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I N D E X

GREGORY L. HAIR

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MR. CATANACH: We'll call next  
Case Number 8777.

MR. TAYLOR: The application of  
Pennzoil Company for an unorthodox oil well location, Lea  
County, New Mexico.

MR. KELLAHIN: I'm Tom Kellahin  
of Santa Fe, New Mexico, appearing on behalf of the appli-  
cant and I have one witness to be sworn.

MR. CATANACH: Are there any  
other appearances in this case?

If not, will the witness please  
stand and be sworn?

(Witness sworn.)

GREGORY L. HAIR,  
being called as a witness and being duly sworn upon his  
oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Hair, for the record would you please  
state your name and occupation?

A Yes. I'm Gregory L. Hair, District Geo-

1       logist, Pennzoil Company, Midland, Texas.

2                   Q               Mr. Hair, as a geologist for your com-  
3       pany, have you made a study of the geologic facts surround-  
4       ing this application?

5                   A               Yes, I have.

6                   Q               And have you previously testified before  
7       the Oil Conservation Division as a petroleum geologist?

8                   A               Yes, I have.

9                                   MR. KELLAHIN:    We tender Mr.  
10       Hair as an expert petroleum geologist.

11                                  MR. CATANACH:    Mr. Hair is so  
12       qualified.

13                   Q               Mr. Hair, to orient the examiner as to  
14       what your company is seeking, let me direct your attention  
15       to the land plat marked as Exhibit Number One.

16                                   First of all, sir, would you locate for  
17       us the proposed spacing unit by section, township, and  
18       range, and then we'll talk about the actual well location.

19                   A               This plat shows four sections in Township  
20       16 South, Range 37 East.

21                                   The section of interest here is Section  
22       17 and we are specifically interested in the west half of  
23       the southwest quarter of Section 17.

24                   Q               Your proposed well is in the Northeast  
25       Lovington Field, sir?

1           A           Yes.

2           Q           And what is the spacing for that field?

3           A           80 acres.

4           Q           And what is the formation that's involved  
5 in that pool?

6           A           It would be the Strawn formation.

7           Q           When we look at the west half of the  
8 southwest quarter of 17, do you have common ownership with  
9 regards to that 80-acre tract?

10          A           Yes, we do.

11          Q           Let's look now at the request for the un-  
12 orthodox well location.

13                      What is the current rule provided for in  
14 the northeast Lovington Strawn Pool for a standard location?

15          A           I believe the standard location in this  
16 pool is 150 feet from the center of a quarter quarter sec-  
17 tion.

18          Q           You've requested a well location that,  
19 first of all, is 660 feet from the west line of 17. Is that  
20 a standard location insofar as the west boundary is con-  
21 cerned?

22          A           Yes, it is.

23          Q           Second of all, you've requested that the  
24 location be 1400 feet from the south line of 17. Will that  
25 place this well closer to an outer boundary of the 80-acre

1 tract?

2 A No, it will not.

3 Q You encroach upon the interior quarter  
4 quarter line is what happens, is that not true?

5 A That is correct.

6 Q All right. Let's turn now to Exhibit  
7 Number Two, Mr. Hair, and have you identify that exhibit.

8 A This is an Isopach map of the Strawn  
9 limestone, which is the formation in question in the area.

10 It shows production in the Lovington  
11 Northeast Field. I believe every producing well on this map  
12 is from the Strawn formation.

13 Q Directing your attention to the proposed  
14 location, Mr. Hair, what, in your opinion, is the reason to  
15 move this to an unorthodox location versus the closest  
16 standard location?

17 A These -- the production in this area  
18 comes from algal bioherms, which are very lenticular in  
19 shape, thin and elongated, and it's very critical to be  
20 right in the center of these bioherms. Porosity can quit in  
21 one standard location.

22 We try to locate these mounds  
23 seismically. We have a fairly dense seismic grid over this  
24 area, and feel that the optimum location is our proposed  
25 location; that a standard location would involve great

1 amounts of risk.

2 Q Can you identify approximately where the  
3 closest standard location would be in terms of the Isopach?

4 A It, I believe it would be outside the  
5 last Isopach line there, which would be a 160-foot -- right  
6 -- just below that line.

7 Thickness is critical in this. We feel  
8 that a relative thickness increase produces the porosity, so  
9 as you get back into the thin zones we would see no porosity  
10 build-up and the risk would be fairly great.

11 Q Is this a proposed location that has been  
12 approved by all the working interest owners that will parti-  
13 cipate in the 80-acre spacing unit?

14 A I believe they have all agreed to it,  
15 yes.

16 Q Do you have an opinion as a geologist,  
17 Mr. Hair, whether or not the proposed location is one that  
18 is the optimum location in the spacing unit and which will  
19 diminish as far as possible the inherent risk in drilling  
20 for this production?

21 A Yes, I feel that it is.

22 Q Except for the land map, Mr. Hair, was  
23 the geologic presentation, the Isopach, one prepared by you  
24 or compiled under your direction and supervision?

25 A Yes, it was.

1 MR. KELLAHIN: We move the in-  
2 troduction of Exhibits One and Two.

3 MR. CATANACH: Exhibits One and  
4 Two will be admitted in evidence.

5

6 CROSS EXAMINATION

7 BY MR. CATANACH:

8 Q Mr. Hair, on what information did you  
9 compose your Isopach map?

10 A Okay, Mr. Examiner, most of it comes from  
11 subsurface data. As you can see, all the control points  
12 there, and there are numerous ones. The actual build-up it-  
13 self is based on seismic data, which we have used extensive-  
14 ly in the area.

15 Q Have you found that seismic data to be  
16 accurate?

17 A We find it very reliable.

18 MR. CATANACH: I have no fur-  
19 ther questions of the witness.

20 Are there any other questions  
21 of the witness?

22 MR. KELLAHIN: No, sir.

23 MR. CATANACH: If not, he may  
24 be excused.

25 Is there anything further in

1 Case 8777?

2 MR. KELLAHIN: No, sir.

3 MR. CATANACH: If not, it will  
4 be taken under advisement.

5

6 (Hearing concluded.)

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C E R T I F I C A T E

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

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 8777, heard by me on Dec. 4, 1965.

David B. Catamb, Examiner  
Oil Conservation Division