



United States Department of the Interior

GEOLOGICAL SURVEY

Drawer 1857
Roswell, New Mexico 88201



April 25, 1972

Tenneco Oil Company
P.O. Box 2410
Denver, Colorado 80201

Attention: Mr. M. K. Mendenhall

Gentlemen:

We acknowledge receipt on April 20 of a ratification and joinder to the Lone Pine Dakota "D" unit agreement No. 14-08-0001-11596, McKinley County, New Mexico, by Tony Yazzie, a basic royalty owner under Navajo Allotted tract No. 7. Such commitment, which is considered to be an original joinder to the unit agreement, is being distributed to the appropriate Federal and Indian offices and all copies surplus to our needs are returned herewith. It is requested that you furnish appropriate notice of these actions to all interested principals.

Sincerely yours,

N. O. FREDERICK
Regional Oil and Gas Supervisor

cc:
Washington (w/cy joinder)
BIA, Window Rock (w/cy joinder)
BLM, Santa Fe (w/cy joinder)
Farmington (w/cy joinder)
NMOCC, Santa Fe (ltr only)
Accounts (ltr only)

JWillock:ds



United States Department of the Interior

GEOLOGICAL SURVEY
Drawer 1857
Roswell, New Mexico 88201

April 18, 1974

Tenneco Oil Company
Attention: Mr. L. L. Parish
P. O. Box 2410
Denver, Colorado 80201

Gentlemen:

Your application for the first expansion of the Lone Pine Dakota "D" unit area, McKinley County, New Mexico, No. 14-08-0001-11596, was approved on April 18, 1974, effective as of August 1, 1973. Approval of the expansion increases the unit area from 2,598.30 acres to 2,538.30 acres.

Two approved copies of the application are enclosed. Please furnish the New Mexico Oil Conservation Commission and other interested principals with appropriate evidence of this approval. You are also requested to file a revised Exhibit "B" with this office.

Sincerely yours,

CARL C. TRAYWICK
Acting Area Oil and Gas Supervisor

cc.
Area Dir., Window Rock (2) (w/3 appr. cert.)
BLM, Santa Fe (w/cy of appr. appln.)
Farmington (w/cy of appr. appln.)
N.M.O.C.C., Santa Fe (ltr. only) ✓
Accounts (ltr. only)

REShook:lh

Drawer 1857
Roswell, New Mexico 88201

June 13, 1972

Tenneco Oil Company
P. O. Box 2410
Denver, Colorado 80261

Attention: Mr. E. E. Mendenhall

Gentlemen:

Your letter of May 31 transmits one xerox copy of a recorded "Certificate of Effectiveness" for the Lone Pine Dakota "D" unit agreement, No. 14-08-0001-11596. Such instrument is filed to substantiate the effective date of the agreement as April 1, 1972. The "Certificate of Effectiveness" is hereby accepted for record purposes and copies thereof are being furnished to appropriate Federal and Indian offices.

Sincerely yours,

N. O. FREDERICK
Regional Oil and Gas Supervisor

cc:
Washington (w/attach.)
BIA, Window Rock (w/attach.)
BIM, Santa Fe (w/attach.)
Farmington (w/attach.)
NMOCC, Santa Fe (ltr. only) ✓
Accounts (ltr. only)

GDaniel:lh



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Drawer 1857
Roswell, New Mexico 88201

March 30, 1972

Tenneco Oil Company
P. O. Box 2410
Denver, Colorado 80201

4564

Attention: Mr. Millard F. Carr

Gentlemen:

The Lone Pine Dakota "D" unit agreement, McKinley County, New Mexico, was approved on March 30, 1972. This agreement has been designated No. 14-08-0001-11596. Please furnish this office with the Certificate of Effectiveness required by Section 24 of the unit agreement.

Enclosed are two copies of the approved unit agreement for your records. Please furnish the New Mexico Oil Conservation Commission and other interested principals with appropriate evidence of this approval.

Sincerely yours,

(CRIS. 3...)

N. O. FREDERICK
Regional Oil and Gas Supervisor

cc:
Washington (w/cy approved agr.)
BIA, Window Rock (w/cy approved agr.)
BLM, Santa Fe (w/cy approved agr.)
BMC, Roswell (ltr. only)
NMOCC, Santa Fe (ltr. only) ✓

RECEIVED
APR 3 1972



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Drawer 1857
Roswell, New Mexico 88201

March 31, 1972

Tenneco Oil Company
Suite 1200, Lincoln Tower Building
Denver, Colorado 80203

4/10/72

Attention: Mr. R. A. Williford

Gentlemen:

Your initial plan covering secondary recovery operations for the Lone Pine Dakota "D" unit area, McKinley County, New Mexico, for the period from April 1, 1972, through December 31, 1972, was approved on this date.

Two approved copies of the plan are attached.

Sincerely yours,

N. O. FREDERICK
Regional Oil & Gas Supervisor

cc:
Washington
Farmington
✓ NMOCC, Santa Fe

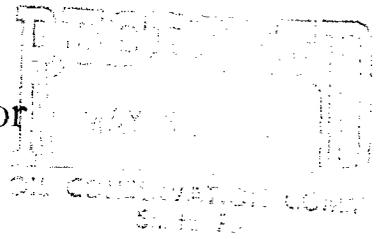
JWillock:ds

RECEIVED
APR 3 1972



United States Department of the Interior

GEOLOGICAL SURVEY



Drawer 1857
Roswell, New Mexico 88201

May 26, 1972

File 4

Tenneco Oil Company
P. O. Box 2410
Denver, Colorado 80201

Attention: Mr. Darrell L. Metcalf

Gentlemen:

We acknowledge receipt on May 15 of ratifications and joinders to the Lone Pine Dakota "D" unit agreement No. 14-08-0001-11596, McKinley County, New Mexico, by Rose Cayadito Simms, a basic royalty owner under Navajo Allotted tract No. 4, and Thomas H. Connelly, an overriding royalty interest owner under Federal tract No. 3. Such commitments are considered to be effective as of June 1, 1972, and are being distributed to the appropriate Federal and Indian offices. All copies surplus to our needs are returned herewith. It is requested that you furnish appropriate notice of these actions to all interested principals.

