CASE 5789; AMOCO PROD. CO. FOR SALT WATER DISPOSAL WELL, ROOSEVELT COUNTY, NEW MEXICO

Application,

Transcripts,

5 mall Exhibts

sid morrish reporting service

General Court Reporting Service

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Phone (505) 982-9212

# BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION Santa Fe, New Mexico October 27, 1976

## EXAMINER HEARING

# IN THE MATTER OF:

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Application of Amoco Production Company )
for salt water disposal well, Roosevelt )
County, New Mexico.

5789

BEFORE: Daniel S. Nutter, Examiner

# TRANSCRIPT OF HEARING

# APPEARANCES

For the New Mexico Oil Conservation Commission:

Lynn Teschendorf, Esq.
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant:

Antone L. Peterson, Esq. Legal Counsel for Amoco Prod. Co. P. O. Box 3092 Houston, Texas

ATWOOD, MALONE, MANN & COOTER Attorneys at Law P. O. Drawer 700 Roswell, New Mexico

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MR. NUTTER: The hearing will come to order, please.
We will call next Case Number 5789.

MS. TESCHENDORF: Case 5789, application of Amoco Production Company for a salt water disposal well, Roosevelt County, New Mexico.

MR. PETERSON: Antone Peterson for the applicant.

The file should also reflect an appearance by Atwood, Malone,

Mann and Cooter for the applicant.

MR. NUTTER: We do have that written appearance.

MR. PETERSON: Amoco has one witness today.

(THEREUPON, the witness was duly sworn.)

# JAMES E. PEASE

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

## DIRECT EXAMINATION

BY MR. PETERSON:

- Q Would you state your full name for the record, please
- A. James E. Pease.
- Q And your employer, location of employment and the capacity in which you are employed, Mr. Pease?
- A. I'm employed by Amoco Production Company in Houston,
  Texas as a Staff Engineer.
  - A Have you testified before the Commission previously?

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A.		MO	,	-		

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In light of that, would you please give us an insight into your qualifications, starting with your educational background and then your duties and responsibilities since graduation?

I earned a Bachelor of Science degree in petroleum engineering from the University of Tulsa in January of 1957 following which I went to work for Amoco Production Company or its predecessor companies in various engineering capacities. I had about four years of field engineering experience and I have about twelve years of reservoir experience with Amoco, including two years in their research center in Tulsa where I was assigned to the reservoir performance and evaluation group and followed thermo-recovery projects. 14

And you are now in the proration section, I understand?

Yes, sir.

MR. PETERSON: Are the witness' qualifications acceptable to the Commission, Mr. Examiner?

MR. NUTTER: Yes, they are.

(Mr. Peterson continuing.) I would like for you now to direct your attention to what has been labeled Amoco's Exhibit One, Mr. Pease, could you tell us what that exhibit shows, please?

Yes, sir, this is a plat of the Petersen Field area.

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The Swearingen "C" Well No. 2 for which we are asking authority for salt water disposal is indicated by the red arrow.

Q I notice you have also marked several other, it looks like well locations, could you explain the significance of

A. Yes, sir, the red dot represents the Swearingen "C"

No. 1 which is an oil producer from the Fusselman zone. The

green dots indicate Penn producers and there is one former

Penn producer which is down in Section 36, Township 5 South,

Range 32 East.

Q You have indicated that the red arrow shows your proposed injection well, would you give us the exact location of that well, please?

A. Yes, sir, it is located three hundred and thirty feet from the south line, nine hundred and ninety feet from the west line in Section 18, Township 5 South, Range 33 East, Roosevelt County, New Mexico.

Q. Do you have any further comments regarding this plat?

A. No, sir.

those markings, please?

Q. I would like for you now to look at what has been labeled Amoco's Exhibit Two and explain what that is, please?

A. This is a complete composite log which was run on the Swearingen "C" No. 2 from surface to TD.

And can you explain the numerous completion attempts

made in this well, please?

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The total depth of the well was eight thousand, six hundred and fifty-six feet, five-and-a-half inch casing was set at eight thousand, four hundred and seventy-seven 5 feet and was cemented in place with four hundred and twenty-6 five sacks of cement. The cement top and the casing annulus is at six thousand, eight hundred and fifty feet by temperature survey.

The first completion attempt was made at eight thousand, three hundred and thirteen to eighteen feet. The perforations were acidized with one thousand gallons of fifteen percent hydrochloric acid. They tested by swabbing a total of fifty-seven barrels of load water and two hundred and fourteen barrels of water in forty hours with no show of oil or gas.

A cast iron bridge plug was set at eight thousand, two hundred and sixty feet and was capped with thirty-five feet of cement. The five-and-a-half inch casing was perforated from seven thousand, eight hundred and thirty-five to fortyfive feet and was acidized with one thousand gallons of fifteen percent hydrochloric acid. This interval was tested for a two-week period, the last test by swabbing was eight barrels of oil and thirty-seven barrels of water in eight hours. interval was re-stimulated with five thousand gallons of fifteen percent hydrochloric acid and was tested for several

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days, the last test being two barrels of oil and four barrels of water by swabbing in three hours.

A cast iron bridge plug was set at seven thousand, seven hundred and seventy feet and capped with thirty-five feet of cement. The five-and-a-half inch casing was then perforated from seven thousand, four hundred and twenty-four to seven thousand, four hundred and thirty-one feet. These perforations were acidized with one thousand gallons of fifteen percent hydrochloric acid. They tested by swabbing six barrels of water with no show of oil or gas in four hours.

The well has been shut in since June 2nd, 1976 awaiting approval for a salt water disposal well.

