1 STATE OF NEW MEXICO 1 2 ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT 3 OIL CONSERVATION DIVISION IN THE MATTER OF THE HEARING 5 CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF 6 CONSIDERING: CASE NO. 10521 7 CASE NO. 10521 BEING REOPENED 8 REPORTER'S TRANSCRIPT OF PROCEEDINGS 9 EXAMINER HEARING 10 BEFORE: Michael E. Stogner, Hearing Examiner Jim Morrow, Hearing Examiner 11 February 17, 1994 12 13 Santa Fe, New Mexico 14 15 This matter came on for hearing before the Oil Conservation Division on February 17, 1994, at 16 Morgan Hall, State Land Office Building, 310 Old 17 Santa Fe Trail, Santa Fe, New Mexico, before Deborah 18 O'Bine, RPR, Certified Court Reporter No. 63, for the 19 State of New Mexico. 20 21 22 MAR 2 | 1994 23 24

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11	FOR GAS COMPANY VICTOR LYONS
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EXAMINER STOGNER: This hearing will come 1 2 to order. At this time I'll call reopened case No. 3 10521, which is in the matter of said case being 4 reopened pursuant to the provisions of Division Order No. R-8170-L, which promulgated special rules and 5 regulations for the South Blanco-Pictured Cliffs, 6 7 establishing a minimum gas allowable for said pool. 8 At this time, I'll call for appearances. 9 MR. CARR: May it please the examiner, my name is William F. Carr with the Santa Fe law firm, 10 11 Campbell, Carr, Berge & Sheridan. In this case, I represent Union Oil Company of California, d/b/a 12 Unocal, Arco Permian, and Amoco Production Company. 13 I have two witnesses. 14 EXAMINER STOGNER: Unocal, Arco and who? 15 16 MR. CARR: Amoco. 17 EXAMINER STOGNER: Any other appearances? 18 MR. LYONS: Victor Lyons, consulting 19 engineer, appearing for Gas Company of New Mexico. We won't have any witnesses or statements. 20 EXAMINER STOGNER: Any other appearances? 21 Will the witnesses please stand to be sworn at this 22 time. 23 24 (Witnesses sworn.) 25 EXAMINER STOGNER: Mr. Carr?

MR. CARR: At this time we call Dana 1 2 Delventhal. 3 DANA DELVENTHAL, the witness herein, after having been first duly 4 sworn upon her oath, was examined and testified as 5 6 follows: 7 EXAMINATION 8 BY MR. CARR: Will your state your name for the record, 9 Q. 10 please. I'm Dana Delventhal. Α. 11 Where do you reside? 12 Q. 13 Α. Farmington, New Mexico. Q. By whom are you employed? 14 I'm currently a consultant for Union Oil 15 Α. of California. 16 And in what area are you consulting? 17 ο. As a reservoir engineer. 18 Α. Have you previously testified before the 19 Q. New Mexico Oil Conservation Division? 20 Α. No, I have not. 21 Could you briefly summarize your 22 educational background for Mr. Stogner? 23 24 Α. I received a Bachelor of Science Degree in Petroleum Engineering from the New Mexico Institute 25

of Mining and Technology.

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- Q. Following graduation, could you summarize your employment history?
- Following graduation, I went to work for Amoco Production Company in Farmington, New Mexico. I was with them for five years before starting an independent consulting firm in 1989.
- Are you familiar with the South Q. Blanco-Pictured Cliffs Pool and the producing status of wells in that pool?
 - Yes, I am. Α.
- Have you prepared certain exhibits for presentation in that case?
- Yes, I have. Α. 14
 - Are you prepared to make recommendations Q. to the Division concerning continuation of the 100 Mcf per day minimum allowable for the pool?
- Yes, I am. 18
- I would tender Miss Delventhal MR. CARR: as an expert witness in petroleum engineering. 20
- EXAMINER STOGNER: Miss Delventhal is so 21 qualified. 22
- 23 Q. (BY MR. CARR) Can you briefly state what Unocal seeks in this case? 24
 - Α. Unocal seeks the promulgation of permanent

pool rules for the South Blanco-Pictured Cliff Pool, which would provide for a minimum of 100 per day gas allowable per acreage factor of 1.

