CASE 4389: Application of COASTAL STATES PRODUCING COMPANY FOR SALT WATER DISPOSAL, LEA COUNTY.

Wales .

Case Number

1138

Application
Transcripts.

Small Exhibits

ETC

DEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
August 5, 1970
EXAMINER HEARING

IN THE MATTER OF:

Application of Coastal States Gas Producing Company for salt water disposal, Lea County, New Mexico Case No. 4389

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING



tis

209 SIMMS BLDG. . P.O. BOX 1092 . PHONE 243-6691 . ALBUQUERQUE, NEW MEXICO

dearnley-meier reporting

MR. UTZ: Case 4389.

MR. HATCH: Case 4389, Application of Coastal States Gas Producing Company for salt water disposal, Lea County, New Mexico.

MR. UTZ: Appearances?

MR. HINKLE: Clarence E. Hinkle, Hinkle, Bondurant, Cox & Eaton, Roswell, New Mexico, appearing on behalf of Coastal States. We have one witness, Mr. Jack R. McGraw, whom we would like to have sworn.

(Witness sworn.)

MR. UTZ: Other appearances in this case? You may proceed.

JACK R. McGRAW

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

DIRECT EXAMINATION

BY MR. HINKLE:

- O State your name, your residence and by whom you are employed.
- A My name is Jack McGraw, I work for Coastal States
 Gas Producing Company as Division Petroleum Engineer in
 Midland, Texas.
 - O Have you previously testified before the Commission?
 - A Yes, I have.
 - O And your qualifications as a petroleum engineer

are a matter of record with the Commission?

- A Yes, sir.
- Q Are you familiar with the application of Coastal States in this case?
 - A Yes, I am.
- Q What is Coastal States seeking to accomplish by this application?
- A Coastal States is seeking permission from the Commission to convert our State "27" Number 2 Well in the Tulk-Pennsylvanian Field to salt water disposal status.
 - Q Have you made a study of this area?
 - A Yes, I have.
- Q Have you prepared certain exhibits for introduction in this case?
 - A Yes, sir.

(Whereupon, Exhibits 1 through 4 were marked for identification.)

- Q Refer to Exhibit Number 1.
- A Number 1 is a plat of the area showing the Tulk Field and the arrow pointing to the proposed soft water disposal well. This plat shows that there are six producing wells in the vicinity of this disposal well and also one salt water disposal well in Section 22.
 - O Any further comments with respect to Exhibit Number

MR. UTZ: What is the location of the disposal well?

I might locate the wells here. The map is a little dim. In Section 23 in the northeast of the southwest it is our State 23 Number 1, that is Coastal States well. Then in Section 26 in the northwest of the northwest Coastal States State 26 Number 1. Then our 26 Number 3 is in the northwest of the southwest of 26. Then Bell Petroleum Corporation has a well in Section 35. This is in the northwest of 35. Coastal States has another well in Section 34. It's in the southeast of the northeast of 34. Then, of course, the wells in 27, the Number 2 well is in the southeast-southeast quarter. The Number 1 well is in the southeast-northeast, and back to the Number 22 which we previously described.

O (By Mr. Hinkle) Now refer to Exhibit Number 2 and explain what this shows.

A Exhibit Number 2 is a diagramatic sketch of the well bore as it will be conditioned in order to dispose of salt water. This shows that the well has 13 3/8 inch casing set at 382 feet cement circulated, 8 5/8 casing set at 4,050 cemented with 300 sacks, 5 1/2 inch casing was set to 10,009 feet, cemented with 200 sacks. The well is perforated from

9,789 all the way down to the bottom perforate, 9,970. This is a bridge plug in the well over the purfs at 9,960 to 70. This bridge plug is set at 9,950 and it will remain in place. The disposal zones are the zones that are perforated above this bridge plug beginning at 9,789 and going to 9,910.

- O Geologically, what is the perforated zone?
- A It is the Upper Pennsylvanian Formation, Bo Series.
- Q Is this formation from which wells are producing in the area?
 - A Yes, it is.

MR. UTZ: You said 9,910 and I believe this exhibit shows 9,924.

- A I'm sorry, 9,924, that's right.
- Q (By Mr. Hinkle) Any further comment with respect to Exhibit 2?
- A Injection will be through plastic coated tubing and a non-corrosive fluid will be placed in the anulis.
 - Now refer to Exhibit 3 and explain that.