- Q I notice, Mr. Pease, you have marked the Fusselman formation on the log, your proposed injection interval, what does the log show about the Fusselman?
- A. The Fusselman was encountered at eight thousand, one hundred and fifteen feet and the top one hundred and thirty-five feet is dense dolomite with essentially zero porosity.
  - Q. Do you have any further comments regarding this log?
  - A. No, sir.
- Q I would like for you then to look at what has been labeled as Amoco's Exhibit Three, a sketch of the proposed injection well, could you explain that sketch, please?
- A. This is a sketch of the Swearingen "C" No. 2 as it will exist after the workover to complete it as a salt water

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disposal well. Two of the present sets of perforations will be cement squeezed, these are from seven thousand, four hundred and twenty-four to thirty-one feet and seven thousand, eight hundred and thirty-five to forty-five feet.

This sketch also shows two additional sets of perforations which will be added during that workover. These are from eight thousand, three hundred and thirty-four feet to eight thousand, three hundred and forty-four feet and eight thousand, four hundred and forty-eight feet to eight thousand, four hundred and sixty-four feet.

Two-and-three-eighths inch internally coated tubing will be run in the well on a packer. The packer will be set at approximately eight thousand, two hundred and sixty feet.

Treated brine will be left in the annulus.

- Q All right, as to the three sets of perforations which you intend to inject this salt water through, what volume of fluid will be injected into the perforations?
- A. When the application was filed the only well in the Petersen Field that was making water at that time was the Swearingen "C" No. 1, the Fusselman producer. At that time it was making about fifty barrels of water per day. Since then we have completed the Swearingen "B" No. 4 Well and on potential test it made a hundred and ninety-three barrels of water per day.
  - g So your estimate of the injection volume we need is

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what, Mr.

- The minimum now would probably be about two hundred and fifty barrels of water per day.
  - What injection pressure would you anticipate?
- We anticipate that this Fusselman interval will take the water on a vacuum. However, I should point out that during the acid treatment of the Fusselman zone the initial shut-in pressure was nineteen hundred pounds, so it is possible that a pressure of about two thousand pounds will be required.
- And you plan to conduct an injectivity test before you commence injection and you would like for that to govern the injection pressure?
- That's correct. We plan to acidize the three sets of perforations as shown on the left of this exhibit and then run a short-term injectivity test at about three different rates.
  - Do you have any further comments regarding the sketch
  - A. No, sir.
- If you would then look at what has been labeled 19 Amoco's Exhibit Four and explain what that exhibit shows, 20 please?
  - This is a two well log cross section between the Swearingen "C" No. 2 on the left and the Swearingen "C" No. 1, the Fusselman producer on the right.

We have marked the various geological horizons on

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the two logs and correlated across between the two.

Q All right, then, this cross section shows your proposed injection well, the Swearingen "C" No. 2 and the immediate oil producer offset in the Fusselman, the Swearingen "C" No. 1. I think in your earlier testimony regarding the log of the Swearingen "C" No. 2 you mentioned that there was a dense zone in the Upper Fusselman in that well. Is it then your opinion that the oil producing zone in the Swearingen "C" No. 1 is isolated from your proposed injection zone in the Swearingen "C" No. 2?

- Yes, it is. The Swearingen "C" No. 1 encountered the Fusselman at seven thousand, eight hundred and twenty-seven feet and the top of the Fusselman in this well was porous and permeable. The perforations in the well are shown on the log cross section, being seven thousand, eight hundred and forty-one to seven thousand, eight hundred and forty-nine feet.
- Even assuming arguendo that those zones were in communication, would you have any qualms about injecting into that Lower Fusselman interval in the "C" 2 Well?
  - No, sir.
- How is the salt water which you plan to inject being disposed of at the present?
- It is presently being trucked out.
- At approximately what cost? Do you have those figures? 25

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BY MR. NUTTER:

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A.	Well,	based on	the fift	y barrel	s of wate	er per day
from the	Sweari	ngen "C"	No. 1, i	's costi	ng about	fifteen
hundred	dollars	a month,	which is	about a	dollar	per barrel
of salt	water.					
Q	So in	your opi	nion the	injectic	n of thi	s salt wate
would se	rve in	the inter	est of co	nservati	on by al	lowing mone
which is	now sp	ent on tr	ucking th	ne salt w	ater awa	y be spent
on furth	er deve	loping th	is reserv	or and l	owering	the
economic	limit (	of these	wells?			
<b>A.</b>	That	is correc	ŧ.		· <u>·</u>	₹ 
Q	Also .	in your o	pinion wo	ould this	propose	d salt wate
injectio	n well	violate a	nyone's o	orrelati	ve right	s?
Α.	No, s	ir.				
i i i i i i i i i i i i i i i i i i i	MR. P	ETERSON:	That's a	11 I hav	e of the	witness.
I would	like to	move tha	t Amoco's	Exhibit	s One th	rough Four
be admit	ted into	o evidence	e.			
:	MR. N	UTTER: A	moco's Ex	chibits O	ne throu	gh Four wil
be admit	ted into	o evidence	∍.		4	
	(THER	EUPON, Amo	oco's Exh	ibits On	e through	h
	Four	were admi	tted into	evidence	e.)	

CROSS EXAMINATION

25 Exhibit Number Two, you testified as to some swab tests that

Mr. Pease, the tests that were made now on your

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were made down here in this eighty-three hundred foot interval?