Sincerely yours,

[ORIG. S. O. 11 0. 1 -

N. O. FREDERICK
Regional Oil and Gas Supervisor

cc:
Washington (w/cy joinders)
BIA, Window Rock (w/cy joinders)
BLM, Santa Fe (w/cy joinders)
Farmington (w/cy joinders)
NMOCC, Santa Fe (ltr. only) ✓
Accounts (ltr. only)

JWillock:lh



August 11, 1972

Mesoro Petroleum
8520 Crownhill Blvd
San Antonio, Texas

Re: Inclusion of the Hanson #22
into the Lone Pine Dakota
"D" Unit, McKinley County,
New Mexico

Gentlemen:

Tenneco Oil Company, as operator of the Lone Pine Dakota "D" Unit, has evaluated the feasibility of bringing the Hanson #22 into the Lone Pine Dakota "D" Unit. We are proposing to include the captioned well into the unit on the same basis that other tracts were included when the Unit was originally formed. Your Phase I participation factor (see attached Table 1) would be 4.116921%. This is based on May, 1971 production of 2429 BOPD and assumes the Hanson #22 would have been producing its allowable 100 BOPD at that time. This Phase I factor would be in effect until a total of 3,232,000 barrels of oil has been produced from the reservoir.

Attached also is Figure 1, which is a revised net pay isopach of the Dakota "D" Zone. Based on this map, there are 93.60 oil plus equivalent gas acre-feet underlying your tract. Based on this volume, your Phase II participation would be .403989%.

Tenneco asks that you give consideration to our proposal and notify us of your decision by September 15, 1972. Your final inclusion into the Unit is contingent upon an 80% compliance of the current working interest owners and the approval of the United States Geological Survey, and the New Mexico Oil Conservation Commission.

If you have any questions, please contact me.

Yours very truly,

TENNECO OIL COMPANY

Original Signed
R. A. WILLIFORD

R. A. Williford
District Production Manager

WEB/dw

cc: USGS - Roswell
NMOCC - Aztec and Santa Fe
All Working Interest Owners



August 11, 1982

Mr. C. C. Kennedy
1249 Chaco Ave.
Farmington, New Mexico 87401

RE: Inclusion of the BSK Edna #1
into the Lone Pine Dakota
"D" Unit, McKinley County,
New Mexico

C
O
P
Y
Dear Mr. Kennedy:

Tenneco Oil Company, as operator of the Lone Pine Dakota "D" Unit, has evaluated the feasibility of bringing the BSK Edna #1 into the Lone Pine Dakota "D" Unit. We are proposing to include the captioned well into the unit on the same basis that other tracts were included when the Unit was originally formed. Your Phase I participation factor (see attached Table 1) would be 4.116921%. This is based on May, 1971 production of 2429 BOPD and assumes the Edna #1 would have been producing its allowable 100 BOPD at that time. This Phase I factor would be in effect until a total of 3,232,000 barrels of oil has been produced from the reservoir.

Attached also is Figure 1, which is a revised net pay isopach of the Dakota "D" Zone. Based on this map, there are 168.52 oil plus equivalent gas acre-feet underlying your tract. Based on this volume, your Phase II Participation would be .727353%. Table 2 is a tabulation of revised tract participations.

Tenneco asks that you give consideration to our proposal and notify us of your decision by September 15, 1972. Your final inclusion into the Unit is contingent upon an 80% compliance of the current working interest owners and the approval of the United States Geological Survey, and the New Mexico Oil Conservation Commission.

If you have any questions, please contact me.

Yours very truly,

TENNECO OIL COMPANY

Original Signed
R. A. WILLIFORD

R. A. Williford
District Production Manager

WEB/lj

cc: USGS - Roswell
NMOCC - Aztec and Santa Fe
All Working Interest Owners

PHASE I

PARTICIPATION FACTORS

Tract	Expanded Case (New)		Existing Case		
	Prod	Frac	Prod	Frac	Fractional Change
1	0	---	---	---	---
2	0	---	---	---	---
3	0	---	---	---	---
4	200	.08233841	200	.08972634	-.00738793
5	100	.04116921	100	.04486317	-.00369396
6	187	.07698641	187	.08389411	-.00690770
7	200	.08233841	200	.08972634	-.00738793
8	200	.08233841	200	.08972634	-.00738793
9	200	.08233841	200	.08972634	-.00738793
10	0	---	---	---	---
11A	200	.08233841	200	.08972633	-.00738792
11B	742	.30547550	742	.33288469	-.02740919
12	200	.08233841	200	.08972634	-.00738793
13	100	.04116921	---	---	+.04116921
14	100	.04116921	---	---	+.04116921
15	0	---	---	---	
Total	2429	1.00000000	2229	1.00000000	0

TABLE I (CON'T)
 OPERATOR SUMMARY
 PHASE I

	<u>Revised</u>	<u>Existing</u>	<u>Difference</u>
Gil Oil	.08233841	.08972634	-.00738793
Beard Oil	.09263071	.10094213	-.00831142
John Beard	.03087690	.03364738	-.00277048
Tesoro	.08233841	.04486317	+.03747524
Tenneco	.67064636	.73082098	-.06017462
Kennedy	.04116921	0	+.04116921
	<hr/>	<hr/>	<hr/>
Total	1.00000000	1.00000000	0

TABLE II
 Comparison of Tract Participation, New and Existing
 Lone Pine Dakota "D" Unit
 7/20/72

