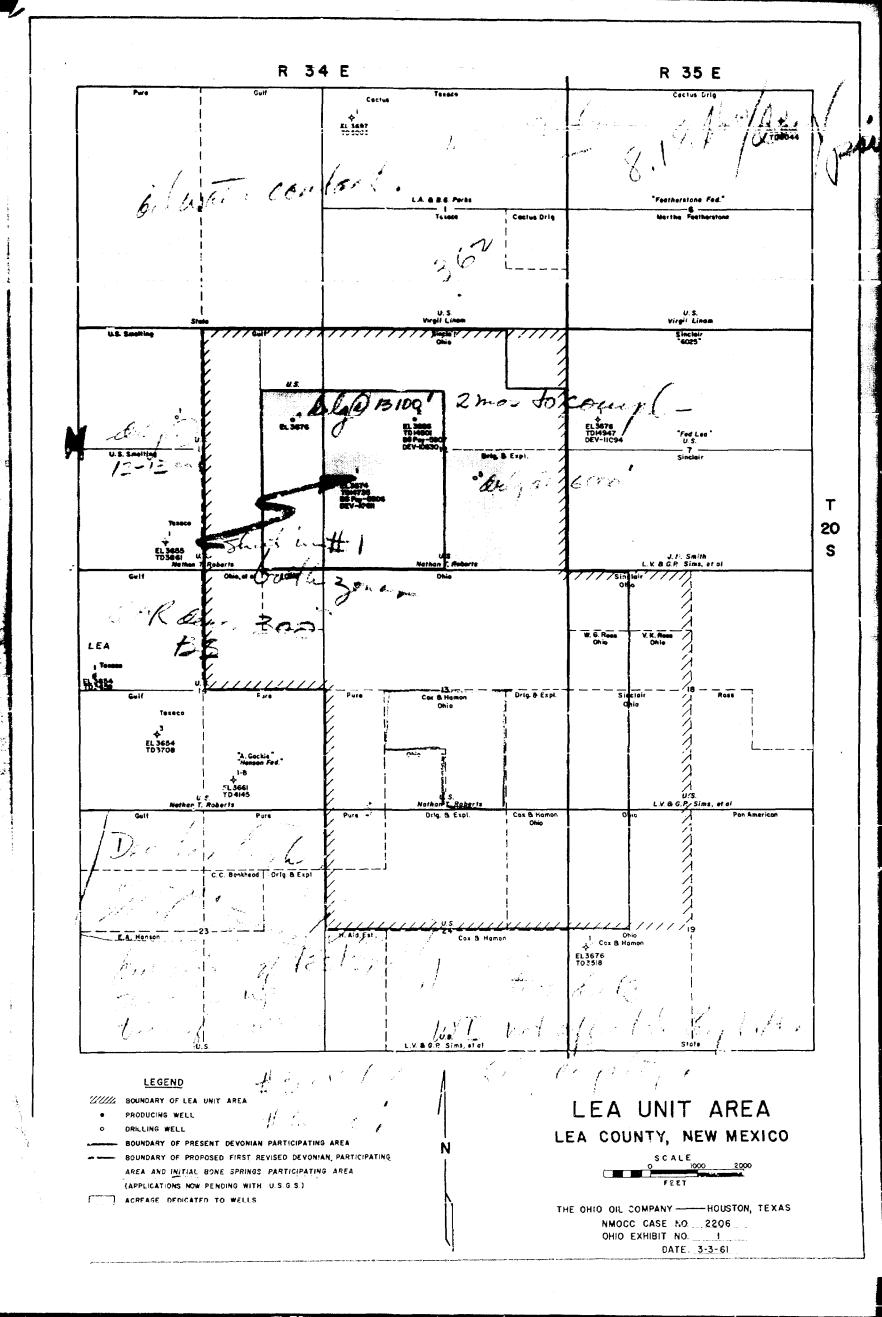
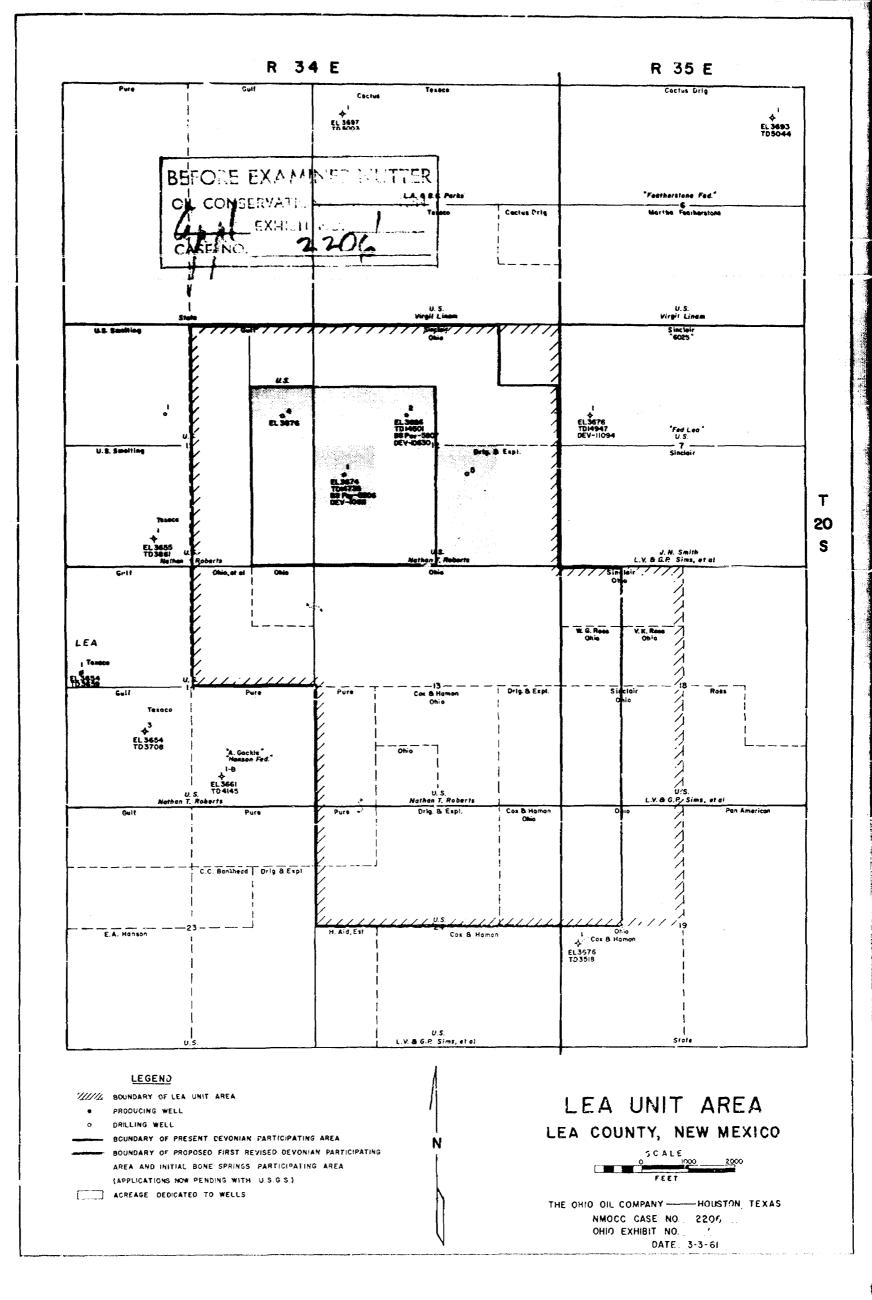


