## STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION 1 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 2 8 May 1985 3 EXAMINER HEARING 5 6 IN THE MATTER OF: 7 Application of Earle M. Craig, Jr., CASE 8 Corporation for an unorthodox gas 8590 well location, Eddy County, New 9 Mexico. 10 11 12 BEFORE: Gilbert P. Quintana, Examiner 13 14 TRANSCRIPT OF HEARING 15 16 APPEARANCES 17 18 19 For the Oil Conservation Jeff Taylor 20 Division: Attorney at Law

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3 ì MR. QUINTANA: We'll call next 2 Case 8590. 3 MR. TAYLOR: The application of Earle M. Craig, Junior, Corporation for an unorthodox gas 5 well location, Eddy County, New Mexico. 6 MR. DAVENPORT: Mr. Hearing Ex-7 aminer, I'm Dave Davenport of the Rodey Law Firm here in 8 Santa Fe, and we're representing Earle M. Craig, Jr., Corporation. 10 I have two witnesses today. 11 MR. QUINTANA: Are there other 12 appearances in Case 8590? 13 If not, gentlemen, please be 14 sworn in at this time. 15 16 (Witnesses sworn.) 17 18 STEVEN FOY, 19 being called as a witness and being duly sworn upon his 20 oath, testified as follow, to-wit: 21 22 DIRECT EXAMINATION 23

24 BY MR. DAVENPORT:

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Q Will you state your name, sir?

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Α
                      Steven Foy; Earle Craig, Junior, Corpora-
1
   tion.
2
                       I'm a landman for that company.
3
            Q
                      Have you previously testified before this
4
   Commission?
5
            Α
                      Yes, I have.
6
7
            0
                       And for the benefit of the examiner would
       briefly relate your educational and your professional
   you
8
   experience?
            Α
                        I graduated in 1979 from the University
10
   of Texas with a BBA in petroleum land management; have been
11
   employed since then by Mobil Oil Corporation, Hinkle Explor-
12
   ation, Limited.
13
                              an independent and then I
                       I was
14
   would bring me to my present employment with Earle
15
                                                           Craig
   Corporation.
16
            Q
                      Would you state, sir, what is sought by
17
   your application today, the company's application today?
18
            Α
                      We are seeking a nonstandard location.
19
20
            0
                      Where is that?
                            is 1970 from the north and 670 from
21
   the east line of Section 19, Township 26 South,
22
                                                       Range
                                                              31
   East, Eddy County.
23
24
            Q
                        In
                            front of you is a document we've
   marked as Exhibit Number One. The third page of that con-
25
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tains a map. Does that map reflect the proposed proration 1 unit and any allowable? 2 Yes, it does. Α 3 Q Okay. What is your proposed objective in this unit, both the formation and the depth you are planning 5 to drill to? 7 The Wolfcamp formation at the approximate depth of 12,800 feet. 8 MR. QUINTANA: Excuse me for a 9 second, counselor. Are the exhibits in the case file the 10 same as we're talking about there? 11 MR. DAVENPORT: I will hand you 12 a set of them, Mr. Examiner. This is Number One. 13 The other witness will bring 14 the other exhibits. 15 MR. QUINTANA: This is Exhibit 16 Number One? 17 18 MR. DAVENPORT: That's correct. Have you determined the ownership of the 0 19 offsetting leases? 20 Yes, we have. 21 And have you prepared or is there 22 attached as part of Exhibit Number One a document which re-23 flects that ownership? 24 Yes, there is. Attached to our applica-25 Α

tion of 14 March to the State of New Mexico is this 1 showing the offsetting tracts, and attached to that is a 2 key, a numbered key, which shows for each tract who is the 3 offset operator. 0 Does the proposed unit offset an existing unit? Yes, it does. 7 Α And who is the operator of that unit? Q Craig is now the operator of the Phantom Α Draw Unit. 10 Who are the other interest owners? 0 11 The other working interest owners in Α 12 unit are Sun, Union Oil of California, Southland Royalty, 13 Hamilton Brothers, and HNG. I believe that's everyone. 14 That is everyone. 15 Let me ask you, sir, have you contacted Q 16 or notified all of the offsetting operators to the proposed 17 unorthodox location? 18 Yes, we have. 19 20 Q And how did you go about doing that? sent them notice, certified mail, 21 22 simultaneously with submission of this application to the Oil Conservation Division. 23 So you sent them a copy of what is marked 24 0 25 Exhibit Number One?

