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 Dugan Production Corporation for a nonstandard oil proration unit, Sandoval County, New Mexico. CASE 9359

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:

MR. STOGNER: Call next Case Number 9359.

MR. ROYBAL: Case 9359. Application of Dugan Production Corporation for a nonstandard oil proration unit, Sandoval County, New Mexico.

MR. STOGNER: At the applicant's request this case will be continued to the Examiner's hearing scheduled for May 25th, 1988.

(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 No. 9359, heard by me on 27 May 1988.

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

25 May 1988

EXAMINER HEARING

IN THE MATTER OF:

Application of Dugan Production Corporation for a non-standard oil proration unit, Sandoval County, New Mexico.	CASE 9359

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:

MR. STOGNER: Call next Case 9359.

MR. ROYBAL: Case 9359. Application of Dugan Production Corporation for a nonstandard oil proration unit, Sandoval County, New Mexico.

MR. STOGNER: At the applicant's request this case is to be continued to the Examienr's Hearing scheduled to be heard in Farmington, New Mexico, on July 6th, 1988.

(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. 9359, heard by me on 25 May 1988.

Michael E. Stogner, Examiner
Oil Conservation Division

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

6 July 1988

EXAMINER HEARING

IN THE MATTER OF:

Application of Dugan Production Corporation for a non-standard oil proration unit, Sandoval County, New Mexico.	CASE 9359

BEFORE: David R. Catanach, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division: Robert G. Stovall
Attorney at Law
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico

For the Applicant:

MR. CATANACH: Call next Case Number 9359.

MR. STOVALL: Application of Dugan Production Corporation for a non-standard oil proration unit, Sandoval County, New Mexico. County, New Mexico.

The applicant has requested that Case No. 9359 be continued.

MR. CATANACH: Case No. 9359 will be continued to the Examiner Hearing September 14, 1988.

(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. 9359, heard by me on July 6 1988.

David R. Catanach, Examiner
Oil Conservation Division

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

14 September 1988

EXAMINER HEARING

IN THE MATTER OF:

Application of Dugan Production Corporation for a non-standard oil proration unit, Sandoval County, New Mexico.	CASE 9359

BEFORE: David R. Catanach, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division:	Robert G. Stovall Attorney at Law Legal Counsel to the Division State Land Office Bldg. Santa Fe, New Mexico
For Dugan Production Corporation:	W. Thomas Kellahin Attorney at Law KELLAHIN, KELLAHIN & AUBREY P. O. Box 2265 Santa Fe, New Mexico 87504

I N D E X

E X H I B I T S

MR. CATANACH: Application of Dugan Production Corporation for a nonstandard oil proration unit, Sandoval County, New Mexico.

Are there appearances in this case?

MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin from the Santa Fe law firm of Kellahin, Kellahin & Aubrey. I'm appearing on behalf of the applicant and I have two witnesses to be sworn.

MR. CATANACH: Would the witnesses please stand to be sworn in?

(Witnesses sworn.)

MR. KELLAHIN: Mr. Examiner, my first witness is Rich Corcoran. C-O-R-C-O-R-A-N. He's a landman for Dugan Production Corporation.

RICH CORCORAN,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Corcoran, would you please state

your name and occupation?

A My name is Rich Corcoran. My occupation is landman for Dugan Production Corporation.

Q Mr. Corcoran, as a landman for your company have you had previous occasions to testify before the Oil Conservation Division?

A I have.

Q And pursuant to your employment as a landman have you made a study of the land ownership with regards not only to the proposed nonstandard spacing unit, but to the other interest owners within this section and the affected operators, if any, surrounding the spacing unit?

A Yes, I have.

MR. KELLAHIN; At this time, Mr. Examiner, we tender Mr. Corcoran as an expert petroleum landman.

MR. CATANACH: He is so qualified.

Q Mr. Corcoran, let me ask you, sir, to take the exhibits out of order for a moment and I direct your attention to Dugan Exhibit Number Four, and before we discuss your specific involvement with this project, take a moment and identify for us first of all the township and range and then the section and then within the section that

acreage that you propose to be designated as a nonstandard oil proration unit.

A Okay. The exhibit marked Number Four, it's Township 21 North, Range 4 West, Section 25. The well that we're going to speak about today is in the northwest quarter northwest quarter of Section 25. The spacing that we're going to ask for outlined in orange and the pool boundary is indicated by a hachured outline.