<u>Tract Number</u>	<u>New Oil & Eg Gas Ac-ft</u>	<u>New Fraction</u>	<u>Existing Oil & Eg Gas AF</u>	<u>Existing Fraction</u>	<u>2 - 4 Ac-ft Change</u>	<u>3 - 5 Fraction Change</u>
1	47.12	.00203376	47.12	.00209102	0	-.00005726
2	13.63	.00058829	13.63	.0060485	0	-.00001656
3	41.21	.00177867	41.21	.00182875	0	-.00005008
4	1950.39	.08418120	1588.57	.07049505	361.82	.01368615
5	279.43	.01206054	362.87	.01610288	-83.44	.00404234
6	3625.07	.15646242	3625.07	.16086763	0	-.00440521
7	3566.55	.15393663	3566.55	.15827072	0	-.00433409
8	592.66	.02557992	592.66	.02630013	0	-.00072021
9	2651.67	.11444930	2651.67	.11767162	0	-.00322232
10	47.27	.00204023	36.78	.00163216	10.49	.00040807
11A	2473.97	.10677955	2403.61	.10666361	70.36	.00011594
11B	6527.91	.28175251	6527.91	.28968528	0	-.00793277
12	1076.84	.04647772	1076.84	.04778630	0	-.00130858
13	168.52	.00727353	0	0	168.52	.00727353
14	93.60	.00403989	0	0	93.60	.00403989
15	13.11	.0056584	0	0	13.11	.0056584
Total	23168.95	1.00000000	22534.49	1.00000000	634.46	

TABLE II (CON't)
 OPERATOR SUMMARY
PHASE II

	<u>New</u>	<u>Existing</u>	<u>Difference</u>
Gil Oil	.11450965	.11767162	-.00316197
Beard Oil	.07222962	.06494845	+.00728117
John Beard	.02406044	.02164948	+.00241096
Tesoro	.02931898	.02552531	+.00379367
Tenneco	.75260778	.77020514	-.01759736
Kennedy	.00727353	---	+.00727353
	<hr/>	<hr/>	<hr/>
Total	1.0000000	1.00000000	0



June 2, 1972

New Mexico Oil Control Division
P. O. Box 2300
Santa Fe, New Mexico

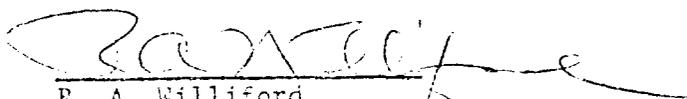
RE: Base Map Showing Unit Well Numbers
Lone Pine Dakota "D" Unit
McKinley County, New Mexico

Gentlemen:

Attached for your information is a copy of the captioned base map.

Yours very truly,

TENNECO OIL COMPANY


R. A. Williford
District Production Manager

WEB/lj

Attachment

cc: Gil Oil
Tesoro
Beard Oil
John Beard
Emery Arnold, NMOCC, Aztec
A. L. Porter, NMOCC, Santa Fe
U. S. G. S., Roswell



June 2, 1972

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

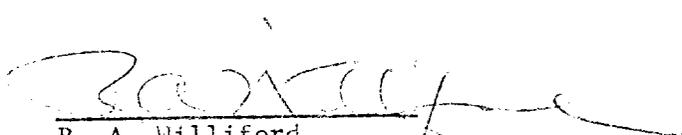
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Lone Pine Dakota "D" Unit
McKinley County, New Mexico

Gentlemen:

Attached for your information is a copy of the captioned base map.

Yours very truly,

TENNECO OIL COMPANY


R. A. Williford
District Production Manager

WEB/lj

Attachment

cc: Gil Oil
Tesoro
Beard Oil
John Beard
Emery Arnold, NMOCC, Aztec
A. L. Porter, NMOCC, Santa Fe
U. S. G. S., Roswell



United States Department of the Interior

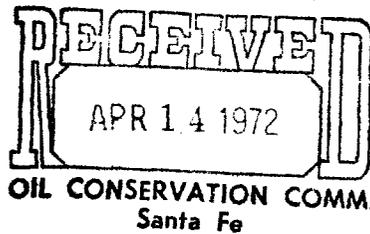
Drawer 1857
Roswell, New Mexico 88201

April 13, 1972

Tenneco Oil Company
P.O. Box 2410
Denver, Colorado 80201

Attention: Mr. M. K. Mendenhall

Gentlemen:



We acknowledge receipt on April 10 of the following described ratifications and joinders to the Lone Pine Dakota "D" unit agreement No. 14-08-0001-11596, McKinley County, New Mexico:

<u>Basic Royalty Owner</u>	<u>Overriding Royalty Owner</u>	<u>Tract No.</u>	<u>Execution Date</u>
	Joe W. Cherry	1	March 20, 1972
	F. D. McCallon	1	March 3, 1972
	James C. Vandiver	1	March 14, 1972
	T. G. Whigham	1	March 13, 1972
	Amoco Production Company	4, 5	March 17, 1972
Bessie R. Etsitty		6	March 11, 1972
	J. C. Templeton	7	March 14, 1972
Robert Jones		8	March 27, 1972

The joinders listed above are considered as original joinders to the unit agreement which was effective April 1, 1972. All tracts were originally qualified for participation as of the effective date of the unit agreement. Copies of the joinders are being distributed to the appropriate Federal and Indian offices and all copies surplus to our needs are returned herewith. We are returning joinders by E. E. Wilson, C. L. Whigham and Joe B. Burr, Jr., which we are unable to identify from Exhibit B as owning interests in the unit. We have previously accepted a joinder by Santa Fe Pacific Railroad Company. It is requested that you furnish appropriate notice of these actions to all other interested principals.

Sincerely yours,

(ORIG.)

CARL C. TRAYWICK
Acting Oil and Gas Supervisor

cc:
Washington (w/cy joinders)
BIA, Window Rock (w/cy joinders)
BLM, Santa Fe (w/cy joinders)
Farmington (w/cy joinders)
✓ NMOCC, Santa Fe (ltr. only)
Accounts (ltr. only)

JWillock:ds

APR 1 1975
OIL CONSERVATION COMM.
2c



OIL CONSERVATION COMMISSION

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

GOVERNOR
BRUCE KING
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

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

February 28, 1972

Mr. Booker Kelly
White, Koch, Kelly & McCarthy
Attorneys at Law
Post Office Box 787
Santa Fe, New Mexico

Re: Case No. 4664
Order No. R-4262
Applicant:
Tenneco Oil Company

Dear Sir:

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

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x

Artesia OCC

Aztec OCC x

Other Unit Division - State Land Office

WHITE,
KOCH, KELLY
&
McCARTHY

January 25, 1972

4604-1005

Mr. A. L. Porter, Jr.
Secretary-Director
Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Tenneco Oil Company's Application for Unit Agree-
ment and Pressure Maintenance Project Lone Pine
Dakota "D" Unit, McKinley County, New Mexico

Dear Mr. Porter:

Enclosed find original and two copies of Tenneco's Appli-
cation for the Unit Agreement and Pressure Maintenance Project
covering the Lone Pine Dakota "D" Unit, McKinley County, New
Mexico. I have previously orally requested that this matter
be set for hearing February 16, 1972.

