1 STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION 2 STATE LAND OFFICE BLDG. SANTA FE, NEW MEXICO 3 6 June 1984 4 EXAMINER HEARING 5 6 7 IN THE MATTER OF: 8 Application of Penroc Oil Corpor-CASE 9 ation for a Hardship gas well 8211 classification, Eddy County, New 10 Mexico. 11 12 BEFORE: Richard L. Stamets, Examiner 13 14 TRANSCRIPT OF HEARING 15 16 APPEARANCES 17 18 19 For the Oil Conservation W. Perry Pearce 20 Division: Attorney at Law Legal Counsel to the Division State Land Office Bldg. 21 Santa Fe, New Mexico 87501 22 For the Applicant: 23 24 25

MR. STAMETS: Call next Case 8211. MR. PEARCE: That case is on the application of Penroc Oil Corporation for a hardship gas well classification, Eddy County, New Mexico. Mr. Examiner, applicant has re-quested continuance of that matter until June the 20th, 1984. MR. STAMETS: The case will be so continued. (Hearing concluded.)

1 3 2 CERTIFICATE 3 4 SALLY W. BOYD, C.S.R., DO HEREPY CERTIFY that 1, 5 foregoing Transcript of Hearing before the the Oil 6 Conservation Division was reported by me; that the said 7 transcript is a full, true, and correct record of the 8 hearing, prepared by me to the best of my ability. 9 10 11 Shuly W. Boyd Cor 12 13 14 15 16 I do hereby certify that the foregoing is a complete record of the proceedings in 17 the Examiner nearing of Case No. heard by me on______19____. 18 _____, Examiner 19 **Oil Conservation Division** 20 21 22 23 24 25

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1 3 2 MR. STOGNER: We will now call 3 Case 8211. 4 PEARCE: MR. This case is on 5 the application of Penroc Oil Corporation for hardship gas 6 well classification, Eddy County, New Mexico. 7 MR. **KELLAHIN:** If the Examiner 8 please, I'm Tom Kellahin of Santa Fe, New Mexico, appearing 9 on behalf of the applicant and I have one witness to be 10 sworn. MR. PEARCE: Are there other 11 appearances in this matter? 12 Would you rise, please, sir? 13 14 (Witness sworn.) 15 16 STERLING TALLEY, 17 being called as a witness and being duly sworn upon his 18 oath, testified as follows, to-wit: 19 DIRECT EXAMINATION 20 BY MR. KELLAHIN: 21 Q Talley, for the record would you Mr. 22 please state your name and occupation? 23 Α My name is Sterling Talley, T-A-L-L-E-Y. 24 I'm President of Penroc Oil Corporation of Midland, Texas. 25 Q Mr. Talley, have you previously testified

1 4 2 before the Oil Conservation Division on other occasions? A Yes, I have on several occasions with the 3 latest occasion being in April of this year. 4 And pursuant to your testimony before the Q 5 Division has you testified as an expert in any particular 6 field of oil and gas operations? 7 A Yes, I have. 8 And what capacity is that, Mr. Talley? 0 9 A Geological and also engineering. 10 0 On behalf of your company have you filed with the Oil Conservation Division the application for Case 11 8211 for a hardship gas well classification for your Angel 12 Ranch Well No. 1? 13 A Yes, I have. 14 Q And pursuant to that application have you 15 prepared certain exhibits and made a study of the facts and 16 information surrounding this application? 17 Α Yes. 18 MR. **KELLAHIN:** We tender Mr. Talley as an expert witness. 19 MR. STOGNER: Mr. Talley is so 20 qualified. 21 MR. KELLAHIN: Mr. Examiner, if 22 you'll note from the hardship application filed by Mr. Tal-23 ley, the minimum rate requested was 350 Mcf a day. That was 24 We have subsequently filed a letter with you in error. 25 dated May 24th requesting that the minimum rate be 450 Mcf a

