot, leaving 230.5 stock tank barrels per acre-foot of mobile oil that would be recoverable with 100 percent volume sweep efficiency.

We have estimated the volumetric sweep efficiency for the selected injection pattern to be around 60 percent of the floodable volume.

Secondary recoverable oil reserves are therefor estimated to be .6 times 230.5 stock tank barrels, or 138.3 stock tank barrels per acre-foot.

As you can see, the gross pay isopachous map from the P-2 zone was planimetered within the estimated floodable limits yielding a gross floodable reservoir volume of 18,552 acre-feet.

Applying the gross to net adjustment factor of .46 results in a net floodable reservoir volume of 8,534 acre-feet.

Again, as I said, the P-1 zone is to be primary gas productive and therefor not floodable. All secondary reserve calculations are for the P-2 only.

The secondary to primary recovery ratio is estimmated to be 1.04-to-1.

Q With a waterflood project instituted on this portion of the pool, what does El Ran calculate the extended life of the field will be and the approximate recoverable reserves?

A The extended life of the field will be around 14 years and we estimate from the secondary reserves around 938,610 barrels of oil.

Q Referring back to Exhibit Number One, would you discuss the waterflood pattern?

A From Exhibit Number One the waterflood pattern will be on a 40-acre 5-spot.

Q And how many injection wells will there be?

A We'll have a total of 13 injection wells, plus the U.S. 1 would be 14, which is our re-injection well.

Q The U.S. No. 1 is already injecting water?

A That's correct.

Q And would you please discuss the production system?

A The production system will all go back to the Roberts 1 lease. It will be the central battery for this unit.

Q Does El Ran request that the order in this matter contain an administrative procedure for approving unorthodox well locations and for changing producing wells to injection wells?

A Yes.

Q Will you please discuss the capital requirements for the unitization and installation of the waterflood?

A The capital requirements will consist of a water supply, which we have to run six miles, 225,000, with a plant injection system and converting -- converting the wells and squeezing off the P-1 amd reperforating five estimated wells, we total out to be $1,041,450.

Q Based on these expenditures, would you briefly discuss the economics of the waterflood and refer to Exhibit Number Nine?

A Exhibit Nine is the economics for the waterflood.

As you can see, from the capital cost, as

I said earlier, $1,000,000, we should see a cumulative discount net revenue return at 10 percent of $5,435,296, that's at 10 percent.

Q And in your opinion will the waterflood operations result in increased recovery of more oil from the pool than would otherwise be recovered?

A Yes, it will.

Q On what basis are the unitization parameters and tract participations calculated?

A They are calculated using ultimate primary of 80 percent and area -- acreage of 20 percent.

Q And based upon the primary production from these tracts do you think that is a fair basis for unitization?

A Yes.

Q Referring to Exhibit Number Ten, would you briefly discuss the waterflood application, which is Case 9358?

A As I said, we will be -- from the C-108 form, we will be converting 13 wells to injection with one already converted, the U.S. No. 1.

Also, in this information is a wellbore sketch describing a typical San Andres well located in this waterflood. As you can see, we've got surface casing set approximately 1728, 8-5/8ths inch casing.

We have a production string that consists of 4-1/2 inch casing and the average total depth on these wells is around 4324. Injection interval would be around 4176 to 4294.

Q Does the C-108 contain the data sheets on all wells within the area of review?

A Yes, it does.

Q And are there any wells within that area requiring any remedial action before the waterflood is instituted?

A No, no wells will need any type of remedial work before installation of the waterflood.

Q Would you discuss the injection rates, please?

A All right. The average daily injection rate will be around 300 barrels of water injected per day with a maximum daily injection rate of 350 barrels of water injected per day.

The system will be a closed system and the proposed average injection pressure will be around 1000 psi with a maximum injection pressure of 1200 psi.

Currently there are two fresh water source wells located in this unit and they are used for livestock watering only and they're also attached.

Q And are there any problems with the com-

patibility of the injection water with the formation water?

A No, there's not any type of compatibility problems. There's waterfloods that exist in eastern New Mexico and west Texas that do combine these two waters, fresh water and San Andres water.

Q And what project allowable does El Ran request?

A In accordance with OCD Rule 701-F-3, El Ran, Incoporated requests that each producing well will be granted an allowable equal to its ability to produce.

