

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

5 September 1984

EXAMINER HEARING

IN THE MATTER OF:

Applications of Dugan Production	CASE
Corp. for amendment of Division	8308
Orders R-7258, R-7367 and R-7365,	8309
Rio Arriba County, New Mexico.	8310

BEFORE: Gilbert P. Quintana, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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I N D E X

JOHN ROE

Direct Examination by Mr. Roberts 5

E X H I B I T S

CASE 8308

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E X H I B I T S

CASE 8309

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CASE 8310

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3 MR. QUINTANA: Call next Case
4 8308.

5 MR. ROYBAL: Case 8308, appli-
6 cation of Dugan Production Corporation for amendment to
7 Division Order R-7258, Rio Arriba County, New Mexico.

8 MR. ROBERTS: Mr. Examiner, my
9 name is Tommy Roberts, Farmington, New Mexico, on behalf of
10 the applicant, Jerome P. McHugh.

11 At this point I'd like to state
12 for the record that the applicant is Jerome P. McHugh and
13 the Cases 8308, 8309 and 8310, and the cases have been ad-
14 vertised under the application of Dugan Production Corpora-
15 tion.

16 I have consulted with Perry
17 Pearce and he advised that readvertising would not be neces-
18 sary, so let the record reflect that the applicant is Jerome
19 P. McHugh.

20 Mr. Examiner, we would request
21 that Case Numbers 8308, 8309 and 8310 be consolidated for
22 purposes of testimony and hearing here today. Issues are
23 common in these three cases and testimony and many of the
24 exhibits will be common to all three cases.

25 MR. QUINTANA: Are there any
other appearances in these three cases?

Let the record show that Cases
8308, 8309 and 8310 will be combined for purposes of testi-

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mony.

MR. ROBERTS: I have one witness to be --

MR. QUINTANA: Will you please stand to be sworn in?

(Witness sworn.)

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

DIRECT EXAMINATION

BY MR. ROBERTS:

Q Would you please state your name, your place of residence, and your occupation?

A My name is John Roe. I live in Farmington, New Mexico. I'm a petroleum engineer, employed by Dugan Production, and we're here today on behalf of Jerome P. McHugh.

Q Have you testified before the New Mexico Oil Conservation Division on prior occasions?

A Yes, I have.

Q In what capacity?

A As a petroleum engineer.

Q And are you familiar with the applications of the applicant in Case Numbers 8308, 8309, and 8310?

1
2 A Yes, I am.

3 MR. ROBERTS: Mr. Examiner, are
4 Mr. Roe's qualifications acceptable as a matter of record?

5 MR. QUINTANA: Yes, they are.

6 Q Mr. Roe, would you please briefly state
7 the purposes of these three applications?

8 A Each of these applications is requesting
9 a revision for the allocation factors which have previously
10 been authorized for the downhole commingling of the Gavilan
11 Mancos Oil Pool with the Dakota production from Basin Dakota.

12 The orders that were issued previously
13 authorizing the current downhole commingling was Order Number
14 R-7258 for the Janet Well No. 1, which is located in
15 Unit A of Section 27, Township 25 North, Range 2 West; Division
16 Order R-7367, which was issued for the Rightway No. 1,
17 located in Unit C of Section 2, Township 24 North, Range 2
18 West; and Division Order R-7365, which was issued for Jerome
19 P. McHugh's Mother Lode No. 1, which is located in Unit H of
20 Section 3 of Township 24 North, Range 2 West.

21 MR. ROBERTS: Mr. Examiner, before we begin identifying exhibits, I'd like to explain for
22 the record how they are numbered for your benefit, also.

23 When we refer to an exhibit
24 that's numbered with a prefix letter "A", we'll be referring
25 to Case Number 8308.

Exhibits numbered with a prefix

1
2 letter "B" refer to Case Number 8309, and exhibits numbered
3 with a prefix letter "C" refer to Case Number 8310.

4 MR. QUINTANA: All right.

5 Q Mr. Roe, would you please identify what
6 have been marked as Exhibits A-One, B-One, and C-One, and
7 explain their significance to this case?