A Exhibit 3 is a water analysis of the water taken from the drill stem test number two in the 27, Number 2. This is intended simply to show the chloride and the character of the water that is produced in this field. This particular sample is not necessarily -- it doesn't look like all other samples in the field but all of them are salty and are not,

of course, not potable water.

- Q Did you furnish all of the offset operators with copies of the application in this case?
 - A Yes, we did.
 - O Have you had any response from any of them?
- A We received a letter, as did the Commission, from Bell Petroleum, as did the Commission, voicing an objection to this.
 - O Is that the only objection that you have received?
- A Yes. Midwest Petroleum is the other operator and they did not contact us one way or the other.
- Q What was the nature of the objection of Bell Petroleum Company?
- A We might just read their letter. You do have a copy of it?

MR. UTZ: Yes, we do: copy of both of them, as a matter of fact.

A They say in their letter that "Saturation calculations from electric logs of their DeSoto State Number 1 indicates several oil zones in the corresponding interval proposed for salt water disposal. Therefore, Bell Petroleum would like to suggest that all the operators in the area, including Phillips Petroleum Company, consider other alternatives prior to a hearing by the Commission regarding water disposal in the

Penn-Tulk Field."

Q (By Mr. Hinkle) Have you made any study with relation to the wells of Bell's?

A Yes, we have. We have a cross section that we prepared that shows the producing zones.

- O You are referring to Exhibit Number 4?
- A Yes. Could we put this on the wall and discuss it?
- Q Would you refer to Exhibit 4 and explain it to the Commission?

A Exhibit 4 is a cross section. If you refer to the plat, I believe it runs counter from north to south starting with Number 27 in the Well Number 263 which jumps to the east and back to the west in Section 27 West, Number 2, the disposal well, and it jumps back again to Bell's well in Section 34, I believe, and then Coastal States State 34 Number 1 -- 35.

This cross section shows the way the area is, what I would refer to as somewhat complicated. The producing zones in this area are somewhat draped across a high in the Tulk Field. The cross section doesn't show it because it's running down one side and more or less on strike, but each of the producing zones pinch out at various places and in this area the Bo Formation produces from several zones and it's hard to identify, for instance, the Bo "C" or Bo "B" or Bo "A". A

lot of them are draped across this little high. Some of them are very small in nature. We found this out from perforating this well, for instance. It has a lot of pay in it and yet it did not produce very much oil. There are several zones in here that were ten to fifteen feet thick and would normally produce a goodly amount of oil but this well did not and others in the area have not, indicating these zones do not extend very far horizontally.

This log, of course, shows this cross section, shows
the Bell Well here in 34, does not have or has very little
porosity in any of the zones that were producing in these wells.
However, they did pick up a zone higher in the section that
is productive and in their well is not productive, in the
disposal well, and it's over-productive in one of the wells
that Coastal has -- excuse me, two, 34 Number 1 to the south
on here has it, but the point of this is that many of these
zones are not continuous throughout the entire zone, the
entire field.

Now specifically, we would like to show with this cross section that the zone that Bell is producing from in this well is not present in the disposal well, and therefore we will not be putting water into the zone that they are producing. We will be putting water into zones that we are producing. We don't object to doing this ourselves, neither do other

operators in the field. We feel any henefit or any effect might be beneficial. These zones make water anyway, a little bit of additional water, if it does get to it, would not be a problem. We have high volume pumping equipment and we move considerable volumes from each well.

- O In your opinion, the disposal of water in this area would not be injurious to any of the wells in the area?
- A The disposal of water in this area would not be injurious to any wells in the area.
 - Q Do you have any other source of water disposal?
- A Yes, we have a disposal well in Section 22. That well, we have been disposing of water into it for approximately two years and it has to be pumped in at rather high pressures and we would like to use this well in addition to that one because we feel it would go under gravity conditions for quite a long time.
- O In the other disposal well you referred to, is it producing from or was it producing from the same formation?
- A Yes, it was. We have noticed no adverse effects from the injection in that well for the past two years.
 - O Do you have any further testimony to offer?
 - A Not at this point.

MR. UTZ: Would you take a red pencil and make a vertical line in your injection zone, in your well there?

MR. HINKLE: You mean, mark the perforations?

MR. UTZ: Just show the zones you are going to inject.

A They are shown. Those are the zones. I might add this one I couldn't correlate over here but it will be used also.

MR. UTZ: And the well is not producing from that?

