BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
April 27, 1960

EXAMINER HEARING

IN THE MATTER OF:

Application of J. R. Cone for an exception to the over-production shut-in provisions of Order R-520, as amended by Order R-967, for two wells in the Jalmat Gas Pool. Applicant, in the above-styled cause, seeks an order allowing the following described wells in the Jalmat Gas Pool to compensate for their overproduced status without being completely shut-in in order to prevent possible waste:

Mobil-Myers Well No. 4, Unit I, Section 22
Pan American-Myers Well No. 1, Unit H, Section 22

both in Township 24 South, Range 36 East, Lea County, New Mexico.

Case 1946

BEFORE:

Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 1946.

MR. PAYNE: Application of J. R. Cone for certain exceptions to the Orders R-520 and R-967.

MR. WHITE: Charles White of Gilbert, White and Gilbert, appearing on behalf of the applicant. We have one witness to be sworn.

MR. UTZ: Are there any other appearances in this case?

(Witness sworn.)

LEWIS O. STORM

called as a witness, having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. WHITE:

Q Mr. Storm, will you state your full name, please?

A Lewis O. Storm.

Q And where do you live, Mr. Storm?

A Hobbs, New Mexico.

Q By whom are you employed, and in what capacity?

A J. R. Cone, independent producer of Lubbock, Texas; capacity, petroleum engineer.

Q Mr. Cone, in this application, is seeking exception to the over-production shut-in provisions of Order R520 as amended by Order R-967 as it pertains to wells in the Jalmat Gas Pool, namely, the Mobil-Myers Well No. 4, Pan American-Myers Well No. 1. Are you acquainted with those wells, Mr. Storm?

A I am.

Q Will you briefly state to the Commission production history of these wells, and where they are located?

A Are my qualifications necessary?

Q Have you previously testified for the Commission?

A Yes.

MR. WHITE: Are his qualifications accepted?

MR. UTZ: Yes, they are.

MR. STORM: Will you repeat your question, Counsel?

Q (By Mr. White) Where are these wells located?

A Both wells are located in Section 22, Township 24 South, Range 36 East, in the Jalmat Gas Pool of Lea County.

Q Will you state the production history of these two wells?

A I have prepared a brief resume here that presents essential mechanical information as well as the production history of the wells up to April 1, 1960. I notice immediately a typographical error at the top of the sheet labelled "J. R. Cone, Mobil-Myers No. 1." No. 1 should be No. 4; that is on Exhibit No. 1.

Both of these wells are completed in the Yates formation, initially completed as light dry gas wells. Over the years there has been an entry of water that has created production problems in maintaining flow. As a number of wells in the Jalmat Gas Pool, these were produced as marginal wells to capacity during the years 1958, 1959, July 1, '58 to July 1, '59, and then when the Jalmat Pool was reviewed by the Commission and deliverabilities considered in allocation, they were found to be over-produced to the extent that the Commission ordered them to be shut-in, which they were, last Fall. In the case of Mobil-Myers Well, it conveniently died at the end of August and we left it shut-in. The Pan-American-Myers No. 1 was shut-in at the end of October. According to the

Conservation Commission, on April 1, 1960, Mobil-Myers No. 1 had an overage of 6,000,803 MCF; the Pan American-Myers No. 1 had an overage of 41,000,350.

MR. UTZ: In all cases you mean Mobil-Myers No. 4, do you not?

A Mobil-Myers 4, excuse me. In conformance with Commission instructions the wells were swabbed and kicked off in February in order to obtain the deliverability test required for this year. We had much trouble obtaining those tests, and by the time they were concluded we had obtained temporary authority from the Commission to produce 50 per cent of the current monthly allowable.