8 A Okay. Exhibits A-One, B-One, and C-one
9 are all exactly the same. There's no difference between the
10 three exhibits. The intended purpose of Exhibit A--Exhibit
11 Number One for each case was basically just to present the
12 location of the three wells, the subjects of these three
13 hearings, which are identified with the red arrows, with re-
14 spect to other wells in the immediate vicinity that are
15 either currently producing or in some cases locations that
16 have been staked for drilling. On this map I've outlined
17 the existing Gavilan Mancos Pool boundary in orange. Indi-
18 cated in colors--the yellow would indicate wells that are
19 Mancos productive; the green would indicate wells that are
20 producing from the Dakota; and the blue would indicate com-
21 pletions in the Greenhorn.

22 Also on this map I've indicated, just as a matter
23 of information, the current barrels of oil per day and the
24 current producing gas well ratio for each of the wells that
25 are producing. In the case of commingled wells, the numbers
reflect the total string production.

I've also indicated, in the case of a well that
there are more than one completion, whether the well is com-

1
2 mingled or it is dually completed.

3 Q Okay, Mr. Roe. Would you turn to what's
4 been marked as Exhibit A-Two. Identify that exhibit,
5 please, and summarize its contents. Explain its signifi-
6 cance to this case.

7 A Okay. Exhibit A-Two is an exact copy of
8 the letter that was submitted on July 11 to the Aztec office
9 of the New Mexico Oil Conservation Division and the purpose
10 of this letter was requesting an administrative handling of
11 this matter and our proposed revision of the allocation fac-
12 tors. The data presented in the letter is current or it is
13 all correct. There's no revisions to it. At the time the
14 letter was submitted we had production data through May of
15 1984, and the data presented through May of 1984 is accurate
16 and current.

17 There are three pages to Exhibit A-Two,
18 the first two pages being the text of the letter and the
19 third page being the tabulation of production that has been
20 recorded on the C-115's for the months November through May
21 of 1984, November '83 through May '84. That's presented in
22 the lefthand portion of the tabulation. I've indicated the
23 split between the Dakota and the Mancos, along with the to-
24 tal commingled string production for both oil and gas.

25 In the righthand portion of this tabula-
tion I've indicated the fact that our total production of
oil and gas is unchanged, however we do feel that the allo-
cation between the zones was not proper on our original--

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using our original allocation factors--and as we would propose the reallocation is presented in the righthand portion of this table.

I would like to not dwell too much on this table right now because in a later exhibit we have updated the production data. The data that as I've indicated November '83 through May '84 is unchanged, and it will be-- we'll discuss it on a later exhibit.

Q Mr. Roe, does the letter which has been marked as Exhibit A-Two set forth the basis on which you request the revised allocation factors?

A Yes, it does.

Q Would you briefly summarize that--those points upon which these applications are based?

A Yes, I will. The--our original allocation which -- the current allocation attributes 63 percent of the commingled oil to the Mancos and 82 percent of the commingled gas string to the Mancos, and the balance, the 37 percent of the oil to the Dakota and 18 percent of the gas to the Dakota.

The original allocation factors were based upon the -- or they incorporated the initial testing that had been done on the well and at the time we had our commingling hearing, that was combined total production of 116 barrels of oil a day of which 73 was from the Mancos and 43 was from the Dakota.

Since the -- and our early testing pretty

much indicated the well was going to be a subcommercial, marginal well at best, we -- it would not flow continuously and we had trouble producing it.

Since installing a rod pump in November of '83, and producing the well under a more continuous basis than we were able to prior to November of 83, production had continued to improve. It's averages as high as 233 barrels of oil a day for the commingled stream, and because of our analysis of the Mancos in this area we feel fairly certain that the -- it's highly fractured. We lost circulation when we drilled the well, requiring large percentages of lost circulation material in our mudstream.

Our log analysis suggests that the Mancos is fractured. With production, we are actually producing back some lost circulation material, with time.

