1 2 3	STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION STATE LAND OFFICE BLDG. SANTA FE, NEW MEXICO					
4	3 June 1987					
5	EXAMINER HEARING					
6						
7	IN THE MATTER OF:					
8 9	Application of Marathon Oil Company CASE for pool creation, special pool rules, 9145 and discovery allowable, Lea County, New Mexico.					
10	and					
11	Application of Marathon Oil Company CASE for the amendment of Division Order 9146					
12	R-8282, as amended, Lea County, New Mexico.					
13						
14	BEFORE: David R. Catanach, Examiner					
15						
16	TRANSCRIPT OF HEARING					
17						
18	APPEARANCES					
19	For the Commission: Jeff Taylor					
20	Legal Counsel for the Division Oil Conservation Division					
21	State Land Office Bldg. Santa Pe, New Mexico 87501					
22	For Marathon Oil Co.: W. Thomas Kellahin					
23	Attorney at Law KELLAHIN, KELLAHIN & AUBREY					
24	P. O. Box 2265 Santa Pe, New Mexico 87501					
25	and Lawrence D. Garcia					
	Attorney					
	Marathon Oil Company P. O. Box 3128					
	Houston, Texas 77253					

Γ

1

Ŧ

<u>~</u>

1		APPEARA	N C E S, CONTINUED
2			
3	For James A.	Davidson:	Chad Dickerson
5			Dickerson Fisk & Vandiver Seventh & Mahone/Suite E
6			Artesia, New Mexico 88210
7			
8			
9			
10			
11			
12			
13 14			
15			
16			
17			
18			
19			
20			
21			
22 23			
23 24			
25			

INDEX STATEMENT BY MR. KELLAHIN STATEMENT BY MR. DICKERSON STATEMENT BY MR. KELLAHIN WEST KUBIK Direct Examination by Mr. Kellahin Cross Examination by Mr. Dickerson Cross Examination by Mr. Catanach Recross Examination by Mr. Dickerson TOM ENGLER Direct Examination by Mr. Kellahin Cross Examination by Mr. Dickerson Cross Examination by Mr. Catanach STATEMENT BY MR. KELLAHIN STATEMENT BY MR. DICKERSON CLOSING BY MR. DICKERSON CLOSING BY MR. KELLAHIN CLOSING BY MR. DICKERSON 

				3
1			EXHIBITS	
2				
3	Marathon	Exhibit	One, Map	17
4	Marathon	Exhibit	Two, Seismic Map	23
5	Marathon	Exhibit	Three, Cross Section B-B'	30
6	Marathon	Exhibit	Four, Filing C-123	58
7	Marathon	Exhibit	Pive, C-105	58
8	Marathon	Exhibit	Six, Plat	59
9	Marathon	Exhibit	Seven, Calculations	59
10	Harathon	Exhibit	Eight, Data Sheet	61
11	Marathon	Exhibit	Nine, Economic Summary	68
12	Marathon	Exhibit	Ten, Schematic	70
13	Marathon	Exhibit	Eleven, Production History	70
14	Marathon	Exhibit	Twelve, Log	71
15	Marathon	Exhibit	Thirteen, Plat	101
16	Marathon	Exhibit	Pourteen, Letter	101
17	Marathon	Exhibit	Fifteen,	
18	Marathon	Exhibit	Sixteen, AFE	102
19	Marathon	Exhibit	Seventeen, Return Receipts	102
20	Marathon	Exhibit	Eighteen, Certificate, etc.	102
21	Harathon	Exhibit	Nineteen, Certificate	102
22				
23				
24				
25				

4 1 MR. CATANACH: Call next Case 2 9145. 3 MR. TAYLOR: The application of 4 Marathon Oil Company for pool creation, special pool rules, 5 and discovery allowable, Lea County, New Mexico. 6 MR. CATANACH: Are there 7 appearances in this case? 8 MR. KELLAHIN: If the Examiner 9 please, I am Tom Kellahin of Santa Pe, New Mexico, appearing 10 in association with Mr. Larry Garcia, Marathon attorney, and 11 we are representing Marathon Oil Company. 12 MR. CATANACH: Are there other 13 appearances? 14 MR. DICKERSON: Mr. Examiner, 15 I'm Chad Dickerson of Artesia, New Mexico, appearing on be-16 half of Mr. James A. Davidson of Midland, Texas. 17 I have one witness. 18 MR. **KELLAHIN:** Examiner, Mr. 19 with your permission, we would like to consolidate the next 20 case, which is 9146, for purposes of presenting testimony 21 and we would request that you enter separate orders. I 22 think we can work with a consolidated case arrangement and 23 we'd like to try that. 24 We'll go ahead MR. CATANACH: 25 and do that, then, if it's all right with you, Mr. Dicker-

5 1 son. 2 MR. DICKERSON: Very good. 3 MR. CATANCH: Okay, at this 4 time I quess we'll call next Case 9146. 5 BR. TAYLOR: The application of 6 Marathon Oil Company for the amendment of Division Order No. 7 R-8282, as amended, Lea County, New Mexico. 8 Okay, same ap-MR. CATANACH: 9 pearances, I assume, in both cases. 10 MR. KELLAHIN: Yes, sir. 11 MR. CATANACH: How many witnesses do you have? 12 13 MR. **KELLAHIN:** I have three 14 witnesses. 15 MR. CATANACH: Can I get all 16 the witnesses to stand and be sworn at this time? 17 18 (Witnesses sworn.) 19 20 MR. **KELLAHIN:** Mr. Examiner, 21 I'd like to take a moment and see if I can outline for you 22 in a brief way, the factual presentation, indicate to you 23 Marathon's perspective in terms of these cases so that as 24 you hear the evidence you will recognize those areas of dis-25 agreement, perhaps some areas of agreement, and I'll have a

1 feel for the kinds of things we'll asking you to render a 2 decision on. 3 If I may begin back a little bit, in Au-4 gust of '86, after a hearing, Examiner Stogner entered a 5 forced pooling order. We will submit to you a copy of the 6 order. It's in Case 8960. The order number is R-8282. 7 The arrangement is this, is that Marathon 8 had planned at that point to drill a Siluro-Devonian well, 9 it's an oil well. The rule is it was on statewide spacing and Mr. Davidson has an interest in that 40-acre tract. 10 He 11 has, I understand, the same interest in each of the 40-acre 12 tracts that are in that guarter section. 13 The order was entered and the case did in 14 fact go to a Commission Hearing. The result of it, however, 15 was the forced pooling order was entered. 16 Our evidence is that Mr. Davidson was 17 provided notice pursuant to the pooling order and that he 18 did not elect to participate in the well pursuant to the 19 time frame allowed. 20 Thereafter the well was drilled and com-21 pleted in mid-February of this year. After completion and 22 some initial testing on the well, it is our evidence and be-23 lief that the oil well constitutes a new Siluro-Devonian 24 discovery. It is our evidence and belief that the well will 25 have the ability to drain more than 40 acres.

б

1 As a consequence of that, we have sought 2 for and present to you today an application to establish 80-3 In the event the Division agrees with us and acre spacing. 4 approves temporary 80-acre spacing for this new Devonian oil 5 pool, we would also seek to amend the pooling order. It is 6 our position with regards to the forced pooling cases that 7 Mr. Davidson is not entitled to any new election period; 8 that he cannot now pay his share of the cost of this suc-9 cessful producing oil well and avoid thereby the impact of 10 the original order. 11 I'm sure we'll have disagreement about 12 that and that will be one of the issues that you'll have to 13 resolve, is to the extent to which the prior forced pooling 14 order may be modified in order to make the pooling order ac-15 reage consistent with the spacing if you should approved 80-16 acre spacing. 17 I will save for closing argument my posi-18 tion on those guestions and why I think we're correct. 19 Our proof is going to be through three 20 witnesses. We'll provide a geologic witness who will set 21 the geologic stage upon which we believe the new pool is 22 justified. 23 We have an engineering witness that will 24 provide you engineering calculations upon which he formu-25 lated the opinion that 80-acre spacing is justified, and

8 1 then we'll provide our land witness, who is the same land 2 witness in the forced pooling case and he'll provide you the 3 documentation and correspondence with regards to the amend-4 ment of the order. 5 That is the substance of our case and at 6 such appropriate time we're ready to go forward. 7 MR. DICKERSON: Mr. Examiner, I 8 think that a little bit more detail in the background of 9 this case is in order. 10 Mr. Davidson wears two hats at 11 this hearing. Mr. Davidson is the owner of 38.125 percent working interest in the south half land the south half 12 of 13 the northeast quarter of Section 14, Township 16 South, 14 Range 38 East, Lea County, New Mexico, 400 acres in all. 15 He also is a royalty owner. He 16 owns minerals which are subject to an oil and gas lease un-17 der that same 400-acre tract. 18 In addition to that he is a 19 royalty owner, again owning minerals subject to an existing 20 oil and gas lease in the Section 23, immediately to the 21 south of the Section 14. 22 We, who practice before this 23 Division, know that in many instances it's fairly common to 24 be faced with a situation when we must resort to forced 25 pooling in which we may not be totally certain whether a gas

9 I well is going to be completed; whether an oil well is going 2 to be completed; whether special pool rules affecting some 3 zones may or may not come into effect prior to drilling a well. There are ways to avoid that problem. 5 The problem is avoided in prac-6 tice, as you know, by filing an application pointing out the 7 possibility of differing spacing units. It may be a 40, it 8 may be an 80, it may be a 150, a 320, depending on what the 9 facts and circumstances in the future holds at the time some 10 party commences to drill a well. 11 That was not done in this case. 12 This was a very straightforward, typical run-of-the-mill 13 pooling case to which Mr. Kellahin referred. It affected 14 only, the evidence in that hearing and we'll cite today the 15 numerous portions of the transcript into evidence before 16 this Division, both at the Examiner Hearing of last August 17 and at the later Commission hearing in October, I think it 18 was. 19 There was no representation, no 20 hint, no inkling, at any point in any of that testimony or 21 evidence given that that was such a sitution. This pooling 22 case was fought and won by Marathon and lost by Mr. David-23 son. No appeal has been taken from it, it is final. It af-24 fected the southeast quarter of the southeast quarter. At 25 that time Marathon was interested in drilling and subse-

10 1 quently did drill its Benson No. 1 Well, located, and at 2 that time anticipated to be a 40-acre oil well under the statewide rules. 3 After the election period and 5 subsequent to the forced pooling order becoming final, Mr. 6 Davidson was, in fact, accorded an opportunity to partici-7 pate by paying his share of the costs in that well. he 8 chose not to do so. He chose not to pay his proportionate 9 part of the cost of a 40-acre oil well. 10 by not appealing the Divi-He, 11 sion order, agreed to suffer the consequences of the penalty 12 imposed upon him by that order, the statutory maximum, cost 13 plus 200 percent. 14 Marathon subsequently drilled 15 and subsequently completed, and it's our information that 16 the well is currently a commercial producer from the pro-17 jected Devonian formation. 18 It's also our information that 19 since that time Marathon has also now drilled and is at 20 total depth on another well immediately in Section 23, to 21 the south, adjoining Mr. Davidson's interest in the subject, 22 the original subject well, southeast of the southeast quar-23 ter of Section 13, which, as I said, is now at total depth. 24 Nothing, as far as Mr. Davidson 25 -- Nr. Davidson has not been accorded by Marathon any infor-

11 1 mation whatsoever, regardless of his position both 85 а 2 royalty owner and as a working interest owner of the infor-3 mation gained from drilling these wells. 4 There was great point made of 5 this fact at the Examiner hearing and the Commission hearing 6 fought in 1986. Marathon was not ordered to produce infor-7 mation as has been the custom of this Division over the years, yet Marathon now comes before us to change the rules 8 9 of the game after these wells have been drilled. 10 The testimony at the original 11 hearings, Mr. Examiner, was quite extensive testimony that 12 it was perfectly possible for Mr. Davidson's offsetting acreage, consisting of 40-acre spacing, the 400 acres in which 13 he owns almost 40 percent working interest, one of which, 14 15 one spacing unit of which at 40 acres, was involved in that 16 proceeding. But that proceeding left open the possibility 17 of nine additional spacing units in Section 13 in which Mr. 18 Davidson was really the majority interest owner, subject on-19 ly to farmouts and whatnot from other parties possibly in-20 creasing Marathon's -- we're not sure of what Marathon's to-21 tal interest may be. 22 At any rate, he was a substan-23 tial working interest owner throughout all that acreage. 24 Nuch of the testimony at that proceeding was to the effect 25 that he may get some benefit from drilling this well. He's

1 going to suffer a penalty which was imposed upon him, the 2 statutory cost plus 200 percent, but he was going to get some benefit, too, if this well was drilled at the cost, 3 4 risk, and expense of Marathon, and subsevently it was done. 5 The practical effect of 6 drilling and completing a successful well might be to en-7 hance and improve Mr. Davidson's knowledge of the mineral 8 situation underlying his lands. That, in fact, has come to 9 pass. While our information is very limited because of the 10 refusal of Marathon to furnish any information whatsoever 11 concerning the production history or data obtained from the drilling of either of these two wells, it is only after the 12 13 fact that Marathon comes in for two separate forms of re-14 lief. One, to establish, as with this Benson Well in the 15 southeast guarter of the southeast guarter of Section 13, or 16 14. I'm misstating, it is Section 14, to establish special 17 pool rules providing for 80-acre spacing. 18 At the same time Marathon has 19 filed a separate application to, and this is a quote, 20 "amend" the forced pooling order. 21 It is our opinion that the pur-22 pose of the posing of these two separate applications in 23 this fashion is to present a colorable argument to this di-24 vision that it may in some manner amend the provisions of 25 that pooling order to expand the force pooled acreage from

40 acres to 80 acres without what is otherwise absolutely
and unequivocally required by our statute, and that is the
prior obligation to have attempted to obtain a voluntary
pooling.

5 Mr. Examiner, you know as well 6 as we lawyers who practice in front of you, the custom and 7 practice of this Division. Someone appears before this Di-8 vision unprepared to show or make a prima facie case to some 9 extent that they have attempted under our statutes to obtain 10 voluntary pooling of the acreage, the customary treatment 11 those parties get is to be invited to come back in two weeks 12 or thirty days after they have attempted to obtain such vol-13 untary pooling and then, if unsuccessful, and if they have 14 been in good faith, the custom and practice again, as we all 15 know, has been to, in the great majority, if not universal-16 ly, grant forced pooling applications. We can argue over 17 risk and who's the operator going to be and all those 18 things. That's not the case before us today.

19 Mr. Kellahin has an aspect of
20 credibility around here that he deserves. His clients
21 recognize it. His opponents recognize it, and those of you
22 who sit as judges in these cases recognize it.

But we think in this case what
is attempting to be done is not permitted by our rules. We
do not think it has ever been, to the best of my ability,

1 I've attempted to ascertain where -- whether or not it has 2 ever been attempted before, I cannot find a case where it 3 has been attempted, nor have I been successful in much less 4 finding a case in which it has been successful. 5 It is Mr. Davidson's position 6 that he was pooled in a 40-acre tract. He has to live with 7 that pooling. 8 He was not pooled and cannot by 9 slight-of-hand, by calling it an amendment to a pooling or-10 der and establishment of special pool rules, in effect lose 11 80 acres of his property, and a valuable property right at this point, and concedably (sic) through the efforts and at 12 13 the expense of Marathon, but he cannot lose the property 14 right that he owns in that other 40-acre adjoining tract in 15 a procedure such as this. 16 It is our position that this 17 Division, we recognize that under the broad terms of our 18 pooling statute a great deal of discretion in this Division 19 and its examiners to improper circumstances and based on the 20 proper evidence before it, in some cases to amend and modify 21 orders. It's not unusual for orders to be amended. 22 But this is much more than 23 that. This is a retroactive attempt to do what should have 24 been, must have been, but was not done in 1986 prior to the 25 drilling of the well.

1 It's Mr. Davidson's position 2 that Marathon has not made any effort whatsoever, much less 3 any effort in good faith, to obtain a voluntary pooling 4 agreement; that regardless of what this Division does, we 5 submit that the statute requires that he have some option, 6 whether to participate, whether in the normal course of 7 events to farmout, Marathon can withdraw its application, 8 and leave it on 40-acre spacing. He's fought that battle and 9 won a year ago. That decision is final. It is not appeal-10 able by either or, by either side. 11 The effect of what Marathon at-12 tempts to do in this case is to avoid these practical prob-13 lems. This, to put it bluntly, is not the simple, straight-14 forward, typical run-of-the-mill pooling case that we're ac-15 customed to seeing and hearing argued in this room. 16 That's all I have. 17 MR. CATANACH: You may proceed. 18 MR. KELLAHIN: Mr. Examiner, 19 just very briefly, we try to bring you interesting cases. 20 We think this is one of them. It is a chicken and egg prob-21 lem about which you do first and how you guess what to do. 22 We think it might be of, if not 23 comfort, at least help in deciding how to address Mr. Dick-24 erson's concerns and mine if you'll let us make the factual 25 presentation, and then we will do what you want us to do in

15

.

16 terms of briefing this question, submitting proposed orders, 1 and we'd like to go forward at this point with the factual 2 3 presentation, and give you that framework upon which to make 4 the decisions both Mr. Dickerson and I seek to have you 5 make. 6 MR. CATANCH: Please proceed, 7 Mr. Kellahin. 8 MR. KELLAHIN: I'd like to call 9 at this time our first witness, Mr. West Kubik. It's K-U-B-10 I-K. 11 MR. KELLAHIN: Mr. Kubik, would 12 you take a moment, sir, and give me a copy of the exhibit 13 packages that you have put together and we'll distribute 14 these. 15 Mr. Examiner, I have distri-16 buted Marathon Exhibits One, Two and Three, which represent 17 Mr. Kubik's geologic displays. 18 19 WEST KUBIK, 20 being called as a witness and being duly sworn upon his 21 oath, testified as follows, to-wit: 22 23 DIRECT EXAMINATION 24 BY MR. KELLAHIN: 25 Q And at this time I will ask you, Mr.

17 1 Kubik, to take Exhibit Number One, let's use Exhibit Number 2 One to orient us as to what is being done in this particular 3 area. 4 Let me first of all ask you, sir, did you 5 prepare all three of these exhibits? 6 A Yes, I did. 7 0 Have you previously testified as a petro-8 leum geologist before the Division? 9 A I have not. 10 C Would you identify for the Examiner when 11 and where you obtained your degree? 12 I obtained my Bachelor of Science in geo-A logy from Oklahoma State in 1979. I obtained a Master's of 13 14 Science in geology from Colorado School of Mines in 1982. 15 Q Will you summarize for us in a general 16 way what has been your experience, your employment exper-17 ience, as a professional petroleum geologist? 18 Ά I worked for two years as a parttime geo-19 logist with Kenai Oil and Gas, an independent in Denver 20 while attending school at Colorado School of Mines. 21 After graduation I worked with Kenai as a 22 fulltime geologist in the Rocky Mountain region for nine 23 months, until March of '82. 24 I've worked in a variety of Basins in the 25 Rocky Mountains. In late '82 I became employed with Mara-

18 1 thon in Midland. I have worked for Marathon in the Midland 2 Office since late '82, that being approximately four and a 3 half to five years, experience with Marathon. I've worked 4 Western Anadarko Basin, Southern Midland Basin, but primar-5 ily for approximately three, three and a half years, I've 6 worked Lea County, New Mexico, in a variety of formations. 7 Pursuant to that employment, 8 Kubik, does the prospect that is being developed Mr. in 9 is called the East Garrett Siluro-Devonian Pool, what is 10 that an area for which you have made a geologic study? 11 Yes. I've been familiar with this area for some time in working some Wolfcamp zones and 12 some Penn zones and handling the -- the geology for the --13 14 for the East Garrett prospect. 15 0 All right, sir. 16 MR. **KELLAHIN:** Жe tender Mr. 17 Kubik at this time as an expert petroleum geologist. 18 MR. CATANACH: Mr. Kubik is so 19 qualified. 20 Q Mr. Kubik, let me take you through Exhi-21 bit Number One in a general way before we talk about the 22 specifics. 23 Would you take a moment and explain to us 24 how to understand the color code at the bottom of the dis-25 play?

A In the color code I've simply undertaken
to describe the production, the producing horizons on this
index map, encompassing all of Township 16, 38, 16 South, 38
East, and portions of 15 -- portions of ranges in 15 South
and portions of ranges in 17 South, just as an orientation
and index map.