The wells will produce in only one manner: by intermitting all of the gas and liquids out of the tubing. Initially they produced out of the tubing. When water entry showed, free piston installations were made on both wells. El Paso took gas from the casing; the water ejected off the tubing side in conjunction with the free pistons. Starting approximately a year ago, the wells would not even perform in this manner and we were obliged to deliver the gas off the tubing to El Paso on an intermitting basis. In an effort to determine whether we can operate at restricted allowables we have been experimenting with the wells during this deliverability period, and since obtaining this temporary authority to produce, the Mobil-Myers No. 1 is now producing on three flows each 24 hours. Each flow is approximately 27 1/2 minutes. The

Pan American-Myers No. 1 is producing on two flows a day, approximately 28 1/2 minutes per flow. We have here, on Exhibit No. 3, some gas charts that were run by El Paso Natural Gas, our transporter, on April 19. At that time the Mobil-Myers No. 4 was producing on four flows a day. The Pan American-Myers No. 4 was producing on six flows a day. These charts were run to give us more accurate indication of the actual gas volumes produced on this intermitting basis.

The computed volumes, according to El Paso, who voluntarily furnished these charts, was 20 MCF per flow on the No. 4, 33 MCF per flow on the Pan American No. 1.

Q Results of Exhibit 3 are set forth, also, in Exhibit No. 1, on the last page?

A They were used to interpolate the approximate production rate. The indicated rates at that time, using the four flows on the Mobil-Myers, four and six flows on Pan American No. 1, would exceed the 50 per cent allowable current. That was the reason the wells now have been cut back on three flows per day on the Mobil-Myers 4, two flows on the Pan American No. 1.

Q Are the wells now stabilized, in your opinion?

A They would appear to be in their flow characteristics.

Q From what source did you obtain the information on Exhibit No. 1?

A All of the information there was taken from the reports

filed by the operator and prepared by me with the Oil Conservation and the U.S.G.S. That is the mechanical well information. The production information is taken from Form C-115 filed by the operator, the allowable information taken from the Oil Conservation Commission pool proration schedule.

Q And Exhibit 1 is a detailed analysis of the production history; more detailed than what you have testified to; is that correct?

A It indicates by the abbreviated forms HP, IP and LP, the various systems of El Paso's oil production into their line. HP, high pressure; IP, intermediate pressure; LP, low pressure. They are currently carrying approximately 100 pounds in the vicinity of these wells.

Q Have you taken any deliverability tests?

A We have taken those tests required by the Commission.

Q Is that your C-122-C form?

A Yes, sir. The last deliverability tests shown on Form C-122-C as prescribed by the Commission.

Q Is that your Exhibit No. 2?

A There is a report for each well. These are, perhaps, a little more indicative of the productibility of the wells than the deliverabilities obtained last year and the year before, because the previous years we were forced to use some substitutions on shut-in pressures. In these cases we took the deliverability

tests and then, because of the overage situation, shut wells in, so the 72-hour shut-in pressures taken from each well are not substitutions. They are lower, as one might expect, from deliverabilities of previous years.

Q Mr. Storm, in your application you requested a 50 per cent of the average monthly allowance. Is it your desire to amend that to a greater percentage?

A It is.

Q Will you explain your reasons for this request?

A A matter of simple economics. In the case of Mobil-Myers No. 4, April 1960, 3,595,000 cubic feet of gas; 50 per cent, approximately 1.8 million, and by sheer accident we are producing the well at that approximate rate now, but 1.8 million feet of gas doesn't bring in much revenue to pay for the operating expense of a well. It would be my desire, in the case of both, if the Commission would so grant, to amend our request to a 75 per cent of current allowable or 75 per cent of the average of the last complete proration period, whichever is the larger. The latter arrangement will provide the operator with more flexibility in producing the wells because gas allowables fluctuate during the year.

Q Do you care to comment any further as to the economic phase of the application?

A Mr. Cone has invested a great deal of money in these

wells, particularly Mobil-Myers lease. He attempted to overhaul a temporarily abandoned well which Magnolia, now Mobil, had on the lease. This was unsuccessful and subsequently this No. 4 was drilled. I personally don't feel he will ever see his capital investment returned, but I think that it is only fair, since the well will produce gas, to attempt to gain an allowable that will at least return operating expenses.

Q In your opinion, would a complete shut-in of these wells materially damage them?

A I think it is very possible. Mobil-Myers No. 4 demonstrates that perhaps better than Pan American-Myers No. 1. We had a good deal of trouble swabbing it off this February in order to start preparing for the deliverability tests. That well, should the clock equipment fail or the well be shut-in unintentionally -- should some unknown condition develop, in 24 hours we have a dead well and a swab job on our hands.