A No, sir, they took a drill stem test in this
interval right here, from 9,858 to 9,900. They recovered 175
feet of drilling mud from this, so this area is obviously very
tight.

MR. HINKLE: We would like to offer in evidence Exhibits 1 through 4.

MR. UTZ: Without objection, Exhibits 1 through 4 will be entered into the record of this case.

(Whereupon, Exhibits 1 through 4 were admitted.)

CROSS EXAMINATION

BY MR. UTZ:

Q While you are standing close to your map, let me read from the log Mr. Salman has sent here and you can mark the zones he objects to and says you might contaminate, so we will have an idea how they correlate with yours.

A Right, sir.

- O He really ought to be here to do this himself inasmuch as it is his objection. Approximately 9,570 - 78.
 - A All right.
 - O And 9,720?
 - A All right.
 - Q To about 36?
 - A All right.
 - 0 9,770 to 80, approximate?
 - A All right.
 - 9,813 to 9,830?
 - A All right.
 - Q And 9,848 to 50?
 - A All right.
 - Q And 9,890 to 96?
 - A All right.
 - Q 9,902 to 12?
 - A All right.
 - Q And 9,923 to 33?
 - A Okay.
 - O That's all.
 - A All right, sir.
- O He has one zone way above his producing zone which you are not going to inject in?
 - A That's true and he has marked this zone which he

is producing from now and we are not going to inject in. It is not porous and he has other zones that were drilled. One of them, possibly two, were drill stem tested and recovered only 175 feet of drill.

- O The well is not open?
- A It's not open in these zones, and in this particular well it is open through here but it's depleted so the bottom hole pressure is four or five-hundred pounds.
- Q And they are not producing any oil at all in your proposed injection zone?
 - A No, sir. We have depleted it.
 - Q All right, sir.

MR. UTZ: Are there other questions of the witness? Witness may be excused.

Statements in this case?

Case will be taken under advisement.

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STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, SOVEIDA GONZALES, Court Reporter, 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.

Soverla Jorzale
COURT REPORTER

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New Next co Oil Conservation Commission



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO P. O. BOX 2008 - SANTA FE 97801 GOVERNOR
DAVID F. CARGO
CHAIRMAN

LAND COMMISSIONER ALEX J. ARMIJO MEMBER

STATE SECLOSIST A. L. PORTER, JR. SECRETARY - DIRECTOR

August 12, 1970

Mr. Clarence Hinkle
Hinkle, Bondurant, Cox & Eaton
Attorneys at Law
Post Office Box 10
Roswell, New Mexico 89201

Case No. 4389 and 4390
Order No. R-4007 & R-4008
Applicant:
Coastal States & Murphy H. Baxter

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours.

A. L. PORTER, Jr. Secretary-Director

ALP/ir		
Copy of ord	er also sent to:	
Hobbs OCC	<u>x</u>	
Artesia OCC		
Aztec OCC	R-4007 to State Engineer	
Other	R-4008 to Unit Division - State Land Office	

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL COMSERVATION COMMISSION OF MEN MEXICO FOR THE PURPOSE OF COMSIDERING:

> CASE No. 4389 Order No. R-4007

APPLICATION OF COASTAL STATES GAS PRODUCING COMPANY FOR SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 5, 1970, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 12th day of August, 1970, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FIMDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Coastal States Gas Producing Company is the owner and operator of the State "27" Well No. 2, located in Unit P of Section 27, Township 14 South, Range 32 East, WMPM, Tulk-Pennsylvanian Pool, Lea County, New Mexico.
- (3) That the applicant proposes to utilize said well to dispose of produced salt water into the Upper Pennsylvanian formation, with injection into the perforated interval from approximately 9789 feet to 9924 feet.
- (4) That the injection should be accomplished through 2 3/8-inch plastic-lined tubing installed in a packer set at approximately 9770 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should

-2-CASE No. 4389 Order No. R-4007

be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer.

(5) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Coastal States Gas Producing Company, is hereby authorized to utilize its State "27" Well Mo. 2, located in Unit P of Section 27, Township 14 South, Range 32 East, MMPM, Tulk-Pennsylvanian Pool, Lea County, New Mexico, to dispose of produced salt water into the Upper Pennsylvanian formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 9770 feet, with injection into the perforated interval from approximately 9789 feet to 9924 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus at the surface in order to determine leakage in the casing, tubing or packer.

