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

25 July 1984

EXAMINER HEARING

IN THE MATTER OF:

Application of Charles B. Gillespie, Jr. for salt water disposal, Lea standard proration unit, Rio Arriba County, New Mexico. CASE 8247

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division:
W. Perry Pearce
Attorney at Law
Oil Conservation Commission
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant:
James G. Bruce
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I N D E X

E X H I B I T S

MR. STOGNER: We will now call Case Number 8247.

MR. PEARCE: That case is on the application of Charles B. Gillespie, Jr. for salt water disposal, Lea County, New Mexico.

MR. BRUCE: Mr. Examiner, my name is Jim Bruce from the Hinkle Law Firm in Santa Fe, representing Mr. Gillespie, and I have one witness to be sworn.

MR. PEARCE: Are there other appearances in this matter?

(Witness sworn.)

DANIEL S. NUTTER,

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

DIRECT EXAMINATION

BY MR. BRUCE:

Q Mr. Nutter, will you please state your full name, address, occupation and employer?

A My name is Dan Nutter. I live in Santa Fe, New Mexico. I'm a consulting petroleum engineer and in this particular case I've been retained by Mr. Charles B. Gillespie, Junior.

Q And have you previously qualified before the New Mexico OCD and had your credentials accepted as a matter of record?

A Yes, I have.

Q And are you familiar with application 8247?

A I am.

MR. BRUCE: Mr. Examiner, is the witness considered qualified?

MR. STOGNER: He is.

Q Mr. Nutter, would you please briefly state what it is Mr. Gillespie seeks by this application?

A The application in Case Number 8247 is that of Charles B. Gillespie, Junior for salt water disposal in Lea County.

He's proposing to convert a present salt water disposal well, which is going into the San Andres formation, into a disposal well in the Wolfcamp formation. This well is known as his State "D" Well No. 3. It's located 3000 feet from the south line and 330 feet from the west line of Section 1, Township 16 South, Range 35 East in the Townsend Wolfcamp Pool, Lea County, New Mexico.

Q Thank you. Would you now please refer to Exhibit Number One and describe that?

A Exhibit Number One is a plat of the area. It's for orientation purposes only. Circled in red is the proposed -- is the salt water disposal well. It's

approximately three miles west of the city of Lovington, New Mexico, and is located on the Lovington airport.

Q Would you please now refer to --

A Oh, I might, while I'm on that, I might point out that that Well No. 5, which is a southeast diagonal offset to the disposal well, is one of the few times that you'll see an error on Midland Mapping Company's maps.

That well should be located where the "X" is, approximately 660 feet to the east of where it's spotted on the map.

Q Okay.

A There's a little "X" there with an arrow pointing to the "X". That's the proper location.

MR. STOGNER: Did you make this correction, Mr. Nutter?

A Yes, sir, I sure did.

MR. STOGNER: And it's correct?

A I -- it's according to your files, it's correct.

MR. STOGNER: Okay, thank you, Mr. Nutter.

Q Exhibit Number Two consists of a number of sheets of paper. Would you please describe them for the Examiner?

A Yes. All of the attachments that are listed on the table of contents are in place in this exhibit with the exception of Attachment No. C-108-10-D, which we'll

get to separately.

The first attachment in the exhibit is the injection well data sheet. You'll note that 13-3/8ths inch casing was set at 309 feet in the well. It was cemented with 350 sacks of cement and cement was circulated on the surface pipe.

8-5/8ths inch intermediate was set at 4649 feet, cemented with 2400 sacks, and cement circulated.

A 5-1/2 inch liner was run from 4519 feet to 10,601 feet. The shoe was cemented with 600 sacks of cement. The top of the cement on the shoe is 6210 by temperature survey. The top of the liner was squeezed with 200 sacks. There are all -- the cement is indicated by dots. I don't know where the bottom of the cement is on the top of the liner, however.

The well was perforated in the Wolfcamp formation originally from 10,546 feet to 10,598 feet.

After that it produced for several years and was plugged in the lower section there and perforated from 6010 to 6040 in the San Andres feet with four holes per foot. It was then converted to salt water disposal in the San Andres.

Those perforations will be squeezed upon conversion of the well to salt water disposal in the original perforations from 10,546 to 10,598 in the Wolfcamp.

