

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY )  
THE OIL CONSERVATION DIVISION FOR THE )  
PURPOSE OF CONSIDERING: )

CASE NO. 13,300

APPLICATION OF HEC PETROLEUM, INC., TO )  
AMEND THE SPECIAL RULES AND REGULATIONS )  
FOR THE CINTA ROJA-MORROW GAS POOL, LEA )  
COUNTY, NEW MEXICO )

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

RECEIVED

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

AUG 5 2004

July 22nd, 2004

Santa Fe, New Mexico

Oil Conservation Division  
1220 S. St. Francis Drive  
Santa Fe, NM 87505

This matter came on for hearing before the New Mexico Oil Conservation Division, MICHAEL E. STOGNER, Hearing Examiner, on Thursday, July 22nd, 2004, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South Saint Francis Drive, Room 102, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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July 22nd, 2004  
 Examiner Hearing  
 CASE NO. 13,300

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\* \* \*

## A P P E A R A N C E S

FOR THE APPLICANT:

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Santa Fe, New Mexico 87504

FOR ROBERT LANDRETH:

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Santa Fe, New Mexico 87501  
By: J. SCOTT HALL

\* \* \*

1 WHEREUPON, the following proceedings were had at  
2 9:23 a.m.:

3 EXAMINER STOGNER: At this time I'll call Case  
4 Number 13,300. This is the Application of HEC Petroleum,  
5 Inc., to amend the special rules and regulations for the  
6 Cinta Roja-Morrow Gas Pool in Lea County, New Mexico.

7 Call for appearances.

8 MR. BRUCE: Mr. Examiner, Jim Bruce of Santa Fe,  
9 representing the Applicant. I have two witnesses.

10 MR. HALL: Mr. Examiner, Scott Hall, Miller  
11 Stratvert, P.A., of Santa Fe, appearing on behalf of Robert  
12 Landreth.

13 I have no witnesses.

14 EXAMINER STOGNER: Any other appearances?

15 Will the witnesses please stand to be sworn?

16 (Thereupon, the witnesses were sworn.)

17 EXAMINER STOGNER: Mr. Bruce, Mr. Hall, is there  
18 any need for opening statements at this time?

19 MR. HALL: I don't believe so.

20 MR. BRUCE: (Shakes head)

21 EXAMINER STOGNER: Okay, in that case you may  
22 continue, Mr. Bruce.

23 MR. BRUCE: Mr. Examiner, our first witness is  
24 Robert Ready, who was previously qualified as an expert  
25 petroleum landman, if the record could so reflect.

1 EXAMINER STOGNER: This is the same HEC that's  
2 still a subsidiary company of Pure Resources?

3 MR. BRUCE: Yes, sir.

4 EXAMINER STOGNER: Let the record show that Mr.  
5 Robert Ready is still sworn and you're under oath at this  
6 point.

7 Mr. Bruce?

8 ROBERT READY,  
9 the witness herein, after having been first duly sworn upon  
10 his oath, was examined and testified as follows:

11 DIRECT EXAMINATION

12 BY MR. BRUCE:

13 Q. And Mr. Ready, you are familiar with the land  
14 matters in this Application, are you not?

15 A. Yes, I am.

16 Q. What is Exhibit 1?

17 A. Exhibit 1 is a plat of the -- outlining the Cinta  
18 Roja-Morrow Gas Pool and indicating the wells in that pool.

19 Q. Okay.

20 A. It also indicates the operators.

21 Q. And there's only four wells in the pool?

22 A. That's correct.

23 Q. Okay. What are the current rules in the Cinta  
24 Roja-Morrow Gas Pool?

25 A. The current rules are 640-are spacing, one well

1 per section, wells no closer than 1650 feet to any outer  
2 boundary of a well unit and no closer than 330 feet to a  
3 quarter quarter section line.

4 Q. And how does HEC seek to amend those Rules?

5 A. We would retain 640-acre spacing, amend the Rules  
6 to provide for four wells per section, that the wells be  
7 located no closer than 660 feet to a quarter section line  
8 and no closer than 10 feet to a quarter quarter section  
9 line.

10 Q. One thing that actually we didn't go over before  
11 the hearing, Mr. Ready, but all of these wells, the four  
12 wells in the pool, appear to be at orthodox locations; is  
13 that correct?

14 A. That's my understanding.

15 Q. And so as of -- starting from this point, nobody  
16 would really have an advantage upon anybody else in the  
17 pool, because if well location rules are changed, everybody  
18 has an equal opportunity to go drill at those new  
19 locations; is that correct?

20 A. That's correct, we seek to amend the rules for  
21 the entire pool, and the wells are orthodox.

22 Q. So basically you're -- other than retaining the  
23 640-acre spacing, you're seeking to equalize the pool rules  
24 with existing statewide rules for Morrow wells?

25 A. That is correct.

1 Q. And were all the operators in the pool notified  
2 of this hearing?

3 A. Yes, they were.

4 Q. And is Exhibit 2 the affidavit of notice?

5 A. Yes, it is.

6 Q. Have any operators other than Mr. Landreth  
7 expressed any opinion, pro or con, regarding this  
8 Application?

9 A. The only other response was from Devon Petroleum,  
10 who supported this. They are a nonoperator in the area.

11 Q. Yeah --

12 EXAMINER STOGNER: I'm sorry, who?

13 THE WITNESS: Devon.

14 MR. BRUCE: They're not one of the operators, Mr.  
15 Examiner --

16 THE WITNESS: They're a nonoperator.

17 MR. BRUCE: -- but they own interest in this  
18 area.

19 EXAMINER STOGNER: Okay.

20 THE WITNESS: Correct.

21 Q. (By Mr. Bruce) Were Exhibits 1 and 2 prepared by  
22 you or compiled from company business records?

23 A. Yes.

24 Q. And in your opinion is the granting of this  
25 Application in the interest of conservation and the

1 prevention of waste?

