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MR. QUINTANA: We'll call next Case 8323.

MR. ROYBAL: Case 8323, application of Blanco Engineering, Inc. for salt water disposal, Eddy County, New Mexico.

MR. DICKERSON: Mr. Examiner, I'm Chad Dickerson of Artesia, New Mexico, appearing on behalf of the applicant and I have one witness.

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

(Witness sworn.)

PAUL G. WHITE,
being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. DICKERSON:

Q Mr. White, would you state your name, your occupation, and where you reside, please?

A My name is Paul G. White. My occupation is petroleum engineer and President of Blanco Engineering, Incorporated, and I live in Artesia, New Mexico.

A You have previously appeared before this

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Division as a petroleum engineer and had your credentials made a matter of record, haven't you, Mr. White?

A Yes, sir, I have.

MR. DICKERSON: Is this witness qualified, Mr. Examiner?

MR. QUINTANA: He is so qualified.

Q Mr. White, would you briefly summarize the purpose of your request for a water injection well in Case 8323?

A We have made application for a salt water disposal well to dispose of produced waters in the Atoka-Glorieta-Yeso Pool from some oil wells that we have drilled there.

Q Let me direct your attention to the map which is a part of the form C-108 submittal, and ask you to direct the Examiner's attention on that map to the proposed injection well.

A The proposed injection well is the Pan American Flint No. 1 and it's located 1980 feet from the south line and 1980 feet from the east line, Section 22, Township 18 South, Range 26 East, Eddy County, New Mexico.

Q And your 1/2-mile circle area of review is indicated on that map as well, is it not?

A Yes, sir. That is the 1/2-mile radius.
Yes, sir.

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2 Q Are there any other wells within that
3 1/2-mile circle which have penetrated the proposed injection
4 zone?

5 A There's only one well that has penetrated
6 that--the proposed injection zone, and it's on the
7 borderline. It's the Ingram Hawkins No. 1 in Section 27, 18
8 South, 26 East. It's no longer producing from the Atoka-
9 Penn.

10 MR. QUINTANA: Is that in the
11 southwest quarter of that line? If you look directly
12 southwest of the well, is that the well you're talking
13 about?

14 A It's straight south of the well, sir.
15 It's in Section 27. It would be 660 from the north line and
16 1980 from the--no 13--1980 from the east line in Section 27.
17 It's right on the borderline.

18 MR. QUINTANA: Okay, thank you.

19 Q Mr. White, when and for what purpose was
20 this proposed injection well originally drilled?

21 A The well was originally drilled as an
22 Atoka-Penn gas well and produced from the Atoka-Penn for
23 several years. It produced a cumulative gas of
24 approximately 5-1/2-billion feet and approximately 45,000
25 barrels of condensate and was abandoned as an Atoka-Penn
producer in 1970.

Q Mr. White, what is the--how is that pro-
posed injection well currently completed, as far as the

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mechanics of that operation?

A At the present time the well--the well was plugged and all casing was left intact. The 13-3/8, which I have not shown on the diagram, was left and it's-- has cement circulated. The 9 and 5 was left intact with cement circulated. The 5-1/2 inch production string was left intact with the cement circulated. The Atoka-Penn perforations were covered with 25 sacks of cement. There's no record of a bridge plug.

Q What will be necessary, in connection with your operations, for reopening, re-entering this well for injection purposes?

A We would like to re-enter the 5-1/2 casing and trip in the hole with bit casing scraper and tubing and clean the 25-sack plug off the top of the Atoka-Penn perforations, acidize, and get an injection rate for purposes of converting to salt water disposal well.

Q What is your proposed average and maximum daily rate and volume of fluids to be injected?

A We have--if we develop our Atoka-Yeso wells and drill them, we plan to have an average injection rate of 2,000 barrels of water per day not to exceed 3,500 barrels of water a day.

Q Again directing your attention to the map which forms part of C-108, describe for the Examiner where on that map the wells from which this produced water will be obtained are located.

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A These wells will all be--these projects will all be drilled in Section 25, Township 18 South, Range 26 East, Eddy County, approximately two miles from the proposed injection well. It's a little better than two miles.

Q And your proposed system is a closed type system?

A Yes, sir. It is a closed system.

Q What average and maximum injection pressures do you anticipate in this well?

A We anticipate, from a study of Yates Petroleum injecting into the same zone, we anticipate an average injection pressure to start with of 400 pounds per square inch; a maximum injection pressure of 1400 pounds per square inch.

Q And that maximum is not in excess of 2/10 per foot of vertical depth?