I also enclose for your review a plat showing the pro-
posed Unit and Pressure Maintenance Project. Attached to
the Application is a copy of the Unit Agreement and copy of
the Special Rules and Regulations which Tenneco seeks.

The land involved is Federal, Indian and Fee and I have
been informed that preliminary approval has been given by the
U.S.G.S. and the Bureau of Indian Affairs. We expect to have
written approval prior to the February 16th hearing.

If you need any further information in this matter, please
advise.

Sincerely,

W. B. Kelly
W. B. KELLY

WBK:cc
Enclosures

cc: Mr. Millard F. Carr
Mr. R. A. Williford

RECEIVED
2/3/72

L.C. White
Sumner S. Koch
William Booker Kelly
John F. McCarthy, Jr.
Kenneth Bateman
Benjamin Phillips
William W. Gilbert (Of Counsel)

RUTH ROSS
P. O. BOX 464
SANTA FE, NEW MEXICO 87501

February 16, 1972

N. E. Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

SUBJECT: IN THE CASE OF 4664 and 4665 - TENNECO OIL COMPANY'S
APPLICATION FOR UNIT AGREEMENT AND PRESSURE MAINTENANCE
PROJECT IN THE LONE PINE DAKOTA "D" UNIT, McKinley County,
New Mexico

Gentlemen:

As the original lessee and as an overriding royalty owner of Federal Oil and Gas Lease NM 0556382, designated as Tract No. 3 on Exhibit "B" to this Unit Agreement, covering 79.44 Acres in T. 17 N., R. 8 W., Sec. 19: Lot 1, NE $\frac{1}{4}$ NW $\frac{1}{4}$, I wish to present my request to the Commission and to Tenneco for favorable consideration to be included in some manner for participation or compensation in both Phase I and Phase II of the Project.

Let me point out how Tenneco will benefit from the inclusion of this acreage as brought out in the Special Rules and Regulations for the Pressure Maintenance Project should their request be approved by the Commission:

According to the information on file, Tenneco's Lone Pine No. 1 well, located in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Sec. 19, T. 17 N., R. 8 W., is to be a water injection well. In the Special Rules for the Project, it is stated that the project area shall comprise all of the area included within the Lone Pine Dakota "D" Unit and that the allowable for the Project shall be the sum of the allowables of the several wells within the project area, including those wells which are shut-in, curtailed, or USED AS INJECTION WELLS. Further it states that the allowable assigned to each INJECTION WELL IN THE PROJECT SHALL BE THE TOP UNIT ALLOWABLE FOR THE LONE PINE DAKOTA "D" POOL. Right from the beginning this acreage benefits the entire Unit from the allowable given, even though the well itself is not producing oil.

Under Section 12 of the Unit Agreement - Plan of Operations - it is stated: "It is recognized and agreed by the parties hereto that all of the land subject to this Agreement is reasonably proved to be productive of Unitized Substances...." It is also stated in the Unit Agreement that drilling, producing or secondary recovery operations performed upon any Tract of Unitized Land shall be accepted and deemed to be performed upon and for the benefit of each and every Tract of Unitized Land.

ould this Tract No. 3 be deleted from the Unit for some reason, I request t the Unit Operator take appropriate and adequate measures to prevent nage, either of oil and gas or other hydrocarbon substances, under the age involved in this Tract.

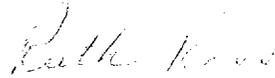
N. M. Oil Conservation Commission

Page 2

February 16, 1972

Therefore, in summary, I respectfully request favorable consideration by the Commission and Tenneco Oil Company of my request to receive a fair and equitable share for my overriding royalty based on the benefits Tenneco will immediately receive in the form of top allowable for the injection well, into which water under pressure is to be injected, for the benefit of all involved. This share should be paid immediately, as the others are paid their share, instead of waiting for some indefinite time in the future under Phase II, at which time my Tract No. 3 is scheduled to participate, according to verbal information supplied by Tenneco's representative.

Sincerely,



Ruth Ross

cc U. S. Geological Survey,
Roswell, New Mexico
cc Tenneco Oil Company

RUTH ROSS
P. O. BOX 464
SANTA FE, NEW MEXICO 87501

February 16, 1972

N. M. Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

SUBJECT: IN THE CASE OF 4664 and 4665 - TENNECO OIL COMPANY'S
APPLICATION FOR UNIT AGREEMENT AND PRESSURE MAINTENANCE
PROJECT IN THE LONE PINE DAKOTA "D" UNIT, McKinley County,
New Mexico

Gentlemen:

As the original lessee and as an overriding royalty owner of Federal Oil and Gas Lease NM 0556382, designated as Tract No. 3 on Exhibit "B" to this Unit Agreement, covering 79.44 Acres in T. 17 N., R. 8 W., Sec. 19: Lot 1, NE $\frac{1}{4}$ NW $\frac{1}{4}$, I wish to present my request to the Commission and to Tenneco for favorable consideration to be included in some manner for participation or compensation in both Phase I and Phase II of the Project.

Let me point out how Tenneco will benefit from the inclusion of this acreage as brought out in the Special Rules and Regulations for the Pressure Maintenance Project should their request be approved by the Commission:

According to the information on file, Tenneco's Lone Pine No. 1 well, located in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Sec. 19, T. 17 N., R. 8 W., is to be a water injection well. In the Special Rules for the Project, it is stated that the project area shall comprise all of the area included within the Lone Pine Dakota "D" Unit and that the allowable for the Project shall be the sum of the allowables of the several wells within the project area, including those wells which are shut-in, curtailed, or USED AS INJECTION WELLS. Further it states that the allowable assigned to each INJECTION WELL IN THE PROJECT SHALL BE THE TOP UNIT ALLOWABLE FOR THE LONE PINE DAKOTA "D" POOL. Right from the beginning this acreage benefits the entire Unit from the allowable given, even though the well itself is not producing oil.