Q When we look at this pool boundary, what pool are we dealing with, Mr. Corcoran?

A We're talking about the Rio Puerco Pool. What we're trying to accomplish here is a request that the Commission approved a nonstandard spacing unit within that pool.

Q Currently the pool rules for the Rio Puerco Oil Pool require how many acres to be dedicated to a well?

A 320 acres.

Q And your well in the northwest quarter of Section 25 is identified by what name?

A By the Husky Federal No. 2, it's known as.

Q All right. When was the Husky Federal No. 2 Well completed, Mr. Corcoran?

A The well was completed on December 8,

1983, and when it was completed it was an undesignated 40-acre Gallup well. At a later time, April of '88 -- '86, that is, this well was included within the Rio Puerco Pool, which I had mentioned earlier is indicated by the hachure mark.

Q The Husky Well was completed in December, '83?

A Yes, that's correct.

Q Do you have a date when the Rio Puerco Oil Pool was originally established?

A Originally established in April of '84 and later extended, I believe, to include this, I believe I'm correct, on April of '86.

Q Subsequent expansion of the pool, then, in April of '86, that included Section 25?

A That's correct.

Q Let me direct your attention now back to Exhibit Number One.

In preparing to integrate this well which was spaced on 40-acre statewide Gallup spacing, into the Rio Puerco Oil Pool, did you tabulate and identify the interest owners in Section 25 and in the adjacent tracts that adjoin the 160-acre spacing unit that you're requesting?

A That's right. I had that done.

Q And what is shown, then, on Exhibit Number One?

A Exhibit Number One indicates all the surrounding ownership for the Husky Federal No. 2 Well, as required by Rule, I believe it's 1207.

Q When we look at the northwest quarter of Section 25, that is acreage that's operated by Dugan Production Corporation?

A It is, everything outlined in that one color. It's orange, I believe.

Q When we look at the southwest quarter of 25, that is the 160-acre tract that is not to be included in the well?

A That's right.

Q And that is a portion of Tract No. 4?

A Yes.

Q And the exhibit then identifies the interest owners for that tract.

A That's correct, and their -- their interest is set out in a percentage basis.

Q When we look at the east half of Section 25, we're looking at a portion of Tract 3 and a portion of Tract 4.

A Yes, that's correct.

Q And is the east half of that section

dedicated to a well that's in the Rio Puerco Oil Pool?

A I don't -- I'm not sure.

Q All right. Are you satisfied, sir, that the tabulation of information concerning these tracts and the ownership is correct and accurate to the best of your knowledge, information and belief?

A I am satisfied that that is accurate.

Q All right. What action have you taken, then, to cause those various offsetting interest owners, as well was the owners in the tract that is to be excluded , notifying them of your proposal?

A Okay, if you'll refer to Exhibit Two, this is a copy of a letter that we sent explaining what we had intended to do, that is, request a nonstandard spacing unit.

It also supplied all the parties identified on the earlier exhibit, Exhibit One, notice for this nonstandard application, as well as notice of the date that this application would be heard.

Q The second page of the letter shows a paragraph that indicates the September 14th Division hearing for this case.

A That's right. In the body of the letter it indicates that on August 20th we had -- August 20th of 1987 we had contacted most of the people outlined -- most

of the people that are -- that were contacted at this time, and had requested the same; however, subsequent to that point in time there was a little change in ownership, so we felt it necessary to recontact everyone.

Q Attached to Exhibit Two, in addition to the letter and the index of parties notified, are some other documents. Would you identify those for us?

A The third page is a list of the parties that were identified, or that were noticed.

The fourth page is in the application -- it's a waiver form that we requested each of the parties to execute and return to both the Commission and ourselves.

The next page is a breakdown of the ownership surrounding the well in question.

The following pages are a copy of our application to the Commission.

And then the last three pages are copies of certified receipts indicating that all parties had received our notice as set out in here.

Q As a result of the August 20th, 1987, communication to certain owners that might be affected, did you receive any objection after that letter by any of these people?

A We have not received any objection.

Q And after the July 27th, '88, letter was

sent, did you receive any objection from any party affected?

A We have received no objections from any parties involved.

Q In addition to sending the notices out, Mr. Corcoran, have you obtained waivers and written consents by certain affected parties?

