STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
Santa Fe, New Mexico

18 March 1987

EXAMINER HEARING

IN THE MATTER OF:

Application of Baruch-Foster Corporation for hardship well classification, Eddy County, New Mexico. CASE 9104

BEFORE: David R. Catanach, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division: Jeff Taylor
Legal Counsel to the Division
Oil Conservation Division
State Land Office Bldg.
Santa Fe, New Mexico

For the applicant:

MR. CATANACH: Call next Case Number 9104.

MR. TAYLOR: Case Number 9104, application of Baruch-Foster Corporation for hardship gas well classification, Eddy County, New Mexico.

MR. CATANACH: At the request of the applicant this case will be continued to the Examiner Hearing scheduled for April 8, 1987.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY the foregoing Transcript of Hearing before the Oil Conservation Division (Commission) was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9104, heard by me on March 18 1987.

David L. Catanach, Examiner
Oil Conservation Division

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8 April 1987

EXAMINER HEARING

IN THE MATTER OF:

Application of Baruch-Foster Corporation for hardship gas well classification, Eddy County, New Mexico. CASE 9104

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division: Jeff Taylor
Legal Counsel to the Division
Oil Conservation Division
State Land Office Bldg.
Santa Fe, New Mexico

For the Applicant: W. Thomas Kellahin
Attorney at Law
KELLAHIN, KELLAHIN & AUBREY
P. O. Box 2265
Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

MR. STOGNER: This hearing will come to order.

We'll call next Case Number 9104.

MR. TAYLOR: The application of Baruch-Foster Corporation for hardship gas well classification, Eddy County, New Mexico.

MR. KELLAHIN: If the Examiner please, I'm Tom Kellahin of Santa Fe, New Mexico, appearing on behalf of the applicant and I have one witness to be sworn.

MR. STOGNER: Are there any other appearances?

MR. MANNING: I'm E. R. Manning with El Paso Natural Gas. I may have a statement; I may not.

MR. STOGNER: Are there any other appearances?

Will the witness please stand and be sworn at this time?

(Witness sworn.)

MR. STOGNER: Mr. Kellahin.

MOHAMMED YAMIN MERCHANT,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q All right, sir, would you please state your name and occupation?

A My name is Mohammed Yamin Merchant. I am a petroleum engineer by trade, chemical engineer by degree.

Q Mr. Merchant, have you previously testified before the Oil Conservation Division as an engineer?

A Yes, sir, I have, various occasions.

Q And pursuant to your employment are you acting as a consulting engineer for the applicant in this case?

A Yes, sir, I am acting on behalf of Baruch-Foster.

Q And pursuant to that employment have you prepared certain exhibits or caused certain exhibits to be prepared in compliance with the hardship gas well rules of the Oil Conservation Division?

A Yes, sir, I have.

Q And that is what constitutes the applica-

tion and Exhibits One through Exhibit Eight?

A That is correct.

MR. KELLAHIN: We tender Mr. Merchant as an expert petroleum engineer.

MR. STOGNER: Mr. Merchant is so qualified.

Q Mr. Merchant, let me have you first of all identify for us Exhibit Number One.

A Exhibit One is on an Oil Commission application for classification as a hardship gas well. You want me to to go into any other details?

Q No, sir, just to identify it.

Let's turn to Exhibit Number Two and let's use this display to show Mr. Stogner what your client is seeking to accomplish.

First of all, would you identify Exhibit Number Two for us?

A Exhibit Two is a plat of various -- the subject well, Baruch-Foster Little Jewel No. 1, as well as the offsetting wells operated by Baruch-Foster and several other producers.

Q The subject well for which you're seeking hardship classification is in the west half of 31?

A Yes sir, it's in the west half of Section 31, located 1980 from north and 1980 from the west line.

Q Would you identify for us significance of the color coding you've used for your wells?

A The orange color is in the Morrow, Morrow zone, the wells located in the Morrow zone and the blue one in the Strawn, and there is one well which is also in the Atoka, Carlsbad Atoka South zone.

Q The subject well, the Jewel Well, does it now produce from the Carlsbad Strawn South Pool?

A No, it's -- it is still completed as a dual producer but it would not produce anything out of the Strawn.

Q So the pool that's the subject of the gas production for the hardship well classification is the South Carlsbad Morrow production from this well.

A That is correct.

Q Would you describe for the Examiner what the minimum daily producing rate for this well, what minimum rate you're seeking for approval?

A The minimum rate Baruch-Foster is seeking is 350 MCF a day and that is based on not only the prior production data, which was -- which is part of the exhibit before we ran the logoff test, and also looking at the logoff test, the data we acquired during the logoff test showed that we should or we must have 350 MCF a day.

