STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT 1 OIL CONSERVATION DIVISION STATE LAND OFFICE BUILDING 2 SANTA FE, NEW MEXICO 3 10 May 1989 4 EXAMINER HEARING 5 6 IN THE MATTER OF: 7 Application of Stevens Operating Corp-CASE 8 oration to amend Division Order No. 9670 R-8917, directional drilling and an un-9 orthodox oil well location, Chaves County, New Mexico. 10 BEFORE: Michael E. Stogner, Examiner 11 12 TRANSCRIPT OF HEARING 13 APPEARANCES 14 For the Division: 15 For Stevens Operating William F. Carr 16 Corporation: Attorney at Law CAMPBELL and BLACK, P. A. 17 P. O. Box 2208 Santa Fe, New Mexico 87501 18 W. Thomas Kellahin For Exxon Company USA: 19 Attorney at Law KELLAHIN, KELLAHIN & AUBREY 20 P. O. Box 2265 Santa Fe, New Mexico 87504 21 For Santa Fe Exploration Ernest L. Padilla 22 Company: Attorney at Law PADILLA & SNYDER 23 P. O. Box 2523 Santa Fe, New Mexico 87504 24 25

INDEX STATEMENT BY MR. CARR JACK AHLEN Direct Examination by Mr. Carr б Cross Examination by Mr. Padilla Cross Examination by Mr. Stogner WILLIAM A. MCALPINE Direct Examination by Mr. Padilla Cross Examination by Mr. Stogner STATEMENT BY MR. PADILLA STATEMENT BY MR. CARR EXHIBITS Stevens Exhibit One, Land Map Stevens Exhibit Two, Structural Map Stevens Exhibit Three, Schematic Diagram Stevens Exhibit Four, Cross Section Stevens Exhibit Five, Affidavit

3 1 MR. STOGNER: This hearing 2 will come to order. 3 We're going to call next Case 4 Number 9570, which is the application of Stevens Operating 5 Corporation to amend Division Order No. R-8917, direction-6 al drilling and an unorthodox oil well location, Chaves 7 County, New Mexico. 8 At this time I'll call for 9 appearances. 10 MR. CARR: May it please the 11 Examiner, my name is William F. Carr with the law firm 12 Campbell & Black, P. A., of Santa Fe. We represent Stevens 13 Operating Corporation. 14 MR. STOGNER: Any additional 15 appearances? 16 MR. PADILLA: Mr. Examiner, 17 Ernest L. Padilla, Santa Fe, New Mexico, for Santa Fe Ex-18 ploration Company. 19 MR. STOGNER: Are there any 20 witnesses, Mr. Padilla? 21 MR. PADILLA: I have one wit-22 ness. It will be very short. 23 MR. STOGNER: Mr. Carr? 24 MR. CARR: One witness. 25 MR. STOGNER: I'm sorry, Mr.

4 1 Carr? 2 MR. CARR: I have one witness. 3 MR. STOGNER: Okay. Will the 4 witnesses please stand and be sworn. 5 6 (Witnesses sworn.) 7 8 MR. STOGNER: All right, Mr. 9 Carr. 10 MR. CARR: Mr. Stogner, ini-11 tially I think I should point out --12 MR. KELLAHIN: Mr. Stogner, 13 I'd like to enter my appearance on behalf of Exxon Com-14 pany, USA. 15 I'm Tom Kellahin of the Santa 16 Fe law firm of Kellahin, Kellahin & Aubrey. 17 STOGNER: Do you have any MR. 18 witnesses, Mr. Kellahin? 19 MR. KELLAHIN: No, sir. 20 MR. Are there any STOGNER: 21 other appearances which we missed? 22 There being none you may con-23 tinue, Mr. Carr. 24 MR. CARR: Mr. Stogner, on 25 April 19, 1989, the Division entered Order R-8917 in Case