A We have and that's identified as Exhibit Three, and I'd like to point out, if you'll go back to -- to Exhibit One, the parties whose interests would make up the southwest quarter of Section 25, which would be the other 100 -- the remaining acreage in a standard spacing unit, two of the parties have executed the waiver and returned it, and it is included in Exhibit Three.

Those two parties' interest make up approximately 55 percent of the interest.

Q What parties are those in Tract 4?

A Those are ICG Petroleum, Incorporated, for 17.33 percent, and Gary Williams Oil Producer, for 37.5849 percent.

MR. KELLAHIN: That concludes my examination of Mr. Corcoran.

We would move the introduction of Exhibits One through Four at this time.

MR. CATANACH: Exhibits One

through Four will be admitted as evidence.

CROSS EXAMINATION

BY MR. CATANACH:

Q Let's see if I understand this right. In April of '86 the pool was expanded, the Rio Puerco, expanded to include the acreage for your well today.

A Yes.

Q Has the well not produced since then or -- or what's been the status?

A I'm -- I'm not certain and I'd like -- I'd rather have my engineer respond to that, if that's okay.

Q Okay.

MR. CATANACH: That's all the questions I have of the witness at this time. He may be excused.

MR. KELLAHIN: Mr. Examiner, at this time I'd like to call Mr. John Roe. Mr. Roe is a petroleum engineer with Dugan Production Corporation.

JOHN D. ROE, JR.,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Roe, for the record would you please state your name and occupation?

A My name is John Dale Roe, Junior, and I'm Engineering Manager for Dugan Production Corporation in Farmington, New Mexico.

Q And, Mr. Roe, on previous occasions you've testified before the Oil Conservation Division and its Commission in various hearings, have you not?

A Yes, I have.

Q Pursuant to your employment as a petroleum engineer for your company, have you made a study of the engineering facts surrounding this particular application?

A Yes, I have.

Q And in making that study have you formulated an opinion with regards to whether or not Dugan's application for 160-acre nonstandard spacing unit in the Rio Puerco Oil Pool should be granted or not?

A Yes, I have an opinion.

MR. KELLAHIN: At this point, Mr. Examiner, we tender Mr. Roe as an expert petroleum engineer.

MR. CATANACH: And so qualified.

Q Mr. Roe, let me have you take Exhibit Number Four. Mr. Corcoran has identified for us the location of the subject well. I'd like to have you take just a minute and give Mr. Catanach a more detailed explanation of what has been the history on the Husky Federal No. 2 Well.

A Yes. The well, formation it was completed in, as an undesignated Gallup well, and produced up until the nomenclature hearing brought it into the Rio Puerco Mancos Pool, is produced as an undesignated 40-acre Gallup producing well.

At the time it was brought into the Rio Puerco Mancos Dugan was -- was really unaware that it had been included into the Rio Puerco Mancos until the Aztec Office of the OCD advised us that we needed to form a 600 -- or 320-acre spacing unit, at which time, which was in 1986 and we'll have a later exhibit to show that we proceeded to put together a 320-acre spacing unit.

We admit to a degree that this has covered a long period of time in putting together either a standard spacing unit or an nonstandard spacing unit that would be recognized by the Commission. It covered a lot of misunderstanding. Initially the Commission had indicated it could be done administratively. The Aztec Office had

even proposed contracting the pool boundaries. There's been a lot of discussion which has resulted in us having this hearing.

Initially this hearing was scheduled -- I forget, but it's been continued several times. The most recent schedule was the date that we met in Farmington, we were going to have it at that time but because of the docket we pretty much, at the Commission's request, agreed to continue it, but we're dealing with a fairly small volume well and I have in one of my exhibits a detail of the actual production from the well. It is a Federal lease capable of production. We have produced it some in '87 and some in '88; none in '86, although, again, we do have that information included in our exhibits.

Q What is your recommendation and opinion to the Examiner as to whether or not we should form a west half spacing unit consisting of 320 acres or the approval of 160-acre nonstandard unit for the well?

A Well, considering the quality and the productivity of the well and the reservoir at this point, at this location within the bounds of the Rio Puerco Mancos Pool, we feel it's fairly impractical form a 320 because of the productivity of the well and if we were to force pool this well at 320, we feel fairly certain that the parties in the southwest quarter would not be able to

recommend participating actively and we'd be forced to go nonconsent, and we have pursued the efforts to put a 320 together and that's pretty much -- the outcome of that effort is that it's a very tough well to have the spacing unit enlarged.