MR. STOGNER: Excuse me, Mr.

Kellahin, before we go any further.

MR. KELLAHIN: Sure.

MR. STOGNER: Now, it is a dual completion.

A Yes, sir.

MR. STOGNER: The Atoka is no longer producing.

A No, Strawn is no longer producing.

MR. STOGNER: And you've -- the Strawn, rather, I'm sorry. And all we're seeking here today is just the Morrow --

A That is correct.

MR. STOGNER: -- for hardship and the Morrow minimum you're requesting is 350.

A That is correct.

MR. STOGNER: Okay, I wanted to make sure I've got that straight.

Mr. Kellahin.

Q Thank you. Before we go into the specific details of the discussion, Mr. Merchant, would you give Mr. Stogner a general synopsis of what you have done to the well in order to try to avoid a hardship request?

What information you find available that causes you to believe this justifies the hardship request, and how you would recommend to the Examiner the well be pro-

duced to avoid either losing the well or losing otherwise recoverable reserves, so if you give me sort of a synopsis of what this case is about and then we'll go into the specific details.

A Okay. It might be hard to go in -- not to go in details. The well, as we said, is located in -- is producing from the Carlsbad Morrow South zone. It has been producing anywhere from 500 to 700 MCF a day when we can produce it.

At times when it has been shut in for an hour or two or three it would -- we have a compressor on the location. Without the compressor the well would not produce, and in order to produce the well we have to run the compressor.

And the minimum rate it can produce is 350-400 MCF a day. Anything less than that the compressor will go down and lose suction.

Q Have you run a logoff test on the well?

A We -- the well does not make any liquids, at least it cannot get anything to surface. We have tried to swab it. We have used soap sticks, tried to unload what liquid it may have in the wellbore, but we just -- we just not have been able to get any liquids out of it. That's very typical in the Morrow, Morrow zones in southeast New Mexico.

Q How does this compare to other wells similarly completed in the area for which you have lost production and not been able to restore production?

A In the east half, as you look on this plat, in the east half of Section 31, Baruch-Foster has an existing well called Allen No. 1.

Allen No. 1 have a typical history, similar history as of Little Jewel No. 1. It was shut in because of no gas sales and currently it is dead and more than likely be plugged because it would not produce anything, and that is evidenced by the decline curve with the dashed --

Q The experience with the Allen Well is an experience you're trying not to repeat with the Jewel Well?

A We don't want to have another casualty on our hands, that's correct.

Q Let's go into some of the specifics now about you and the operator have attempted to do in order to keep this well flowing, not to lose otherwise recoverable gas reserves.

We might save Exhibit Number Two as a reference exhibit and then go through some of the others. For example, identify for us Exhibit Two-A. What is this, Mr. Merchant?

A Exhibit Two-A is just to help us during this hearing, It's a land plat, shows not only the subject

well in discussion but also the Allen No. 1 and various other gas wells operated by various other operators in the same zone.

Q All right, sir, and what is Exhibit Number Three?

A Exhibit Three is an affidavit submitted by Baruch-Foster that the purchaser, as well as the offsetting operators, have been notified.

Q Let's turn to Exhibit Four now, Mr. Merchant, and have you describe for us your efforts, as witnessed by the Oil Conservation Division staff in establishing a minimum producing rate for the well.

First of all, if you could identify for us, what is Exhibit Number Four?

A Exhibit Four is the tabulated data of the logoff test, which we conducted and it was witnessed by Mike Williams from Oil Commission out of Artesia office, which started on March the 3rd and lasted through March the 10th.

It shows the pressures, tubing pressure, casing pressure, on each zone, Strawn as well as the Morrow. It also shows the different rates the well was flowed at, starting from the highest rate first.

As the test progressed we tried to reduce the rate as low as we can get to and on March the 8th the well started going down on low suction, and it was dead. We

kicked it back on. It came back on March 9 to 595 MCF a day and March the 10th Mike Williams out of the Artesia office was there and said that's enough of the test, and we did not go any further.

Q You propose to continue to produce the well with the aid of a compressor if it's approved for hardship classification?

A That's the only -- that's the only way the well would produce. It would not produce otherwise. That was the reason the compressor was rented. If we don't have a compressor the well would not produce.

Q Apart from the compressor, is there any other remedial or mechanical action you can take or recommend to the operator that might avoid the producing difficulties this well is experiencing?

A We have tried, the operator have tried, and rightfully so, to produce the well with a -- from time to time dropping soap sticks. That hasn't helped.

