BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
December 20, 1967
EXAMINER HEARING

IN THE MATTER OF:

Application of Lone Star Producing Company for salt water disposal, Roosevelt County, New Mexico.

Case No. 3700

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

NEW MEXICO OIL CONSERVATION COMMISSION

BEST AVAILABLE COPY

EXAMINER HEARING

SANTA FE , NEW MEXICO

Hearing Date **DECEMBER 20, 1967** TIME: **9 A.M.**

NAME	REPRESENTING	LOCATION
Jack Willock	Tenneco Oil Company	Durango, Colorado
Nina Dutlaime	RW BYRAM & Co.	Santa Fe
W. C. Blackburn	Continental Oil Co.	Casper, Wyoming
R. L. Halvorsen	RTA Oil Prod	Midland Tex.
Dale McCarter	Texaco Inc	Hobbs, N.M.
A.L. Porter, Jr	OCC	Santa Fe, N.M.
Booker Kelly	White Gilbert Koch & Kelly	S.F.
Jason W. Kellahin	Kellahin & Fox	Santa Fe, N.M.
R.S. Morris S.G. Bird	Midwest [illegible]	[illegible]
Jack R McGraw	Coastal States	Midland, Tex
W D Elliott	"	Corpus Christi, Tex
Robert Zinke	"	Midland, Texas
Don W. Mattson	Midwest Oil Corp	Midland, Tex.
J R Rowan	"	"
John Pulte	Midwest Oil Corp	Midland
A J Losee	H & S Oil Co	Artesia, N.M.
R. L. Hensel		Artesia N.M.
Herbert R. Spencer	H & S Oil Co.	Artesia N.M.

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DS Morris [illegible]	Midwest (Montgomery, Federici & Andrews)	Santa Fe
Jack R McGraw	Coastal States	Midland, Tex
W D Elliott	"	Corpus Christi, TEX
ROBERT ZINKE	"	Midland, Texas

MR. NUTTER: The hearing will come to order, please. The first case will be number 3700.

MR. HATCH: Case 3700. Application of Lone Star Producing Company for salt water disposal, Roosevelt County.

MR. HINKLE: Clarence Hinkle, Hinkle, Bondurant and Christy of Roswell, representing Lone Star. We have one witness and about three exhibits, I think.

I'd like to have Mr. Ochsner sworn.

MR. HATCH: Will you stand, please.

(Witness sworn.)

MR. HINKLE: Let's let her identify these exhibits and get them in there.

(Whereupon, Applicant's Exhibits Numbers 1, 2, and 3 were marked for identification.)

JOHN D. OCHSNER

called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. HINKLE:

Q State your name.

A John Ochsner.

Q Where do you live?

A Midland, Texas.

MR. NUTTER: Would you spell your name for the record, please?

A O-c-h-s-n-e-r.

Q By whom are you employed?

A Lone Star Producing Company.

Q In what capacity?

A As district engineer.

Q Have you previously testified before the New Mexico Oil Conservation Commission?

A Yes, sir, I have.

Q Your qualifications as a petroleum engineer are a matter of record?

A Yes, they are.

Q Are you familiar with Lone Star's operations in New Mexico?

A Yes, I am.

Q Have you made a study of the South Prairie Pool and of the South Prairie Cisco Pools?

A Yes, I have.

Q And of all the wells that have been drilled in that area?

A Yes.

Q Are you familiar with the application of Lone Star in this case?

A Yes, I am.

Q What are they seeking to do?

A Lone Star is seeking to dispose of salt water produced from the South Prairie Cisco Pool in the South Prairies-San Andres Pool and by disposing of it in the Lone Star Federal New Mexico "D" Number 1 Well, which is located in Section 29, Township 8 South, Range 36 East, in the northeast quarter of the northeast quarter of that section.

Q Refer to Lone Star's Exhibit Number 1 and explain what this is and what it shows.

A This is a plat of the area showing the proposed injection well location and the limits of the South Prairie Cisco Pool and the South Prairie-San Andres Pool.

Q Those are the limits as defined by the Oil Conservation Commission?

A Yes, they are. And the wells are color coded thereon and shown as the Pennsylvanian and the San Andres Well that have produced or are producing in the fields.

Q Does Lone Star have any producing wells in either of these pools?

A Yes, we have two Pennsylvanian producers and one

San Andres producer in the second field.

Q Where are they located?

A The San Andres Well is located in Section 20, the northeast quarter of the northeast quarter, which is the Federal Lone Star, Federal New Mexico "C" Number 1, and the two Cisco producers are Lone Star Federal New Mexico Number 1 and the Federal New Mexico "B" Number 2, which are located in Sections 20 and 21.