My recommendation is that we -- that a nonstandard 160 be authorized. We have evidence to show that it is -- has producing characteristics reflecting the fractured Mancos reservoir. We think that it's probably proper to include it within the boundary of the Rio Puerco Pool, although we have information to show that it is a marginal well by the general standards of wells within the Rio Puerco Mancos.

Q What's currently happening with the east half of 25?

A The east half of Section 25 is a 320-acre spacing unit and it is dedicated to the well located in Unit B of Section 25 and that is operated by Gary Williams Oil Producers, Incorporated, and it is their -- I probably will not say this right -- but it's the Ceja, C-E-J-A, Pelon, P-E-L-O-N, Well No. 25-2. It is a well that on Exhibit Four I have identified four pieces of information in the handwritten numbers. The upper left number would be the actual average production during 1987 in barrels of oil per month.

The upper righthand number would be the actual MCF per month, and I stress these are producing month averages, in other words, if a well produced four months, then that's the average of four months, not a 12-months average.

The lower left number would be the cumulative oil in thousands of barrels and that would be cumulative to January 1st of -- my exhibit shows '81 but it's actually 1988.

And the lower right number would be the cumulative gas to January 1st of 1988 in millions of cubic feet per day -- millions of cubic feet, period.

By looking at the numbers of the Husky Federal No. 2 and Gary Williams Ceja Pelon 25-2, it is apparent that his well is significantly better than our well.

Q Turn your attention now, sir, to Exhibit Number Five.

The first page of that is a completion report. Would you show us the particular information on the first page that's of importance to you in reaching your opinion?

A All right. Initially, I just want to point out that we did file our completion report and it was accepted as an Undesignated Gallup completion and spaced 40

acres. It was completed December 8th of 1983, as Mr. Corcoran has testified.

We pretty much completed the overall interval that's generally produced in the Rio Puerco Mancos Pool, the top perforation being at 4787 and the bottom one at 5215, covering a 428-foot gross interval. And this completed interval is further identified on page 2 of Exhibit Number Five, which is a copy of the open hole induction electric log recorded in the well. I have identified the perforations with marks across the righthand margin of the depth column.

Also important on the log, I've indentified two intervals that we had encountered lost circulation while drilling the well, the one being at approximately 4890; we lost 225 barrels of mud; and another being at approximately 5113; we lost 100 barrels of mud.

Q What significance is that to you?

A That is historically in the Rio Puerco Mancos Pool plus other fractured Mancos reservoirs we've been developing, that's a very good indicator that we've encountered a natural fracture at that depth.

Q When we look at the area just above the 5000 foot interval, you have an area that says "producing interval"?

A Yes, I do.

Q P-11-20-3?

A Yes.

Q That refers to what well?

A That would be the Gary Williams Oil Producers, Incorporated, operated well; it's their San Isidro Well 11-16, which is located in Unit P of Section 11 of Township 20 North, Range 3 West, and that primarily is the big well in the Rio Puerco Mancos Pool.

Q How does that producing interval compare to the quality of that interval in your well?

A Well, by correlation of the logs, and we have very good correlation throughout the whole Rio Puerco Mancos Pool area, it would suggest that, you know, the characteristics that are encountered in the gut of the Rio Puerco Mancos Pool are similar to what we see in the Husky Federal No. 2, the main difference being the quality of fracturing that exists at the two different points in the reservoir.

Q All right, sir, if you'll turn your attention to Exhibit Number Six, would you identify that exhibit for us?

A Yes, sir, Exhibit Number Six consists of three pages.

The first page of Exhibit Number Six is nothing more than a plot of the actual production that was

reported to the Commission on our Form C-115. It -- the lower curve is the presentation of oil production. The upper curve is a presentation of the gas production. The oil -- the scale on the -- that relates to oil production, the bottom log scale is 10, 100, 1000, 10,000.

The gas scale is different and I've identified it as a second scale pretty much in line with the identification of gas production.

Q Turn to the second page, Mr. Roe.

A Okay. Since what is plotted on the first page of Exhibit Number Six is the actual monthly production that we report, it -- probably it does not reflect the total production that would be available from the well if we were producing it on a sustained basis.

It's our common practice (unclear) we do not have an authorized spacing unit for the well, and in view of the fact that we have not successfully put together a west half 320, and we no longer have a recognized 40-acre spacing unit, so we -- we are not producing the well full time. It's producing between 3 and 6 days per month; therefor, in order to more properly reflect the productivity of the well, again is a low grade producing well, the upper portion of page 2 I've presented a summary of the C-116 test data that has been submitted to the Commission and taken from the well, the most recent test being one

taken April 19th of 1988 during which the well averaged 2.52 barrels of oil per day over a 24-hour test period.

