CASE NO.

7676

APPlication, Transcripts, Small Exhibits,

ETC.

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2	CONTROL OF MENTOS
2	STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT
3	OIL CONSERVATION DIVISION
•	STATE LAND OFFICE BLDG.
4	SANTA FE, NEW MEXICO
	15 September 1982
5.	
	EXAMINER HEARING
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7	
•	IN THE MATTER OF:
8	Application of Tenneco Oil Company CASE
	for salt water disposal, Lea County, 7676
9	New Mexico.
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13	BEFORE: Daniel S. Nutter
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A .J	TRANSCRIPT OF HEARING
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17	APPEARANCES
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19	
*,	For the Oil Conservation W. Perry Pearce, Esq. Division: Legal-Counsel to the Division
20	Division: Legal-Counsel to the Division State Land Office Bldg.
	Santa Fe, New Mexico 87501
21	
-	
22	
23	For the Applicant: W. Thomas Kellahin, Esq. KELLAHIN & KELLAHIN
-	117 No. Guadalupe
24	Santa Fe, New Mexico 87501

1	3
2	MR. NUTTER: Call Case Number 7676.
3	MR. PEARCE: That is on the application of
4	Tenneco Oil Company for salt water disposal, Lea County, New
5	Mexico.
6	MR. KELLAHIN: If re Examiner please,
7	I'm Tom Kellahin of Santa Fe, New Mexico, appearing on behalf
8	of the applicant, and I have one witness to be sworn.
9	
10	(Witness sworn.)
11	
12	BILL McGREEVY
13	being called as a witness and being duly sworn upon his oath
14	testified as follows, to-wit:
15	
16	DIRECT EXAMINATION
17	BY MR. KELLAHIN
18	Q. Mr., McGreevy, would you please state your
19	name and occupation?
20	A. My name is Bill McGreevy. I work with
21	Tenneco. I'm a production engineer in the Southwest Division
22	Office in San Antonio.
23	Q Mr. McGreevy, have you previously testified
24	before the Division as a production engineer?
25	The state of the state of the No. The No.

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2	Q.	Would you explain to Mr. Nutter when and
3	where you obtained	your engineering degree?
4	A.	Okay. I have a mechanical engineering
5	degree from the Uni	versity of Missouri. I graduated in Jan-
6	uary of 1971.	
7		I worked as a facility engineer, primarily
8	in hospitals, up un	til a year and a half ago, when I joined
9	Tenneco.	
10		I've been working in the Southwest Divi-
11	sion since then.	
12	Q.	Pursuant to your employment by Tenneco,
13	Mr. McGreevy, have y	ou made a study of the subject well for
14		sed conversion to a salt water disposal
15	well?	
16	A.	Yes.
17		MR. KELLAHIN: We tender Mr. McGreevy as
8	an expert petroleum	engineer, Mr. Nútter.
19		MR. NUTTER: Mr. McGreevy is qualified.
20	Q	Mr. McGreevy, let me refer you to the
21	packet of exhibits a	ttached to Form C-108, and have you first
22		lat which is the second attachment, and
23		r us the proposed salt water disposal well
4		That's the No. 3.
100		

All right, sir, and where is that well

It's being trucked out by X-L Truckline,

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2 the MacLean Truckline, right now. 3 And have you made a study of the economic savings, if any, to Tenneco if the salt water disposal well is approved and you can avoid the trucking of produced water? 5 Right now it's -- we have figured out that the economic life of this lease is under four years under the 7 way we're operating it right now, trucking the water; however, we can establish a salt water disposal well out of Number --Jennings Federal No. 3, the estimated economic life of the 10 Jennings lease is in excess of 20 years, calculate 22 years. 11 12 It would be a considerable savings productionwise for us. 13 14 Approximately how much water would you be 15 disposing of in the disposal well on a daily basis, Mr. 1ó McGreevy? 17 We expect an average injection rate of 18 100 barrels a day, and a maximum injection rate of 200 barrels 19 a day. 20 21

Will this -- what will the surface injection pressure be on the well?

Not in excess of 700 psi.

Okay, 700 psi is the surface pressure using the .2 psi per foot of depth guideline?

It's under that, yes.

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2	All right, sir. Let me have you turn
3	them to the first attachment to the C-108, which is your well
4	schematic and have you generally describe how you propose to
5	complete this well for disposal.
6	A. Okay. When it was abandoned casing was
7	cut off on the well at a depth of 2906. So what we plan to
8	do is go in and drill out this existing cement plugs and
9	dress off that casing, run new casing down, new tubing string
10	and injection packer, and set it at 4900 feet, and reperfor-
11	ate.
12	Where will your injection perforations be?
13	A 4970 through 4982, with four jet shots
14	per foot.
15	And what is the injection formation?
l6	A Delaware.
17	Q And is that the same formation that the
8	four producing wells are producing from?
9	A. That's right.
20	Q All right. All right, sir, let's turn to
21	the third attachment to the C-108, which is your tabulation
22	of producing wells in the half mile radius of the
3	A. Okay.
4	Q Would you summarize for us what you've

compiled on your tabulation?

1	8	l
2	A. Okay, these are the existing five producin	ß
3	wells, one of which is ours, the Jennings No. 1, that lie in	
4	this area. We still show them all producing. They're almost	
5	identically completed with 8-5/8ths inch surface casing and	
6	4-1/2 inch work string. 8-5/8ths in each case, according to	
7	my calculations, is cemented to the surface, and the 4-1/2	
8	inch casings are are cemented down to the shoe and up so	
9	many feet.	
10	Q. In your opinion, then, are the offsetting	
11	producing wells in the area of investigation cemented across	
12	the Delaware Sands?	
13	A. V. Yes, M. T. J.	
14	Q. And did you find any plugged and aban-	
15	doned wells within the half mile radius?	
16	A. No, I didn't.	. 2
17	Q All right, sir, let's turn to the log of	
18	the subject well and have you identify that for us.	
19	A. Okay, this is the log that was submitted	
20	to the Department of Interior when it was originally completed	,
21	showing the different formation tops as they're listed there.	
22	Q. All right, sir, and following the log,	÷.
23	then, is a written summary of your re-entry procedures for	
24	the disposal well?	

it was originally completed, ps as they're listed there. , and following the log, re-entry procedures for That's right.

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and just briefly, it states there are two water aquifers in the area. There's -- there's no faulting shown from the Delaware to the surface in the area of the subject well, and that the Delaware is isolated besides that by essentially two zones, the Morrow Lime, which is 30 foot thick and low poro-

ogical engineer, Clayton Roth, concernig aquifers in the area

All right; sir. Following the summary,

This is a statement prepared by our geol-

So that, plus the physical distance of the 4000 feet between injection zone and the aquifers, should preclude the possibility of aquifer contamination.

sity, and upward of that there's over 200 foot of anhydrite

- Q. All right, sir. That exhibit also shows the location of water wells within the area, does it not?
 - Right, within a 4-mile radius.
- Q. All right. And have you submitted copies of this application to the offset operators and to the owners of the surface at the disposal location?
 - A. Yes, we have.
 - All right.

then, what is the next exhibit?

A.

above the Morrow Lime.

A. That is documented on the attachment.

Let's see, that would be the next to last page there, showing

10 2 that we did send it registered mail. In addition to the return receipt to Conoco, have you furnished the USGS and the Commissioner of Public Lands with copies of the application? 5 Yes, I have. À. 7 All right, sir, and then there's a copy 8 of a portion of a gamma ray log, Mr. McGreevy. What is the 9 purpose of this? 10 The purpose of putting that in there was 11 just additional information to show you where the existing 12 well, the Jennings Federal No. 3 was perforated, and then 13 where we plan to perforate it, it's labeled proposed perfs. 14 All right, sir, and then the last exhibit 15 attached to the form is what? 16 This is a structure map of the Delaware 17 sand. 18 All right, sir. Were these exhibits either 19 compiled by you directly or compiled under your direction and 20 supervision? 21 Yes, they were. 22 And in your opinion, Mr. McGreevy, will 23 approval of this application be in the best interests of 24 conservation, the prevention of waste, and the protection of correlative rights?

I see.

24

data sheet --

It doesn't indicate that the Bowen lead seal casing patch is the cementing casing patch that they make Do you plan to use the Bowen lend seal

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Yes.

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2	Q.	Would you do	that?	
3	Α.	Yes.		
4	Q.	Okay.		- N
5		MR. NUTTER:	Are there any	further ques-
6	tions of Mr. M	cGreevy?		
7		MR. KELLAHIN:	No, sir.	
8		MR. NUTTER:	Does anyone hav	ve anything
9	to offer in Ca	se Number 7676?		
10		We'll take th	e case under a	dvisement.
11				
12		(Hearing conc	luded.)	
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CERTIFICATE

I, SALLY W. BOYD, C.S.R., DO HERDBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sing W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the kxa ner hearing of Case No. 2676 heard by a e on 7/16 1987.