Q Are these wells, as well as the other wells in both pools, producing considerable water?

A Yes, they are.

Q What is the status of your South Prairie-San Andres Well located in the northeast of the northeast quarter?

A The Lone Star Federal C-1, which is a San-Andres well is presently making two hundred and six barrels of oil per month and twelve hundred and sixty-nine barrels of water, and we are planning to plug this well in the near future.

Q So when this is plugged, you, or Lone Star, will not have any wells, as far as the San Andres Pool is concerned?

A That's correct.

MR. NUTTER: What formation is that well producing from?

A The San Andres.

MR. NUTTER: This is a San Andres Well?

A Yes, the second well is -- we have one San Andres Well, which is the C-1 and is making the previous two hundred barrels per month, and we are planning to plug this in the near future.

Q Does Lone Star own the lease on which your proposed injection well in the northeast of Section 29 is located?

A That is correct. Lone Star owns the offsetting developed leases from the proposed injection well.

Q What is the history of the proposed injection well?

A The proposed injection well was drilled initially by Cosden Petroleum Corporation in November of 1960 and was drilled to a total depth of ninety-seven hundred and fifty-nine feet and completed in the Cisco Formation. The Cisco was a water-dry formation. The well watered out and was plugged and abandoned in January of 1962, and Lone Star obtained the lease after Cosden had plugged the well and abandoned, and re-entered it on

November the 12th, 1964, and deepened it to twelve thousand and eighty-nine feet to test the Atoka formation. It was dry in the Atoka, plugged back, a liner was set and the San Andres was tested from forty-nine hundred and forty-seven feet to five thousand twenty-seven feet. Water was obtained on the tests.

Q You did not obtain any oil in the San Andres formation at all?

A No commercial. We obtained only a slight show in the San Andres well, testing it at two perforations.

Q Do you have an electrical log of the injection well, proposed injection well?

A Yes, we do.

Q Refer to Exhibit 2 and explain what it shows.

A If I may borrow one of those for just a minute.

The subject log of the well shows the top of the San Andres at depth of 4,045 feet, the base of the San Andres at 5495 feet, the proposed injection zone from 4910 to 5,015 feet and the previously producing Cisco Zone or Bough "C" Zone is at 9,693 feet.

Q Does the log of that well correlate with your San Andres Well, as far as the San Andres formation is concerned, located in the northeast, northeast of Section 20?

A The individual zones, it's a more strati-

graphic, the San Andres, the stratigraphic in here, and the individual productive zones are difficult to correlate, but the intervals do correlate, the San Andres. It's correlative from one well to the other well in the field.

Q I believe you testified that Lone Star is going to plug, shortly, the well located in the northeast, northeast of Section 20.

A That is correct.

Q When that well is plugged then, how far will it be from the injection well to the closest San Andres well which is producing?

A It will be a little over a mile to the closest producer.

Q Now, refer to your Exhibit Number 3 and explain what this shows.

A This is a diagrammatic sketch of the proposed salt water disposal installation showing surface casing set at 472 feet of thirteen and three-eighths inch casing, which was cemented with 350 sacks and circulated. Eight and five-eighths inch casing was set to 4210 feet, cemented with 1700 sacks and it circulated. A four and a half inch liner is presently set at 3800 feet to 5100 feet and this has also been cemented. Tubing will be set to -- two and three-eighths inch tubing will be set to a proximate depth of 4910 feet

with a Baker Model D. Packer set at approximately 4900 feet, and injection will be into preforations from 4910 feet to 5,015 feet. This will be through plastic coated tubing with a treated fluid in the annulus.

The well will be drilled out. Plugs presently in the well will be drilled out to approximate depth of 5,060 feet, and cement plugs presently in the well are from 7,425 feet to 7,500 feet and the plug will be from 5,060 feet to 5,213 feet. Deeper, 9,575 to 9800 feet. 9,975 feet to 10,500; 12,025 to 12,100 and 12,275 to 12,050.

The sketch also shows that the original hole, which was drilled by Cosden and completed in the Cisco Zone, when the well was deepened to the Atoka, the five and a half, which was left in the well by Cosden, was -- the well was deviated outside the old hole and around the five and a half inch casing left in the well, and deepened to the Cisco.

Q By completing this well in the manner in which you have described, in your opinion, will the injected water be confined to the San Andres formation?

A Yes, it will.

Q What are the quantities of water which you propose to inject into this well?

A The estimated volume of salt water would be

approximately two thousand barrels per day with an estimated injection pressure of eighteen hundred pounds. The volume could change since other operators have requested that we dispose of their water. Lone Star is currently producing about thirty thousand barrels per month or approximately a thousand barrels per day, so some of this did include injecting water for other operators who have contacted us in the field.