- Q. When was this pool originally created?
- A. It was originally created in May of 1952 under Order No. R-156.
- Q. When was prorationing instituted in the pool?
- A. Prorationing became effective January 1st of 1955 under Order No. R-565.
- Q. Could you refer to what has been marked as Unocal Exhibit No. 1, identify this exhibit, and then review it for Mr. Stogner?
- A. Unocal's Exhibit No. 1 shows an outline of the San Juan Basin with the individual Pictured Cliff pools outline. It gives a general idea of the size and positioning of the Pictured Cliff pools within the Basin.
- Q. How many of these Pictured Cliffs pools were prorated at one time?
 - A. At one time as many as five.
 - Q. And which ones are they?
- A. The Fulcher Kutz Pictured Cliffs, Aztec
 Pictured Cliff, West Kutz Pictured Cliff, the Ballard
 Pictured Cliff and the Tapacitos Pictured Cliff Pools

were all prorated.

- Q. And how many of those pools are prorated today?
- A. Currently only two pools are, the South Blanco-Pictured Cliff and the Tapacito Pictured Cliff.
- Q. What happened to prorationing in the other PC-prorated pools?
- A. The others, proration was dropped after an industry committee recommended deprorationing of those pools in 1974. This was Order No. R-1670-R. The committee had determined the productivity of these wells had declined, that the average well production rate of 100 Mcf a day would not cause waste nor impair correlative rates if the pools were deprorated.

However, the South Blanco-PC and Tapacito
PC at that time had two separate pipelines serving
those wells, Gas Company of New Mexico and an El Paso
line. Their fear was that the two different system
pressures would allow nonratable takes between
individual wells should they be prorated.

- Q. So prorationing remained for that reason in these pools?
 - A. That's correct.

- Q. Was Unocal the original applicant in Case
 10521 heard by the Division in August of 1992?
 A. We were.
 Q. What did Unocal seek at that time?
 - A. We sought deprorationing of the entire pool.
 - Q. At that time what were the average producing rates for wells in this pool?
 - A. Roughly 24 Mcf per day.
- Q. Has that rate changed significantly since that time?
- 12 A. Not significantly.
- Q. The pool, therefore, is in an advanced state of depletion?
- 15 A. Yes, it is.

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- Q. Is there still a potential for nonratable taking in this pool?
 - A. No. With the spot market system now and most of these PC's being so depleted, they all are producing at the low pressure systems or from behind a compressor; so they're not bucking different system pressures.
 - Q. What was the result of the original hearing on Unocal's application in this case?
 - A. The application to prorate the entire pool

was denied; however, the Division did set a new rule, setting a minimum allowable of 100 Mcf per day to become effective December 1, 1992.

Q. Are there wells in the pool that can produce in excess of that 100 Mcf per day?

- A. Yes, there are. Out of roughly 1,500 wells, 24 to 30 wells are capable of reaching 100 Mcf per day.
- Q. In reaching this conclusion, what was the reason stated by the Division in the original order?
- A. Although they were comfortable that it was a low permeability reservoir and that it was in an advanced state of depletion, there was some concern that a higher-rate producer may be able to drain in excess of 160 acres, depending on individual net pays.
- Q. And they were concerned that that would impair correlative rights?
 - A. That was their concern, yes.
- Q. Today Unocal is not recommending that prorationing cease in this pool; is that correct?
 - A. No, we are not.
- Q. In 1991, the first hearing of this matter,
 Unocal identified certain advantages that would
 result if the pool was deprorated. What were those?