Jasa Jo.

Japhietion, Transcript,

mill Exhibits, Etc.





NEW MEXICO OII. CONSERVATION COMMISSION

GAS-OIL RATIO REPORT

		. • •								
OPERATOR	The Oh	10 011	Company		P OO	L Le	a Bone	Spring	5	•••••••••••
ADDRESS	Box 2107.	Hobbs	New Mex	l co	MON	TH OF	Ju	ne	*****************	, 19 61
SCHEDULED T	P.S T		COMPLE	TION TEST	r	***************************************	SPECIAL	TEST	X	(Check Onc)
				(See Instruct	ions an Re	everse Side)				
Lear	Well	Date of Test	Producing Method	Choke Size	Test Hours	Daily Allowable Bbls.	Production During Test			GOR
	No.						Water Bbls.	Oil Bbls.	Gas MCF	Cu. Ft. Per B bl.
		1961								
Lea Unit	,	6/5	Flwg.	20/64	24	163	0.0	458.94	338.7	738
			90	20, 11		,		1.50.5	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	750
					<u> </u>				:	•
	İ	Note	Ahove	test sub	mitted	to prove	walle	ahili	•••	
		Note	to pro	duce at	a rate	greater	than t	wo time:		
			curren	t top al	lowable	for sub	ject p	001.		
					•					
	l \						į		ļ	
<u></u>	<u> </u>				- 11 h	la anastar	. +ban +l		t of oil	
No well will be assigned an allowable greater than the amount of oil produced on the official test.										
	I exceedin	Ouring g	as-oil rati o unit allo	io test, e wable for	ach well the poo	l shall be ol in which	produce well is	ed at a ra s lo: & ted	te not by more	
exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent										
tolerance in order that well can be assigned increased allowables when authorized by the Commission.										
Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60 degrees F. Specific gravity base will be 0.60.										
	1	Mail ori	ginal and o	one copy	of this r	eport to t	he distr	ict office	of the Ne	:w
	Mexico	Oil Cons	servation (ommissi	on. in	accordance	with air	le jur and	wppropried	e Pool Rules.
	(1 d	ertify that	the informat	ion given is	true and	complete to t	he best of	my knowler	ige.)	
Date	July 17,	1961				The	Ohio	Qil Com	pany	
					D	Union	ren I. A	D L	Pel	
					***	Are	ea Petr	oleum Er	ngineer	