5 1 9617, which approved the nonstandard -- or an unorthodox 2 oil well location and a nonstandard proration unit, Chaves 3 County, New Mexico. 4 Stevens Operating Company is 5 before you here today seeking authority to directionally 6 drill a well and that is the only aspect or provision of 7 the prior order which we are interested in changing or 8 amending. 9 testimony will show that Our 10 we intend to comply with the provisions of the order as 11 previously entered. 12 If you will note, the order 13 contains a severe restriction on the allowable that is as-14 signed to the well. In Finding 15 there is a calculation 15 which indicates the restriction could be as -- could be 16 allowed to produce only 15.6 percent of the allowable as-17 signed to the well, and the purpose of this application is 18 to utilize an offsetting wellbore to reduce costs and 19 therefore attempt to make a completion at the location pre-20 viously approved. 21 My first witness, my only 22 witness, is Jack Ahlen. 23 24 25

6 1 JACK AHLEN, 2 a witness and being duly sworn upon his being called as 3 oath, testified as follows, to-wit: 4 5 DIRECT EXAMINATION 6 BY MR. CARR: 7 Q Would you state your full name for the 8 record, please? 9 My name is Jack Ahlen. Α 10 Mr. Ahlen, where do you reside? Q 11 In Roswell. А 12 What do you do for a living? Q 13 Α I'm a consulting geologist. 14 Q And in what capacity are you employed in 15 this case? 16 А I'm a consultant for Stevens Oil and 17 Curry and Thornton in this particular -- in this matter. 18 Have you previously testified before Q 19 this Division and had your credentials as a geologist ac-20 cepted and made a matter of record? 21 А Yes, sir. 22 Q Were you an expert geological witness in 23 9617, which resulted in the prior order approving the Case 24 nonstandard unit and unorthodox well location? 25 Yes, sir. А

7 1 Are you familiar with the application Q 2 in this case on behalf of Stevens Operating Corporfiled 3 ation? 4 Α Yes, sir. 5 Have you studied and are you familiar Q 6 with the subject area? 7 А Yes, sir. 8 Are the witness' MR. CARR: 9 qualifications acceptable? 10 MR. STOGNER: They are. 11 Ahlen, would you briefly state what 0 Mr. 12 Stevens Operating Corporation seeks with this application? 13 Stevens Operating Corporation seeks to А 14 reduce the costs in drilling to their particular acreage in 15 the tract. By re-entering a previously drilled hole in the 16 immediate vicinity and doing directional drilling from that 17 wellbore we expect to have a savings of approximately 50 18 percent of the normal cost of a well. 19 Would you refer to what has been marked Q 20 for identification as Stevens Exhibit Number One, identify 21 it and review it for Mr. Stogner? 22 is the -- exactly the same appli-А This 23 cation that was utilized in Case Number 9617. It shows a 24 copy of the Midland Map Company land map showing lease 25 It shows the discovery well and the standard ownership.

8 1 proration units surrounding that well. It also shows the 2 applied for proration unit for the unorthodox location 3 which was granted. 4 And this is the same plat that you 0 5 testified from at the prior hearing. 6 А Yes, sir. 7 Q And in what pool are you -- is Stevens 8 going to be attempting to make a completion? 9 А In the North King Camp Pool. 10 Q And you propose to dedicate to it the 11 previously approved nonstandard proration unit? 12 Yes, sir. Α 13 Q And that is the east half of the west 14 half of Section 9. 15 Being approximately 160 acres. А 16 Q Would you now go to Exhibit Number Two, 17 identify that and review it for the Examiner? 18 Okay, Exhibit Number Two is the same А 19 Devonian seismic structure map that was used in the pre-20 vious testimony, except that I have added to that the nota-21 tion that the original requested location has been approved 22 by Order No. should be R-8917. 23 have also added a semi-circle to the Ι 24 west of that approved location and we propose to hit that 25 target with our directional well.