- Yes, sir. A.
- Now, that would be the Fusselman, correct?
- Yes, sir.
- And then some additional tests were made at seventyeight, thirty-five to forty-five and that would be the Pennsylvanian?
  - Yes, sir.
- And that's in the Cisco which is the pay in the offsetting wells, is that correct?
  - Yes.
- And then the upper perforations that were tested at seventy-four, twenty-four to thirty-one were in the Wolfcamp then?
  - Yes, sir.
- And the only thing that was productive at all was the Penn which was only two barrels of oil per day, I think, after the second treatment on the well?
  - It was two barrels of oil in three hours.
- Oh. Okay, now, what is the actual interval that you will be disposing of?
- It will be from eight thousand, three hundred and thirteen feet to eight thousand, four hundred and sixty-four feet.
  - Which is what is shown on your Exhibit Number Three

1 then?

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A. Yes.

Q Well, the application was for a different interval,
being down to eighty-five, thirty-eight, but I guess you
decided not to go that deep into the Fusselman with the
water?

7 A. That is correct. We do not plan to drill out the 8 casing shoe on the casing.

- Q I see. Now, you say that on the testing in the Fusselman formation it indicated a formation pressure of about nineteen hundred pounds?
- A. That was the initial shut-in pressure on the acid treatment of the perforations from eight thousand, three hundred and thirteen to eighteen feet, yes, sir.
- Q. So while you think that the Fusselman might take water on a vacuum it also may take about two thousand pounds of pressure on the surface to get water in?
  - A. Yes, sir.
- Q The Commission as a rule of thumb, Mr. Pease, has adopted, at least on a temporary measure, a maximum injection pressure of approximately two-tenths of a pound per foot of depth which at eighty-three hundred would be approximately sixteen hundred and sixty pounds.

You haven't made any tests to determine whether the water would go in the formation on a vacuum or whether it is

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going to take two thousand pounds?
Not at this time, sir.

MR. NUTTER: Are there any further questions of this witness? He may be excused.

(THEREUPON, the witness was excused.)

MR. NUTTER: Do you have anything further, Mr.

Peterson?

MR. PETERSON: I don't.

9 MR. NUTTER: Does anyone have anything they wish to 10 offer in Case Number 5789?

We will take the case under advisement.

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# REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a Certified Shorthand Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

Sidney F. Morrish, C.S.R.

sid morrish reporting servic General Court Reporting Service 825 Calle Meja, No. 122, Santa Fe, New Mexico Phone (505) 982-9212 

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Wew Mexico Oil Conservation Commission



DIRECTOR

JOE D. RAMEY

# OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO P. O. BOX 2088 - SANTA FE 87501

PHIL R. LUCERO
November 5, 1976



fr. Antone Peterson egal Counsel	Re:	CASE NO	%	5789 <b>R-5311</b>	
Amoco Production Company Sox 3092 Jouston, Texas 77001	e 11 जातीयाः प्रहारा	Applica	int:	and a construction of the second of	
		Amoco	Prod	uction	Company
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JOE D. RAMEY Director					
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(Director	t to:		- A. - A. - A.		

# 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. 5789 Order No. R-5311

APPLICATION OF AMOCO PRODUCTION COMPANY FOR SALT WATER DISPOSAL WELL, ROOSEVELT COUNTY, NEW MEXICO.

#### ORDER OF THE COMMISSION

#### BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 27, 1976, at Santa Fe, New Mexico, before Examiner, Daniel S. Nutter.

NOW, on this 4th day of November, 1976, 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, Amoco Production Company, is the owner and operator of the Swearingen "C" Well No. 2, located in Unit M of Section 18, Township 5 South, Range 33 East, NMPM, Feterson-Fusselman Pool, Roosevelt County, New Mexico.
- (3) That the applicant proposes to utilize said well to dispose of produced salt water into the Fusselman formation, with injection into the perforated interval from approximately 8,313 feet to 8,464 feet.
- (4) That the injection should be accomplished through 2 3/8-inch plastic lined tubing installed in a packer set at approximately 8,260 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge or approved leak detection device should be attached to the annulus in order to determine leakage in the casing, tubing, or packer.

-2-Case No. 5789 Order No. R-5311

- (5) That the injection well or system should be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 1700 psi.
- (6) That the operator should notify the supervisor of the Hobbs district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.
- (7) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.
- (8) 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, Amoco Production Company, is hereby authorized to utilize its Swearingen "C" Well No. 2, located in Unit M of Section 18, Township 5 South, Range 33 located in Unit M of Section 18, Township 5 South, Range 33 least, NMPM, Peterson-Fusselman Pool, Roosevelt County, New Mexico, to dispose of produced salt water into the Fusselman Mexico, to dispose of produced salt water into the Fusselman formation, injection to be accomplished through 2 3/8-inch formation, injection to be accomplished through 2 3/8-inch funding installed in a packer set at approximately 8,260 feet, with injection into the perforated interval from approximately 8,313 feet to 8,464 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 shall be equipped with an approved leak annulus or device in order to determine leakage in the casing, tubing, or packer.