DOMESTIC SERVICE
Check the slag of service desired; otherwise this message will be a self-as a feligate talegram
FULL RATE TELEGRAM
DAY LETTER

WESTERN UNION

1206 10-51

INTERNATIONAL SERVICE
Check the classoferwise desired; otherwise the message will be sent at the full rate
FULL SATE
LETTER TELEGRAM

NO. WOR.-CL. OF SHO. PO. OR COLL. CASH NO.

3 th 2206

JULY 21, 1961

MR. J. O. TERRELL COUCH THE CHILD OIL COMPANY INCOMESON, THEAS

RESIDENCE YOUR LETTER JULY 16 REQUESTING ABRIBALTY TO SHIP-IN LEA-SHIP

POUR NOVE SPRINGS AND TRANSFER ALLOWABLE TO UNIT ONE BOME SPRENGS.

PROCEDURE AS OUTLINED IN YOUR LETTER HEREBY ANTHORIZED.

A. L. PORTER, JP., SECRETARY-DIRECTOR RES MEXICO OIL CONSERVATION COMMISSION The Chic Cil Cc. Legal Department

W. Hume Everett Division Attomog

July 18, 1961

P.O.Box <u>3128</u> Houston.-Texas

J. O Terrell Couch Warren B. Leach Jr.

Re: Case No. 2206 - Order R-1906 Transfer of Allowables, Lea Unit Lea County, New Mexico

Mr. Dan Nutter New Mexico Oil Conservation Commission P. O. Box 871 Santa Fe, New Mexico

Dear Sir:

We propose to conduct interference tests in the Bone Springs formation by shutting in the Bone Springs completion in Lea Unit Well No. 4 and transferring the allowable of that well to the Bone Springs completion in Lea Unit Well No. 1 effective August 1, 1961.

For your information, I enclose a Form C-116 reporting the results of the most recent production test on the Bone Springs completion in Lea Unit Well No. 1, evidencing the ability of the well to produce in excess of double the top unit allowable. The Commission records will verify that the Bone Springs completion in Lea Unit Well No. 4 is now a top allowable well.

I believe that our proposed transfer of allowable is in keeping with the purpose and intent of the above designated order. However, I considered it desirable to report our plans to you and request your concurrence in my interpretation of the order.

Please send a collect telegram to me approving our proposed transfer of allowable as outlined above, if there is no objection to the transfer. If you desire any additional information, please telephone me collect.

Very truly yours,

TC:MK Enc.

cc w/enc. - Mr. Jue Ramey

prillCouch

Mr. Jue Realey
New Mexico Oil Conservation Commission
P. O. Box 2045
Hobbs, New Mexico
R-1906 provides for shutting-in
Lee Unit No.
Lee Unit No.
Lee Wills not within 660
ferring the wells not Boundary
or to other wells not Boundary
of the Unit Boundary

ATWOOD & MALONE

LAWYERS

JEFF O.ATWOOD (1863-1960) RORS L. MALONE CHARLES F. MALONE E. KITK NEWMAN RUSSELL D. MANN PAUL A. COOTER BOB T. TURNER

TELEPHONE MAIN 2-6221
ROSWELL PETROLEUM BUILDING
ROSWELL, NEW MEXICO

February 10, 1961

Mr. A. L. Porter, Jr.
Secretary-Director
New Mexico Oil Conservation Commission
Post Office Box 871
Santa Fe, New Mexico

Dear Mr. Porter:

We enclose herewith original Entry of Appearance of our firm as local counsel with W. Hume Everett and J. O. Terrell Couch in connection with the application of The Ohio Oil Company dated February 9, 1961, for the transfer of allowables within the Lea Unit area.