1 5 2 day. MR. STOGNER: That correction 3 will be so noted. 4 Q Mr. Talley, let me take some of your pro-5 posed exhibits out of order, sir, and specifically direct 6 your attention to Attachment Number Three, which is the map. 7 A Okay. 8 And if you'll look to the map, Mr. 0 Tal-9 ley, identify for us the proration and spacing unit on which 10 the subject well is located. The Angel Ranch No. 1 Well, drilled Α Yes. 11 by Penroc, is located in the north half of Section 33, Town-12 ship 19 South, Range 28 East, and that proration unit is 13 outlined in an orange color and the location of the well 14 being 660 from the north and 1980 from the east is so desig-15 nated by a circle color. 16 Q All right, sir, this well produces from 17 what gas pool? 18 Α It produces in the Winchester Morrow Gas 19 Pool. Q And the well was completed when? 20 A The well was completed 12-15-76 in those 21 Upper Morrow sands through a series of perforations 10,912 22 to 10,956 feet. Total depth of this well was 11,248; plug-23 ged back total depth, 10,972 feet. 24 The initial potential of the well in 1976 25 calculated absolute open flow 3,242,000 cubic feet per was

6 1 day plus 24 barrels of condensate and 48 barrels of water. 2 Shut in tubing pressure 2662 pounds. 3 A gas connection to El Paso sales line 4 was 1-24-77. 5 Q All right, this well has always been con-6 nected to El Paso's system? 7 A Yes, it has. 8 0 All right, sir. Let's turn now, Mr. Tal-9 ley, to the production decline plot that is Attachment Number One. 10 Is Attachment Number One a decline curve 11 that you prepared, Mr. Talley? 12 A Yes, it is. 13 0 All right, sir. Generally describe for 14 us before we go into specifics about the well, generally 15 describe for us what you have represented on Attachment 16 Number One. 17 Α Okay. On this production decline curve we've plotted from the date of first sales in January, 1977, 18 through May of 1984, and included above the curve are the 19 annual produced volumes of gas. 20 You'll note that the well performance was 21 good until approximately the middle of 1979 at which time a 22 decline of pressure, coupled with water volume, caused 23 difficulty in maintaining flow. 24 It became necessary to install а 25 compressor in November of 1979 to keep the well on the line.

7 1 Q All right, let's stop for a moment and 2 concentrate on that portion of the decline curve in 1979. 3 In the month of November you have labeled the curve to show 4 compressor installed. 5 Describe for us in some detail, Mr. Tal-6 ley, what has actually occurred with the well that caused 7 you to install the compressor? 8 Well, as I just mentioned, the pressure Ά 9 decline and the increase in volume of water would not allow the well to produce of its own volition into the sales line 10 with its back pressure, and it was necessary at that time 11 then to compress the gas to keep the water moving and keep 12 the gas going into the sales line. 13 Do you recall in '79 what the approximate Q 14 volumes of water being produced were? 15 In 1979 it was making ten to fifteen bar-A 16 rels per day. 17 In your opinion was the installation of a Q compressor at that point necessary in order to continue the 18 life of this well? 19 Oh, yes, it was, very definitely. A 20 All right, sir, in '79 you installed a Q 21 compressor and what happened then? 22 А Well, you'll note that the plateau of the 23 curve stayed fairly steady until about the middle of 1980 24 and then there was a general decline and the well became 25 Pressure continued to decline and water conmore erratic.

1 8 2 tinued to increase somewhat on a daily basis. And then in 1982 we were asked to begin 3 to curtail production in the well. 4 Who made that request, Mr. Talley? 0 5 Α Well, the purchaser, El Paso. 6 All right, sir, in early '82, then, at El 0 7 Paso's request you attempted to curtail production and what 8 did you actually do? 9 Well, we tried to slow the compressor A 10 We tried to cut back on the choke size to back on rpms. decrease the amount of gas that was being delivered. 11 0 All right, to what average daily volume 12 rate did you reduce the well during this period? 13 Well, during that period you'll see that Ά 14 on of -- of about 25-million cubic 15 feet per month down to a low of about 12, a little over 12-16 million during the time we were trying to cut the well back, 17 and then we found at that point there was a critical point 18 where the well would no longer -- would no longer flow, what with the water and the pressure that we encountered and even 19 the compressor wouldn't keep it going. 20 In terms of Mcf a day, Mr. 0 Talley, what 21 is that critical flow rate? 22 if Well, right today we find that A the 23 well isn't maintained between 400 and 450,000, it will die. 24 All right, during 1982 you attempted to Q 25 curtail the production from the well at the request of the

