CASE 4384: Application of SHELL OIL COMPANY FOR SALT WATER DISPOSAL, CHAVES COUNTY.

Lase Number 1382

Application
Transcripts.

Small Exhibits

T / C

dearniey-meier reporting service, ne.

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

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
July 15, 1970

EXAMINER HEARING

IN THE MATTER OF:

Application of Shell Oil Company for salt water disposal, Chaves County, New Mexico.

Case No. 4384

BEFORE: Daniel S. Nutter, Examiner



TRANSCRIPT OF HEARING

MR. LOPEZ: I have one witness.

R. M. CARROLL, JR.,

being duly sworn according to law, upon his oath testified as follows:

DIRECT EXAMINATION

BY MR. LOPEZ:

- Q Mr. Carroll, would you state, for the Commission, your occupation and location.
- A I am a Petroleum Engineer with Shell Oil Company.

 I have a BS Degree in Petroleum Engineering from the University of Oklahoma. I am a Registered Professional Engineer in the State of Texas. I have had twenty-five years experience as a Petroleum Engineer with Shell Oil Company. Twenty-two years of those were spent in the Permean Basin of West Texas and roughly two years in Canada.
- Q Mr. Carroll, does your area of supervision include the area which concerns the application of Shell Oil Company in this case?
 - A It does.

MR. LOPEZ: Mr. Examiner, are his qualifications acceptable?

MR. NUTTER: Yes. They are.

Q (By Mr. Lopez) Mr. Carroll, have you prepared some exhibits in connection with Shell Oil Company's application

today?

A I have. I have a plat which we'd call Exhibit 1 which shows the area, the southern portion of the Cato Field, showing the well that we want to dispose of water, which is in Section 35, Township 8 South, Range 30 East.

MR. LOPEZ: Could we have these exhibits marked for Gidentification?

(Whereupon, Exhibits 1 through 3 were marked for identification.)

Q Is this plat that has been marked Exhibit No. 1, is it the same plat that was attached to the application originally filed in this case?

A Not exactly because for reproduction reasons we extended it on down to show another we'll that is being used for salt water disposal approximately five miles southwest. It doesn't quite include the same area that was presented with the application.

- Q Would you describe the township and range and section which the proposed well is located in?
 - A Section 35, Township 8 South, Range 30 East.
 - Q And the section number is --
 - A 35.
- Q All right, now. Referring to Exhibit No. 2, would you please briefly describe that?

- A Exhibit 2 is a portion of a gamma ray neutron log on the well we propose for salt water disposal.
 - Q Referring to your Exhibit No. 3 --
- A This is a diagrammatic sketch of our proposed completion, if this is approved, of the way we will complete the well, dispose of salt water.
- Q Now, I would like you to fully discuss this Exhibit for the Commission, describing the tubing you plan to use --
- A Well, we will use plastic-coated tubing set on a packer above the zone of disposal. The annulus space between the tubing and the casing will be filled with an inert fluid that is inhibited to protect both strings from corrosion. The casing on it through the zone will be cemented with sufficient volume of cement to confine the water to the zone where we are perforating the proposed injection.
 - Q Will you use pressure gauges at the top of the tubing?
 - A Yes, we will.
- Q Now, will the injection of salt water be below the water-oil contact?
- A Yes. It will. This well had a drillstem test of this interval and it recovered twenty-two hundred feet of salt water -- no oil or gas.
 - Q What type of reservoir is this?
 - A It is a partial water drive reservoir and this

proposed injector will be below the oil-water contact for the field as confirmed by the drillstem test that I referred to.

There are other wells currently injecting in this well -- a Shell well about five miles to the southwest, Section 17, Township 9 South, Range 30 East.