Q And it would also necessitate restabilization of the wells?

A True. It takes a couple of weeks to really smooth these things out.

Q Would the granting of this application affect correlative rights in any way?

A Not to my knowledge. I am not aware of any producing Jalmat Gas Wells within a mile of these. By that I mean Jalmat

Gas Wells, not oil wells.

MR. WHITE: We offer Exhibits 1 through 3 in evidence at this time.

MR. UTZ: Without objection Exhibits 1 through 3 will be received in evidence.

MR. WHITE: That concludes our presentation.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Storm, during September and October of last year the wells were, well, I believe you said they just shut-in themselves; died?

A The Mobil-Myers died right at the end of August, and we were aware that the overage situation had been indicated from the reclassification of proration schedules, and we left it shut-in. Pan American Well was shut-in when we received the Conservation Commission's letter. It was nearly the end of October, as I recall, before we received instructions to shut-in that well.

Q Now, in the case of the Myers 4, I thought it produced in the month of November 456 MCF. How much of the month was that well producing?

A It must have been just the last two or three days, Mr. Utz. We received the letter, reference F844, relating to the Mobil-Myers No. 4, in our Lubbock office, and it was relayed to me. The notice to me was dated in Lubbock November 28; I received it

November 30. I have no other indication here. I may well have been advised by telephone and moved the swabbing unit in.

Q You did have to swab the well?

A Yes, sir.

Q Then it produced -- incidentally, someone has made a transposition of figures on the December figure. I have 105 and I notice 1085 here. Do you have any idea which one is right? That's for December, '59.

A 1085 was reported to the Conservation Commission on Form C-115.

Q Was the well producing every day during the month of December?

A To my knowledge, Mr. Utz. I don't know that we had any difficulty with it that month. We had it on a reduced time cycle arrangement, considerably over what it had been in the spring and summer before because of the overage situation. It was on approximately four flows a day, as I recall, even at that time.

Q At that rate it wasn't necessary to do any swabbing?

A No, sir; it has not been.

Q And the January, '59 production, was it necessary to do any swabbing in that month?

A Not that I recall.

Q Now, what is it that you are asking to produce per month from this well?

A I would like to ask 75 per cent of the average monthly allowable of the previous complete proration period 7/1, 12/31/59, for this reason: For example, if you will notice, in February, 1960 the allowable assigned the well was 1,716,000. In other months, going back as far as July, the allowable reaches nearly 7 million. That much variation makes it easier to regulate these wells by putting them on a pattern and leaving them alone. There is less chance of them dying for some reason.

Q You have noted, in some of the recent wells, all of the orders of this nature have given you the option of producing the current monthly allowable, a percentage of that, or an average of the previous six months. That was the reason in giving you that option so you could set your well.

A I presume so, but in your letter authorizing this you referred only to the current allowable, and I was a little concerned about that because, working closely with El Paso, it appears that our AP allowable will be produced in another day or so, and I do not want to shut the wells in unless it is absolutely necessary.

Q It appears that 75 per cent would be around 3,000 a month; does that sound about right?

A It would appear that way from the past 8 or 10 months.

Q Mr. Storm, if you can operate your well at around a thousand to fifteen hundred per month without having to swab the well in, why wouldn't it be better to operate at that rate and get

your overage made up so you can have a full allowance?

A I would have no personal objection, speaking for myself, because we have the wells now set, they are behaving, but it would indicate on the order of 1 million 8 hundred or possibly 2 million, and I am a little skeptical if we can reduce the flows further on that well without running the risk of the thing dying, and I think that, in that case, Mr. Cone would just leave it shut-in.

Q Do you think the maximum would be 2 million?

A I believe the well would operate at 2 million. It will make more. We have learned that by varying the number of flows, but we were searching for a minimum.

Q The average allowable for the past ten months for your information is 3993. In that case it would seem that 50 per cent would be enough, wouldn't it?

A It would be approximately 2 million.