2 A. Yes.

3 MR. BRUCE: Mr. Examiner, I'd move the admission  
4 of HEC Exhibits 1 and 2.

5 EXAMINER STOGNER: Any objection?

6 MR. HALL: No objection.

7 EXAMINER STOGNER: Exhibits 1 and 2 will be  
8 admitted into evidence.

9 EXAMINATION

10 BY EXAMINER STOGNER:

11 Q. In referring to Exhibit Number 1, does this  
12 denote the current pool boundaries?

13 A. That's correct, it's four sections outlined.

14 Q. Okay, and you have four red dots, and they're all  
15 currently producing, as you know, at this point --

16 A. Yes.

17 Q. -- or do I need to address that --

18 A. Let's address that with the engineer.

19 Q. Okay, let's see. As far as the land issues, are  
20 there -- I can't hardly make it out. Are these all federal  
21 leases involved in these four sections, or is there some  
22 fee lands and state lands?

23 A. There are fee lands in here. It's a mix of  
24 federal and fee lands.

25 Q. Federal and fee.



1           A.    I'm not aware of any state lands in here.

2           MR. BRUCE:   Mr. Examiner, the southwest quarter  
3 of 10 may be a state lease.

4           THE WITNESS:   I'm sorry, that's --

5           EXAMINER STOGNER:   Okay.

6           THE WITNESS:   -- that's correct.   It's pretty  
7 obvious.

8           EXAMINER STOGNER:   I just wanted to -- I mean,  
9 they sent you up here to do land issues, might as well --

10          THE WITNESS:   I don't mind.

11          EXAMINER STOGNER:   With that, I have no other  
12 questions of Mr. Ready.   You may be excused.

13          THE WITNESS:   Thank you.

14          MR. HALL:   Does Mr. Hall?

15          EXAMINER STOGNER:   Oh, I'm sorry.   Mr. Hall,  
16 plumb forgot about you.   Silly me.

17          MR. HALL:   That's okay, Mr. Stogner.

18          EXAMINER STOGNER:   Any questions?

19          MR. HALL:   Briefly, Mr. Stogner.

20                       CROSS-EXAMINATION

21   BY MR. HALL:

22           Q.    Mr. Ready, do we know how the interests in each  
23 of the four sections were consolidated and dedicated to the  
24 four wells in the pool?   Did we investigate that?

25           A.    I have not investigated that in every section,

1 no.

2 Q. Okay. Do we know if any of those -- So you don't  
3 know whether any of those interests were consolidated  
4 pursuant to a compulsory pooling order?

5 A. I do not.

6 Q. With respect to your Section 8, those interests  
7 are consolidated under an operating agreement; is that  
8 right?

9 A. That's correct.

10 Q. At the time the operating agreement for Section 8  
11 was signed up, wasn't it premised on the existing pool  
12 rules at the time?

13 A. I was not party to that but would assume that it  
14 was.

15 Q. Okay. Were all the working interest owners in  
16 Section 8 notified of this Application?

17 A. The operators of the pool were notified.

18 Q. Notified operators only --

19 A. Correct.

20 Q. -- in each of the sections?

21 A. That's correct.

22 Q. Mr. Ready, I understand that HEC has recently  
23 proposed a well in the northeast quarter of Section 8; is  
24 that correct?

25 A. Yes.

1 Q. And what's the footage location proposed for that  
2 well?

3 A. I do not have the footage location. The other  
4 witness can testify to that.

5 Q. Okay. There should be no dispute, then, that  
6 that well is being proposed under the current existing pool  
7 rules; is that correct?

8 A. That well is being proposed in contemplation of  
9 amending the pool rules.

10 Q. All right, but at the time it is proposed, the  
11 time it was proposed, rules have not been amended yet? No  
12 dispute about that, correct?

13 A. That's correct.

14 Q. Prior to proposing that well and sending out your  
15 AFE, did HEC poll all the interest owners in Section 8 to  
16 see whether they would have approved of that proposed  
17 location?

18 A. There was no polling, as you call it. There was  
19 a ballot sent to the parties.

20 Q. I see. And did that ballot also address  
21 downspacing to four wells per section?

22 A. Not specifically in the ballot, no.

23 Q. Okay, did you attempt to ascertain the sentiment  
24 of the interest owners, the other working interest owners,  
25 in Section 8 about your proposed rule change?

1           A.    I would state that sentiment was expressed by the  
2 elections to the ballot of all parties to participate in  
3 the well, with the exception of Bob Landreth, who has not  
4 responded.

5                   We have also had verbal communication from other  
6 parties who are working interest owners in that section,  
7 requesting -- or supporting the operation, and requesting  
8 the name of any party that might not consent because they  
9 would desire to pick up their interest.

10          Q.    All right. And you say Mr. Landreth hasn't  
11 responded. HEC has had discussions with Mr. Landreth,  
12 hasn't it?

13          A.    He has not formally responded to the AFE. We  
14 have had discussions and meetings with him in an effort to  
15 address his questions.

16          Q.    Are you contemplating drilling two additional  
17 wells after your second well in Section 8?

18          A.    There is no plan to do that immediately. The  
19 plan is to provide ourselves as operator the opportunity to  
20 enjoy the spacing that is provided under current statewide  
21 rules, protect ourselves from drainage, and economics would  
22 govern any additional drilling.