- (2) That the injection well or system shall be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 1700 psi.
- (3) That the operator shall notify the supervisor of the Hobbs district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.
- (4) That the operator shall immediately notify the supervisor of the Commission's Hobbs district office of the failure of the tubing, casing, or packer, in said well or the leakage

-3-Case No. 5789 Order No. R-5311

of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

- (5) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.
- (6) 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

STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

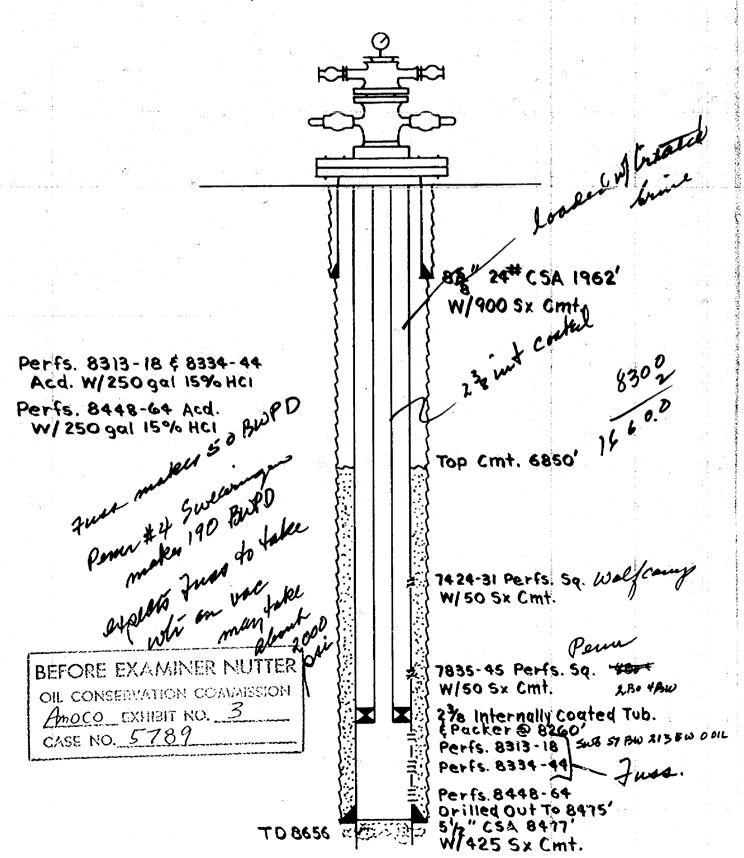
PHIL R. LUCERO, Chairman

EMERY C. ARNOLD Member

JOE D. RAMEY, Member & Secretary

SEAL

# PETERSON PENN FIELD ROOSEVELT CO., NEW MEXICO SWEARINGEN C" NO. 2



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SCALE: 1" = 4000'

ATWOOD, MALONE, MANN & COOTER LAWYERS

JEFF 0. ATWOOD [883-1960] ROSS L. MALONE [1910-1974]

007.20 1976

CHARLES F. MALONE
RUSSELL D. MANN
PAUCIAL COOTER
BOB F. TURNER
ROBERT A. JOHNSON
JOHN W. BASSETT
ROBERT E. SABIN
RUFUS E. THOMPSON

P. O. DRAWER 700 SECURITY NATIONAL BANK BUILDING ROSWELL, NEW MEXICO 88201 [805] 622-622:

RALPH D. SHAMAS

October 19, 1976

Mr. Joe Ramey, Director Oil Conservation Commission State Land Office Building Santa Fe, New Mexico 87501

RE: Examiner Hearing October 27, 1976

Dear Mr. Ramey:

A TO THE POST OF T

Please find our enclosed Entry of Appearance in Case No. 5789. Thank you and with best regards, I am,

Very truly yours,

Charles F. Malone

CFM:sgs Enclosure

cc: Antone Peterson, Esquire w/enc.

# BEFORE THE OIL CONSERVATION COMMISSION STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF AMOCO PRODUCTION COMPANY FOR SALT WATER DISPOSAL WELL PETERSEN-FUSSELMAN POOL, ROOSEVELT COUNTY, NEW MEXICO.

CASE NO. 5789

# ENTRY OF APPEARANCE

The undersigned Atwood, Malone, Mann & Cooter of Roswell, New Mexico, hereby enter their appearance herein for the Applicant, Amoco Production Company, with Antone Peterson, Esquire, of Houston, Texas.

Bander de canales estates de la casa de la c

ATWOOD, MALONE, MANN & COOTER

Attorneys for Amoco Production

Company Post Office Drawer 700

Roswell, New Mexico 88201

Dockets Nos. 31-76 and 32-76 are tentatively set for hearing on November 10 and November 23, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

#### DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 27, 1976

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

The following cases will be heard before Paniel S. Nutter, Examiner, or Richard L. Stamets, Alternate Examiner:

CASE 5768: (Continued from September 29, 1976, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Service Drilling Company, The Travelers Indemnity Company, and all other interested parties to appear and show cause why the Gonzales-Pittman Well No. 1, located in Unit M of Section 24, Township 21 North, Range 21 Fast, Mora County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 5785: (Continued from October 13, 1976, Examiner Hearing)

Application of Doyle Hartman for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Seven Rivers Queen formation underlying the NE/4 NE/4, NW/4 NE/4, SW/4 NE/4, and SE/4 NE/4 of Section 19, Township 24 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico, to form four 40-acre proration units to be dedicated to four oil wells to be drilled at standard locations on said tracts. Also to be considered will be the cost of drilling and completing said wells and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the wells and a charge for risk involved in drilling said wells.

CASE 5574: (Reopened) (Continued from October 13, 1976, Examiner Hearing)

In the matter of Case 5574 being reopened pursuant to the provisions of Order No. R-5118 which order established a temporary special depth bracket allowable of 750 barrels of oil per day for the Eagle Mesa-Entrada Oil Pool, Sandoval County, New Mexico. All interested parties may appear and show cause why said special depth bracket allowable should not be rescinded.

Application of Amoco Production Company for salt water disposal well, Roosevelt County, New Mexico.

Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Fusselman formation through the perforated interval from 8313 feet to 8538 feet in its Swearingen "C" Well No. 2 located in Unit M of Section 18, Township 5 South, Range 33 East, Petersen-Fusselman Pool, Roosevelt County, New Mexico.