- Q Is that well described on Exhibit No. 1?
- A Yes. It has a circle and red arrows pointing to the center of it.
- Q How much water are you making in this area at the present time?
- A We are making in excess of 3,000 barrels per day, at present.
- Q If your application is denied what effect will this have on your operation?
- A Well, the current injector would be continued to operate at capacity which is a little over a thousand barrels a day and we would have to truck the water out which would result in increased expense and possibly premature abandonment of the producer because it would raise the cost of operation and would result in oil left in place.
- Q If the application is granted, is it your opinion that the correlative rights of offset operators will be protected?
- A Yes. It will. The proposed injector is in excess of a mile from the nearest producer and it is below the water

and it should be many years -- probably in excess of ten years before the effects of this would be shown on the surrounding wells.

Q Is there anything else you'd like to add at this time?

A No.

MR. LOPEZ: That is all I have, Mr. Examiner.

CROSS EXAMINATION

BY MR. NUTTER:

- Q Mr. Carroll, you presently operate the one salt water disposal well down here in Section 17, is that correct?
 - A Yes.
- Q And it has got a capacity of a thousand barrels per day?
- A It is in excess of a thousand barrels a day -- roughly thirteen hundred barrels a day.
 - Q And how much water is presently being produced?
 - A Over three thousand barrels a day.
 - Q What is the present disposition of this excess water?
- A We have had another well in Section 26, Township 8 South, Range 30 East that we have been disposing of in the Yates Formation.
 - O This is one of these two wells shown on this Exhibit?
- A Yes. It is. Well No. 2, if you are looking at the ones I have presented here. It is Well No. 2 that has a slash

Andres. That is the disposal well in the Yates. It is not a satisfactory well. It has taken excessive pressure and we don't feel we can continue in that well.

- Q Are you handling water for anyone other than Shell?
- A No.
- Q So this is all Shell water?
- A Yes.
- Q You are presently operating the well in Section 17 at capacity. You are having difficulties with the Yates disposal well in Section 26 so you are seeking a new San Andres Well in 35?

A Yes. We will abandon -- well, the Yates Well is abandoned right now. We are trucking water.

MR. NUTTER: Any further questions of Mr. Carroll?
You may be excused.

Do you have anything further, Mr. Lopez?

MR. LOPEZ: I don't, Mr. Examiner.

MR. NUTTER: Anyone have anything they'd wish to add in Case 4384?

(Whereupon, Exhibits 1, 2 and 3 were admitted into evidence.)

MR. NUTTER: We will take the case under advisement.

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EXHIBITS

Exhibits	Marked	Evidence			
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STATE OF NEW MEXICO)
) s:
COUNTY OF BERNALILLO)

I, Peter A. Lumia, Certified Shorthand Reporter, do
hereby certify that the foregoing and attached transcript of
proceedings before the New Mexico Oil Conservation Commission
at Santa Fe, New Mexico, is a true and correct record to the
best of my knowledge, skill and ability.

Certified Shorthand Reporter

i do hereby portify that the foregoing is a complete record of the proposition in the firminar hearing of these bo. #384, beard by se on filly 5 19.70

New Mexico Oil Conservation Commission



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO P. O. BOX 2088 - SANTA FE 67801 GOVERNOR
DAVID F. CARGO
CHAIRMAN

LAND COMMISSIONER ALEX J. ARMIJO MEMBER

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

July 20, 1970

	Re	Case No.	4384	
Mr. Owen Lopez Montgomery, Federici, Andrews,	RC 4	Order No.		
Hannahs & Morris		Applicant		
Attorneys at Law	±	Shell Oil	Company	
Post Office Box 2307 Santa Fe, New Mexico				ar a
Dear Sire				

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

A. L. PORTER, Jr.
Secretary-Director

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Copy of ord	ier also sent to:		
Hobbs OCC		Ē	
Artesia OCC_		•	
Other	State Engineer Office		

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:

> CASE No. 4384 Order No. R-3999

APPLICATION OF SHELL OIL COMPANY FOR SALT WATER DISPOSAL, CHAVES COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:30 a.m. on July 15, 1970, at Santa Fe, New Mexico, before Examiner Daniel S. Mutter.