A. There were several advantages that we foresaw by deprorating the entire field. One, it would allow for future development, either through workover or new drills. Secondly, it would eliminate a fairly extensive testing system that in essence only curtailed the production of a handful of wells. And, also, it would ensure that the pool could maintain market share now that so much of the San Juan Basin gas was not being prorated.

- Q. Let's go now to Unocal Exhibit No. 2. Would you identify that exhibit for the examiner and review it, please.
- A. Exhibit No. 2 is a plot of the Blanco South Pictured Cliffs Pool. It gives both pool production, historic figures as well as the number of wells producing. The items of interest show that in 1992, since we've instituted the minimum allowable, we have seen a few more wells brought to production, and the average rate per well really hasn't changed at all.
- Q. Bringing these wells to production, has that been the result of workovers?
- A. In 1991, there were 1,480 wells that produced during that year. In 1992, there were 1,491. So there were 11 wells that produced that had

not produced before. This would primarily be wells put on compression or wells returned to production that had been shut in.

- Q. Prior to that time, prior to the institution of minimum allowables, had there been any workover activity in this field?
- A. There hadn't been in the immediate years before this time.
- Q. Curtailment of production from the pool or implementation of minimum allowables in the pool, does this in fact have any real impact on overall pool production?
- A. Currently, no. In the last year, the 100 Mcf per day, we've seen no change in the pool's production either in the total amounts or in an average rate per well.
- Q. Would you go down to Unocal Exhibit No. 3, identify and review that, please.
- A. Exhibit No. 3 is a graph showing the South Blanco-Pictured Cliffs Pool daily flow rate on a per well basis. This takes the total pool's production, dividing by the number of wells on line to give you an idea of production ability at any one time. As you can see in '92 and '93, there's been no change.
 - Q. Let's go on now to Exhibit No. 4.

Identify that.

- A. Exhibit No. 4 just gives an idea of the production comparison of the South Blanco-PC Pool versus the San Juan Basin total. In 1992, production for the Basin was up and production for the pool was up slightly, and you can also see the percentage of the total Basin production that is coming from the South Blanco-PC Pool has increased slightly. So we've been able to maintain our market share of the San Juan Basin gas.
- Q. So basically this shows a production from this particular pool represents now a larger percentage of total Basin production then prior to --
- A. Just slightly, but we are not declining, which is what we were hoping for.
- Q. And that is in fact what was predicted by Unocal in the 1991 hearing; isn't that correct?
- A. That's correct. We did not predict that there would be much change to total takes in the field.
- Q. At this point in time, has establishment of minimum allowables eliminated unnecessary paperwork in the field?
- A. Not entirely. We're still required to do the deliverability testing and of course the

record-keeping for proration purposes.

- Q. If these rules are made permanent and a permanent minimum allowable established, does Unocal intend to seek relief from the deliverability testing requirements for the extremely marginal wells in the pool?
- A. Yes, we would. We would seek to exempt wells which are not able to make 100 Mcf per day from the testing requirements.
- Q. What operational changes or improvements have occurred as a result of the minimum allowable?
- A. For Unocal as an operator, we have chosen to include some of the South Blanco-PC wells into some of our stratal compression systems, figuring that they would justify the cost of that connection. Should we be limited on gas takes, there may be some of those wells that would not be connected.
- Q. Miss Delventhal, in your opinion will establishment of these minimum allowables on a permanent basis impair correlative rights?
 - A. No, it will not.
- Q. In fact, the maintenance of that 100 Mcf per day limitation is a limit that the OCD had imposed two years ago to protect correlative rights; isn't that correct?

- A. That is correct.
- Q. Will adoption of a minimum allowable otherwise be in the best interest of conservation and the prevention of waste?
 - A. Yes, it will.

