STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO

5 February 1986

EXAMINER HEARING

IN THE MATTER OF:

Application of Pollution Control, Inc., for salt water disposal, Lea County, New Mexico.	CASE 8817

BEFORE: David R. Catanach, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division:	Jeff Taylor Legal Counsel to the Division Oil Conservation Division State Land Office Bldg. Santa Fe, New Mexico 87501
For the Applicant:	W. Thomas Kellahin Attorney at Law KELLAHIN & KELLAHIN P. O. Box 2265 Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

MR. CATANACH: Call Case 8817.

MR. TAYLOR: The application of Pollution Control, Inc., for salt water disposal, Lea County, New Mexico.

MR. CATANACH: Are there appearances in this case?

MR. KELLAHIN: If the Examiner please, I'm Tom Kellahin of Santa Fe, New Mexico appearing on behalf of the applicant and I have one witness.

I'd like the record to reflect that Mr. Joe Ramey is my professional petroleum engineer. He's my technical witness for this case and that he has previously been sworn and qualified as an expert.

MR. CATANACH: Mr. Ramey, I would advise you that you are still under oath in this case.

MR. RAMEY: Yes, sir. I always tell the truth, anyway.

JOE D. RAMEY,

being called as a witness and being previously sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Ramey, have you been employed as a petroleum engineer to make an examination on behalf of Pollution Control, Inc., of its request in this case for approval of use of its L & B Oil Company, Inc. State "AG" Well No. 1 as a salt water disposal well?

A Yes, I have been.

Q Pursuant to that employment have you prepared Commission Form C-108 and the attachments required by the Division?

A Yes, I have.

Q Let me show you what is marked as Exhibit Number One and ask you if that is a true and correct copy of the C-108 form that you prepared?

A Yes, it is.

Q Let's turn to Exhibit Number Two and have you identify for us the proposed disposal well.

A The proposed disposal well is in the southwest quarter of the northeast quarter of Section 33, Township 18 South, Range 36 East. This is the formerly L & B Oil Company State "AJ" Well No. 1 and the well was drilled as an oil and gas test. It was drilled to a total depth of 12,164 feet to the Devonian. The well was spudded on 12-17-82 and plugged and abandoned on 12 -- or 2-17-83.

Q What is the proposed disposal interval that Pollution Control, Inc. will utilize in the well?

A The, probably the main disposal interval will be the Devonian; however, we are seeking the entire open hole interval from 5000 feet down to the total depth of 12,164 for disposal purposes.

Q On Exhibit Number Two, Mr. Ramey, have you made any investigation of any possible wellbores that produce from or penetrate through the disposal interval within the half mile radius surrounding the disposal well?

A Yes. There are no wells within the -- within the area of review. There's one well just outside the area of review but it is not within the one-half mile radius prescribed by the Division.

There are -- there are oil wells within two miles of the -- of the well, which are producing from the San Andres, and since the San Andres will be open in this interval, why, it was necessary to have a hearing on the well.

Q Can you describe for the Examiner what the applicant proposes to do in terms of maximum daily volume of disposal?

A The initial volume will be around 2000 barrels per day that they are -- that Pollution Control is hauling in the immediate area which would go to this well,

and they're -- they're anticipated maximum volume would be -- would be 10,000 barrels a day.

Q Do you have a recommendation to the Examiner in terms of a surface limitation pressure?

A Yes. My application requested, well, on the fourth sheet on the application, on the discussion sheet, I listed 2430 psi, which is the top of the Devonian and more appropriately, the top of the injection interval should be 5000 feet, so a maximum pressure of 1000 psi is requested. So if you would make that change, Mr. Examiner.

Q What is to be the source of the water that will be disposed of in the disposal well?

A Primary source is -- is from the Bone Spring in the Scharb area. That's where the initial volumes will come from, but this will be -- this will be an open system and available for truck delivery. They will make a commercial disposal well out of it, so that it could be from -- from any water producing formation in this area.

Q What recommendations do you have to the examiner with regards to submittal of an analysis to demonstrate the compatibility of disposal fluids with formation fluids found in the injection interval?

A Well, Pollution Control will obtain a, you know, a large volume of the water in the wellbore upon conversion and will retain this, and then they will, for any

-- any type water that is brought in they will run compatibility tests. In other words, they will try to get samples of San Andres water, Devonian water, Bone Spring water, anything that is likely to be carried to the well, and run compatibility tests on it, so only those waters that are compatible to the waters in the injection formation will be allowed to be disposed of in the well.