NOW, on this 20th day of July, 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,

FINDS:

- (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, Shell Oil Company, is the owner and operator of the Eastland Shell Federal Well No. 1, located in Unit A of Section 35, Township 8 South, Range 30 East, NMPM, Cato-San Andres Pool Area, Chaves County, New Mexico.
- (3) That the applicant proposes to utilize said well to dispose of produced salt water into the lower San Andres formation, with injection into the perforated interval from approximately 3606 feet to 3680 feet.
- (4) That the injection should be accomplished through 2-inch plastic-lined tubing installed in a packer set at approximately 3590 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer.

-2-CASE No. 4384 Order No. R-3999

(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, Shell Oil Company, is hereby authorized to utilize its Eastland Shell Federal Well No. 1, located in Unit A of Section 35, Township 8 South, Range 30 East, NMPM, Cato-San Andres Pool Area, Chaves County, New Mexico, to dispose of produced salt water into the lower San Andres formation, injection to be accomplished through 2-inch tubing installed in a packer set at approximately 3590 feet, with injection into the perforated interval from approximately 3606 feet to 3680 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 Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO OID COMSERVATION COMMISSION

DAVID F. CARGO, Chadrman

ALEY J. ARMIJO, Member

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

Docket No. 17-70

DOCKET: REGULAR HEARING - WEDNESDAY - JULY 15, 1970

OIL CONSERVATION COMMISSION - 9 A.M. - MORGAN HALL, STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

ALLOWABLE: Consideration of the allowable production of gas for August, 1970, from thirteen prorated pools in Lea, Eddy, and Roosevelt Counties, New Mexico. Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba and Sandoval Counties, New Mexico for August, 1970.

THE FOLLOWING CASES WILL BE HEARD BEFORE DANIEL S. NUTTER, EXAMINER, OR ELVIS A. UTZ, ALTERNATE EXAMINER, IN THE OIL CONSERVATION COMMISSION CONFERENCE ROOM ON THE SECOND FLOOR OF SAID BUILDING AT 9:30 A.M.

CASE 4381:

Southeastern New Mexico nomenclature case calling for an order for the creation, extension, and contraction of certain pools in Lea, Chaves, Eddy and Roosevelt Counties, New Mexico.

(a) Create a new pool in Lea County, New Mexico, classified as an oil pool for Atoka production and designated as the West Crossroads-Atoka Pool. The discovery well is the Union Oil Company of California Lea "M" State Well No. 1 located in Unit A of Section 6, Township 10 South, Range 36 East, NMPM. Said pool would comprise:

TOWNSHIP 10 SOUTH, RANGE 36 EAST, NMPM SECTION 6: NE/4

(b) Create a new pool in Lea County, New Mexico, classified as an oil pool for Devonian production and designated as the West Garrett-Devonian Pool. The discovery well is the Freeport Oil Company Mattie Price Well No. 1 located in Unit A of Section 6, Township 17 South, Range 38 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 38 EAST, NMPM SECTION 6: NE/4

(c) Create a new pool in Chaves County, New Mexico, classified as an oil pool for Devonian production and designated as the Race Track-Devonian Pool. The discovery well is the Klabzuba, Munson, and Seamon White Well No. 1 located in Unit I of Section 13, Township 10 South, Range 27 East, NMPM. Said pool described as:

Docket No. 17-70

(Case No. 4381 continued)

TOWNSHIP 10 SOUTH, RANGE 27 EAST, NMPM SECTION 13: NE/4 SE/4

(d) Contract the Bough Permo-Pennsylvanian Pool in Lea County, New Mexico, by the deletion of the following described area:

TOWNSHIP 9 SOUTH, RANGE 36 EAST, NMPM SECTION 18: NE/4

(e) Extend the Vada-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 36 EAST, NMPM SECTION 18: NE/4

(f) Extend the Blinebry Oil Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM SECTION 30: SW/4

(g) Extend the Bluitt-San Andres Associated Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 38 EAST, NMPM SECTION 20: NW/4