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- Q. Will it enable the pool to maintain its market share of general overall production from the San Juan Basin?
 - A. Yes, it will.
- Q. Will it reduce or lead to the reduction of paperwork that burdens both the OCD and the operators in the pool?
 - A. It is our intention that it will, yes.
- Q. In your opinion, will it ultimately result in the increased recovery of gas from the pool?
 - A. Yes, it will.
 - Q. Were Exhibits 1 through 4 prepared by you or compiled under your direction?
 - A. Yes, they were.
- MR. CARR: At this time, Mr. Stogner, we move the admission of Exhibits 1 through 4.
- EXAMINER STOGNER: Exhibits 1 through 4

 will be admitted into evidence at this time.
- MR. CARR: That concludes my direct examination of this witness.

EXAMINATION

BY EXAMINER STOGNER:

- Q. Miss Delventhal, on Exhibit No. 1, this appears to be one of the biggest, if not the biggest, Pictured Cliff pool up in the San Juan Basin. Do you know if that holds true for its production? Is there any other Blanco Pictured Cliffs or Pictured Cliffs pool that has more production than the South Blanco?
- A. No, there doesn't. It has the highest cum of the Pictured Cliff pools. However, on a per well basis, it isn't the most productive.

EXAMINATION

BY EXAMINER MORROW:

- Q. Did I understand you to say that you would come in later and ask for relief on the deliverability test, or are you asking for that now?
- A. If it cannot be made a part of this order, and we are not pushing for it particularly, but we will try to submit a case to eliminate the testing on those wells. They're due for testing this year, and out of our 124 wells, only one makes in excess of 100 a day.
- Q. I looked through the proration schedule that was issued last fall and noticed some of the wells there didn't have that minimum assigned to

them. Do you know how that operates? You know you've got the 100. What notification did you get, anything other than this order?

- A. No, that's the only thing outlining the 100 Mcf per day was the temporary order.
- Q. Are some of the wells, due to line pressures, capable of producing more than their deliverability actually indicates?
- A. Generally, no. The only ones that are hurt in the deliverability calculations are wells that have produced in excess of 100 a day largely due to compression. The way the deliverability calculation -- wells that are placed on compression, the ratio of the shut-in wellhead pressure to the producing wellhead pressure, it is smaller, and they are curtailed more sharply than wells that are producing without compression. So they would be the only ones being hurt under the current system.
- Q. So would it be your understanding that the way this would work, regardless of what the deliverability test is, so long as I guess it's as much as 100, that whatever the poolwide calculation calculated for that well, using the F1 and F2 factors, if that well had had an acreage factor of 1 would be assigned 3,000 a month?

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1	A. Correct.
2	EXAMINER STOGNER: I have no other
3	questions, Mr. Carr.
4	MR. CARR: I have no further questions of
5	this witness.
6	EXAMINER STOGNER: She may be excused.
7	MR. CARR: At this time, we would call for
8	Amoco Production Company, Mr. Bill Hawkins.
9	JAMES WILLIAM HAWKINS,
10	the witness herein, after having been first duly
11	sworn upon his oath, was examined and testified as
12	follows:
13	EXAMINATION
14	BY MR. CARR:
15	Q. Will you state your name for the record,
16	please.
17	A. James William Hawkins.
18	Q. Where do you reside?
19	A. In Denver, Colorado.
20	Q. By whom are you employed and in what
21	capacity?
22	A. I'm employed by Amoco Production Company
23	as a petroleum engineer.
24	Q. Have you previously testified before this
25	Division and had your credentials as a petroleum

engineer accepted and made a matter of record?

- Yes, I have. Α.
- Q. Have you testified in all recent allowable hearings for Amoco Production Company?
 - Α. Yes.