23          Q.    Is the drilling of wells 3 and 4 contingent on  
24 the success of well 2 in Section 8?

25          A.    Certainly there will be relationships. I don't

1 know that direct contingency is the proper way to say it.

2 Q. Could you explain to the Hearing Examiner and to  
3 me why you're not proposing two-well-per-640 density  
4 development in this case?

5 A. We feel that given the nature of the pools -- I  
6 think this will be discussed later, but given the nature of  
7 the prior 640-acre pools, the number of those that have  
8 been amended to provide for essentially current statewide  
9 rules, the existence of an offset well within 660 feet of  
10 the pool, that four wells per section is an appropriate  
11 order to be governed by the economics of the wells.

12 MR. HALL: No further questions, Mr. Examiner.

13 EXAMINER STOGNER: Any other redirect?

14 MR. BRUCE: Just one thing, Mr. Examiner, just a  
15 brief statement and a question.

16 Mr. Examiner, if you'll look at Exhibit 1, there  
17 is a well, Pogo Producing, Allison Federal well, just in  
18 Section 7, east half of Section 7. That well, although  
19 it's within a mile of the Cinta Roja Pool, was designated  
20 -- was the last well drilled in this immediate area, was  
21 designated in the West Cinta Roja-Morrow Gas Pool, which is  
22 spaced on 320 acres, statewide rules. I note on there that  
23 Mr. Landreth does own an interest in that well.

24 The Division notice requirements require notice  
25 to all operators in the pool plus all operators of Morrow

1 wells within a mile of the pool, who are not in a  
2 designated pool. But other than that Pogo well, there were  
3 none that I could locate within that mile.

4 But I just want to confirm with Mr. Ready.

5 REDIRECT EXAMINATION

6 BY MR. BRUCE:

7 Q. Mr. Ready, all of the working interest owners in  
8 Section 8 are aware of the fact you are seeking to drill at  
9 least one more well in Section 8?

10 A. That's correct.

11 MR. BRUCE: Okay, thank you.

12 EXAMINER STOGNER: Any other questions? You may  
13 be excused, Mr. Ready.

14 Also, I think it would be important at this time,  
15 for the record, do you have the order number that  
16 promulgated these special rules?

17 MR. BRUCE: Yes, Mr. --

18 MR. HALL: 3161.

19 MR. BRUCE: Yeah, R-3161, in Case 3492.

20 EXAMINER STOGNER: What was the date of that  
21 order?

22 MR. BRUCE: The date of that order was November  
23 30, 1966, before Examiner Nutter.

24 EXAMINER STOGNER: 1966.

25 MR. BRUCE: It was -- Mr. Examiner, that was -- I

1 think we have some dates on the drilling of the well. That  
2 was after the 1964 date, which increased Morrow spacing  
3 from 160 to 320, although I think on the next exhibit we  
4 have -- I think the initial well in the pool was drilled  
5 before the spacing increase.

6 EXAMINER STOGNER: Okay, I'll take administrative  
7 notice of Case 3492, which resulted in Order Number R-3161,  
8 and that may or may not have been amended, temporary rules  
9 first, and then adoption of permanent rules.

10 And also, yes, I was alluding to that fact, and  
11 that's the reason I asked the date. 1966 is, of course,  
12 two years after -- as we all in this room know -- rules for  
13 Pennsylvanian or deeper changed from 160, as we all know in  
14 this room, 160 to 320. We're not stating any facts that  
15 nobody else in this room doesn't know or aware of, to 320  
16 acres. And also take administrative notice of the record  
17 of any other pools, either adjacent to this pool boundary  
18 or within a mile thereof.

19 Please continue.

20 KEN KRAWIETZ,  
21 the witness herein, after having been first duly sworn upon  
22 his oath, was examined and testified as follows:

23 EXAMINATION

24 BY MR. BRUCE:

25 Q. Would you please state your name and city of

1 residence for the record?

2 A. My name is Ken Krawietz, Midland, Texas.

3 Q. Would you spell your last name for the Examiner,  
4 please?

5 A. K-r-a-w-i-e-t-z.

6 Q. Who do you work for and in what capacity?

7 A. I'm employed by Pure Resources as a petroleum  
8 engineer.

9 Q. Have you previously testified before the  
10 Division?

11 A. No, I have not.

12 Q. Would you briefly summarize your educational and  
13 employment background for the Examiner?

14 A. I have a BS in petroleum engineering from Texas  
15 Tech University. I'm a registered professional engineer in  
16 Texas. I have 25 years of industry experience.

17 Q. How long have you worked for Pure Resources or  
18 its predecessor?

19 A. Approximately one year.

20 Q. Okay. And does your area of responsibility at  
21 Pure include this area of Southeast New Mexico?

22 A. Yes.

23 Q. And are you familiar with the engineering matters  
24 involved in this Application?

25 A. Yes.



1 MR. BRUCE: Mr. Examiner, I'd tender the witness  
2 as an expert petroleum engineer.

3 EXAMINER STOGNER: Any objection?

4 MR. HALL: No objection.

5 EXAMINER STOGNER: So qualified.

6 Q. (By Mr. Bruce) Mr. Krawietz, would you -- Well,  
7 first of all, is it your opinion that the special rules for  
8 the pool be amended?