We feel that the improved productivity is a result of the Mancos cleaning up. The potential tested during our initial completion was disguised with the existence of damage that was either done in the invasion of lost circulation material, invasion of mud, or the invasion of our cement. We feel that the bulk of the productivity--that the productivity improvement is from the Mancos as opposed to the Dakota. Our initial potential that we have data to support the fact that we feel the initial potential does accurately represent the potential of the Dakota. With our allocation factors being fixed and the production being better than anticipated, and that improved productivity being

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from the Mancos, it is allowing -- or we're allocation more oil to the Dakota than in reality is occurring.

Q In the drilling of this well, the Janet No. 1 Well, did you experience any lost circulation through the Dakota formation?

A We did experience lost circulation. We, I have identified on a later exhibit the intervals that we lost circulation, but we did lose circulation and were required to incorporate cedar fiber and cottonseed hulls in order to drill through the Mancos.

Q Did, my question dealt with the Dakota formation and lost circulation through the Dakota formation. Did you experience any lost circulation through the Dakota formation?

A No, there was no lost circulation in the Dakota interval; not in this particular well, and analysis of the logs would suggest the Dakota is not highly fractured, or at least not as significantly fractured as the Mancos.

Q Mr. Roe, would you turn to what's been marked as Exhibit A-Three and identify that exhibit?

A Okay. Exhibit A-Three is an exact duplicate of page number three of Exhibit Number Two, with the exception that I've updated it for production that did occur during the months of June and July and I would call your attention to the fact that I've -- for reference I've numbered the columns at the bottom of Exhibit Number Three.

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2 In column number four and column number
3 seven we have indicated the total commingled stream of pro-
4 duction that has occurred for the Janet No. 1 during the
5 time period November '83 through July '84. This represents
6 a total oil of 38,584 barrels of oil and 25.5-million cubic
7 feet of gas.

8 With the existing allocation factors, we
9 have allocated an average of 56 barrels of oil a day to the
10 Dakota. That's indicated in column number two, and an aver-
11 age of 95 barrels of oil per day to the Manco. That's indi-
12 cated in column three.

13 The average GOR in the Dakota during this
14 9-month period would be 323, indicated in column five, and
15 in column six the average GOR during this period for the
16 Mancos would be 860.

17 During this 9-month period the well has
18 produced a total of 256 days. Our, as I've indicated ear-
19 lier, our initial potential of 116 barrels of oil per day
20 was tested between the zones. The Dakota, we anticipated
21 its -- or its initial potential was 43 barrels a day from
22 some -- a study that I had done in the area. Utilizing
23 wells in the West Lindrith and the Ojito Gallup Dakota, I
24 had determined that under sustained operations on the aver-
25 age we would expect the wells to produce 42 percent of what
was presented on the initial potential.

Utilizing that 42 percent, we, under sus-
tained production operations, we would have expected the Da-

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2 kota to initially produce at 18 barrels a day and decline at
3 an annual rate of 40 percent, and again, this is resulting
4 from the fairly detailed study that I had done in support of
5 our commingling, our original commingling application.

6 In column number nine I've indicated the
7 Dakota production as we believe it actually exists, initial-
8 ly averaging 18 barrels a day and during the nine month per-
9 iod averaging 15.7 barrels a day.

10 Having what we feel to be a pretty good
11 handle on the Dakota production, the balance of actual pro-
12 duction is believed to have come from the Mancos and that
13 average during the nine month period would be 135 barrels a
14 day.

15 The gas allocation factors we believe to
16 be accurate as evidenced by the fact that with the revision
17 in the oil our GOR during the nine month period for the Da-
18 kota would average 1150 and the Mancos would average 605.
19 These numbers are more in line with the actual production
20 numbers that have occurred on occasions when the zones were
21 tested separately.

22 Q Now, Mr. Roe, in summary, is it accurate
23 to say that it is your opinion that the allocation of actual
24 production to date between the Mancos and Dakota zones is
25 not represented truly by the current allocation factors?