7 It shows a variety of producing forma-8 tions as listed. They are listed in stratigraphic order, 9 shallowest at the top, deepest at the base. It shows a var-10 iety of formations, Glorieta, San Andres, Drinkard, Abo, being some of the shallower formations producing from depths 11 of 5-to-8000 feet, Wolfcamp and Brown producing from appro-12 13 ximately 10,000 feet, and the interval of interest here, the 14 Siluro-Devonian shown in red and showing the producing wells 15 in nearby fields to the prospect, those fields being -- mov-16 ing from the north to the south --

17 Q Right, just a moment, to make sure you
18 don't get too far ahead of me.

19 A Okay.

20 Q Let's devote our attention to the other
21 Siluro-Devonian Pools that have been established, at least
22 insofar as this map shows.

23 A All right.

24 Q Before we talk about those, how do we
25 look at the color code and orient ourself to the other Devon-

20 1 ian oil pools? Are they simply clustered by a color code? 2 They're the orange wells, are they not? 3 A Yes. 4 All right. 0 5 A The Devonian wells are the orange wells 6 on the map, yes. 7 0 Okay. Identify for us, starting in the 8 top right with the Medicine Rock, identify for us the areas 9 that are designated as particular Devonian Pools and then, 10 if you will, also let us know if those pools are designated 11 under statewide 40-acre spacing or whether they're on 12 special rules of 80 acres or more. 13 A All right. Starting with the Medicine 14 Rock Devonian Pield in the far upper right of the map, to my 15 knowledge that field was ordered on 80-acre spacing. 16 All right, sir. 0 17 A The very top left of the map is the very 18 southern tip of the Denton Devonian Field. I do not have 19 knowledge of what the word spacing was, whether special 20 spacing was requested in that field. It appears to have 21 been drilled on forties. 22 Moving south, immediately south of there, 23 to the South Denton Devonian Field shown there, seven well 24 producing field, again I do not know if special rules were 25 granted or requested for that field. Again it was drilled

21 1 on forties. 2 Moving to the south, kind of the center 3 portion of the map, the Knowles Field shown there, eight 4 producers, to my understanding that was special rules of 80-5 acre spacing were granted on the Knowles Field. 6 The West Garrett Field to the left of the 7 map, it's my understanding was spaced on forties, or granted 8 forties, and then finally, the South Knowles Field, the bot-9 tom right, again to my understanding was originally granted 10 80-acre spacing. 11 On the exhibit there is an orange line 0 12 that passes through the Marathon Oil Benson 1, which I will 13 call the discovery well just to keep you on to that well 14 point. 15 In addition to the discovery well there 16 are other wells that are aligned with that line. Is that a 17 line of cross section? 18 A Yes, it is. 19 0 All right, and that's your Exhibit Number 20 Three? 21 A That is. 22 0 Okay. When we're looking at what Mara-23 thon proposes to have the Division establish as the East 24 Garrett Siluro-Devonian Pool, have you reached a geologic 25 opinion, sir, as to whether in your mind this constitutes a

22 1 new Devonian discovery? 2 In my opinion, it does. Α 3 Have you satisfied yourself, sir, 0 that 4 this is both vertically and horizontally separated --5 λ Yes. 6 0 -- from other established Devonian pools? 7 A Yes, sir, I have. 8 0 And have you developed a geologic opinion 9 as to whether or not the discovery well is within a reser-10 voir that ought to be designated as a new pool? 11 λ Yes. 12 0 When we look at the shaded area, did you 13 shade that area in around the discovery well? It looks like 14 half of four sections? 15 Yes, I did. A 16 What's the purpose of that? 0 17 It was just to give it a very rough ball-A 18 park outline to -- to what the pool may eventually encompass 19 based on a very rough outline of our seismic map, the dis-20 tribution of the reservoir shown on our seismic map. It was 21 just a very rough attempt to outline what -- what may be the 22 pool outlines in a very -- in more of a land sense than in a 23 geologic sense. 24 Prior to the drilling of the 0 Benson 1 25 Well, the discovery well, when a geologist such as you with

23 this type of experience examines and identifies an area for 1 2 a well, do you know prior to the drilling of that well in 3 this type of Devonian area whether or not you're going to 4 get wells that you as a geologist would recommend be devel-5 oped on 40 or 80-acre spacing? 6 A No, sir. 7 0 Let's turn then to the Exhibit Number 8 Let's look at some of the specific geology about this Two. 9 particular discovery, Mr. Kubik. 10 Pirst of all would you take a moment, 11 sir, and simply identify the exhibit for us? 12 A The exhibit is a Silurian depth, Siluro-13 Devonian seismic depth map based on seismic and well con-14 trol, constructed by Dave Rebenstorf, our geophysicist for 15 the area, originally. It is based on a number of seismic 16 lines, the critical ones to the prospect outlined in yellow. 17 There are other seismic lines in the area and it is again a 18 structural depth map on the Siluro-Devonian horizon. 19 This is the same Mr. Rebenstorf that tes-0 20 tified at the forced pooling case in which Mr. Davidson's 21 interest was pooled. 22 A It is. 23 Q All right, and you've taken that base 24 then, that was used in evidence and have further evalmap, 25 uated it and reached certain conclusions?

24 1 Yes. A 2 Q All right. Describe for us generally, 3 Kubik, what additional work or any alterations or chan-Mr. 4 ges you might have made in the base map. 5 A The -- really the only changes that were 6 made were that the top of the Siluro-Devonian was antici-7 pated, was encountered at a slightly lower structural eleva-8 tion, but still -- still anomalously high and it simply 9 caused Mr. Rebenstorf to go back in and provided his with a 10 velocity point, allowed him to just do some very subtle re-11 contouring and changed some of the contour values but it 12 basically did not alter the reservoir at all. 13 Q But geologic data that was used to update 14 his interpretation is the information derived from the Ben-15 son 1 Well? 16 A Yes. 17 0 The one we've called the discovery well? 18 A Yes. 19 Q Okay. Just to the south of that is ā 20 well that was called, or is called, the No. 1 Roddy Well? 21 Yes. A 22 C What is the current status of that well, 23 sir? 24 A That well is currently undergoing tes-25 ting.

25 1 It has reached total depth and --0 2 Yes, it has. A 3 0 -- you're preparing completion and tes-4 ting on it? 5 Yes. A 6 Q OKay. The -- apart from the Benson Well 7 and the Roddy Well, are there any other Siluro-Devonian 8 tests or producing wells in the immediate area? 9 On this map there are a few I might point A 10 To the immediate -- to the immediate west of the Benout. 11 son Well there are two Silurian tests, shown as the Sun Yeager and the Major, et al, No. 1 Yeager, the two dry holes in 12 13 Units I and J of Section 15, were dry holes to the Silurian. 14 The well in Unit A, 22, was a dry hole to 15 the Silurian. These probably could be better seen on the 16 index map. I have those dry holes listed but basically the 17 Knowles Field is to the immediate south end of the map, 18 which is Devonian production. That is the only other Devon-19 ian production on the map and there are -- there are a few 20 dry holes, also. 21 The closest Devonian production is in the 0 22 -- in the Knowles Field to the south. 23 A Yes, it is. 24 And how far away is the closest producing 0 25 well in the Devonian from the discovery?

26 1 Appears to be approximately 2-1/2 miles. A 2 You said earlier that you have reached 0 3 the geologic opinion that this constituted a new resrvoir? 4 A Yes. 5 Would you describe for us the reasons 0 6 that you base that opinion on? 7 A Primarily based on our detailed seismic. 8 We have a very dense grid, as you can see. These reservoirs are fairly straightforward to -- to define seismically. 9 The other reservoirs that produce, such as Knowles and those off 10 of this map, are very similar in that they are faulted anti-11 clines, faulted on one or more sides. 12 13 We have dry holes on the flanks of our 14 feature and intermediate positions between our feature and 15 the nearest producing fields and our well did come anoma-16 lously high for that general area, but primarily it is based 17 on the dense seismic grid. The seismic is a very good tool 18 in here and I think very well defines that we definitely 19 have separation from -- from any of the nearest Siluro-De-20 vonian Pools. 21 What information, geologic information, 0 22 do the logs from the Benson 1 Well allow you to do in deter-23 mining and satisfying yourself that this is in fact a new 24 discovery? 25 I don't really know if that much is going A

27 1 from the logs identified as a new discovery. Perhaps most 2 of that would have had to be based, I think, on engineering 3 information, but again, most of it was based on the seismic 4 and our well just simply confirmed our seismic and the tops 5 in the reservoir development. 6 Q Well, and that is the geologic benefit, 7 then, of the log of the Benson Well is --8 A Yes, sir. 9 Q -- it tells you the accuracy of the seis-10 mic. 11 A Yes, it has confirmed the seismic. 12 0 Can you as a geologist determine what the 13 drainage is going to be for this reservoir? 14 A No, I really am not qualified to -- to 15 make very detailed calculations and determinations on -- on 16 what the drainage should be. 17 That's an engineering question. 0 18 A It is an engineering question. 19 Fine, let me ask you a geologic question, Ø 20 though, with regards to well spacing. 21 Ä Okay. 22 0 In terms of the geology, do you see it 23 that this reservoir has an adequate size and shape to it 24 whereby at least from a geologic perspective you would re-25 commend either 40-acre spacing or 80-acre spacing or 160-

28 1 acre spacing? Can you not approach it from a geologic per-2 spective? 3 A Yes. 4 0 All right. Making that assessment, what 5 your opinion, then, about how you would space wells in is 6 order to adequately explore and develop the new pool? 7 A My opinion as a geologist and who having 8 looked at the other fields, their spacing, their correlative 9 reservoir characteristics, it is my opinion that the pool 10 should be drained on eighties. 11 Should be spaced on eighties. 0 12 Spaced on eighties. A 13 What kind of geologic parameters or fac-0 14 tors have you looked at, Mr. Kubik, to satisfy yourself that 15 this reservoir has the kind of geologic characteristics that 16 would lead you to believe that it is a reservoir that could 17 be spaced upon eighties as opposed to forties? 18 Primarily in that looking at the surroun-A 19 ding fields we see some variability in the relative amounts 20 of fracturing versus matrix porosity that contributes to 21 production. Many of these fields are fractured; many of 22 them also have good matrix porosity. I think it could be 23 said in general that the data that I've been able to come up 24 with for some of the immediately offsetting fields where 25 there is some variation, is that in those fields where fracturing in a relative sense is more dominant than good matrix
porosity, these fields have been ordered on eighties and
have been drilled on eighties.

4 In those fields which have better inher-5 ent matrix reservoir porosity and less fracturing, the South 6 Benton Field being a prime example in this area, that those 7 fields were in fact drilled on forties, so that having that 8 generalization at hand, of -- of more fracturing and less 9 porosity being more conducive to 80-acres, it was certainly 10 my opinion once seeing the Benson drilled, I sat on the well 11 as the reservoir was drilled and was there for the initial 12 test, and it was my opinion, looking at the samples, that 13 we're dealing primarily with a fractured reservoir with very 14 little matrix porosity, and certainly that was confirmed by 15 the logs, the point being that we saw that we had a reser-16 voir that was dominated by fractures and had very little or 17 no good matrix porosity, therefore, by analogy to other 18 fields that would tend to lend it much more to being spaced 19 on eighties.

20 Q For the Benton Pool could you have made 21 the judgment about the fractured nature of this reservoir 22 and its potential for 80-acre spacing until the Benson Well 23 had been drilled?

A We could not. You can make generalities
that in general Siluro-Devonian resrvoirs have varying

1 amounts of matrix porosities. Some of them are fractures; 2 some of them are not, and -- but the reservoir in the area 3 is -- is complex enough and has enough heterogeneity that 4 that really cannot be judged ahead of time, particularly on 5 a rank wildcat well. 6 Let's turn to Exhibit Number Three, Ø Mr. 7 Kubik, and have you identify that exhibit for us. 8 A All right. 9 You've previously identified Exhibit 0 10 Three as a cross section that you have prepared. Would you 11 describe for us the method by which you've made a study to 12 decide how to prepare a cross section?

13 A I made the cross section based on, I wan-14 ted to show the -- really, the nature of our wildcat rela-15 tive to immediately adjacent dry holes and other producing 16 I ran the cross section through the South Benton fields. 17 Field to the north, through a -- starting with a dry hole to 18 the north of that field, through the south -- through the 19 north -- through the South Benton Field, and then through 20 some dry holes between the South Benton Pield and our well, 21 through our well, and again through some dry holes flanking 22 our wells and on to a producing field to the south, the 23 Knowles, primarily just to show the analogy of field type, 24 the production type, and also to show the separation of our 25 feature from -- to the nearest Devonian Pool.

31 1 Q This is a structural cross section, is 2 it? 3 A It is a structural cross section. 4 0 Is the methodology you have used in pre-5 paring the structural cross section one that is a standard 6 method used by geologists? 7 A Yes, sir. 8 0 Having done this, what conclusion do you 9 reach as a geologist based upon the relationship of the Ben-10 son Well to the other wells on the cross section? 11 Basically, you can see that I note in the 12 record that this is modeled partially off of our seismic information, which is a very dense grid in the area. 13 14 Basically you conclude that the Benson 15 Well is on a separate horst-like feature with downthrown 16 faults on either flank, separated from the immediately adja-17 cent fields by low and wet Devonian. 18 0 Identifying a structure for the Devonian pools is in fact the basic building block upon which you 19 20 discover and develop Devonian pools? 21 A Yes, it is. 22 You're looking for a stratigraphic Q 23 structural features in order to trap the oil? 24 A Yes, very definitely out here. That is 25 -- the only way in this immediate -- that is the only the

type of field in this immediate area are small. The Denton
is somewhat large but for the most part fairly, fairly small
structural accumulations faulted on one or more sides is the
trapping mechanism.

Q Do you have a geologic opinion with regards to the continuity or discontinuity of these types of
reservoirs so that you can make a judgment that based upon
that fact a prudent operator would go either for 40 or 80
acre spacing?

10 Α Generally, on other fields the -- the 11 continuity of the reservoir within a field appears to be quite good. There -- there really aren't that many ano-12 13 malies within fields to suggest a very broken up reservoir. 14 The majority of the field certainly on the index map as well 15 as the immediate area, all have pretty much continuous and 16 even reservoir, although there certainly are some small 17 scale variations well to well, but generally you do have a 18 continuous reservoir over the entire feature and that cer-19 tainly would allow you the option of either spacing.

20 Q And looking specifically at the Benson
21 area, which Marathon proposes for the new pool, do you see
22 any geologic feature or other characteristics of the geology
23 on any of your work that would cause you to say, "Aha, dis24 continuous, we've got to go for 40-acre spacing."

25

I have not.

A

33 1 All right. Are there in fact any geolo-Q 2 gic characteristics, features, sealing faults, that you have 3 located that would preclude you from reaching the geologic opinion that we could space wells in this pool on 80-acre 4 5 spacing? 6 A No. 7 MR. **KELLAHIN:** That concludes 8 my examination of Mr. Kubik. 9 I would move the introduction 10 at this time of his Exhibits One, Two, and Three. 11 MR. DICKERSON: Mr. Examiner, I 12 would like to reserve the right to object to any of these 13 until following a small amount of cross examination. 14 MR. KELLAHIN: No objection. 15 MR. CATANACH: All right, go 16 ahead, Mr. Dickerson. 17 18 CROSS EXAMINATION 19 BY MR. DICKERSON: 20 Q Mr. Kubik, I have one question regarding 21 your Exhibit Number One. 22 You've shaded, as Mr. Kellahin described, 23 four half sections of land in the general vicinity of the 24 acreage that we're in dispute here today. 25 A Yes.

Q Did you do that shading based on your interpretation as a geologist from the information available
to you as to the likely productive limits of this, what you
have testified in your opinion, is a new Siluro-Devonian
Pool?

6 A Again, in a very general sense, yes. 1 7 did not intend it to be a very detailed distribution of re-8 servoir distribution. It was an attempt on my part simply 9 to outline an area on the map and shade it primarily for re-10 ference purpose. I intended to make a very blocky outline 11 of the feature. I certainly could have gone in and made a much more detailed shaded area to cover, you know, exactly 12 what we have mapped as gray, but it was basically just a 13 14 very general attempt to -- to cover the pool with a very 15 blocky index-type shading.

16 Q Mr. Kubik, did you have any input into 17 the development of this prospect as a prospect at the time 18 it was presented to Marathon management?

19 A I was not the original geologist on the
20 prospect but at a subsequent time, when that geologist left
21 our office, I was handed responsibility for the prospect and
22 since that time have been the geologist on the prospect.

23 So I have been involved in presenting it
24 to management on a number of occasions and have been
25 Marathon's geologist for the prospect since that time.

1 Who was that geologist and when did he Q 2 leave Marathon's employment? 3 His name was Jeff Zeeman (sic). A He did 4 not leave our employment. He was transferred to Houston and 5 to my knowledge that would have been sometime, perhaps, in 6 '85, I think. This prospect has been on the books for Mara-7 thon for - for some time. 8 So you had performed part of your duties 0 9 a geologist in relation to this prospect prior to the 88 time the Benson No. 1 Well was drilled. 10 11 A Yes. 12 0 In connection with that, or based on your 13 knowledge of what that geology was believed to have been 14 been based on the seismic information and other data that 15 you had prior to the drilling of that well, do you have an opinion as to how the boundaries of the roughly drawn, 16 as 17 you have stated, of the apparently or likely prospective, 18 productive Devonian area may have changed by reason of information gained from the drilling the Benson No. 1? 19 20 A You're referencing the shaded area on Ex-21 hibit One? 22 Correct. Q 23 A That was drawn by me just very recently, 24 specifically for this hearing as a -- as a, again, just an 25 index feature.

1 We should probably go to the Exhibit Two. 2 Now I could state simply that drilling of the Benson has not 3 changed our outline or the shaded area of the structural feature on Exhibit Two. 5 So had you attempted to anticipate the 0 6 likely productive area prior to the Benson No. 1 based on 7 the knowlege that you had at that time, you do not think it would have differed greatly from what your opinion has now 8 caused you to shade in? 9 No, I don't, I don't believe so. 10 A Again, this shading I may have done, if asked to do a very gener-11 alized, blocky shading of -- of the pool area prior to the 12 drilling, it may well have been very, very similar to this, 13 14 to this shading. 15 Again, the two shadings are really very 16 different features and are -- don't have that much real de-17 tailed relation to each other. One is a very detailed 18 shading on Exhibit Two; the other one on Exhibit One 18, 19 again, is just a very gross generalization. 20 Q In connection with your study of this 21 area prior to the drilling of the Benson No. 1 Well, Mr. 22 Kubik, had you prior to that time familiarized yourselves 23 with some of these other Siluro-Devonian fields in the area? 24 λ Yes, I have.

25

Q

And I believe it was your testimony that

1 based on your expertise as a geologist, it would not have 2 been possible for you to anticipate the nature of the rock 3 formations that you would in fact encounter when the Benson 4 No. 1 Well was finally drilled. 5 A Not in detail, no. 6 0 Would it not have been, you were aware 7 prior to the drilling of that well, were you not, that some 8 of the wells in the general vicinity in this reservoir, 9 Siluro-Devonian, were developed on forties while others were 10 developed on eighties? 11 Å I was aware of that. 12 C It would not have been a farfetched as-13 sumption to anticipate that conceivably the rock drilled 14 through when that Benson No. 1 Well was drilled might justi-15 fy eighties, would it not have been, even prior to the time 16 that well was drilled?

17 A You could have held that as a possibil-18 ity.

19 Q Would it be fair to characterize the
20 Devonian, other Devonian pools shown on your Exhibit Number
21 Two as roughly half of them spaced on forties, roughly half
22 spaced on eighties, or is there is -- have you calculated
23 the percentages?

24 A You know, if you include the Denton Pool,
25 with just a portion shows up to the upper left, to my know-

1 ledge the South Knowles, Knowles, Medicine Rock, were pooled 2 on eighties; the West Garrett, the South Denton and the Den-3 ton to my knowledge, at least, were drilled and devloped on 4 forties, so -- so that might be fair. 5 Q At any rate, it would not have required a 6 great leap in your geological imagination to anticipate that

6 great leap in your geological imagination to anticipate that
7 possibly you would discover a pool which should be developed
8 on 80-acre spacing when in fact the Benson No. 1 was dril9 led.

10 A As I said, that certainly was a possibil-11 ity, but that was not something that I was addressing or 12 that was not -- that I was not addressing at the time. I 13 was reponsible for the geology and making sure that we had a 14 successful wildcat.

15 Q Now you did not testify, as I understood 16 it, in the original hearings involved pooling Benson No. 1 17 Well, is that correct?

18 A I did not.

19 Q Who did testify?

20 A Dave Rebenstorf.

21 Q And is he present today?

22 A He is not.

23

Q Is there a reason for that?

A We just felt that it was not necessary.
His only reason for testifying previously was that he was

1 the -- the individual who made this Exhibit Number Two and 2 therefore that he should be present. This exhibit has al-3 ready been presented to this Division and he has described 4 it was felt that I could describe it probably as it. and 5 well him, and that he was really -- really just not as 6 needed.