Application of Dome Petroleum Corporation for pool creation and assignment of a discovery allowable, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for Entrada production and the assignment of approximately 58,770 barrels of oil discovery allowable to the discovery well, being the Federal 21 Well No. 1 located in Unit K of Section 21, Township 20 North, Range 5 West, McKinley County, New Mexico.

CASE 5791: Application of Texaco Inc. for a non-standard gas proration unit and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 320-acre non-standard Eumont gas proration unit comprising the E/2 SE/4, SW/4 SE/4, and SE/4 SW/4 of Section 23; the W/2 NW/4 of Section 25; and the E/2 NE/4 of Section 26, all in Township 19 South, Range 36 East, Lea County, New Mexico, to be simultaneously dedicated to applicant's William Weir Wells Nos. 1 and 2 at unorthodox locations in Unit E of said Section 25 and Unit N of said Section 23, respectively.

CASE 5792: Application of Dugan Production Corporation for Jawnhole commingling, San Juan County, New Mexico.

Applicant, in the above-styled cause, seeks authority to commingle Angels Peak-Gallup and Basin-Dakota production in the wellbore of its McAdams Well No. 3 located in Unit H of Section 34,

Township 27 North, Range 10 West, San Juan County, New Mexico.

Application of Dugan Production Corporation for an unorthodox gas well location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Sherman Edward Well No. 2A, to be drilled at a point 2500 feet-from the North line and 510 feet from the West line of Section 3, Township 29 North, Range 5 West, Blanco Mesaverde Gas Pool, Rio Arriba County, New Mexico, the N/2 of said Section 3 to be dedicated to the well.

Examiner Hearing - Wednesday - October 27, 1976

CASE 5776: (Continued & Readvertised)

Application of Continental Oil Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its James Ranch Unit Well No. 8 to be drilled at a point 1980 feet from the North line and 660 feet from the West line of Section 31, Township 22 South, Range 31 East, Los Medanos-Morrow Gas Pool, Eddy County, New Mexico, the N/2 of said Section 31 to be dedicated to the well.

Application of Continental Oil Company for compulsory pooling, Eddy County, New Mexico.

Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the W/2 of Section 31, Township 22 South, Range 31 East, Los Medanos Field, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location in Unit L of said Section 31. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

Application of Continental Oil Company for an exception to the provisions of Order No. R-1670, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 21(A) of the Ceneral Rules and Regulations for the provated gas pools of Northwestern New Mexico contained in Order No. R-1670, to permit the reporting of Basin Dakota production from wells on its Northeast Haynes Lease in Township 24 North, Range 5 West, Rio Arriba County, New Mexico, without the necessity of separately measuring the production from each well.

CASE 5777: (Continued & Readvertised)

Application of Gifford & Mitchell and M. B. Wisenbaker for pool creation, pool rules, and a non-standard gas spacing unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new gas pool for Pennsylvanian production for its Horse Back Well No. 1 located 1000 feet from the South line and 1980 feet from the East line of Section 33, Township 26 South, Range 36 East, Lea County, New Mexico, the promulgation of pool rules therefor, including a provision for 640-acre spacing and approval for a 589.52-acre non-standard gas spacing unit comprising all of partial Sections 33 and 34 of the aforesaid township.

Docket No. 30-76

Dockets Nos. 31-76 and 32-76 are tentatively set for hearing on November 10 and November 23, 1976. Applications for hearing must be filed t least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - THURSDAY - NOVEMBER 4, 1976

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

CASE 5743: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit:

John W. Adams, Executor of Estates of R. W. and June Adams; and Ruth McGahey, Fred McGahey and David McGahey dba Adams & McGahey, American Employers' Insurance Company, and all other interested parties to appear and show cause why the following wells located in Township 21 North, Range 30 East, Harding County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program:

Gonzales Well No. 2, located in Unit P of Section 9; Adams & McGahey Well No. 1, located in Unit B of Section 16; and Gonzales "A" Well No. 1, located in Unit H of Section 32.

Upon application of John W. Adams, this case will be heard De Novo pursuant to the provisions of Rule 1220.