1 9 2 purchaser and in August, I'm sorry, in September of '82 what happened to the well? 3 Well, in August the well was actually Α 4 in by El Paso for nine days and then all of September shut 5 and 24 days in 19 -- or in October of 1982. 6 And the well was --7 All right, you've got nine days Q in 8 August, all of September, and 24 days in October. 9 Α Right. All right. Then El Paso allowed you to 10 0 put the well back on production and it would not flow unless 11 you swabbed the well. 12 A That is correct. 13 0 All right, sir. Tell us about swabbing 14 the well. How long did it take you to get it back --15 A Well, in this particular case --16 0 -- on production? 17 Α -- the well had to be swabbed for two 18 full days to get it to start to produce again. Once you restored production again in the Q 19 well, Mr. Talley, were you able to maintain the previous 20 flow rates that you had maintained prior to the well being 21 shut in? 22 Α No, you'll note that from November of 23 1982 on the decline curve through May of 1982, we averaged 24 only 422 Mcf a day. 25 Then in June of 1983 the Angel Ranch

1 10 2 loaded and ceased to produce. This time it was swabbed for four days before kicking off again. 3 Then that period of June '83 through 4 March of '83 -- of '84 showed a daily average gas production 5 of 357 Mcf. 6 All right, sir, let's go to the pumper 0 7 reports on the daily production, the recent production. Ι 8 think that's Exhibit Number Five, is it? 9 Α Attachment Five, yes. 10 Attachment Five, let's go to that tabula-0 tion, Mr. Talley, and have you describe for us your efforts 11 to arrive at a minimum flow rate for the well. 12 Well, ever since early 1982 when we had Α 13 been requested to try to cut back on production, we have 14 The latest attempt, I asked the contract pumper to done so. 15 cut back and see what we could come up with as a critical 16 point in May, and if you'll note, at May the 19th we --17 That's not the first page of that tabula-0 18 tion. 19 Α No, it's about the third page. All right, turn now to the third page, 0 20 then, and you're looking at the date May 19th? 21 Α Yes, it would be on your left there. 22 All right, sir. What happened on Q May 23 19th? 24 Well, it slowed the compressor down, A as 25 -- as far as it would go and still be somewhat efficient and

1 11 you'll note that on the 20th the well went from 387 Mcf a 2 Then on the 21st to 182 and on the 22nd it was day to 246. 3 down to 120,000, at which time the well was just practically 4 dying of its own accord and so we had to open it back up. 5 And you'll note then on the 23rd we were 6 making 465,000. 7 All right. During that three or four day 0 8 interval, Mr. Talley, there was zero fluids produced from 9 the well. That is true. Α 10 Q That's an indication to you of what, Mr. 11 Talley? 12 Α Well, now when I say zero fluids we're 13 talking about no condensate production and the water produc-14 tion fell off dramatically. In other words, it just dropped 15 off because we weren't able to keep the water moving. 16 The producing rate is so low at that Q 17 point that the liquids are not produced out of the well --That's right. A 18 0 -- and it loads up and the well will die. 19 That's right. Α 20 0 After increasing the rate of flow in May 21 24th. I believe it was, you produced four barrels of water 22 on that day and had --23 No, that's -- that's condensate. Α 24 Q I'm sorry, condensate production at 465 25 Mcf day and subsequently you produced the well at what a

1 12 2 average rate, Mr. Talley? A Oh, it's running a little over 400,000 a 3 day. 4 0 Can you describe in relation to Mcf a day 5 the amount of water that you've seen produced in the past 6 from the well as to what that water production is now? 7 Well, in May of 1980 we were making about Α 8 5 barrels per day and making about a million cubic feet of 9 gas a day. 10 now are making 25 barrels plus a day We and only about 400 to 450,000 cubic feet a day. 11 So what we're saying is that the water 12 has increased over five times and the gas has decreased by 13 over 50 or 60 percent. 14 0 All right, sir, let's go to the wellbore 15 schematic of the well. I think it's Attachment Number Two. 16 A Let me make one other point on the de-17 cline curve. 18 think it's very evident that you'll I notice the plateaus on that decline curve, during that per-19 iod of the summer of 1982 when the well was shut in com-20 pletely, you'll note that the plateaus have not every come 21 back to what it was previous to that, which to me is a very 22 good indication of wellbore damage, formation damage. 23 0 What's your concern about the well being 24 further -- well, what's your concern if the well loads up 25 again and fails to produce and you have to swab it back.