7 Q Does he still serve any function in con8 nection with the development of this area?

9 A He's still a geophysicist in this area,
10 handles seismic on this prospect.

II Q And does the seismic data that Marathon
I2 has -- at this point when you have two wells drilled in the
I3 -- what you now believe to be a Devonian pool, can you exI4 plain to me as a layman how the seismic data may give way or
I5 be related to the subsurface data that you now have by virI6 tue of drilling these two wells?

17 Well, the -- what the drilling of the two A 18 wells has told us is, it has confirmed the seismic in the 19 sense that we have an anomaly and we have an anomalous up-20 thrown block and our well was significantly high to two off-21 setting dry holes. The wells that we drilled, as I testi-22 fied previously, did change somewhat the numerical values of 23 the contours within the structural feature. Specifically it 24 reduced the total amount of closure slightly, but basically 25 otherwise did not, certainly did not alter the shape. The

wells drilled as they were really will not tell you much
about the outer limits of the field but it certainly confirms the feature as mapped with -- with minor modifications
of the actual structural horizon.

Q One more question with regard to the
shaded area on your Exhibit Number One, Mr. Kubik. If my
mathematics is correct you have shaded the four half
sections of land which would consist of approximately 1280
acres of land, do you not?

10 A Yes.

11 Q Without belaboring the point to cite to 12 the specific place in the testimony in the earlier 13 proceeding, assume for a moment that I tell you that I 14 believe that the testimony in that proceeding was that the 15 likely prospective area believed by Marathon to exist for 16 this Siluro-Devonian Pool at the time prior to the drilling 17 of the Benson No. 1 Well, consisted of approximately 320 18 acres.

19 Is that consistent with your testimony 20 now, that your shaded 1280 acres has not been dramatically 21 affected by the information gained from drilling the Roddy 22 and the Benson No. 1 Well?

A No, it has not. This again was my
attempt on my first trip to Santa Fe to testify to -- to
outline and index area for -- for the field. Again, they're

1 different beasts.

The shaded area on Exhibit One, every bit
of that shaded area that I have shaded is not to imply that
every bit of the shaded area there should be productive.

Again, it was a very -- I just tried to
keep it very blocky and very straight lined, just to identify where the pool is and roughly in a very gross sense
where the pool is going to be.

9 I did not make the shaded area on Figure 10 1 anomalously larger because of something that we learned in the drilling of the Benson. Our specific interpretation on 11 the distribution of the reservoir at this point is still on 12 13 Exhibit Two, the shaded area on Exhibit Two, as far as spe-14 cifics, and again, I don't know what else I can really say 15 Perhaps, you know, I didn't do enough -- put on that. 16 enough thought into exactly the detail for which I should 17 put the shading area on Figure 1 and perhaps I've gone out 18 of the bounds of what is usual at these -- these hearings. 19 If I have, then I would apologize for that but again it was 20 just a very gross attempt on my part to put a very blocky 21 area over the -- over the pool. It was not intended to rep-22 resent a productive area.

23 Q That was merely the question -- or the
24 purpose of my question, Mr. Kubik. I did not in any way
25 mean to imply that you had done anything out of the ordin-

42 1 ary. I simply wanted to find out whether or not that was to 2 be relied upon to any great extent and your answer is it 3 should not be, as far as --4 A That would be my testimony. The shaded 5 area in Figure 1 should not be referred to as a specific de-6 lineation of productive area. That should be referred to 7 Figure -- Figure 2 again, as I've stated, but the shaded 8 area in Figure 1 is just a reference area. It should not be 9 referred to in any way as far as production is concerned. 10 And as a practical matter, the limits of 0 11 this pool will be determined by later drilling, will they 12 not? 13 Yes, they will be. A 14 0 Let's look at your Exhibit Number Two. 15 A Okay. 16 I notice at the -- what I believe to Q be 17 the location of the No. 1 Benson Well in the southeast guar-18 ter of the southeast quarter of Section 13, a figure "Sil", 19 which I suppose is Silurian? 20 A Yes. 21 -9387? 0 22 Α Yes. 23 0 That is the top --24 A Yes. 25 Q -- to the -- the subsea to the top of the

43 1 Silurian? Yes, it is. 2 A Subsea, not subsurface? 3 0 4 A Subsea. 5 Is that -- was that on this map at Q the 6 time it was prepared for the original hearing or is that in-7 formation data confirmed by your core sample or your samples 8 from the actual drilling of the Benson No. 1 Well? 9 Α That is the top based on logging. It's a 10 log top from the post -- after the drilling of the Benson 11 Well. 12 And that is your pick of the top of that? 0 13 A Yes, it is. 14 0 Based on the log which appears on your 15 Exhibit Number Three of Benson No. 1? 16 Now that I'm -- I should note here, A this 17 top is a true vertical depth top. The top on the log will 18 not -- will not exactly match the top shown here. 19 The bottom hole location, you can see 20 there are two -- two well locations at the Benson, the 21 southerly one being the surface location labeled "SL", the 22 northeasterly one being bottom hole location and there is 23 just, there will be a difference. The log will -- will show 24 actual hole depth, whereas the true vertical depth will be 25 slightly shallower, so they will -- I think the difference 1 was 8 feet, so the log will show a top, I think, somewhere 2 in the range of 9395, I'm not certain, I don't have my num-3 bers right in front of me, but -- but the number on the map 4 is a true vertical depth, which will not exactly match the 5 log but is correct based on a deviation survey run on the 6 well.

7 Q Directing your attention for a moment to
8 the log of the Benson No. 1 Well, there is a dark, horizon9 tal line drawn. Do I understand that correctly to be rough10 ly the top of the Siluro-Devonian as you have picked it?

A Yes. The lower -- the lower heavy line.
Q Okay. Back to Exhibit Number Two, Mr.
Kubik, directing your attention to what I understand to be
the location of your Roddy Well in Section 23 immediately to
the south, there appears another figure, in fact there are
two of them, Silurian, -9350 and -9344.

What do those figures refer to?
A The Silurian -9350 is again a log top,
subsea log top, from the Marathon No. 1 Roddy.

20 The 9344 is the subsea Silurian depth as21 signed to the -- to the shotpoint from seismic shown imme22 diately to the left of the well location. So the 9344 is
23 associated with the seismic point to the -- to the west.

24 The 9350 is the actual Silurian top that25 we encountered.

45 1 Can you relate for us the difference, Q if 2 any, with regard to the Benson No. 1 Well --3 A Yes, sir. 4 0 -- as to the top of this Siluro-Devonian 5 formtion as confirmed by your borehole data, as compared to 6 the projection --7 On seismic. A 8 -- based on seismic? 0 9 A The Benson is a little different than 10 It is a little farther away from our nearest seismic that. 11 line, but in general, it's certainly -- certainly matched 12 quite well in a general sense. 13 You can see the immediate point immediately to the north labeled 9387 is perhaps the closest re-14 15 ference point that we have. There's also a 9387 shown just 16 to the south and west of the well, so it certainly tied in 17 quite well, but I do need to mention, you know, this map was 18 -- was remapped after the information was derived from the 19 Benson. These are not the original values on our original 20 interpretation pre-drilling. 21 Q Looking at the No. 1 Roddy Well again, 22 accepting, it appears to me, the seismic projection, you 23 would have picked a top to the Devonian of -9344? 24 Yes, approximately. Å 25 And in truth it was 9350? Q

46 1 A Yes. So six feet of difference? 2 0 3 Α Yes. 4 Can you tell us what -- or can you tell 0 5 from this map what, if any, difference there was in those 6 two picks in the No. 1 Benson Well? 7 You mean the difference in what we would λ 8 have anticipated and what we encountered? 9 Correct. 0 10 A Again, that would be based on the pre-11 viously submitted map and this was not -- this is not the exact map that we used. This is not the map we had before 12 13 we drilled the Benson. 14 To answer your question, the Benson came in - came in roughly 100 feet, give or take, low to our 15 16 seismic projection on our original map, and having that data 17 point, having that interval velocity point, we went in and 18 remapped on the seismic and came up with this map, which is 19 certainly a much closer match to what is really there. 20 0 Okay, now you have had access, you have 21 obviously seen the logs of the No. 1 Roddy Well. 22 A Yes, I have. 23 And the log of the No. 1 Roddy 0 is not 24 shown in your cross section, is it? 25 λ It is not.

47 1 Is there a reason for that? Q 2 A The cross section is intended to be a 3 very general -- a general description of the Silurian in the 4 area, just trying to keep the wells to a minimum, the clut-5 ter to a minimum, and just to show in general our feature 6 and surrounding features. You'll notice I also included on-7 ly one, one well in the Knowles Field and one well in the 8 South Denton Field. 9 0 So if I understand your correct -- your 10 the actual drilling of the No. 1 Benson Well detestimony, termined the Devonian to be lower than anticipated. 11 12 A Yes. 13 0 Which had the practical effect, did it 14 not. of making the best location the No. 1 Roddy Well, based 15 on the information that you had prior to drilling the No. 1 16 Roddy but subsequent to drilling the No. 1 Benson? 17 A Yes. After evaluating the data from the 18 we felt at the time that we could get approximately Benson, 19 40 feet high to the Benson. 20 C And at the time the No. 1 Benson Well, it 21 I suppose, to have been at the highest point was projected, 22 on the anticipated Devonian structure? 23 A Yes, it was. 24 And the truth has turned out to be Q that 25 it is not in fact at the highest point on that Devonian --

48 1 A After, I believe, I do not have the map 2 in front of me, but I think that there was an area encompas-3 sing the approximate positions of the Benson and the Roddy 4 that based on the data appeared to be approximately flat, I 5 think. 6 Since we are here in disagreement, Q Mr. 7 Kubik, over the reservoir which has been discovered by the 8 drilling of the No. 1 Benson Well, and I suppose confirmed 9 by the Roddy Well, --10 A Yes. 11 -- would it have not, even given your de-Q sire to keep to a minimum the number of wells which are de-12 13 picted on your cross section, would not it have been more 14 logical to have included the Roddy log on that cross sec-15 tion, eliminated one of the other wells to a further dis-16 tance away from from this reservoir? 17 A I don't believe so. Again I just picked 18 just picked a well on our feature to just put on the -- I 19 cross section, just to show our structural feature. 20 In the sense of what this cross section 21 is here to describe, there's no advantage in one well over 22 the other. 23 0 Okay. Looking at, from my quick look at 24 your Exhibit Number Three, the cross section, the Benson No. 25 1 Well shows, what is that, initial potential, 313 barrels

49 1 of oil? 2 Yes. А 3 120 barrels of water per day? 0 4 A Yes. 5 When was that -- when was that well com-0 6 pleted? 7 Α I believe approximately February 11th or 8 12th, is that -- I believe 7th, I believe. 9 0 And do you know the current status of that well? 10 11 A Not in detail. It's still producing. I 12 don't know. We in Exploration have not been kept up to date 13 on exactly what the well's doing. 14 If we want to know, we can call them, but 15 I do not know. 16 You do not know what the well is doing? Û. 17 Not exactly, no, sir. A 18 Q Do you know approximately what the well 19 is doing? 20 А I think approximately it's making 60 or 21 70 barrels of oil and I don't know how much water. 22 Were there-- I noticed on some of the 0 23 other wells shown on your cross section there some drill 24 stem test results and other information. Were there any 25 drill stem tests conducted on the Benson No. 1 Well?

50 1 Ä Yes, there were. 2  $\odot$ Is there any reason the results of those 3 tests are not shown on your exhibit? 4 Again, just to generalize the feature, А 5 the perfs indicate that there is oil production on the -- on 6 the feature. The drill stem tests, there were four of them, 7 would have basically cluttered the map quite a bit, and they 8 would show nothing that would be inconsistent with the 9 perfs. 10 Again, I did that on some of the other --11 other wells. I -- I left out, I just tried to provide the pertinent information to describe our reservoir fluid. 12 13 Q Did you have any core data in the Benson 14 No. 1 Well? 15 We did not. A 16 Q And the Roddy Well, do you have any core 17 data? 18 Α We do have. We do. We cored the well. 19 We do not have the analysis in hand yet. 20 Q Have you physically examined the cores? 21 A I have not. 22 0 Do you as a geologist and as an employee 23 of Marathon, Mr. Kubik, do you know what Marathon's position 24 is on the release of data now in your possession related to 25 the Benson No. 1 Well and the Roddy No. 1 Well?

51 1 I really do not in detail know what our A status is right now or what our position is as far as 2 3 releasing that data. 4 0 If I were to ask you for a copy of the 5 log on the Roddy No. 1 Well, have you been instructed what 6 you are to do upon that request? 7 A I have not. I'd certainly forward that 8 to my superiors if we would feel that I would do it. 9 0 Both these wells were drilled tight, were they not? 10 11 Yes, they were. A 12 No informtion released to anybody, Û in-13 cluding Mr. Davidson. 14 That's correct. A 15 Q Do you know whether or not that is re-16 lated to the dispute that Marathon has had with Mr. Davidson 17 in the history of this proceeding? 18 I do not know specifically, but in gen-A 19 eral it is our -- it is Marathon's policy to drill wildcat 20 wells tight. 21 Have you calculated, Mr. Kubik, porosi-0 22 ties from the logs in the productive intervals in the Roddy 23 and the Benson wells? 24 А I have looked at the logs. That was pri-25 marily a job of our engineering section but I have -- I have

52 1 just looked at them in passing. 2 Do you know whether or not an engineer is Q to testify here for Marathon today? 3 4 On either of these wells? А 5 Yes. Q 6 I don't believe so. No. A 7 Do you have an engineer here? 0 8 we do. A 9 MR. **DICKERSON:** I have, Mr. 10 Examiner, no further questions of this witness. 11 I also, let me ask Mr. Kellahin 12 a question, if I may. 13 MR. CATANACH: Sure. 14 MR. DICKERSON: May I ask what 15 is the substance of the testimony of the witnesses to fol-16 low? 17 MR. KELLAHIN: Engineering wit-18 ness will provide volumetric calculations. He has some por-19 osity on the Benson Well I think he's used in that calcula-20 tion. 21 MR. DICKERSON: So you are 22 calling an engineer. 23 MR. KELLAHIN: bet, You and 24 then the last witness is a landman. 25 Q From your review, Mr. Kubik, of the infor-

53 1 mation from the Benson and the Roddy wells, have you been 2 able to determine the likely oil/water contact on this Dev-3 onian structure? 4 A I have not, really. We -- we have some 5 from both wells that are tentative but again indications 6 it's primarily in the Engineering and Operations Department 7 at this time. 8 C Do you know what that tentative figure 9 is? 10 A I don't know what -- what they are con-11 sidering. You may certainly ask the engineer when he comes 12 I wouldn't want to put words in his mouth as to what up. 13 it -- what it is. 14 0 No, my question was merely do you know 15 what it is. 16 I have a ballpark idea. A 17 Of this tentative figure? Q 18 A Yeah. 19 Q What is it, approximately? 20 I think -- well I dont' see -- I have the A 21 information in my office. Again I'm not handling that. I 22 know what it -- what they determined to be. I got a copy of 23 the analysis they did at Core Lab to -- to determine this. 24 I don't think any final decisions have been made; at least 25

54 1 Well, is the answer that you do not remem-Q 2 ber or --3 I do not remember exactly what it is. A I have been aware of it but at this point I do not have 4 ----5 have that at hand anywhere. 6 Q At any rate, it's your information that 7 some determination by other Marathon personnel has been made 8 on this point. 9 A Yes, I believe so. 10 MR. DICKERSON: Mr. Examiner, I 11 have no further questions of Mr. Kubik, and I have no objection to the introduction of these three exhibits. 12 13 MR. CATANACH: Okay, Exhibits 14 One, Two, and Three will be admitted into evidence. 15 16 CROSS EXAMINATION 17 BY MR. CATANACH: 18 0 Mr. Kubik, I just want to -- well, I want 19 you to briefly answer a question for me. 20 I just want to know --21 Sure. A 22 С -- in your opinion what separates this 23 reservoir from all the other Devonian reservoirs in the 24 area, very briefly, if you know? 25 Just simply that it's a structural separ-A

55 1 ation. They are structurally isolated features and -- and 2 in general they would -- would each contain oil in the 3 reservoir, whereas low positions, or flank positions, or in-4 termediate positions between the fields would be water wet, 5 constituting individual reservoirs. 6 MR. CATANACH: I have no further 7 questions of the witness. 8 He may be excused. 9 MR. DICKERSON: Mr. Catanach, 10 if I may, I have one further question you've reminded me of. 11 12 RECROSS EXAMINATION 13 BY MR. DICKERSON: 14 Kubik, with regard to the No. 1 Ben-0 Mr. 15 son Well, and based on the information that Marathon has now 16 obtained and of which you have personal knowledge, what is 17 the relative situation concerning the southeast quarter of 18 the southeast quarter of that section, the original spacing 19 unit for the Benson No. 1 Well as compared to the southwest 20 quarter of the southeast quarter, which is not intended to 21 be included within that spacing unit, and I'm speaking from 22 -- from a structural standpoint? 23 Α We expect, well, just looking at the map, 24 expect that position to -- in a ballpark sense, we to be 25 roughly flat with the Benson.

56 1 And relatively lowers to any 80-tract  $\mathbf{C}$ 2 that may be dedicated to the No. 1 Roddy Well? 3 Based strictly on the map, yes, but it's A 4 hard to judge aforehand. 5 MR. DICKERSON: further NO 6 questions. 7 MR. CATANACH: Sorry, Mr. Kel-8 lahin, did you have any redirect? 9 MR. KELLAHIN: No, I didn't. 10 MR. CATANACH: The witness may be excused. 11 12 MR. KELLAHIN: Mr. Examiner, at this time we'll call Mr. Tom Engler. 13 14 15 TOM ENGLER, 16 being called as a witness and being duly sworn upon his 17 oath, testified as follows, to-wit: 18 19 DIRECT EXAMINATION 20 BY MR. KELLAHIN: 21 Mr. Engler, for the record would you  $\mathcal{Q}$ 22 please state your name and occupation? 23 A My name is Tom Engler and I work as an 24 engineer, a reservoir engineer, with Marathon Oil. 25 C Mr. Engler, have you previously testified

57 1 before the Division as an engineer? 2 A No, I haven't. 3 Would you describe for the Examiner when 0 4 and where you obtained your degree in engineering? 5 A In 1982 I received a Bachelor of Science 6 in petroleum engineering in petroleum engineering from New 7 Mexico Institute of Mining and Technology. 8 You were a classmate of Mr. 0 Stogner's, 9 were you not? 10 А That's correct. 11 MR. KELLAHIN: Don't hold that against him. 12 13 MR. CATANACH: He was a class-14 mate of mine, too. 15 0 After your graduation, Nr. Engler, would 16 you summarize for us what has been your employment exper-17 ience as an engineer? 18 А For five years I've been working for Mar-19 athon Oil and a -- both a production and a reservoir 20 engineer, primarily based in fields, producing fields in the 21 southeast New Mexico area, and I've handled the engineering 22 on the East Garrett Siluro-Devonian Field since the incep-23 tion of the Benson. 24 0 That engineering would include the Benson 25 well that we've been discussing today?

58 1 A Yes, that's correct. 2 MR. KELLAHIN: We tender Mr. 3 Engler as an expert petroleum engineer. 4 MR. CATANACH: Any objections? 5 MR. DICKERSON: No objection. 6 MR. CATANACH: The witness is 7 considered qualified. 8 Q Mr. Engler, I have placed before you what I've marked as Marathon Exhibits Four through Twelve. 9 10 Is this a package of exhibits that you 11 have compiled, calculations that you have made, and other 12 information that has been prepared either directly by you or 13 under your direction and supervision? 14 A Yes, sir. 15 Q Let me begin, sir, and have you first of 16 all simply identify for us Exhibit Number Four. 17 Exhibit Four is simply the filing for the A 18 creation of a new pool that we did when the Benson was first 19 completed. 20  $\mathcal{Q}$ All right, sir, let's turn to Exhibit 21 Number Five and have you identify that exhibit. 22 A Again, Number Five is the C-105 which was 23 filed with the state and it gives all the pertinent informa-24 tion between the completion and the IP of the test, and so 25 forth.