26 A Yes. That's -- that's correct. The bot-
27 tom of each of the columns in columns number two and three
28 we've indicated the current oil allocation factors; in

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2 columns nine and ten at the bottom I've indicated the re-
3 vised allocation factor, which would be 90 percent of the
4 oil to the Mancos and 10 percent of the oil to the Dakota.

5 The gas, as I've indicated, we feel to be
6 properly allocated and there are no changes proposed for
7 that.

8 Q Mr. Roe, would you refer to what have
9 been marked as Exhibits B-Two and B-Three applicable to Case
10 8309, identify those exhibits and if you have any comments
11 in addition to those you made in response to Exhibits A-Two
12 and A-Three, make those comments?

13 A Okay. B-Two and B-Three are exhibits
14 that are similar in nature as to A-Two and A-Three, other
15 than they're prepared specifically for the Rightway No. 1.
16 As I've indicated, our reason for proposing a revision in
17 allocation factors is the same. It's, basically, we have
18 evidence to support the fact that the Mancos was damaged at
19 the time we recorded our initial potential. For the Right-
20 way the initial potential totaled 78 barrels of oil a day,
21 of which 51 was allocated or 51 was from the Mancos and 27
22 was from the Dakota.

23 As I've indicated with Exhibit A-Two, we
24 do get the lost circulation material back upon producing
25 these wells under artificial lift conditions. We installed
a rod pump in the Rightway No. 1 on November 2nd, 1983 and
have produced it continuously since that time and production
has improved since installing the rod pump.

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2 At the time we'd test our potential again
3 and as is evidenced by the total of 78 barrels a day, we
4 anticipated a subcommercial well, and that was the basis of
5 our original request for commingling, and our original
6 commingling factors allocate 67 percent of the oil to the
7 Mancos and 33 percent of the oil to the Dakota; 85 percent
8 of the gas to the Mancos and 15 percent to the Dakota.

9 In this application and as supported on
10 Exhibit B-Three, we would revising the allocation factor to
11 represent 92 percent of the commingled stream being
12 allocated to the Mancos and 8 percent of the commingled
13 oil stream allocated to the Dakota.

14 Again our gas allocation factors, we feel
15 properly represent the gas production.

16 The -- with reference to Exhibit B-Three,
17 it is again an exact format that was utilized on Exhibit A-
18 Three, just to highlight the performance to date durign the
19 nine month period November '83 through July '84, actual
20 production has averaged 124 barrels of oil per day. That's
21 the commingled stream. And utilizing our current allocation
22 factors, the Dakota production would average 41 barrels a
23 day and the Mancos, 83 barrels a day.

24 Our GOR during this nine month period
25 would average 346 in the Dakota and 953 in the Mancos,
which, again, these GORs are not in line with what has been
tested on the occasion that the Dakota or Mancos was tested
separately, or produced separately.

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2 In the righthand portion of the Exhibit
3 Number Three I've indicated our Dakota production forecast,
4 which we believe to exist during the nine month period; the
5 actual production would average 9.6 barrels of oil a day;
6 the balance being from the Mancos and that would average 114
7 barrels a day.

8 As I've indicated, our allocation factors
9 as we believe they exist and as they currently exist, are
10 indicated at the bottoms of columns number two and three for
11 the oil and nine and ten for the proposed revision in oil,
12 and then the gas allocation factors would be located at the
13 bottom of five and six and twelve and thirteen.

14 Q Refer to exhibit C-Two and C-Three and
15 identify those exhibits and highlight the pertinent points
16 of those exhibits.

17 A Okay. Exhibit C-Two and Exhibit C-Three
18 again are the same format as we've just reviewed for A in
19 the previous two cases.

20 Our reason for the revised commingling
21 factors is the same. We did have evidence of fracturing in
22 the Mancos and we feel that the improved productivity of
23 this well is a result of the Mancos being better than was
24 reflected on our initial potential.

25 At the time we were completing this well
we tested 63 barrels a day from the Mancos and 15 barrels a
day from the Dakota. That was what was reported on our ini-
tial potential.