1 <u>3</u> 2 A Yes, that would be the case and then afthat I think we'd see another plateau even lower on a ter 3 decline curve where we're going to be damaging the well even 4 more. 5 All right, let's go to the wellbore sche-Q 6 Mr. Talley, and have you describe for us the performatic, 7 ated interval in the Morrow in which this well is completed. 8 Well, you'll see from the schematic it's Α 9 a typical wellbore setup where you have three strings of casing, in our case 4-1/2 run at 11,248. We have 2-3/8ths 10 tubing with a packer at 10,770 feet and the perforated Mor-11 row interval is 10,912 to 10,956, and that is in a solid 12 sand. It's not a series of thin sands intervalized. 13 The perforated interval, then, is 0 one 14 Morrow sand stringer and in your opinion would you be able 15 to recomplete it to isolate the water flow out of that sand 16 stringer? 17 Α No, it's a homogeneous body. 18 0 All right, sir. Let me ask you, Mr. Talley, if you in your opinion would recommend any other type 19 of mechanical operations on the well that might alleviate 20 this well's exposure or sensitivities to loading up with 21 fluids. 22 Α I would not change the setup that we No, 23 have at this time because I think under the prudency of a 24 good operator you'd be asking for more well formation damage 25 if you tried to go in that let this well be killed and do

1 14 any other type of mechanical changing at this time. 2 Q You have installed a compressor, Mr. Tal-3 ley, and you are operating the compressor and the choke size 4 on the well to the optimum efficiency that will allow this 5 well to produce at the minimum rate of between 425 and 450 6 Mcf a day. 7 A Yes. 8 0 And in your opinion is that the minimum 9 efficient rate at which to produce this well? A Yes, it is. 10 Is this well in a prorated gas pool? Q 11 Ά It's nonprorated. 12 All right, sir, Exhibit Number Six, would Q 13 you describe what the correspondence is that represents Ex-14 hibit Number Six. 15 Α Is that our letters? 16 These are the notice letters, I believe. 0 17 Α Yeah, Exhibit Six is a series of letters that we wrote when we applied for the 90-day emergency hard-18 ship application to the offset operators, notifying them of 19 the fact that we had applied for hardship application. 20 Have you received any objection from any 0 21 of the offset operators to your application for hardship gas 22 well classification? 23 А No, we have not. 24 0 And you're currently operating the well 25 under a 90-day emergency classification?

1 15 2 Yes, sir, we are. Α And when does that period expire, Mr. 0 3 Talley? 4 About August the 1st. Α 5 In your opinion will approval of this ap-Q 6 plication, Mr. Talley, be in the best interests of conserva-7 tion, the prevention of waste, and the protection of corre-8 lative rights? 9 Α It would. 10 KELLAHIN: MR. If the Examiner move the introduction of Exhibits One through 11 please, we Six. 12 MR. Exhibits One STOGNER: 13 through Six will be admitted into evidence. 14 15 CROSS EXAMINATION 16 BY MR. STOGNER: 17 Talley, you said that this well 0 Mr. is 18 being produced under the 90-day emergency clause issued by our Artesia District Office? 19 Yes, sir. Α 20 that subject to the restricted flow 0 IS 21 put on by El Paso way back in '82 or is that producing at 22 full capacity? 23 It's subject to the restricted flow, yes. Α 24 Since El Paso asked this well to be re-0 25 -- early 1982, I will assume that to stricted in 19 be