The next attachment is the application for the approval of the well as a disposal well.

The following attachment is the Attachment C-108-5. It's the location map and has a one-half mile radius circle and a two-mile radius circle drawn around the disposal well which is indicated by red and the number "3".

Also shown are two red dots which are Wolfcamp disposal wells. Neither of these wells is on active duty at the present time, however, but both have been utilized for disposal into the Wolfcamp formation.

The next attachment is the well data sheet for all of the wells within the area of interest.

You'll note that the surface pipe on all of the wells within a half mile radius of the disposal well has been set at at least 290 feet. That's the most shallow surface pipe in here.

The Ogallala is present in the area at a depth up to approximately 120 feet, so the Ogallala has a minimum of 170 feet behind the -- protected by this surface casing.

This well was originally drilled, the disposal well is the third well on the list there, the Charles B. Gillespie State "D" No. 3. It was originally drilled by Cabot Carbon Company. Ownership was transferred to Mr. Gillespie in August of 1967.

Also it's interesting to note that each one of these wells within the area of interest has its intermediate pipe set in the 4600-foot range. This is in the top of the San Andres formation.

For the disposal well you'll see two sets of perforations, 10,546 to 10,598, and 6010 to 6040. The lowermost perforations are the original perforations which produced oil and will be used for disposal.

The 6000-foot perforations are in the lower part of the San Andres formation and will be squeezed.

The potential on the well is in there. It states that it's 192 barrels of oil; however, that was the potential in only 12 hours, so the official potential test on the well was filed as 384 barrels of oil per day.

While we're on this I might mention the tops of the various formations in here.

The top of the anhydrite in the subject well was 1820.

The top of the salt ws 1940; base of the salt was 2950.

Top of the San Andres, 4625.

Top of the Glorieta, 6268.

Top of the Tubb, 7398.

Top of the Abo, 8093.

Top of the Hueco, 9630.

And top of the Wolfcamp, 10,525.

The next exhibit shows the schematic diagram of the two wells within the area of interest which have been plugged and abandoned.

You'll notice that starting at the top we have a double casing and double cement job across the Ogal-

lala. This first well was -- has its surface pipe set at 329 feet with cement circulated.

The intermediate pipe has cement circulated on it. The 5-1/2 inch pipe in this well was run to 10,675. It was cut and there is a cement plug spotted at the top of the 5-1/2 inch stub. There's also a 25-sack cement plug at 6200 feet in the top of the Glorieta. There's a cement plug at 4650 feet at the top of the San Andres.

So I believe that this well is adequately plugged to provide protection to all the fresh water sands in the area.

The next well is the -- another well that's been plugged within the area of interest and it has been plugged at an almost identical manner to the first well.

The next attachment sheet is a data sheet. It states that there will be an average of 200 barrels per day disposed into the well with the maximum expected daily rate of injection at 350 barrels. The system will be open unless problems are encountered, in which case a closed system will be considered.

It's anticipated that injection into the well would be on a vacuum but should surface pressure be necessary, it would not exceed .2 of a foot -- .2 of a pound per foot to the uppermost perforations, or 2100 pounds.

Source of the disposal water is the Wolf-

camp formation from various leases that Mr. Gillespie operates in the area, so there is no compatibility problem expected with the disposal of water into the formation.

The next attachment is C-108-8, and it's a rundown on the geological data in the area. I think the most important part is the part that states that the Ogallala formation is the ground water source in the area. It's usually found at depths of less than 120 feet and there are no other fresh water sands known in the area.

Following attachment is the stimulation program. It states that on December 29th, 1968 the well was converted to salt water disposal. It states the means by which the well was converted to disposal in the San Andres at that time.

It's proposed that those San Andres perforations will be squeezed. The plug and the cement from 10,163 feet to 10,363 feet will be drilled out. The well will be cleaned out and the perforations from 10,546 to 549 -- 598 would be acidized with 2000 gallons of 15 percent acid and the well converted to disposal.

Following attachment is the logging and test data. The well, as I stated before, produced 192 barrels of oil in 12 hours for a potential of 384 barrels.