(h) Extend the South Carlsbad-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 27 EAST, NMPM SECTION 6: E/2 SECTION 7: N/2

(i) Extend the High Plains-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 34 EAST, NMPM SECTION 14: SW/4

(j) Extend the Loco Hills-Queen Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 30 EAST, NMPM SECTION 31: SE/4 NE/4 and NE/4 SE/4

(k) Extend the Midway-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM SECTION 17: S/2

(1) Extend the Quail-Queen Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM SECTION 12: S/2

TOWNSHIP 19 SOUTH, RANGE 35 EAST, NMPM SECTION 7: SW/4

(m) Extend the West Sawyer-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 37 EAST, NMPM SECTION 34: NW/4

(n) Extend the East Weir-Tubb Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM SECTION 12: NE/4 and N/2 SE/4

CASE 4382: In the matter of the application of the Oil Conservation Commission upon its own motion for an order for the contraction of the Aztec-Pictured Cliffs Pool in San Juan County, New Mexico, by the deletion of certain lands in Township 28 North, Ranges 8 and 9 West; Township 29 North, Ranges 8, 9, and 10 West; and Township 30 North, Range 10 West; further, for the extension of the Blanco-Pictured Cliffs Pool and the South Blanco-Pictured Cliffs Pool in San Juan County, New Mexico, to include, among other lands, the lands being deleted from the aforesaid Aztec-Pictured Clifs Pool; and for the further extension of the Aztec-Pictured Cliffs Pool in San Juan County, New Mexico.

Wednesday - July 15, 1970 Regular Hearing -4-

Docket No. 17-70

- CASE 4383: Application of MWJ Producing Company for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the rules governing the Baum-Upper Pennsylvanian Pool to permit the drilling of an oil well at an unorthodox location 330 feet from the North line and 2310 feet from the West line of Section 9, Township 14 South, Range 33 East, Lea County, New Mexico.
- CASE 4384: Application of Shell Oil Company for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from 3606 feet to 3680 feet in its Eastland Shell Federal Well No. 1 located in Unit A, Section 35, Township 8 South, Range 30 East, Cato-San Andres Pool Area, Chaves County, New Mexico.
- CASE 4385: Application of King Resources Company for a unit agreement, Otero County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Brokeoff Mountain Unit Area comprising 37,747 acres, more or less, of Federal, State and Fee lands in Townships 24, 25, and 26 South, Ranges 19 and 20 East, Otero County, New Mexico.
- CASE 4386: Application of Texaco Inc. for an exception to Order No. R-3221, as amended, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico. Said exception would be for applicant's wells located on its V. G. Kinahan Federal and Peery Federal leases comprising respectively, Sections 20 and 29 of Township 15 South, Range 30 East, Little Lucky Lake-Devonian Pool, Chaves County, New Mexico. Applicant seeks authority to dispose of produced salt water in an unlined surface pit located in Unit K of said Section 29.
- CASE 4387: Application of Benson-Montin-Greer Drilling Corporation for surface commingling of oil, Rio Arriba County, New Mexico.

 Applicant, in the above-styled cause, seeks authority to commingle the production from its Canada Ojitos Unit Well No.

 13, a non-participating well located in Unit L of Section 27, Township 26 North, Range 1 West, Rio Arriba County, New Mexico, with oil production from the participating area of said unit.

SHELL OIL COMPANY

PETROLEUM BUILDING
P.O. BOX 1509

Re: Salt Water Disposal
Cato Field
Chaves County, New Mexico

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

Gentlemen:

Attached is an Application to Dispose of Salt Water by Injection Into a Porous Formation submitted by Shell Oil Company to test the injectivity and if satisfactory, to begin salt water disposal into the Eastland Shell Federal No. 1 located in Section 35, T-8-S, R-30-E in Chaves County, New Mexico. Also attached are a log of the proposed injection well, a diagrammatic sketch of the proposed injection well, and a plat of offset wells producing in the same proposed injection zone.