1
2 Since installing a rod pump in November
3 11th of '83, the well has produced at rates much higher than
4 that, actually averaging 392 barrels a day in May of 1984.

5 With our current allocation factors for
6 the Mother Lode No. 1, allocate 79 percent of the oil to the
7 Mancos and 21 percent to the Dakota, and 91 percent of the
8 gas to the Mancos and 9 percent to the Dakota.

9 It's proposed that we revise these allo-
10 cation factors to reflect 97 percent of the commingled
11 stream being allocated to the Mancos and only 3 percent of
12 the commingled stream allocated to the Dakota. Again the
13 gas allocation factors would remain unchanged.

14 With reference to Exhibit C-Three, again
15 the format is exactly the same as the previous two cases,
16 highlightin the numbers that exist during the nine month
17 period November '83 through July '84. The actual production
18 averaged 199 barrels a day during the 265 days that this
19 well has produced. Of that 199 barrels a day 42 barrels a
20 day is allocated to the Dakota with our existing allocation
21 factors. The balance of the 157 barrels a day to the Man-
22 cos.

23 With the current allocation our factors
24 that exist, our average GORs appear to be 249 in the Dakota
25 and 670 in the Mancos. Again, the 249 in the Dakota is an
unrealistic number; however, when we make the revised allo-
cation of our oil we feel that the GORs come more in line
with the -- that that we believe exists in the Dakota and

1 Mancos and during the same nine month period our Dakota pro-
2 duction with the revised allocation factors would average
3 5.6 barrels a day and the balance of 173 -- 193 barrels a
4 day would be from the Mancos.

5 Q Mr. Roe, by what standard would you com-
6 pare the gas/oil ratios in these wells?

7 A Well, we have recently, there have some
8 wells that were completed only in the Mancos so we have the
9 actual production performance of several wells, some oper-
10 ated by McHugh and some operated by other operators, plus
11 there have -- there has only been really one sustained pro-
12 duction test of the Dakota in this area and that was in the
13 Gavilan No. 1.

14 I have data that would -- relative to
15 that well here in the following exhibit.

16 Q Turn to what has been marked as Exhibit
17 A-Four and identify that exhibit.

18 A Exhibit A-Four is an open hole -- it's a
19 reproduction of the open hole induction electric log --

20 (REPORTER'S NOTE: At this point the tape became erratic in
21 sound value and the reporter is unable to make a clear
22 transcription for the next several minutes.)

23 (Thereafter the following testimony was
24 given.)

25 A We perforated the overall 460-foot gross
interval and within this 460-foot interval, 456-foot gross

1 interval we've completed 17 separate zones and we feel that
2 there's approximately 36 feet of pay with an average poro-
3 sity of 9.6 percent.

4 The page does indicate that we did have a
5 little lost circulation at -- when the bit was at 8169.
6 We're not real sure whether this is indicative of fracturing
7 in the Dakota or that the lost circulation occurred at some
8 other point in the wellbore.

9 We also had a little evidence of bit tor-
10 quing in the upper part of the Dakota, which possibly would
11 suggest some minor fracturing; however, based upon our ini-
12 tial potential test we don't feel that the evidence of frac-
13 turing, plus in the other wells that we have information on
14 that fracturing in the Dakota is a significant factor and
15 especially with respect to the fracturing that exists in the
Mancos.

16 Q Would you go to Exhibit C-Four and iden-
17 tify that exhibit?

18 A Exhibit C-Four is the open hole induction
19 log for the Mancos interval and the Dakota interval in the
20 Mother Lode No. 1.

21 The first page of Exhibit C-Four is
22 across the Mancos interval. I've indicated three separate
23 intervals that we had lost circulation in the Mancos. We
24 lost 300 barrels of mud at 6916, 200 barrels of mud at 6974,
and 300 barrels of mud at 7324.

25 Again, as with the other two wells we

1
2 were anticipating lost circulation and we had lost circula-
3 tion material at the time we encountered these zones. We
4 increased the percentage of lost circulation material after
5 encountering the zones and we did lose a significant amount
6 of material to the formation in the Mancos.