Examiner Examiner

Oil Conservation Division

BRUCE KING GOVERNOR LARRY KEHOE SECRETARY

STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

POST OFFICE BOX 2098 STATE LAND OFFICE BUILDING SANTA FF, NEW MEXICO 87501 (505) 827-2434

September 30, 1932

Kellahin & Kellahin Attorneys at Law	e: CASE NO. 7676 ORDER NO. R-7079
Post Office Box 1769 Santa Fe, New Mexico	Applicant:
	Tenneco Oil Company
Dear Sir:	
Enclosed herewith are two copies Division order recently entered	
Yours very truly,	
JOE D. RAMEY Director	
· · · · · · · · · · · · · · · · · · ·	
JDR/fd	
Copy of order also sent to:	
Hobbs OCO x Artesia OCD x Aztec OCD	
Other	

STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 7676 Order No. R-7079

APPLICATION OF TENNECO OIL COMPANY FOR SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on September 15, 1982, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this <u>30th</u> day of September, 1982, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Tenneco Oil Company, is the owner and operator of the Jennings Federal Well No. 3, located in Unit B of Section 14, Township 24 South, Range 32 East, NMPM, Lea County, New Mexico.
- (3) That the applicant proposes to utilize said well to dispose of produced salt water into the Delaware formation, with injection into the perforated interval from approximately 4970 feet to 4982 feet.
- (4) That the injection should be accomplished through 2 7/8-inch plastic lined tubing installed in a packer set at approximately 4900 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. 7676 Order No. R-7079

- (5) That the injection well or system should be equipped with a pressure limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 995 psi.
- (6) That the Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from the Delaware formation.
- (7) That the operator should notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.
- (8) 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, including, but not limited to, the placement of not less than 50 sacks of cement across the lead sealed casing patch at approximately 2906 feet.
- (9) 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, Tenneco Oil Company, is hereby authorized to utilize its Jennings Federal Well No. 3, located in Unit B of Section 14, Township 24 South, Range 32 East, NMPM, Lea County, New Mexico, to dispose of produced salt water into the Delaware formation, injection to be accomplished through 2 7/8-inch tubing installed in a packer set at approximately 4900 feet, with injection into the perforated interval from approximately 4970 feet to 4982 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 detection device in order to determine leakage in the casing, tubing, or packer.

PROVIDED FURTHER, that the applicant shall cause to be placed not less than 50 sacks of cenent across the lead sealed casing patch at approximately 2906 feet in said well.

-3-Case No. 7676 Order No. R-7079

- (2) That the injection well or system shall be equipped with a pressure limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 995 psi.
- (3) That the Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Delaware formation.
- (4) That the operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.
- (5) That the operator shall immediately notify the supervisor of the Division'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.
- (6) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 702, 703, 704, 705, 706, 708, and 1120 of the Division Rules and Regulations.
- (7) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO
OLL CONSERVATION DIVISION

JOE D. RAMEY.

Director

Dockets Nos. 31-82 and 32-82 are tentatively set for September 29 and October 13, 1982. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING WEDNESDAY-SEPTEMBER 15, 1982

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

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

- ALLOWABLE: (1) Consideration of the allowable production of gas for October, 1982, from fifteen prorated pools in Lea. Eddy, and Cheves Counties, New Mexico.
 - (2) Consideration of the allowable production of gas for October, 1982, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

CASE 7638: (Continued and Readvertised)

In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Cibola Energy Corporation, American Employers Insurance Company and all other interested parties to appear and show cause why the Simms Ranch Well No. 1, located in Unit N, Section 9, the Clyde Berlier Well No. 1, located in Unit K and the Clyde Berlier Well No. 2, located in Unit F, both Section 21, the Mora Ranch Well No. 3 located in Unit M and the Mora Ranch Well No. 4, located in Unit M, both in Section 5, all in Township 21 North, Range 21 East, Mora County, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 7637: (Continued from August 18, 1982, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Division on its own motion to permit R.A.F. Enterprises, Fireman's Fund Insurance Company and all other interested parties to appear and show cause why the Shaw Well No. 1, located in Unit M, Section 18, Township 4 North, Range 8 East, Torrance County, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE /635: (Continued from September 1, 1982, Exeminer Hearing)

In the matter of the hearing called by the Oil Conservation Division on its own motion to permit CO2-In-Action, Travelers Indemnity and all other interested parties to appear and show cause why the Trigg Well No. 3 located in Unit J. Section 25, Township 15 North, Range 28 East, San Miguel County, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 7636: (Continued from September 1, 1982, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Division on its own motion to permit CO2-In-Action, Travelers Indemnity and all other interested parties to appear and show cause why the Amistad No. 1 located in Unit E of Section 18, and the Amistad No. 2 located in Unit D of Section 7, both in Township 19 North, Range 36 East, Union County, should not be plugged and abandoned in accordance with a Division-approved plugging program.

- CASE 7673: Application of Yates Petroleum Corporation for a unit agreement, Eddy County, New Mexico.

 Applicant, in the above-styled cause, seaks approval for the Almost Texas Unit Area, comprising 3,840 acres, more or less, of State and Federal lands in Township 26 South, Range 31 East.
- CASE 7664: (Continued from September 1, 1982, Examiner Hearing)

Application of Yates Petroleum Corporation for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Little Cuevo Unit Area, comprising 13,407 acres, more or less, of State and Fee lands in Township 17 South, Range 18 East.

- CASE 7674: Application of Trican Energy, Inc. for a unit agreement, Lea County, New Mexico.

 Applicant, in the above-styled cause, seeks approval for the Javalina Basin Unit Area, comprising 3,840 acres, more or less, of State and Federal lands in Township 25 South, Range 34 East.
- CASE 7675: Application of Texaco Inc. for downhole commingling, Les County, New Mexico.

 Applicant, in the above-styled cause, seeks approval for the downhole commingling of Justis
 Blinebry, Justis Tubb-Drinkerd, and Justis Devonian production in the wellbore of its G. L. Erwin
 "A" Federal Well No. 2 located in Unit K, Section 35, Township 24 South, Range 37 East.

- CASE 7676: Application of Tanacco O11 Company for salt water disposal, Lea County, New Mexico.

 Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Delaware formation in the perforated interval from 4970 feet to 4982 feet in its Jennings Fed. Well No. 3 located In Unit B of Section 14, Township 24 South, Range 32 East.
- CASE 7677: Application of Anadarko Production Company for a waterflood expansion, Lea County, New Mexico.

 Applicant, in the above-styled cause, seeks authority to expand its Teas Yates Waterflood Project by converting two wells located in Unit F of Sections 13 and 14, Township 27 South, Range 33 East and dvilling three new injection wells at unorthodox locations in Units M of Section 11 and Unit L of Section 13, Township 20 South, Range 33 East, and Unit E of Section 18, Township 20 South, Range 34 East.
- Application of Phillips Petroleum Company for a pressure maintenance project, Lea County, New Mexico. Applicant in the above-styled cause, seeks authority to institute a pressure maintenance project in the Vacuum Grayburg-San Andres Pool by the injection of water into the Grayburg San Andres formation through eight injection wells to be drilled at unorthodox locations in Section 35, Township 17 South, Range 34 East, as follows: 2630 feet from the South line and 1330 feet from the West line; 2630 feet from the South and West lines; 2630 feet from the South line and 1330 feet from the East line; 1310 feet from the East line; 10 feet from the South line and 1310 feet from the East line; 1330 feet from the North line and 1310 feet from the West line; and 1330 feet from the North line and 10 feet from the West line. Applicant also proposes two production wells at unorthodox locations in said Section 35 as follows: 1310 feet from the South line and 2630 feet from the East line and 1310 feet from the South and East lines.
- CASE 7630: (Continued from September 1, 1982, Examiner Hearing This Case will be Dismissed)

 Application of Relph Nix for an oil treating plant permit, Eddy County, New Mexico.

 Applicant, in the above-styled cause, seeks authority for the construction and operation of an oil treating plant for the purpose of treating and reclaiming sediment oil at a site in the SW/4 NE/4 of

Section 18, Township 19 South, Range 26 East.

CASE 7671: (Continued from September 1, 1982, Examiner Hearing)

the same reservoir.

- Application of Texas Eastern Developments, Inc. for an exception to Rule 307, San Juan County, New Mexico. Applicant in the above-styled cause, seeks an exception to Rule 307 of the Division Rules and Regulations to permit it to draw a vacuum on the Shiprock Gallup 0:1 Pool reservoir through 16 wells in Sections 16 and 17, Township 29 North, Range 18 West. Applicant further seeks an administrative procedure whereby it could extend the proposed vacuum system to include additional wells in
- CASE 7679: Application of C & K Petroleum, Inc. for the amendment of Order No. R-4857-A and for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Division Order No. R-4857-A to provide that the lands pooled by said order shall be the W/2 SE/4 of Section 27, Township 16 South, Rsuge 37 East, dedicated to its Shi/p 27 Well No. 2 located in Unit O in said Section 27. Applicant further seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the E/2 SE/4 of the aforesaid Section 27, to be dedicated to a well to be drilled in Unit P of said Section 27. 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, designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 7680: Application of Unichem International, Inc. for an exception to Order No. R-3221, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221 to permit the commercial disposal of produced brins into several unlined surface pits located in Section 11, Township 23 South, Range 29 East.
- CASE 7681: Application of Cibola Energy Corporation for an unorthodox gas well location, Chaves County, New Maxico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of an Ordovician gas well to be drilled 330 feet from the North line and 990 feet from the East line of Section 13, Township 9 South, Range 27 East, the E/2 of said Section 13 to be dedicated to the well.

- CASE 7682: Application of Cibola Energy Corporation for an unorthodox gas well location, Chaves County, New Mexico.

 Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Mississippian gas well drilled 330 feet from the North line and 330 feet from the West line of Section 34, Township 11 South, Range 28 East, the W/2 of said Section 34 to be dedicated to the well.
- Application of S & I Oil Company for compulsory pooling, San Juan County, New Mexico.

 Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Gallup formation underlying the E/2 SE/6 of Section 12, Township 29 North, Range 15 West, to be dedicated to a well drilled at a standard location thereon. 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, designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 7684: Application of R. E. Lauritsen for compulsory pooling, San Juan County, New Mexico.

 Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Gallup and Dakota formations underlying the W/2 of Section 11, Township 29 North, Range 15 West, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be one cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 7685: Application of Cimarron Energy Corporation for an unorthodox location, Eddy County, New Mexico.

 Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Pennsylvanian test to be drilled 1980 feet from the South line and 660 feet from the West line of Section 34, Township 22 South. Range 28 East, the S/2 of said Section 34 to be dedicated to the well.

CASES 7528 and 7529: (Continued and Readvertised)

Application of Jack J. Grynberg for compulsory pooling, Chaves County, New Mexico. Applicant, in each of the following two cases, seeks an order pooling all mineral interests down through the Abo formation underlying the lands specified in each case, each to form a standard 160-acre gas spacing and provation unit to be dedicated to a well to be drilled at a standard location thereon. Also to be considered in each case 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, designation of applicant as operator of the wells and a charge for risk involved in drilling said wells:

CASE 7528: NW/4 Section 4, Township 5 South, Range 24 East

CASE 7529: NE/4 Section 4, Township 5 South, Range 24 East

(Continued from September 1, 1982, Examiner Hearing)

CASES 7666, 7667, 7668, and 7669: Application of Yates Petroleum Corporation for compulsory pooling, Chaves County,

New Mexico. Applicant, in each of the four following rases, seeks an order pooling all mineral interests
down through the Abo formation underlying the lands specified in each case, each to form a standard 160acre gas spacing and provation unit to be dedicated to a well to be drilled at a standard location
thereon. Also to be considered in each case 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,
designation of applicant as operator of the wells and a charge for risk involved in drilling said wells:

CASE 7666: SW/4 Section 3;

CASE 7667: NW/4 Section 4;

CASE 7668: NW/4 Section 14:

All of the above being in Township 5 South, Range 24 East and

CASE 7669: NW/4 Section 2, Township 9 South, Range 25 East.

CASE 7670: (Continued from September 1, 1982, Examiner Hearing)

Application of Yates Petroleum Corporation for compulsory pooling, Chaves County, New Merico, Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying the N/2 of Section 26, Township 14 South, Range 27 East, to be dedicated to a well to be drilled at a standard location thereon. 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, designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 7652: (Continued from August 18, 1982, Examiner Hearing)

Application of Conocc Inc. for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Cisco formation underlying all of partial Sections 34 and 35, Township 20 1/2 South, Range 23 East, underlying a previously approved 688-acre non-standard proration unit, to be dedicated to a well at a previously approved unorthodox location which is to be re-entered. Also to be considered will be the cost of re-entering said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in re-entering said well.

CASE 7672: (Continued from September 1, 1982, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Division on its own motion for an order creating, assigning discovery allowable, contracting, and extending certain pools in Chaves, Eddy, Lea and Roosevelt Counties, New Mexico:

(a) CREATE a new pool in Eddy County, New Mexico, classified as an oil pool for Brushy Canyon production and designated as the Brushy Draw-Brushy Canyon Pool. Further, to assign approximately 25,410 barrels of discovery allowable to the discovery well, the J. C. Williamson UCBHWW Federal Well No. 1 located in Unit M of Section 25, Township 26 South, Range 29 East, NMPM. Said pool would comprise:

TOWNSHIP 26 SOUTH, RANGE 29 EAST, NMPM Section 25: SW/4

(b) CREATE a new pool in Lea County, New Mexico classified as an oil pool for San Andres production and designated as the Hobbs Channel-San Andres Pool. The discovery well is the Bass Enterprises Production Company Humble City Unit Well No. 1 located in Unit D of Section 36, Township 17 South, Range 37 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM Section 36: NW/4

(c) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Morrow production and designated as the Humphreys Mill-Morrow Gas Pool. The discovery well is the Florida Exploration Company Reno Com Well No. 1 located in Unit D of Section 11, Township 25 South, Range 35 East, NMPM. Said pool would comprise:

TOWNSHIP 25 SOUTH, RANGE 35 EAST, NHPM Section 11: N/2

(d) CREATE a new pool in Les County, New Mexico, classified as an oil pool for Abo production and designated as the Justis-Abo Pool. The discovery well is the Santa Fe Energy Company Carlson B-25 Federal Well No. 3 located in Unit O of Section 25, Township 25 South, Range 37 East, NMPM. Said pool would comprise:

TOWNSHIP 25 SOUTH, RANGE 37 EAST, NMPM Section 25: SE/4

(e) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Upper Pennsylvanian production and designated as the McMillan-Upper Pennsylvanian Gas Pool. The discovery well is the Southland Royalty Company Pecos River Federal 20 Com Well No. 1 located in Unit J of Section 20, Township 19 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSHIP 19 SOUTH, RANGE 27 EAST, NMPM Section 20: E/2

(f) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Strawn production and designated as the Mosley Canyon-Strawn Gas Pool. The discovery well is W. A. Moncrief. Jr.. Jurneyan State Well No. 1 located in Unit C of Section 8, Township 24 South, Range 25 East, NMPM. Said pool would comprise:

TOWNSHIP 24 SOUTH, RANGE 25 EAST, NMPM Section 8: N/2

(g) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Tubb production and designated as the West Nadine-Tubb Pool. The discovery well is the Tamarack Petroleum Company, Inc. Kornegay A Well No. 1 located in Unit F of Section 9, Township 20 South, Range 38 East, NMPM. Said pool would comprise:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM Section 9: NW/4

(h) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Morrow production and designated as the Pitchfork Ranch-Morrow Gas Pool. The discovery well is the HNG 011 Company Madera 32 State Com Well No. 1 located in Unit C of Section 32, Township 24 South, Range 34 East, NMPM. Said pool would comprise:

TOWNSHIP 24 SOUTH, RANGE 34 EAST, NMPM Section 32: N/2

(1) CREATE a new pool in Eddy County, New Mexico, classified as an oil pool for Yeso production and designated as the Seven Rivers-Yeso Pool: The discovery well is Chama Petroleum Corporation Irami Federal Well No. 1 located in Unit N of Section 34, Township 19 South, Range 25 East, NMPM. Said pool would comprise:

TOWNSHIP 19 SOUTE, RANGE 25 EAST, NMPM Section 34: SW/4

(j) CREATE a new pool in Les County, New Mexico, classified as an oil pool for Abo production and designated as the East Skaggs-Abo Pool. The discovery well is the Texaco Inc. Ch. B. Weir A Well No. 12 located in Unit G of Section 12, Township 20 South, Range 37 East, NAPM. Said pool would comprise:

TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM Section 12: NE/4

(k) CREATE a new pool in Las County, New Mexico, classified as an oil pool for Tubb production and designated as the Teague-Tubb Pool. The discovery well is the Alpha Twenty-One Production Company Les Well No. 2 located in Unit A of Section 17, Township 23 South, Range 37 East, NMPM. Said pool would comprise:

TOWNSHIP 23 SOUTH, RANGE 37 EAST, NMPM Section 17: NE/4

(1) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Devonian production and designated as the Townsend-Devonian Pool. The discovery well is the Kimbark Oil and Gas Company New Mexico 1-4 State Com Well No. 1 located in Unit N of Section 4, Township 16 South, Range 35 East, NMPM. Said pool would comprise:

> TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM Section 4: Lots 11, 12, 13, and 14

(m) CREATE a new pool in Eddy County, New Mexico, classified as an oil pool for Bone Spring production and designated as the Welch-Bone Spring Pool. The discovery well is the Quanah Petroleum, Inc. Hay B Federal Com Well No. 1 located in Unit K of Section 9, Township 26 South, Range 27 East, NMPM. Said pool would comprise:

> TOWNSHIP 26 SOUTH, RANGE 27 EAST, NMPM Section 9: SW/4

(u) CONTRACT the horizontal limits of the Buckeye-Abo Pool in Lea County, New Mexico, by the deletion of the following described area:

TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM Section 3: W/2 NW/4

(o) CONTRACT the horizontal limits of the Vacuum-Abo Reef Pool in Lea County, New Mexico, by the deletion of the following described area:

TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM Section 3: E/2 NW/4

(p) EXTEND the Antelope Sink-Upper Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

> TOWNSHIP 19 SOUTH, RANGE 23 EAST, NMPI: Section 13: N/2 Section 14: N/2

(q) EXTEND the West Arkansas Junction-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 36 EAST, NMPM Section 20: NW/4

(r) EXTEND the Atoka-Yeso Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 26 EAST, NMPM Section 26: E/2

(s) EXTEND the Bilbrey-Morrow Gas Pool in Les County, New Mexico, to include therein:

> TOWNSHIP 22 SOUTH, RANGE 32 EAST, NNPM Section 5: 107/4 Section 6: E/2

(t) EXTEND the Bunker Bill-Penrose Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 31 EAST, NMPM Section 14: N/2 S/2 and NE/4

(u) EXTEND the Cemetery-horrow Gas Pool in Eddy County, New Mexico, to include therein:

> TOWNSHIP 20 SOUTH, RANGE 25 EAST, NHPM Section 3: S/2 Section 4: All

(v) EXTEND the Commuche Stateline Tansill-Yates-Seven Bivers-Queen Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 26 SOUTH, RANGE 36 EAST, NYPH
Section 26: NW/4
Saction 27: NE/4 and E/2 NW/4

(w) EXTEND the South Empire-Morrow Gas Pool in Eddy County, New Mexico to include therein:

> TOWNSHIP 17 SOUTH, BANGE 28 EAST, NIPM Section 35: S/2 Section 36: W/2

(x) EXTERD the South Empire-Wolfcamp Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 28 EAST, NMPM Section 36: E/2 ME/4

TOWNSHIP 17 SOUTH, RANGE 29 EAST, NORPH Section 31: HW/4 and S/2 HE/4

(y) EXTEMD the Forty Winer Ridge-Bone Spring Pool in Eddy County, New Mexico, to include therein:

> TOWNSHIP 23 SOUTH, RANGE 30 EAST, NREPH Section 16: SE/4

(2) EXTEND the Hardy-Tubb Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 36 EAST, NMPM Section 2: Lots 11, 12, 13, 14, and S/2 Section 11: NW/4

(as) EXTEND the Northeast Lovington-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM Section 20: NW/4

(bb) EXTEND the West Milnesand-Pennsylvanian Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 34 EAST, NMPM Section 19: W/2

(cc) EXTEND the South Peterson-Pennsylvanian Associated Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 5 SOUTH, RANGE 33 EAST, NMPM Section 30: SE/4
Section 31: N/2 NE/4

TOWNSHIP 6 SOUTH, MANGE 33 EAST, NMPM Section 15: \$/2

(dd) EXTEND the Race Track-San Andres Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 10 SOUTH, RANGE 28 EAST, NMPM Section 18: NE/4 and S/2 SE/4

(ee) EXTEND the Ross Draw-Wolfcamp Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 26 SOUTH, RANGE 30 EAST, NMPM Section 23: \$/2 Section 26: N/2

(ff) EXTEND the West Sand Dunes-Atoka Gas Pool in Eddy County, New Mexico, to include therein:

> TOWNSHIP 23 SOUTH, RANGE 31 EAST, NMPM Section 17: S/2 Section 20: All

(gg) EXTEND the Saunders Permo-Upper Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGZ 33 EAST, NMPM Section 21: NE/4

DOCKET: COMMISSION HEARING - WEDNESDAY - SEPTEMBER 22, 1982

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

The following cases were continued from the August 26, 1982, Commission Hearing:

CASE 7656: Application of Cities Service Company for determination of reasonable well costs, Lea County, New Mexico.

Applicant, in the above-styled cause, pursuant to the provisions of Section 70-2-17 C, NMSA, 1978 Comp., and Paragraph (5) of Division Order No. R-6781, seeks a determination of reasonable well costs for two wells drilled under the provisions of said Order No. R-6781 by Doyle Hartman on lands pooled by said order.

CASE 7657: Application of Harvey E. Yntes Company for non-rescission of Order No. R-6873, Chaves County, New Mexico.

Applicant, in the above-styled cause, seeks the non-rescission of Order No. R-6873, which order pooled certain lands to be dedicated to a proposed Ordervician test well to be drilled thereon, being the W/2 of Section 18, Township 9 South, Range 27 East. Said order provided that should the unit well not be drilled to completion, or abandonment, within 120 days after commencement thereof, operator shall appear and show cause why the pooling order should not be rescinded.

CASE 7658: (Readvertimed)

Application of Harvey E. Yates Company for a dual completion and downhole commingling, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Seymour State No. 1 located in Section 18, Township 9 South, Range 27 East, in such a manner that Abo perforations from 4912 feet to 4929 feet would be commingled with Upper Atoka perforations from 5926 feet to 5952 foot and the aforesaid intervals dually completed with Lower Atoka perforations from 6008 feet to 5048 feet and produced through parallel strings of tubing.

KELLAHIN AND KELLAHIN

Attorneys at Law El Patio, 117 Guadalupe Post Office Box 1769 Santa Fe, New Mexico 87501

Telephone (505) 982-4285

Crase 26.26

Jason Kellahin W. Thomas Kellahin Karen Aubrey James B. Grant

August 27, 1982

wie 20 198

OIL C

SANTE FE

Mr. Joe D. Ramey Oil Conservation Division P.O. Box 2088 Santa Fe, N.M. 87501

Re: Tenneco Oil Company

Dear Mr. Ramey:

This will confirm my telephone conversation with Mrs. Florene Davidson of your office in which I requedsted that she docket an application for hearing on September 15, 1982, for Tenneco Oil Company for approval of a salt water disposal well, the Jennings Federal #3 well, 660' FNL and 1980' FEL Section 14, T24S, R32E, Lea County, New Mexico to disposal of produced salt water into the Delaware formation through perforations from 4970 feet through 4982 feet.

I will file the C-108 and attached exhibits upon receipt from Tenneco.

Very truly yours,

KELLAHIN & KELLAHIN

W. Thomas Kellahin

WTK: mm

cc: Mr. David Motloch, Tenneco San Antonio

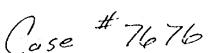
en andres de des Ser de Maria de Romando

Tenneco Oil Exploration and Production

A Tonneco Company

Southwestern Division

6800 Park Ten Blvd. • Suite 200 North San Antonio, Texas 78213 (512) 734-8161



Oil Conservation Division P. O. Box 288 Santa Fe, New Mexico 87501

Attn: Joe Ramey

Dear Sir:

Enclosed is Tenneco's application for permission to convert an existing plugged and abandoned well to a salt water disposal well. If you have any questions concerning this application please contact me.

Thank you,

William R. McGreevy Area Production Engineer

September 7, 1982

Enclosure 0112B/WRM/dt

SEP 9 1982
OIL CONSERVATION DIVISION SANTA FE

OIL CONSERVATION DIVISION

POST OFFICE BUT ASHE STATE LAND OFFICE BUT DING SANTATE NEW MERSUS BISSE FORM C-180 Revised 7-1-81

VEST 10	ATION FOR AUTHORIZATION TO INJECT						
ι.	Purpose: Secondary Recovery Pressure Maintenance X Disposal Storage Application qualifies for administrative approval? X),es						
11.	Operator: Tenneco Oil Exploration and Production						
	Address: 6800 Park Ten Blvd., Suite 200 North, San Antonio, TX 78213						
	Contact party: Bill McGreevy Phone: (512) 734-8161						
in.	Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.						
17.	Is this an expansion of an existing project?						
٧.	Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.						
VI.	Attach a tabulation of data on all wells of public record within the area of review whi penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.						
vii.	Attach data on the proposed operation, including:						
	 Proposed average and maximum daily rate and volume of fluids to be injected; Whether the system is open or closed; Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.). 						
III.	Attach appropriate geological data on the injection zone including appropriate litholog detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.						
IX.	Describe the proposed stimulation program, if any.						
х.	Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)						
XI.	Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well shewing location of wells and dates samples were taken.						
XII.	Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.						
III.	Applicants must complete the "Proof of Notice" section on the reverse side of this form						
CIV.	Certification						
	I hereby certify that the information submitted with this application is true and correto the best of my knowledge and belief.						
· /· *	Name: William R. McGreevy Title Production Engineer						
	Signature: // R. M. Angust 16, 1982						

III. WELL DATA

- A. The following well data must be submitted for each injection well covered by this application.
 The data must be both in tabular and schematic form and shall include:
 - Lease name; Well No.; location by Section, Township, and Runge; and footinge location within the section.
 - (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
 - (3) A description of the tubing to be used including its size, lining material, and setting depth.
 - (4) The name, model, and setting depth of the parker used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

- B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.
 - (1) The name of the injection formation and, if applicable, the field or pool name.
 - (2) The injection interval and whether it is perforated or open-hole.
 - (3) State if the wellowas drilled for injection or, if not, the original purpose of the well.
 - (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
 - (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

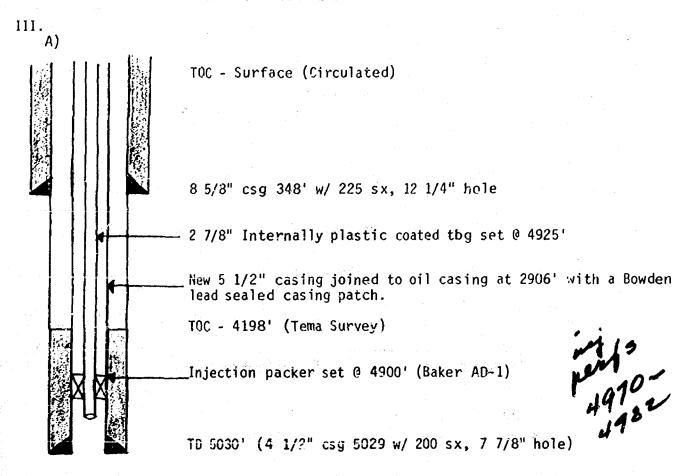
- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells:
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

WELL DATA: Schematic and Tabular

JENNINGS FEDERAL #3 T24S R32E Sec 14 660' N & 1980' E



III.

1. Jennings Federal #3 T24S R32E Sec 14 660' N & 1980' E.

2. Casing - 8 5/8" set @ 348' w/ 225 sx. 12 1/4" hole, TOC - surface. Circulated - 4 1/2" set @ 5029' w/ 200 sx. 7 7/8" hole, TCC 4198'. Temp. Survey.

3. Tubing - 2 7/8" Internally plastic coated, tubing set @ 4925'.

4. Packer - Baker AD-1 set @ 4900'.

III.