MIDIAND, YEXAS 79701 June 18, 1970

Shell Oil Company respectfully requests permission for injection of 2000 BPD of brine water produced in conjunction with oil and gas operations in the Cato Field. It is anticipated the maximum pressure required for both the test and injection will not exceed 1800 psi.

Although wells in the area are producing from the proposed injection formation, drill stem tests indicate that the well is located below the oil-water contact.

Should further information be required, please advise.

Yours very truly,

Original Signed By J. F. TRECKMAN

For: J. L. Mahaffey, Manager Production Department - West Midland Division

JRF :VJ

Attachments

(Caso 13/4 CF)
1PANY 74/07

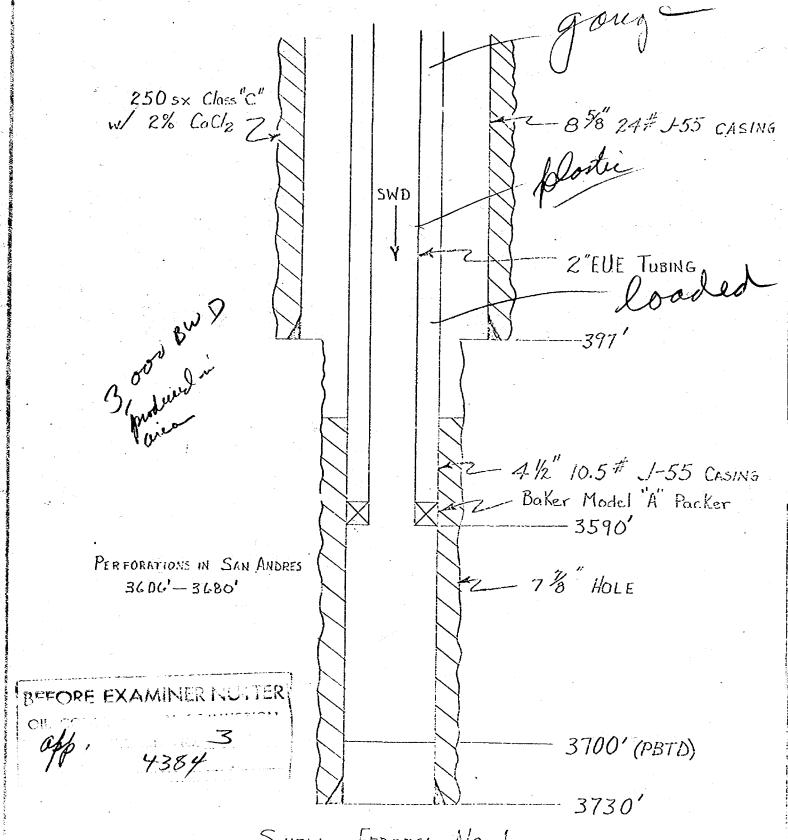
NEW MEXICO OIL CONSERVATION COMMISSION

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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.