The only -- there's no mechanical thing we can do to keep the well on production, with the exception of a compressor.

Q Do you have an opinion as to what is the particular difficulty with these low pressure reservoir wells that have caused them to stop producing when you get below 350 MCF a day?

A Yes, sir.

Q What has occurred?

A May I?

Q Yes, explain what your opinion is.

A In our -- besides this well I also operate 350 wells in southeast New Mexico and there are many, many wells, some of them in the Morrow, many of them in the Eumont gas zone, which are low, low pressure, low volume reservoirs, and my experience is that they would not produce unless there's some artificial lift is involved. In this case it's a compressor. In many cases it's a pumping unit.

The wells not only produce, they will not produce unless they're aided, aided by some kind of artificial lift, number one.

Number two, even though people say, well, you cannot -- or it's a logoff test and why does it not make any liquids? I've been on wells which you cannot swab, maybe half a barrel a day out of it, but that half a barrel a day can make the difference between a couple of hundred MCF a day and no MCF a day.

Q The fact that you can't swab liquids out of the wellbore does not mean that there is an absence of water or fluids in the formation at the perforations, does it?

A That is correct. In this particular case

the well is almost 12,000 feet deep and what little fluid -- liquids it have in the wellbore, when you start swabbing, by the time you get to surface you're not going to bring anything with you.

Q What is happening in the formation with regards to the water, the clays, and the sands in the perforations? What's happening to the permeability in the wellbore?

A From experience in the Morrow zone in the southeast New Mexico area, we have seen, cannot prove it, at least on paper, what the clays will do, but the lab studies have shown that it have clays that will swell up if you leave the liquid, especially water, in the reservoir.

During my Getty days back in the seventies, we ran several studies which I was involved in. We showed that if you leave the water or liquids in the reservoir, it will not expand but swell the clays and permanently damage the reservoir. and even a frac job cannot open the reservoir again.

When we turn off the compressor and leave the well sit for several days, can you then turn on the compressor and restore production into the well to the original levels you experienced in that well prior to the shut-in?

A Well, unfortunately we haven't ventured out to leave the thing shut-in for several days at a time

because of our experience on the offsetting Allen No. 1, which we know we have lost it.

Q You did that very thing on the Allen Well and could not restore --

A No, we could not restore production and Baruch-Foster tells me that more than likely it would have to be plugged, and I don't disagree with them, and that's the reason we haven't -- haven't had the nerve to go in and shut the Jewel No. 1 for a longer period of time, but we do notice that when it does go down on low suction, that we have had lot of trouble bringing it back on. It's like a yo-yo.

Q Let me direct your attention to Exhibit Four-A, Mr. Merchant, and have you identify and describe this exhibit.

A Okay. This is the data which the field operator, lease operator, have turned in and I have data to back it up. I've acquired a couple of charts, two weeks production charts, from El Paso, from the El Paso office, which shows that after we finished running the logoff test, that we have had troubles. From March the 9th through March the 26th we continued to have trouble. The well would go down. We'd kick it back on again. Anywhere from 250-260 MCF a day all the way up to 410 MCF a day, and this is not by choice. It just does that on its own, and on tbe remarks

you'll notice it says, it's open on wide open choke.

On the 18th we find it down on low suction.

Again on March 21st it was down on low suction.

Again on March 25th we were down on low suction.

That is trying to tell us something, gentlemen. To leave the well down, I personally believe that it would be just like Allen No. 1, we're going to lose it.

Q I direct your attention now, Mr. Merchant, to Exhibit Four-B and have you identify and describe this exhibit.

A Exhibit Four-B is the daily production report from the field and it can be verified by El Paso's sales figures, which should be relatively, pretty close to what we have -- we have here, and we had -- we were having the same -- same problems at lower rates; wells going down at low suction.

It also shows on December 19 of '86 where we dropped soap sticks and unloaded the well. A similar story. We're showing the same thing we're showing after the logoff test. We start playing with it and it starts giving all kind of problems, just like a patient trying to die.

Q Turn to Exhibit Number Five, Mr. Mer-

chant, and would you identify and describe this two page exhibit?

A Exhibit Five are the decline -- is the decline curve on the Little Jewel No. 1. On the first page, at least on my exhibit here and it should be on yours, is the decline curve on the Morrow zone where it shows that it was on a very steep decline rate, almost getting to a point of abandonment where it would produce on its own, would not sell gas, and in December of '85 Baruch-Foster installed a compressor at a cost of 16 -- at that time it was $2000 a month but since then we have reduced -- gotten reduced cost.