Very truly yours,

ATWOOD & MALONE

By: KLA &- Malace

RLM:j Enclosure

cc: J. O. Terrell Couch, Esquire
/ (with enclosure)

A TOP OF THE PROPERTY OF THE P

P. 0. Box 2107 Hobbs, New Mexico

- February 20, 1961

U. S. Smelting, Refining and Mining Company BOX 1911 Hidland, Texas

Submitted herewith is a copy of an application to the New Mexico Oll Conservation Commission requesting authority to dually complete The Ohio Oll Company's Lea Unit, Well No. 4, located in Section 11, Township 20-S, Range 34-E, Lea County, New Maxico.

It is respectfully requested that you waive objection to the proposed dual completion by signing the two enclosed copies of this letter, and forwarding one copy to the New Mexico DII Conservation Commission and returning the second copy to us at your earliest convenience. Enclosed, for your convenience are addressed, stamped envelopes.

Yours very truly,

THE OHIO OIL COMPANY

T.O. Webb

Area Petroleum Engineer

Objection Walved February 28 , 1961

Wining Company

UNITED STATES SMELTING REFINING AND MINING COMPANY

DIL OPERATIONS
P. O. BOX 1877
MIDLAND, TEXAS

February 28, 1961

Mr. A. L. Porter
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Dear Mr. Porter:

Returned herewith is one copy of our Waiver of Objection to the proposed dual completion of The Ohio Oil Company's Lea Unit Well No. 4 located in Section 11, Township 20 South, Range 34 East, Lea County, New Mexico.

We have been advised by The Ohio Oil Company that application has been made to the New Mexico Oil Conservation Commission for a hearing for well tests and transfer of allowables in the Lea Unit. We did not receive notice of this application or notice of the hearing date. We respectfully request that our name be placed on the mailing list for any subsequent applications or hearings.

Yours very truly,

T. B. Garber

Assistant to Vice President

Oil Operations

TBG: jb Encl

mailing lish

BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF THE OHIO OIL COMPANY TO TRANSFER ALLOW-ABLES FROM THE LEA-DEVONIAN POOL AND THE LEA-BONE SPRINGS POOL IN TOWNSHIP 20 SOUTH, RANGES 34 and 35 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO, WITHIN THE LIMITS OF THE LEA UNIT AREA.

No. 2206

ENTRY OF APPEARANCE

The undersigned, Atwood & Malone, of Roswell, New Mexico, a firm of attorneys, all of whose members are duly licensed to practice law in the State of New Mexico, hereby enters its appearance in the above styled and numbered cause as co-counsel with W. Hume Everett, Esquire, and J. O. Terrell Couch, Esquire, of Houston, Texas, for the Ohio Oil Company, Petitioner.

Dated at Roswell, New Mexico, this 10th day of February, 1961.

ATWOOD & MALONE

Post Office Box 867

Roswell, New Mexico

C4SE 2203:

Application of Pan American Petroleum Corporation for permission to commingle the production from two separate pools. Applicant, in the above-styled cause, seeks permission to commingle the oil production from the Drinkard and Paddock Pools from all wells presently completed on the L. E. Grizzel "B" Lease, comprising the S/2 NE/4 of Section 8, Township 22 South, Range 37 East, Lea County, New Mexico, without separately metering the production from each pool.

CASE 2204:

Application of Pan American Petroleum Corporation for permission to commingle the production from the separate pools. Applicant, in the above-styled cause, seeks permission to commingle the oil production from the Drinkard and Penrose-Skelly Pools from all wells presently completed on the J. W. Grizzell Lease, comprising the SW/4 of Section 5, Township 22 South, Range 37 East, Lea County, New Mexico, without separately metering the production from each pool.

CASE 2205:

Application of Tamanaco Oil Corporation for an unorthodox well location. Applicant, in the above-styled cause, seeks approval of an unorthodox well location for its El Poso Ranch N-11 Well at a point 175 feet from the South line and 1700 feet from the West line of Section 11, Township 28 North, Range 1 East, Rio Arriba County, New Mexico.

CASE 2206:

Application of The Ohio Oil Company for permission to transfer allowables. Applicant, in the above-styled cause, seeks permission to shut-in certain wells in the Lea Unit, both in the Devonian and Bone Springs formations, and transfer the allowable for such wells, for a limited period of time, to other wells within said Lea Unit, Township 20 South, Ranges 34 and 35 East, Lea County, New Mexico.