A No, sir. The .2 per vertical depth to the top perforations would be 1819 psi.

Q Do you propose to utilize the existing perforations?

A Yes, sir. That's correct.

Q Mr. White, have you made an examination of the proposed injection water to determine its compatibility with the zone in which it is to be injected?

A Yes, sir. We've had Unichem Chemical

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2 Company analyze the Atoka-Penn waters and the Atoka-
3 Glorieta-Yeso waters for compatability and they were--there
4 was no evidence of incompatability.

5 Q Geological information and logs on this
6 proposed injection well have previously been submitted to
7 the Division, have they not?

8 A Yes, sir, they have.

9 Q Mr. White, what is the--what other
10 possibly productive zones of oil and gas are located in this
11 area both above and below the proposed injection interval?

12 A There are no zones below this proposed
13 injection interval, and zones above are the Abo, and there's
14 quite a number of San Andres and Grayburg wells, shallow
15 wells, located in this area at from 1600 feet down to 2200
16 feet.

17 Q What is the geologic name and depth of
18 all the sources of underground drinking water in the area?

19 A The underground drinking water, the
20 maximum depth is in the Artesian water zone and the maximum
21 depth is 850 foot deep.

22 Q Have you examined all available
23 engineering and other data and determined that in your
24 opinion there is no evidence of underground faults or other
25 hydrologic connection between the injection zone and the
sources of underground drinking water?

A Yes, sir. We've researched this quite

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2 thoroughly and we feel like there's no chance of any
3 contamination or any faults or anything in the area where we
4 would be injecting the salt water.

5 Q Describe the proposed stimulation program
6 for your injection well.

7 A We propose to, after clean-out of the
8 cement on top of the Atoka-Penn perforations, to acidize
9 with 2,000 to 2,500 gallons of 15% regular non-emulsifying
10 acid.

11 Q What is the proposed mechanics of your
12 completion of this well? What type tubing will you utilize?

13 A We propose to, after clean-out and
14 the establishment of proper water injection rates and
15 pressures, we propose to run a Baker nickel-plated packer on
16 2-7/8 inch upset tubing that's plastic-lined and set the
17 packer above the Atoka-Penn perforations.

18 Q Mr. White, once again with regard to that
19 Hawkins gas well which you indicated in Section 27, the only
20 well in the vicinity which had penetrated the proposed
21 injection interval of your well, what is the current status
22 of that well?

23 A As far as I know, the well is just tempo-
24 rarily abandoned. There's no production from the Atoka-Penn
25 zone at all. It's been listed as not having produced for,
oh, six or seven years. The casing is intact. Everything
is still there. The 5-1/2 casing was cemented with 600
sacks of cement.

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2 Q The last form attached to the C-108, Mr.
3 White, is proof of notice whereby you gave notice of your
4 application to the owner of the surface and all offset lease-
5 hold operators, is it not.

6 A Yes, sir. That's right.

7 MR. DICKERSON: Mr. Examiner, I
8 move the admission of Exhibit One, the C-108, submittal at
9 this time, and I have no further questions.

10 MR. QUINTANA: Exhibit One will
11 be so admitted.

12 Mr. White, I might have missed
13 it, but did you say that there was samples of the fresh wa-
14 ter wells within the area?

15 A Yes, sir. There's two water wells--
16 there's two fresh water wells, one used for irrigation
17 presently. On the line, down the west line of Section 23--
18 it's on the west line right about the center of 23, the
19 locations, exact locations are on the water analysis sheet
20 that we submitted, and those two wells are, one well is pro-
21 ducing and irrigating now and the other one is a standby
22 well, and we took samples from those two wells.

23 MR. QUINTANA: Thank you. One
24 further question. That gas well that did penetrate the
25 proposed disposal zone on the outskirts of the 1/2-mile
radius, do you anticipate any water from your disposal well
possibly reaching that in any short period of time?

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A No, sir. I do not. From the 'cum' gas recoveries and the 'cum' liquid recoveries from other wells that's been used in the Atoka-Penn as salt water disposal, we anticipate being able to put approximately 3.3-million barrels of water into the well before we would penetrate anything in the 1/2-mile circle.

MR. QUINTANA: Thank you. Are there any further questions of the witness?

The witness may then be excused.

A Thank you, sir.

MR. QUINTANA: Case 8323 will be taken under advisement.

(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 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 and true record of the proceedings in the hearing held by me on SEPT. 5 1984, of Case No. 8323.

Gilbert P. Quintana, Examiner
Oil Conservation Division