- (2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.
- (3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Pe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW PRACTO
OIL CONSERVATION COMMISSION

DAVID P. CARGO, Chairman

ALEX J. ARMIJO, Member

A. L. PORTER, Jr., Member & Secretary

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SUITE 400 700 WILSHIRE BOULEVARD LOS ANGELES, CALIFORNIA 90017

ÅUG

(213) 629-3143

August 3, 1970

Mr. A. L. Porter, Jr., Secretary-Director NM Oil Conservation Commission Santa Fe, New Mexico

Dear Mr. Porter:

Reference is made to the application of Coastal States Gas Producing Company which appears on Docket No. 18-70 - Case 4389.

Please be advised that Bell Petroleum Company is the operator of a well (#1 DeSoto State) which is a diagonal offset (660' from the North line and 660' from the West line of Section 35, Unit "D") to the proposed salt water disposal well of Coastal States.

This well produces from the perforated interval of 9726-9736 approximately 100 B/D of oil and no water. An examination of the attached "movable oil plot log of this well" indicates 4 or 5 possible zones in the suggested water disposal interval. Therefore we respectfully recommend that other alternatives be considered for disposal purposes.

Yours very truly,

BELL PETROLEUM COMPANY

O. M. Salman, Vice President

OMS/hs Encl.

COUDINOVIO

SUITE 400 700 WILSHIRE BOULEVARD LOS ANGELES, CALIFORNIA 90017 Car 4389

July 9, 1970

Coastal States Gas Producing Company Post Office Box 235 Midland, Texas 79701

Frikrisk, Tells, Tipo. Konis Fri offic be bores ii

Attention: Mr. Joe R. Howard

Re: Proposed Salt Water Disposal Well, Coastal States' State
"27" No. 2, Tulk (Penn) Field
Lea County, New Mexico

Gentlemen:

Please be advised that Bell Petroleum Company is the operator of a we'l (#1 DeSoto State) which is a diagonal offset (660' from the N. line and 660' from the W. line of Section 35) to the above captioned well. Saturation calculations made from electrical logs of #1 DeSoto State indicate several oil zones in the corresponding interval proposed for water disposal in your well. Therefore Bell Petroleum Company would like to suggest that all the operators in the area, including Phillips Petroleum Company, consider other alternatives prior to a hearing by the Commission regarding water disposal in the Tulk (Penn) Field.

Yours very truly,

BELL PETROLEUM COMPANY

U.M.IO. M. Salman, Vice President

OMS/h/cc: /A. L. Porter, Jr. New Mexico Oil Cons. Com. State Land Office Bldg. Santa Fe, New Mexico 87501

> Midwest Oil Corp. 1500 Wilco Bldg., Midland, Texas 79701

New Mexico State Engineers Office Santa Fe, New Mexico 87501 Attn: Mr. Frank Irby

Mr. Jerry Dean Box 1235 Lovington, New Mexico 88260 DOCKET MAILED

Date 7/23/70

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REFORE EXAMINER UTZ NO. 4389

COASTAL STATES GAS PRODUCING COMPANY
PROPOSED SALT WATER DISPOSAL WELL
TULK (PENN) FIELD
SALT WATER DISPOSAL SYSTEM
LEA COUNTY, NEW MEXICO

PROPOSED DISPOJAL WELL

O UPPER-SENN PRODUCERS

ABANDONED PRODUCERS

DRY HOLES

DISPOSAL WELL

SWO

Constal States Gas Producing Co. State 24 #2

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Baker Model NEP. 0 2900-90	ger Pour sylvanian Format. I cont. syl 200sts Closs C.
EXHIBIT NO. 2	C.271. E-5-40

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THE WESTERN COMPANY Service Laboratory

WAYER ANALYSIS

Operator	Coastal States	Date Sampled	
Well	State 27 #2	Date Received	2-5-69
Field	Baum	Submitted by	Hobbs District
Formation	Penn	Worked by	Koehl
Depth		Other Description	DST #2 (oil skim)
County	Lea, New Mexico		
	in a contract of the contract	CHEMICAL DETERMINATIONS	
Density	1.020 @ 74°F	pH	8,4
Iron	Very Faint Trace .	Hydrogen Su	olfide Very Strong Trace
Sodium and	Polassium10,900		
Calcium	960	ppm Sulfate	8,700 ppm
Magnesium _	292		ppm
Chloride	. (12,000)	,	ride ——— ppm
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PHONE MU 2-7925

COASTAL STATES GAS PRODUCING COMPANY

NORTH TEXAS DIVISION WILCO BUILDING MIDLAND, TEXAS 79701

July 2, 1970

New Mexico Oil Conservation Commission State Land Office Building Santa Fe, New Mexico 87501

Attention: Mr. A. L. Porter, Jr.