Case 5789

10a = - 10/23/16

Form C-108 Revised 1-1-65

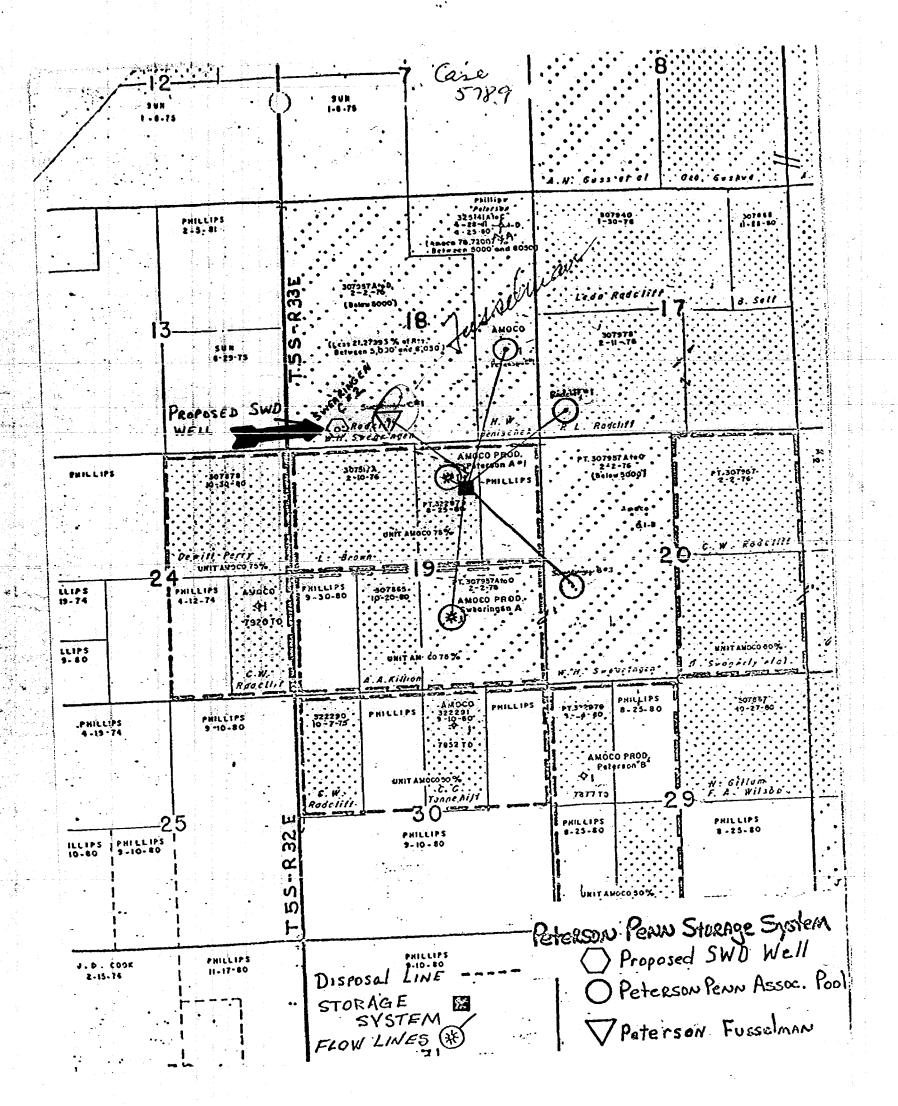
## NEW MEXICO OIL CONSERVATION COMMISSION

# APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POPOLIS

OPERATOR			ADORESS		
Amoco Production	Company			Drawer A, Leve	elland, TX 79336
		WELL NO.	PIELD	- Fussely	COUNTY DOCCOUNTY
Swearingen "C"		2	Peters	on <del>Penn</del>	Roosevelt
	M		30	South	990
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West LINE, SECTION	18 ,	WHSHIP 5-S	RANGE 33-E	i / j i ~	
		CASING A	IND TUBING DATA		
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Fusselman			8116		8580
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E THE FOLLOWING ITEMS ATTACHED I IS APPLICATION (SEE RULE 701-8)	1		ELECTRICAL LOG	The state of the s	AGRAMMATIC SKETCH OF WELL
	Yes	·	! Yes	<u> </u>	<u>Yes</u>
I hereby cert	tify that the infe	ormation above is tru	e and complete to the	best of my knowled	ge and belief.
V 1. 1. 1.	D 11 C	, , , ,	miniakusti A.		0.00.76
ray w. up	R. W. Cox	K Ad	ministrative As	sistant	9-28-76 (Date)
// (Signature)	A 14				

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well. Of 2-MMOCC-hot accompany this application, the New Mexico Oil Conscruation Commission will hold the application for a period of 15 days 1-MM Sutergrow the dote of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been rel-Ms. D. GLA-Keeived by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, 1-Div. if the applicant so requests. SEE RULE 701.

1-Susp
1-RC





# Amoco Production Company RESEARCH CENTER WATER ANALYSIS

T.S. or File No. 535.11

Lab. No. T-22,740

Field No. 1A-1526

API Well No.

LOCATION SAMPLED: Division Houston	District	Area	Leve	lland	· ·
Operator (Plant) Amoco Production Co.	Well No1	lcase		ringen "C"	
State (Province) Texas	County (Parish)	Roosevel			ye Tilizi
Twp 55 Rng. 33E Scc. 18	Quarter (Lsd.)	Othe	r (Meridian).	554'FSL & 2	078'FWL
	Wilder ( ) Field	Well (x) Field	name Pe	terson Penn	
Sample collected from separator	Wildcar ( ) Field Date 6-15-76 Interval name	Samp	le collected b	y B. Baker	· . <del></del>
Interval sampled 7841 to 7849	Interval name	russeiman	<del></del>		
Recovery			•		<del></del>
Form 97 transmitted by V. E. Staley	Date 6-18-70	6 Auth	onized by		
ORGANIC CONSTITUENTS in mg/1	C	ONVENTIONAL	MAJOR 10	N ANALYSIS	
BOTTOM MIDDLE TOP. MUD		Major fons mg/1	% of Total Major Ions	Yalve	% of Total Reaction Value
Toluene HC Gases	Sodium Na	7/30		meq/1	
RC 020	Gikium Ci++	31,337	31.41	1.363.17	<u>39.34</u> 7.83
	Magnesium Mg** Porassium K*	<u>5,440</u>	5.45 1.19	<u>271,46</u> <u>97.82</u>	2.83
DESCRIPTION OF SAMPLE	Chloride CI	60,600	60.73	1,708.92	49.32
Sample used for detailed analyses	Bicarbonate HCO3	00,000	.42	6.89	.20
Date received	Sulfate SO4		.80	16.64	.48
Condition as received	& Carbonate CO3		0	0	0
Color	TOTAL	99,787		and the second s	A 2
Odor	Total solids by evapo	notion			,760 mg/
Suspended solids	N2Cl resistivity equiv	valent (Dunlap)_	***	99	.998 mg/
Bottom sediment					
Oil or fluorescence	_   PH7.1	Specific gravity	1.071 1	·	<u>78</u> _°
	Ryznar stability inde	x (2pHs-pH)_		<del></del>	<del></del> •
QUALITY OF SAMPLE		OTHER IONS AN	D DISSOLV	ED SOLIDS	
BOTTOM MIDDLE TOP	CATIONS m	noina I\g	15 mg/	1 OTHERS	mg/1
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V. E. Staley	Analyse Jon &	h. Alconton		Date7-1	6-76
G. W. Schmide					nf