1 16 around February or March, something like that? 2 A Right. 3 Has the flow been restricted since that 0 4 time? 5 Α We have kept the well on a reduced -- we 6 have -- we have flowed the well under the conditions which 7 would allow us to move the water and keep the well flowing. 8 In other words, minimum restriction, yes. We just can't 9 produce it any less unless the well dies. might also point out that we have to 10 Ι introduce soap sticks into this well two to three times ä 11 week. 12 0 How many soap sticks? 13 А Two to three times a week. 14 What would happen if you increased that 0 15 to four or five times a week? 16 Well, it would keep the water Α more 17 buoyant, yeah, but that's what we find that we have to do to keep the well going. That's the bare minimum that we find. 18 Q So if you increase the soap sticks you 19 could possibly produce at 450 or a lower rate and ---20 Α I don't think so. I think we're doing at 21 this point all that can be done. Now we can introduce soap 22 sticks every day. I don't think it will help over what 23 we're doing right now. 24 0 Have you tried that? 25 A Yes, we have. We have tried at least

1 17 2 four times a week and five times a week but not seven days a week, no. 3 And it has not been successful? Q 4 It doesn't help any more than the three Α 5 times, two to three times a week. 6 MR. How long KELLAHIN: have 7 you been using soap sticks in this well? 8 Oh, my goodness, two years, I guess. A 9 0 Before El Paso asked you to restrict the 10 flow rate was this well producing at its capacity? No. Α 11 Am I safe to assume that this well never 0 12 produced at its capacity? 13 I don't believe in producing a well Α No. 14 at its capacity. That's not ever been my type of operation. 15 Well, what, on your type of operation, 0 16 what restricted you at the very beginning back in '78 and 17 1792 18 А To preserve bottom hole pressure. Did you have some sort of formula Q that 19 you used or a rule of thumb? 20 We normally try to produce Α а well. 21 particularly in its infancy like that one was, to where we 22 find a spot that it will level out and not be producing more 23 than about two-thirds to one-half capacity. 24 And we have found that that increases the 25 life of wells considerably; gains more reserves.

1 18 Have you done any calculations concerning 2 Q the tension size of the tubing in the hole? 3 No, I have not. A 4 0 Do you think that could be possible or 5 would help? 6 I don't think it woull help; not in this A 7 case. 8 Q Why not? 9 Because we find that on 9-1-83 when A El Paso conducted its annual shut-in tubing pressure test that 10 the shut-in tubing pressure psia was 1363.2 and we found 11 that in December when the sales line froze and we had an op-12 portunity to take another shut-in, it was down to 1014.2 and 13 the pressure was declining too rapidly. 14 Now you stated in your testimony earlier 0 15 that your company adjusted the choke and what was the re-16 sults of those? 17 Α When you lower the choke size then you 18 decrease the water amount and when you decrease the water amount it tends to die. 19 0 What is the optimum choke size that 20 you're operating on now? 21 3/4 inch. Α 22 Are there any -- let's refer back to your 0 23 map, are there any other Winchester Morrow producers in the 24 immediate area, say within a mile? 25 A Yes, sir.

1 19 2 And which ones are they? 0 Let me find my map. Α 3 Okay, in the south half of 28, in the 4 southeast of the southwest, Cities Service has a well which 5 I might point out has probably been the best well in that 6 reservoir that's been drilled. 7 This particular sand is a lenticular, 8 shoestring type sand. It doesn't vary much more than a mile 9 to a mile and a half wide across it, and it goes 10 northwest/southeast. Now Dorchester, in the west half of 34 11 had a well in that sand, as did a well in the east half of 12 34, and then on down into -- well, you asked for a mile so 13 forget beyond that. 14 Back to the east half of 34 I show two 0 15 gas wells down in the south. 16 Α Okay, the one in the northwest of the 17 southeast has been plugged and abandoned. 18 A replacement well, I don't know whether you'd call it a replacement well or not, but drilled 19 another well to the same Morrow, which is the No. 4 in the 20 southwest of the southeast. 21 Okay, I have that one. 0 22 That No. 3 Well to the north that Α Okay. 23 plugged out was always a very weak well. They move to was 24 the south and made another weak well in the Morrow and a 25 pretty strong Wolfcamp well for awhile.