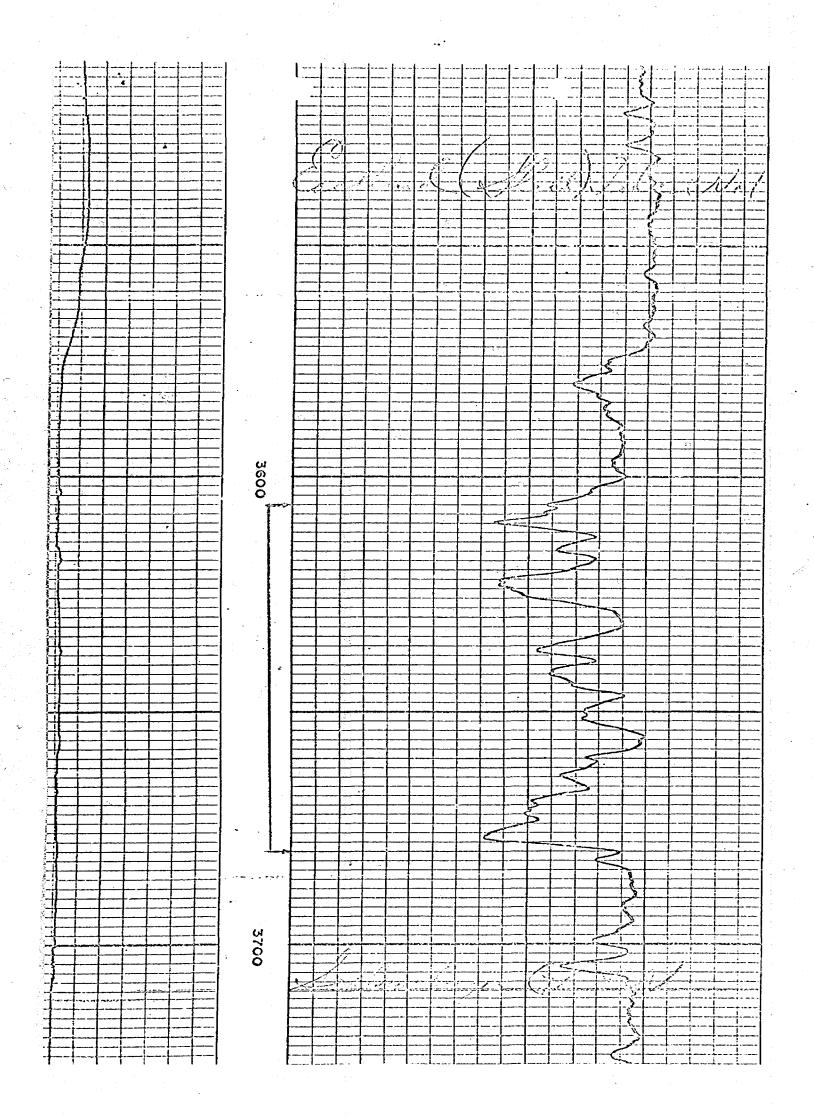
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SHELL FEDERAL NO. 1

SHELL OIL COMPANY

*This is the proposed injection system. The surface string is in place and the well is presently TA'd.





SHELL OIL COMPANY

P. O. BOX 1810 MIDLAND, TEXAS 79701

July 6, 1970

Subject: Disposal of Salt Water into Sholl Federal No. 1, Cato Field Section 35, Township 8 South, Range 30 Egst, Chaves County, New Mendico

Mr. J. H. Fields Route 2 Benver City, Texas 70323

Centlemen:

Shell Oil Company is presently considering the Shell Federal No. 1 for subsurface disposal of produced water. Shell would like to test the San Andres formation, in the interval between 3606 and 3680 feet, for possible disposal zones. If injectivity tests prove successful, Shell would convert the well to facilitate disposal of 2000 BMPD.

For your information, you will find attached a copy of the MMCC Form C-108, a plat of the area and a schematic drawing of the subject well.

If the proposed test and installation meet your approval, please sign and return two copies of this waiver to this office. The waiver will accompany the MOCC Form C-108 at the time formal application is made.

Yours very truly,

J. J. Pickell, Manager Production Department - South Mid-Continent Division

JRF:RH Enclosures

J. M. Fields



SHELL OIL COMPANY

PETROLEUM BUILDING
P.O. BOX 1509
MIDLAND, TEXAS 79701

June 18, 1970

Subject: Salt Water Disposal

Cato Field

Chaves County, New Mexico

MAIN CEFICE 600

Cas 4384

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

'70 Jun 22 AH 9 42

Gentlemen:

Attached is an Application to Dispose of Salt Water by Injection Into a Porous Formation submitted by Shell Oil Company to test the injectivity and if satisfactory, to begin salt water disposal into the Eastland Shell Federal No. 1 located in Section 35, T-8-S, R-30-E in Chaves County, New Mexico. Also attached are a log of the proposed injection well, a diagrammatic sketch of the proposed injection well, and a plat of offset wells producing in the same proposed injection zone.