Q And in your opinion will the granting of the applications in Case Numbers 9357 and 9358 prevent waste and protect correlative rights?

A Yes.

Q And were Exhibits Six through Ten prepared by you or under your direction or compiled from company records?

A Yes, it was.

MR. BRUCE: Mr. Examiner, I move the admission of Exhibits Six through Ten.

MR. STOGNER: Exhibits Six through Seven will be admitted into evidence at this time.

I'm sorry, Six through Thirteen will be admitted in --

MR. BRUCE: Ten.

MR. STOGNER: Ten through Thirteen, whatever.

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. Ilseng, how many wells are there in the half mile radius, the area of review, I should say?

A Okay, from Form C- --

Q Are they listed in that second part?

A Yes, they are, in Form C-01, right after the well -- well completions. Then you have them.

Q I don't see any cement calculations on your production string. Am I missing them? Did you not include them?

A No, sir, they're not included in this Form C-0108. We just have wherever casing is set at.

Q Okay, would you provide that information for me?

A Yes, I can.

Q Okay. Let's -- how many plugged and abandoned wells do we have in that area of review?

A Plugged and abandoned wells, I can count those. There are a total of seven wells.

Q And where did you get the plugging information on those wells?

A I got those plugging things from OCD.

Q Okay. Would you please provide me, also, subsequent to this hearing, a schematic of the plugging the wells, detailed information as provided by Roman Numeral VI of C-108, and also would you provide the correct information as provided by Part 3-A on those wells within the half mile radius?

A Yes, sir.

Q Now you're seeking 1000 psi injection pressure, is that correct?

A That's correct.

Q Do you have any tests to show that that will not -- that that pressure will not frac the formation?

A At the time being we don't, just based on just some waterfloods around the general area.

We'd say the maximum injection pressure would be around 1200.

Q But you have no information to show that the 1200 psi can sufficiently be injected into this formation without fracing it.

Are you aware of our procedure of .2 psi per foot maximum injection pressure --

A Yeah.

Q -- and limit?

A Yeah, uh-huh.

Q Then why are you seeking 1200 at ths time without that information?

A That would just be a maximum. First of all, we just want to --

Q Let me rephrase myself. What's the average depth of this formation?

A Average depth of producing formation will be, as I said, a depth of around 4167.

Q Okay, and when I multiply that by .2, correct me if I'm wrong, 833.4, to be exact. There again I'm asking you if you know that our policy is .2 psi per foot of depth maximum pressure, until such time as you can provide us with some tests, why are you asking for 1200?

The best we can do at this time without the information would be to limit the injection at .2 psi until you provied it, and it --

A Okay.

Q -- will be an administrative procedure and which I think should be able to cover you on that.

A Okay.

Q Now at the beginning of your testimony you were reading off a bunch of numbers pretty quick. Where were you getting that information from?

A That was based on the secondary number

based volumetric calculations from log data.

Q Did you do those calculations?

A Yes, I did.

Q Okay.

MR. STOGNER: Mr. Bruce, I'm going to ask you to probably submit that data to me so I'll have it --

MR. BRUCE: Sure.

MR. STOGNER: -- handy and I can be able to look at it.

MR. BRUCE: Sure.

MR. STOGNER: And neeedless to say, I wasn't able to comprehend all those numbers.

MR. BRUCE: I'll send it to you today.

MR. STOGNER: Okay. I have no further questions of this witness at this time.

Are there any other questions of Mr. Ilseng?

If not, he may be excused.

Mr. Bruce, do you have anything further?

MR. BRUCE: No, sir.

MR. STOGNER: Does anybody else have anything further in Case Number 9357?

Mr. Bruce, I'll leave the record open pending the additional information. I believe there was three things I was asking for, the cement information on all the wells; the schematic on the P & A'd wells; and then the --

MR. BRUCE: The volumetric data.

MR. STOGNER: Yes. Mr. Bruce, if you want to, if you'd just copy that stuff that he read today, I'll take that (inauddible.)

MR. BRUCE: Sure.

MR. STOGNER: Okay, that's all we have on these two cases.

We'll take about a fifteen minute recess at this time.

(Hearing concluded.)

C E R T I F I C A T E

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

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case Nos. 9357 and 9358 heard by me on 27 April 1988.

Examiner
Oil Conservation Division