It's certainly to their interest to prevent pluggage of the injection interval.

Q Let's turn now to Exhibit Number Three, Mr. Ramey, and have you review with us the information contained on the schematic of the wellbore for the disposal well.

A The well has 13-3/8ths set at 373 feet and cemented with 400 sacks, which is circulated.

And it has 8-5/8ths at 5000 feet, and it was cemented with 2300 sacks and was also circulated.

The hole size down to the total depth of 12,164 is 7-7/8ths and of course we propose to inject into the open hole interval from 5000 to 12,164.

The operator will set 2-7/8ths inch plastic coated tubing with a -- I've listed a Baker Model D; I doubt if he will set a Baker Model D. He will probably set some kind of retrievable packer, maybe a Baker LocSet packer, but that will be determined and will be, you know,

cleared with the supervisor of the Hobbs District Office as to the proper packer before it is set in there.

I have listed the injection formation as Abo/Wolfcamp/Mississippian/Devonian. I think the Devonian will be the major disposal zone but if we -- if we get to the anticipated maximum interval of 10,000 barrels a day, we will probably have a relatively high fluid level in the -- in the well, and so these other zones could possibly take water at that time.

And then it just lists the oil pools that are in the area, also, which is the West Arkansas Junction-San Andres Pool to the northwest and then the Monument and Eumont Pools to the southeast of this area.

Q Do you have an opinion, Mr. Ramey, as to whether or not this well has been adequately cemented so as to isolate the disposal formation from any shallow fresh water sands?

A Yes. It has -- it has both the surface casing and the intermediate casing that are cemented solid. They're circulated to the surface and should -- should offer adequate protection to the fresh water in the area, which is at around 280 feet.

Q Let's turn back to Exhibit Number Two and have you identify for the Examiner within the 2-mile radius those fresh water sources that you've been able to -- to de-

termine exist.

A There is -- there's one well within a mile of the -- of the disposal well, and that fresh water well is in -- would be in Unit A of Section 5, which is directly to the south. I did not mark those on the exhibit, Mr. Examiner, I'm sorry, but it is in Unit A of Section 5 of 19, 36.

Then there are three wells to the east and southeast. There is one which would be in the southeast quarter of Section 27, which would be to the northeast of the well.

There is one in the southeast quarter of Section 34, which would be just almost due east of the well.

And then there's another fresh water well in Section 3, which is to the -- to the southeast of 19, 36.

I've attached analyses of these wells as part of the application.

MR. KELLAHIN: Those are set forth as Exhibit Number Five, Mr. Examiner.

Q In making your study, Mr. Ramey, have you found from available geologic and engineering data whether or not there's evidence of open faulting or other hydrologic communications between the disposal interval and any fresh water sands?

A No, I could find no evidence of any faul-

ting or any other hydrologic connection between any of the open hole interval and the fresh water in the area.

Q And will the disposal well be equipped in accordance with Division rules for disposal or injection wells?

A Yes. We will -- one thing I didn't mention, we will put treated oil in the annular space and of course pressure test it as required and we will also -- also put a pressure valve on the annular space.

Q Would you turn to Exhibit Number Six and identify for us the affected offset operators and surface owners within the area of investigation?

A Yes. There, of course, Snyder, Snyder Ranches is the -- is the surface owner. Mr. Larry Squires is President of Snyder Ranches and he's also President of Pollution Control, so I did not -- I did not send him a notice by certified mail.

Syntero (sic) Oil and Gas Company, Inc., is an offset operator, Chevron Oil Company, Phillips Petroleum, and Yates Petroleum. Those were -- those were all sent notice or copies of the application by certified mail. I've got return receipts for every one but Syntero and got the -- the letter was returned and said "unable to forward", and the only address I have found available for Syntero was from the -- from the New Mexico State Land Office downstairs.

I have no idea where they are but an attempt was made to notify them.

Q Attached as Exhibit Number Seven, are those copies of the return receipt cards for those operators that you were able to serves with notice?

A Yes, Chevron, Philips, and Yates.

Q All right. In your opinion, Mr. Ramey, will approval of this application be in the best interest of conservation, the prevention of waste and the protection of correlative rights?