Secretary-Director

: Coastal States' State "27" No. 2

Tulk (Penn) Field Lea County, New Mexico

Proposed Salt Water Disposal Well

 \odot

Gentlemen:

Coastal States Gas Producing Company requests permission to convert the Coastal States' State "27" No. 2, located in the SE/4 of SE/4 of Sec. 27, T-14-S, R-32-E, to salt water disposal status.

This well was drilled and completed by Coastal States in February, 1969.

It was completed in the Upper Pennsylvanian formation through perforations of at 9870-80', 9904-10' and 9920-24' and was potentialed for 237 BO plus 343 BW per day. The well declined to 120 BO and 85 BW per day by March 15, 1969. At this time two additional zones at 9840-47' and 9879-98' were perforated and acidized. The well has continued to decline and is now below the economic limit.

Coastal States is presently disposing of 850 BPD of produced water from this field in our State "22" No. 1 well at a pressure of 1400 psi. We plan to inject water into the State "27" No. 2 by gravity. If it will not take all the produced water on a vacuum, then the excess will be injected into our State "22" No. 1 well.

We propose to dispose of the produced water into the Upper Penn formation from 9789-9924. There is a bridge plug at 9950. A zone at 9960-70 was tested on initial completion and found to contain water. We propose to leave this bridge plug in the well since the water zone is at a higher pressure than the depleted oil zones. Coastal States' producing wells in Sections 23, 26 and 27 will be carefully observed in order to detect any affect from injecting water into the Upper Penn in the subject disposal well. No adverse results have been seen from injecting into the State "22" No. 1 well.

DOCKET MAILED

Detro 2/23/70

July 2, 1970

The attached plat shows the location of the subject well and all wells within a two-mile radius. As shown on this plat, there are nine producing wells within two miles of the proposed disposal well.

A diagrammatic sketch of the proposed disposal well is also attached. This sketch shows that we plan to inject through tubing with the packer set at 9770', well below the calculated top of the cement on the 5-1/2" casing at 7400'. A non-corrosive fluid will be placed in the annular space behind the packer.

Coastal States respectfully requests that this be approved administratively or that it be set down for hearing at the next regular hearing date.

Very truly yours,

oe R. Howard

vision Production Manager

JRH:CM:sg

Attachments

cc: Midwest Oil Corp. 1500 Wilco Bldg. Midland, Texas 79701

> Bell Petroleum 1st Savings & Loan Bldg. Midland, Texas 79701

New Mexico State Engineers Office Santa Fe, New Mexico 87501 Attention: Mr. Frank Irby

Mr. Jerry Dean Box 1285 Lovington, New Mexico 88260

Mr. Clarence Hinkle Hinkle, Bondurant and Christy P. O. Box 10 Roswell, New Mexico 88201

W. D. Elliott

Form C-108 Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

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OPERATOR	u di dua eu	er a cyclen	ADDRESS			i	
Coastal States Gas I	Producing C		P. O.	Box 23	5. Midland.	Texa	
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(Signature)			(Title)		,		(Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well. not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