Under Section 12 of the Unit Agreement - Plan of Operations - it is stated: "It is recognized and agreed by the parties hereto that all of the land subject to this Agreement is reasonably proved to be productive of Unitized Substances...." It is also stated in the Unit Agreement that drilling, producing or secondary recovery operations performed upon any Tract of Unitized Land shall be accepted and deemed to be performed upon and for the benefit of each and every Tract of Unitized Land.

Should this Tract No. 3 be deleted from the Unit for some reason, I request that the Unit Operator take appropriate and adequate measures to prevent drainage, either of oil and gas or other hydrocarbon substances, under the acreage involved in this Tract.

N. M. Oil Conservation Commission
Page 2
February 16, 1972

Therefore, in summary, I respectfully request favorable consideration by the Commission and Tenneco Oil Company of my request to receive a fair and equitable share for my overriding royalty based on the benefits Tenneco will immediately receive in the form of top allowable for the injection well, into which water under pressure is to be injected, for the benefit of all involved. This share should be paid immediately, as the others are paid their share, instead of waiting for some indefinite time in the future under Phase II, at which time my Tract No. 3 is scheduled to participate, according to verbal information supplied by Tenneco's representative.

Sincerely,


Ruth Ross

cc U. S. Geological Survey,
Roswell, New Mexico
cc Tenneco Oil Company

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Handwritten signature

May 24, 1973

Tenneco Oil Company
Lincoln Tower Building
Denver, Colorado 80203

Attention: Mr. D. D. Myers

Re: Lone Pine Dakota "D"
Unit Expansion

Gentlemen:

The New Mexico Oil Conservation Commission grants preliminary application for the expansion of the Lone Pine Dakota "D" Unit, McKinley County, to include the SW/4 NW/4 of Section 8, Township 17 North, Range 8 West, NMPM. The addition of the above described 40 acres will increase the unit area to 2638.30 acres.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/JEK/og

cc: United States Geological Survey
Washington, D. C.

Tenneco Oil

A Tenneco Company

Suite 1200
Lincoln Tower Building
Denver, Colorado 80203
(303) 292-9920



4504

August 21, 1973

Oil Conservation Commission
State of New Mexico
Post Office Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. A. L. Porter, Jr.
Secretary - Director

RE: Lone Pine Dakota "D"
Unit Expansion
McKinley County, New Mexico
PA - 5737

Dear Mr. Porter;

Your letter of May 24, 1973 advised that the New Mexico Oil Conservation Commission granted preliminary approval of Tenneco's application for expansion of the Lone Pine Dakota "D" Unit, McKinley County, New Mexico to include the SW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 8, Township 17 North, Range 8 West, NMPM.

Attached hereto, for your advance information, is a copy of the Notice of Expansion, Joinder and Consent to Expansion of Unit Area and revised Exhibit "C" to the Unit Agreement which has been sent to all working Interest owners, Royalty and Overriding Royalty owners, the Bureau of Indian Affairs and the USGS.

TENNECO OIL COMPANY

Oil Conservation Commission
Mr. A. L. Porter, Jr.
August 21, 1973
Page 2

Tenneco will, of course, file with the Commission the Consent and Joinders of those interests joining in the expansion immediately after the receipt of same from the various interest owners.

Very truly yours,

TENNECO OIL COMPANY

A handwritten signature in cursive script, appearing to read "C. H. Moerbe".

C. H. Moerbe
Landman

CHM/fv

Attachment



TENNECO OIL COMPANY • P. O. BOX 2410 • CAPITOL LIFE BLDG. • DENVER, COLORADO 80201

August 15, 1973

TO THE SUPERVISOR AND OWNERS
OF WORKING, ROYALTY OR OTHER
OIL AND GAS INTERESTS IN THE
LONE PINE DAKOTA "D" UNIT

Re: NOTICE OF EXPANSION
Lone Pine Dakota "D" Unit
McKinley County, New Mexico

Gentlemen:

Tenneco Oil Company, as Unit Operator of the Lone Pine Dakota "D" Unit and pursuant to Section 4 of the Unit Agreement dated February 15, 1972, hereby gives notice of proposed expansion of the Unit Area thereunder to include, effective August 1, 1973 (as Tract 13) the following lands in McKinley County, New Mexico:

Township 17 North, Range 8 West, N.M.P.M.

Section 8: SW/4NW/4

containing 40 acres, more or less,

covered by United States Oil and Gas Lease Serial No. NM-052931.

Such expansion is necessary to bring into unit participation Tesoro Oil Corporation's Hanson #22 well drilled on said lands and completed in the Dakota "D" Sand, the common reservoir with unit production. Attached hereto is a revision of Exhibit "C" to the Unit Agreement showing the Tract Participation of Tract 13 and the revised Tract Participation for all other Tracts.

The basis for such participation of Tract 13 was determined as follows:

1. Phase 1 participation was computed on the same basis used when the Lone Pine Dakota "D" Unit was originally formed, being based on May, 1971 production and assuming that the Hanson #22 well was capable of producing 100 BOPD at that time.
2. Phase 2 participation is the negotiated result of adding the oil plus the equivalent gas acre-feet for Tract 13 (93.60 acre-feet) to the current total unit acre-foot number. The fractional participation for Tract 13 was determined by dividing 93.60 by the total acre-feet as prescribed. The remaining tract participations were determined by multiplying their original tract fractions by one (1) minus the Tract 13 fraction.

After unanimous agreement between the original Unit Working Interest Owners and the Working Interest Owner of Tract 13, preliminary concurrence by the Director and the Area Director to the above described basis for expansion was obtained. Copies of this notice are being mailed to all affected parties to the Lone Pine Dakota "D" Unit Agreement and all such parties are hereby advised that 30 days from the date of mailing will be allowed for submission to the undersigned, as Unit Operator, of any objection to this proposed expansion.

THIS NOTICE SUPERSEDES THE PRIOR NOTICE OF AUGUST 1, 1973.