Q In regard to your Mobil-Myers No. 1 --

A Pan American No. 1?

Q Right. Pan American-Myers No. 1, the month of November the well was completely shut-in?

A Yes, sir.

Q The month of December it produced 369. Do you know how many days that was for?

A No, sir; I don't, and it was not produced by the operators arrangement or permission. We attempted to find out from El Paso

what happened. We were all aware the well was supposed to be shut-in. The best we can determine is that somebody opened and closed it without authority.

Q In other words, it started producing by merely opening a valve?

A It would indicate that; it won't for me if I go down and open it.

Q And it was shut-in in January of '60, had no production?

A Yes, sir.

Q February production, 995. Do you know how many days that was for?

A Right at the end of the month, again, Mr. Utz, swabbing to kick off and prepare for the scheduled deliverabilities.

Q Was it necessary to swab the well in order to produce that?

A Yes, sir; we swabbed both wells.

Q And in March our records indicate it produced 1831. Did you have any production problems for that month?

A 1831? Let me check that.

Q Is El Paso the only purchaser of this well? That is from the El Paso report.

A Yes, sir.

Q I notice you have 2993.

A That was the March, 1960 report. That is on a purchase

basis of 15025; El Paso reports several to our office and we report the 15025 volume unless, of course, there is a stenographic error.

Q Well, they are supposed to report 15025 to us on the 114's.

A I will check on that when I return to Hobbs.

Q I checked this personally, so I am quite sure that is what they reported?

A Your volume is what?

Q 1831.

A That was from El Paso's March 114; 1831 is more in line, I believe, but I will check that.

Q Our records show that the average allowable for the past ten months for that well was 6,086. Now, whichever of these production figures happen to be correct, yours, 2993 or the other, would it not appear that 50 per cent would be adequate to keep this well producing? In that case it would take the well about 13 months to make up its over-production.

A Would you repeat your question, please?

Q 50 per cent, or at the rate of approximately 3 million per month?

A We can operate, I believe, at 3 million. That is, viewing it strictly mechanically; not from an economic standpoint.

Q Well, of course, the only reason you can apply for such

a thing as making up overage at a lesser rate is because of well damage. Economically you have already gotten more than your allowable; is that correct?

A Computed on the basis of the proration schedule we have.

MR. UTZ: Are there other questions of the witness?

BY MR. PAYNE:

Q Mr. Storm, do you have data on reserves?

A No, sir, I don't.

Q Could you tell me the approximate amount of water per day produced by each of these wells? Is it about two barrels?

A Mr. Payne, May I answer you this way: We have just completed a six day test on the wells and they indicate a rate of approximately 1/2 barrel of water per flow on the present intermitting cycle. On three flows a day that would be a barrel and a half to two barrels of water. The water volume is not acute, but on shut-in, sufficient to kill the wells.

Q Do you anticipate the water production might increase in the future?

A Not acutely.

Q Have you made any study to determine the feasibility of cutting off water by remedial work?

A Yes, sir. I would say Mr. Cone has something like $20, $30,000 in the Mobil-Myers No. 4 specifically for that purpose and it accomplished nothing.

Q In the event your water problem became more acute [illegible] have you considered the possibility of installing a bottomhole pump?

A No, sir. I question the economics, if you go to the reserves, would justify such an action.

Q If you produced 50 per cent of the current allowable, or 50 per cent of the average allowable for the preceding six months proration period, do you think these wells would be in balance before they are abandoned?

A If we do?

Q If an order is entered allowing you to produce them at the rate of 50 per cent at your option, that being either 50 per cent of the current allowable or 50 per cent of the preceding six month proration period allowable, do you believe that the wells will be back in balance prior to being abandoned?

A Yes, sir. The Mobil Well is but a few months away from being in balance. The picture in the tabulation is not quite accurate because there has been production experimenting and under authority of various letters from the Commission, trying to determine a way. The Pan American, if there is a choice, is a little stronger, and I would say would indicate a longer life. Therefore, it has as good a chance to make up its overage as the Mobil has to make up the small overage charged to it.

Q Have you determined where the water is coming from?

A I wish I knew the answer to that, Mr. Payne.