1. Injection Formation - Delaware

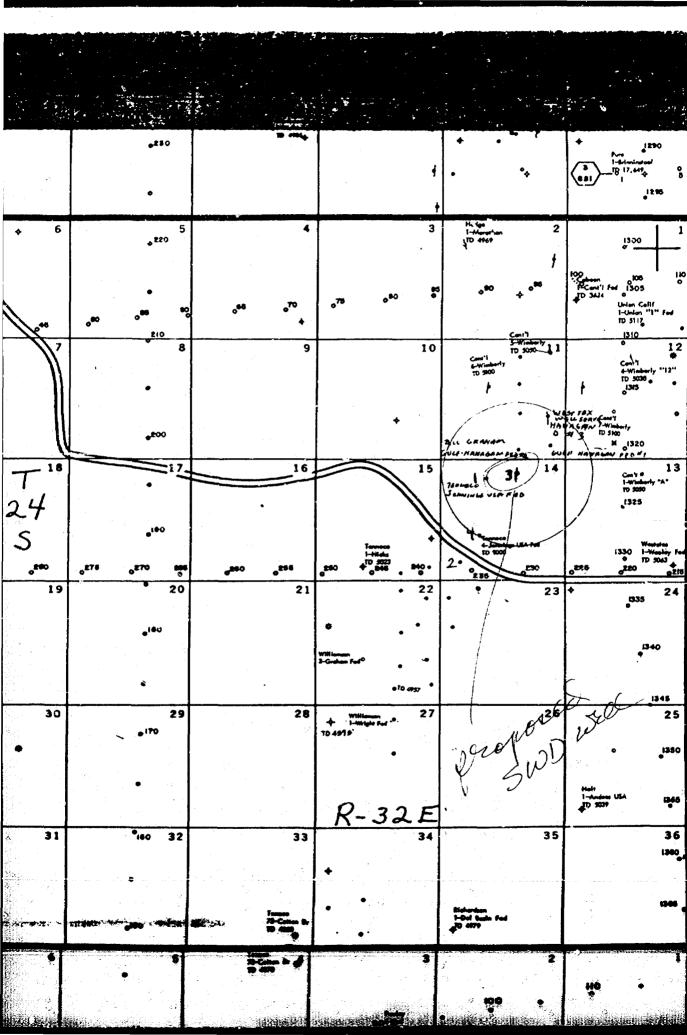
2. Injection Interval - 4970'-4982' (Perforated)

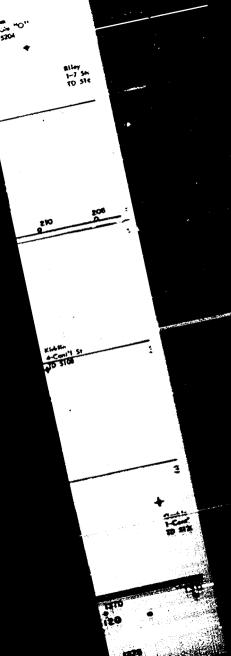
3. Original Purpose of Well - Oil

4. Other Perforations - 4967-4969, 125' cmt plg w/ 25 sx

49102

Office to to 200 100 to 100 post D





WELL, LEASE,	WELL TYPE	CONSTRUCTION	DATE DRILLED	LOCATION	DEPTH TO (FT.)	RECORD OF COMPLETION
Hanagan D #3	Oil	8 5/8 380' w/135 SX	9/27/62	1980 FS 660 FE	4986	12/24/62
West Texas Well Service	e	4 1/2 4986' w/400SX	•	T24S R32E Sec. 11		
Gulf-Hanagan-Fed #2	0i1	8 5/8 316' w/200SX	5/1/62	660 FS 1980 FE	5076	6/1/62
Bill J. Graham		4 1/2 5042' w/200SX		T24S R32E Sec. 11		
Gulf-Hanagan-Fed. #1	Oil	8 5/8 323' w/240SX	2/23/62	660 FS 660 FE	5064	4/2/62
Bill J. Graham		4 1/2 5064' w/225 SX		T24S R32E Sec. 11	W 1	
Jennings - USA #1	011	8 5/8 315' w/200SX	7/1/62	660FS 1980FW	5019	7/30/62
Tenneco Oil Co.		4 1/2 5017 w/200SX		T24S R32E Sec. 14		
USA Jennings Fed. #4	0i1	8 5/8 360' w/375SX	11/4/75	1980 FS 1650FW	5000	11/29/75
Tenneco Oil Co.		4 1/2 4999' w/395SX	, . ,	T24S R32E Sec. 14		

VII.

1. Average injection rate - 100 BPD; Maximum injection rate - 200 BPD; Volume (22 years) - 803,000 BDLS

2. System is closed.

3. Average injection pressure - 550 PSI; Maximum injection pressure - 750 PSI.

VIII.

+25tunny 700

Injection zone - Delaware sand, fine-grained sandstone,, 20' thick and depth 4970. Aquifer - Carlsbad water basin, Santa Rosa (300' and up).

IX.

No stimulation planned.

X.

Logs already on file.

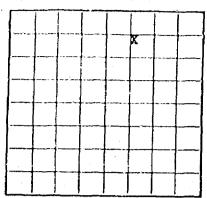
XI.

Not applicable.

XII.

Not applicable.

Form 9-330



UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

		SHOO	TING R	ECORD			
Blac	Strall used	Explosive used	Quantity	Date	Depth shot	Depth e	deaned out
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Rock pr	ossure. lbs. per s	g. ia.					
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1450	4660	3210		nhydrit			
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4910	1	90	T	/Rustle /Salt l /Salt 4	r Anhydrite 450 660		
4910	1	90	T	/Rustle /Salt l /Salt 4	r Anhydrite 450 660		
4910	1	90	T	/Rustle /Salt l /Salt 4	r Anhydrite 450		
4910	1	90	T	/Rustle /Salt l /Salt 4	r Anhydrite 450 660		
4910	1	90	T	/Rustle /Salt l /Salt 4	r Anhydrite 450 660		
4910	1	90	T	/Rustle /Salt l /Salt 4	r Anhydrite 450 660		

PROCEDURE FOR RE-ENTERING JENNINGS #3 - PROPOSED SWD

- 1. Check pressure under surface plate by using a "Hot Tap". If pressure is safe remove surface plate, have pulling unit and reverse unit rig-up.
- 2. Weld belled nipple 8-5/8" csg x 8-5/8 8RD female thread to surface csg. Attach 8-5/8" 8RD Male x 7-1/16" 3000 flange. Nipple up 7-1/16" 3000 psi BOP.
- 3. Drill out plugs at surface, 318' to 378' 1110' to 1200', 1400' to 1500' and 2856' to 2906' with 7-7/8" bit and 4 4-3/4" drill collars. TOH TIH with 4-3/4" bit and 4 3-1/2" drill collars and drill out plugs at 2906' to 2956' and 4880' to 5020'. The casing stub is at 2906'. Be sure to use brine water for drilling and note that there is mud between all plugs. Weight up brine water as necessary during clean out operations.

NOTE: If water is being lost, run 5-1/2" 15#/ft casing before drilling out to TD of 5020'.

- 4. Add a sweep of 10 sx Flosal then circulate cuttings out, trip out bit and run casing stub dressing tool.
- 5. Run 5-1/2" 15.5#/ft casing and casing bowl to fit over the end of the new 5-1/2" casing and inside the old 5-1/2" casing stub.
- 6. Cut excess casing at surface. Weld on 5=1/2" 8RD male belied nipple. Make up Larkin 5-1/2" OD 8RD female x 2" type K they head (w/2" side outlets).
- 7. Run bit to drill out bottom plug to TD of 5020' if not done in step 2. NU 7-1/16" 3 M BOP to Larkin adaptor flange.
- 8. Run correlation log (GR-CLL). TlH with tbg. spot 200 gal. acid. TOH. RIH with 4" casing gun and perforace 4970'-4982'. 4 JSPF, premium charge, .5" holes, 90° phasing, total of 48 perforations.
- 9. Run in tubing string and injection packer. Displace hole w/2% KCl wtr. and appropriate corrosion chemicals. Set packer @ 4900'. ND BOP. NU tree.
- 10. Run swab test and evaluate.
- 11. Put well on injection.

Chip Cox 7/14/82

Re: CONVERSION JENNING FED. #3 (P & A) TO SALT WATER DISPOSAL WELL

In the area of the subject well there are two water augifers, the Ogalalla Formation (approximately 100' below ground level) and the Triassic (500-600' below G.L.). There are a few wells which produce water from shallow alluvial deposits. Examination of geological data, including well logs, shows no faulting from the Delaware to surface in the area of the subject well. The proposed perfs at 4970-4982 would be of no hazard to the aquifers previously mentioned; as the Lamar Lime, which is over 30' thick (including shale sections) and low porosity due to the shale content, would block upward migration of the injected water. Over 200' of anhydrite above the Lamar Lime, plus the physical distance of over 4000' between the injection zone and the aquifers, should also preclude the possibility of aquifer contamination. (Assuming a good cement job).

The following is a list of water wells within a 4 mile radius of the subject well:

LOCATION	,	T0	HORIZON-AQUIFER
T24S R32E Sec. 3, NW T24S R32E Sec. 3, NE T24S R32E Sec. 10, SE T24S R32E Sec. 33, NE T24S R33E Sec. 9, SE	NE SW SE SW NE SE	500' 550' 60' 367' N.A.	Ogalalla Ogalalla N.A. (Alluvium) N.A. (Not available) N.A.
T24S R33E Sec. 10, NH T24S R33E Sec. 17, SE T24S R33E Sec. 23, SW T24S R33E Sec. 33, NE	SE SE	36' N.A. 230' (Plug N.A.	Alluvium Ogalalla ged) N.A. Ogalalla

Data on water aquifers and water wells was obtained from Jim Wright, New Mexico State Engineers Office, Roswell, New Mexico (505-622-6521).