9 1 Q And it is your intention to control the 2 well so that you will be no closer to the eastern boundary 3 of your spacing or proration unit than the location that 4 was previously approved, is that correct? 5 А We will conduct a continuous deviation 6 and directional survey during the drilling of that well 7 such that we know where the bottom of the hole will be. 8 Prior to kicking off we will also run a 9 deviation and directional survey of the old hole at the 10 standard location so that we know the surface, the relative 11 surface location of the old hole. 12 Now, when these directional or deviation Q 13 surveys are conducted, will the Oil Conservation Division 14 be notified? 15 They will be supplied with a copy of all А 16 are made for the deviation. We will making surveys that 17 them at a regular interval so it will be difficult to call 18 exactly when each one will be made. 19 Will you make copies of these also 0 20 available to other interest owners in the area if they re= 21 quest? 22 Yes, sir. А 23 Q All right. Now, in the prior case the 24 applicant was Curry and Thornton. Could you explain to Mr. 25 Stogner the relationship between Curry and Thornton and

10 1 Stevens Operating in regard to this particular venture? 2 А Yes, sir. Curry and Thornton do not 3 operate wells in this part of New Mexico and Mr. Stevens 4 was a working interest owner in that particular lease and 5 he has accepted operations from Curry and Thornton. 6 All right, and Exhibit Number Two also Q 7 shows the fault that was the subject of the last hearing --8 Yes, sir. А 9 -- is that correct? Would you now re-Q 10 fer to Stevens Exhibit Number Three, identify that, and 11 review it for Mr. Stogner? 12 Α This is a schematic diagram of the 13 PhilTex Honolulu Federal previously drilled in Section 9 of 14 14 South, 29 East, located 1980 out of the south and west 15 corners. 16 I have noted on this exhibit the surface 17 elevation; that there is a 4 inch marker pipe sticking out 18 of the ground cemented to the surface; that the well has 19 13-3/8ths inch casing set at 320 feet, the cement was cir-20 culated. It also has an intermediate string of 8-5/8ths at 21 3990, cement was circulated. A 25-sack cement plug was 22 placed in the well over that, the interval at the bottom of 23 that pipe from 4050 to 3950. It also has a 25-sack cement 24 at 5740 to 5637; another 25-sack cement plug at 7784 plug 25 to 7681; and a 25-sack cement plug in the bottom of the

11 1 hole from 9894 to 9791; and the total depth of the well is 2 9894. 3 We intend to drill all the cement 4 markers out above the 7700 foot plug and kick off our well 5 immediately above that. 6 0 And so Exhibit Number Three shows the 7 current configuration. 8 Α Current, yes, sir, the current config-9 uration of the dry hole that was drilled several years in 10 the past. 11 All right. Let's now go to Stevens Q 12 Exhibit Number Four and referring to this exhibit I would 13 ask that you review for Mr. Stogner exactly how you pro-14 pose to directionally drill this well. 15 А The display is an east/west cross 16 structure cross section between the PhilTex Honolulu Fed-17 eral No. 1 and the Santa Fe Exploration Holmstrom Federal 18 No. 1. 19 Ι illustrate a copy of the electric log 20 the PhilTex Well to the west of the stick diagram. The on 21 stick diagrams represent the wells and they are in true 22 scale proportion on the diagram. That means that one inch 23 equals 100 feet vertically as wells as horizontally. 24 You'll note that the datums in the Phil-25 Tex Well are substantially lower than those in the -- in

12 1 Santa Fe Exploration Well, being that the -- the primthe 2 ary pay zone, the Devonian formation, is approximately 150 3 feet low at a datum of -6109 in the PhilTex Well; for the 4 producing well the Devonian datum is at -5976. 5 Our seismic information suggests that 6 the fault in question that was one of the primary concerns 7 of the previous testimony is very close to the location 8 Santa Fe had exhibited in their initial presentation before 9 The seismic that we ran shows it at the the committee. 10 same spot, being approximately 100 to 200 feet east of the 11 PhilTex Well. 12 It is our proposal that we kick off the 13 hole at a point close to 7474 in the PhilTex Well, build an 14 angle to the east of approximately 15 degrees by the time 15 we reach a depth of 8224 feet, measured. At that depth we 16 will attempt to hold the angle constant at 15 degrees to 17 the east until we reach a depth of 8913, measured. 18 At that point we will start to straight-19 en the hole out at the rate of 2 degrees per 100 feet, pass 20 through the fault near the top of the Mississippian forma-21 tion and drop to vertical at a depth of approximately 9450 22 feet, measured. 23 We will continue that rate to the west, 24 building an angle of -- at the rate of 2 degrees per 100 25 feet to the west, intersect the top of the Fusselman or the