1 Before we leave that exhibit, let me have 0 you give us some of the production data at the bottom of the 2 3 exhibit with regards to the date of first production and 4 give us generally the type of test that was conducted and 5 the initial test results. 6 Α Well, as you see, the date of first pro-7 duction was February 11th, 1987, and we had an IP of 313 barrels of oil per day, 11.4 MCP per day, and 120 barrels of 8 9 water per day. 10 This is also -- this is on a 24-hour test 11 with a rod pump, on a pumping unit. 12 C Let's turn now to Exhibit Number Six and 13 again simply identify this exhibit for us. 14 Exhibit Six is to show that we're reques-A 15 ting 80-acre spacing. It's location is shown as a -- we're 16 requesting a laydown 80 to accommodate the reservoir. 17 All right, let's get to Seven, which be-0 18 gins, then, your calculations, and have you give me some of 19 the background that you as an engineer will use, or informa-20 tion that you have by which you approach the aspepcts of 21 your discipline to decide how you as an engineer will recom-22 mend to your management that you'll produce and develop the 23 reservoir. 24 A In this case the first attempt was a vol-25 umetrics calculation and what you see before you is the 30

60 1 We also ran, of course, 40 acres, but we used the acres. 2 data that we had at hand, and as you see there, to 3 determine the volumetric amount of reserves in place, amount 4 of reserves. 5 Q Why would you elect to use a volumetric 6 calculation? 7 Well, at the time we had preliminary A 8 data which would allow us to go through these calculations. 9 0 For what purpose can you use a volumetric 10 calculation in determining whether or not you should space 11 wells on 40 or 80 acres? 12 А Well. it allows the flexibility of 13 assuming your drainage area, and therefore using the rest of 14 your parameters determined with a -- and in this case, with 15 a comparison of performance, or decline curve in the 16 drainage area. 17 Is this a typical 0 methodology or 18 calculation by which a reservoir or production engineer will 19 make calculations to determine how wells ought to be spaced 20 in a given reservoir? 21 А Yes, with the data at hand this is a 22 typical analysis. 23 Are you comfortable and satisfied that Q 24 the parameters you've selected for the volumetric 25 calculation are fair and reasonable?

61 Yes, I am. 1 A 2 0 Let's talk, sir, a moment about the 3 source of the data and how you determined that the parameters are fair and reasonable? 4 5 To start at the top, we have an assumed A 6 porosity of approximately 3 percent and on Exhibit Number 7 Eight you can see a data sheet which shows where some of these numbers came from. 8 9 0 All right, let's look at both of them to-10 gether, or perhaps it's helpful to look at both Seven and 11 Eight together. A In Exhibit Eight we have data and fluid 12 -- data sheet and fluid data and here you can see, like, for 13 14 the porosity, 3 percent. We did some log analysis. This is 15 on the Benson, only the Benson, and you can see on the last 16 exhibit, Exhibit 12, a copy of the Benson logs where we used 17 our analysis for the porosity. 18 Describe for us generally, Mr. Engler, 19 the relationship of three percent porosity to the type of 20 porosity ranges that you see in other Devonian Pools. 21 Well, as the geologist mentioned, A the 22 Devonian Pool is a typically low matrix porosity, anywhere 23 from 2 to 5 percent. In this case our reservoir guality 24 showed up a little poorer than what we actually had antici-25 pated originally.

62 1 O. What conclusions do you reach if now you find the reservoir porosity is a little poorer than you had 2 3 anticipated encountering prior to drilling the well? What 4 difference does that make to us today in deciding spacing? 5 A Well, what it does is it shows our frac-6 ture system is more of a dominant producing -- dominant pro-7 ducer, thus for, as evidenced by some of these other offset 8 fields, the fracture system is more likely drained than has been pooled on 80 acres. 9 10 Describe for us the source of the other  $^{\circ}$ parameters that went into the volumetric calculation. 11 12 А Again, the second one is a net pay of 15 13 This is again based off your logs. feet. 14 And the drainage area in this case is 15 shown as 80-acres; a water saturation of 35 percent is also 16 a log analysis number. A formation volume factor of 1.07 is 17 from a calculation off of our oil analysis from our fluid 18 data which you see in Exhibit Sight, and a recovery of 55 19 percent is, being as it's a water-drive system, is an aver-20 age water-drive recovery for this type of producing mechan-21 ism. 22 0 The drive mechanism being a water-drive 23 reservoir, the percentage recovery is in the range of 55 24 percent. 25 That's correct. A

53 1 All right, using those parameters, 0 then 2 you make a volumetric calculation and you get recoverable 3 reserves of what percentage? I mean what number? 4 In this case it was 100, just a A little 5 under 107,000 stock tank barrels. 6 And that assumes an 80-acre area. 0 7 A Area, correct. 8 If you used a 40-acre factor in the calΰ 9 culation, what would that give you for a recoverable reserve 10 number? 11 A It would give you approximately 53,000. 12 0 Okay. Approximately what did it cost Marathon to drill and complete the well, either dry 13 hole 14 costs or completed well costs? 15 Å Completed well costs for the Benson is 16 \$1,142,000. 17 0 Can you drill and complete wells in this 18 reservoir, realizing 50,000 barrels of oil? 19 No, sir. A 20 Q All right. Having done the volumetric 21 do you have information by which you can study calculation, 22 or determine permeability in the reservoir? 23 A I guess I don't know what you --24 Well, we talked about some of the things Q 25 that you as an engineer will look at. We've got porosity,

64 1 water saturation. You've got the height of the reservoir, 2 recovery factor. I guess one of the other things we common-3 ly hear people talk about is the permeability of the reser-4 voir. Do we have enough information now to discuss perme-5 ability? 6 A Not at this time. We don't have a good 7 handle on permeability. 8 Q Are you satisfied that there's enough 9 preliminary information to cause you to reach the conclusion 10 that this is a fractured reservoir? 11 Yes, sir. A 12 0 What difference will it make to you as an 13 engineer in deciding spacing whether or not this reservoir 14 is a fractured reservoir or the typical matrix reservoir we 15 see? 16 A Well, I think that ties back into a mat-17 rix reservoir. in a matrix reservoir you can drain maybe a 18 smaller area and as shown by your offset fields, this, you 19 know, typical -- you have more of a typical 40-acre case. 20 In the case of a more fractured type re-21 servor you are more of a drainage of 80 acres, because of 22 the extension of the fractures and also the capacity of the 23 flow. 24 0 Having made the volumetric calculation, 25 what can you as an engineer now do to verify or confirm the

65 1 reliability of that volumetric calculation? 2 Well, what I did is I -- I did a decline A 3 analysis to obtain reserves and another method, the perfor-4 mance of the Benson production. 5 Q Decline analysis, is that an accepted 6 tool of yoyr profession by which to analyze reserves and 7 make comparisons? 8 Α Yes sir. 9 Okay, and you did that? Q 10 Yes, sir. A 11 Would you describe for us what you've 0 Is that on Exhibit Number Seven? 12 done? 13 That's -- yes. On Exhibit Seven on the А 14 right side you have a decline analysis. The -- the input or 15 data, we had an average initial rate for the first year of 16 70 barrels of oil per day. We had a final economic limit of 17 3 barrels of oil per day and we inputted a decline of 22 18 percent and this is based on the nearest offset Devonian 19 production, and that's that Knowles Devonian Field, as 20 you've seen previously. 21 Q By taking the -- all right, discuss for 22 us how you analyze and evaluate the Knowles Devonian Field 23 to get a decline number that you have confidence in. 24 Okay, I took the annual production from A 25 -- for the Knowles Devonian and, of course, plotted it up to

66 1 determine the -- the decline for that field, and that's what 2 it is. 3 That decline represents actual --0 4 A Actual performance. 5 -- field decline for that reservoir? 0 6 Correct. Α 7 0 Okay. Why have you utilized that number 8 for the Benson decline analysis? 9 A Well, the Benson is yet to stabilize. We limited data, and, two, it hasn't had a stabi-10 have, one, 11 lized rate, enough stabilized rate to get a good decline. 12 0 In order to provide the data are you com-13 fortable that the Knowles Devonian Field analysis is an acceptable way to put that parameter into the calculation? 14 15 A Yes, sir, at this time, yes. 16 0 Having those bits of information, you 17 have made a decline calculation? 18 Yes, I did. A 19 All right, and what does that tell you? 0 20 A Prom the calculations I obtained the reserve number of a little less than 109,000 barrels of oil. 21 22 Q Having done it that way, what conclusion 23 do you draw? 24 Well, with the good agreement between the A 25 two methods and using this preliminary data that I have, it

seems to show that the temporary pool rules of 80 acres will
allow us to effectively drain or effectively develop this -this specific pool.

Q What decline analysis result would have
caused you to believe that 80-acre spacing is not appropriate?

7 A In this case, say, your decline was half
8 or 10 percent, and you have much more decline reserves than
9 was shown here.

10 I want to have you describe for us 0 how 11 you decide you have a reasonable correlation between the 12 volumetric results and the decline analysis results, to say 13 you ought to go to one spacing or another. How far off would these numbers have to be, in other words, for you to 14 15 say 80-acre spacing is not going to work?

16 A I guess in my opinion I'd have to say if 17 you were a, say, 75,000 barrels off, you'd probably want to 18 look at possibly another type of either drainage area in 19 your volumetrics to see what kind of drainage area you would 20 get.

21 Q How would you characterize the degree of
22 match between the two calculations in deciding whether or
23 not you ought to stay with 80-acre spacing as a proposal?

A Well, in this case, these matched, in my
opinion, exceptionally well.

68 1 Do you have an opinion, Mr. Engler, as to Q 2 whether or not, based upon current available information, we went to 40-acre spacing and started drilling wells on 40 ac-3 4 res, whether those would be necessary wells or not? 5 Å And my opinion at this time is that it 6 would not be really beneficial to use such a drilling pro-7 gram. 8 Why not? 0 9 A I think on Exhibit -- Exhibit Nine we show 10 an economic summary. 11 Option one is to drill one 80-acre well. 12 That is the economics, in a sense, of our Benson No. 1. 13 Option two is to drill two 40-acre wells 14 to develop the same amount of reserves of 106,000 barrels of 15 oil. 16 Q Do you know whether or not you would have 17 recommended to Marathon's management, had you known the re-18 serves were only 106,000, whether you would have recommended 19 to them that they drill the Benson Well in the first place? 20 Ä If I knew it was 106,000, I would not re-21 commend drilling it. 22 0 Prior to drilling the Benson Well, what 23 type of reserves had been projected for this area? 24 Ä I think prior to the drilling of the Ben-25 son, I believe we gave a half million barrels of oil.

69 1 And had we realized a reservoir that Q in 2 fact had half a million barrels of oil, in that situation, 3 could we have developed this on 40-acre spacing? 4 A Quite possibly, yes. 5 0 The economic summary is one that you have 6 prepared yourself? 7 Yes, sir. A 8 this economic summary a typical way 0 IS 9 for an engineer to evaluate the economics of a prospect such 10 as this? 11 Yes sir. A 12 0 It's a standard tool of your profession? 13 A Uh-huh. 14 Q Is it a tool or a technique by which a 15 management spends money and makes investments? 16 A Yes, sir. 17 All right, and what is the result of the 0 18 analysis? 19 A As you can see, say, with option one, 20 with a gross investment of \$1,143,00 have a profit-to-in-21 vestment ratio of .11. It takes eight years to pay out the 22 project, have a rate of return of 3.3 percent. Investment 23 per equivalent barrel of oil is \$13.50. 24 Under the second option you drill two 40-25 acres wells, you have an investment of \$2,000,000 dollars,

70 1 and as you can see, there's a negative profit-to-investment 2 ratio; you can't calculate a payout; you have no rate of re-3 turn; it would take \$23.30 per equivalent barrel of oil. 0 What's your conclusion, Mr. Engler, from 5 this analysis? 6 λ Economics are guite poor. 7 0 And what does that tell you about which 8 option of exercise? 9 A In my opinion, option one is to drill one 10 80-acre well. 11 Ö Let's turn now to Exhibit Number Ten, Mr. 12 Engler , and have you simply identify this exhibit for us. 13 Α Exhibit Ten is a wellbore schematic of 14 the Benson. It simply shows what we ran in the way of 15 casing, what we have in the way of completion, and where 16 your Siluro-Devonian perfs are. 17 0 Is this a typical way to complete and set 18 up for production a Siluro-Devonian Well? 19 Ä Yeah, this is typical for this depth. 20 Q All right, sir, and let's go to Exhibit 21 Eleven and have you identify that for us. 22 А Exhibit Eleven shows the production 23 history for the Benson No. 1 from the time we installed the 24 pumping equipment till the time we finally dropped it off 25 our report.

71 1 What use is this information? ŝ 2 Ā Well, in this case, you can see, from 3 February 19th through March 25th we still, one, have no real stabilized production rate, and two, it does show that 4 5 we are cutting a lot of water. 6 Now comfortable are you in utilizing the Q 7 70-barrel a day rate in the calculations that were discussed 8 earlier? 9 A 70 barrels a day is based on a May test. 10 A May test shows the well pumping 70 barrels of oil per day 11 and 120 barrels of water per day. 12 And that's your most current and -- and C 13 best evidence of the capacity of this well to produce? 14 That's correct. A 15 How would you characterize the drop 0 in 16 daily producing oil rate from mid-February through the end 17 of March of this year? 18 A Well, in that time frame, as you see, 19 your production dropping, the well still isn't stabilized to 20 where I could obtain any kind of decline. 21 All right, sir, let's turn to Exhibit 0 22 Twelve, then, and have you identify that for us. 23 Exhibit Twelve is the gamma ray density A 24 log off the Benson. It's simply to show again the neutron 25 log top of the Siluro-Devonian, the perforations, and it's

1 the porosity tool that we ran on the -- logging tool that 2 we ran.

In summary, then, Mr. Engler, what is
your recommendation and opinion to the Examiner with regards
to how to space the new Benson reservoir that we have identified as the East Garrett Pool?

7 A In -- my recommendation is with the pre-. 8 liminary data at hand, that a temporary special pool order 9 of 80 acres would, one, allow us to continue watching performance and possibly obtain further information on this re-10 11 servoir to see whether 80 acres will be -- is the actual drainage area or not, and two, it's also economical, the 12 13 best -- economically it effectively and efficiently drains 14 the reservoir that we know at this time.

15 Q Without the benefit of an 880-acre spac-16 ing, if this is left on statewide 40-acre spacing, what is 17 your in your opinion the concern and problem with doing --18 leaving the pool on 40-acre spacing?

19 A Well, my concern would be we might drill
20 unnecessary 40-acre wells and develop really no additional
21 reserves as if we developed them on eighties.

22 Q The drop in producing rates from the ini23 tial potential down to the present time, can you draw any
24 opinion with regards as to whether or not that is character25 istic of a fractured reservoir versus a matrix reservoir?

73 1 A I do believe a typical fracture reservoir does have a high IP, dropping to some stabilized rate at 2 3 some future time. This would not be characteristic of a 4 0 5 typical sand matrix reservoir that is more oftenly developed 6 on 40-acre spacing? 7 That's right. A 0 8 The signals you're getting from the 9 reservoir from your studies and calculations confirm that 10 you ought to be careful, drill the minimum number of wells, 11 and that number is on 80-acre spacing? That's right at this time. 12 A 13 MR. KELLAHIN: I have nothing 14 further of Mr. Engler. 15 We would move the introduction 16 of his Exhibits Four through Twelve. 17 MR. DICKERSON: And, Mr. Exam-18 iner, I would like the opportunity to cross examine prior to 19 making any possible objections. 20 MR. CATANACH: Okay Mr. 21 Dickerson. 22 23 CROSS EXAMINATION 24 BY MR. DICKERSON: 25 Û Mr. Engler, from your Exhibit Number Four

1 I notice that you filed, evidently, Marathon filed a request 2 for creation of a new pool, and the date of that exhibit was 3 March 4th, 1987. That's correct. A 5 And then Exhibit Number Six, which Q is 6 your Form C-102, I suppose also filed with the Oil Conserva-7 tion Division, setting forth the 80 acres to be dedicated to 8 your Benson No. 1 Well, was dated May 26th, 1987. 9 Ά Yes, sir. This Exhibit Six is strictly 10 to show you our location in the laydown 80 acres. 11 Right, I understand that. Q 12 I note a typed provision at the bottom of your Exhibit Number Seven. It says TWE 3/07/DAH. 13 What's 14 the significance of that? 15 Well, that shows it's from my file and A 16 the DAH is the secretary's name, secretary's initials. 17 0 And the significance of 3/07? 18 A I imaging that's her coding for how she 19 files it in her disk. 20 That's not a date, do you think? 0 21 No, sir. A 22 0 Okay, at any rate would it be a reason-23 able conclusion from Exhibits Four and Six that Marathon has 24 been considering hte establishment of a new Devonian oil 25 pool since not later than March 4th of 19877

75 1 Once again, establishment --A Of this Devonian oil pool? 2 0 3 Before March 4th? A 4 Or at least by March 4th. It I'm making Ö 5 an untrure assumption, or something, correct me. It just 6 seems that --7 This March 4th date is to file with the A 8 state because after you have potentialed the well you have 9 to file for creation of a new pool. 10 0 Uh-huh. Okay, let me ask one other question, had Marathon determined by March 4th, the date of 11 that instrument, the C-123, what spacing for this Benson 12 Well would be appropriate? 13 14 Α No, sir, we had not. 15 Q Had you as an engineer made a 16 determination in your own mind on that point? 17 A Not by March 4th, no. 18 When did you make that determination, 0 19 approximately? 20 А When we did our calculations would be in 21 about the month of May. 22 0 At approximately the same time you had 23 Mr. Kellahin file applications before the Division today, 24 shortly before that? 25 A I'm not sure what time we did that.

76 Directing your attention to Exhibit 1 Q Num-2 ber Seven, and again, I'm a layman here, you have made one 3 calculation and you have assumed, have you not, for your determination of the stock tank barrels in place, or recover-4 5 able stock tank barrels --6 A Yes. 7 0 -- an 80-acre spacing. That's what's shown here, right. 8 Α 9 Q And you also, although it's not shown on here, assumed a 40-acre spacing and came up with a figure 10 one-half of your stock tank barrels for 80-acre 11 assumed spacing? 12 13 That's right. Α 14 0 Is there anywhere on this exhibit that 15 you actually make a calculation based on engineering data 16 available to you as to the area which is in fact being 17 drained by the Benson No. 1? 18 A I guess I don't understand. 19 Have you made a calculation as an en-0 20 gineer as to the area not assuming a drainage area, but made 21 a calculation as to the drainage area of the Benson No. 1? 22 A No, I have the comparison that you see 23 there, the decline performance and volumetrics. 24 Q Could you make such a calculation? 25 A Not with the data we have right now.

77 1 Q What is the data that you would need that 2 you do not have access to now? 3 We are still waiting for a core analysis A 4 which you've heard that we have before. 5 On the Roddy Well. Q 6 A Correct. And we are still, we have still 7 the -- in the works some more pressure trend and testing 8 that we have not done yet. 9 0 Do you have some pressure data available 10 to you from these wells at this point? 11 A We have some limited data, that's right. 12 What time frame do you 0 anticipate receiving additional data in the way of, say, the core ana-13 14 lysis that you're waiting on? 15 Core analysis, the next month, month and A 16 a half. 17 And so at this point you have approxi-0 18 mately three, three months of production history on the Ben-19 son Well? 20 Well, four months. A 21 0 Actually closer to four. 22 A Four months. 23 Q Based on a production history of that, it 24 is possible for you as an engineer to make some calculations 25 with the data that you do have right now or will have within

78 1 the near term future calculating the actual drainage area of 2 the Benson No. 1 Well? 3 With the performance production? A 4 0 Or with all the data that you now have or 5 you could as an engineer, could you not, will have, 6 calculate, based on that information, a drainage area which 7 is actually taking place? 8 A With more data we could always calculate 9 something, yes, that's correct. 10 No, I'm saying with the data that you 0 11 have now you may -- you could make some calculation, 12 couldn't you? 13 A Not with the data we have now. The data 14 we have now, calculations are shown. 15 You have not and you could not Q make a 16 colculation based on your training as an engineer of the 17 actual area in fact being drained by the Benson No. 1, based 18 on the information you have now? 19 That's correct. Ά 20 Would you tell me just in one, two, three Q 21 fashion what additional information you need in order to 22 make such a calculation? 23 A We, like I said, one core analysis that 24 we will get, and two, some pressure transient testing that 25 we will obtain.