Yes, we -- we did. Α 1 Q Okay, and in addition to sending letters 2 to these folks, did you -- did you contact some of them by 3 telephone? Yes, we did. We -- we also requested 5 written waivers in addition to giving them notice, even though we knew that we're not required to do so, and we got 7 written waivers from most everybody and we got verbal 8 waivers from a few others. Q Let me ask you when it was that you sent 10 these letters, this notification to these folks? 11 Α We sent it -- we sent letters to them on 12 the 12th of March. 13 Okay, were these sent certified mail with 14 return receipt requested? 15 Α Yes. 16 Q And did you receive the return receipts 17 from everybody? 18 Yes, we did. 19 20 And have any of the offsetting operators objected to the proposed unorthodox location? 21 No, they have not. 22 Α Did your application to the Commission, 23 24 which I think is marked as Exhibit Number One, state that you gave this notification to the offsetting operators? 25

Yes, it does. A 1 Okay. Q 2 DAVENPORT: At this time I MR. 3 would offer Exhibit Number One into evidence and have no further questions of this witness. MR. QUINTANA: Exhibit One will 6 be entered as evidence. 7 8 CROSS EXAMINATION 9 BY MR. QUINTANA: 10 Q Mr. Foy, do you have copies of these 11 return receipts that you received from the offset operators? 12 Not with me but they can be furnished to 13 you. 14 Q You may provide us Xeroxed copies or if 15 you want to let go of the originals, whatever. 16 MR. DAVENPORT: Okay, we'll 17 provide them. 18 MR. QUINTANA: I have no 19 further questions of the witness. 20 He may be excused. 21 22 WAYNE R. GIBSON, 23 being called as a witness and being duly sworn upon his 24 oath, testified as follows, to-wit: 25

## DIRECT EXAMINATION

3 | BY MR. DAVENPORT:

Q Will you state your name, sir?

A Wayne R. Gibson, G-I-B-S-O-N.

Q And who are you employed by and what's your position?

A I'm employed by the Earle M. Craig, Jr., Corporation in Midland, Texas.

My position is Manager of Geological and Geophysics.

Q Have you previously testified before this Commission, sir?

A Yes, I have.

Q And would you relate your educational and professional experience for the benefit of the Hearing Officer?

A I have a Bachelor's degree with a Master's in -- with a major in geological science from Susquehanna University in Pennsylvania; a Master's degree from the University of Wisconsin conferred in 1971, with a major in geology, and I've been employed, first by Texaco as a geologist, exploration and development, until 1979. That's from 1971 to 1979.

And from mid-1979 to present with Earle

M. Craig, Jr., Corporation, as a geologist and then Geological/Geophysical Manager.

I've been engaged in oil and gas exploration and exploitation since 1971 and I'm a member of the American Association of Petroleum Geologists and certified by that organization.

Also the Society of Professional Well Log Analysts and Society of Economic Paleontologists and Minerologists.

Q Would you relate to us why this unorthodox location is being sought in this case?

A We interpret a very narrow commercial reservoir trend to extend in a basically north/south direction in the zone that we've identified on the cross section as the main pay, which produces in our Phantom Draw Unit No. 1 Well, and we want to minimize our risk of an uneconomic, sub-economic location by deviating from that trend, that relatively linear, narrow, north/south trend.

Q Have you brought with you today some exhibits that were either prepared by you or prepared under your supervision?

A They were prepared under my supervision.

Q And would you go through them fairly briefly and explain what they -- what is shown on each of them?

Starting with Exhibit Number Two, if you would.

A On Exhibit Number Two, or Exhibit Number Two is a cross section with well logs scaled at 5 inches to 100 feet that trends from the Damsite in Red Bluff Wolfcamp Pools in Texas, Loving County, to the Phantom Draw Field, which is also producing from the same zone in Eddy County, New Mexico.

There are four wells represented on the cross section. The cross section is hung on a stratigraphic datum and in that we attempted to show the different productive zones and potentially productive zones and we focused in on one which we call the main pay, which is the zone which is probably contributing most of the gas in the Phantom Draw Unit.

It's Wolfcampian in age and it's a detrital limestone carbonate.

We're trying to compare, we're trying to use the well control, those two logs, to predict -- and other geologic data -- to predict the geologic reservoir trend.

We're interpreting the reservoir trend or the width of the reservoir trend based on analogy with a nearby field. That's why the cross section extends to the nearby field in Texas, the Damsite Red Bluff Field. Q And is there anything else that is of importance to us that's reflected by Exhibit Number Two?

A We have tried to categorize the clean limestone pay based on a gamma ray measurement and a porosity measurement and we are using 80 percent clean lime, or less than 20 percent clay or shale as one cutoff parameter and 6 percent, or greater, porosity as the second cutoff, and based on those cutoffs, we interpret the producing well to have 28 feet of reservoir in the main pay zone and we interpret the nonproductive well to have about 14 feet of carbonate pay.

The nonproductive well was plugged because it could establish gas rates that were noncommercial.

Q What about Exhibit Number Three?

A Exhibit Number Three is a reservoir Isolith of the same main pay zone identified on the cross section. The width of the trend is based on analogy with the Red Bluff and the Damsite Fields in Texas, and the trend of the -- the reservoir trend is based on projecting it northward towards the Cotton Draw, Big Sinks Fields, and southward to the Damsite Field.