It shows that after installation of compressor that we were able to revive the well.

Exhibit Five-A is the -- is the decline curve in the Strawn zone, which currently is not doing anything.

Q Let's compare this to the production decline curve for the offset well, the Allen Well. I believe that's shown as Exhibit Six and then Six-A.

A Okay. Exhibit Six is the first page of the decline curve in the Morrow zone. It was doing a little less than 1000 MCF a day, which is roughly 30 MCF a day from 12,000 feet, 11-plus.

It died after it was shut in. We tried to turn it back on; it wouldn't come back on, and as you

notice, you will notice on this decline curve from early '84 on we have not had any production.

Q Do you have an opinion, Mr. Merchant, about the effects, if any, of offsetting operations and the impact of potential drainage by other wells on the subject spacing unit for the Jewel Well?

A Yes, sir. The wells shown on the plat offsetting Section 31 and Section 32, 36, 25, so on and so forth, are producing anywhere from 250 to a million cubic feet a day.

The well in Section 25 in Unit letter O is -- in December it did a million cubic feet a day, and it would be unfair on Baruch-Foster Jewel No. 1 if the well just sits there shut-in, let the offset producers drain the acreage.

Q Is the South Carlsbad Morrow Pool a prorated gas pool?

A Yes, sir, it is a prorated gas pool.

Q Let's turn to Exhibit Number Seven, now, Mr. Merchant, and have you identify and describe that exhibit.

A Exhibit Seven is an economic run or call it reserve study, or whatever, based on decline rate based on the current gas price of $1.30 MCF based on monthly lease operating cost of between $3500 to $4000 a month.

What we have done, and this is just in-house run what I made just a few days ago, using a 14 percent decline rate off the decline curve, using a compressor, keeping gas price constant, $1.30 MCF, per MCF for three years, and giving an escalation factor of 5 percent a year, of 5 percent -- it's 5 percent a year for a maximum of $5.00 an MCF, which we know -- which we don't know that will be true or not, we don't know what will happen three years from now.

Based on those figures, the remaining reserves are calculated out to be 358-million cubic feet from this Baruch-Foster well, and naturally, the only way we can get those is if we can produce the well.

Q Those are remaining producable reserves.

A Yes, sir.

Q Do you have further reserve information that you have been provided, Mr. Merchant?

A I was provided a reserve data by Baruch-Foster. They had an independent engineer out of Dallas did an independent study again, probably using the same kind of factors.

Q This is shown as Exhibit Seven?

A Exhibit Seven-A, and he -- I don't know the gentleman but he came up with 750-some MCF a day, pardon me, 736-million cubic feet of remaining reserves which would

be lost if the well is not produced, or is died and don't come back on.

Q I'm having difficulty finding that number in Exhibit Seven-A. Where is it located?

A I've had trouble. The only number I have come up with is 7.-- let's see, just a second.

I'm sorry, Tom, the number I came up with is what Baruch-Foster submitted in their -- in the Exhibit One, Item 4, in the hardship case application where they said if the well is not produced they're going to lose 736-million cubic feet of --

Q 736, then, Exhibit Seven-A is the back-up data by which another engineer has calculated 736 --

A That's right.

Q -- MMCF.

A Right, and I have had difficulty reading all the numbers on this thing.

Q Your best estimate is based upon Exhibit Number Seven where you show 358 MMCF.

A That is correct. If I was producing this well even for my own self that's what I'd say there are.

Q Okay. All right, sir, let's turn to Exhibit Number Eight, Mr. Merchant, and have you identify and describe that exhibit.

A Exhibit Eight is a wellbore sketch. It

shows where the 7-inch casing is set at 10,708 feet. It also shows where the 4-1/2-inch liner is from 10,538 feet to 11,818 feet, and it shows the Morrow perforations from 11,441 feet to 11,465 feet with a plug back depth of 11,786.

The Morrow zone is being produced under a packer, which is set at 11,390.

It also shows the Strawn perforations from 10,362 to 10,440, which is -- which was being produced through a separate tubing string and as I mentioned earlier, the Strawn is currently not capable of production, but this is the current status of the well.

Q Do you have anything else, Mr. Merchant, with regards to the applicant's request for a hardship classification?

A None other than the only way the well will produce is with a compressor and even then, based on the -- based on the offsetting Allen No. 1, we don't know if the well is shut-in that we will not be in the same boat like we are with the Allen No. 1.

Q Your production has declined in the subject well from 655 MCF a day down to what in your opinion is the minimum sustainable producing rate of 350 MCF a day?