Clayton L. Roth Géological Engineer

CLR/dt/0098B

AFFIDAVIT OF PUBLICATION

State of New Mexico, County of Lea.

4	
1,	

ROBERT L. SUMMERS

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping at-tached hereto was published once a veek in the regular and entire issue of said paper, and not in a supplement thereof for a period

01	
ONE	weeks.
Beginning with the	issue dated
AUGUST 2	82
and ending with the	e issue dated
AUGUST 2	19 82
Robert ?	Linene Publisher.
Sworn and subscrib	ed to before

2ND me this _ day of

Notary Public. My Commission expires_

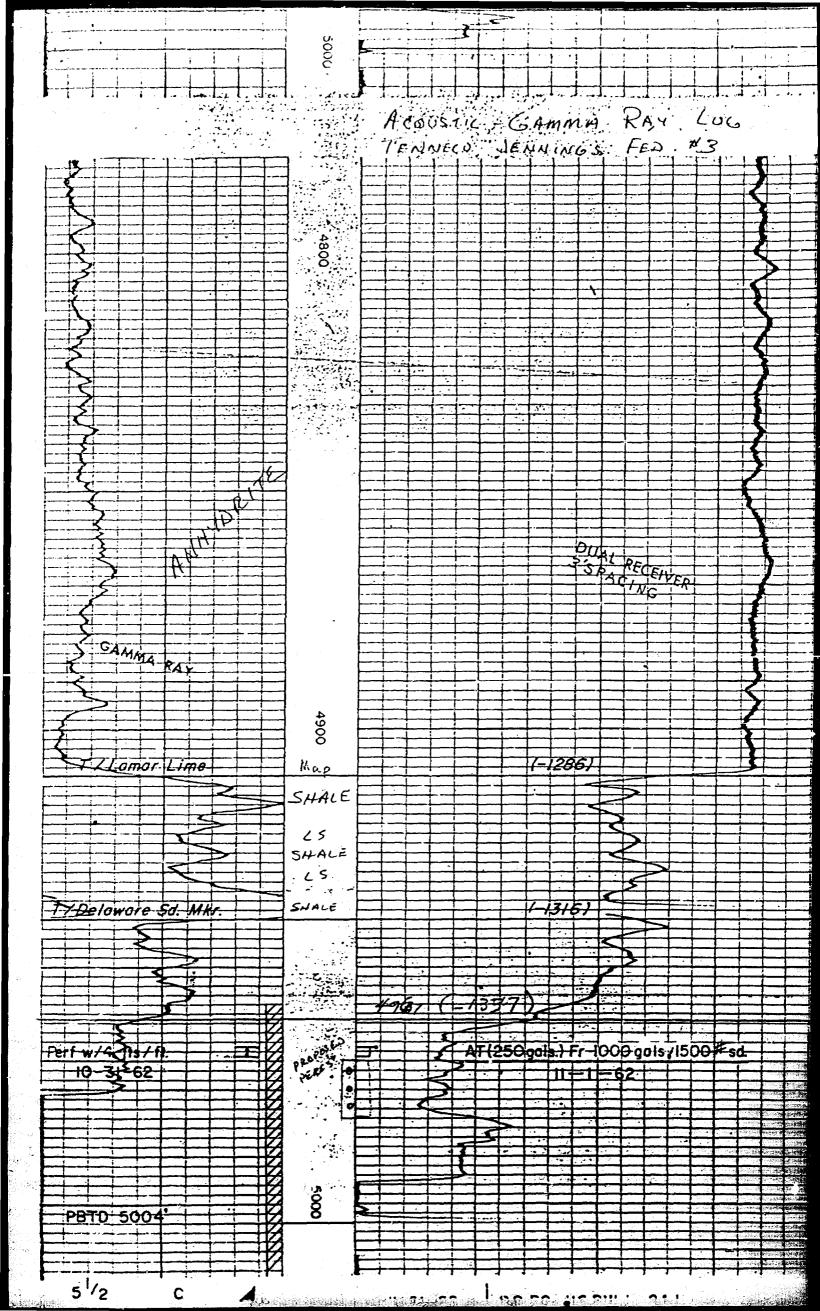
This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

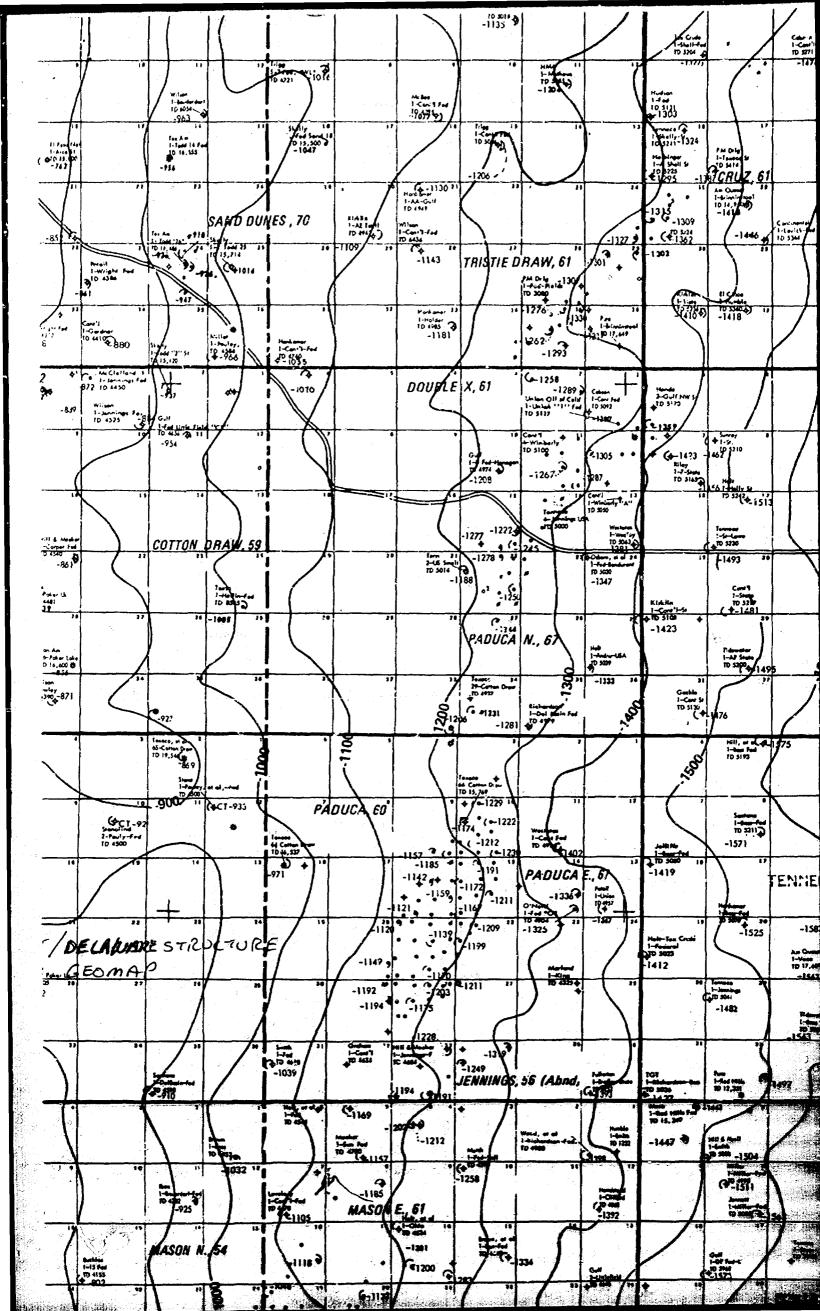
"NOTICE OF Tenneco Oil intends 7 to convert the P&A Jennings Federal /3 to a salt water injection well. The well is located at T24S, R32E. Section 14, 660 ft. North & 1980 ft. East. The injection formation is the Delaware at a depth of 4970 feet The maximum injection rate is 200 BPD at a maximum pressure of psi All interested parties p to file objection or requestor thearing within the nservation Divisio 5 73/1 (512) 734 816F ATTN: BILL MCGREI

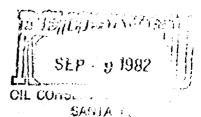


XIV. PROOF OF NOTICE - proof that a copy of the application has been furnished, by registered mail, to the leasehold operator, Continental Oil, within one-half mile of the well location.

• SENDER:	Complete items 1, 2, and 3, Add your address in the "RETURN TO" space on sween.
1. The follow	wing service is requested (check one.)
@ Show	to whom and date delivered
	to whom, date and address of delivery
	TRICTED DELIVERY
	to whom and date delivered
	TRICTED DELIVERY
200 200W	to whom, data, and address of delivery.\$
(CON	ISULT POSTMASTER FOR FEES)
2 ARTICLE	ADDRESSED TO:
Contine	utal oil co-
P.O. beg	
1 1 1 2 2 2 2	A CONTRACTOR OF THE SAC ASSESSED.
	KW Misica 88240
L. ARTICLE REGISTERES	DESCRIPTION:
11/1	The Destruction of the Contract of the Contrac
1644	
Always	obtain algorithm of addr. mee 67 agent) \$10
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SURFACE USE AND OPERATIONS PLAN

TO RE-ENTER

AND CONVERT TO WATER INJECTION WELL

TENNECO OIL COMPANY
WELL NO. 3 JENNINGS FEDERAL
660'FNL & 1980'FEL SEC.14, T.24 S., R.32 E.
LEA COUNTY, NEW MEXICO

LOCATED: 27 miles west-northwest of Jal, New Mexico.

