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

11 July 1984

EXAMINER HEARING

IN THE MATTER OF

Application of Alpha Twenty-One Production Company for hardship gas well classification, Lea County, New Mexico.

CASE 8252

BEFORE: Richard L. Stamets, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division:

For the Applicant: Robert H. Strand
Attorney at Law
ATWOOD, MALONE, MANN & TURNER
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I N D E X

E X H I B I T S

REPORTER'S NOTE: El Paso Natural Gas Company statement included in original transcript.

MR. STAMETS: We'll call next then Case 8252, which is application of Alpha Twenty-One Production Company for hardship gas well classification, Lea County, New Mexico.

MR. STRAND: Mr. Examiner, Robert H. Strand of the firm of Atwood, Malone, Mann and Turner in Roswell, appearing for the applicant, and Mr. Lansford will also be the witness in this case.

MR. STAMETS: The record will show that Mr. Lansford is previously sworn and qualified for this case.

ROBERT WAYNE LANSFORD,

being previously sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. STRAND:

Q Mr. Lansford, are you familiar with the application in Case Number 8252?

A Yes, sir, I am.

Q And have -- was there previously an application filed, an administrative application filed in this matter, dated May 31st, 1984?

A Yes, sir, there was.

Q And was that application prepared by you

or under your supervision?

A Yes, sir.

Q Would you please state for the record the purpose of this application?

A Alpha Twenty-One Production Company seeks an order designating its El Paso Smith No. 1 Well as a hardship gas well pursuant to Commission Order No. R-7453.

Q And for the record what is the location of this well?

A Unit N, Section 21, Township 24 South, Range 37 East, Lea County, New Mexico.

Q From what formation does that well produce and from what pool?

A It produces from the Yates-Seven Rivers in the Jalmat Pool.

Q And who is the transporter and gas purchaser from that well?

A El Paso Natural Gas Company.

Q Would you state in some detail the record -- for the record the problems that you would see resulting from shutting in the El Paso Smith No. 1 Well or curtailing it below its ability to produce?

A Yes. We've experienced, each time the well has been shut in, that the corrosion and scale build-up downhole would plug the well off and each time the well was shut in we had a rig up on it and change out tubing, pump, and reacidize the well to get it back on production.

Q Mr. Lansford, can you summarize what steps, if any, you've taken to remedy this problem that results after shutting in of the well?

A I have aided the formation with scale inhibitors and I have a pump jack over the hole to pump the fluid out. When the well is shut in I'm not able to get any chemicals circulated through the wellbore system to protect it from corrosion or the scale build-up.

Q Mr. Lansford, I refer you to what we've designated as Exhibit Number Three. Would you please describe that?

A Exhibit Number Three is a laboratory analysis from Halliburton Services, showing our analysis of the scale that we retrieved out of the Smith No. 1 Well.

Q And this, is this the scale problem that you have referred to in your previous testimony?

A Yes, this is the scale build-up along with the corrosion problem.

Q And has Halliburton recommended a chemical treatment?

A Yes, sir, they recommended that each time I treat this well with an non-sequestering acid.

Q And are you currently utilizing this procedure?

A Yes, sir, I am.

Q What is the problem that results then when you shut in the well? This treatment does not work at

that point in time?

A It helps the well after the initial clean up of the scale build-up and the well will go ahead and produce as long as the well is producing but when it's shut in it tends to go ahead and just plug off the tubing, the pump, and corrodes the tubing, tubular goods.

Q Would it be correct to say that at the point you shut in the well this particular chemical treatment is no longer effective?

A Yes, sir.

Q Mr. Lansford, are there any, to your knowledge are there any mechanical means of preventing this particular problem?

A The only one I can think of now is weekly chemical treatment and the only way that would be effective is to pump the well.

Q So then is it your opinion that it is necessary to keep this well pumping to remove the fluid on a continual basis in order to prevent these problems which you've testified to?

A Yes, sir.

Q I refer you to what we've designated Exhibit Number One. Will you please describe that?

A Our Exhibit Number One shows our shut-in occurrences and our well problems encountered after each shut-in. Shown also is the cost it took to replace the tubing that was eat up from the corrosion; the pump, and we al-

so have an analysis from the pump repair showing, you know, what the problem was, it was definitely corrosion and the scale build-up in our pump. The tubing was eaten through by corrosion.

Q Are the shut-in periods or the shut-ins that you have listed on -- on that exhibit simply a sample of the shut-ins that you've had on the well?

A Yes, sir, this is just an example of four instances where we've done this but this has been occurring for the last several years.