7 (Tape faulty) to 7070 covers a 305 foot
8 gross interval. It entails completing 30 separate intervals
9 and developing approximately 52 feet of pay with an average
10 porosity of 12.7 percent.

11 The second page of this exhibit is
12 throughout the Dakota interval we've completed the overall
13 7861 to 8108, 247-foot gross interval. We developed 13 sep-
14 arate intervals and possibly 32 feet of pay with an average
15 porosity of 9.7 percent.

16 We did not encounter any lost circulation
17 or bit torquing through this interval in the Dakota.

18 Q Okay, Mr. Roe, would you now turn to Ex-
19 hibit A-Five, B-Five, and C-Five and identify those exhi-
20 bits, please?

21 A Okay. A-Five, B-Five, and C-Five are --
22 are all exactly the same. What is in A-Five is common to B-
23 Five and is also exactly duplicated in C-Five. I'll make
24 reference to A-Five and call some attention to highlights.

25 Those same comments would apply to the
other two sets of exhibits.

Q Exhibit Number Five for each case con-
sists of six pages. The first page is a summary of the wells

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in this immediate vicinity and the well. Its purpose is mainly just to present the information that we have regarding the Mancos and the Dakota.

I've indicated the initial potentials in barrels of oil per day and the GOR that was tested for each zone. Also I've indicated the cumulative production that has occurred as of August 1st of 1984 and also the current production that exists for each well in barrels of oil per day and the current GOR.

As a matter of interest, since this is a fairly new area, a total of 331,000 barrels of oil have been produced from this area plus approximately 488-million cubic feet of gas and the daily average production from this area is about 2400 barrels of oil per day from all of the operators.

Q Mr. Roe, let me interrupt you there. When you refer to "this area" you're talking about the Gavilan area, the Gavilan Mancos Oil Pool, within those boundaries?

A It's within the boundaries of the Gavilan Mancos Oil Pool plus I've included four wells, five wells, that are outside the Gavilan Mancos Pool boundary but in the immediate area of interest, and we feel probably have some bearing on this, the production being similar in nature.

Of the five wells that are outside the boundary there are three locations and two that are in the completion process, so there's really no real new evidence

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available from those wells yet, but it does suggest that this is an area that there will be lots of activity in in the coming future.

Q Go ahead with your analysis of Exhibit A-Five.

A Okay. Just one last comment on the first page.

There are fourteen wells in this area in, as Mr. Roberts indicated, the bulk of the completion and the production information is within the bounds of -- or all of the production is within the bounds of the Gavilan Mancos Pool as it exists now.

There are fourteen wells that have been completed and have production histories. Three wells are in the process of completion or awaiting on completion tool and there are two staked locations.

On the second page of Exhibit A-Five, it's just footnotes that further explain the first page and there's really nothing noteworthy on the second page other than should there be questions requiring additional explanation or if I felt there was additional explanation, those explanations are presented on the second page.

The third page of this exhibit is a production plot for the Gavilan No. 1, which is the well operated by Northwest Exploration. This well is located in Unit A of Section 26, Township 25 North, Range 2 West. It's in the immediate vicinity of the three wells we're talking

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2 about that are the subject of this hearing and the purpose
3 of this plot was to just present the overall picture of all
4 of the production that has occurred from the date of first
5 production, which was in 1982.

6 When Northwest equipped this well they
7 equipped it in a manner that they could produce the Mancos
8 by itself, the Dakota by itself, or with the strings com-
9 mingled and that has actually occurred during the life of
10 the well.

11 I've indicated, it may be a little hard
12 to see, but I've got additional detail on page number four.
13 The reason for page three was just to show the overall pic-
14 ture. On the page four I've taken an area out of this pro-
15 duction curve and provided additional details.

16 So with reference to page four of this
17 exhibit, I've provided daily production data for the months
18 July, 1983, through January, 1984. During this period of
19 time the well was produced as a single Mancos. It was pro-
20 duced as a commingled Mancos-Dakota. It was produced as a
21 single Dakota, and then production as a single Mancos was
22 restored.