1 Devonian formation at 59 -- -5945, penetrate the same ap-2 proximately good pay zone as the Holmstrom Well did, and 3 our total depth will be at a depth of 9751 feet, measured, 4 That would be equivalent to a depth of 9710 feet if depth. 5 it had been, measured from the surface straight down and 6 that would be a location which is 330 feet east of the 7 Philtex Honolulu Federal No. 1 Well. 8 Q Now, Mr. Ahlen, by doing this you will 9 save the cost of drilling to the kickoff point at 7474 10 feet, is that correct? 11 Yes, sir, that is correct. А 12 And if you are unable to affect this Q 13 economic savings, in your opinion will it be possible from

13 economic savings, in your opinion will it be possible from 14 an economic point of view to go forward with the well to 15 test or to produce the reserves on this nonstandard prora-16 tion unit?

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Yes, it will.

18 Q Would an order resulting from this 19 hearing which provided that you were authorized to complete 20 within 500 feet of the location but in all events west of 21 the proposed -- or the previously approved location, be 22 satisfactory for your purposes?

That would accomplish our purpose.

24 Q Would you identify what has been marked 25 as Exhibit Number Five?

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14 1 А Exhibit Number Five is an affidavit that 2 offset operators have been notified of this cause. 3 Q In your opinion will granting this ap-4 plication be in the best interest of conservation, the 5 prevention of waste, and the protection of correlative 6 rights? 7 Yes, sir, it will. А 8 Were Exhibits One through Five either 0 9 prepared by you or compiled at your direction? 10 А Yes, sir. 11 MR. CARR: At this time, Mr. 12 Stogner, we would move the admission of Stevens Operating 13 Corporation Exhibits One through Five. 14 MR. STOGNER: Are there any 15 objections? 16 Exhibits One through Five will 17 be admitted into evidence. 18 MR. CARR: And that concludes 19 my direct examination of Mr. Ahlen. 20 MR. STOGNER: Mr. Padilla, 21 your witness. 22 23 CROSS EXAMINATION 24 BY MR. PADILLA: 25 Ahlen, on your Exhibit Number Two Q Mr.

vou show the approved location and I'm wondering what's -what's the other circle to the left of the proposed location in that exhibit?

A That would be the approximate location of the directional hole. If we succeed in doing what has been -- this -- this is an idealized attempt to reach the reservoir with a directional survey and directional techniques. We would hope that we can come close to this -this exact drilling program.

10 Q Mr. Ahlen, you are then trying to bot-11 tom hole locate -- the bottom hole location will be just 12 east of the fault as shown on this exhibit, then.

13 A Yes, sir, if we are -- if the interpre14 tation, the geophysical interpretation is correct.

15 Q What is the distance between the ap-16 proved location and your approximate bottom hole location?

17 A In this particular instance it would be18 165 feet.

19 Q How would that affect the penalty as 20 made in Order R-8990 (unclear)?

 21
 A
 It would not affect it all. The formula

 22
 would be -

Q Constant.

23

A Yes, sir. Well, the formula would be as
determined by the order.

16 1 Q But as I understand, you've changed the 2 I read the order footage has to -- it is footage and as 3 factor in the formula, is that not true? 4 Yes, sir, whatever it figures out to be. А 5 Q Would locating the well in this manner 6 have the effect of lessening the penalty? 7 Yes, sir. А 8 0 By how much? 9 I have not calculated it. А 10 Q By the distance of 165 feet, whatever 11 that is, is that --12 Α It -- it affects both of the penalty 13 calculations, since it's the product of the -- of the two 14 penalties. 15 You haven't done any calculations as to Q 16 this proposed bottom hole location would affect the how 17 formula as described or as written in the order. 18 The formula remains the same, sir. Α 19 I understand the formula remains the 0 20 just simply asking you whether or not you have same. I'm 21 made calculations as a result of the new footage location. 22 I have not. А 23 Looking at your Exhibit Number Four, Q 24 chances that you can -- if you're in effect what are the 25 changing the direction of the well twice, is that correct?