79 1 Q Do you have bottom hole pressure? I no-2 tice on your Exhibit Number Eight you have 4839 build-up 3 from DST. That was virgin reservoir pressure? 4 A On a drill stem test, that's right. 5 Q How many drill stem tests were conducted 6 on that well? 7 The Benson? Four. A 8 Q And was the pressure, was the pressure 9 data that you've shown on your Exhibit Number Eight, was it the same in all four of these tests? Or were all four 10 of 11 these tests in the Devonian? 12 A All four were in the Devonian. 13 Were they all four in the interval which Q 14 is now perforated and producing? 15 A No, sir. 16 0 Well, what was the pressure data obtained 17 on the other three DSTs? 18 A Of the other three, one packer failed and 19 two of the others had a -- I can't recall what the pressure 20 data is at this time. 21 0 Do you have that information with you? 22 No, I don't have any of the drill stem A 23 test data with me. 24 You're aware, Q are you not, that Mr. 25 Davidson has requested Marathon to furnish certain informa-

80 1 tion to him? 2 Yes, I've heard that. Α 3 О And you're also aware that Marathon has 4 refused to do so? 5 I know that, yes. A 6 But it is your testimony that you do have Q 7 additional information which you, as an engineer, or anyone, 8 attempting to determine the answer to the questions that 9 we're debating here today would find it necessary to have in 10 order to make such calculations? 11 MR. KELLAHIN: I'm going to ob-12 ject to the question. He did not say that, I do not be-13 lieve. 14 MR. DICKERSON: I think it's a 15 reasonable question, Mr. Examiner. Wouldn't anybody need 16 that information in order to make a determination about the 17 area actually being drained by this well? 18 A From a drill stem test? I do not see 19 how. 20 The problem that I am seeing or I am hav-Q 21 ing with your testimony, Mr. Engler, is you have assumed a 22 40-acre spacing unit and you've made calculations based on 23 that assumption, and you have assumed an 80 and you have 24 made calculations based on that assumption, but you're not 25 giving us anything that supports the reasonableness of your

81 ۱ assumption. 2 A. Well, the support, I believe, comes in 3 the decline analysis, the performance that we're seeing on 4 the Benson as tied into the volumetrics that we show. 5 0 How comfortable are you with that decline 6 analysis averaged 70 barrels of oil per day based on less 7 than four months production history? 8 A At this time this is the best data, de-9 livery data we have. 10 C You would concede that in ninety days or 11 six months you will have more data and better data from 12 which you can make such determinations? 13 In six months to a year more points A on 14 your curve, yes, you can have a stabilized rate. That's why 15 temporary rules. 16 0 And until that rate does stabilize it's 17 more or less a guess or it has some inherent weaknesses in 18 making an assumption of 70 barrels of oil per day average 19 for the year, does it not? 20 A It's an educated quess. 21 But you cannot put one of these formulas 0 22 down on paper to support that educated guess at this point? 23 A I guess I don't understand. The data is 24 what we have at this time. 25 0 The point I'm attempting to make here is

82 that the calculations you have made on Exhibit Number Seven 1 do not in fact support any testimony by you that that well 2 is in fact draining 80 acres or 40 acres. 3 You have assumed each and based your calculations based on that, correct? 4 A That's correct. 5 C I mean you could have assumed 160-acre 6 drainage. 7 Correct. A 8 And you would have come up with 213,000 9 0 barrels of oil in place. 10 λ Correct. 11 It's a question of multiplication only. 0 12 That's correct. 13 A Q Okay, so the assumption that you're mak-14 ing is not supported by Exhibit Number Seven, is it? 15 MR. KELLAHIN: I'm going to ob-16 ject to the question, Mr. Catanach. 17 He says, yes, it is supported. 18 Dickerson doesn't 19 Mr. understand the choice of the parameters. 20 I don't know how we could make it any clearer. 21 22 I think it's repetitious. He's 23 asked the guestion. He's answered it as best he can, Yes, 24 there is an acceptable engineering technique to examine the volume of the reservoir. He's confirmed it with the decline 25

83 curve. How many times does he have to say this is what he 1 did? 2 MR. DICKERSON: Mr. Catanach, I 3 my understanding of what Mr. Engler agreed to was think. 4 that this is a mathematical assumption there. This Exhibit 5 Number Seven by itself, was my question, does not by itself 6 support any testimony that this Benson well is 7 in fact draining 80 acres. It's cross examination. I think I'm en-8 titled to ask the question and I think I'm entitled to an 9 answer to the question, and I think the answer is, no, that 10 Exhibit Number Seven does not support that assumption. 11 MR. **KELLAHIN:** Well, I think 12 the answer is yes, and he's got to the point where he's ar-13 guing with the witness. 14 MR. CATANACH: Mr. Dickerson, 15 in cases like this where there's no data available to make 16 an exact determination of what a well is draining, certain 17 18 assumptions have to be made up front before -- so you can establish temporary rules and then you come in later on with 19 the data you need to -- to make those rules permanent. 20 21 MR. DICKERSON: I understand. Mr. Examiner. Are you telling me not to ask the question? 22 23 MR. CATANACH: Well, I don't see -- I don't know why you're pursuing this if you under-24 stand that point. 25

84 1 MR. DICKERSON: Really, I think 2 I do understand it and as long as it's clear here, I'm happy 3 with the record. I'll withdraw that question. 5 Mr. Engler, in reviewing your -- all of Q 6 these exhibits, and again here I'm, I'm sure, ignorant on 7 much of this and merely a layman, but you have two wells in 8 this pool at the present time. 9 Α That's correct. 10 0 And the calculations that you have made, 11 unless I've missed something here, are all based on either 12 information that you have, limited though it may be, or as-13 sumptions that you have made concerning the Benson No. 1 14 Well, is that correct? 15 This is on the Benson. A 16 0 Okay. 17 A Correct. 18 G But you have additional information ob-19 tained from the Roddy at this point of which you have know-20 ledge, do you not? 21 We have more information from the Roddy, A 22 that's correct. 23 Q Now do you as an engineer, you're here 24 on behalf of Marathon testifying in support of an applica-25 tion to establish 80-acre spacing units. Do you as an en-

35 1 gineer consider the information that you have in your mind 2 and available to you obtained from the Roddy Well to be per-3 tinent or relevant to the questions that we're here concern-4 ing today? 5 A I don't know how to answer that. Yes, I 6 it would be pertinent; however, most of the data on quess 7 the Roddy is not available at the time. 8 Ŷ But some is. 9 The log is about the only thing I saw. A 10 Whatever is available, you, as a repre-0 11 sentative of Marathon, do not intend to rely upon it today, 12 even though it may be pertinent? 13 A As an engineer I looked at both logs and 14 I used strictly the Benson on this case. The logs in either 15 -- both wells are fairly similar. 16 Q Well, based on your examination and based 17 on the knowledge that you have of the Roddy Well, is it your 18 testimony that the Roddy well, which is higher structurally, 19 as I understand it, than the Benson Well, is an equivalent 20 well as far as it's productive capability? 21 A Well, with the data right now, that's 22 correct. 23 It's your testimony that they're equiva-0 24 lent wells, one not significantly better than the other? 25 A Until we get the core data we'll have a

86 real, good idea of the actual productive capacity of the 1 Roddy. 2 Q And so the jury is still out. It may or 3 may not be equivalent to the Benson. It may be considerably . better than the Benson? 5 It may be. 6 λ 7 Do the indications that you have based on 0 the knowledge you've gained so far indicate it to be a bet-8 ter well than the Benson? 9 At this time with the testing going on it A 10 is showing equivalent to the Benson productionwise. 11 The equivalent decline rate, you mean? 0 12 It's too early for a decline. 13 Å With regard to your Exhibit Number Nine, Q 14 your economic summary, did I understand you, Mr. Engler, to 15 say based on the data that you have shown under the Option 16 No. 1, drill one 30-acre well, is that or is that not a pro-17 fitable well for Marathon? 18 That is not. 19 A So based on the information that you have 20 0 21 from the Benson No. 1, you now only would not drill two wells on 40-acre spacing, you wouldn't even have drilled 22 23 that one well on 80-acre spacing, would you? 24 A With these reserves, we would not. 25 Q But would it be reasonable to assume that

87 if the Roddy Well is in fact equivalent to the Benson No. 1 ١ and it is also an uneconomic well, you're not going to drill 2 anly additional wells in the prospect, are you? 3 A If it looks that poor, we would definitely have to consider our position. 5 You do not think it looks that poor in the Õ 6 Roddy Well, do you? 7 I don't know at this time. A 8 You don't have an opinion? 0 9 A opinion is that at this time My it's 10 looking -- it's initial rate is looking consistent with the 11 Benson, although we do not know what kind of decline we're 12 going to show in the future with four or five months produc-13 tion. 14 0 How much further down the road towards 15 the information from the Roddy Well that you would having 16 require as an engineer in order to make a similar calcula-17 tion would you be when you have in your hand the core analy-18 sis that you're waiting on? 19 The core analysis and six to twelve months 20 of production definitely help. 21 0 I'm going to ask you, Mr. Engler, would 22 you direct my attention to the one of these exhibits that 23 supports any evidence or that offers any evidence that the 24 25 Benson No. 1 Well will adequately and efficiently drain an

88 1 80-acre spacing unit. 2 λ Well, the drainage calculations are shown 3 on the Exhibit Number Seven, the reserve comparison sheet. 4 Again, without getting the Examiner upset 0 5 with me, you merely assumed the 80-acre spacing on that 6 sheet, did you not? 7 That's correct. Α 8 You didn't calculate an area of drainage. Q 9 That's correct. A 10 Are you authorized on behalf of Marathon, Q 11 Mr. Engler, to state what, if any, information will and will 12 not be available to Mr. Davidson or any other interested 13 parties in this well? 14 No, I'm not authorized. A 15 0 You're not authorized to give any infor-16 mation? 17 A No. it's not of my -- this is something 18 that's going to have to come above me, management, something 19 other than me, to authorize the --20 Q Well, are your instructions at this point 21 that you are not to give any information to Mr. Davidson? 22 A We'd give any information that we have 23 here. That's all I really know. 24 Q You pick and choose the information that 25 you're going to give and that you're going to introduce be-

fore this Division and on which you base your application. 1 MR. KELLAHIN; I'm going to ob-2 That's argumentative. This man need not answer the ject. 3 question. 4 MR. DICKERSON: The answer is 5 obvious, I think, Mr. Examiner. I'll withdraw that ques-6 tion. 7 **KELLAHIN:** MR. The answer is 8 Examiner. On March 3rd, '87, in response to obvious, Mr. 9 Hr. Davidson's inquiry Mr. Lemay wrote Mr. Davidson and told 10 him that he wasn't entitled to the information, and that's 11 why he hasn't given it. 12 MR. DICKERSON: In argument 13 we'll have a little more on this, Mr. Examiner, but in the 14 interest of time I'm willing to drop it at this point. 15 MR. CATANACH: Okay. 16 0 Mr. Engler, you testified that there were 17 four DST's, I think, on that Benson Well. In your analysis 18 and based on your information obtained from those tests, did 19 you calculate permeability? 20 We did calculate -- on one drill stem 21 Å test we got a good enough curve to analyze for 22 а 23 permeability number, that's correct. 24 Q And what was that permeability number? I believe it was 2-1/2 millidarcies 25 A is

90 1 what was shown on the -- the analysis. 2 And based on that calcultion, if you were 0 3 to assume that level of permeability for this reservoir, 4 could you not as a reservoir engineer calculate an area of 5 the radius of drainage? 6 A Only if you had a degree of reliability 7 on a build-up curve on a 4-hour build-up in the drill stem 8 test. 9 And you do not have any such curves?  $\mathbf{O}$ 10 Å No. We have the curve. We don't have 11 the reliability. On a small drill stem test where you have 12 2-hour flow, 4-hour build-up, you do not have the actual --13 don't see the transient (sic). 14 But Q if you assume that rate of 15 permeability and together with the rest of the information 16 that you have, you could then calculate an area of drainage, 17 could you not? 18 А I'm not aware that you could. 19 Do you have any pressure analysis from Q 20 bottom hole pressure tests? 21 A For the Benson I do. 22 Q And for the Roddy? 23 No, I don't. A 24 Ó Will, in the normal process of completing 25 that well, Marathon make such tests?

91 1 A I hope sc, yes. 2 Q It would be your practice in most cases 3 4 Yes. A 5 Ô -- to do so? 6 A Yes. 7 Would it be fair from an engineering 0 8 standpoint to say or to use a figure of 20 percent of the 9 recoverable oil to have been produced, Mr. Engler, before 10 you have established a reliable rate of decline? 11 I -- 20 percent, I suppose it's possible, A 12 based more on time than amount of reserves. 13 And would at least not be an unreasonable 0 14 amount of reserves to have been produced prior to making 15 that determination? 16 A It may not. 17 Q . In your opinion is decline analysis on a 18 pumping well reliable? 19 Α Yes, sir. 20 Û Based on your information and experience 21 as an engineer? 22 A Yes, sir. 23 In your examination of this -- what pool Q 24 was it that you examined that was closest to the --25 Α Knowles Devonian?

92 1 0 The Knowles Devonian. In your examina-2 tion of that Knowles Devonian Pool did you also examine any 3 of the other Devonian Pools in the area? 4 I did. A 5 0 Did you not learn anything of any conse-6 quence from your examination of those other pools? 7 А What I saw was, based on performance from 8 those pools, I got declines again on those and again it ran-9 ged anywhere from 15 to 25 percent. With those averages I 10 assumed the nearest producing pool as the best analogy to 11 what we have here. 12 0 So based on your investigation into those 13 othar pools it was your opinion that the Knowles Devonian 14 was representative of all the pools in the area? 15 À That's correct. 16 0 And that it would be comparable to the 17 Devonian pool that we're here concerning today? 18 A That's correct. 19 What is the bottom hole pressure based on 0 20 the information that you have in the Benson Well as compared 21 to initial bottom hole pressures in other Devonian wells in 22 the other pools in the area? 23 λ I don't know what the other pressures in 24 the other fields are on a drill stem test. I believe maybe 25 geologist might be able to tell you more on the data а of

93 1 those fields. 2 You didn't come across that in your 0 in-3 vestigation of those other --4 A No, I just looked at production. 5 MR. DICKERSON: Mr. Examiner, I 6 have no further questions of this witness. I do, however, 7 have an objection. 8 I have no objection to the in-9 troduction of Marathon's Exhibits Four, Five, and Six. I 10 also have no objection to the introduction of Seven and 11 Eight. 12 However, with regard to -- ex-13 cept to the extent I'm going to state in a moment. 14 With regard to Exhibit Nine, 15 the testimony of this witness was that based on this infor-16 mation, which is exclusively termed the Benson No. 1 Well. 17 it would not be an economic well to be drilled even on 80-18 acre spacing. It would not pay Marathon to do that. 19 The witness testified that he 20 has at his control information available to him concerning 21 the Roddy Well, which would be as a matter of law, I submit, 22 relevant to this proceeding. 23 Marathon has chosen to select 24 to pick and choose the information that they will make 25 available to us as opposition in this hearing and to your-

94 ł self as the examiner charged with making a determination 2 here. 3 To the extent it is pertinent 4 to Mr. Engler as an engineer, it is pertinent to us in our 5 status as opponents here. It is absolutely essential to you 6 in your status as the examiner and in effect judge for this 7 proceeding. 8 We think it is improper to allow the introduction of Exhibits Seven, Eight, and Nine in 9 this well -- in this case, without along with that, for 10 11 whatever purpose it may serve, requiring Marathon to introduce what other and additional information it has at its 12 13 fingertips and has chosen to selectively leave out of this 14 proceeding. 15 MR. CATANACH: We understood 16 the witness to comment that not enough data was available 17 from the new well with which to make any kind of determina-18 tion. 19 MR. DICKERSON: Well, I was pre-20 cluded, as I understood it, from pursuing too far into that 21 by Marathon's not producing that data and I am blind and 22 blundering in the wilderness trying to guess what may be in 23 the -- some of these witnesses briefcase or back in their 24 office back in Midland, as you are, Mr. Examiner, so none of 25 us know, except Marathon, what that information is.

1 In all likelihood, and in my 2 opinion as an attorney, it is relevant to this proceeding. 3 It is part of the foundation that is necessary to lay for 4 Marathon to come in with evidence that is presented for us. 5 The evidence that it has presented should not be allowed and 6 relied upon in view of the inability of myself to examine 7 it; of yourself to examine it; to cross examine based on 8 this information; to observe and perceive with the help of 9 my witnesses any possible weak assumptions made, any unsup-10 ported assumptions, erroneous calculations made, regardless 11 of how skimpy the information is or Marathon may consider it 12 to be. Marathon has information available to it which it is 13 choosing not to make available to the rest of us. It is not 14 fair to Mr. Davidson to introduce part but less than all of 15 information available when this is a property right of the 16 his that is being affected here, and it is for that reason 17 that, in my opinion, the evidence offered with regard to the 18 exhibits that I have objected to is not properly before 19 this body and should not be considered by it without requir-20 ing Marathon to come forward forthrightly with other infor-21 mation which it has in hand and let us all in on what infor-22 mation is known about these wells and the likelihood that --23 or their contention that the proper drainage area for this 24 Benson Pool or this Devonian Pool is 80 acres. We do not 25 have any information to this point and these exhibits do

96 1 not support that in my opinion. 2 MR. **KELLAHIN:** Mr. Examiner. 3 may I respond? 4 MR. CATANACH: Yes, sir. 5 MR. **KELLAHIN: Onder Rule 703** 6 of the Rules of Evidence of District Court, this expert wit-7 ness may in fact rely upon information that is not available 8 here in the hearing room. 9 Mr. Dickerson, however, raises 10 an objection that is not merited. The three exhibits have 11 all been authenticated by this witness as being his work, 12 relying upon information he derived from the Benson Well. 13 He has told you and your recol-14 lection is like mine, the information from the Roddy Well is 15 not available; just now testing that well, and it's of no 16 use to anybody, particularly Marathon, until they can ana-17 lyze and study it. When that information is available and 18 studied then that becomes part of the basis upon which you 19 come back and make permanent rules. 20 Mr. Dickerson's objection to 21 the three exhibits is not appropriate. They are properly 22 authenticated. They're admissible under rules of civil pro-23 cedure, rules of evidence, and we request that they be 24 admitted. 25 His effort to extract from us

~

1 proprietary information about the Roddy Well by this means 2 and this vehicle of objection, are also without merit. Mr. 3 Davidson didn't pay for any part of that Roddy Well. He 4 does't participate in that well. That's not his well: 5 that's our well. He's not entitled to that information. 6 When that information is ana-7 lyzed and evaluated then we will decide what use to make of 8 it. The information we've given you today is based upon the 9 Benson Well. If you determine in your opinion that it's in-10 sufficient for temporary rules, then you deny the applica-11 tion. That's how you solve that. 12 But the three exhibits are ad-13 missible and Mr. Dickerson's desire to use this hearing for 14 discovery so that Mr. Davidson has an opportunity to decide 15 how he's going to make investments for the rest of his pro-16 perty is not appropriate. 17 We've presented you with suffi-18 cient evidence on that question and the documents are cer-19 tainly admissible and we'd ask that you do so. 20 MR. CATANACH: I'm going to al-21 low the exhibits to be admitted into evidence in this case. 22 Do you want to do a little 23 redirect of the witness? 24 MR. **KELLAHIN:** I have no 25 questions of Mr. Engler.