9 A. Yes.

10 Q. And summarize the reasons for your opinion.

11 A. We're simply trying to amend the rules to  
12 statewide rules, to have similar Morrow opportunities that  
13 exist in the area, with wells being justified based on  
14 technical and economic merit. We believe there are  
15 additional reserves to be recovered with additional wells.  
16 The geology of the Morrow in this area is typical, with  
17 lenticular discontinuous reservoirs. We feel that there  
18 are additional reserves possible uphole, and possibly  
19 downhole, that cannot be easily justified with a stand-  
20 alone well.

21 Q. So in other words, something like the Atoka out  
22 here, there's -- although it may be present, there's  
23 nothing that would justify drilling a stand-alone Atoka  
24 well?

25 A. That's correct.

1 Q. And so -- You mentioned downhole, perhaps  
2 Devonian or deeper formations?

3 A. Also through there.

4 Q. And those are extremely risky, are they not, if  
5 you don't have uphole bailout zones?

6 A. Yes, it would certainly be an exploratory nature.

7 Q. Okay. Could you first identify Exhibit 3 for the  
8 Examiner and briefly identify what that shows?

9 A. Exhibit 3 is a map of the sand thickness prepared  
10 by our geologist, showing the producing wells in the area.  
11 It also lists the date the wells were completed, cumulative  
12 gas production at the time the map was prepared. It also  
13 notes Section 8 where our existing well is, in yellow.

14 Q. Now, it indicates the wells in this area that  
15 have been completed or at least produced from the Morrow.  
16 What was the -- When was the first well drilled in this  
17 pool, and what were the subsequent well dates?

18 A. First well was drilled in Section 9 in roughly  
19 1964. The next well was drilled in Section 10 in 19- --  
20 well excuse me, Section 12, 1979; Section 8, 1981; and the  
21 last well is 1996, over in Section 7.

22 Q. Okay, so the first well drilled in the pool was  
23 1964, and there was a few wells drilled over what, the next  
24 15, 16 years within the pool boundaries, correct?

25 A. Yes, sir.

1 Q. But there hasn't been any development in the pool  
2 since 1981?

3 A. That's correct.

4 Q. And you mentioned the well over to the west.  
5 That's the Pogo Producing Company well, is it not?

6 A. Yes, that's correct.

7 Q. And so that is really the most recent well, well,  
8 within a mile of the pool, is it not?

9 A. Yes, sir.

10 Q. Okay. Does the data also give -- Is that  
11 cumulative production numbers for the wells?

12 A. Cumulative gas production, yes.

13 Q. Okay. So there's some fairly decent wells, other  
14 than the well in Section 4; is that a fair statement?

15 A. That's true, yes.

16 Q. Let's move on to your next exhibit, Exhibit 4.  
17 What does that reflect?

18 A. Exhibit 4 is a cross-section, east-west. It's  
19 noted on the previous exhibit, shown as the east-west  
20 cross-section with the Pogo well, Allison Federal, in  
21 Section 7 on the left, and to the right is the -- in  
22 Section 11, I believe -- yes.

23 Q. Now, what is the primary producing zone in this  
24 well? Is it lower Morrow, middle Morrow?

25 A. The orange line on the map would designate what

1 we would refer to as Morrow C, and I would designate -- if  
2 we look at the Federal CR-8 Number 1, the upper sand shaded  
3 in yellow is upper Morrow C. The sand below that I'll  
4 refer to as lower Morrow C. Those are the two main  
5 producing sands in these wells.

6 Q. For the most they're correlatable across the --  
7 east-west across the pool, are they not?

8 A. That's true.

9 Q. Okay. Now, those are the main producing zones.  
10 Let's -- in the CR -- Take a step back.

11 Mr. Hall asked the prior witness about drilling  
12 additional wells. Let's discuss how it came about that you  
13 want to drill more wells in this area, let's look at the  
14 CR-8. What zone is that well perforated in and producing  
15 from?

16 A. The CR-8 Number 1 is perforated in what I'd refer  
17 to as the lower Morrow C, which is on this map 14,000 to  
18 14,015, roughly.

19 Q. Okay. Are there additional zones in that well  
20 that have not been perforated, that you believe could be  
21 productive?

22 A. Yes, the upper Morrow C I believe to be  
23 productive, and also --

24 Q. That would be the upper yellow coloration on this  
25 map?

1 A. Yes, that's true.

2 Q. Okay.

3 A. And we believe the lowest sand denoted by the  
4 green line, which is referred to as the Antelope sand.

5 Q. Okay, so immediately below that green line  
6 there's some yellow coloration, and you believe that that  
7 may be productive?

8 A. Yes.

9 Q. But it's not perforated?

10 A. No, it is not.

11 Q. Now, this well is -- It's a darn good well, isn't  
12 it?

13 A. Yes, it is.

14 Q. But has the Morrow ever been stimulated in this  
15 well?

16 A. No, not effectively. There was a very small acid  
17 job done on the well in 19- -- I want to say roughly  
18 1998 --

19 Q. Okay.

20 A. -- and that's all.

21 Q. Why don't you go into a little bit -- What has  
22 HEC proposed regarding this well and regarding another well  
23 in the section?

24 A. Okay, we have proposed initially adding pay in  
25 what I'd call the upper Morrow C zone and also the Antelope

1 sand, and performing a fracture stimulation on this well.  
2 There's evidence in the files to indicate high skin damage,  
3 and calculations indicate at least a significant increase  
4 in production can be obtained through a fracture  
5 stimulation.

6 We proposed this to the co-owners -- we had  
7 approval from all but two -- believing that the upper  
8 Morrow C may be wet, and felt like -- and would not approve  
9 the AFE.