23 The upper portion of page number four of
24 this exhibit is the daily data and it is presented for your
25 information if you choose to look at it.

The lower portion is a summary and that's
the part that I'll discuss. It basically summarizes the up-
per portion plus it also accounts for the entire production

1
2 history of the well.

3 Briefly the well was produced as a single
4 Mancos from March of '82 through July 27th of 1983. During
5 this period it initially averaged 44 barrels of oil per day
6 with an average GOR of 8677. This was an average production
7 that did occur during the first 161 days of production.

8 The last fifteen days of production,
9 which occurred July 1st through July 27th, it averaged 71
10 barrels a day with an average GOR of 7930.

11 Northwest then commingled the Mancos and
12 Dakota and produced it as a commingled zone from July 28th
13 through October 9th of 1983. During the latter portion of
14 this period production was averaging 108 barrels of oil per
15 day with a GOR of 3565.

16 At this time the -- I might just point
17 out that the GORs that I've quoted here are utilizing gas
18 volumes that I got from the C-115. The reason I did that is
19 the daily gas volumes that are reported here, there was a
20 lot of times a question in my mind as to the accuracy of
21 them. It appeared that maybe they were just not able to
22 measure volumes on all of the days and I used, to remove un-
23 certainty, I used an actually recorded gas volume. The pro-
24 duction of gas from this well was being sold to the pipe-
25 line, so they should be fairly accurate numbers.

26 On October 10th through November 30th of
27 1983 the well was produced from the Dakota for a total
28 period of 50 days. The Dakota was the only thing open dur-

1
2 ing this test and the average production during the last 30
3 days of this period was 6 barrels of oil a day and the GOR
4 was an average of 7772.

5 At that point production to the single
6 Mancos was restored and that is the current status of the
7 well. It, during June of 1984 averaged 82 barrels of oil
8 per day with a GOR of 2223.

9 Mr. Roe, what conclusions do you draw
10 then from the data in Exhibit A-Five relative to the pro-
11 posed revision of allocation factor?

12 A Okay. Exhibit A-Five it establishes the
13 fact that we have productive potential in the Dakota. It,
14 to your knowledge, is the only well that has actually under
15 any long period tested the Dakota. It establishes that re-
16 lative to the Dakota the Mancos is the primary producing in-
17 terval in this -- this area.

18 Q I believe you have a couple of other
19 pages in Exhibit A-Five. Do you wish to elaborate on the
20 contents of those pages?

21 A Yes. On page number five, this is the --
22 a plot of the daily production rates for Jerome P. McHugh's
23 Native Son No. 2.

24 At the initial -- initially we had both
25 the Mancos and the Dakota open for production. The daily
rates are plotted beginning in March, March 9th, 1983, and
through June 12th of 1984 -- now I said March 9th of 1983,
that's 1984, March 9th, we started production and produced a

1
2 commingled stream through June 12th of 1984, at which time
3 we shut the well in to isolate the Dakota because we were
4 not able to obtain authorization from the Commission to com-
5 mingle these zones.

6 We produced the well under a temporary
7 allowable during the period March through June and at -- on
8 June 12th we shut the well in. We isolated the Dakota, ef-
9 fectively June 18th the Dakota was temporarily abandoned. We
10 changed out the tubing and restored the well to production
11 upon obtaining a pipeline connection for gas sales during
12 August 14th of 1984, and as you can see on the plot of daily
13 rates, the volumes -- the daily rate was restored to rates
14 than higher than we actually had prior to the isolation of
15 the Dakota. The fact that we installed 2-7/8ths tubing dur-
16 ing our workover, where production prior to that was through
17 2-3/8ths tubing, that is our explanation as to the rates
18 being higher.

19 The back pressure that the well was sub-
20 jected to before temporarily abandoning the Dakota and after
21 abandoning the Dakota was similar, so improved productivity
22 is the result of the larger tubing. This significance of
23 this plot is that the volume of oil that was attributable to
24 the Dakota during the period March through June is fairly
25 small compared to the amount that is attributable to the Da-
kota -- to the Mancos.