98 ١ HR. CATANACH: I just have a 2 couple of questions. 3 4 CROSS EXAMINATION 5 BY MR. CATANACH: 6 0 Mr. Engler, where did you -- where did 7 you actually get that 55 percent recovery factor that you 8 used in your volumetric calculations? 9 A On that 55 percent, I used that from lit-10 erature that we have around our office, basically. It's 11 what we normally assume for a water drive reservoir. 12 Water drive fractured reservoir? 0 13 A Water drive fractured (inaudible). 14 С The 22 percent decline, that's just based 15 on the Knowles Devonian Field. Do you know of any other De-16 vonian pools in the area with similar declines? 17 A Yeah, I ran declines on two, two or three 18 of those other small pools in that area, and as I mentioned 19 before, declines vary anywhere from 15 to 24-25 percent. So 20 I just used the closest pool as an analogy. 21 If the Division decides to grant tempor-Q 22 ary rules for the new pool, including 80-acre spacing, do 23 you have a recommendation as to the well locations for that 24 poo17 25 MR. Kellahin: Mr. Examiner, we

99 1 would recommend to you the typical well locations in an 80-2 acre spacing. I believe they require a well to be within 3 150 feet of the center of a quarter quarter. If that's the 4 standard you wish to apply to this pool, you'll find that 5 the Benson Well is unorthodox and needs to be grandfathered 6 in. 7 think the Roddy Well is at a I 8 standard location. 9 We have no preference about it 10 if you want to apply the standard well location we have no 11 objection to it. 12 13 MR. CATANACH: Mr. Kellahin, 14 what is the period of time that you're asking for the tempo-15 rary rules to be in effect? 16 MR. KELLAHIN: I have been told 17 24 months. We might want to ask Mr. Engler if that is a 18 period of time that would give sufficient opportunity to 19 evaluate the data. If he's got some other time, we need to 20 ask him, but I was told 24 months. 21 0 Then, Mr. Engler, would it, in fact, take 22 24 months to obtain the necessary data? 23 A I would say a minimum of a year to gain 24 all the data that would be helpful. 25 Q But you're -- are you asking for two

100 years? 1 Well, I'm -- I'm -- two years, I guess, A 2 is a normal procedure on them. 3 MR. CATANACH: I have nothing 4 further of the witness. 5 Any other questions of this 6 witness? 7 He may be excused. 8 MR. KELLAHIN; I realize we're 9 running very short of time. I wonder if you might give us a 10 very short break and let me consult with Mr. Dickerson. My 11 desire will be to show him the balance of the land exhibits 12 and to see whether or not we might dispose with the land 13 witness and let him get to Mr. Davidson so we can hear his 14 position? 15 All I intended to show with the 16 landman was to -- to verify what I think we can perhaps 17 stipulate to about what has occurred. 18 19 MR. CATANACH: Okay. 20 MR. KELLAHIN: If you'll give me a minute I think we can see if we can do that. 21 22 23 (Thereupon a brief recess was taken.) 24 25

1 MR. **KELLAHIN:** During the 2 break, Mr. Examiner, Mr. Dickerson and I have stipulated in 3 principal that I will attempt to summarize Mr. Daniels 4 presentation, identify certain exhibits, and then we'll rest 5 our case to give Mr. Davidson an opportunity to testify to-6 day so that we can finish the case today. 7 I will ask that Mr. Dickerson 8 listen to me and correct me if I misstate what I think we're 9 trying to do. 10 First of all, Mr. Daniels would testify that Exhibit Number Thirteen represents an accurate 11 land arrangement, ownership plat, so that in regards, parti-12 13 cularly to the southeast guarter, but I think it's typical 14 of the south half of Section 14, that the parties and the 15 percentages that are now involved in the 40-acre spacing for the Benson Well, will be the same parties and the same per-16 17 centages if either -- if the south half of the southeast is 18 dedicated and we go to 80-acre spacing. There will be 19 change in the people, their percentages, and the ownership 20 then is in common. 21 Pourteen, verification that on 22 September 11th, '86, a certified letter was sent to Mr. 23 Davidson providing him his 30-day election period to prepay 24 his share of the well costs for the Benson Well. A copy of 25 the Marathon order, R-8282, was inclosed in that letter,

1 along with the APE, shown as Exhibit Sixteen. 2 Those documents are shown by a 3 return receipt card that on September 15th Mr. Davidson 4 received that package. It's Exhibit Number Seventeen. 5 Mr. Daniels' testimony would 6 say that within that 30-day period Mr. Davidson did not 7 elect to participate in the well and was pooled. 8 Exhibit Eighteen 1s MY 9 certificate to you with regards to the notices for hearing 10 in the pool case. They include a copy of the cover letter 11 to Mr. Lemay, the application, and the list of working 12 interest owners and offset operators within a mile, all of 13 whom were furnished that case and the application pursuant 14 to the notice rules. 15 Exhbiit Nineteen represents a 16 similar certificate for the amendment in the pooling order 17 for which all interest owners in the 40-acre tract, as well 18 as the 80-acre tract, the working interest owners, were sent 19 notification by certified mail pursuant to the notice rules. 20 We further stipulate that 21 Marathon testimony would be that they did not provide Nr. 22 Davidson with a new opportunity to contribute his 40-acre 23 tract but have elected to conform the force pooled acreage 24 to an 80-acre tract should the Examiner order temporary 25 rules.

rules, and that we did not go through the standard procedures you would normally go through to give Mr. Davidson a
new election period or a new opportunity to negotiate a new
deal with regards to the well.

That is the substance of Mr.
Daniels' testimony and that is Marathon's position. If Mr.
Dickerson concurs with me, we would, based upon that stipulation, then, move to introduce Marathon's Exhibits Thirteen
through Eighteen.

10 MR. DICKERSON: I have no ob-11 jection to that, Mr. Examiner. I would like for you to 12 take, and again I'm attempting, as Mr. Kellahin is, to ab-13 breviate our day here, to take administrative notice of the 14 proceedings already conducted in Case 8960 and in the ---15 that was the Commission Hearing last fall involving this 16 well and these parties, and in the preceding Examiner provi-17 sion, in the interest of -- I'm attempting -- we'll have Mr. 18 Davidson -- not necessary to have him testify here 19 today. Those proceedings adequately reflect the factual 20 statements as opposed to my legal opinions in my opening 21 statement regarding the extent of his interest in the Benson 22 No. 1 Well, both in the 40-acre unit proposed for it initi-23 ally, or his interest in the adjoining acreage both as a 24 royalty interest and a working interest owner, and to leave, 25 as far as possible, a record before us here today that pre-

1 sents what I think is the legal issue presented as a matter 2 of record here, and yet save us some time, and if Mr. Kella-3 hin has no objection to that, I will request a short oppor-4 tunity for some legal argument but forebear calling Mr. 5 Davidson as a witness because it would unduly and probably 6 unprofitably delay us all and not further the determination 7 of the legal and factual questions in front of us. 8 MR. KELLAHIN: I have no objec-9 tion, Mr. Examiner. 10 MR. CATANACH: Okay. I will 11 take administrative notice of Case 8960. 12 Would you like to, Mr. Dicker-13 son, make a statement at this time? 14 MR. DICKERSON: Mr. Examiner, I 15 think it's sufficiently clear from the record here today 16 what is going on. Absent the amendment to the pooling order 17 sought by Marathon to include the offsetting 40-acre tract 18 to the west in which Mr. Davidson owns a 38.125 percent wor-19 king interest, he would most likely not be of any great con-20 cern with this pooling case; however, in the present posture 21 of this dispute, the pooling case and the amendment of the 22 pooling order case, are inextricably intertwined so that we 23 cannot have a result reached in one without injuring the in-24 terest of one party or another in the other case. 25 Marathon's witnesses today tes-

1 tified that their data is to some extent preliminary. We
2 understand that as a practical matter. Any engineer and the
3 people charged with making such determinations desire to
4 have a longer history of production before committing to
5 some of these calculations and expressing their opinion as a
6 matter of any great certainty.

We propose a way that in my
opinion would offer all parties an opportunity to have a decision rendered in this dispute based on the best possible
evidence presented.

11 The Roddy Well is currently 12 being completed. Marathon is awaiting certain informtion from that well and in the meantime both wells, presumably, 13 14 will continue to be produced based on the title ownership in 15 the wells in question and the fact that regrdless of the 16 outcome in these two cases, this is not a case where Mara-17 thon is, insofar as I can tell, attempting to obtain 80-acre 18 spacing in order to pool acreage and hold leases which 19 might otherwise be subject to expire or something like that. 20 It's not a case such as that. There is, obviously, the pos-21 sibility that -- that 80-acre spacing would result in an in-22 creased allowable under our Rule 505 for a well of this 23 depth, and I'm not at all insinuating that that's the motive 24 for it. I do not know.

25

But the, given the fact that

1 title in both of these wells is uniform throughout both the 2 -- a 40-acre spacing unit and the requested 80-acre spacing 3 unit sought by Marathon, it is our position that there will 4 be no prejudice to either party by postponing a decision in 5 these cases until additional data is -- becomes available, 6 and if I mischaracterize it, I have no doubt Mr. Kellahin 7 will correct me, but my memory is that these witnesses to 8 some extent acknowledge the fact that their evidence would 9 be -- they would have better evidence at their control and 10 would presumably use that evidence at a later time. I đo 11 not think that any party, including Mr. Davidson, would be 12 prejudiced by doing that, nor do I think Marathon would be 13 prejudiced by doing that.

14 To establish 80-acre spacing 15 based on the state of this evidence, however, and to do the 16 unthinkable, to amend the pooling order to expand a 40-acre 17 spaced unit, clearly spaced as 40 acres in the original 18 proceedings, by more or less rubber-stamp without due 19 consideration of the legal issue involved as to the power of 20 this Division to do that under these circumstances, would 21 have the possible affect of prejudicing Mr. Davidson, 22 however.

His interest does not change
regardless of what the spacing unit dedicated to that Benson
Well is. He has the same interest in both forties; however,

1 it is our position that he is pooled in the 40 acres origin-2 ally dedicated to the well in the southeast guarter of the 3 southeast quarter. He is not pooled, and he has the right 4 to drill, as the owner of a working interest covering an un-5 divided interest in the minerals in the southwest southeast 6 and in the adjoining additional eight 40-acre spacing units 7 in the south half of Section 14 and the south half north-8 east, and we would propose that an equitable way of avoiding 9 this Division having to make this determination at this 10 point of the legal issue that I'm posing, would be to simply 11 delay any determination in these matters until additional 12 information is determined. If Marathon in four to six 13 months would have additional information, they can appear at 14 that time and show us what they have gotten and we're all 15 reasonable people and if we're convinced, we fold our tents 16 and go home.

17 On the other hand, if -- if a 18 decision is forced on us at this time, and assuming that one 19 side or party is sufficiently aggrieved to want to pursue 20 it, we've all been imbroiled in the past in other proceed-21 ings similar where we're faced with the de novo and then all 22 the other related disputes that can get more and more com-23 plicated and more and more protracted, and more and more 24 heated, and possibly all to no effect.

25

And it would therefore be our

108 1 position that a reasonable thing for you to do as Examiner 2 would be to delay proceedings in this case pending receipt 3 of additional information that will evidently be forthcoming 4 in the near foreseeable future, and when that information is 5 based, to reconvene -- or is obtained, to reconvene and make 6 your decision based on all the best evidence that can be 7 presented to you. 8 MR. CATANACH: Mr. Dickerson, 9 what information do you think would be necessary ? 10 MR. DICKERSON: Well, I under-11 stand the core analysis would be helpful to an engineer in 12 determining the nature of the reservoir in this Devonian 13 structure, and it's going to be forthcoming shortly, I think 14 was the testimony. 15 In the normal course of Mara-16 thon's business some bottom hole pressure tests will be con-17 ducted and we'll have all the time lengthening period of ac-18 tual production from which drainage radius can in fact be 19 calculated instead of assumed or estimated, and that it 20 would have the additional benefit of forcing the parties to 21 continue to litigate this under the normal procedures that 22 our rules require when in fact it may all become moot at one 23 point or another based on additional information. 24 I don't know what all informa-25 tion Marathon will get, Mr. Examiner, I'm in the dark.

1 MR. CATANACH: What would your 2 opinion be, Mr. Dickerson, if the information that you're 3 suggesting was submitted in confidentiality to the Division 4 so that the Division could utilize the information sent in? 5 MR. DICKERSON: My -- I would 6 have no objection to the information being furnished to the 7 Division unless by that you imply, Mr. Examiner, that you 8 would have access to it and we would not have access to it. 9 That is not fair. That is not the way the American system 10 of justice, even at the administrative level operates. 11 We're entitled to know the witnesses against us; we're en-12 titled to see the evidence against us; to have it presented. 13 This is a public forum and to the extent that it is relied 14 upon by the agency or a party when we're here opposing, this 15 is -- this is people's lives, money, and property that we're 16 talking about. It's not merely hypothetical, theoretical 17 legal arguments or anything. It is -- it is money and it is 18 principal to Marathon and to my client, as well, and so we 19 certainly have no objection to Marathon furnishing it. We 20 do have objection to an order being based on information 21 which is secret to us but known to Marathon and to the Divi-22 sion that we have no opportunity to see or even know or in 23 any way on appeal attack, question, or obtain. 24 MR. CATANACH: I understand.

25

Mr. Kellahin, would you like to

109

110 1 address ---2 MR. Thank you, Mr. **KELLAHIN:** 3 Examiner. 4 address Let me the forced 5 pooling question first and then talk to you about the inter-6 relationship of the parties and the acreage. 7 We didn't get into the interre-8 lationship and some of the timing of the various contracts 9 and leases in Section 23 and 14. That matter is in the 10 transcript for the Commission Hearing in the forced pooling 11 case. I will tell you some of it but it's in the record and 12 you might want to look at it. 13 I will tell you time is of the 14 It would be wonderful to have the time that essence. Mr. 15 Dickerson thinks that we have in order to slowly develop and 16 analyze the reservoirs. 17 First of all, let me direct my 18 attention to the forced pooling order itself. 19 The Division retains jurisdic-20 tion over the forced pooling case by its continuing 21 jurisdictional language of that order. It's a chicken and 22 egg problem in this kind of situation where you can't force 23 pool anything other than a declared spacing unit and in a 24 wildcat area like this, you're obligated to pool on the 25 spacing pattern and that was 40 acres.

111 1 Mr. Dickerson would have you 2 believe that this type of case is somehow similar to an ap-3 plication where the applicant in a forced pooling case ex-4 pects to encounter multiple formations on varying spacing 5 patterns. 6 That's a different question. 7 What we're talking about here is the same pool that you 8 drill to after you drill the well, then realizing that you 9 now have information that causes you to believe that the 10 spacing ought to be wider. 11 You have a change of facts with 12 regards to the reservoir. It's something you can't know be-13 fore you drill the well. 14 The law makes provision for 15 this kind of change. You're allowed to change the forced 16 pooling acreage. We don't have to give Mr. Davidson a new 17 election. How can we? You can't. Think about how you 18 physically give him a new election in this situation. It 19 doesn't do anything more than give him a free ride. We've 20 got a completed well. It's producing. He had his opportu-21 nity to share in that risk and he elected not to do so. 22 If you give him a new election 23 period by requiring us to go through a new pooling case, he 24 gets his thirty day election and he joins. He sends us a 25 check for a producing well. He'd be foolish not to. He es-

112 1 capes the risk factor penalty and he is allowed to change 2 the effect of not joining in the well. 3 Dickerson had you believe Mr. 4 that you've never done this before. In fact you have. It's 5 in a case called HCW Exploration. It first appeared before 6 Examiner Catanach on May 14th, 1986. It was Case 8894 in 7 which on behalf of HCW Exploration I requested a change in a 8 forced pooling case. 9 This was a Jalmat case. Ne had 10 force pooled originally in Order No. R-8071, Mr. Doyle Hart-11 man. Mr. Hartman had an interest in that 160-acre tract and 12 it was a Jalmat gas well and we pooled him. 13 After the pooling and after 14 drilling the well and in fact after producing it for some 15 time, the gas/oil ratio changed in that pool, or in that 16 well, and we had an oil well. We came in here and changed 17 the spacing so that it was now the appropriate oil spacing. 18 Mr. Hartman in that case had 19 his lawyers come in here and say, guys, you've done it 20 wrong. You've got to do it over. I get a new election. 21 It was the Division's decision 22 in that case that, no, you had the continuing jurisdiction 23 and the right to modify forced pooling orders so that they 24 were consistent with the spacing rules. That's the way 25 you've done it in the past. It's not absolutely perfect but

113 1 it's the way that works, and I think it's the only way that 2 will work here. 3 How else can you think of fix-4 ing the pooling order that will not put all the risk back on 5 Marathon and allow Mr. Davidson to escape that risk. It 6 just doesn't work. 7 So we really do have just a 8 spacing case and I wouldn't get caught up in the forced 9 pooling problem. I don't think it's that big an issue. If 10 you're wrong on it, then I guess somebody will have to tell 11 us we're wrong, but I think you're legally sound. You've 12 done it before. I think there's cases in other jurisdic-13 tions that make that appropriate; be happy to brief you on 14 that question. 15 The spacing, though, I think is 16 what we're here about. The spacing is to space it on 80 ac-17 res. It's what we do all the time. That's why we have 18 temporary rules based upon preliminary data. This is no 19 different than the hundreds of others you've heard. You get 20 data like this early on and what do you do? You've got to 21 protect the status quo. You can't wait thirty days or sixty 22 days or six months while the engineers continue to get data 23 and do colculations because you've got no control over the 24 activity that's drilled around you. If you wait too long 25 the accomplished fact is that you get close wells and un-

114 1 necessary wells on spacing patterns that are too close to-2 gether. 3 So if you're going to make a 4 mistake, make a mistake you can change and the mistake that 5 you can change is one that allows you either infill drilling 6 or down spacing. 7 We've said it a thousand times, 8 you can't undrill the unnecessary well and next month or 9 next year if we get wells on 40-acre spacing we can't take 10 them away. 11 Mr. Dickerson wants you to 12 wait. I have an advantage over him in that I did the forced 13 pooling case before the Commission ad I understand the pro-14 perty interests among the parties. 15 Davidson is in a very com-Mr. 16 petitive situation with Marathon in the two sections. If 17 Marathon, as Mr. Daniels testified before the Commission. 18 does not act within certain time frames, they cannot control 19 the acreage that ought to appropriately be dedicated to a 20 well. They have continuous drilling obligations of 180 21 days, and if we wait for 180 days after the completion of 22 each of these wells while we get data, we'll lose the ac-23 reage and the primary beneficiary in many of those instances 24 will be Mr. Davidson. 25 In some of that property he's

top leased us. In other of the property he has a mineral interest owner and we've got an impossible situation where we do not have the luxury of delay. We would implore upon you that you act quickly. We think the action that you can take is fully allowed by the law and it's the only prudent action that you can take. Avoid drilling unnecessary wells until

8 we know more about it; allow us a opportunity to gain fur9 ther data. The information available to you is all we have.
10 If you don't think it's enough, deny the case.

11 That's the answer. We're not 12 required to disclose proprietary data. Mr. Lemay has told 13 us we don't have to give Mr. Davidson information on the 14 well. He's got an override, I think, in the Roddy Well. 15 He's not a working interest owner. He didn't pay for it. 16 You give us an opportunity to 17 analyze it before we have to give it away to give it away to

18

the world.

But we think we've given you
enough information to justify the spacing pattern. You
don't have a standard drainage calculation, but Mr. Engler
told you and I think you can calculate it for yourself, that
an acceptable alternative is to take a volumetric calculation, match it with a decline analysis, and see if you're
going to get a reasonable match, and he got a good match.