That trend is marked with a limit of economic production based on the comparison of the Texas Pacific, now Craig, Phantom Draw Unit No. 1, and the Texas Pacific Phantom Draw Unit No. 2 Well, wherein the one with only

14 feet of reservoir, the Texas Pacific No. 2, was noncom-1 mercial and the Texas Pacific No. 1, now Craig, operated by 2 Craig, is commercial. 3 We seek a location that will give us the 4 maximum amount of commercial permeable pay. 5 What is the nearest well that's producing 6 from this formation, nearest to the proposed unit? 7 To the proposed location, the nearest Α 8 productive from the same zone is in Section it's the Craig, previously Sun and Texas Pacific, Phantom 10 Draw Unit Federal. 11 And that's reflected on Exhibit Number 12 Three? 13 Α That's correct. 14 All right. Is there anything else about 15 Exhibit Number Three that's of importance to us today? 16 If not, I'd turn to Exhibit Number Four. 17 Α Let's go to Four. Exhibit Number Four is 18 provided for geologic information and doesn't materially 19 support our application for nonstandard location approval. 20 It is a structure map on the top of the 21 Wolfcamp pay, that is, on the top -- let me retract that. 22 On the top of the Wolfcamp pay formation, not on the top of 23 the Wolfcamp reservoir, but it's representative of the top 24

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of the Wolfcamp main pay.

1	And the structure map shows the proposed		
2	location, standard or nonstandard, would be up dip to pro-		
3	duction in the Phantom Draw Unit Federal No. 1.		
4	Q Let me ask you whether it's where in		
5	your opinion it's likely that there would be significant		
6	drainage competition with the currently producing offsetting		
7	wells if the location is granted?		
8	A The current producer has produced for ap-		
9	proximately ten years and is currently producing at a rate		
10	of about 300 MCF of gas per day, and in my opinion, signifi-		
11	cant drainage competition is not likely.		
12	Q If the application were not granted,		
13	would a well at a standard location have a greater probabil-		
14	ity of being dry?		
15	A A well at the standard location would		
16	have a greater probability of being nonproductive.		
17	Q And would this be economic waste?		
18	A Yes, it would.		
	Q And if no well were drilled, is there a		
19	distinct possibility of unrecovered production?		
20			
21	A Yes, it would. There is a distinct pos-		
22	sibility and we would like to see a field developed in		
23	southern New Mexico similar to the Red Bluff Damsite Field		
24	in northern Loving County, Texas.		
25	Q So if if there were no well drilled,		

would this be economic waste, as well? 1 Yes, it would. Α 2 Q Okay. In your opinion would the granting 3 the application be in the best interest of conservation and the prevention of waste? Α In my opinion it would. 6 7 MR. DAVENPORT: At this time we would offer Exhibits Two through Four. MR. QUINTANA: 9 Exhibits Two through Four will be accepted as evidence. 10 MR. DAVENPORT: 11 Okay, and have no further questions of this witness. 12 MR. QUINTANA: How do you pro-13 nounce your name again? 14 15 Α Wayne, W-A-Y-N-E, Gibson. MR. QUINTANA: Gibson. 16 17 18 CROSS EXAMINATION BY MR. QUINTANA: 19 20 Mr. Gibson, you're unorthodox in the eastern -- from the east line of that 21 section, you 22 stated that Craig Corporation operates the Phantom Draw Unit to the east in Section 20? 23 That's correct. 24 Α 25 Q Mr. Foy stated that. You don't believe

that there'll be substantial drainage from Section 20? 1 I don't believe that there will be sub-2 stantial drainage competition with the first well and 3 don't have a good handle on how much drainage that there will be in Section 20. However, I might point out, as currently, 6 as my current understanding, the Texas Pacific Phantom Draw 7 is producing from a proration unit which is composed of the west half of Section 20. I believe that to be correct, and so that well is -- that well is -- that well is the prime 10 and sole drainer of Section -- the west half of Section 20. 11 MR. QUINTANA: I have No further 12 questions. 13 Are there other questions 14 of the witness? 15 If not, he may be excused. 16 MR. DAVENPORT: Thank you. 17 18 MR. QUINTANA: Anything further in Case 8590? 19 20 MR. DAVENPORT: That concludes our presentation. 21 22 MR. QUINTANA: In that case, if there is nothing further, Case 8590 will be taken under ad-23 visement. 25 MR. DAVENPORT: Thank you.

(Hearing concluded.)

## CERTIFICATE

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

hearing, prepared by me to the best of my ability.

Sarry W. Boyd CSR

I do hereby certify that the foregoing is a complete material of the proceedings in the Examiner hearing of Case vo. 8590 heard by the on May 8 1985.

Oil Conservation Division