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Top cont by temp survey 6850' {7% hole}

Form C-108
Revised 1-1-65

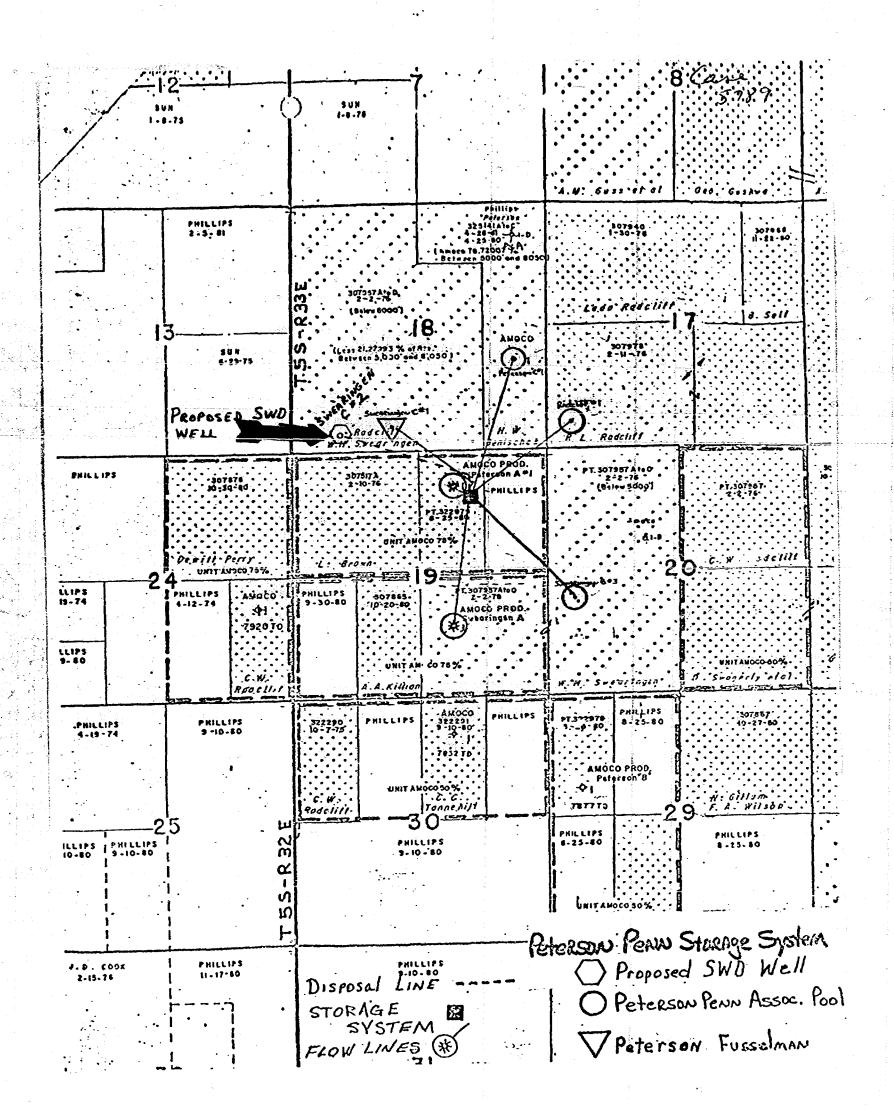
# NEW MEXICO OIL CONSERVATION COMMISSION

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Mrs. David Gra	ves P. O. Bo	x 63, Elida,	New Mexico	88116		· * * * * * * * * * * * * * * * * * * *
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E THE FOLLOWING ITEMS ATTAC IS APPLICATION (SEE RULE 701	-8)	EA	ELECTRICAL		DIAGRAM	MATIC SKETCH OF WELL
	Yes			Yes	1	Yes
I hereby	certify that the in	formation above is	true and complete	to the best of my know	vledge and	d belief.
	n u c-		Kalma na a 4 4 4	us Assistant		0 20 76
Kay W. WY	R. W. Co	<u> </u>		ve Assistant .		9-28-76
			(Title)			(Date)

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

012-MMCCC-hot accompany this application, the New Hexico Oil Conservation Commission will hold the application for a period of 15 days 1-MMSULEAfrom 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 rel-MASD. Generated by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, 1-Div. If the applicant so requests, SEE RULE 701.

1-Susp
1-RC



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TATA
(AMOCO)

# **Amoco Production Company**

ENGINEERING CHART

Case. 5789 SHEET NO. DATE 7-14-76

330 FSL ! 990 FWL, Sec. 18, T-5-S. R-33-E KB. 4434 GL. 4424 Permovent Datum Log . measured from KB. 10' obv GL. 85/8 24# K.55 CSA 1962 W 900 SX cmt cir. {124 hole} Top (mt. 6850) Wolfcamp Perf 7424-31 CIBP @ 7770 Perf 7835-45' Cisco CIBP @ 8260 cop w/ 35' cml. Ref 8313'-18' Fusselman 5%" 14'1 17" K.55 11/11/11 TO 8656

8477' wy 425sx CSA

The cont he town survey 6850 \$7% hole?