17 1 Α Yes, sir. Yes, sir. If you change the 2 direction of a well as slowly as possible so that you don't 3 get any dog legs in it, which make it hard to produce. 4 What -- what range of deviation do you Q 5 have in locating your -- your bottom hole location consi-6 dering the fact that you're changing the direction twice? 7 In effect the Eastman people, who are А 8 the leading experts in this particular field, say that as 9 they change these directions they get better and better 10 control as to the location. As a matter of fact, they say 11 that they steer the bottom of the hole in the direction 12 that you want it. 13 Our maximum deflection will be 15 de-14 grees from vertical when we are drilling that segment be-15 tween 8224 and 8913. 16 the Eastman people have a figure as 0 Do 17 to what the range of deviation that you --18 How far we would be from that location? А 19 How far you're going to be from that 0 20 location? 21 А In projecting it they feel as though 22 they can control it within 50 feet, but after you get there 23 they'll probably know within 2 feet. 24 2 feet of the actual bottom hole --0 25 Of the actual bottom hole location, yes, А

18 1 sir. 2 But you could actually be 50 feet away Q 3 from where you actually projected the bottom --4 Anticipated, yes, sir. А 5 So you could be closer to the fault or Q 6 vou could be --7 Further away. А 8 further away, so there's a range of Q --9 100 feet, approximately, between what you actually project 10 either way. 11 Yes, sir. Α 12 Q I mean -- I shouldn't say either way, 13 but the total error, total potential error could be 100 14 feet. 15 If you would allow me, though, the Α 16 greatest potential error in drilling a well like this is 17 the misinterpretation of the seismic data as to the exact 18 location of the fault, as well as the angle of the fault. 19 Q Now what --20 So that could vary 100 percent. А 21 What effect would you have crossing the Q 22 crossing the fault? What does the fault do in -- to 23 your drilling activity here as you cross a fault? 24 Α It causes significant deviation in the 25 immediate vicinity of the fault. There is -- de[ending

1 upon the nature of the fault itself, how broad the fault 2 angle, the broken strata in the vicinity of a fault is, as 3 well as the angle of those segments of rock, cause the bit 4 to deviate violently in that -- in the immediate vicinity 5 of a fault. 6 But how --0 7 Eastman has developed a technique to А 8 lower the consequence of that with a downhole turban bit. 9 So you could have some wild gyrations 0 10 right at the point of crossing the fault, essentially. 11 Yes, sir. Yes, sir, there was signifi-А 12 cant discussion of that when we held the previous hearing. 13 How do you -- how do you -- suppose you Q 14 do find you're going in a different direction than you want 15 to go, how do you control the bit at that point? Do you 16 come back up hole and start again or how do you do that? 17 Yes, sir. Yes, sir, if they go too far А 18 off, you plug back and redrill the hole. 19 So you actually have to plug back and Q 20 come back up again. 21 the deviation encountered is too А If 22 great and the dog leg is too great as a result of crossing 23 that fault, you do plug back, unless it's nominal and then 24 -- and then they can steer the course of the hole back on 25 -- on course.

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20 1 If you -- if you have that kind of Q 2 problem, what -- what increase in cost would you exper-3 ience should that problem --4 Α Probably lose a day. I would imagine 5 it's a day -- a day of rig time plus a day of the Eastman 6 people. It's approximately \$4-to-\$5000 a day. 7 How -- do you have an estimate in your Q 8 cost estimates as to how many times you may have to ac-9 tually come back up and plug back again and start over, you 10 know, start the hole again? 11 А The Christianson people say we shouldn't 12 have to do that. They -- they have developed a technology 13 well enough so that shouldn't be necessary. That will be a 14 surprise to us. 15 Q But you -- you considered this, haven't 16 you? 17 Oh, yes. That's part of the А Oh, yes. 18 risk. 19 Q Have you added anything to your cost as 20 part of that risk? 21 А I have not. I do not have a copy of the 22 AFE with me so -- and I have not seen one. It was being 23 developed as I left Roswell for this hearing. 24 Do you know the difference in the cost Q 25 between what the well would cost to drill as originally