115

116 1 That's a comfort. 2 We don't have a large reservoir 3 to make lots of mistakes in. We ask that you help us avoid 4 making this mistake and grant us the relief we've requested. 5 Thank you. 6 MR. DICKERSON: Mr. Catanach, I 7 would request that you allow myself and Mr. Kellahin, as 8 well, if he would like it, fifteen days or so in which to 9 submit a brief because I think that the legal issues would 10 make that worth while. 11 MR. KELLAHIN; I would like to 12 very much. I think I concur with Mr. Dickerson. It's --13 it's an important decision to make and we would like to give 14 you the benefit of both of our perspectives and see if there 15 are some -- some new cases that might help you decide that 16 question, and I would concur that perhaps fifteen days would 17 give us a chance to do that. 18 MR. CATANACH: That would be 19 fine. 20 MR. DICKERSON: Mr. Catanach. 21 may I summarize in one minute or less? 22 In our opinion we did not know, 23 it is not in evidence to my recollection, that Marathon has 24 a 180-day drilling commitment between wells, but I think it 25 is in evidence that the Roddy Well is now in the process of

117 1 being completed. It is not yet completed; therefore, Mara-2 thon, while it has a time problem, it is a time problem that 3 is not imminent, not critical, and not going to lose any 4 rights immediately. They've got a relatively long period of 5 time in which to analyze this and decide where and if they 6 want to drill their next well. 7 The gist of the testimony that 8 I heard was why would anybody assuming that the data that 9 has been presented here today by Marathon is correct, why in 10 the world would Marathon or anybody else drill another well 11 here? 12 And so if, however, you choose 13 to go ahead and decide this case, I would agree with Mr. 14 Kellahin that based on this evidence the proper thing for 15 you to do is either grant or deny the application and I 16 would simply submit to you in concluding that based on this 17 evidence it would be perfectly proper for you to deny the 18 application based on current evidence presented. 19 MR. CATANACH: Thank you. Any-20 thing else? 21 MR. KELLAHIN: That's it. 22 MR. CATANACH: Okay. 23 24 (Hearing concluded.) 25

CERTIFICATE I, SALLY W. BOYD, C.S.R., DO HEREBY CER-TIPY the foregoing Transcript of Hearing before the Oil Con-servation Division (Commission) was reported by me; that the said transcript is a full, true, and correct record prepared by me to the best of my ability. Sally W. Boyd CSR. I do hereby covier that the foregoing is a complete tecora of the proceedings in the Examiner hearing of Case No. 9145 heard by me on ones, alan , Examiner **Oil Conservation** Division 

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT 1 OIL CONSERVATION DIVISION STATE LAND OFFICE BUILDING 2 SANTA FE, NEW MEXICO 3 20 January 1988 4 EXAMINER HEARING 5 6 7 IN THE MATTER OF: 8 Application of Marathon Oil Company CASE 9 for the amendment of Division Order 9146 No. R-8282, as amended, Lea County, 10 New Mexico. 11 12 13 BEFORE: David R. Catanach, Examiner 14 15 16 TRANSCRIPT OF HEARING 17 18 19 APPEARANCES 20 21 For the Division: 22 23 24 For the Applicant: W. Thomas Kellahin 25 Attorney at Law KELLAHIN, KELLAHIN & AUBREY P. O. Box 2265 Santa Fe, New Mexico 87504

INDEX STEVE DANIELS Direct Examination by Mr. Kellahin Cross Examination by Mr. Catanach EXHIBITS Marathon Exhibit One, Plat 13 Marathon Exhibit Two, Application 14 Marathon Exhibit Three, Application 15 Marathon Exhibit Four, Order 16 Marathon Exhibit Five, Return Receipt 17 Marathon Exhibit Six, Letter 18 Marathon Exhibit Seven, Response 19 Marathon Exhibit Eight, Letter 20 Marathon Exhibit Nine, Letter 21 Marathon Exhibit Ten, Notes Marathon Exhibit Eleven, Letter 

3 ۱ MR. CATANACH: Call next Case 2 9145, the application of Marathon Oil Company for the 3 amendment of Division Order No. R-8282, as amended, Lea 4 County, New Mexico. 5 Are there appearances in this 6 case? 7 KELLAHIN: MR. Yes, Mr. 8 Examiner. I'm Tom Kellahin of Santa Fe, New Mexico, 9 appearing on behalf of Marathon Oil Company and I have one 10 witness to be sworn. 11 MR. CATANACH: Any other ap-12 pearances in this case? 13 Will the witness please stand 14 and be sworn in. 15 16 (Witness sworn.) 17 18 STEVE DANIELS, 19 being called as a witness and having been duly sworn upon 20 his oath, testified as follows, to-wit: 21 22 DIRECT EXAMINATION 23 BY MR. KELLAHIN: 24 Q Mr. Daniels, for the record would you 25

4 please state your name and your occupation? 1 Steve Daniels, landman with Marathon Oil Α 2 Company. 3 Daniels, have you previously testi-Mr. Q 4 fied before the Oil Conservation Division as a petroleum 5 landman? 6 Yes, sir, I have. Α 7 And have you participated on behalf of 0 8 your company as a petroleum landman with regards to the com-9 pulsory pooling applications that your company has sought 10 and obtained from the Division insofar as it concerns the 11 interest of Mr. Davidson? 12 Α Yes, sir, I have. 13 Q And you have participated in all the 14 prior hearings with Mr. Davidson and Marathon in these 15 cases? 16 Yes, sir. Α 17 18 Q Subsequent to the order entered by the Division in Case 9146, and it was Order No. R-8282-B, 19 entered on September 18th, 1987, have you sought and attempted 20 to secure Mr. Davidson's voluntary agreement concerning the 21 poolage of his acreage in the subject well? 22 23 Α Yes, sir, I have. MR. KELLAHIN: At this time, 24 25

5 Mr. Catanach, we tender Mr. Daniels as an expert petroleum 1 landman. 2 MR. CATANACH: He is so quali-3 fied. 4 0 Mr. Daniels, let's take a moment and 5 start off, sir, with what is marked as Exhibit Number One. 6 Would you refresh the Examiner's recollection and commence 7 by identifying for us the well that's the subject of this 8 application? 9 Α Marathon drilled the Benson No. 1 Okay. 10 at a location of 330 feet from the south line and 990 feet 11 from the east line of Section 14, Township 16 south, Range 12 38 East. This well was successfully completed on February 13 11th, 1987. 14 The 80-acre spacing unit to be dedicated Q 15 to the well is that area outlined in yellow? 16 Α Yes, sir, it is. 17 0 Let's commence back at the beginning with 18 regards to the initial proposal that Marathon made by which 19 the first forced pooling order was obtained. 20 Can you go back and give us the time sequence with regards to the sub-21 ject matter of the various orders and applications involved? 22 A Okay. What I'll do is make just a series 23 or run through all of our cases with Mr. Davidson. 24 All right, sir, let's start with August 25 Q

1 21st of 1986.

А Okay. On August 21st, 1986, the Oil Con-2 servation Division issued Order No. 8282, which compulsorily 3 pooled Mr. James Davidson's 38.125 percent working interest 4 in the southeast southeast quarter of Section 14. 5 This order came as a result of August 6th, 1986, compulsory pooling 6 hearing held in Santa Fe. 7 On October 23rd, 1986, a de novo hearing 8 was requested and on that date said hearing was heard before 9 the Director of the Oil Conservation Division and as a re-10 sult of that hearing on November 4th, 1986, the Commission 11 entered Order No. R-8282-A, which affirmed the previous Exa-12 miner's order entered on August 21st, 1986. 13 Q All right, let's stop for a moment, 14 Mr. Daniels. The original pooling order was with regards to the 15 pooling of a 40-acre tract, was it not? 16 17 А That is correct, sir. 0 On that 40-acre tract what percentage in-18 terest did Mr. Davidson have in that acreage? 19 Α Mr. Davidson had a 38.125 percent working 20 interest. 21 MR. 22 KELLAHIN: If the Examiner please, I'd like to show you a copy of the original pooling 23 order. It's 8282. 24 25 Q After the Commission affirmed the

6

BARON FORM 25C16P3 TOLL FREE IN CALIFORNIA BOO-227-2434 NATIONWIDE BOO-227-0120

7 original pooling order did Marathon notify Mr. Davidson of 1 his 30-day election period in which he could prepay his 2 share of the cost of that well? 3 Yes, sir, we did. Α And did Mr. Davidson exercise his elec-0 5 tion under the pooling order? 6 Davidson did not pay his money and Α Mr. 7 elected to go nonconsent subject to a 200 percent risk pen-8 alty. 9 Q Chronologically what then was the next 10 thing that occurred? 11 Α Well, then --12 Q The well was drilled and completed, was 13 it not? 14 -- we completed on February 11th, 1987. Α 15 After our engineers and geologists reviewed data from this, 16 the production from this well, it was their recommendation 17 that the spacing units out in this area for the Siluro-De-18 vonian Oil Pool be spaced on 80-acre spacing. 19 As a result, on June the 3rd, 1987, Mara-20 thon came to the Commission to request that the Siluro-De-21 vonian Oil Pool in this area be spaced on 80-acre spacing. 22 Q At the same time on the same Examiner's 23 docket on June 3rd of 1987 was there another Marathon case? 24 Α Yes, sir, there was. 25

8 Q And what was that case? 1 That was, I believe, Case Number 9146, Α 2 where we were at -- while we were trying to amend the spac-3 ing rules to 80 acres we were also going to amend the August 4 21st, 1987, pooling order to pool all interest in the addi-5 tional 40-acre tract, being the southwest southeast quarter 6 of Section 14. 7 When we talk about the additional 40-acre 0 8 tract, what interest did Mr. Davidson, or does Mr. Davidson, 9 have in the additional 40-acre tract? 10 Mr. Davidson has a 38.125 percent working Α 11 interest in the southwest southeast quarter of Section 14. 12 0 Same percentage for either of the for-13 ties? 14 A Yes, sir, that's correct. 15 What then occurred, Mr. Daniels? 0 16 On August 18th, 1987, by Division Order 17 Α R-8497, the Oil Conservation Division approved temporary 18 pool rules for the North Knowles Devonian Pool and said 19 rules were to be spaced on 80-acre -- wells were to be 20 spaced on 80-acre spacing units. 21 Subsequent to this order, on October --22 excuse me, September 18th, 1987, by Division Order R-8282-B 23 the Division denied Marathon's application to amend the ori-24 ginal 40-acre pooling order and required that Marathon at-25

BARON FORM 25C16P3 TOLL FREE IN CALIFORNIA 600 227 2434 NATIONWIDE 800-227-0120

9 1 tempt to work out a voluntary agreement with Mr. Davidson 2 concerning his interest in the southwest southeast quarter 3 of Section 14. Have you attempted to negotiate with Mr. 0 5 Davidson a voluntary agreement subsequent to that last or-6 der? 7 Α Yes, sir, we did, on -- by letter dated 8 October 19th we requested Mr. Davidson -- we had an offer to 9 Mr. Davidson (unclear.) 10 Let me direct your attention now to Exhi-0 11 bit Number Two and have you identify that. 12 Exhibit Number Two is Marathon's A Okay. 13 application to -- to reopen Division Case No. 9146 and amend 14 Division Order, the previous Division Order R-8282 and R-15 8282-A. We were wanting this hearing to be scheduled on 16 January 20th, 1988. 17 And what is Exhibit Three? 0 18 Α Exhibit Three is our application to the 19 Oil Conservation Division requesting --20 For the case today? 0 21 Α Yes, sir, for this case today. 22 And Exhibit Number Four? 0 23 Exhibit Number Four is the order of Α the 24 Division which was issued on September 18th, 1987. 25 And this is the order that required Mara-0

thon to attempt to secure Mr. Davidson's voluntary agreement 1 before pooling his interest in the additional 40-acre tract. 2 Yes, sir, that's what it is. Α 3 And Exhibit Number Five. 0 4 Α Okay, Exhibit Number Five is a return 5 receipt in which Mr. Davidson was properly notified of 6 today's hearing. 7

8 Q All right. Before we talk about Exhibit
9 Number Six, describe for the Examiner what Marathon's
10 proposal was to Mr. Davidson for his participation of the
11 additional 40-acre interest in the completed and producing
12 well.

Α Okay. What we requested to Mr. Davidson 13 owns a 38.125 percent interest in the south was he half 14 southeast quarter of Section 14, being 80 acres. The 15 southeast southeast quarter is force pooled and we were 16 giving him the opportunity to contribute his interest in the 17 southwest southeast of 14 and participate in the Benson No. 18 1 Well, which was a well which was completed and was 19 presently -- is presently producing. This interest would 20 provide Mr. Davidson with approximately a 19.0625 percent 21 working interest in the well. 22

23 Q All right, let's go through the
24 methodology of determining what Mr. Davidson's contribution
25 in dollars would have been for his interest in the addition-

11 al 40-acre tract. 1 as to the original 40-acre tract, Now, 2 adjustment being made except to divide that there's no 3 interest in half. 4 That's correct. Α 5 All right, what is your best estimate of Q 6 the actual well cost for the Benson Well? 7 Approximately \$1,151,100. Α 8 0 How did you calculate based upon that 9 well cost what Mr. Davidson's contribution would have been 10 for participation of his interest in the additional 40-acre 11 tract? 12 I took that, that well cost figure and Α 13 multiplied it times his interest in the 80-acre proration 14 unit, which would have been 19.0625 percent. 15 Q All right. In my own simple way, let me 16 show you how I did it and you see if I've done it --17 Α Okay. 18 0 -- another way that's equally correct. 19 Can you simply take the \$1,151,000, divide that in half and 20 then take that number and multiply it by 38.125 percent? 21 Α Yes, sir, that would be -- would give you 22 the same figure of 219,400. 23 24 0 And that is -- that represents in your opinion the contribution Mr. Davidson should make for his 25

12 interest in the additional 40-acre tract. 1 Yes, sir. Α 2 And these were based upon 0 the actual 3 costs of the Benson No. 1 Well? 4 Yes, sir, they were. Α 5 And have you sought to escalate those Q 6 costs or adjust them? 7 No, sir, we have not. Α 8 Had you detailed to Mr. Davidson the pro-Q 9 posal that we have just discussed? 10 Yes, sir, I did. Α 11 And you submitted that to him as a 0 let-12 ter? 13 Yes, sir. On October 19th, 1987, which Α 14 I believe, Exhibit Number Six, we requested, we made is, 15 this offer to Mr. Davidson and we also would, in order to 16 help make his decision as to participate, we would afford 17 him the opportunity to review production data from the Ben-18 son No. 1 Well. 19 What, if any, response did you receive 20 0 from Mr. Davidson with regards to your October 19th letter? 21 Α Davidson responded by letter dated 22 Mr. October 29th, 1987. He advised Marathon that he is inter-23 ested in selling his 38.125 percents leasehold interest in 24 the southwest quarter southeast quarter of 14 for \$200 per 25

13 1 acre and he would assign Marathon a 75 percent net revenue interest leasehold. 2 What this would be, the leasehold which 3 4 he presently is in possession of has a -- provides for a 1/8th royalty and therefor he would be reserving an 1/8th 5 6 royalty himself and delivering that 75 percent net revenue interest lease. 7 0 Davidson's response is set forth as 8 Mr. Exhibit Number Seven? 9 10 Α Yes, sir, that is correct. 11 Okay, and let's look at Exhibit Number 0 Eight. What is that? 12 Α Exhibit Number Eight is in his previous 13 letter on October the 29th he neglected to put \$200 per ac-14 15 re. He had originally, in his October 29th letter he advised -- wrote for \$200 only, and he just clarified that of-16 fer as to \$200 per acre. 17 18 Okay. Did Marathon respond to Mr. David- $\circ$ 19 son's counter-proposal? 20 Α Yes, sir. Upon review of Mr. Davidson's 21 proposal Marathon, by letter dated November 23rd, 1987. ad-22 vised that his terms were unacceptable to Marathon. We did advise Mr. Davidson, however, that 23 24 we would still provide him the opportunity to participate as 25 to our previous October 19th offer, that being participate

14 with approximately a 19 percent working interest in the well. 1 As to his interest in the additional 40-Q 2 acre tract, would Mr. Davidson be making his decision about 3 contributing the \$219,000 plus based upon a completed produ-4 cing well in which he had production information? 5 Α Yes, sir. 6 Q Do you believe your proposal to Mr. 7 Davidson represents a fair and reasonable offer for partici-8 pation in the well on a voluntary basis? 9 Α Yes, sir, I do. 10 Q What, if any, response did you receive 11 from Mr. Davidson subsequent to your November 23rd letter? 12 In that letter we requested that Mr. Α 13 Davidson respond by December 7th; however, we did not re-14 ceive any reply and on December the 15th I called Mr. David-15 (unclear) and we advised that he was not interested son 16 in contributing his interest in the southwest southeast to 17 18 and participate in the Benson No. 1 Well. The notes that you made of that conversa-0 19 tion at a time when recent to that conversation are set 20 forth on Exhibit Number Ten? 21 Yes, sir, that is correct. Α 22 0 Would you identify and describe for us, 23 24 Mr. Daniels, Exhibit Number Eleven? Α Exhibit Number Eleven is a letter 25 dated

1 January 12th, 1988, from Mr. Davidson's attorney, Mr. Chad 2 Dickerson, and he was advising Mr. Kellahin that Mr. David-3 son does not intend to enter an appearance on the captioned 4 hearing for -- set for today's date, and that's what that 5 letter states. 6 0 Do you have an opinion, Mr. Daniels as to 7 whether or not the actual well costs as booked by Marathon, 8 the \$1,151,000 represents reasonable and fair well costs? 9 Yes, sir, they are reasonable and fair. Α

10 Q Was the subject matter of the well costs 11 an issue before the Division examiners at one time in the 12 past?

13 A Yes, sir, it was. On August 12th, 1987,
14 Mr. Davidson, under Case Number 9168, advised that he objec15 ted to the cost of the well and therefor a hearing was held
16 before the OCD concerning that.

17 Q Did Mr. Davidson subsequently withdraw
18 his objection to the reasonable well costs dispute?

19 A Yes, sir, he did on -- pursuant to an or20 der dated November 9th, 1987. The Oil Conservation Division
21 entered Division Order No. 8282-C, which dismissed Mr.
22 Davidson's reasonable well cost hearing.

Q Do you have a recommendation to the Examiner as to the overhead charges that ought to be assessed
against Mr. Davidson's interest in the additional 40-acre

15

16 1 tract? 2 That -- those figures Yes, sir, I do. Α 3 would be \$4,598 for a drilling well rate and \$459 for a com-4 pleted well rate, and I would request a 200 percent risk 5 penalty. 6 Q What's your basis for that request, Mr. 7 Daniels? 8 Mr. Davidson would feel that -- or I feel Α 9 that we -- Marathon took all the risk in drilling the well 10 and I don't feel that those -- the risk involved in the 11 drilling of that well has decreased any to this point. 12 Do you recommend to the Examiner that 0 13 notwithstanding Mr. Davidson's apparent lack of interest in 14 participating his interest in the additional 40-acre tract, 15 that he be provided an additional election period in which 16 to pay his \$219,400? 17 Α Let me just go back, first, and say Mr. 18 Davidson was afforded this opportunity after the de novo 19 hearing and he elected not to do so. 20 Q That was on the original 40-acre inter-21 est. 22 А That was on the original 40-acre, yes, 23 sir. In our subsequent letters and offers made to Mr. 24 Davidson in an effort to get him to participate in the well, 25 and he has reponded negatively, then, you know, I don't feel

that he will, you know, I don't really feel that it's 1 needed; however, we would certainly have no objection should 2 the Examiner request it. 3 0 Do you have any comments or observations 4 about the possibility of the absence of a penalty factor on 5 Mr. Davidson's additional interest in the 40-acre tract and 6 whether or not that would be fair and equitable to Marathon? 7 Α I feel that if we were to lessen the 8 penalty it would be an injustice to Marathon. 9 Q Do you have an opinion as to whether or 10 not the lack of a penalty on that interest would constitute 11 a windfall to Mr. Davidson? 12 Α Yes, sir, it would. 13 0 In what way, Mr. Daniels? 14 Α He would be able to participate in the 15 well without any -- any penalty. 16 Q Marathon then would recover his interest 17 out of production? 18 A Yes. 19 0 And then upon recovery, you're also seek-20 ing to recover an additional 200 percent penalty? 21 Yes, sir, that is correct. Ά 22 Q And that is to compensate Marathon for 23 carrying Mr. Davidson's interest? 24 Yes, sir. Α 25

18 Q And he would have an opportunity to avoid ۱ that penalty by contributing the \$219,000. 2 That's right. Α 3 Do you have anything else, Mr. Daniels? Q 4 No, sir, not at this time. Α 5 MR. KELLAHIN: That concludes 6 my examination of Mr. Daniels, Mr. Catanach. 7 We would move the introduction 8 at this time of Marathon Exhibits One through Eleven. 9 MR. CATANACH: Exhibits One 10 through Eleven will be admitted into evidence. 11 12 CROSS EXAMINATION 13 BY MR. CATANACH: 14 Daniels, referring to Exhibit Number Q Mr. 15 Seven, which is Davidson's counter-offer, is this -- is this 16 a type of offer that Marathon would normally refuse? 17 18 А Yes, sir. We review this. This would be, certainly be an offer which we would review. 19 KELLAHIN: No, he said re-MR. 20 fuse. 21 Refuse, oh. In looking at the leasehold Α 22 price in this area, his -- the bonus consideration which he 23 was requesting is slightly higher than what we'd pay for in 24 25 this area, and we felt that our original offer was fair and

19 reasonable and that that was the best offer which Marathon 1 would make. 2 0 So you don't think that Mr. Davidson's 3 offer was fair and reasonable? 4 Α Not in this particular situation, no, 5 sir. 6 MR. CATANACH: Mr. Kellahin, 7 was Mr. Dickerson aware that the hearing was today? In his 8 letter he says February 20th. It's not just a mistake, or 9 do you know? 10 MR. KELLAHIN: It's a typo, Mr. 11 You'll note on Exhibit Number Two that Mr. Examiner. 12 Dickerson was sent a copy of the original application of the 13 hearing. His copy was mailed to him on December 22nd and I 14 think he simply misspoke. 15 I talked to him on the phone 16 last Friday and he was aware of the hearing today. 17 MR. CATANACH: Okay, that's all 18 the questions I have of the witness. He may be excused. 19 Is there anything further in 20 Case 9146? 21 MR. KELLAHIN: No, sir. 22 MR. CATANACH: If not, it will 23 be taken under advisement. 24 25 (Hearing concluded.)