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- Are you familiar with the allowables in ο. the recent production from the South Blanco-Pictured Cliffs Pool?
 - Α. Yes.
- Are you prepared to make recommendations Q. today to the Division concerning the continuation of a minimum allowable for that pool?
 - Α. Yes, I am.
- MR. CARR: Are the witness's 14 qualifications acceptable? 15
- EXAMINER STOGNER: 16 They are.
- (BY MR. CARR) Mr. Hawkins, would you 17 Q. briefly state the purpose of Amoco's testimony in 18 19 this proceeding?
- Amoco is testifying in this case to request that the Division continue with a permanent 100 Mcf per day minimum allowable for the South 22 Blanco-Pictured Cliffs Pool, and we're also going to 23 24 request that some exceptions be granted to deliverability testing for wells that produce less 25

than that 100 Mcf per day minimum allowable.

- Q. Have you prepared exhibits for presentation today?
 - A. Yes.

- Q. Could you refer to what has been marked for identification as Amoco Production Company Exhibit No. 1, identify that, and review it for Mr. Stogner.
- A. Yes. Exhibit No. 1 shows the average monthly sales for the San Juan Basin prorated pools for the period of October 1992 to March 1993. This information comes from the October '93 to March '94 proration schedule; so it was the most recent sales information that I had available on all of the pools.

What it shows is that the South

Blanco-Pictured Cliffs Pool produces just under 1.4

Bcf per month; that all the four prorated pools

together produce about 28 Bcf per month; and that the

South Blanco-Pictured Cliffs Pool is just slightly

under 5 percent of the total prorated pool

production.

If we were to add in the rest of the pools from San Juan Basin, I think that would be similar to what Unocal showed. It would be around 2 to 3 percent probably of the total San Juan Basin

production.

- Q. Let's move on to Exhibit No. 2, your proration data. Would you review this for the examiner?
- A. Yes. This, again, is just a summary of the information provided in the proration schedule, the latest one being that October '93 to March '94 schedule, and I've made a table showing the information related to Amoco's operated wells and to the total pool.

Amoco operates about 268 wells in the pool. There are approximately 40 of those that are shut in at this point in time, 220 some odd are actively producing. The total pool, there are roughly 1,500 wells in the total South Blanco-Pictured Cliffs Pool.

I've also shown the average monthly sales for both Amoco operations and the total pool, but if we skip to the next line, the point is that for Amoco-operated wells and for the total pool, the average monthly sales per well is just under 1,000 Mcf or just slightly under 30 Mcf per day.

I also checked to see how many wells were producing over 3,000 Mcf a month. In the October '93 to March '94 schedule, we showed 10 wells under

Amoco's operations that were producing over 3,000 Mcf per month, and the total pool had 36 wells. Again, that would have been based on the sales data from October '92 through March '93. So it was a one year prior sales period.

estimates of the number of deliverability tests that will have to be run on wells in this pool. Amoco operations will test approximately 190 wells, and in the total pool, probably in excess of the 1,000 that I've shown here. That's simply based on the percentage of -- the same percentage, about 65 to 70 percent of the total wells that we operate.

And I think the point there again is that, considering that only a very few number of wells in the pool can produce over the 100 Mcf per day, we're having to deliverability test an extraordinarily large number of wells in the pool that will have no impact on the wells' allowable.

- Q. Let's go to the last exhibit, Exhibit 3, and I'd ask you to review your conclusions and recommendations for Mr. Stogner.
- A. This is just a real quick summary of the first two exhibits. The South Blanco-Pictured Cliffs Pool represents a very small percentage of the total

San Juan Basin production. The average well there produces approximately 30 Mcf per day.

Our recommendation is that within this pool that the Division retain the minimum allowable of 100 Mcf per day in order to promote efficient and economic production of these low-rate wells. And we also ask that the Division grant exceptions to deliverability testing for all wells in the pool that produce less than the 100 Mcf per day.

- Q. Mr. Hawkins, if the minimum allowable is established, the results of those deliverability tests would have no impact whatsoever on the allowable; is that right?
 - A. That's my understanding, that's correct.
- Q. That's the basis for your request for relief from deliverability testing?
 - A. Yes, it is.