1 20 2 Then you'll notice in the south half of 33, Penroc drilled this ARCO Federal, which missed that Mor-3 row sand completely and made an Atoka well. 4 Then to the west Southland Royalty has, I 5 guess it's actually -- yeah, Southland Royalty has a couple 6 of Morrow wells. 7 The one in the north half and the other 0 8 one in the --9 South half, right. Α 10 0 These wells that you just described as being Morrow producers, are they in the same sand stringer 11 as your Angel Ranch No. 1? 12 To my knowledge only two of them are. Α 13 That would be the Cities Service Well and the Dorchester 14 well in the east. 15 I don't think that either one of those 16 Southland Royalty wells are. I think they're in a series of 17 thinner sands. 18 Q Okay, let's call our attention to those two wells that you've testified about in Section 28 and 34, 19 or mentioned, I should say. 20 Do you know if they're having the same 21 watering problem? 22 A No, I do not. 23 Are they selling to El Paso, also, do you 0 24 know? 25 I have no idea. A

1 21 So you wouldn't know if they were also 0 2 restricted or not. 3 I don't know. A 4 0 When the production, or when this well 5 came back on production again, October of 1982, it stayed 6 fairly stable for about seven months. 7 You also testified that, as we can see by 8 the production rates, it did not come back up to the total 9 that it was previously in late '81 or early '82 and you felt that there was some reservoir damage applicable to that. 10 A Yes. 11 If this was on restricted flow, how can 0 12 you make that determination? 13 Well, because of what -- what happened A 14 there in 1982 early when we started a restricted flow, you 15 can see what happened to the curve. 16 Prior to that we were still under our own 17 restrictive flow, as I pointed out, even in 1981. But when we started cutting the well back 18 for El Paso there in early '82 I think the well would have 19 stayed a much higher plateau had that not have happened. 20 But this well hasn't produced Q un-21 restricted or to Penroc's rule of thumb of being two-thirds 22 of capacity, is that right? 23 Α I don't understand your question. 24 Well, after you came back on production Q 25 in October of '82, your flow was restricted.

1 22 2 A Right. 0 Could it have produced at a higher capa-3 city than what --4 Α Yes, that's what I was trying to say, 5 maybe in my own inept way. 6 0 But could it have come back up to the 7 plateau, say, of 1980 or '81? 8 A Oh, I doubt that. No. 9 What kind of damage? Could you describe 0 10 the damage that you believe occurred? A 11 No, I have no idea what the damage might have been, I mean other than the fact that we experienced --12 Q Damage ---13 We experienced greater water after that А 14 than we did before and we experienced less pressure. In 15 other words, it won't come back to the same pressure than it 16 did before, which I would imagine would be a function of the 17 fact that the Morrow is notoriously sensitive. Any time you 18 shut these wells down, why, they don't like to respond the 19 same way. Where actually is this water coming from? 0 20 Α From the Morrow. 21 Q Have you narrowed it down to the -- to 22 what perforations or --23 А As I pointed out, this is one homogeneous 24 It's not -- there aren't little intervals, sand body. so 25 there's no way to break it down.

1 23 2 Q Let's go back to your Attachment Number 3 Five. In the column marked Liquid Production, this is condensate and not water, is that right? 4 That's correct. A 5 0 How come water production was not in-6 cluded in this graph? 7 А We just don't report water on this -- on 8 this pumper report. 9 Q Do you have that information? 10 A Oh, yes. Not with me, no. 11 0 Could you supply that information? A Oh, yeah, not with me. Not with me, but 12 13 0 Could you supply that information subse-14 quent to this hearing? 15 Α You mean daily water reports? 16 Corresponding with the tests that was run Q 17 during this period? 18 A Oh, yeah. 19 Q If you could, I would appreciate that. Could there be any other mechanical means 20 to keep this well operating below a rate of 350 or 450 Mcf? 21 Is there any mechanical means possible? 22 А Not to my knowledge. 23 0 Could pumps be installed to lift the 24 water out? 25 А A pump?