21 1 proposed and using this method? 2 We're saving approximately half the cost А 3 of the well, of a new well. 4 And it's -- your testimony is that you 0 5 have -- you will do a continuous drilling survey in accor-6 dance with the --7 А Yes, sir, in conformance with the order. 8 PADILLA: Mr. Examiner, I MR. 9 believe that's all I have. 10 Mr. Carr, do you MR. STOGNER: 11 have any recross -- redirect further? 12 MR. CARR: Nothing further, 13 Mr. Stogner. 14 MR. STOGNER: Mr. Padilla, 15 before I start cross examining Mr. Ahlen here, has your 16 witness done some calculations based on the formula given 17 on this particular application? 18 MR. PADILLA: I believe that 19 in terms of figuring and computing what the total we have 20 amount of penalty would be in terms of barrels per day pro-21 In other words, it's a simple calculation, multiduced. 22 plying the penalty times the top allowable, which is ap-23 proximately 80 barrels. 24 MR. STOGNER: Through the 25 whole gamut of the 500=foot radius?

23 1 then we would apply whatever the actual location is to the 2 factors set out in this order. 3 CROSS EXAMINATION 5 BY MR. STOGNER: 6 Well, I did a preliminary calculation Q 7 and correct me, Mr. Ahlen, along here. 8 Finding Number 13 in Order No. 9 R-8917 is a penalty (unclear) should be assessed for crowd-10 ing the east line of the unit in proportion to the dis-11 tance moved from a standard location towards that line, or 12 in this case, 495 over 660. 13 Well, you were asking for 500 14 feet target area of a location 2475. So I took 2475 minus 15 500 coming up with 970. Now that comes up with 870 from 16 the lease line. 870 over 660 equals 1.318. 17 Now, then, the formula goes on 18 as 1 minus P1, 1 minus 1.318, gives us a negative number. 19 A negative number times another number is going to give you 20 a negative allowable. So we have a problem here. 21 Okay. I -- as I -- as I read the pen-А 22 alty, the normal distance would have been 660 from the 23 boundary line and we're going 330, so that would be a 50 24 percent penalty right there. 25 Uh-huh. Q

24 1 Okay, and then -- and then we're going А 2 and the next dimension is from the dry hole to the --3 discovery well, and the relative distance of the location 4 to the discovery well. 5 Q Yes. 6 А Okay, so that would be approximately, 7 let's 7/8ths, so 7/8ths times 1/2 would be the pensav, 8 alty. 9 0 Oh, but you put a 500 foot target area 10 in, so let's take the worst case --11 Okay, I -- I --А 12 -- scenario --0 13 А Yeah, okay, well, in the first place 14 we're not going to go west of the dry hole. That's ob-15 viously a -- I'd say that the boundary would be the fault. 16 Okay. And --Q 17 MR. PADILLA: Mr. Stogner, I'd 18 be all for a negative allowable, if that's the way you 19 compute it, I agree. 20 Q Well, if we take everything -- I realize 21 that -- that more than likely you're not going to swing 22 that way but I'm looking at what is written and the worst 23 case scenario and that really throws this particular --24 А I'm going to presume that we're doing 25 pretty well on getting it where we hope we can get it.

25 1 Q So there will probably be an extra 2 stipulation on there, anyway, either like you suggest, 3 either the fault line or to 660 from the -- in this case 4 1980 from the west line, because anything past that you're 5 going to get a negative -- I'm mean you're going to get a 6 zero product or you're going to divide a number by zero. 7 А You're going to be 800 over 600. See, 8 that's a 660 location --9 Q Uh-huh. 10 А -- and if we get west of that location 11 it would be 800, as an example, over 600. That's not a 12 negative number. 13 That's 1.3. 14 Q 1.3 but you've got to subtract that from 15 one according to the formula on the order in paragraph 16 number 4, part C. 17 А Right. 18 So there will probably be an extra stip-Q 19 ulation that this will work out considering you're not 20 going to be drilling east of your location. 21 А Right. 22 Q So to make this work there will probably 23 an extra stipulation and do you see a problem in an exbe 24 tra stipulation being added, Mr. Carr, Mr. Ahlen? 25 MR. CARR: No, I don't.