Form C-108 Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

State 1271 2 Tulk (Penn) 100 100 100 100 100 100 100 100 100 10	OPERATOR Coastal States Gas	Producing (Company	ADDRESS P. O.	Box 235. M	idland. Te	*** 79701
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Mr. Jerry Dean. Box 1285. Lovington. New Mexico 88260 37 MANES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-RALF (\$) MILE OF THIS INJECTION WELL Bell Petroleum, 1st Savings & Loan Bldg., Midland, Texas 79701 Midwest Oil Corp., 1500 Wilco Bldg., Midland, Texas 79701 We copies of this application seen Sunface owner Each operators within one-half mile The new Mexico State Engineer NY TO Each of the Following Items attached to Plat of Area Electrical Log Diagrammatic sketch of well its application (see Rule 701-B) Yes Ye	ISWER YES OR NO WHETHER THE FOL	LLOWING WATERS AR	E MIN- WATER		NATURAL WATER	IN DISPO- ARE W	ATER ANALYSES ATTACHED?
Mr. Jerry Dean. Box 1285. Lovington. New Mexico. 88260 ST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (\$) MILE OF THIS INJECTION WELL. Bell Petroleum, 1st Sayings & Loan Bldg., Midland, Texas. 79701 Midwest Oil Corp., 1500 Wilco Bldg., Midland, Texas. 79701 We copies of this application seen Surface owner FACH OPERATOR WITHIN ONE-HALF MILE THE NEW MEXICO STATE ENGINEER OF THIS WELL. WE copies of this application seen Surface owner OF THIS WELL. We copies of this application seen Surface owner OF THIS WELL. We copies of this application seen Surface owner OF THIS WELL. Yes Ye		二、 潭東、江江州 大江津越区	Principal de Alimania de	Yes	I		Yes
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Division Froduction Manager July 2, 1970	RE THE FOLLOWING ITEMS ATTACHEE HIS APPLICATION (SEE RULE 701-B)	[ELECYRICAL I		DIAGR	1.4
(Signature) (Title) (Date)	Qu P. Han	ertify that the info		•		,	y 2, 1970

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well.

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if the applicant so requests. SEE RULE 701.

Cane 4389

Form C-108 Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

Coastal States Gas	Producing C	OMPARY	P. O.	Box 235, Midlan	ad, Texas 79701
State "27"		2	Tulk (Penn)	Lea
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		140	- A69		
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LIMEUIATE	8-5/8	4,050	300 sxs Cl	ss C 2300'	Calculation
ING STRING	0-3/0	4,030	1.00 0.00		
	5-1/2	10,009'	200 axa Cl	ss C 7400'	Calculation
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Mr. Jerry Dean, Box			4	50	
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Car 4389

Pertinent Information

- 1. Injection will be made into the Upper Pennsylvanian formation from 9789-9924.
- 2. The fluid to be injected is produced salt water (see attached analysis) from the Tulk (Penn) Field, Lea County, New Mexico.
- 3. The anticipated volume will be 1000-3000 BPD.
- 4. The anticipated injection pressure is 0 psi.
- 5. The disposal zone contains water similar to that being injected.

 Both waters are highly mineralized and are unfit for domestic use.

Care 4389

MidA+5F 1011 11,1200 Mensaria 19179 19186 3755 12 (. 5annus 2011) 2011) 2011) (VaSII) 8 - 21 - 72 8 - 26 58 50 U Mothesid tota 400 Allied Creem. Sc 50 76 Sc 50 76 15 48 14 32 Rhoda JM Harris MI. [Not]. 12-17-71 18-3-15-2 1-15-11 15 2e:10e Green (1982)

Green (1982) Cobal Core | Constal Six etal 5-21-11 | U-520 10-21 Allind Cham 6-31-76 N-541 ## Cox | Figure | Chicago 5011°c1 2016-73 20357 Allied Chein. E: 21-76 K: 6113 22-72 E-16-77 K-696 21-1-21-75 1-543 1-55 Costal Stolesetal Cobat - 13 - 75 K-4671 14 23 233 242 | S.45*\cr | S.45*\cr | S.55.23 | L.22\to Superior | S.15*\cr | S.15*\cr | S.15*\cr | Superior | S.15*\cr | S.15*\cr | S.15*\cr | Superior | S.15*\cr | S. Coastal States

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10-0-30 15 1-523 Humble 6-15-76 45268 3059 200:05 | J.L.Coc Rodio | J.L.Coc (2-26-16) | 2-16-79 | K-1011 | 1-2426 | 15/10 | 27 TJ Sun 4/16-til Krass 15 M 5.a. Styre
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Prusentiat Funssus Champlin 1 · 16 · 78 L·551 Bell Pel. 9 15-77 6) Free Suy Comments of the Co Geffy H.B.P. B-6572 1 500 501 1 500 501 15 0 Hontie 12 - 21 - 75 K-5532 Texace: 27.55 MBP: 59353 Phillips, Petr B-9650 Sun | | 19-21-75 | | 18-21-75 | | 18-21-3 Politics
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State Di Sole falk Texas 345 CAL PE Francis 2 Sun 1-500 L Sun 1-50 # P 51 أحربن Crex State Verome Smith, 17-17-78 1-1318 1-1318 Sun 6 2, 76 1, 6147 84 54 किट्य गृह 1975 | 1975 | 1976 | 1976 | Union C Getry 4-15-79 1-2506 6/12 Union (3/10/3)
12: 17: 78
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1: 57: 78 Union 5-21-73 K-1281 INTESTA 10 cm. Terace T 15 32 Fundle 20-75 22-25 21-21 Allied Chem. 10 + 15 + 78 1-1526 69 13 Texo::3:17:9: 1.4:17:9: 3:52 \$ 1.53 \$ 2.56 \$ 50 -Honda (2-12-7) (-12-7) Affine Chem.