10 The two parties that felt this way were invited  
11 in for a meeting. We discussed this at length. We left  
12 the meeting --

13 Q. Was one of those people Mr. Landreth?

14 A. Yes, it was.

15 Q. Okay.

16 A. We left the meeting with one party firmly  
17 believing the zone was wet, and therefore without approval  
18 of all partners we were not going to perform this workover.  
19 Instead --

20 Q. And let me interrupt. That's because under the  
21 JOA you need 100-percent approval to re-enter a producing  
22 well; is that correct?

23 A. That's correct.

24 The operation was re-proposed to stimulate only  
25 the existing perforations with a very small fracture

1 treatment, and this zone was tailored specifically to Mr.  
2 Landreth's request, and the operation was re-proposed to  
3 all partners and has been approved by all but one.

4 Q. Again, Mr. Landreth?

5 A. That's right.

6 Q. Okay.

7 A. Because -- During the meeting we had with the  
8 partners we said we firmly believe the upper Morrow C will  
9 be productive if produced downdip in the Custer Mountain  
10 well, and we feel it is somewhat correlative to the zone in  
11 the CR-8 Number 1, and we said we would desire to drill  
12 another well to capture the reserves from that sand.

13 Q. Okay.

14 A. The proposal was discussed, seismic lines were  
15 shown, very open discussion, and our intent was clearly  
16 demonstrated in that meeting.

17 Q. Okay. Now, you mentioned seismic. HEC does have  
18 seismic over this area; is that correct?

19 A. Yes, that's true.

20 Q. And you showed certain seismic data to Mr.  
21 Landreth at the meeting?

22 A. Yes.

23 Q. Have you offered to show the rest of your seismic  
24 data to Mr. Landreth?

25 A. Yes.

1 Q. And furthermore, with respect to Exhibit 4, Mr.  
2 Landreth showed you his cross-section, his geologic  
3 interpretation of this area, did he not?

4 A. It was not in this meeting, but in another deal  
5 we have in progress, there was a cross-section that agrees  
6 with this.

7 Q. But his geology and this cross-section, are they  
8 similar?

9 A. Yes.

10 Q. So there's really no dispute over the zones that  
11 may or may not be productive in these wells?

12 A. That's true.

13 Q. Okay. So the long and the short of it is, you  
14 believe there are additional reserves to be recovered in  
15 these sections by the drilling of additional wells?

16 A. Yes.

17 Q. And at least at this point, the only way you can  
18 perforate these upper and lower zones is by drilling an  
19 additional well; is that correct?

20 A. That's true.

21 Q. Now, one question regarding drilling. Would you  
22 make plans to drill, say, three additional wells in Section  
23 8 or wherever and just one, two, three, or would you drill  
24 a well, evaluate it, and then determine whether or not even  
25 to drill a second well?



1 A. The latter is true.

2 Q. Okay.

3 A. Each additional well would be solely proposed on  
4 their technical and economic merit and discussed fully with  
5 all owners.

6 Q. Okay, you don't want to drill uneconomic wells?

7 A. No, we have no desire to do that.

8 Q. Okay. Now -- and you have had discussion not  
9 only in the meetings with Mr. Landreth, you have had  
10 telephone discussions with him, have you not?

11 A. Yes.

12 Q. And he has expressed to you certain reservations  
13 about the drilling of uneconomic wells, et cetera, has he  
14 not?

15 A. That's true.

16 Q. Now, nobody really wants to drill them, but based  
17 on the pressure data, do you think that the current one  
18 well per section is effectively draining this pool?

19 A. No, I do not.

20 Q. Could you refer to Exhibit 5 and discuss that for  
21 the Examiner?

22 A. Exhibit 5 is a plot of bottomhole pressure versus  
23 time of the four wells in this pool. The two wells in  
24 question, which are the -- have produced -- are producing  
25 the majority of the gas from the pool have the dots

1 connected.

2           The plot shows that the original well in 1964  
3 exhibited a bottomhole pressure roughly of 9400 p.s.i.  
4 When the well in Section 8 was drilled in 1981, the  
5 bottomhole pressure in the zone that is currently  
6 perforated was 6400 p.s.i. The zone which I refer to as  
7 the upper Morrow C, bottomhole pressure was roughly 8600  
8 p.s.i. Both of these indicate to me that there has been  
9 some drainage from the well in Section 10, although the  
10 effectiveness is poor because it took roughly 20 years to  
11 deplete the pressure 3000 p.s.i. in the producing sand.

12           Q. Okay. And again, that would only be in the main  
13 producing sand, would it not?

14           A. That's right. And it appears -- my  
15 interpretation is, the upper Morrow C zone, which was  
16 perforated in the well in Section 10, has been depleted  
17 some 800 p.s.i.

18           Q. Okay. But there would still be -- even if you  
19 drilled the new wells, there would still be recoverable  
20 reserves; is that your --

21           A. Yes, very much so, yes.

22           Q. But you mentioned the upper Morrow zones. What  
23 is Exhibit 6?

24           A. Exhibit 6 is pressure data from the CR-8 Number 1  
25 obtained from RFT samples, and the two zones in question

1 have a circle, and to the right it indicates that 6395 is  
2 the pressure in the lower Morrow C, 8596 is the pressure in  
3 the upper Morrow C.

4 They show that there has been a sample taken in  
5 the upper Morrow C, which is noted at the bottom as fluid  
6 test number 1 at 13,974, and their recovery was 3800 cc's  
7 of water. And this is the only data we have, we do not  
8 know if that's formation water or is it filtrate?

9 And that was generally agreed by everyone. The  
10 problem was that they did not see any gas in that sample,  
11 indicating to them that this zone was wet.