Respectfully submitted,

TENNECO OIL COMPANY

By L. L. Parish
L. L. Parish
Attorney-In-Fact *MLP*

EXHIBIT "C"

(effective August 1, 1973)

TO UNIT AGREEMENT FOR THE
DEVELOPMENT AND OPERATION
OF THE LONE PINE DAKOTA "D" UNIT
McKINLEY COUNTY, NEW MEXICO

Schedule of Tract Participation

<u>Tract No.</u>	<u>Tract Participation</u>	
	<u>Phase I (%)</u>	<u>Phase II (%)</u>
1	.000000	.208237
2	.000000	.060235
3	.000000	.182119
4	8.587377	7.020345
5	4.293689	1.603626
6	8.029196	16.020221
7	8.587377	15.761604
8	8.587377	2.619134
9	8.587377	11.718488
10	.000000	.162541
11A	8.587377	10.622240
11B	31.859164	28.848701
12	8.587377	4.758864
13	<u>4.293689</u>	<u>.413645</u>
	100.000000	100.000000

EXHIBIT "C"

(effective August 1, 1973)

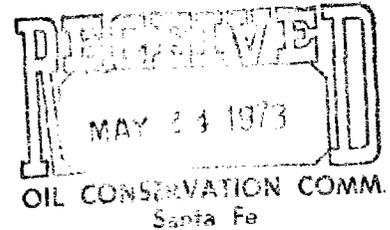
TO UNIT AGREEMENT FOR THE
DEVELOPMENT AND OPERATION
OF THE LONE PINE DAKOTA "D" UNIT
McKINLEY COUNTY, NEW MEXICO

Schedule of Tract Participation

<u>Tract No.</u>	<u>Tract Participation</u>	
	<u>Phase I (%)</u>	<u>Phase II (%)</u>
1	.000000	.208237
2	.000000	.060235
3	.000000	.182119
4	8.587377	7.020345
5	4.293689	1.603626
6	8.029196	16.020221
7	8.587377	15.761604
8	8.587377	2.619134
9	8.587377	11.718488
10	.000000	.162541
11A	8.587377	10.622240
11B	31.859164	28.848701
12	8.587377	4.758864
13	<u>4.293689</u>	<u>.413645</u>
	100.000000	100.000000



May 21, 1973



Mr. A. L. Porter
Secretary - Director
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

RE: Lone Pine Dakota "D"
Unit Expansion and
Expansion of Pressure
Maintenance
McKinley County, New Mexico

Gentlemen:

Tenneco Oil Company, as operator of the Lone Pine Dakota "D" Unit, respectfully submits application for administrative approval to expand the Lone Pine Dakota "D" Unit and the Pressure Maintenance Project to include 40 acres, more or less, of the following described Federal land:

Township 17 North, Range 8 West
Section 8 SW/4 NW/4 - Federal Lease Number - 052931

The Secretary-Director, under terms of Commission Orders R-4262 and R-4263, has the authority to grant such request.

In support of this application, Tenneco encloses the following:

- 1) a copy of the original application for preliminary approval made to the United States Geological Survey (U.S.G.S.)
- 2) a copy of the letter from the U.S.G.S. approving the preliminary application for expansion.

Commission approval of this application will promote the conservation of oil and gas in the Lone Pine Dakota "D"

TENNECO OIL COMPANY

Mr. A. L. Porter
May 21, 1973
Page 2

Pool, therefore, your rapid approval will be appreciated.

Yours very truly,

TENNECO OIL COMPANY



D. D. Myers
District Production Manager

WEB/lj
Attachments

cc: All Working Interest Owners
C. W. Nance- Rocky Mountain Division



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

MAY 11 1973

Tenneco Oil Company
Lincoln Tower Building
Denver, Colorado 80203

Attention: Mr. R. A. Williford

Gentlemen:

Your application of January 30, 1973, filed with the Oil and Gas Supervisor, Roswell, New Mexico, requests preliminary approval of a proposed expansion of the Lone Pine Dakota "D" unit area, McKinley County, New Mexico.

The proposed expansion will add 40 acres of Federal land thereby increasing the unit area from 2,598.30 acres to 2,638.30 acres. Such expansion contains land indicated by available geologic information to be within the productive limits of the Dakota "D" reservoir. The inclusion of this tract in the unit area is deemed necessary to obtain maximum recovery of secondary oil through better control of pressure maintenance operations in this part of the field.

No objections will be offered to the proposed expansion provided such expansion is accomplished in accordance with the applicable provisions of Section 4 of the unit agreement within a reasonable period of time.

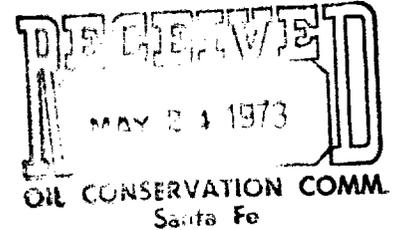
When the Oil and Gas Supervisor, Roswell, New Mexico, is asked to grant final approval of the proposed expansion, a minimum of eight copies of the request for final approval should be submitted along with eight copies of each of the necessary joinders.

Sincerely yours,

Harvey W. Corbett
Acting Director



January 30, 1973



The Director
United States Geological Survey
Washington, 25 D.C.

RE: Application for the Preliminary
Approval of the First Expansion
of the Lone Pine Dakota "D" Unit,
McKinley County, New Mexico

Gentlemen:

Pursuant to Section 4 (Expansion of the Unit Agreement for the Development and Operation of the Lone Pine Dakota "D" Unit, Tenneco Oil Company, as operator, respectfully submits application for the approval by said Director, Application for the Preliminary Approval of the First Expansion of the Lone Pine Dakota "D" Unit. The area of expansion is 40 acres, more or less, and comprises the following Federal land:

Township 17 North, Range 8 West
Section 8: SW/4 NW/4 Federal Lease Number- 05293T

In support of this application, the following numbered items are attached and made a part hereof:

1. Map showing the current Unit Area and the proposed expansion area with tract numbers.
2. Table showing tract designations, lease numbers, names, and operators.
3. Current and Revised Tract Participation Tables.
4. Geologic Study with revised structure and isopach maps plus details on map construction.
5. A table showing the monthly oil production from the Tract to be included demonstrating that hydrocarbons in paying quantities are being recovered.
6. A letter from Tesoro Petroleum accepting the terms of entry herein prescribed.