The lower part of the data presented on page 2 is a summary of the actual production numbers that have occurred from the well and along with the question you asked Mr. Corcoran earlier, during 1986 we did not produce the well at all and it produced only eight months during 1987 and we've produced it so far each month during 1988 but during any one month it's been a very small portion of the month that we've produced it, and effective August 1st of 1988 cumulated production over the 37 months we've produced, had some production, is 1781 barrels of oil and 4115 MCF of gas.

Q All right, sir, and then the last page of this exhibit?

A Okay, the last page of the exhibit is nothing more than to just add some support to the fact that we're dealing with a marginally economic well. The current market conditions have -- have not improved since we submitted this sundry in 1986. This sundry was submitted to the BLM. Not only were we not able to have our spacing unit pieced together, but economics are a real issue here. With the oil prices declining, this particular well was -- is located about 11 miles west of Cuba very close to the Continental Divide; it's approximately 8 miles off of

Highway 44 and it is a real hard well to get in and out of and it's weather dependent. If there's any moisture at all, we can't get in.

So for a lot of reasons we view this well as a marginally economic well and the last page of this exhibit just supports that.

Q What did this well cost to drill and complete?

A Our actual cost to drill and complete the well was just a little more than $243,000. I think the exact number is 243,125.

Q Are you able to assign any reserve number to this spacing unit or to this well based upon conventional volumetric analysis of oil in place or recoverable oil?

A No. As is the case with most other fractured Mancos reservoirs that we've dealt with, the conventional reserve analysis is impossible. We have to resort to pressure testing and pressure interference data, which normally you stay away from, but in a fractured reservoir which we feel exists here, that's the only method to establish reserves.

Q In terms of comparing the productivity of wells so that the Examiner can be satisfied he is dealing with your well as a well that cannot be expected to

fully drain and develop 320 acres, can you take Exhibit Number 4 and show us the wells that were tested and upon which there was interference information to establish originally 320-acre spacing for the pool?

A Yes, yes, I can.

The original efforts to set up the larger spacing for this pool were pretty much pursued by Gary Williams Oil Producers, Incorporated, and naturally, it was centered around the wells that they operated and had most of the information on.

Now, on Exhibit Four all of the Rio Puerco Mancos Pool is not presented, only the lower western portion. In addition to the 39-1/2 acres that are here, there's an additional 39 -- I'm sorry, 39-1/2 sections that are presented, there's an additional 32 sections that are east of what I show on Exhibit Four or southeast in Townships 21, 2 West, 21, 3 West, and 21 North, 2 West.

Now, in the area that's in the southeastern part of my Exhibit Number Four, most of the wells wells involved in this pressure interference testing that was done and performed under the direction and guidance of the New Mexico Petroleum Recovery Research Center, specifically Bill Weiss, most of the wells are identified. I regret that I hadn't identified them with a circle or something but I can give the wells to you and their locations.

There was ten wells that were actually involved in pressure build-up tests and then of those ten, seven of them were incorporated into a pressure interference test, one well being the producing well and six wells being observation wells.

Then again, if it would be useful to the Examiner, I'd be happy to provide the location of those wells.

The results of that study were used to basically give confidence that we were going to effectively drain larger areas. There was pressure interference detected between wells as far as 3-1/2 miles apart.

Now the oil in place number that we would arrive at using that pressure interference data is at the upper end of what I feel comfortable with. Mr. Weiss concluded that there was approximately 320 barrels of oil per acre that would be recoverable, and he was considering pretty much the same general section that we're looking at. He was looking at a 400-foot gross interval, and like I say, he did a very detailed analysis of this area.

Q On what basis, then, do you conclude as an engineer that your well, the Husky Federal No. 2 Well, does not have the capacity to fully drain and develop 320 acres?

A In a fracture type reservoir your ultimate recovery will be a fracture of your productivity. A low rate well does not necessarily mean that you aren't able to drain larger areas. It's just that you aren't going to drain it very fast and it's also an indicator that you probably, or not probably, you did not have the fracture system necessary to drain as large an area as you would in an area where the fracture system is better developed.

Q Would you turn now to Exhibit Number Seven?