A Yes. We, you know, when we were asked to run a logoff test, we were scared to run it because we are -- we are afraid we're going to lose the well. Again it's

going back to the offsetting Allen No. 1, and when we ran the logoff test, data, production data prior to that and production data after that, and even as late as yesterday, we are having problems. Well is like I said, yo-yo. It's just -- it will go back down; it will come back on with 250; it'll go down, and we really need to produce it to keep it running at a constant, constant rate.

Q In your opinion, Mr. Merchant, what is the conservative remaining producable reserves that will be lost if this well is denied a hardship application?

A Based on my own calculation, and the parameters I laid out earlier, we -- we would lose 360-million cubic feet of gas, at least, minimum.

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

We'd move the introduction of Exhibits One through Eight.

MR. STOGNER: Exhibits One through Eight will be admitted into evidence.

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. Merchant, let's first pick some similarities between the Jewel and the Allen Well.

What is the perforated interval in the

Morrow formation that the Allen produced from?

A I don't have those perforations with me but they are similar to what they are in the Little Jewel No. 1.

Q Do you know if the Allen produced any liquids?

A Based on my knowledge the Allen did not produce any liquids, either. It was exactly in the same -- same (not understood) like the Little Jewel No. 1. In fact, we do not even have any facilities to collect liquids if it makes any liquids on either one of the facilities.

Q Did they put a compressor on the Allen Well?

A No. A compressor had not been installed on the Allen Well because even -- getting to the economics of the thing now, the Little Jewel No. 1 can now stand its own way based on the compressor in what little revenues it makes and the compressor hasn't been tried. The Allen No. 1 was swabbed several times where it would not do anything.

Q Were liquids ever returned in the Allen Well --

A No, sir.

Q -- after it was swabbed.

A No, sir.

Q Now looking at the production here, it

shows that in '74, '75, '76, and '77 it declined but it produced at a relatively high rate and then in '78 production seems to have dropped drastically and was never able to regain the production.

What happened in the years '79, '80, and '81 that caused that drastic drop, do you know?

MR. KELLAHIN: Is this on the Allen Well?

Q Yeah, this is the -- I'm referring now to Exhibit Number Six. We're talking to just the Allen Well right now.

A I don't know of any reason why it caused here with the exception of that that's all the well would produce.

Q And then it dropped off in '82. Do you have any reason why?

A No, it just function of the reservoir, I would say.

Based on what I've seen on the Little Jewel No. 1, it's a function of reservoir. To put it crudely, it had had hell coming back on; it just would not do it.

MR. KELLAHIN: Perhaps we could supply that subsequent to the hearing, Mr. Examiner. We will contact the operator again and see if he has records that Mr. Merchant doesn't have that will determine what, if

anything, occurred in '78 and '82 to cause those declines in production.

MR. STOGNER: Thank you, Mr. Kellahin.

Q Also I was curious before it was finally taken off line it appears in '84 where similar methods to bring it back on, soap sticks --

A Yes.

Q -- was utilized.

A Yes. We tried soap sticks based on my best knowledge --

Q Well, I'm talking about the Allen now. Was soap sticks used on it?

A On the Allen?

Q Yeah.

A Yes.

Q Okay.

A It was. In fact when I first got involved in this case I drove to Allen No. 1 and the field man said that they had a swab unit on it on and off three different times and it just would not do it.

Q Okay. Let's look at the Exhibit Number Five for the Jewel and looking at the Morrow. It looked like production dropped in December of '74. Do you know why, what happened then?

A No, I don't know why.

Q Okay and then it went back up in '76 or '77, rather. Do you know why, what caused that or anything?

A No. I'll just have to find that out, Mr. Examiner. It may very well be that the well was being produced on a choke and it was produced at high rates in late '76.

Q Okay, and there's never been any fluid production from this well.

A There has never been any fluid production.

Q And then in '81 and -- no, I'm sorry, '84 and '85 the production seemed to be coming back up again after a period of decline and relatively leveling off in '82 and '83.

A That's right, that's when we started playing with the soap sticks and start swabbing it on and off. We have to understand here that the well is wide open, you know, there is no choke size on it; even at 280 MCF a day it's wide open.

Q What would happen if we put some chokes on it?

A It will die. That's what it did during the logoff test, if you notice. It just started going down.

Q Okay.

A We did try to put chokes on it to see if we can choke it back at as low a rate as possible.

Q Now I want to turn over to the second page on Exhibit Five, it's Five-A, and that shows the Strawn production and it looks like you had a compressor put on it about the same time as you put a compressor on the Morrow, is that correct?