26 1 Q In which --2 It would avoid MR. CARR: 3 having to come back if we did something that we don't think 4 we can do, but, you know, I think an additional requirement 5 would be appropriate. 6 MR. STOGNER: Other than that, 7 that's all the questions I have for this witness. 8 Are there any other questions 9 of Mr. Ahlen? 10 MR. CARR: I have no questions 11 of Mr. Ahlen. 12 MR. STOGNER: He may be ex-13 cused. 14 Mr. Carr, do you have any 15 other witnesses? 16 MR. CARR: No, I have no other 17 witness, Mr. Stogner. 18 MR. STOGNER: Okay, Mr. Pad-19 illa? 20 MR. PADILLA: No, I don't have 21 any further questions. 22 I have one witness, though. 23 We'll call Bill McAlpine at 24 this time, Mr. Examiner. 25

27 1 WILLIAM A. MCALPINE, SR., 2 being called as a witness and being duly sworn upon his 3 oath, testified as follows, to-wit: 4 5 DIRECT EXAMINATION 6 BY MR. PADILLA: 7 Q Mr. McAlpine, will you state your full 8 name, please? 9 Α William A. McAlpine, Senior. 10 Q Your President of Santa Fe Exploration 11 Company? 12 Α I am. 13 Q And you testified here in Case 9617 as 14 President of Santa Fe Exploration Company? 15 Yes, sir. А 16 Does the proposed application affect Q 17 your -- what you own -- well, tell us, sir, where you own 18 property in relation to the proposed location. 19 А We're the adjacent operator with the 20 discovery well of the Devonian that is east of the proposed 21 location and the location that was set forth and approved 22 in Order No. R-8917. 23 McAlpine, have you figured what the 0 Mr. 24 total barrel allowable would be under Order R-8917? 25 Α An engineer in our office did.

28 1 At your direction? Q 2 А Yes. 3 And what did he conclude? Q 4 Well, at that depth the maximum allow-А 5 able was 515 barrels a day, and based on the formula, he 6 calculated that the well would be allowed to produce 80 7 barrels a day if it received the maximum. 8 Do you have any problem with 80 barrels Q 9 a day as authorized by that order generally? 10 Well, we have no objection to the direc-А 11 tional drilling being done here as long as the maximum pro-12 duction allowed under the formula is not in excess of 80 13 barrels a day. 14 Mr. McAlpine, --Q 15 А The -- if I may? 16 Go ahead. Q 17 Mr. Examiner, when this case was heard Α 18 this was not contemplated and the Commission, the Division, 19 approved a most unorthodox shaped proration unit and which, 20 you know, was hashed at length. 21 I'm of the opinion that the reason that 22 the formula was given was at that time that if there was 23 deviation in the hole toward our leaseline, then that could 24 be taken into account. 25 0 Concerning the testimony of Mr. Ahlen,

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30 1 whether they want to drill the well or -- or come through 2 the dry hole, we have no objection to it. 3 You just simply don't want that top 0 4 allowable based on that penalty to be increased above 80 5 barrels a day, is that --6 А For the reasons I just got through 7 saying. 8 MR. I PADILLA: have no 9 further questions, Mr. Examiner. 10 MR. STOGNER: Mr. Carr, your 11 witness. 12 MR. CARR: Ι have no ques-13 tions. 14 15 CROSS EXAMINATION 16 BY MR. STOGNER: 17 Mr. McAlpine, no matter where the loca-Q 18 tion of the well is, 80 barrels max, that's what you're re-19 questing. 20 А Yes, sir, because of the shape that the 21 Commission approved of the proration unit and the indeter-22 minable -- now they're, the way they're going to approach 23 it, you know, one foot through the fault line into that 24 zone, that's all they have to do, but that doesn't tell you 25 that that fault line is that distance from the lease line