A Yes. Exhibit Number Seven is a reproduction from Pages 61 and 62 of the current oil proration schedule Number 49, Volume Number 3, which basically is used to set the allowables for the period September through December of 1988.

The information presented on this is pretty much just a summary of the most recent gas/oil ratio test that was submitted by the operator to the Commission on Form C-116 and I feel fairly certain that the data presented here and highlighted in blue would reflect what each operator has tested the current productive -- productivity of his individual wells to be.

Q Show us some comparisons on Exhibit Seven by which you then can conclude the productivity of

the Husky Federal 2 Well is so low that it cannot be reasonably expected to drain and develop 320 acres.

A Well, first off, the thing that's important is the hours that I've identified with the blue marking, there's 16 of them, the range of rates is 3 barrels of oil per day to 140 barrels of oil per day. The 140 barrel of oil per day productivity is from the well located in Section 11, 20 North, 3 West. That was the one we mentioned earlier, the San Isidro 11-16 Well, located in Unit P.

And that definitely is the best well in the Rio Puerco Mancos Pool.

The lower end of the range is Dugan Production's Husky Federal No 2. The number presented here is 3 barrels a day, which is a rounding of the 2.52 barrels of oil per day that I showed on the last -- page number 2 of my Exhibit Number Six.

By comparison the direct offset that's located in the north -- or in the west half of Section 25 on their standard 320-acre unit, having a cumulative production of about 7000 barrels of oil, it still has a productivity of 5 barrels a day.

There are other wells. The bulk of the higher rate wells are located in the southeastern part of the area that I've shown on Exhibit Four, which again sup-

ports the more productive area of the Rio Puerco Mancos Pool is removed a little bit from the area we're talking about.

Q In your opinion, Mr. Roe, is the southwest quarter of Section 25 going to be drained and depleted by your well in the northwest quarter of that section?

A I -- it's my feeling that if drainage ever results it will be at a point down the road that -- that the present worth is almost negligible and I personally feel that because of the productivity of our well we probably will not drain beyond the 160-acre spacing unit that we're asking for, which is 100 percent Dugan Production leasehold interest.

Q If this application is approved by the Examiner and the Division, do you see any adverse affect on the correlative rights of other interest owners?

A There should be no adverse affect. In fact, if we were to ask or be pushed to put the 320 together by forced pooling, there might be one adverse affect tying their acreage up by a well that probably will never drain it and actually prohibit them from ever developing it should they have a different viewpoint than we do.

Q Let me ask you now to turn to Exhibit Eight. Would you identify and describe this exhibit?

A Exhibit Number Eight is a copy of a letter that Dugan Production sent in what we knew, or at the time what we felt the -- the ownership was in the southwest quarter of Section 25, and I might add, that ownership is also the same ownership as exists in the east half of Section 25, which is the spacing unit for the -- the Gary Williams Ceja Pelon 25-2.

So here in this letter of September 26 we propose that a 320-acre spacing unit be put together.

MR. KELLAHIN: That concludes my examination of Mr. Roe, Mr. Catanach. We would move the introduction of Exhibits Five through Eight.

MR. CATANACH; Exhibits Five through Eight will be admitted as evidence.

CROSS EXAMINATION

BY MR. CATANACH:

Q Mr. Roe, do wells traditionally take a long time to produce in this area or is it just your well in particular or is it just your well in particular or --

A Well, there's -- with reference to Exhibit Seven, there's one well that has 3 barrels a day; one well has 5 barrels a day; one, 7 barrels a day -- I'm sorry, two that have 7; and then the rates get a little better, being fairly typical to any fractured Mancos, being

fairly typical to any fractured Mancos. We see a big variation throughout the reservoir as far as well productivity goes. Again, well productivity is, in my opinion, totally determined by the natural fracturing and so the lower the productivity, the lower the natural fracturing, or the lower the degree that that point in the reservoir is naturally fractured.

As you can see from our Exhibit Four, our well is located on the edge of the Rio Puerco Mancos Pool and there are really no good wells west, north, or south of our well, and I think we, with our well, we have identified the western edge of influence that fracturing had in the Mancos formation.

In answer to your question, all of the wells in the Rio Puerco Mancos, including our well, have similar lives as far as productive lives go. In other words, development in this area was all in the '82-'83 time frame. The cumulative production ranges -- our well is not the lowest. There's a well in the southeast quarter of Section 26 that has never produced. Now whether it is completed and -- and I say never produced, it has produced but not anything that's significant, not even enough to really sell a load of oil. That is a well that Dugan Production recently has taken over operatorship of from Jack Cole.