# ( ) Amoco Production Company RESEARCH CENTER WATER ANALYSIS

T.S. or File No. 535, 11
Lab. No. T-22, 740

	WAIEK ANALTSIS			Field No. <u>IA-1</u> Well No. <u> </u>	
LOCATION SAMPLED: Division Houston	District	Area	Leve:	lland	<del></del>
Operator (Plant) Amoco Production Co.	Well No1		Swear	ringen "C"	•
State (Province) Texas	County (Parish)	Rooseve	Lt		
Twp. 5S Rng. 33E Sec. 18	Quarter (Lsd.)	Othe	r (Meridian)_	554'FSL & 2	0/8'FWL
	Wildex ( ) Field W	/cll (x) Field	namePe	cerson Penn	
Sample collected from separator  Interval sampled 7841 to 7849	Date 6-15-76	Samp	ole collected b	y B. Baker	
Recovery	Interval nameF				
Form 97 transmitted by V. E. Staley	Date 6-18-76	Auch	orized by	•	
ORGANIC CONSTITUENTS in mg/1		VENTIONAL		N ANALYSIS	
		•		and the second of the second	
BOTTOM MIDDLE TOP MUD		Major lons	% of Total	Reaction Value	% of Total
lokuene		mg/1	Major Ions	meq, 1	Value
IC Gases	Sodium Na+	31.337	31,41	1,363,17	39.34
	S Calcium C++	5,440	5.45	271-46	7.83
	Wagnesium Mg++	1,190	1.19	97.82	2.83
	Porassium K+				
DESCRIPTION OF SAMPLE	Chloride Cl	60,600	60.73	1,708.92	49.32
Sample used for detailed analyses	Bicarbonate HCO3	420	.42	6.89	
Date received	Sulface SO4""	800	80	16.64	.48
Condition as received	Carbonate CO3	0 203		0	0
Color	TOTAL	99,787		. 100	760
Odor	Total solids by evapora				. 760 mg/
uspended solids:	NaCl resistivity equival Resistivity 07	ent (Dunlap)_			
Sociom sediment	pH7.1Sp	( 6c	1.071 a	:	78 °
At at aborescence	Ryznar stability index	(20Hs-0H)	3		
MIALTY OF CAMPLE			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	•	*
QUALITY OF SAMPLE		HER IONS AN	of war well a second		24
Chloride BOTTOM MIDDLE TOP	CATIONS mg/	1 ANION	dS mg/	OTHERS	
on mg/l:				<u> </u>	<del>-</del>
OMMENTS:	<del></del>		<del></del>	<del></del>	
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Note- representative sample	REMARKS AND CON	CLUSIONS:	i e	REU	
of water being produced				Leveila	ind Area
To col		•		JULS	22 1976
from Fusselman zone		•	-	VES	1
perforations 7841-7849-	_ } -			DLW	
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V. E. Staley	_ Analysi Jin de	Allenton	V	Due 7-1	6-76
G. W. Schuldt	The state of the s	ng-gravast gadinati Maliga *			nf ·

# OIL CONSERVATION COMMISSION Hobbs DISTRICT

DIL CONSERVATION COMMISSION BOX 2088	DAT	0etobe	er 1, 19	76
SANTA FE, NEW MEXICO	RE:	Proposed		
		Proposed Proposed		· · · · · · · ·
		Proposed		X
		Proposed	WFX	
				<u></u>
	and the second s	*		
Gentlemen:				
· Cit C Cit Cit Cit Cit Cit Cit Cit Cit C		-		
I have examined the application da	ted			
for the Amoco Production Co. Swearing	ngen licii	/l 2=M	18-5-	22
Operator Leas	e and Well No	. บ	nit, S-	r-R
	e and Well No	. <b>'</b>	nit, S-	r–R
Operator Leas	e and Well No	, ' ' <b>'</b> ' <b>'</b> ' <b>'</b> '	nit, S-	r-R
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and my recommendations are as follows:	e and Well No		nit, S-	r-R
and my recommendations are as follows:	e and Well No		nit, S	r-r
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dr/

### 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. Order No. R-

APPLICATION OF AMOCO PRODUCTION COMPANY FOR SALT WATER DISPOSAL WELL, ROOSEVELT COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

### BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 27, 1976 at Santa Fe, New Mexico, before Examiner, Daniel Se Nutter

NOW, on this day of November 1976 , 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, Amoco Production Company is the owner and operator of the Swearingen "C" Well No. 2 located in Unit M of Section 18, Township South East , NMPM, Peterson-Fusselman Pool Range Roosevelt County, New Mexico.
- (3) That the applicant proposes to utilize said well to dispose of produced salt water into the Fusselman formation, with injection into the perforated interval from approximately 8,313 feet to 8,538 feet.
- That the injection should be accomplished through -inch plastic lined tubing installed in a packer set at approximately 8260 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge or approved leak detection device should be attached to the

-2-		
CASE	NO.	

annulus in order to determine leakage in the casing, tubing, or packer.

- (\*) That the injection well or system should be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more 1700 than 700 psi.
- That the operator should notify the supervisor of the Hobbs district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.
- That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.
- (2) 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, Amoco Production Company is hereby authorized to utilize its Swearingen "C" Well No. 2 located in Unit M of Section 18 South Township NMPM, Petersen-Fusselman Pool East Kange Roosevelt County, New Mexico, to dispose of produced salt Fusselman water into the formation, injection to be accomplished through tubing installed in a packer set at approximately 8,260 feet, with injection into the perforated interval from approximately 8,313 feet to

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 shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

- (2) That the injection well or system shall be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 1700 psi.
- (3) That the operator shall notify the supervisor of the Hobbs district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.
- (4) That the operator shall immediately notify the supervisor of the Commission's Hobbs district office of the failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.
- (5) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.
- (6) 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.

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