31 1 that entire mile went north/south. 2 So it could be right up against the Q 3 fault line which is further west of your lease, but you 4 still want 80-acre allowable. 5 А No, sir, they have -- there is a 6 160-acre allowable here. 7 Q Uh-huh. 8 А But -- and as you'll notice, well, going 9 back further, --10 Q I'm sorry, I should have said 80 barrels 11 a day allowable no matter where the location in the prora-12 tion unit, as long as it's no closer than 2417, or 13 whatever --14 Yes, sir, whatever was approved on that А 15 prior order. 16 Q Okay. I wanted to make sure that I un-17 derstood you on that. 18 MR. STOGNER: Okay, I have no 19 other questions of this witness. 20 there any other questions Is 21 of Mr. McAlpine? 22 MR. CARR: No. I just have a 23 closing statement and that's it. 24 MR. STOGNER: He may be ex-25 cused.

32 1 Mr. Padilla, I'll let you go 2 first and, Mr. Carr, I'll let you be last. 3 MR. PADILLA: Well, Mr. Exa-4 I think the -- this case is very simple. It's just miner. 5 simply a matter of Santa Fe Exploration being able to live 6 with the nonstandard proration unit and the nonstandard 7 location with an allowable, maximum allowable of 80 barrels 8 a day. 9 now, obviously, the To _ _ 10 order states a formula which in effect could increase that 11 allowable beyond the 80 barrels per day if the well is ac-12 tually located -- if the bottom hole location is actually 13 (not clearly heard) west of the original proposed location. 14 We're simply saying that, yes, 15 it may be a matter of another challenge of the Order R-8917 16 insofar as any increase in the allowable is concerned. 17 The other side is obviously 18 going to argue that we have a formula and whatever para-19 meters fit into that formula is fair game. 20 We're simply saying that we 21 believe that without necessarily a collateral attack on the 22 previous order that if a directional drilling application 23 going to be approved that the allowable ought to be is 24 maintained at 80 barrels and no greater than 80 barrels. 25 MR. STOGNER: Thank you, Mr.

33 1 Padilla. 2 Mr. Carr? 3 MR. CARR: Mr. Stogner, we're 4 before you asking for an amendment of the prior order in 5 one respect and that's for authority to directionally 6 drill. 7 I think that it's important to 8 understand the case to look at what the order says and if 9 you look at what the order says and the order paragraphs 10 that we're focusing on are 3 and 4 and the sub-parts of 4. 11 There's nothing in here that 12 says an 80 barrel per day allowable. That's not what the 13 order says. 14 The order requires a contin-15 uous directional survey to be run on the well to establish 16 a bottom hole location and then it sets certain factors for 17 determining what the penalty will be and it says in para-18 graph 4, the depth bracket allowable for the well shall be 19 penalized by using the following formula based on the bot-20 tom hole location. 21 It's penalized for being too 22 close, too close to Mr. McAlpine's property. Now we don't 23 know exactly where the well is going to bottomed, but what 24 we are doing is coming in here with a penalty that could be 25 as much as 85 percent of the well's allowable and trying to

1 do it in a way that will, one, enable us to produce the 2 reserves that are under that tract and do it in an econ-3 omically feasible way. And all we're asking for is a 4 provision to permit the directional drilling and a bottom 5 hole location that will still be determined by directional 6 survey, and we use that -- that location and apply it to 7 this formula, and yes, if it is farther away from them, the 8 penalty would be reduced, but we think if it's farther away 9 from them a penalty should be reduced and it would be con-10 sisten with the prior order. 11 We believe that if this appli-12 cation is granted as proposed, we'll be able to develop the 13 reserves that are under our tract in the most efficient and 14 economic way, thereby preventing waste, that will impair 15 the correlative rights of no one but will enable us to pro-16 duce without waste the reserves under our tract. 17 MR. STOGNER: Thank you, Mr. 18 Carr? 19 Is there anything further by 20 anybody in Case Number 9670? 21 This case will be taken under 22 advisement. 23 24 (Hearing concluded.) 25

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CERTIFICATE б I, SALLY W. BOYD, C. S. R. DO HEREBY CERTIFY that 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. Dally is, Boyd I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9670. neard by me op eluto, Examiner Oil Conservation Division