12 Q. Okay. So again, over to the right-and side where  
13 you're listed -- again, this is for the CR-8 1 well, which  
14 was drilled in 1981, 17 years after the initial discovery,  
15 correct?

16 A. Correct.

17 Q. And so that 6395 number, that was the pressure  
18 which was somewhat below the initial reservoir pressure?

19 A. Yes, sir.

20 Q. And then the 8596 figure was for that zone above  
21 or -- was it above or below the main producing zone?

22 A. Above.

23 Q. Above?

24 A. Yes.

25 Q. And it still had pretty much virgin pressure?

1           A.    Yes, it was very high, but appears to be -- what  
2 I believe to be 800 p.s.i. below the original pressure.

3           Q.    The original pressure. But that would indicate  
4 to you that -- assuming there's gas there, that it would  
5 still have good pressures and be producible?

6           A.    Yes, I believe so.

7           Q.    And again, there is another zone below the main  
8 producing zone that has never been tested in these wells?

9           A.    That's correct, it's a zone which I refer to as  
10 the Antelope sand. It is thin but we believe possibly  
11 productive. We don't think it's going to be as significant  
12 as the upper sands but feel it could contribute. And that  
13 zone is producing in the well in Section 10.

14          Q.    Oh, it is producing in Section 10. So you know  
15 it is capable of production, at least somewhere nearby?

16          A.    Yes.

17          Q.    Okay. Now --

18          A.    Excuse me, Section 9.

19          Q.    In Section 9.

20          A.    The Custer Mountain well.

21          Q.    Okay. And because you can't go into the CRA  
22 Number 1 well to test those zones, the only way to test  
23 them is with an additional well; is that correct?

24          A.    That's correct.

25          Q.    Now, drainage is always a concern, pressure drops

1 are always a concern, are they not, Mr. Krawietz?

2 A. That's true.

3 Q. Now, our next case involves the Catclaw draw  
4 well, which has many more wells than this pool does, does  
5 it not?

6 A. Yes, it does.

7 Q. And that's a Morrow pool?

8 A. Yes, sir.

9 Q. Does HEC have recent experience with an infill  
10 well in that pool which would give you encouragement about  
11 drilling additional wells in this pool?

12 A. Yes, it does.

13 Q. And in what regard?

14 A. The -- Multiple sands were encountered, several  
15 of which were at virgin pressure. Others were at somewhat  
16 depleted pressures, however still very much commercial.

17 Q. And that was a recent well you drilled in the  
18 Catclaw Draw-Morrow?

19 A. Yes, it was, and it encountered sands that were  
20 not correlative to other wells that exhibits the lenticular  
21 nature of the Morrow.

22 Q. What was the initial producing rate on that well?

23 A. It was -- initial sales rate was 3 million cubic  
24 feet a day.

25 Q. Okay. And what is the current -- before that,

1 what was the total production from the Catclaw Draw-Morrow  
2 Pool?

3 A. From the pool -- The total pool I believe to be 3  
4 to 4 million a day --

5 Q. So you roughly --

6 A. -- somewhere in that range.

7 Q. -- doubled production with one infill well?

8 A. Yes.

9 Q. And in your discussions with Mr. Landreth and  
10 your very understanding of it, he is concerned with the  
11 drilling of uneconomic wells?

12 A. Yes, he is, and he has a very valid concern --

13 Q. And --

14 A. -- and that's certainly our intent, not to do.

15 Q. Yeah, it's not HEC's intent to drill uneconomic  
16 wells?

17 A. That's true.

18 Q. Were Exhibits 3 through 6 prepared by you or  
19 under your supervision or compiled from company business  
20 records?

21 A. Yes, they were.

22 Q. And in your opinion, is the granting of this  
23 Application in the interests of conservation and the  
24 prevention of waste?

25 A. Yes, I do.

1 MR. BRUCE: Mr. Examiner, I'd move the admission  
2 of Exhibits 3 through 6.

3 EXAMINER STOGNER: Any objections?

4 MR. HALL: No objection.

5 EXAMINER STOGNER: Exhibits 3 through 6 will be  
6 admitted into evidence at this time.

7 Cross-examination?

8 CROSS-EXAMINATION

9 BY MR. HALL:

10 Q. Mr. Krawietz, let me see if I followed you here.  
11 On your Exhibit 4, is the upper C open in any of the wells  
12 on that exhibit? Do we know?

13 A. The well -- it is in the well in Section 10.

14 MR. BRUCE: The Cinta Roja 10 well, Mr. Krawietz?

15 THE WITNESS: Yes. It's open -- it was open in  
16 the well in Section 9, and it's my understanding that well  
17 is now producing solely from the antelope sand, which is  
18 below. It also produces in the Pogo Allison Federal well  
19 to the west.

20 Q. (By Mr. Hall) The Antelope, you mean?

21 A. No, the --

22 Q. The upper C?

23 A. -- what I was calling the lower Morrow C.

24 Q. Okay. My question was, is the upper C open in  
25 the Allison Fed well?

1 A. To my knowledge, no.

2 Q. Okay.

3 A. I don't have full data on the well like --

4 Q. If I understood you, the Antelope Sand is open in  
5 that well, the Allison well, as well as the Custer Mountain  
6 well?

7 A. The records I have show it was tested. I don't -  
8 -

9 Q. It was tested in the Allison?

10 A. Yes.

11 Q. Okay. And the pressure data you're showing on  
12 your Exhibit 5, that's all lower C pressure; is that  
13 correct?