FEDERAL LEASE NUMBER: NM-033503.

LEASE ISSUED: November 1, 1958. Lease is in producing status.

RECORD LESSEE: Tenneco 011 Company.

ACRES IN LEASE: 520.

SURFACE OWNERSHIP: State of New Mexico.

POOL: Double X Delaware.

EXHIBITS: A. Road Map

B. Plat Showing Existing Wells and Existing Roads

C. Drilling Rig Layout.

D. Topo Plat

1. EXISTING ROADS:

- A. Exhibit "A" is a road map showing the location of the proposed re-entry well. Point "A" on the plat is on State 128 at Milepost 23.9, approximately 30 road miles west of Jal, New Mexico, where a caliche road goes north. To go to the proposed re-entry well from this point, exit State 128 to the north and go north 0.8 miles to where a caliche road goes east. Turn east and go 0.2 mile to arrive at the proposed re-entry well.
- B. Exhibit "B" is a plat showing existing roads in the vicinity of the proposed re-entry well. Existing roads are color coded.

2. PLANNED ACCESS ROAD:

A. The access road is shown on Exhibits "B" and "D". No new road will be needed. The road constructed to drill the well originally will be used. No repair to the existing road is contemplated.

3. LOCATION OF EXISTING WELLS:

A. Existing wells in the immediate area are shown on Exhibit "B".

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

A. The location of the tank battery serving this lease is shown on Exhibit "B". It is planned that the equipment needed for water injection, the water storage tank and pump, will be located in the existing tank battery site. A water injection pipeline from this equipment to the injection well will be laid on the ground alongside existing roads.

5. LOCATION AND TYPE OF WATER SUPPLY:

A. It is not planned that a water well will be drilled. Water necessary for re-entry operations will be purchased and trucked to the well site or will be moved to the well site by temporary pipeline laid on the ground alongside existing roads.

6. SOURCE OF CONSTRUCTION MATERIALS:

A. The access road and well pad are in place and in good condition, and it is not anticipated that any caliche will be needed. However, if

caliche is needed, it will be taken from the existing pit on mineral reserved land (Federal minerals-private surface) in the SE\SE\footnote{4} of Section 15, T.24 S., R.32 E., Lea county, New Mexico. Location of the pit is shown on Exhibit "D".

7. METHODS OF HANDLING WASTE DISPOSAL:

- A. Drill cuttings will be described of in the drilling pits.
- B.Drilling fluids will be Nlowed to evaporate in the drilling pits until the pits are dry.
 - C. Water produced during tests will be disposed of in the drilling pits.
 - D. Oil produced during tests will be stored in test tanks until sold.
 - E. Trash, waste paper, garbage and junk will be buried in a separate trash pit and covered with a minimum of 24 inches of dirt. All waste material will be contained to prevent scattering by the wind. Location of the trash pit is shown on Exhibit "C".
 - F. All trash and debris will be buried or removed from the well site within 30 days after finishing drilling and/or completion operations.

8. ANCILLARY FACILITIES:

A. None required.

9. WELL SITE LAYOUT:

- A. Exhibit "C" shows the relative location, and dimensions, of the well pad, mud pit, trash pit, and small workover rig.
- B. The well pad constructed for the original well is still in place and in good condition, and is more than sufficient for the proposed operations. Necessary pits will be opened in the old pit area.
- C. Archaeological examination of the well site has been done.

10. PLANS FOR RESTORATION OF THE SURFACE:

- A. After completion of re-entry and/or completion operations, all equipment and material not needed for operations will be removed. Pits will be filled and location will be cleaned of all trash and junk.
- B. Any unguarded pits containing toxic fluids will be fenced.

C. After abandonment, all equipment and trash will be removed and the well site will be cleaned. Any special rehabilitation requirements of the surface management agency will be complied with and accomplished as rapidly as possible. See attached letter.

11. OTHER INFORMATION:

- A. Topography: Land surface in the area of the well site is level.
- B. Soil: Top soil at the well site is a loamy sand.
- C. Flora and Fauna: The vegetative cover is sparse and includes mesquite, catclaw, weeds, and range grasses. Wildlife in the area is that typical of semi-arid desert land and includes coyotes, rabbits, rodents, reptiles, dove and quail.
- D. <u>Ponds and Streams</u>: There are no ponds or streams in the area.
- E. Archaeological, Historical, and Cultural Sites: None observed.
- F. <u>Residences</u> and <u>Other Structures</u>: There are no occupied dwellings or windmills within a mile of the proposed re-entry.
- G. Land Use: Grazing and wildlife habitat.
- H. Surface Ownership: State of New Mexico.

12. OPERATOR'S REPRESENTATIVE:

Bill McGreevy Tenneco Oil Company 6800 Park Ten Blvd., Suite 200 North San Antonio, Texas 78213 Phone: 512-734-8161

13. CERTIFICATION:

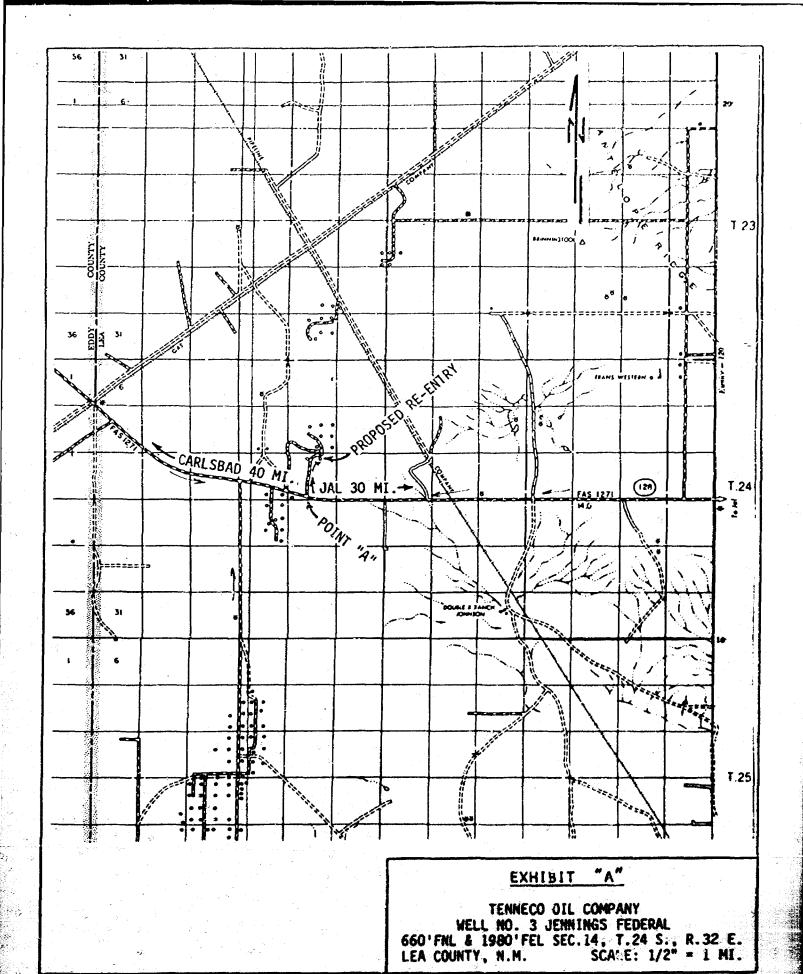
I hereby certify that I, or persons under my direct supervision, have inspected the proposed re-entry site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Tenneco Oil Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

August 30, 1982

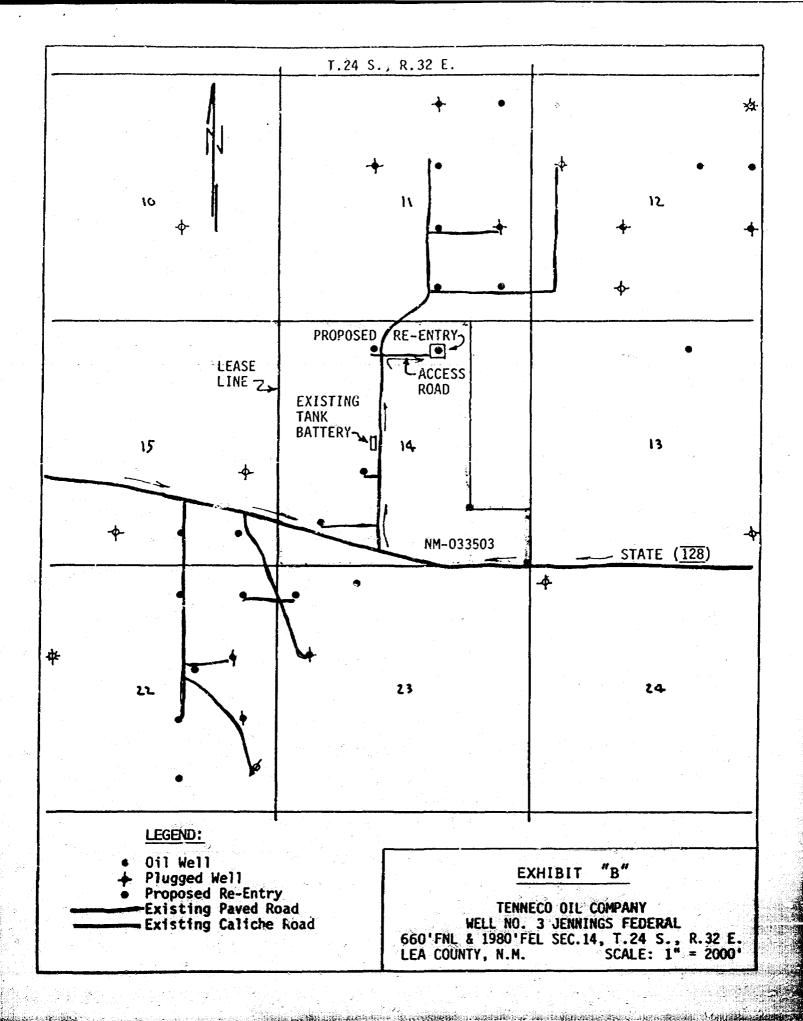
Date:

Arthur R. Brown, Agent for

Tenneco Oil Company



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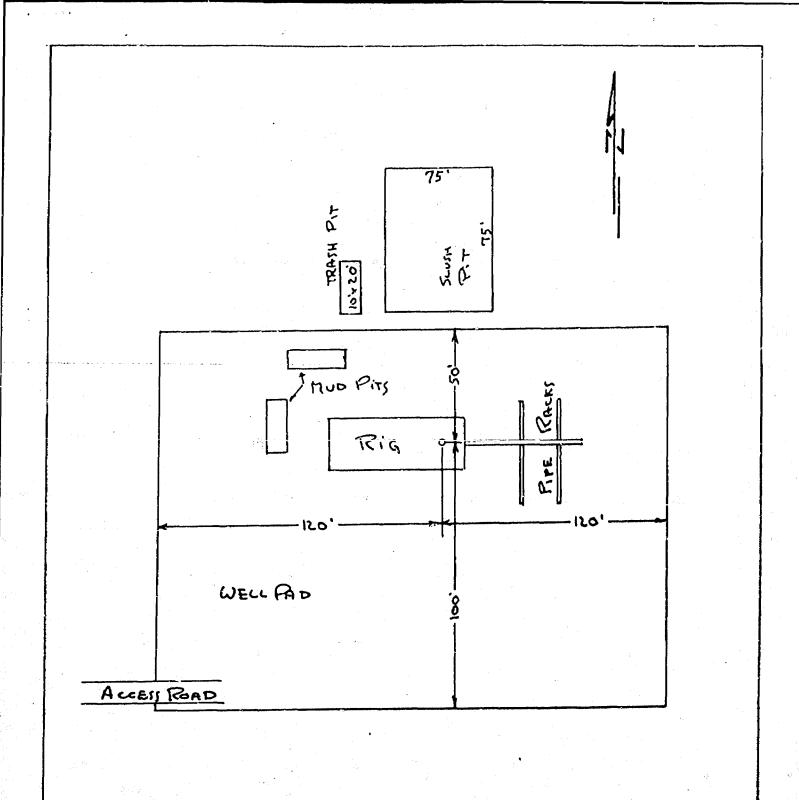
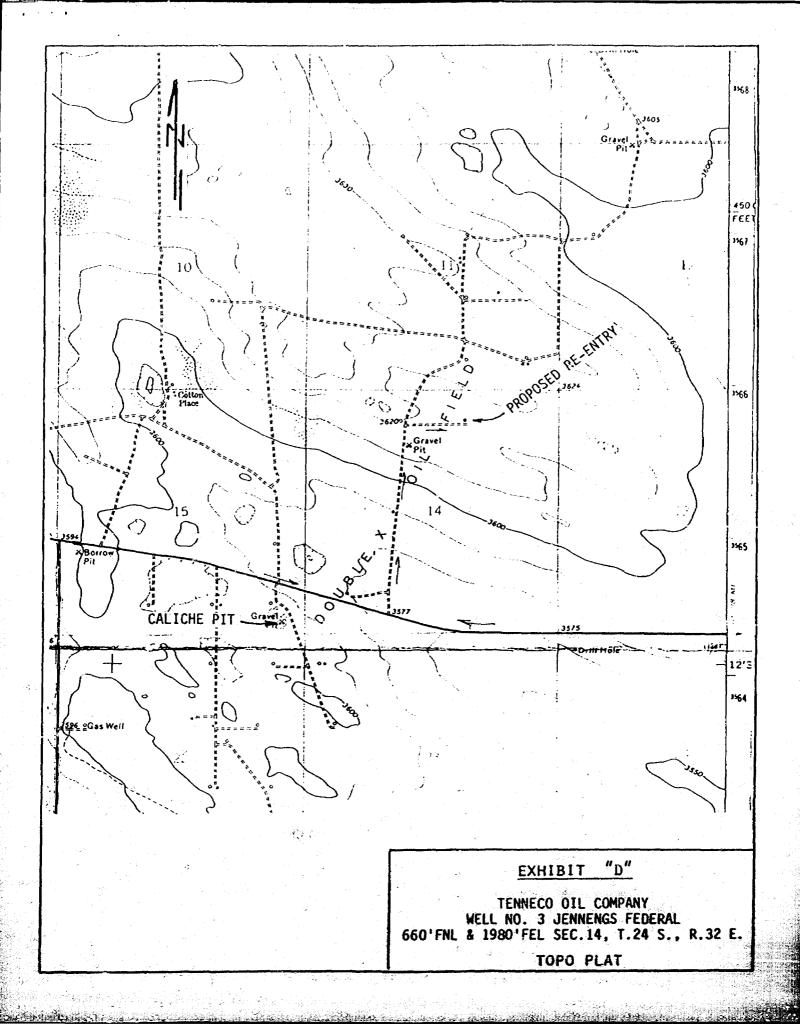


EXHIBIT "C"

TENNECO OIL COMPANY WELL NO. 3 JENNINGS FEDERAL DRILLING RIG LAYOUT SCALE: None



ARTHUR R. BROWN 101 E. Marland Hobbs, New Mexico 88240 Office (505) 397-2767 Home (505) 392-5642

PETROLEUM ENGINEERING & REGULATORY SERVICES

JAMES A. KNAUF 1501 W. Missouri Artesia, New Mexicio 88210 Phone (505) 746-4138

101 E. Marland, Suite 105 Hobbs, New Mexico 88240

August 30, 1982

Minerals Management Service P.O. Box 1857 Roswell, New Mexico 88201

Gentlemen:

SEP 9 1982

SANTA FE

This is with reference to Tenneco Oil Company's Application for Permit to Re-Enter well No. 3 Jennings Federal, a previously plugged and abandone well in the NW4NE4 of Section 14, T.24 S., R.32 E., Lea County, New Mexico, lease NM-033503.

This proposed re-entry is on mineral reserved land, the land being owned by the State of New Mexico with the minerals reserved to the United States.

The New Mexico State Land Office has been contacted previously concerning drilling and surface restoration requirements on this type of land. Mr. Ray Graham advised that they have no special restoration requirements for this type of land, and that restoration requirements normally specified for Federal lands of similar quality would be satisfactory for this State-owned land.

Sincerely,

Arthur R. Brown, Agent for

TENNECO OIL COMPANY

ARB/bb

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

IN TH

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 7676
Order No. R- 2029

APPLICATION OF TENNECO OIL COMPANY FOR SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO.

M.5

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on September 15, 1982, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____day of September, 1982, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (!) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Tenneco Oil Company, is the owner and operator of the Jennings Pederal Well No. 3, located in Unit B of Section 14, Township 24 South, Range 32 East, NMPM, Lea County, New Mexico.
- (3) That the applicant proposes to utilize said well to dispose of produced salt water into the Delaware formation, with injection into the perforated interval from approximately 4970 feet to 4982 feet.
- (4) That the injection should be accomplished through 278-inch plastic lined tubing installed in a packer set at approximately 4900 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.
- (5) That the injection well or system should be equipped with a pressure limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 995 psi.
- (6) That the Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from the Delaware formation.

- (7) That the operator should notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.
- (8) 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, including, but not limited to, the placement of not less than 50 salls of century across the lead shalled casing public an approximatily the (9) That approval of the subject application will prevent for

the drilling of unnecessary wells and otherwise prevent waste

IT IS THEREFORE ORDERED:

and protect correlative rights.

(1) That the applicant, Tenneco Oil Company, is hereby authorized to utilize its Jennings Federal Well No. 3, located in Unit B of Section 14, Township 24 South, Range 32 East, NMPM, Lea County, New Mexico, to dispose of produced salt water into the Delaware formation, injection to be accomplished through 24-inch tubing installed in a packer set at approximately 4900 feet, with injection into the perforated interval from approximately 4970 feet to 4982 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 detection device in order to determine leakage in the casing, tubing, or packer.

PROVIDED FURTHER, that the applicant shall cause to be placed not less than 50 sacles of cause to be placed not less than 50 sacles of cement across the lead scaled casing patch coment across the lead scaled casing patch approximately 2906 feet in said will.

- (2) That the injection well or system shall be equipped with a pressure limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 995 psi.
- (3) That the Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Delaware formation.
- (4) That the operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.
- (5) That the operator shall immediately notify the supervisor of the Division'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.
- (6) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 702, 703, 704, 705, 706, 708, and 1120 of the Division Rules and Regulations.
- (7) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

Memo

Trom

FLORENE DAVIDSON
ADMINISTRATIVE SECRETARY

Jo Called in 8/26/82

Tenuce Oil Company Salt Water Alisportal.

Januarys Fed.#3

660/N + 1980/E

14-245-326

Lea County

Alispose into Delaware formation thru perforations from 4970' thru 4982'

OIL CONSERVATION COMMISSION-SANTA FE

GARNIN AND