1 24 Yes, sir. 2 Q What kind of pump? Α 3 Oh, jack pump or a submersible pump, is 0 4 that possible? 5 I don't think so. I mean it's possible Α 6 to install it. I don't think it's going to achieve what 7 you're driving at, at all. 8 When you were asked to cut back in 1982 0 9 by El Paso, did you correspond with them about your water 10 problem? Yes, we've had several А Oh, yes. 11 telephone calls and letters of communication with El Paso. 12 Q And what was their response to your 13 communications? 14 Well, they let us keep the well on as А 15 long as they could, and you'll notice that that August, 16 September, October '82 period when they were in such dire 17 straits as far as taking gas, they just absolutely had to 18 cut it off, and then you will notice that they, by correspondence and explaining the problem and that sort of 19 thing since then, they have allowed us to keep this well on. 20 I have no further MR. STOGNER: 21 questions of this witness. 22 MR. PEARCE: Excuse me, one 23 quick one, Mr. Examiner, if I may. 24 25

1 25 CROSS EXAMINATION 2 BY MR. PEARCE: 3 Talley, what happened in June of '83 0 Mr. 4 to cause that well to load, do you know? 5 I mean --6 Well, it's also very sensitive to changes Α 7 in line pressure, which in other words, I mean -- I can't 8 explain it. 9 You just did. That was my question. 0 10 Α This is a touchy well. I tell you, I don't understand it sometimes myself. 11 MR. STOGNER: Are there any 12 other questions of Mr. Talley? 13 If not, he may be excused. 14 MR. BURCHELL: May I ask one 15 question? 16 MR. PEARCE: Sure. 17 MR. STOGNER: Sure. 18 QUESTIONS BY PAUL BURCHELL: 19 I'm Paul Burchell with El Paso Natural Q 20 Gas Company. 21 Talley, I'm just trying to -- have Mr. 22 you made any P/z cum plots of this particular well? 23 Any what? Α 24 P/z cum plots, pressure (not clearly aud-Q 25 ible)?

1 26 A You mean just the cumulative production 2 itself? 3 Q Yeah, versus pressure (not clearly aud-4 ible.) 5 Α Oh, no, huh-uh. 6 Q Do you -- you do feel, though, that if 7 you had such plots it would show ultimate gas recoveries 8 would be less? 9 Oh, yes, very definitely. А 10 Q Thank you. MR. STOGNER: Is there anything 11 further in Case Number 8211 this morning? 12 MR. BURCHELL: El Paso would 13 like to make a statement at this point if it's possible. 14 MR. STOGNER: Mr. Kellahin, are 15 you going to make a closing statement? 16 MR. KELLAHIN: Well, let's see 17 what Mr. Burchell says first. 18 MR. STOGNER: Okay, Mr. Burchell. 19 For those who don't know, for 20 the record would you state your name and your --21 MR. BURCHELL: Yes. My name is 22 Burchell, a staff engineer for The El Paso Natural Paul W. 23 Gas Company in their Production Control Department. 24 I reside in El Paso, Texas. 25 I'm without counsel and Mr.

1 27 2 Kellahin, is that --MR. Please say what KELLAHIN: 3 you have, Paul. 4 MR. BURCHELL: It's just а 5 statement that El Paso Natural Gas would like to make in 6 this particular case. 7 These hardship hearings are 8 coming on rapidly and I'm sure the Division will start 9 seeing many more of these cases. 10 The total volume of hardship qas for El Paso Natural Gas has almost gotten out of hand 11 and we're glad to see that the Division has taken the ini-12 tiative to conduct these hearings and determine what wells 13 are really hardship and what wells are not. 14 El Paso Natural Gas recognizes 15 the need and the importance of qualifying certain wells as 16 hardship cases and permitting them never to be shut-in for 17 the sole purpose of preventing waste. 18 Should the Division determine the particular well in this case to be a hardship well, El 19 Paso is willing and able to code and schedule this well and 20 continue to produce it in such a manner that it will never 21 be shut in; however, El Paso would like it understood by the 22 operator and by the Division that hardship well gas impedes 23 the flexibility of pipeline operations and all other wells 24 producing into the pipeline system must be appropriately 25 curtailed to make up this well's additional gas production