20 1 CERTIFICATE 2 3 I, SALLY W. BOYD, C.S.R., DO HEREBY 4 CERTIFY that the foregoing Transcript of Hearing before the 5 Oil Conservation Division (Commission) was reported by me; 6 that the said transcript if a full, true, and correct record 7 of the hearing, prepared by me to the best of my ability. 8 9 10 11 Salley W. Boyd CSE 12 13 14 15 I do have a withat the foregoing is 16 a complete sector 1 of the proceedings in, 17 the Exampler hearing of Case No. 9146, heard by nie on Jan 20 1988 18 Catanach, Examiner avid K. 19 Oil Conservation Division 20 21 22 23 24 25

FORM \$5CIGF3 TOLL FRE IN CALIFORNIA 800-227-2434 NATIOWNIDE 800-227-0120

**BARON** 

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT 1 OIL CONSERVATION DIVISION STATE LAND OFFICE BUILDING 2 SANTA FE, NEW MEXICO 3 20 January 1988 4 EXAMINER HEARING 5 6 7 IN THE MATTER OF: 8 Application of Marathon Oil Company CASE 9 for the amendment of Division Order 9146 No. R-8282, as amended, Lea County, 10 New Mexico. 11 12 13 BEFORE: David R. Catanach, Examiner 14 15 16 TRANSCRIPT OF HEARING 17 18 19 APPEARANCES 20 21 For the Division: 22 23 24 For the Applicant: W. Thomas Kellahin 25 Attorney at Law KELLAHIN, KELLAHIN & AUBREY P. O. Box 2265 Santa Fe, New Mexico 87504

INDEX STEVE DANIELS Direct Examination by Mr. Kellahin 3 Cross Examination by Mr. Catanach EXHIBITS Marathon Exhibit One, Plat Marathon Exhibit Two, Application 14 Marathon Exhibit Three, Application Marathon Exhibit Four, Order 16 Marathon Exhibit Five, Return Receipt Marathon Exhibit Six, Letter 18 Marathon Exhibit Seven, Response Marathon Exhibit Eight, Letter 20 | Marathon Exhibit Nine, Letter Marathon Exhibit Ten, Notes 22 Marathon Exhibit Eleven, Letter 

BARON FORM 25CIERS TOULFREE IN CAUFORNIA BOORESTIGAS MATIONWIDE BOORESTORD

3 1 Call next Case MR. CATANACH: 2 9145, the application of Marathon Oil Company for the 3 amendment of Division Order No. R-8282, as amended, Lea 4 County, New Mexico. 5 Are there appearances in this 6 case? 7 MR. KELLAHIN: 8 Yes, Mr. Examiner. I'm Tom Kellahin of Santa Fe, 9 New Mexico, appearing on behalf of Marathon Oil Company and I have one 10 witness to be sworn. 11 MR. CATANACH: Any other ap-12 13 pearances in this case? Will the witness please stand 14 and be sworn in. 15 16 (Witness sworn.) 17 18 19 STEVE DANIELS, being called as a witness and having been duly sworn upon 20 21 his oath, testified as follows, to-wit: 22 23 DIRECT EXAMINATION 24 BY MR. KELLAHIN: 25 Q Mr. Daniels, for the record would you

4 please state your name and your occupation? 1 А Steve Daniels, landman with Marathon Oil 2 Company. 3 Daniels, have you previously testi-Q Mr. 4 fied before the Oil Conservation Division as a petroleum 5 landman? 6 Yes, sir, I have. 1 Α Q And have you participated on behalf of 8 your company as a petroleum landman with regards to the com-9 pulsory pooling applications that your company has sought 10 and obtained from the Division insofar as it concerns the 11 interest of Mr. Davidson? 12 Α Yes, sir, I have. 13 And you have participated in all Q 14 the prior hearings with Mr. Davidson and Marathon in these 15 cases? 16 17 А Yes, sir. Subsequent to the order entered by 18 Q the Division in Case 9146, and it was Order No. R-8282-B, 19 entered on September 18th, 1987, have you sought and attempted 20 to secure Mr. Davidson's voluntary agreement concerning the 21 poolage of his acreage in the subject well? 22 A Yes, sir, I have. 23 MR. KELLAHIN: this time, 24 At 25

5 Mr. Catanach, we tender Mr. Daniels as an expert petroleum 1 2 landman. MR. CATANACH: He is so quali-3 fied. 4 5 Mr. Daniels, let's take a moment and Q sir, with what is marked as Exhibit Number One. 6 start off, 7 Would you refresh the Examiner's recollection and commence 8 by identifying for us the well that's the subject of this 9 application? 10 Α Marathon drilled the Benson No. 1 Okay. 11 at a location of 330 feet from the south line and 990 feet 12 from the east line of Section 14, Township 16 south, Range 13 38 East. This well was successfully completed on February 11th, 1987. 14 15 The 80-acre spacing unit to be dedicated Q 16 to the well is that area outlined in yellow? 17 A Yes, sir, it is. 18 Let's commence back at the beginning with Q 19 regards to the initial proposal that Marathon made by which 20 the first forced pooling order was obtained. Can you go 21 back and give us the time sequence with regards to the sub-22 ject matter of the various orders and applications involved? 23 A Okay. What I'll do is make just a series 24 or run through all of our cases with Mr. Davidson. 25 All right, sir, let's start with August Q

1 21st of 1986.

2 Α Okay. On August 21st, 1986, the Oil Con-3 servation Division issued Order No. 8282, which compulsorily pooled Mr. James Davidson's 38.125 percent working interest 4 in the southeast southeast quarter of Section 14. 5 This order came as a result of August 6th, 1986, compulsory pooling 6 7 hearing held in Santa Fe. On October 23rd, 1986, a de novo hearing 8 9 was requested and on that date said hearing was heard before the Director of the Oil Conservation Division and as a re-10 11 sult of that hearing on November 4th, 1986, the Commission entered Order No. R-8282-A, which affirmed the previous Exa-12 miner's order entered on August 21st, 1986. 13 All right, let's stop for a moment, 14 0 Mr. Daniels. The original pooling order was with regards to the 15 16 pooling of a 40-acre tract, was it not? 17 That is correct, sir. А 18 On that 40-acre tract what percentage in-0 terest did Mr. Davidson have in that acreage? 19

6

20 A Mr. Davidson had a 38.125 percent working
21 interest.

MR. KELLAHIN: If the Examiner
please, I'd like to show you a copy of the original pooling
order. It's 8282.

After the Commission

affirmed

the

25

Q

NATIONWIDE 600-227-0120

TOLL FREE IN CALIFORNIA 800-227-2434

FORM 25C-6P3

NONA

7 original pooling order did Marathon notify Mr. Davidson of 1 his 30-day election period in which he could prepay his 2 share of the cost of that well? 3 Α Yes, sir, we did. And did Mr. Davidson exercise his elec-5 G tion under the pooling order? 6 7 Α Mr. Davidson did not pay his money and 8 elected to go nonconsent subject to a 200 percent risk penalty. 9 Chronologically what then was the 10 0 next thing that occurred? 11 Α Well, then --12 The well was drilled and completed, 13 0 was it not? 14 15 А -- we completed on February 11th, 1987. After our engineers and geologists reviewed data from this, 16 the production from this well, it was their recommendation 17 18 that the spacing units out in this area for the Siluro-De-19 vonian Oil Pool be spaced on 80-acre spacing. 20 As a result, on June the 3rd, 1987, Mara-21 thon came to the Commission to request that the Siluro-De-22 vonian Oil Pool in this area be spaced on 80-acre spacing. 23 Q At the same time on the same Examiner's docket on June 3rd of 1987 was there another Marathon case? 24 25 A Yes, sir, there was.

8 1 0 And what was that case? That was, I believe, Case Number 2 À 9146, where we were at -- while we were trying to amend the spac-3 4 ing rules to 80 acres we were also going to amend the August 21st, 1987, pooling order to pool all interest in the addi-5 tional 40-acre tract, being the southwest southeast quarter 6 of Section 14. 7 Q When we talk about the additional 40-acre 8 tract, what interest did Mr. Davidson, or does Mr. Davidson, 9 have in the additional 40-acre tract? 10 A Mr. Davidson has a 38.125 percent working 11 interest in the southwest southeast quarter of Section 14. 12 Q Same percentage for either of the for-13 ties? 14 Yes, sir, that's correct. 15 A 16 0 What then occurred, Mr. Daniels? 17 Α On August 18th, 1987, by Division Order 18 R-8497, the Oil Conservation Division approved temporary 19 pool rules for the North Knowles Devonian Pool and said 20 rules were to be spaced on 80-acre -- wells were to be spaced on 80-acre spacing units. 21 22 Subsequent to this order, on October -excuse me, September 18th, 1987, by Division Order R-8282-B 23 the Division denied Marathon's application to amend the ori-24 25 ginal 40-acre pooling order and required that Marathon at-

9 1 tempt to work out a voluntary agreement with Mr. Davidson 2 concerning his interest in the southwest southeast quarter 3 of Section 14. 4 Have you attempted to negotiate with Mr. Q 5 Davidson a voluntary agreement subsequent to that last or-6 der? 7 sir, we did, on -- by letter dated A Yes, 8 October 19th we requested Mr. Davidson -- we had an offer to 9 Mr. Davidson (unclear.) 10 Let me direct your attention now to Exhi-0 11 bit Number Two and have you identify that. 12 Okay. Exhibit Number Two is Marathon's А 13 application to -- to reopen Division Case No. 9146 and amend 14 Division Order, the previous Division Order R-8282 and R-15 8282-A. We were wanting this hearing to be scheduled on 16 January 20th, 1988. 17 And what is Exhibit Three? O 18 Α Exhibit Three is our application to the 19 Oil Conservation Division requesting --20 0 For the case today? 21 Α Yes, sir, for this case today. 22 And Exhibit Number Four? Q 23 Α Exhibit Number Four is the order of the 24 Division which was issued on September 18th, 1987. 25 Q And this is the order that required Marathon to attempt to secure Mr. Davidson's voluntary agreement
before pooling his interest in the additional 40-acre tract.
A Yes, sir, that's what it is.
Q And Exhibit Number Five.
A Okay, Exhibit Number Five is a return
receipt in which Mr. Davidson was properly notified of

7 | today's hearing.

8 Q All right. Before we talk about Exhibit
9 Number Six, describe for the Examiner what Marathon's
10 proposal was to Mr. Davidson for his participation of the
11 additional 40-acre interest in the completed and producing
12 well.

A Okay. What we requested to Mr. Davidson 13 owns a 38.125 percent interest in the south was he half 14 southeast quarter of Section 14, being 80 acres. The 15 southeast southeast guarter is force pooled and we were 16 giving him the opportunity to contribute his interest in the 17 southwest southeast of 14 and participate in the Benson No. 18 1 Well, which was a well which was completed and was 19 presently -- is presently producing. This interest would 20 provide Mr. Davidson with approximately a 19.0625 percent 21 working interest in the well. 22

23 Q All right, let's go through the
24 methodology of determining what Mr. Davidson's contribution
25 in dollars would have been for his interest in the addition-

10

11 al 40-acre tract. 1 Now, as to the original 40-acre tract, 2 there's no adjustment being made except to divide that 3 interest in half. 4 That's correct. А 5 All right, what is your best estimate of Q 6 the actual well cost for the Benson Well? 7 Approximately \$1,151,100. A 8 How did you calculate based upon that 9 Q well cost what Mr. Davidson's contribution would have been 10 for participation of his interest in the additional 40-acre 11 tract? 12 А I took that, that well cost figure and 13 multiplied it times his interest in the 80-acre proration 14 unit, which would have been 19.0625 percent. 15 Q All right. In my own simple way, let me 16 show you how I did it and you see if I've done it --17 18 A Okay. -- another way that's equally correct. 19 Q Can you simply take the \$1,151,000, divide that in half and 20 then take that number and multiply it by 38.125 percent? 21 A Yes, sir, that would be -- would give you 22 the same figure of 219,400. 23 And that is -- that represents in your 24 Q 25 opinion the contribution Mr. Davidson should make for his

12 interest in the additional 40-acre tract. 1 2 А Yes, sir. And these were based upon Q the actual 3 costs of the Benson No. 1 Well? 4 Yes, sir, they were. 5 Α Q And have you sought to escalate those 6 7 costs or adjust them? 8 Α No, sir, we have not. Had you detailed to Mr. Davidson the pro-9 0 10 posal that we have just discussed? Yes, sir, I did. 11 А And you submitted that to him as a 12 0 let-13 ter? On October 19th, 1987, which 14 А Yes, sir. 15 is, I believe, Exhibit Number Six, we requested, we made this offer to Mr. Davidson and we also would, in order to 16 17 help make his decision as to participate, we would afford 18 him the opportunity to review production data from the Ben-19 son No. 1 Well. 20 What, if any, response did you receive 0 21 from Mr. Davidson with regards to your October 19th letter? 22 Mr. Davidson responded by letter dated А October 29th, 1987. He advised Marathon that he is inter-23 24 ested in selling his 38.125 percents leasehold interest in 25 the southwest quarter southeast quarter of 14 for \$200 per

BAROM FORM 25C16P3 TOLL FREE IN CALIFORNIA 800-227-2434 NATIONWIDE 800-227-0120

13 1 acre and he would assign Marathon a 75 percent net revenue 2 interest leasehold. 3 What this would be, the leasehold which 4 he presently is in possession of has a -- provides for a 5 1/8th royalty and therefor he would be reserving an 1/8th 6 royalty himself and delivering that 75 percent net revenue 7 interest lease. 8 0 Davidson's response is set forth as Mr. 9 Exhibit Number Seven? 10 Yes, sir, that is correct. А 11 Okay, and let's look at Exhibit Number Q 12 Eight. What is that? 13 Exhibit Number Eight is in his previous А 14 letter on October the 29th he neglected to put \$200 per ac-15 re. He had originally, in his October 29th letter he ad-16 vised -- wrote for \$200 only, and he just clarified that of-17 fer as to \$200 per acre. 18 С Okay. Did Marathon respond to Mr. David-19 son's counter-proposal? 20 Α sir. Upon review of Mr. Davidson's Yes, 21 proposal Marathon, by letter dated November 23rd, 1987, ad-22 vised that his terms were unacceptable to Marathon. 23 We did advise Mr. Davidson, however, that 24 we would still provide him the opportunity to participate as 25 to our previous October 19th offer, that being participate

with approximately a 19 percent working interest in the well. 1 Q As to his interest in the additional 40-2 acre tract, would Mr. Davidson be making his decision about 3 contributing the \$219,000 plus based upon a completed produ-4 cing well in which he had production information? 5 Yes, sir. А 6 0 Do you believe your proposal 7 to Mr. Davidson represents a fair and reasonable offer for partici-8 pation in the well on a voluntary basis? 9 А Yes, sir, I do. 10 Q What, if any, response did you receive 11 from Mr. Davidson subsequent to your November 23rd letter? 12 A In that letter we requested that Mr. 13 Davidson respond by December 7th; however, we did not 14 receive any reply and on December the 15th I called Mr. David-15 (unclear) and we advised that he was not interested 16 son in contributing his interest in the southwest southeast to 17 --18 and participate in the Benson No. 1 Well. The notes that you made of that conversa-19 0 tion at a time when recent to that conversation are 20 set forth on Exhibit Number Ten? 21 Α Yes, sir, that is correct. 22 Q Would you identify and describe for 23 us, Mr. Daniels, Exhibit Number Eleven? 24 Exhibit Number Eleven is a letter dated 25 A

January 12th, 1988, from Mr. Davidson's attorney, Mr. Chad Dickerson, and he was advising Mr. Kellahin that Mr. Davidson does not intend to enter an appearance on the captioned hearing for -- set for today's date, and that's what that letter states.

Q Do you have an opinion, Mr. Daniels as to
whether or not the actual well costs as booked by Marathon,
the \$1,151,000 represents reasonable and fair well costs?

9 A Yes, sir, they are reasonable and fair.
10 Q Was the subject matter of the well costs
11 an issue before the Division examiners at one time in the
12 past?

A Yes, sir, it was. On August 12th, 1987,
Mr. Davidson, under Case Number 9168, advised that he objected to the cost of the well and therefor a hearing was held
before the OCD concerning that.

17 Q Did Mr. Davidson subsequently withdraw
18 his objection to the reasonable well costs dispute?

19 A Yes, sir, he did on -- pursuant to an or20 der dated November 9th, 1987. The Oil Conservation Division
21 entered Division Order No. 8282-C, which dismissed Mr.
22 Davidson's reasonable well cost hearing.

23 Q Do you have a recommendation to the Exa24 miner as to the overhead charges that ought to be assessed
25 against Mr. Davidson's interest in the additional 40-acre

ARON FORM 25CIGP3 TOLL FAEE IN CALIFORNIA 800-227-2434 NATIONWIDE 800-227-0120

16 1 tract? 2 Yes, sir, I do. That -- those figures А 3 would be \$4,598 for a drilling well rate and \$459 for a com-4 pleted well rate, and I would request a 200 percent risk 5 penalty. 6 C What's your basis for that request, Mr. 7 Daniels? 8 Mr. Davidson would feel that -- or I feel А 9 that we -- Marathon took all the risk in drilling the well 10 and I don't feel that those -- the risk involved in the 11 drilling of that well has decreased any to this point. 12 Do you recommend to the Examiner that Q 13 notwithstanding Mr. Davidson's apparent lack of interest in 14 participating his interest in the additional 40-acre tract, 15 that he be provided an additional election period in which 16 to pay his \$219,400? 17 Let me just go back, first, and say Mr. A 18 Davidson was afforded this opportunity after the de novo 19 hearing and he elected not to do so. 20 That was on the original 40-acre inter-0 21 est. 22 A That was on the original 40-acre, yes, 23 sir. In our subsequent letters and offers made to Mr. 24 Davidson in an effort to get him to participate in the well, 25 and he has reponded negatively, then, you know, I don't feel

that he will, you know, I don't really feel that it's 1 needed; however, we would certainly have no objection should 2 the Examiner request it. 3 Do you have any comments or observations 0 about the possibility of the absence of a penalty factor on 5 Davidson's additional interest in the 40-acre tract and Mr. 6 whether or not that would be fair and equitable to Marathon? 7 А I feel that if we were to lessen the 8 penalty it would be an injustice to Marathon. 9 Do you have an opinion as to whether Q or 10 not the lack of a penalty on that interest would constitute 11 a windfall to Mr. Davidson? 12 Yes, sir, it would. А 13 In what way, Mr. Daniels? Q 14 He would be able to participate in the Α 15 well without any -- any penalty. 16 Marathon then would recover his interest 17 Q out of production? 18 A Yes. 19 And then upon recovery, you're also seek-Q 20 ing to recover an additional 200 percent penalty? 21 Yes, sir, that is correct. 22 А Q And that is to compensate Marathon for 23 carrying Mr. Davidson's interest? 24 25 А Yes, sir.

BARON FORM 25CIGP3 TOLL FREE IN CALIFORNIA 800-227-2434 NATIONWIDE 800-227-0120

17

18 Q And he would have an opportunity to avoid ۱ that penalty by contributing the \$219,000. 2 Α That's right. 3 Do you have anything else, Mr. Daniels? Q No, sir, not at this time. Α 5 MR. KELLAHIN: That concludes 6 my examination of Mr. Daniels, Mr. Catanach. 7 We would move the introduction 8 at this time of Marathon Exhibits One through Eleven. 9 MR. CATANACH: Exhibits One 10 through Eleven will be admitted into evidence. 11 12 CROSS EXAMINATION 13 BY MR. CATANACH: 14 Daniels, referring to Exhibit Number 15 0 Mr. Seven, which is Davidson's counter-offer, is this -- is this 16 a type of offer that Marathon would normally refuse? 17 18 Α Yes, sir. We review this. This would be, certainly be an offer which we would review. 19 MR. KELLAHIN: No, he said re-20 fuse. 21 A Refuse, oh. In looking at the leasehold 22 price in this area, his -- the bonus consideration which he 23 was requesting is slightly higher than what we'd pay for in 24 25 this area, and we felt that our original offer was fair and

reasonable and that that was the best offer which Marathon 1 would make. 2 0 So you don't think that Mr. Davidson's 3 offer was fair and reasonable? 4 A Not in this particular situation, no, 5 sir. 6 MR. CATANACH: Mr. Kellahin, 7 was Mr. Dickerson aware that the hearing was today? In his 8 letter he says February 20th. It's not just a mistake, or 9 do you know? 10 MR. KELLAHIN: It's a typo, Mr. 11 You'll note on Exhibit Number Two that Mr. Examiner. 12 Dickerson was sent a copy of the original application of the 13 hearing. His copy was mailed to him on December 22nd and I 14 think he simply misspoke. 15 I talked to him on the phone 16 last Friday and he was aware of the hearing today. 17 18 MR. CATANACH: Okay, that's all the questions I have of the witness. He may be excused. 19 Is there anything further in 20 Case 9146? 21 MR. KELLAHIN: No, sir. 22 MR. CATANACH: If not, it will 23 24 be taken under advisement. 25 (Hearing concluded.)

20 1 CERTIFICATE 2 3 4 I, SALLY W. BOYD, C.S.R., DO HEREBY 5 CERTIFY that the foregoing Transcript of Hearing before the 6 Oil Conservation Division (Commission) was reported by me; 7 that the said transcript if a full, true, and correct record of the hearing, prepared by me to the best of my ability. 8 9 10 11 Salley W. Boyd CSR 12 13 14 15 I do hereby control that the foregoing is 16 a complete some of the proceedings in the Examiner Luaring of Case No. 9146 17 neard by me on\_\_\_\_ Jan 20 19 88 18 atanach , Examiner 19 Oil Conservation Division 20 21 22 23 24 25