26 Q Mr. Roe, what conclusions, then, would
27 you be able to draw from the data submitted for the Native

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Son No. 2 Well, Jerome P. McHugh's well, insofar as it applies to the request for revision of allocation factors?

A This is presented in support of the fact that the bulk of our completion information, well, it just supports the fact that the Mancos is our primary producing interval. The initial potential for the Native Son No. 2 was much less than we see here on a daily basis. We actually had an initial potential of 233 barrels a day in the Mancos and 58 barrels a day in the Dakota.

As you can see, the Mancos-Dakota combined stream initially averaged 500 barrels a day, and again, now, I say 500 barrels a day, that's once we were able to get production sustained during the month of January '84, we actually had a daily average of 133 barrels a day during eight days that we were able to get the well to produce, and during February we also averaged 153 barrels a day during ten days that we were able to get the well to produce.

We have continued swabbing trying to get the well to come around and beginning March 9th the data is tabulated on a daily basis.

Q Mr. Roe, do you have any information regarding the oil gravity factors which have a bearing on this application, or these applications?

A Yes, that would be one other factor that we have as evidence to the fact that the Dakota was, even though it was producing it was not a significant part of the

1
2 commingled stream.

3 The average oil gravity during June of
4 1984 was 44.2 degrees API and the gravity during August that
5 we actually observed was 44.7 degrees, suggesting a very
6 minor change in the composition of the total oil stream.

7 Again, the data we have with regards to
8 the Dakota suggests that its gravity would be about 37 de-
9 grees.

10 Oh, one other, the last page of this ex-
11 hibit is -- is just included for information. It is a plot
12 of all production that has occurred from the Native Son No.
13 2, not just the area that I've chosen to provide detail on.

14 Q Mr. Roe, in your opinion would the grant-
15 ing of the application in Case Numbers 8308, 8309, and 8310
16 be in the best interests of conservation and result in the
17 protection of correlative rights and the prevention of
18 waste?

19 A Yes, sir, I believe that this is abso-
20 lutely necessary in order to protect correlative rights.

21 Q Were Exhibits A-One through A-Five, B-One
22 through B-Five, and C-One through C-Five, either prepared by
23 you or at your direction and under your supervision?

24 A Yes, they were.

25 MR. ROBERTS: We move the ad-
mission of those exhibits.

MR. QUINTANA: Okay, Exhibits
A-One through A-Five, B-One through B-Five, and C-One

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through C-Five will so be admitted in Cases 8308, 8309, and 8310.

MR. ROBERTS: Mr. Examiner, I have no other questions.

MR. QUINTANA: Are there any other questions of the witness? The witness may be excused.

Cases 8308, 8309, and 8310 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 record of the proceedings in
the Examiner hearing of Case Nos. 8308, 8309, 8310
heard by me on SEPT. 5 1984.
Gilbert P. Quintana, Examiner
Oil Conservation Division

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

22 August 1984

EXAMINER HEARING

IN THE MATTER OF:

Application of Dugan Production Corp. CASE
for amendment of Division Order No. 8308
R-7258, Rio Arriba County, 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 Oil Conservation Commission State Land Office Bldg. Santa Fe, New Mexico 87501
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For the Applicant:

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3 MR. STOGNER: Call next Case
4 Number 8308.

5 MR. PEARCE: That case is on
6 the application of Dugan Production Corporation for
7 amendment of Division Order R-7258, Rio Arriba County, New
8 Mexico.

9 Mr. Examiner, applicant has re-
10 quested continuance until September the 5th, 1984.

11 MR. STOGNER: Case Number 8308
12 will be so continued to the Examiner Hearing scheduled for
13 September 5th, 1984.

14 (Hearing concluded.)
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C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY
that the foregoing Transcript of Hearing before the Oil 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
hearing held before the Oil Conservation Division of Case No. 8308
held by me on August 22, 1984.
Michael E. [Signature] Examiner
Oil Conservation Division