But at any rate, our well is at the

lower end of cumulative production for wells in the pool. The maximum cum would be the well that I've mentioned in P of 11 of 23 wells, a well operated by Gary Williams. That's got 126,000 barrels and again this is all roughly the same time frame, and so it's not fair to say all wells take a long time but if you have a well that has less fracturing, it's going to take a longer time. The performance that we've indicated on Exhibit Six, that, even though it's down in the monthly rate of about 75 barrels a month, it hasn't stabilized. This performance is fairly typical of a fractured reservoir. You see a real rapid, steep decline in productivity but it will stabilize at some point and then it will last forever.

Our well, being lesser fractured, will take a long time to produce the reserves that are in that part of the reservoir.

Q I see. Do you have any idea, if your application is approved, do you have any idea if the operators or the interest owners in the southwest quarter would propose to drill a well or how would that acreage be developed, do you know?

A Well, it's my feeling right now, and I'm speaking as if I had the option to develop that acreage, with the Husky Federal No. 2 plus the Penistaja No 16 that Jack Cole drilled in the southeast of 26, and if you look

on further down to the south, Lewis has got a well, that it isn't a great well, but I think with the information that exists very close to or are direct offsets to that acreage, it would be very difficult to justify an expenditure of $250-to-300,000 to add an additional piece of information as to the productivity of that part of the reservoir.

I can't say that they would never drill. I feel they wouldn't for sure drill unless oil prices got ridiculously high, at which time their only option would be to drill on a nonstandard spacing unit, and it would be something that they would have the option to do, whereas if we put it in a 320 they wouldn't have that option and I feel fairly certain that we're not going to drain that part of the reservoir with our well.

And, and like I say, I might mention that one of our exhibits, 54 percent of that ownership. or 55 percent, has signed a waiver to our having a nonstandard spacing unit in the northwest quarter.

Q Let's see, as I understand it, the -- the interest in the northwest quarter is common and it's owned by Dugan Production Company.

A That's correct. It's -- Dugan has 100 percent ownership of that interest.

Q So going from, say, a 40 to a 160,

that's -- that's what you're doing, right?

A Yes.

Q It's not going to hurt anybody's interest, violate anybody's correlative rights.

A That's exactly right and, like I say, one of the problems we ran into trying to form a 320 was how were they going to pay for the risk in drilling costs or -- and how are we going to handle what production occurred and having seen that production, should they be allowed to participate at no risk. I mean these are all questions that we've already hashed over at Gavilan when we changed the spacing, and so a lot of those problems are taken care of by not changing ownership of a well and especially when the well's of a productive nature that it might even be argued that it might not go in a 160 acre, but I forgot when Mr. Kellahin asked me about the recovery efficiency of the Mancos reservoir, I gave you the 340 barrels of oil per acre that resulted from the interference test that Gary Williams did, but more typically for the Mancos formation, and also the results of interference testing or massive interference testing involved on the West Puerto Chiquito, the oil recovery per acre is more in the range of 100 to 300 and may be averaging 150 barrels of oil per acre.

So using the 150, 100-to-150, which I

feel our well is more in the area of, our ultimate recovery is going to be dependent upon the oil price. At 2-1/2 barrels a day our economic limit is not far from that at the current oil price. If we can hold out until oil prices go up, our reserves will easily be doubled. I feel fairly certain we're draining more than 40 acres. I am not sure I can tell you that we're going to drain 160 acres.

Q It seems to me that you may have had the right idea in September of '86 when you tried to form a 320 acre unit, but it just never would have panned out.

A Well, putting myself in the position of operators in the southeast quarter, I mean, I would not -- if Dugan came to me and asked me to pay 50 percent of the total $243,000 that it took to drill the well, and provided me with the production information from that well, I'd say, hey, wait a minute, I don't want any part of your well, plus, I don't want you to tie my acreage up in your well because I don't think it's going to drain it.

Q So that's basically the response you got when you tried to form a unit?

A Yes, that is the response we got.

Q Okay.

A It's a pretty tough issue, Mr. Catanach, how to handle a change in ownership in a well that's marginally commercial.

MR. CATANACH: I don't have any further questions of the witness.

MR. KELLAHIN: Thank you. That concludes our presentation.