Q If this well is approved by the Commission as an injection well, do you contemplate going ahead with it as quickly as possible?

A Yes, we would like to inject water by January the 1st of 1968.

Q And you are considering disposing of the water produced from other wells other than Lone Star's in this particular case?

A We have been contacted by other operators who have requested this.

Q Have you had any objection from any of the offset operators or any of the lease owners in the area as to using this well as an injection well?

A We have not been advised of any objection to our disposal well.

Q Did you furnish a copy of this application with

the exhibits to the State Engineer?

A Yes, we did.

MR. HINKLE: I'd like to offer in evidence Exhibits 1, 2 and 3.

MR. NUTTER: Lone Star's Exhibits 1, 2 and 3 will be admitted in evidence.

(Whereupon, Applicant's Exhibits 1, 2 and 3 were admitted in evidence.)

MR. HINKLE: That's all we have.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Ochsner, now you mentioned that the well in the northeast, northeast of 20, which is presently a San Andres well would be plugged and abandoned in the near future. Of these other wells in Sections 20 and 21, how many of those wells, to your knowledge, have tested the San Andres and found it to be non-productive?

A In 20 and 21, I know of no other wells that have tested the San Andres.

Q So all of the San Andres production after the abandonment of your C Number 1 there will either be in Section 16 or 17?

A Yes, that's correct.

Q And will be at least one mile removed from the disposal well?

A Yes.

Q Now, apparently even the Pennsylvanian is being abandoned down here in this south end now, isn't it?

A Yes, it is. We have plugged out in Section 28, the -- well, both Cisco wells have been abandoned and in the Section 21, the southwest, southwest well, our B-1 has been abandoned, and the well immediately north of the proposed injection well in 20, our Federal New Mexico Number 2 Well, has been abandoned. Almost all wells in the Pennsylvanian are producing in excess of fifty percent water and are in advanced stages of depletion. Most wells have watered out, and it appears that the large Kobe pumps are possibly overcoming the major affect of the water drive, and, so, production is continuing.

Q Now, you mentioned that your company is producing at the rate of about a thousand barrels a day, correct?

A Of water.

Q Of water?

A Yes.

Q And if the San Andres Well -- I think you mentioned it made 1269 barrels of water one month.

A That's correct. Two hundred and six oil, and 1269 water.

Q So most of the waters that you're producing is coming from those two Pennsylvanian wells, then?

A Yes, that is our main concern. Our major oil production is also coming from the Cisco.

Q And when you plug and abandon that San Andres well, that's not going to really change your water production too much?

A No, that is correct.

Q Do you have any estimates on the ability of the San Andres to take the water here?

A The only information we have is in the east cross-roads, which is somewhat removed from this, the San Andres. We're injecting in the San Andres, in the east crossroads for dispoaal and we're getting comparable volumes to this in the San Andres there.

Q Comparable to two thousand barrels a day?

A Yes, I believe our pressure has increased over there to near two thousand and we may be faced with opening additional interval or changing not too long in the future over there. But this zone, the San Andres, over here appears to be better, more permeable and better developed than it does in that area over there.

Q Do you know whether any of the operators in this field presently have disposal systems?

A We know of no other disposal systems.

Q So this would be the first one for this area?

A That's correct.

Q Do you know what the total amount of water that's been produced in the field as of today?

A I can give you an estimate here. Approximately 58,000 barrels per month from the Cisco and 2500 from the San Andres.

Q Well, at the current rates of production then, if your well would take two thousand barrels a day, it would take care of the water produced in the field, wouldn't it?

A Yes, I feel sure it would. Initially, it would be just a matter of how long it would probably maintain this.

Q What do you think of the possibility of some of these Cisco wells down in the south end here taking water, in the event the San Andres can't take them?

A We had initially considered putting water into the Cisco in our previously abandoned Federal B-3, which is due east out of this well, but since our main production, our production we have now is from this zone, we were afraid we might end up cycling water or effect our production from these two wells, so we did not inject at this time in there.

Q I see.

MR. NUTTER: Are there any further questions of Mr. Ochsner? He may be excused.

Do you have anything further, Mr. Hinkle?

MR. HINKLE: That's all I have.

MR. NUTTER: Does anyone else have anything else to offer in Case Number 3700? If not, we'll take this case under advisement and call the next case, 3701.

* * *

I N D E X

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, CHARLOTTE MACIAS, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

Witness my Hand and Seal this 6th day of January, 1967.

Charlotte J. Macias
NOTARY PUBLIC

My Commission Expires:

February 10, 1971

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 3700 heard by me on 12/20, 1967

Examiner
New Mexico Oil Conservation Commission