Q Do you know if it is salt water?

A It is sulphur water; it is water that is common to wells of that area.

Q Is there a water drive in this pool?

A In terms of a man's lifetime, it is not effective if there is one.

Q This is formation water, presumably?

A To my knowledge it is.

MR. PAYNE: That is all.

BY MR. UTZ:

Q If it was formation water wouldn't it have been producing it since the wells were initially completed?

A You would think so, Mr. Utz. In the case of the Mobil Well we initiated testing of the well at the top of the reef section, a sandy face just above the reef; unsuccessful. Came back and on each frac treatment we reestablished water until it finally was eliminated, but the wells had not been on production long before the water showed. The Pan American was completed clean; the advent of water has been gradual, volumes not acute but sufficient to load the well if something happens, to where it will not kick off the El Paso system.

Q Are these completions perforated through casing or is the casing set on top?

A Perforated through. The mechanical information on each well is at the top of Exhibit 1.

MR. UTZ: Are there other questions?

BY MR. PAYNE:

Q When one of these wells is shut-in, do you have a difficult time getting your intermitter adjusted again when you get it back on production?

A If all mechanical equipment works properly, no, Mr. Payne. But unfortunately that isn't always the case. We have had clocks fail, and the next day we have to start over.

Q Have you had any particular difficulty with these two wells in that regard?

A As long as we get them unloaded when we first kick them out; we must unload to the air or tank, then we put the clock control in service. From there on the clock control mechanism works properly and we generally get around all right. In the case of the Mobil-Myers Well it didn't; it died by itself, clock control notwithstanding. It just quit.

BY MR. NUTTER:

Q How long has a clock control intermitter been installed on this well?

A Since the summer of '56, '57, Mr. Nutter.

Q The one well died last fall; how long has it been since the other well has been producing without any natural death? Has

it ever died a natural death?

A When the intermitter hangs open; yes, it will.

Q But that has not happened lately?

A We try to watch the equipment to forestall that happening.

Q What is your present rate of production on the Pan American-Myers No. 1?

A About 2,006 MCF per month; that is an approximation. I am using El Paso's chart based on six flows a day; it is possible on two flows there would be a little bit larger volume. We will find that out.

Q You said you had reduced the flows per day; it was originally four?

A On the Mobil-Myers 4 we ran four flows a day at the time the chart was made; subsequently reduced it to three. Pan American-Myers was on six and it is down to two, now.

Q So both of these approximations of production are based on more flows per day than you are actually running at the present time?

A Yes; that was our way. We didn't change the time arrangement.

Q What was the volume of gas produced on the three flows per day on Pan American and on four flows on the Mobil-Myers?

A According to El Paso's calculations, integrations in El Paso, 20 MCF per flow on the Mobil-Myers 4.

Q And that was running four flows per day; is that right?

A Yes.

Q That would be 80 per day?

A Yes. Pan American well, 33 MCF per flow.

Q That would be 132 per day?

A Yes.

Q And when the Pan American-Myer was flowing on three flows?

A We have had it on three different settings, six, four and two, in the past six weeks. It is currently on two.

Q Well, according to the tabulations here the average allowable for the last complete six month period for the Pan American-Myers would be somewhere in the neighborhood of 6862 MCF per month, and at the rate of three flows per day on the Pan American-Myers you were producing approximately 2970 MCF per month which is actually 50 per cent or less of the allowable. Would that be correct at three flows per day on the Pan American-Myers?

A That is roughly 100 MCF per day, approximately three million a month.

Q Now, when you were flowing the Mobil-Myers four times a day, you were making about 80 MCF a day, or 2400 per month?

A It is a weaker well and the charts will demonstrate that from the differential standpoint.

Q And its average allowable for the past six months, 4500 MCF?

A Approximately.

MR. NUTTER: I belive that is all. Thank you.

MR. UTZ: Any other questions? If not, the witness may be excused. Other statements in this case? If not, the case will be taken under advisement.

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, the Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

June Paige
Court Reporter

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1946, heard by me on Jan. 27, 1960.

Examiner
New Mexico Oil Conservation Commission