A That is correct, and we did take the compressor off it because it was causing problems. It would not -- would not take care of the Morrow and the Strawn at the same time.

Q Do we have one compressor or --

A We just had one compressor, yes.

Q Now did this, did the Strawn die or was it taken off the line, because it looks like it was producing pretty good.

A It -- it produced for a little while and we have had problems, Baruch-Foster did have problems trying to produce it and the Morrow at the same time, so we left the compressor on the Morrow because right now the Strawn have 40 pounds on it and that's all it would do.

Q What was the longest period this well has ever been shut-in, do you know?

A A few hours.

Q Seems like there was some --

A Let me go back and look at the -- I'll say a few hours at a time. Exhibit Four-B where we have production data back in December.

Q Well, I'm looking at '82 and '83 and '84, it looked like it might have been shut down for a few times there.

A It could very well be true. I'll just have to check on it.

Q Okay. What brought that back on line? Was there anything had to be done to bring it on?

A Swab it; soap sticks.

Q Do you know if that --

A That is true.

Q It is true? How do you know that?

A Because I've been talking to the pumper on location.

Q Okay. And we didn't have a compressor out there all that time and the production relatively was lower than it is now. How come it was able to come back on?

A Mr. Examiner, only one thing I will say, that -- that every time it would come back on, like it would not come back on as strong as the time before.

Right now if we try to bring it on by itself it would not produce, you know. True, in '82, '83, '84 it did come on whether it was by swabbing or soap sticks or

what not.

Currently if we leave the compressor alone the well would not do anything.

Q Well, it looks like that's what you had in '82 and '83.

A That is correct but that was in '82, '83, and '84. We are talking 1987 and the reservoir is getting to a point where it is partially depleted, or it also has some damage with the liquids in the wellbore where people keep talking about the swelling clays, which nobody can prove it but if you look at some of the core studies, which back in my 1979-1980 Getty experience we have seen in the lab that the --the -- I cannot even pronounce the word -- the clays will swell up. They'll swell up so bad that they would not let the gas into the -- into the wellbore.

There have been studies to that effect.

Q Were these studies done on this pool or --

A Not on this pool. It was done in the Morrow pool again by Getty, which I don't know if it was ever made public or not, by Getty in the San Simeon Ranch area in Lea County.

Q Were the reservoirs similar?

A Similar reservoirs, yes, sir. You take the same precautions drilling these wells, same precautions

completing these wells. We don't put foreign fluids, anything which you can keep off the reservoir the better off you are.

And if the well can produce by itself, like you're pointing out to back in '83, '84, I would think that we'd be more than happy to do it. There's no sense putting a compressor on it and spending another $3000 a month, $2200 a month paying compressor rental.

Q I'm looking at your Exhibit Number Two. Of the wells that are shown on this map, it appears to me there's only one and that's in Section 29, that shows to be shut-in and then, of course, your Allen Well you said was shut-in.

A Yes, sir.

Q Do you know how those other wells are producing, if they're having any similar problems? Do they have any liquids?

A I don't know if they have any liquids. I don't see any production data pointing towards that they make any liquids.

I do know that they'll produce anywhere -- December, '86 production data submitted to the state showed that they produced anywhere from 286 MCF a day -- I'll back off -- at 200 MCF a day to as much as a million a day.

Grace -- Grace's well in Unit letter O in Section 25 to the north northwest of Baruch-Foster's well, December it averaged 1-million cubic feet a day. Of course, TransWestern is buying that gas so I don't know what the story is there.

Q What - what happened to the operator that you're here today? Was the -- did the purchaser ask the wellw as shut down? Did he come in and shut your well down? What - what is it that -- that you had to come in today?

A I think from what I've been told, that there was no market for the gas.

Q Un-huh.

A And the well was asked to be shut-in, and when that happened, Baruch-Foster moved and asked for a hardship case. Based on -- based on -- based on the reasoning that it's not economic hardship, you know, there's not much revenues off the well if you look at it on a monthly basis. It's strictly a matter of lost reserves.

That's when all this started.

Q When we talk about fluids down there, these unseen fluids --

A Yes, sir.

Q -- are we talking fresh water, salt water, are we talking a condensate? What --

A You know, we -- I haven't ever -- on this well I have not seen any liquids come to the surface.

Q Uh-huh.

A So I don't know if it's fresh water or salt water and I would not think it would be fresh water. I would say it would be salt water, more than likely be salt water or possibly some condensate, but since we have never seen any liquids to surface, I don't know.

Again, going back to my experience in southeast New Mexico, I've had wells where you can not swab but when you put a pump jack on it, they'll make 30 to 40 MCF a day. These are shallow wells I'm talking about, but at the same time I haven't hauled any water off them in two years.