- Q. If that can't be done in this proceeding today, will Amoco proceed to pursue this matter either administratively or with a subsequent hearing?
- A. Yes, we will. And I would like to bring to the attention of the examiner that under Rule 9C in Order R-8170 -- I think it's J is the current one -- that the Director does have the authority to allow exceptions to deliverability testing on

marginal wells where the deliverability is of such a volume that it would be insignificant in comparison to the GPU's allowable.

- Q. In your opinion, would approval of minimum allowables on a permanent basis and a blanket authorization for relief from deliverability testing for the marginal wells in this pool be in the best interests of conservation, the prevention of waste, and the protection much correlative rights?
 - A. Yes, it would.
 - Q. Were Exhibits 1 through 3 prepared by you?
- 12 A. Yes, they were.

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- MR. CARR: At this time, Mr. Stogner, I
 move the admission of Amoco Exhibits 1 through 3.
- EXAMINER STOGNER: Amoco Exhibits 1
 through 3 will be admitted into evidence at this
 time.
- MR. CARR: That concludes my direct examination of Mr. Hawkins.
- EXAMINER STOGNER: Are there any questions? He may be excused.
- EXAMINER MORROW: Wait just a minute. I was trying to think of one.
- 24 EXAMINATION
- 25 BY EXAMINER MORROW:

Q. Are there very many of the gas proration units that are developed on any density less than 160, or two-well units in this pool?

- A. For the most part, as far as I am aware, the majority of these are all developed on one well per 160.
- Q. So if those deliverability tests were eliminated -- I'm trying to visualize how the thing would work. I guess only those operators who wanted more than 3,000 a day for their well would need to run a deliverability test. If they chose not to run it, they would get a maximum of 3,000 a day, assuming they had 160 acres assigned to their well?
- A. I think that's a good way to look at it.

 A lot of these wells, though, I don't think are going to be even capable of making the 3,000 Mcf a month.

 So it might be that an operator would choose not to produce more than 3,000 a month and be excused from the deliverability testing, or that the well is just incapable of making 3,000 a month and the well had exception from deliverability testing.
- Q. I guess you said there were just 30 of those, is that right, 36?
- A. I counted 36 in the last proration schedule. And of course that data is about a year

old in terms of sales and production. So there may be fewer than that at this point.

- Q. Of those 36, how would you characterize those? What's their capability, from 3,000 to 10,000 or --
- A. No. They're going to be very close to 3,000. I don't even know if there's one well -- maybe there's one well in that whole pool that made 4,000 a month. So even that would be less than 150 Mcf per day.
 - Q. So a 4,000 cap would get everything then?
 - A. Probably, just about.

EXAMINER MORROW: That's all I have.

EXAMINER STOGNER: Thank you, sir. I don't believe there's any other questions at this time.

MR. CARR: Nothing further in this case.

EXAMINER STOGNER: Does anybody else have anything further in Case 10521 at this time? If not, this case will be taken under advisement at this time then.

, Examiner

CERTIFICATE OF REPORTER 1 2 STATE OF NEW MEXICO 3 4 SS. COUNTY OF SANTA FE 5 I, Deborah O'Bine, Certified Shorthand 6 7 Reporter and Notary Public, HEREBY CERTIFY that I caused my notes to be transcribed under my personal 8 supervision, and that the foregoing transcript is a 9 10 true and accurate record of the proceedings of said hearing. 11 I FURTHER CERTIFY that I am not a relative 12 or employee of any of the parties or attorneys 13 14 involved in this matter and that I have no personal interest in the final disposition of this matter. 15 WITNESS MY HAND AND SEAL, February 28, 16 17 1994. 18 19 DEBORAH O'BINE CCR No. 63 20 OFFICIAL SEAL 21 I do hereby certify that the foregoing is Deborah O'Bine a complete record of the proceedings in NOTARY PUBLIC STATE OF NEW MEXICO 22 the Examiner hearing of Gase No. 10521 (Regional) heard by me of 23

Oil Conservation Division

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