TENNECO OIL COMPANY

January 30, 1973
Page 2

The basis for participation of the Hanson #22 in the Unit is as follows:

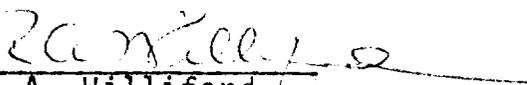
- Phase 1 - the same as when the Unit was formed. Based on May, 1971 Production and assumes the Hanson well capable of 100 BOPD at that time. (While the Hanson #22 is not currently producing 100 BOPD, changes in the mechanical condition of the well should upgrade it to that status.)
- Phase 2 - Has been negotiated by simply adding the oil + equivalent gas acre-feet for the Hanson tract (93.60 Ac-ft) to the current total Unit Acre-foot number. The fractional participation for the Hanson tract was determined by dividing 93.60 by the total acre-feet as prescribed. The remaining tract participations were determined by multiplying their existing tract fractions by 1-Hanson tract fraction.

Tenneco Oil Company, as operator, has received unanimous approval from the Working Interest Owners in the Lone Pine Dakota "D" Unit to proceed with the expansion of the Unit. We therefore respectfully request that the Director approve the First Expansion of the Lone Pine Dakota "D" Unit.

Dated this Thirtieth day of January, 1973.

Yours very truly,

TENNECO OIL COMPANY


R. A. Williford
District Production Manager

WEB/lj
Attachments

cc: Working Interest Owners
C. W. Nance - Rocky Mountain Division

ITEM 2
LEASE SERIAL NUMBERS AND TRACT NUMBERS

<u>Type</u>	<u>Map Tract Number</u>	<u>Serial Number</u>	<u>Lease Name</u>	<u>Working Interest Owner</u>
4 Federal Tracts	1	NM8270	Hospah	Tenneco Oil Co.
	13	952931	Hanson	Tesoro Petroleum
	2	NM0555807	Connelly Fed.	Tenneco Oil Co.
	3	NM9556382	Lone Pine	Tenneco Oil Co.
6 Indian Tracts	4	14-20-0603-9534	Joe Toledo	John Beard (25%) Beard Oil (75%)
	5	14-20-0603-9535	Dosh E Pi Henio	John Beard (25%) Beard Oil Co. (75%)
	6	14-20-0603-9871	Don ne Pah	Tenneco Oil Co.
	7	14-20-0603-9895	Yazzie	Tenneco Oil Co.
	8	N00-C-14-20-2666	Kagoso	Tenneco Oil Co.
	9	N00-C-14-20-3007	Bah E	Gil Oil & Gas Co.
4 Fee Tracts	10	SFP9744	Santa Fe & Pacific RR	Tesoro Petroleum Corp.
	11A	SFP9750	Santa Fe & Pacific RR	Tenneco Oil Co.
	11B	SFP9750	Santa Fe & Pacific RR	Tenneco Oil Co.
	12	SFP9744 SFP9750	Santa Fe & Pacific RR	Tenneco Oil Co. (50%) Tesoro Petroleum (50%)

ITEM 3
CURRENT
TRACT PARTICIPATION PARAMETERS

LONE PINE DAKOTA "D" FIELD
MCKINLEY COUNTY, NEW MEXICO

Tract No.	Description (S-T-R)	Production		Oil + Eq. Gas Ac-F	
		Tract	Unit Fraction	Tract	Unit Fraction
1	SE/4 12-17-9	0	0	47.12	.00209102
2	SW/4 17-17-8	0	0	13.63	.00060485
3	NW/4 19-17-8	0	0	41.21	.00182875
4	SW/4 8-17-8	200	.08972634	1588.57	.07049505
5	NW/4 17-17-8	100	.04486317	362.87	.01610288
6	NW/4 18-17-8	187	.08389411	3625.07	.16086763
7	NE/4 18-17-8	200	.08972634	3566.55	.15827072
8	SE/4 18-17-8	200	.08972634	592.66	.02630013
9	SW/4 18-17-8	200	.08972634	2651.67	.11767162
10	NE/4 7-17-8	0	0	36.78	.00163216
11A	SE/4 7-17-8	200	.08972633	2403.61	.10666361
11B	SE/4 N/2 24-17-9	742	.33288469	6527.91	.28968528
12	SW/4 7-17-8	200	.08972634	1076.84	.04778630
Total		2229	1.00000000	22534.49	1.00000000

ITEM 3 CON'T.
REVISED

TRACT PARTICIPATION PARAMETERS
LONE PINE DAKOTA "D" FIELD
MCKINLEY COUNTY, NEW MEXICO

Tract No.	Description (S-T-R)	Phase I Production		Phase II Oil + Eq. Gas Ac-F	
		Tract	Unit Fraction	Tract	Unit Fraction
1	SE/4 12-17-9	0	0	47.12	.00203237
13	SW/4 NW/4 8-17-8	100	.04293689	93.60	.00413645
2	SW/4 17-17-8	0	0	13.63	.00060235
3	NW/4 19-17-8	0	0	41.21	.00182119
4	SW/4 8-17-8	200	.08587377	1588.57	.07020345
5	NW/4 17-17-8	100	.04293689	362.87	.01603626
6	NW/4 18-17-8	187	.08029196	3625.07	.16020771
7	NE/4 18-17-8	200	.08587377	3566.55	.15761604
8	SE/4 18-17-8	200	.08587377	592.66	.02619134
9	SW/4 18-17-8	200	.08587377	2651.67	.11718488
10	NE/4 7-17-8	0	0	36.78	.00162541
11A	SE/4 7-17-8	200	.08587377	2403.61	.10622240
11B	SE/4 N/2 24-17-9	742	.31859164	6527.91	.28348701
12	SW/4 7-17-8	<u>200</u>	<u>.08587377</u>	<u>1076.84</u>	<u>.04758864</u>
TOTAL		2329	1.00000000	22,628.09	1.00000000

ITEM 4

LONE PINE DAKOTA "D" UNIT FIRST EXPANSION GEOLOGICAL DATA

General

The drilling of three additional wells outside the eastern portion of the Lone Pine Dakota "D" Unit has necessitated a slight revision in the geologic interpretation of that portion of the pool. These wells, the Hanson #22, Edna #1, and the Lillie #1, changed the oil-water contact and the trace of Fault "C" in the eastern portion of the pool.