Shell Oil Company respectfully requests permission for injection of 2000 BPD of brine water produced in conjunction with oil and gas operations in the Cato Field. It is anticipated the maximum pressure required for both the test and injection will not exceed 1800 psi.

Although wells in the area are producing from the proposed injection formation, drill stem tests indicate that the well is located below the oil-water contact.

Should further information be required, please advise.

Yours very truly,

J. L. Mahaffey, Manager

Freduction Department - West

Midland Division

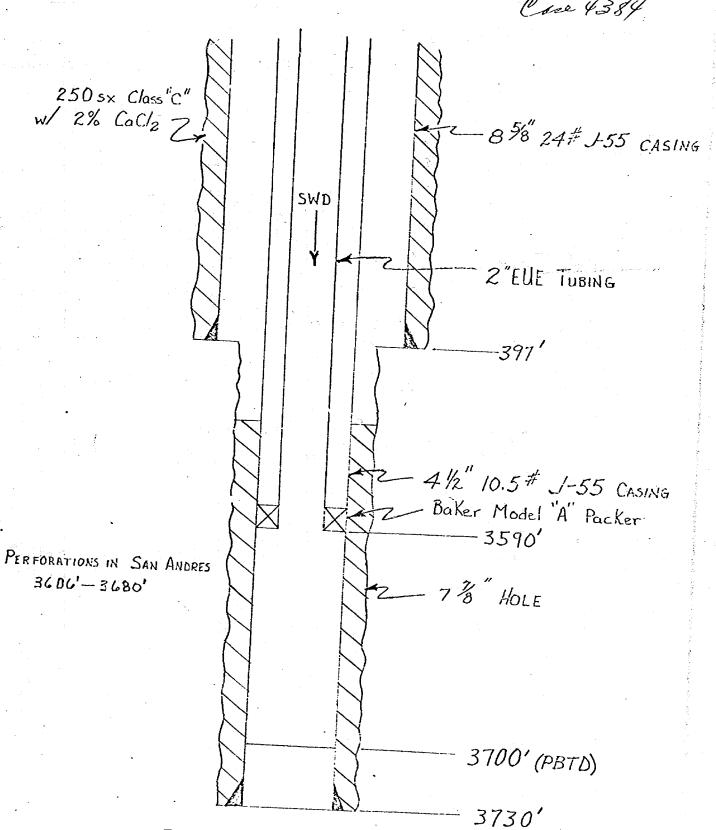
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Attachments

DOCKET MAILED

Date 7=2-70

Case 4384



SHELL FEDERAL NO. 1

SHELL OIL COMPANY

*This is the proposed injection system. The surface string is in place and the wiell is presently TA'd.

NEW MEXICO OIL CONSERVATION COMMISSION Oue 4384 APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

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Manager, Production Department-West

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NEW MEXICO OIL CONSERVATION COMMISSION

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

Shell Oil Company			ADDRESS	1 Dans 150	\0 \114.11.		20203
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Federal land, ourfa	ERATORS WITHIN	ONE-HALF (1) MILE O		LL			
Federal land, ourfa	ERATORS WITHIN	one-half (‡) Mile o	8998	TOR WITHIN ONE	-HALF MILE	THE NEW MEXI	O STATE ENGINEER
Federal land, surfaint names and addresses of all of Shell Oil Company h	N SURFACE OW	one-half (‡) Mile o	SEACH OPERA	TOR WITHIN ONE	-HALF MYLE		O STATE ENGINEER

Qt. Theelman FOR	Manager, Production Department-West	June 18, 1970
(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 held 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.