Q What is the approximate cost each time you shut in the well to bring it back to a producing condition?

A Approximately $3000. I didn't include the price of the -- cost of the acid jobs because I didn't feel like it was relevant because we had to do that anyway to get the scale away from the wellbore in the formation.

Q If the order requested in this application is not granted, how often would you anticipate the well would be shut in over the next one to two years?

A Well, that would depend on the market demand and I feel confident that it probably would be shut in at least every month.

Q And how long would it have to be shut in each time before this problem would occur?

A From past experience I would say a week.

Q And would you anticipate that such shut-

in periods would extend for a week or longer?

A Yes, sir, I would.

Q Mr. Lansford, what -- at what rate is the well currently producing?

A The well is currently producing 87 Mcf per day now.

Q Do you feel if the well was shut in, for example, at least once a month and it was necessary to expend $2 to $3000, say, each month to get it back going, that that well would be an economical producer at that point?

A Yes, sir, I would.

Q It would be an economical producer or not?

A No, it wouldn't be. If it had to be shut in and we had to rig up on it and acidize it each time, the economics involved would be too much. We'd more than likely plug the well.

Q How many more shut-in periods would you estimate it would require before Alpha Twenty-One Production Company as operator would probably plug the well?

A Well, it's getting pretty close now. Of course our production is falling down fairly rapidly. I believe we could probably stand three or four more shut-ins.

Q Mr. Lansford, is the corrosion problem that you've discussed here and the costs involved in remedying that problem the primary basis for this application?

A Yes, sir, it is.

Q You do not see any substantial problem of formation damage resulting from these shut-ins?

A I feel like the only formation problem we're going to see on this is from scale build-up inside the formation.

The Yates-Seven Rivers, the bottom hole temperature is around 95 to 98 degrees and I feel like we could keep the production up by acid and I don't think we'll see damage occur from any shut-in other than the scale build-up.

Q Have you seen any specific decrease in production rates after these shut-ins that you testified to?

A Yes, sir, I have. And it usually causes us to go ahead and reacidize the well and try to get the production increase back.

Q But you normally do get it back?

A Close, but it is falling off.

Q Mr. Lansford, I refer you to Exhibit Number Two. Will you please describe that?

A Exhibit Number Two is the computer design showing the reserves and economics on the Smith No. 1 Well.

Q Have you analyzed that reserve study to determine what total reserves might possibly be lost if this well was plugged?

A Yes, sir, I have.

Q Would you please testify as to that total figure of reserves?

A Okay. Total ultimate reserves, 381-million. And the lost estimated production to July the 1st, 1984 to December the 31st, 1984, would be 10-million cubic feet.

Q What would be your estimate then of the total amount of reserves?

A 201-million.

Q That, in reaching that figure did the reserve study show cumulative production through July 1st, 1984 of 170-million cubic feet?

A Yes, sir, it did.

Q And subtracting that figure plus the estimated reserves on July 1st, 1984 through December 31st, 1984 from your total ultimate production of 381-million, you then arrive at the figure of 201-million cubic feet?

A Yes, sir.

Q Mr. Lansford, have you run any type of minimum flow or log-off test on this particular well?

A No, sir, I have not.

Q Do you feel there's any type of procedure that could be utilized to determine the ultimate minimum flow that you would request in this case?

A Yes, sir. I think we are at the minimum flow of 87 Mcf per day. I mean, I'd like to get it up to 100 Mcf a day.

MR. STRAND: Can we go off the record? He needs some medication.

A All right.

Q Okay. As part of your original application filed in this case, Mr. Lansford, did you include a production summary?

A Yes, sir, I have.

Q And that shows production on the well on a monthly basis from 1980 through April of 1984.

A Yes, sir.

Q Mr. Lansford, is it your opinion that the well is currently at its lowest economic point as far as maintaining it as a producer?

A Yes, sir, it is.

Q And you do not feel that it could be lowered any further considering the possibilities of excess scale build-up?

A Right, yes, sir.

Q So your best estimate of a minimum sustainable producing rate then is producing the well at approximately the 87 Mcf per day that it's currently producing.

A Yes, sir.

Q Mr. Lansford, does this well produce from a prorated pool?

A Yes, sir, it produces from the Jalmat Pool.

Q And is there any over or under production on this well at the present time?

A No, sir, it's classified as marginal.

Q And under that classification you're allowed to produce it at its maximum rate of production?

A Yes, sir.

Q Mr. Lansford, was notice of this application given to all offset operators and to El Paso Natural Gas Company as transporter?

A Yes, sir, it was.