1 28 in those days of low demand, market demand, that is. 2 That's all the statement I 3 have, Mr. Examiner. 4 MR. STOGNER: Mr. Burchell, if 5 I might --6 MR. BURCHELL: Yes. 7 MR. STOGNER: -- and I think I 8 will, when you say the production should be, or the lack of 9 production should be made up, are saying by that particular 10 producer or by the -- all the producers in the field, or what? 11 MR. BURCHELL: I would like to 12 qualify that to you, Mr. Examiner. 13 This is a misconception that's 14 been made, I think, here in New Mexico and in Texas and Ok-15 lahoma, that it's only the offset operators in that common 16 source of supply that's affected by one well producing 100 17 percent of the time and the other wells being shut in. 18 This is not necessarily the case. 19 a particular year's pro-Over 20 duction all wells on the pipeline system will be curtailed 21 proportionately, and the take of gas from these wells will 22 be ratable for all those other wells. 23 In other words, in one particu-24 lar year we may take from on our system 60 or 70 percent of 25 the gas from every operator regardless of whether he's in

1 29 the same pool, an offset operator, common source of supply, 2 prorated, nonprorated, marginal, nonmarginal, all wells will 3 be -- gas will be taken ratably, and when a particular dis-4 tressed well, or an emergency well, blowout situation, or a 5 hardship well is allowed to produce 100 percent of the time, 6 that extra gas that goes into the system is proportionately 7 -- has to be made up or backed off all of the other wells. 8 I hope that answers your ques-9 tion. 10 MR. STOGNER: That does. Is that all you have to say? 11 MR. BURCHELL: Yes, that's all 12 I have to say. 13 Thank you, MR. STOGNER: Mr. 14 Burchell. 15 Mr. Kellahin? 16 MR. KELLAHIN: Mr. Examiner, in 17 response to Mr. Burchell's statement, I think the Commission 18 rules and procedures, at least as set forth in Order 7453 on the hardship well classifications do address the concerns of 19 people that are in the same pipeline system and does not 20 simply limit it to the effect on offset operators. 21 The Commission has allowed in 22 the past in these cases effected parties, in other words 23 operators in the same system, to ask for minimum flow tests, 24 to enter and participate and object to the classification. 25 Unlike a number of those other

applications no one has opposed this one.

1 30 You may recall, and I think the 2 file will reflect that Penroc Oil Corporation for this well, 3 I believe, was one of the very first to inquire of the Com-4 mission about hardship well classification back in September 5 of '83, before there were ever any hardship rules in place. 6 I think you can see that unlike 7 many of the applicants that have applications filed. Mr. 8 Talley has sufficient historical documentation that he in 9 fact has diligently attempted to establish a minimum flow 10 rate. can see from the pumper's You 11 reports in May of '84 that they have coordinated the com-12 pressor rate and the choke on the well to come up to minimum 13 rates and they continue to restrict the well at such point 14 you see it loading up on May 19th, and so on. 15 So there is in fact a minimum 16 flow rate on this well. You can see that once it produces 17 less than the 385 Mcf a day, it starts loading up with 18 fluids and it kills the well. This operator, unlike other 19 operators, is not simply speculating on what will happen 20 with the general category of sensitive Morrow wells. He 21 knows what happens with this well. He can see that when it 22 was shut in he had to swab it to get it back. 23 You can see that it doesn't re-24 turn to the same plateau as it did before. You can see that 25 he's undertaken action to install a compressor and do some

constructive thing to minimize the flow rates on his well. He now, I believe, has provided you with abundant justification to grant an exception for this well and we request that you do so. MR. STOGNER: Thank you, Mr. Kellahin. Is there anything further in Case Number 8211 this morning? If not, the record will be held open pending subsequent information. (Hearing concluded.)

CERTIFICATE SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY I, that the foregoing Transcript of Hearing before the Oil Con-servation Division was reported by me; that the said tran-script is a full, true, and correct record of the hearing, prepared by me to the best of my ability. Since W. Boyd CSR I do the state of the forecalle is a consplete rended on the proceedings in the Examinant bearing of Case to. 82/1. heard 19 84. h Baminer onser