14 A. No, it would not be in the Custer Mountain well,  
15 and yes, it would be in the Cinta Roja 8 Number 1.

16 Q. On the new well you're proposing in the northeast  
17 quarter of Section 8, do you plan to commingle all of those  
18 zones if they prove to be economically viable?

19 A. I would say most likely, yes, but it's going to  
20 depend on the pressure data we obtained during the well and  
21 what the partners want to do with the well. Do it's -- but  
22 my desire and belief is, yeah, it probably would be.

23 Q. It depends on the pressures you see at the time?

24 A. Right.

25 Q. Okay. In your Exhibit 6, the vintage of that RFT



1 data, that's 1981, I assume?

2 A. Yes.

3 Q. Okay. Mr. Krawietz, why can't these Morrow  
4 reserves be recovered on the basis of two wells per  
5 section, as opposed to four wells per section?

6 A. I think it's been shown that Morrow -- due to the  
7 nature of the Morrow, that economic and commercial reserves  
8 can be recovered on 160 acres, and our intent is to enjoy  
9 the same opportunity as statewide rules allow in the  
10 Morrow, and as I stated before, have the wells dictated by  
11 the commercial, technical and economic merits, rather than  
12 some restriction artificially placed.

13 Q. Is it your testimony that if we develop these  
14 sections on 320s that we'll be leaving reserves  
15 unrecovered?

16 A. Again, each well is going to give us data as to  
17 the sand thickness. There's only four wells in the pool,  
18 which is hard to make firm correlations and maps on. Each  
19 well is going to indicate new data, which will lead us  
20 forward as to what the future development plans are.

21 And again, all wells that are proposed are going  
22 to go to partners, and our intent is not to steamroll over  
23 any partner and to give them adequate say-so in the  
24 matters. And the development of the field is like any  
25 other, that the data that you obtain with one well is going

1 to lead you to what you do next.

2 Q. Well, I'll ask you the same question I asked Mr.  
3 Ready. Will you drill wells 3 and 4 in Section 8  
4 contingent upon the success of your well in the northeast  
5 quarter?

6 A. There's no plan for a well 4. Well 3 is going to  
7 be contingent on the election that's currently out to  
8 partners of stimulation on the existing well. Without  
9 stimulation, we're -- I estimate it's 29 years to recover  
10 those reserves.

11 In addition to that, we have a well to the west  
12 of us that's on statewide spacing that we believe to be  
13 draining us, so I think the possibility of a third well is  
14 definitely a possibility, and certainly if we're not  
15 allowed to stimulate the 8-1 well.

16 Q. When you -- on the 8-1 well, did you make a  
17 proposal to the partners just for the stimulation job, or  
18 was that part of the package to re-enter the --

19 A. I've made two formal proposals, one to add pay  
20 and frac, the other to only frac the existing zone.

21 Q. And what was the basis of the objection to  
22 restimulating the currently open zone?

23 A. I don't think there is any objection. However,  
24 we have one party that will not approve it.

25 Q. Did you -- With the quality of data you have in

1 the pool, did you attempt to estimate the incremental  
2 recoveries you would expect from developing these sections  
3 with four wells? Was that done?

4 A. No. No, I didn't do any formal -- Well, I take  
5 that back. On the 8-2 I made an estimate to substantiate  
6 my economics, you know, for my AFE approval, and the  
7 reserves I based that on were extremely conservative and  
8 showed the project to be very economic.

9 Now, as far as estimating new reserves versus  
10 existing reserves or rate acceleration, I did not do that  
11 because there's probably going to be both. There's  
12 certainly going to be new reserves in the upper Morrow C  
13 zone, because it's -- we're not going to be able to  
14 perforate it in an existing well, so there is a combination  
15 of the two.

16 Q. If I understand your answer, your analysis to  
17 date looks only at rate acceleration; is that accurate to  
18 say?

19 A. No, both.

20 Q. Okay.

21 A. I'd say there's some of both. What I base my  
22 economics on and my -- to get approval from our management,  
23 was obtaining reserves in that upper Morrow C zone alone.  
24 Those would be all new reserves.

25 Q. Are you able to share with us today what the

1 additional reserves would be?

2 A. My answer is yes. Let me dig it out here. The  
3 reserves I presented, on an unchance-weighted basis, were 5  
4 BCF.

5 Q. And that's for what area? Is that for just a  
6 section?

7 A. Yeah.

8 Q. Section 8?

9 A. (Nods)

10 Q. Okay. If I understand you, when you did your  
11 economic analysis based on development costs, you did it  
12 just for the costs attributable to the new well in the  
13 northeast quarter of Section 8. Did you attempt to  
14 evaluate -- run that forward and look at the economics of  
15 drilling four wells per section?

16 A. No, because there's no plan to drill four wells  
17 per section at this point. But we want that opportunity,  
18 should the data on the existing wells indicate it to be a  
19 viable project, and I believe it will be.

20 Q. Is HEC willing to consider development on the  
21 basis of two wells per section in the interim --

22 A. No.

23 Q. -- until the data from the new well in the  
24 northeast quarter of Section 8 are available?

25 A. No.

1 Q. And why not?

2 A. I don't want to have to come back here again,  
3 basically. And I don't -- and we believe, like I said  
4 before, we -- other operators and other nearby fields in  
5 the area enjoy statewide rules, as does the well on our  
6 west lease line, 660 feet from our west lease line.

7 Again, I don't feel that the development of this  
8 field should be restricted artificially, it should be done  
9 based on the technical merits, the economic merits and the  
10 desires of the owners in this section.