1

Coastal States Gas Producing Co.

Boss Sink 6'2 133/8" @ 382' cmt. w/ 400 sks class. 2300' top of cut by calculation 8 % 0 4050' cmt w/ 300 sks class C top cmt @ 2300' by calculation 2% EUE thg. plastic Coated Non Corrosive Fluid in Annulas top of cont. 7400'by cakulation Baker Model R Packer @ 9770' 9189-98 9840-47 Upper Poursylvanian Formation 9810-80 9904-10 9920-25 Baker Model N BP. O 9950 9960-70 5/2 @ 10,009 cost. 1/200sts class C.

Cres 4389 C.M. 5-5-10

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CALLETE	NO 4
Section 2 P. P.	(14)

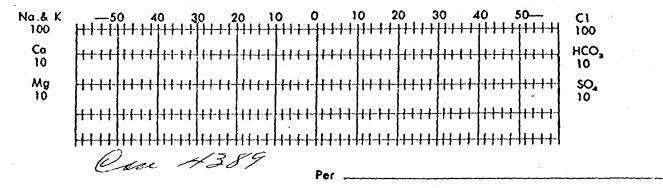
THE WESTERN COMPANY Service Laboratory

WATER ANALYSIS

Operator Coastal States Date Sampled Well Date Received State 27 #2 2-5-69 Field Baum Submitted by Hobbs District **Formation** Worked by Penn Koehl Depth Other Description DST #2 (oil skim) County Lea, New Mexico CHEMICAL DETERMINATIONS 1.020 @ 74°F Density Very Strong Trace Very Faint Trace Hydrogen Sulfide -10,900 Sodium and Potassium_ ppm 8,700 Calcium . ppm 292 Magnesium ppm Phosphate 12,000 Chloride . as Sodium Chloride

Remarks:

for Stiff type plot (in meq./1.)



BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING

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THE PURPOSE OF CONSIDERING:	
	CASE No. 4389
	Order No. R- 4007
	and the second of the second o
APPLICATION OF COASTAL STATES GAS PRODUCING COMPANY FOR SALT WATER	
DISPOSAL, LEA COUNTY NEW MEXICO	5
ORDER OF THE COMMISSION	
BY THE COMMISSION:	
This cause came on for hearing at 9 a.m. at Santa Fe, New Mexico, before Examiner Ele	
NOW, on thisaay ofAugust,	19 <u>70</u> , the Commission, a
quorum being present, having considered the tand the recommendations of the Examiner, and in the premises,	testimony, the record,
In the premises,	
FINDS:	
(1) That due public notice having been law, the Commission has jurisdiction of this matter thereof.	
(2) That the applicant, Coastal States	s Gas Producing Company ,
is the owner and operator of the State "27"	
located in Unit P of Section 27, Township	o 14 South , Range
32 East , NMPM, Tulk-Pennsylvanian Poo	ol Lea
County, New Mexico.	a
(3) That the applicant proposes to util	lize said well to
dispose of produced salt water into the Upper	er Pennsylvanian
formation, with injection into theperfection	orated interval
from approximately 9789 feet to 9924	feet.
(4) That the injection should be accomp	olished through
236 -inch plastic-lined tubing installed	in a packer set at

approximately <u>9770</u> feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should be attached to the annulus or the annulus left open at the surface in order to determine leakage in the casing, tubing, or packer.

(5) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Coastal States Gas Producing Company, is hereby authorized to utilize its State "27" Well No. 2

located in Unit P of Section 27, Township 14 South, Range

32, East, NMPM, Tulk-Pennsylvanian Pool, Lea

County, New Mexico, to dispose of produced salt water into the

Upper Pennsylvanian formation, injection to be accomplished through

2 % -inch tubing installed in a packer set at approximately

9 770 feet, with injection into the perforated interval

from approximately 9789 feet to 9924 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus or the annulus left open at the surface in order to determine leakage in the casing, tubing, or packer.

- (2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.
- (3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.