MR. CATANACH: Okay. There being nothing further in Case 9359, it 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.

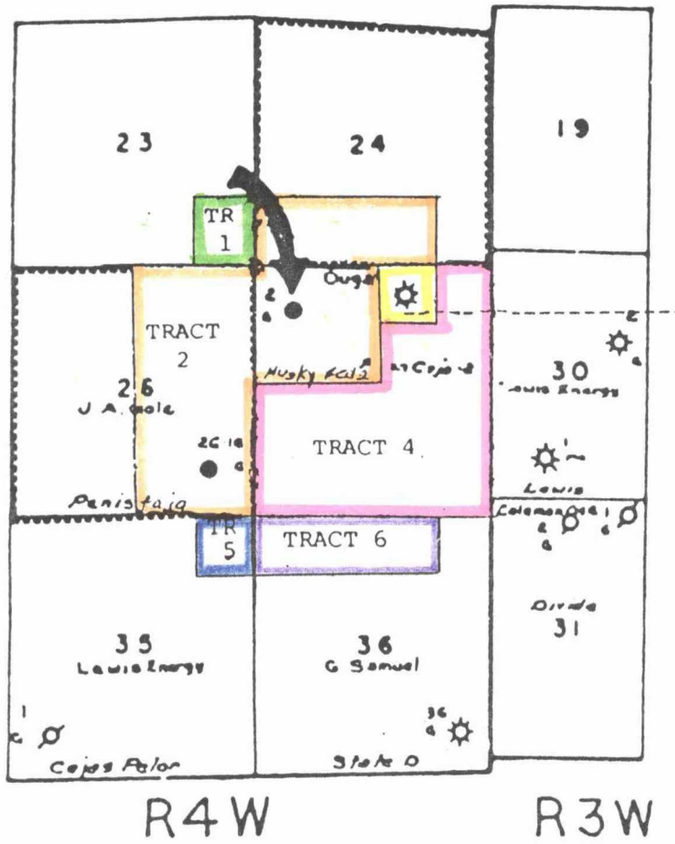
Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9359, heard by me on September 14 1988.

David R. Catanach, Examiner
Oil Conservation Division

EXHIBIT "A"
APPLICATION FOR DUGAN PRODUCTION CORP. - NON-STANDARD 160.0 ACRE SPACING UNIT
HUSKY FEDERAL #2 WELL

NMOCD CASE NO. 9359
9-14-88
Dugan Production Corp.
Exhibit No. 1



TRACT 1 - Section 23: SE/4 SE/4

Yates Petroleum Corp.	40.0%
Myco Industries, Inc.	20.0%
Yates Drilling Co.	20.0%
ABO Petroleum Corp.	20.0%

TRACT 2 - Section 24: S/2 SW/4, SW/4 SE/4
Section 25: NW/4
Section 26: E/2

Dugan Production Corp.	100.0%

TRACT 3 - NW/4 NE/4 (to base of the Gallup formation)

Gary-Williams Oil Producer	37.585%
*AMR Energy Corp. (Toga Petroleum Corp.)	37.585%
ICG Petroleum, Inc.	17.330%
Talus Properties Ltd. P'ship.	7.500%

TRACT 4 - Section 25: NE/4 NE/4, S/2 NE/4, S/2 (to the base of the Gallup formation)

Talus Properties Ltd. P-ship.	7.500000000%
~~ICG Petroleum Inc.~~	17.33000540%
Gary-Williams Oil Producer	37.58499974%
*AMR Energy Corp. (Toga Petroleum Corp.)	36.63999926%
Toga Petroleum Corp.	0.94500047%

Received waivers

TRACT 5 - Section 35: N/2 (to the base of the Gallup formation)

Gary-Williams Oil Producer	33.80499784%
AMR Energy Corp.	33.80499784%
Talus Properties Ltd. P'ship.	7.500000000%
ICG Petroleum Inc.	16.25000000%
A. E. Investments	6.28819200%
Penn Bristol Corp.	2.35181232%

TRACT 6 - Section 36: N/2 NW/4, NW/4 NE/4

Gary-Williams Oil Producer	39.585%
*AA Energy (Toga Petroleum Corp.)	39.585%
ICG Vista Petroleums, Inc.	12.500%
Talus Properties Ltd. P-ship.	8.330%

* NOTE: Public records do not show a transfer of interest or name change. However, Toga Petroleum Corp. is in the process of filing such documentation.