11 Q. If we went to statewide rules for the Morrow for  
12 this pool, is there some reason that HEC is averse to  
13 having more than one operator per section in the pool?

14 A. No.

15 MR. HALL: Nothing further, Mr. Examiner.

16 EXAMINER STOGNER: Any redirect?

17 MR. BRUCE: Just one question.

18 REDIRECT EXAMINATION

19 BY MR. BRUCE:

20 Q. Looking at your Exhibit 3, Mr. Krawietz, although  
21 there's -- how to phrase this? There are not a lot of  
22 Morrow-producing wells in this area, compared with other  
23 areas of this state; is that correct?

24 A. That's very true, yes.

25 Q. I mean, if you look at Exhibit 3 in the north

1 two-thirds, three-quarters of this township, there are only  
2 four wells that have been productive, commercially  
3 productive, from the Morrow?

4 A. Yes.

5 Q. And like I said, in the next case you're going to  
6 go to an area where there's two, three wells per section?

7 A. Yes.

8 Q. Okay, thank you. And in short, data isn't as  
9 good in this area, in this township, as it is in other  
10 parts of the state?

11 A. That's true. Data is very limited in this field.

12 MR. BRUCE: Thank you. That's all, Mr. Examiner.

13 EXAMINATION

14 BY EXAMINER STOGNER:

15 Q. Mr. Krawietz, do you know if this pool has ever  
16 been prorated?

17 A. Yes, sir -- I might be getting it mixed up with  
18 the Catclaw Draw. I'll say I don't know. I doubt if it  
19 would have been, because there was only one well from '64  
20 to '81.

21 Q. Do you know if all four wells are producing into  
22 the same pipeline?

23 A. That I do not know.

24 Q. Who are you selling your gas -- or who's taking  
25 your gas from your well in Section 10?

1 A. Mr. Landreth's well is in 10, I don't know --

2 Q. I'm sorry, I mean 8, in Section 8.

3 A. Eight? Sid Richardson.

4 Q. Sid Richardson. Do you know of any other  
5 pipelines out there in this area, other than Mr.  
6 Richardson?

7 A. Mr. Landreth has -- and I have discussed the  
8 possibility of adding compression and putting it into a  
9 transmission line, whereas now it goes to Sid Richardson,  
10 into a plant. So there appears to be another option there,  
11 but our gas is under contract and it's not feasible at this  
12 time. But that's the only other option I know of, and our  
13 gas marketing department says that's not a possibility at  
14 this time.

15 Q. Now, you mentioned -- you talked about the  
16 Antelope sand in Section 9, for that well in Section 9. I  
17 believe that's the Custer well?

18 A. Yes, sir.

19 Q. What zone is that, when I refer to Exhibit Number  
20 4?

21 A. It's the sand that's noted just below the green  
22 line, lowermost sand shaded in yellow there.

23 Q. That looks like it's about 14,250 on down to  
24 14,300?

25 A. Yes, sir. Yes, sir, that's -- uh-huh.

1 Q. Okay. Now, when I'm referring to Exhibit Number  
2 1, just a general statement. What's some of the closest  
3 Atoka or Wolfcamp or other upper Pennsylvanian production?  
4 Is there any that could be depicted on this map?

5 A. There's none in this -- I'd say within a one-  
6 section boundary around this pool that I'm aware of.

7 Q. Has it been tested, do you know? Any of the  
8 upper zone?

9 A. In the -- The four wells in this pool, plus the  
10 Pogo well, have all produced from the Morrow and have not  
11 been recompleted. I'm not aware of any DST's or any data,  
12 and right now they're all still in the Morrow. I would  
13 suspect there's some recompletion opportunities, but it's  
14 nothing that I'm aware of that's been encountered to date.  
15 But we have experience in other areas nearby that indicate  
16 there's some serendipity, as you know, in those zones that  
17 we've encountered.

18 EXAMINER STOGNER: I have no other questions of  
19 this witness.

20 Any redirect?

21 MR. BRUCE: No, sir.

22 EXAMINER STOGNER: Any cross-examination?

23 MR. HALL: (Shakes head)

24 EXAMINER STOGNER: You may be excused.

25 Anything further in this matter?



1 MR. HALL: No, sir.

2 MR. BRUCE: No, sir.

3 EXAMINER STOGNER: Okay. Then in that case, I  
4 will take Case Number 13,300 under advisement at this time.  
5 Let's take a 10-minute recess.

6 (Thereupon, these proceedings were concluded at  
7 10:18 a.m.)

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I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 13300,  
heard by me on July 22, 2004.  
Michael E. Stogner, Examiner  
Oil Conservation Division

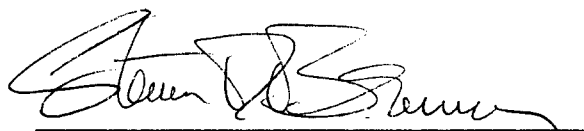
## CERTIFICATE OF REPORTER

STATE OF NEW MEXICO    )  
                                  )   ss.  
COUNTY OF SANTA FE    )

I, Steven T. Brenner, Certified Court Reporter  
and Notary Public, HEREBY CERTIFY that the foregoing  
transcript of proceedings before the Oil Conservation  
Division was reported by me; that I transcribed my notes;  
and that the foregoing is a true and accurate record of the  
proceedings.

I FURTHER CERTIFY that I am not a relative or  
employee of any of the parties or attorneys involved in  
this matter and that I have no personal interest in the  
final disposition of this matter.

WITNESS MY HAND AND SEAL July 24th, 2004.



STEVEN T. BRENNER  
CCR No. 7

My commission expires: October 16th, 2006