A Yes, it will.

MR. KELLAHIN: That concludes my examination of Mr. Ramey, Mr. Catanach.

We move the introduction of Exhibits One through Seven.

MR. CATANACH: Exhibits One through Seven will be admitted as evidence.

MR. KELLAHIN: We also have available to you, if you desire, logs from the District Office of the disposal well, if you care to see those.

CROSS EXAMINATION

BY MR. CATANACH:

Q Mr. Ramey, you said that you could not locate Syntero Oil Company?

A That is correct. I sent them a copy to their last known address, which is the address that was filed with the New Mexico State Land Office when they -- when they leased the land.

MR. KELLAHIN: Mr. Examiner, for information here is the actual copy I sent that was mailed on January 8th and shows that it was returned to the sender, no forwarding address available.

MR. CATANACH: Do you want to mark that as an exhibit, Mr. Kellahin?

MR. KELLAHIN: Yes, sir, we'll mark this as Exhibit Number Eight, and if I may make a copy, I'll put that in the record.

MR. CATANACH: Okay.

A He could just have it, as far as I'm concerned.

MR. KELLAHIN: Okay, thank you.

MR. CATANACH: Exhibit Number Eight will be admitted into evidence.

Q Mr. Ramey, you stated that the Devonian was going to be the main primary injection interval. Have you all done log analysis or anything else that would indicate that that would be the primary injection zone?

A Just in -- just in looking at the logs. I have not, you know, I did not try to do any porosity cal-

culations or anything like that.

In talking to Mr. Squires, he was on the well when they drill stem tested it and they recovered like 5000 feet of water out of the zone, which indicates to me good porosity and good permeability, and I think that would be the primary zone.

Just a few miles to the east of this well PetroTherm has a disposal well in the Abo, so I think that's -- that certainly is a zone that is capable of taking water.

In analyzing the log, or just looking for good porous intervals, why, I found, you know, I found an interval in the Wolfcamp and also an interval in the Mississippian, which I think all of those will probably take water.

Q Now the only producing zone in that whole area is the San Andres, is that correct.

A Yes, sir, that is correct.

Q That's within two miles?

A Yes, it's just about -- it would be -- there are several wells just a mile and a half or so to the north and west, which are in the -- the West Arkansas Junction-San Andres Pool.

There's a possibility that the San Andres will also take some water in this area, but I don't think it would ever be a factor in affecting oil production in that

particular pool.

Q Mr. Ramey, do you know when the well was originally drilled, were any of these other zones tested?

A There -- I do not know. There were no drill stem tests filed with the Division and no information on the 105 that was filed. I tried to find L & B Oil Company and I couldn't; could get no information on that. There was nothing on the scout tickets so I would assume they were either tested or did not indicate anything. I'm sure they had a mudlogger on the place when they drilled the well; I think anyone would on a wildcat of this type and I'm reasonable certain every zone was (not clearly understood.)

Q Mr. Ramey, that source water is going to be trucked in, is that correct?

A Yes, sir. Right now Pollution Control is, or General Petroleum, which is another subsidiary of the Snyder Ranches - Pollution Control consortium, and they're hauling in excess of 2000 or around 2000 barrels a day to their disposal facility at Laguna Gatuna from the Scharb-Bone Spring area, and this would be -- this would be a shorter haul to this well and would save the operator some money.

Q Mr. Ramey, our rules require that the injection zones, that an analysis be done of the water in the proposed injection zones. Apparently there's no way that

you all can do that.

A I don't think so; not -- not really economical. We'd, of course, have to go in and set, you know, some kind of a open hole packer or a set of two open hole packers to isolate each zone if we did an analysis.

What we had anticipated doing was after -- after the well was cleaned out and all the zones cleared, was getting -- just getting an analysis of the mixed water, a large sample of mixed water (not understood.)

Q And can that be provided to us when that's done?

A Yes, sir, it will be. Certainly will be.

MR. CATANACH: I have no further questions of the witness.

Are there any other questions of the witness?

If not, he may be excused.

MR. RAMEY: Thank you, Mr. Examiner.

MR. CATANACH: Is there anything further in Case 8817?

If not, it will be taken under advisement.

(Hearing concluded.)

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. 8817, heard by me on Feb. 5 1986.

David R. Catanach, Examiner
Oil Conservation Division