Net Productive Sand

The net productive sand for both the Hanson #22 and the Edna #1 was calculated to be eight (8) net feet. The basis for this calculation was consistent with page 12, the Engineering and Geologic Report dated September 1, 1971.

Productive Limits

The oil-water contact in the eastern portion of the pool was determined primarily on the basis of information obtained from the drilling of the Lillie #1. This well penetrated the top of the 16 percent porosity in the Dakota "D" Zone at a subsea depth of +4220' and drillstem tested 120 feet of oil and gas cut mud and 786 feet of water. As a result of this recovery, the oil-water contact is now considered to be at a subsea datum of +4219', or one foot below the top of the 16% porosity in the Lillie well. This is three feet below the previously determined contact of +4222' established in the Beard Dosh E Pi Henio #2. This small difference in contact is due to the sensitivity of water saturation to permeability (refer to discussion of Core Data, pp. 9-11, Engineering and Geologic Report).

The gas-oil contact has not changed.

Fault Traces

The tract of Fault "C" (see structure map) has been changed due to the drilling of the Edna #1, Hanson #22, and Lillie #1. On the structure map, Fault "C" turns sharply northward in the vicinity of LPU #2 and then returns to an easterly strike near the Hanson #22 and Edna #1 wells. The fault data for the above changes is shown adjacent to each of the above wells.

Item 4
Page Two

Net Productive Isopach Maps

Net oil and gas pay isopach maps are attached. They were constructed consistent with the Engineering and Geologic Report of September 1, 1971.

ITEM 5

PRODUCTION HISTORY
HANSON #22
TESORO PETROLEUM CORPORATION

	Month	Oil Production Barrels	Cum Oil Barrels
1972	June	2960	2960
	July	2583	5543
	August	2395	7938
	September	2030	9968
	October	2070	12038
	November	2001 (e)	14039

(e) Estimated

ITEM 6
TESORO PETROLEUM CORPORATION

8520 CROWN HILL BOULEVARD

512-824-0261

SAN ANTONIO, TEXAS 78209

HAROLD VAGTBORG, JR.
VICE PRESIDENT

November 14, 1972

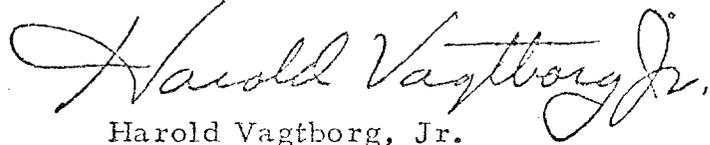
Mr. R. A. Williford
District Production Manager
Tenneco Oil Company
Suite 1200 - Lincoln Tower Bldg.
Denver, Colorado 80203

Dear Buck:

This letter will evidence our agreement to put our Hanson No. 22 well into the Lone Pine Dakota "D" Unit.

It is our understanding that our Phase I participation factor will be 4.116921 and our Phase II participation factor for this well will be 0.403989. It is also our understanding that these interests are subject to adjustment, depending on whether or not Kennedy includes his Edna well in the Lone Pine Dakota "D" Unit.

Yours very truly,



Harold Vagtborg, Jr.

HV:edq

BEARD OIL COMPANY
SUITE 200, 2000 CLASSEN BUILDING
2000 CLASSEN BOULEVARD
OKLAHOMA CITY, OKLAHOMA 73106
405/528-2323

February 8, 1980

*Case
4664*



Tenneco Oil Company
720 South Colorado Blvd., Penthouse
Denver, CO 80222

Attention: Mr. Steve Hudson

Re: Beard Oil Company #2 Dosh e pi Henio
SE NW Section 17-17N-8W
McKinley County, New Mexico

Gentlemen:

Confirming our telephone conversation today, please be advised that Beard Oil Company has no use for the above referenced well, and hereby gives Tenneco Oil Company, as Operator of the Lone Pine Dakota "D" Unit, permission to plug this well at Unit expense.

Please furnish us with copies of the plugging reports filed with U. S. G. S. and with the State of New Mexico in connection with the plugging of this well.

Yours very truly,

BEARD OIL COMPANY

A handwritten signature in cursive script, appearing to read "James W. Vater, Jr.", written over the typed name.

James W. Vater, Jr.
Vice President

JWVJ:tlg

XC to: U. S. G. S., Farmington, New Mexico
New Mexico Oil Conservation Commission, Santa Fe, New Mexico





United States Department of the Interior

MINERALS MANAGEMENT SERVICE

SOUTH CENTRAL REGION

505 MARQUETTE AVENUE, N.W., SUITE 815
ALBUQUERQUE, NEW MEXICO 87102

IN REPLY
REFER TO:

Tenneco Oil Company
P. O. Box 3249
Englewood, Colorado 80155

Gentlemen:

The Lone Pine Dakota "D" Unit Agreement, No. 14-08-0001-11596, was approved on March 30, 1972, effective April 1, 1972, for the recovery of oil from the Dakota "D" formation. The term of the unit agreement is for the time that unitized substances are produced in quantities sufficient to repay the cost of producing same from the unitized land, and as long thereafter as drilling, reworking, or other operations are prosecuted thereon without cessation of more than 90 consecutive days, and so long thereafter as unitized substances can be produced.

The last production from the Lone Pine Dakota "D" Unit was May 31, 1980. Our Farmington District office has advised us that all wells within the unit are reported as plugged, but final abandonment of the wells has not yet been approved.

Accordingly, the Lone Pine Dakota "D" Unit Agreement is considered to have terminated on its own terms as of May 31, 1980.

Sincerely yours,

Gene F. Daniel
Deputy Minerals Manager
Oil and Gas

cc:
BLM, Santa Fe
NMOCD, Santa Fe

4664
SEP 10 1980
SANTA FE