Q But you've got a pump jack on it.

A But you've got a pump jack on it, and I'll -- I can show you records where we have sold 30 to 40 MCF a day every day, day in and day out.

Q On those wells are you able to shut the pump jack in for about a month and come back and restart it up and get production back?

A No.

Q Same thing --

A In fact, you shut the well in on those wells, the ones we're talking, I've gotten rich doing that, buy the wells from these companies who say there's no gas and I put a pump jack on it and pay $40.00 a month electric

cost and make $90.00 a month in revenues.

Q When this well was originally completed was there a frac job done to it?

A It was an acid job done to it.

Q An acid job. Has there been any subsequent completion techniques done to it?

A No, sir. You know, in the Morrow zone people like to keep as much fluids off it as possible. If you have a way poor Morrow well, that's when you frac it, and most of the frac jobs in the Morrow wells have not been successful. You're back again to those movable clays people talk about in the Morrow formation, and you put that much frac, chances are you might not make a well, you know, it's a toss up.

It might be a case of last resort if you want to go frac it but why would you go frac it if you cannot even sell the gas?

Q Why was this well still dual instead of downhole commingled? Do you think that Strawn production might have helped the Morrow at that time or vice versa, or --

A It might have, but why is it still dual, you know, you get to a point that's all it's doing, we just leave it alone, 'cause if you lose the well eventually it will be plugged so you won't have to rig up and go through

all the time and expense anyway.

The Strawn zone is not hurting anything.

Q I'm curious, is 350 MCF a day, that would bring in about, roughly, what kind of revenue a day?

A This multiplied by a dollar, $350 a day times 70, that's a 70 percent net revenue lease.

Q What are you getting on gas, about $1.30?

A $1.30 before taxes, that's the gross price.

Q So that would be about $455 a day. What's your cost to operate the --

A At this time it runs between $3500 and $4000 a month. Of course, better than 50 percent of that cost is the compressor rental.

Q How much a month to run the compressor?

A About $1600 a month.

Q Oh, 1600.

A In fact I have the invoices here if you were interested in looking at those.

That's from Compressor Systems, Inc., it's a rental unit.

Q Well, now that comes -- 1,600 comes out to about $533 a day to run the compressor and at $1.30 --

A No, no.

Q I'm sorry?

A Pardon me. 1600.

Q Okay, I put another 0 in it.

A Now if it's in revenues, I like another 0.

Q About $60 a day.

A Of course, that 's just the rental fee and of course as you know and I know if you have a piece of machinery sitting on location you're going to have other expenses attributed to it.

Q Right. Okay, now I'm still a little bit, somewhat confused, once it gets down below 350 what happens at that point?

A It will go down on low suction, the well would go down.

Q What do you mean on low suction?

A We would not be able to sell any gas. There is nothing coming through.

So in answer to your question or comment earlier on the decline curve, what happened in '83, '84, and it came back on, I don't know, it's a function of reservoir, I believe, but how somebody can prove it, I don't know that.

Now it's having problems even coming back with the help of compressor and if it goes down below that rate, it would not come on. I mean anything below that rate it will just sit there doing nothing.

Q Do you know what the bottom hole pressure on that Morrow reservoir is right now?

A I don't know exactly what the pressure is but I'm sure it's very low, just looking at the production data of last two, three, or four weeks.

Q Even if this thing was approved at 350 MCF a day, what do you think the economic life of it will be at that point?

A Three or four years, based on -- you know, I've used a 14 percent decline rate. There are two things that can happen. It can continue on that 14 percent decline rate, produce it for about three, three and a half years, and become uneconomic, or it can get to a point and stabilize, you know, some of them gas wells will do that. They'll sit there and make that 50 MCF every day forever.

Again I've seen that in southeast New Mexico on many wells.

Q Well, do you think this well, even if it was given 350, let's say next year it could go down to 300, and then 250?

A I would say so. I think it will follow a decline rate and it will get to a point where it will find its own stabilization point, or at least I hope, anyway.

MR. STOGNER: I have no further questions of Mr. Merchant.

Do you have any further questions, Mr. Kellahin.

MR. KELLAHIN: No, sir.

MR. STOGNER: Are there any other questions of this witness?

He may be excused at this time.

Mr. Manning, do you have any closing statements?

MR. MANNING: El Paso, I'm E. R. Manning with El Paso Natural Gas. El Paso Natural Gas neither opposes this application nor approved of it. I would like to remind the Examiner that El Paso has consistently avoided doing anything to lose any reserves anywhere on our system.