After completion the well produced 164,707 barrels of oil, 626,996 Mcf of gas, and 12,000 barrels of water before conversion to salt water disposal.

Disposal into the San Andres has been

going on for -- since 1968; however, it's starting to take -- it's starting to fill up and if the applicant disposes of his average rate of 200 barrels per day, it takes a pressure of 300 to 400 pounds at the present time. It's hoped that the Wolfcamp will take the water on a vacuum.

Attachment C-108-11-A is the next one. It indicates the location of the water wells which would be on the following attachment. There are two water, fresh water wells within a half mile of the disposal well.

The well that's marked No. 1 on the following map is the T. G. Singletary Well. It's a farm well. And the well No. 2 marked on the following map is a water well on the Lovington Airport for airport use.

There's many other water wells in the area but none within the half mile circle.

So we go to Attachment C-108-11-B, which is the next one. It shows the disposal well marked with the "3", the Airport well is the well east/southeast marked No. 2 with the red triangle. The Singletary well is south/southeast, marked with the "1", and as I mentioned before, there are numerous other water wells, all indicated by the red triangles on this exhibit.

The following exhibit is an analysis made by an independent water laboratory of the two fresh water wells within the area of interest. You will see that both of them have potable water. The Airport well is slightly harder than the water in the Singletary well but the maximum

chlorides in either well is 64 parts per million.

Exhibit Number 108-12 is the affirmative statement required.

The following attachment, 14-A, is the receipt for certified mail to offset operator. This case was advertised in the newspaper by the applicant. Attachment 14-B is a copy of the legal notice.

Next turn to Exhibit Three, then.

Q Would you please describe the well log for the Examiner, Mr. Nutter?

A Okay. The exhibit shows the formations that the well was drilled through and at the bottom, indicated in red on the exhibit, is the proposed disposal zone in the Wolfcamp formation from 10,548 to 10,590 -- 546 to 10,598.

Q And finally would you turn to Exhibit Four and describe that for the Examiner?

A Exhibit Four is a letter addressed to the Oil Conservation Division in Santa Fe from Jerry Sexton, the District Supervisor in Hobbs, in which he has reviewed the application for salt water disposal and gives his okay, signed JS.

Q And in your opinion would the granting of this application be in the interest of conservation, the prevention of waste and the protection of correlative rights?

A Yes, sir, I believe it will. It will

certainly save the operator money by not having to use pumping facilities to dispose of the water. By injecting the water at a vacuum rather than under pressure it will be a lot more reliable insofar as keeping the water within the wellbore.

Q And were Exhibits One through Four prepared under your direction or have you examined them and do you agree with the data thereon?

A Yes, sir.

MR. BRUCE: And at this time I move for the admission of Exhibits One through Four, Mr. Examiner.

MR. STOGNER: Exhibits One through Four will be admitted into evidence.

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

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. Nutter, was this appliction originally filed administratively?

A There was an application that the applicant filed for administrative approval; however, it wasn't eligible because it was within two miles of production.

Q And that's the reason it's set for hearing today?

A Yes, sir.

That's when it was advertised in the newspaper and no timely objection was filed to the application, when it was advertised.

Q This particular well is on the Airport property in Lovington, is it not, sir?

A Yes, sir.

MR. STOGNER: I have no further questions of this witness.

Are there any other questions of Mr. Nutter? If not, he may be excused.

Mr. Bruce, do you have anything further in Case Number 8247 this morning?

MR. BRUCE: I have nothing further, Mr. Examiner.

MR. STOGNER: Is there anybody else that has anything in Case Number 8247 this morning?

If not, this case 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 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. 8247. heard by me on July 25 1984.

Oil Conservation Division, Examiner

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

11 July 1984

EXAMINER HEARING

IN THE MATTER OF

Application of Charles B. Gillespie, Jr. for salt water disposal, Lea County, New Mexico. CASE 8247

BEFORE: Richard L. Stamets, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division:

For the Applicant:

MR. STAMETS: The hearing will come to order.

We called earlier Case 8247, an application of Charles B. Gillespie, Jr., and the applicant has requested that this case be continued to the July 25th Examiner Hearing and it will be so continued.

(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 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. 8247 heard by me on 7-11 1984.

Robert L. Stamets, Examiner
Oil Conservation Division