Q Is it your opinion that in the even this application is not granted and that the El Paso Smith No. 1 Well continues to be shut in periodically that underground waste will occur as a result of having to prematurely plug the well?

A Yes, sir.

Q Is it further your opinion that granting this application will promote conservation, prevent waste, and protect correlative rights?

A Yes, sir.

Q Were Exhibits Number One through Three prepared by you or under your supervision?

A Yes, sir, they were.

MR. STRAND: Mr. Examiner, I would move admission of Exhibits One through Three.

MR. STAMETS: These exhibits will be admitted.

MR. STRAND: And also ask that administrative notice be taken of the materials filed with

the prior administrative application.

MR. STAMETS: We will take note of those.

MR. STRAND: I have nothing further.

CROSS EXAMINATION

BY MR. STAMETS:

Q Mr. Lansford, how are the chemicals which you use put into this well?

A Initially we put in scale inhibitors in the stimulation job and on each stimulation job, and we're putting in scale inhibitors and corrosion inhibitors on a biweekly treatment schedule by (not understood) and by a chemical pump.

Of course the chemical treatment biweekly, you know, won't do any good if the well is shut in and no longer treating it.

Q When the treatment occurs immediately before shut-in, would that be sufficient to alleviate the problem?

A I don't think so. Our biggest problem is the iron sulphide scale and really the only effective treatment for that is really soap, as bad as I hate to say it. We do have polyacrylimides in there but that's mostly for your calcium and bicarbonates and sulfates and that does help to a certain extent but on your iron sulphide scale

it's most effective is just constant treatment of soap.

Q But if you give it this treatment before it's shut in will that last?

A No, sir, not -- I've tried it.

Q Okay. How much water is produced by this well?

A Okay. The Smith No. 1 is producing 225 barrels of water per month.

Q And that's at what gas rate or does that come regardless of the rate?

A Regardless of the rate. I do have it on pump jack.

Q Is your problem in this well gas production or just being able to keep the water producing?

A Just keep the water producing.

Q What's the minimum volume of water that you've got to produce in any day to keep the gas on, and what, then, is that gas volume?

A Okay, in that well we have about a 69 pound bottom hole pressure so you're talking about two or three barrels of water in the wellbore to kill that well.

So when you shut the pump off in about thirty minutes the well is dead.

Q Is this unique to your well or are most wells in this pool in this same shape?

A That's the only one I know of that's having that bad a problem.

Q You show us on Exhibit One four periods of shut-in and some rather high costs, but then you mentioned that these were not the only shut-in periods.

A No, sir. I just took it -- that's on what I could dig out of the records before I came up here.

Q Now, did you have similar expenses after each shut-in period?

A Every one of them.

Q Every one, so you're looking, your average then at $3000 that you spoke about earlier would be for all the shut-in periods, not only what's shown here but the ones that have not been shown.

A Yes, sir, I think for the unit on the hole each time I've had to shut it in.

Q What's the monthly income from this well?

MR. STRAND: Mr. Lansford, can you provide a monthly breakdown of income?

A Yes, sir, but it has been varying. It normally runs from $2000 to $3200 a month, depending on how much it's shut in.

Q Could you supply me with a breakdown which would show your income, your costs, these extra costs, and you indicated you can only afford to do this two or three more times, some demonstration that that is a fact, that these costs would be so high that you would not be able to keep the well on production?

A No problem, I've got that.

Q How -- how would you do a log off test on this well? You've got the well pumping and it's also flowing gas, flowing gas to the line. I presume after you pinch the well back so far it's not going to pump water any more.

A Right.

Q Now, could that sort of a test be done on this well?

A Yes.

Q Okay, and that could be done without any material damage to the well?

A Yes, sir.

Q Okay. We'd like to have that kind of a test and ask that you let our Hobbs Office know when that test is to be done.

MR. STAMETS: Are there any other questions of the witness?

Aside from the El Paso statement which is incorporated into this record, does anyone else have anything to say in this case, as to this case?

Recognizing the additional material to be supplied, the case will be taken under advisement.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division 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. 8252 heard by me on 7-11 1984.

Examiner
Oil Conservation Division

El Paso
Natural Gas Company

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El Paso Natural Gas Company neither concurs with nor objects to this application. El Paso recognizes that some wells should definitely be recognized as "hardship" wells. El Paso believes it must express to the New Mexico Oil Conservation Division that anytime a well is declared a "hardship" well, then the extra production from that well must be taken from the total production from all other wells on our system. This increases the non-controllable gas taken into our system thereby reducing our flexibility of pipeline operations to take ratably and protect correlative rights.