That has been our policy and it will continue to be our policy, but I would also like to remind the Examiner that our traditional gas or our NGA gas, which goes to what we call our traditional market, which is the furnaces and the air conditioners for the customers in New Mexico, Arizona, and California, is now varying at the rate of 700-million to 800-million a day systemwide.

I would also like to advise you that our hardship gas systemwide, that means Texas, New Mexico, Oklahoma, Kansas, Colorado, et cetera, is now at approximately 700 to 800-million a day, so any time anyone

gets a hardship, that means that someone else is going to have to be backed off some where else.

So it's getting down to the point to where we just don't have any place to go with this gas. Now we would encourage Baruch-Foster to sell this gas on the spot market if they possibly can. I realize it's a very small amount. I realize that's a tough, tough thing to do, sell that small amount. We would be glad to transport it. We'll bend over backwards move it anywhere on our system we possibly can.

But I would like to advise you, Mr. Examiner, the predicament that we are in now. Hopefully it won't stay in this forever, in this particular situation. We have said for about the last six or eight years, well, in two years it's going to be something different, and I don't think El Paso's been the only one that has said that or has thought that, and to where now I don't even try to guess whenever it's going to get better, but I am convinced it will eventually get better.

That's about all I have.

MR. STOGNER: Thank you, Mr. Manning.

MR. MERCHANT: I have a comment.

MR. STOGNER: Well, I have a

question for you there, Mr. --

MR. MANNING: Me?

MR. STOGNER: No, Mr. Merchant.

MR. MANNING: Oh, Mr. Merchant.

MR. STOGNER: Are you proposing that we set a minimum or a maximum ceiling at 350 MCF?

A The position we're in today, we'll be satisfied with 350 MCF a day.

MR. STOGNER: As a maximum.

A Yes, we'll be satisfied. If we can sell between 350 to 400, as long as the well does not die and go -- go goodbye forever, that's all we're trying to achieve. We understand what El Paso's position is. I fully understand that, but you know, all we're trying to do is keep the patient alive for long enough to the day until the gas market gets better, and we all hope it will, so we won't lose a well.

Q Does Baruch-Foster have any other wells presently producing in that Morrow field down there?

A No, we do have a Strawn well to the south, which would produce a million a day when we can sell the gas, and we sell all we can. We didn't come for a hardship on that one.

So it's stricty a case of save the patient. We're not ready to go to the burial yet.

Q Well, do you think the operator should have to make up this 350 MCF production if he gets it approved on this well, cut back on another well that he operates?

A Well, I'm not sure how the other well will act. I do know that we sell whatever we can sell. It's not selling its capacity, either. I mean it's a better -- it's a better well, the Strawn well, it's a better well, but it was not, you know, it's not sellling all it can, anyway.

We have, to go back to El Paso's comment, we have other people who are interested in taking the gas. I can sell gas any day, any time. In fact right now I can sell 10-million a day if I wanted to, but I cannot sell any more gas from my own account at the same price what El Paso is paying not only on this well but other wells, but the problem you run into is the NGA, have to go through the abandonment and all other procedures, which -- which is not a piece of cake, and, hopefully, if we can produce this gas, this well at 350 MCF a day and save it instead of plugging it prematurely, it would be -- and if FERC still don't have the abandonment procedures changed, I'm not familiar with all the FERC rules, well maybe we can find another purchaser. We have people who are willing to take this gas but being NGA we have to go through the abandonment.

MR. STOGNER: I have no further questions for Mr. Merchant.

Are there any other questions?

How about closing comments?

Okay. Mr. Kellahin, Mr. Merchant, I'm going to leave the record open pending the supply of the well history on the Allen well and any subsequent history on the Jewel Well from '83, '82, and those other years that I have mentioned.

Also at that time would you supply me a rough draft order?

MR. KELLAHIN: Yes, sir.

MR. STOGNER: On this well and with maybe a couple of paragraphs giving me some reservoir analysis or describing the reservoir and the mechanisms in which it's not being able to produce?

MR. KELLAHIN: Do you want logs on the two wells? We talked about the correlation of the perfs in the two wells. We'll be happy to supply those logs, if you want?

MR. STOGNER: Why don't you go ahead and do that? That way we'll have that information also.

Is there anything further in Case Number 9104?

Did we take your exhibits into -- all right. The witness may be excused and I'm going to leave the record open for 9104 and we're through with this case for today.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY the foregoing Transcript of Hearing before the Oil Conservation Division (Commission) was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9104, heard by me on 8 April 1987.

Examiner
Oil Conservation Division