NEW MEXICO OIL CONSERVATION COMMISSION

Care 4389

APPL	ICATION TO DISP	OSE OF SALT W	ATER BY INJEC	CTION INTO	A POROUS	FORMATIO	DN
PERATOR			ADDRESS				
Shell Oil Comp	my		P. 0	Box 150	9 Midlan	d, Texas	
EASE NAME		WELL NO.	FIELD				COUNTY
Shell Federal		11	Cato	Field			Chaves
out 110K		• • • • • • • • • • • • • • • • • • • •					the second of the
UNIT LETTE	R; w	ELL IS LOCATED	330 FEET F	пом тне <u>NO1</u>	rth LINE	AND 990	FEET FROM
Rast LINE, SECTI	ON 35 TO	WNSHIP 8-S	RANGE 30.	R NMPN	. Charma	County	
			G AND TUBING DA		MICAGE	- Louity	
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEME	NT T	OP OF CEMENT	то	P DETERMINED 81
IRFACE CASING						ļ	*.
24# J-55	8 5/8"	397'	250 sks 2%	CaCl ₂	Hrc Cement	È ∤	
10°.57, J-55(pro	posed) 4 1/2"	37301	400 sks	2	600		
ONG STRING							
							<u></u>
EUE (proposed)	2"	35901	Baker Model				
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San Andres		1		860'		3765	1 %
1	CASING OR ANNUCUS!	4	S OR OPEN HOLE? PI	3606 • -		ON	
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No.		in San Andr	98		71	ON ZONE?	IN THE PROPOSED INJ NO
ST ALL SUCH PERFORATED IN				н —			<u> </u>
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		None	SEO TYPE SYSTEM	T11		None	
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ME AND ADDRESS OF SURFACE	OWNER (OR LESSEE, IF	STATE OR FEDERAL LA	Yes	<u> </u>	.98		
Federal land, s	urface lessee	unknown					
ST NAMES AND ADDRESSES OF	ALL OPERATORS WITHIN	ONE-HALF () MILE O	F THIS INJECTION WE	L			
Shell Oil Compa	my has all su	th offset le	88e8				
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VE COPIES OF THIS APPLICAT NT TO EACH OF THE FOLLOWII	ION BEEN SURFACE OWN	VER	EACH OPERAT	OR WITHIN ONE	HALF MILE TH	E NEW MEXIC	STATE ENGINEER
17 -		-			1		
E THE FOLLOWING ITEMS ATT	ACHED TO PLAT OF ARE	A	ELECTRICAL	LOG	101	AGRAMMATIC :	SKETCH OF WELL
	Yes		į Y	e 8	1	Yes	

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

\mathcal{L}	4-	Theelowan	For Manager	, Production	Department-West	June 18, 1970
\overline{y}	7	(Signature)		(Title)		(Date)

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

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GMH/esr

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

SHAFT ...

CASE No. 4384

Order No. R- 3 999

APPLICATION OF SHELL OIL COMPANY FOR SALT WATER DISPOSAL, CHAVES COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION: This cause came on for hearing at 9 a.m. on July 15 at Santa Fe, New Mexico, before Examiner Daniel S. Nutter NOW, on this_ _day of __July____, 19<u>70</u>, 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, FINDS: (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof. That the applicant, Shell Oil Company is the owner and operator of the Eastland Shell Federal Well No. 1 , located in Unit A of Section 35, Township 8 South, Range 30 East , NMPM, Cato-San Andres Pool Area , Chaves County, New Mexico. That the applicant proposes to utilize said well to dispose of produced salt water into the San Andres formation, with injection into the _____perforated _____interval from approximately 3606 feet to 3680 feet. (4) That the injection should be accomplished through

2 -inch plastic-lined tubing installed in a packer set at

approximately 3590 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, Shell Oil Company,
is hereby authorized to utilize its <u>Eastland Shell Federal Well No.</u> 1,
located in Unit A of Section 35 , Township 8 South , Range
30 East , NMPM, Cato-San Andres Pool Area , Chaves ,
County, New Mexico, to dispose of produced salt water into the Lower
San Andres formation, injection to be accomplished through
3590 feet, with injection into the perforated interval
from approximately 3606 feet to 3680 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 crethe-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.