CASE 2207:

Application of Honolulu Oil Corporation for a pressure maintenance project. Applicant, in the above-styled cause, seeks permission to institute a pressure maintenance project in the Chisum Oil Pool, Chaves County, New Mexico, by the injection of water into certain wells underlying its State B Lease, N/2 SE/4 of Section 13, Township 11 South, Range 27 East. Applicant further seeks the promulgation of special rules and regulations governing said project.

P. O. BOX 3128
HOUSTON 1, TEXAS

February 9, 1961

Re: Lea-Devonten Pool and Loa Bone Springs Pool in Township 20 South, Ranges 34 and 35 East,

N.M.P.M., Lea County, New Mexico

New Mexico Oil Conservation Commission P. O. Box 871 Santa Fe, New Mexico

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

Secretary-Director

Gentlemen:

The Ohio Oil Company, Operator of the Lea Unit created by Unit Agreement for the Development and Operation of the Lea Unit Area heretofore approved by Lea Unit Agreement Order No. R-1540 dated November 30, 1959, in Case No. 1823, acting with the concurrence of the other working interest owners in said Unit, hereby applies for authority to transfer allowables within the Lea Unit Area to the extent and in the manner hereinafter requested.

Applicant hereby requests authority to transfer the allowable of any well or wells now or hereafter completed within the Lea Unit in the Devonian formation, to any other well or wells now or hereafter completed within the Lea Unit in the Devonian formation, whenever, for whatever period of time and to whatever extent such transfer of allowable is, in the opinion of the Operator of the Lea Unit, necessary or advisable in connection with the taking of interference tests in the Devonian formation, subject, however, to the following restrictions:

- (1) Such authority to transfer allowables shall be in effect only for the period commencing on March 1, 1961 and extending to and including December 31, 1961.
- (2) No allowable shall be transferred to any well located within 660 feet of the Lea Unit boundary.
- (3) If any party's share of oil or gas produced from such formation by any well or wells from which any such allowable is to be transferred is different from such party's share of oil or gas produced from such formation by any well or wells to which any such allowable is to be transferred, such allowable cannot be so transferred without the consent of such party unless the Lea Unit working interest owner or owners desiring to transfer the allowable agree to account to such party for the oil and gas produced from such formation by said wells as though the allowable were not transferred.

February 9, 1961 New Mexico Oil Conservation Commission Page 2

Applicant further requests authority to transfer the allowable of any well or wells now or hereafter completed within the Lea Unit in the Bone Springs formation, to any other well or wells now or hereafter completed within the Lea Unit in the Bone Springs formation, whenever, for whatever period of time and to whatever extent such transfer of allowable is, in the opinion of the Operator of the Lea Unit, necessary or advisable in connection with the taking of interference tests in the Bone Springs formation, subject, however, to the three restrictions set out above.

The authority to transfer allowables as herein requested is necessary to afford Unit Operator a reasonable opportunity to attempt the taking of effective interference tests within the respective formations identified above in accordance with the desires of the Commission as expressed in Order No. 1826, Case No. 2118, and Order No. 1827, Case No. 2119. The correlative rights of all interested parties will be adequately protected if the requested authority is granted subject to the restrictions stated above, and it is reasonable to expect that the proposed interference tests may provide additional information concerning the respective formations, which will aid in the prevention of waste and the protection of correlative rights.

The Ohio therefore requests that this application be set for hearing before the Commission, or an Examiner of the Commission, at the earliest possible date, and that notice be given as requested by the applicable laws and regulations. A list of the interested parties now known to applicant is attached.

Very truly yours,

THE OHIO OIL COMPANY

CAPPI DO PO

J. O. Terrell Couch

TC: MK

c - Mr. E. S. Johnny Walker Commissioner of Public Lands P. O. Box 791 Santa Fe, New Mexico

> Mr. John Anderson Regional Oil and Gas Supervisor United States Geological Survey P. O. Box 6721 Roswell, New Mexico

List of Interested Parties known to Applicant re: Foregoing Application

W. G. Ross and wife, Vee K. Ross P. O. Box 1094 Midland, Texas

Jake L. Hamon
5th Floor Vaughn Building
1712 Commerce Street
Dallas 1, Texas

Edwin B. Cox 2100 Adolphus Tower Dallas, Texas

The Pure Oil Company P. O. Box 239 Houston 1, Texas

Gulf Oil Corporation P. O. Box 669 Roswell, New Mexico

Sinclair Oil & Gas Company P. O. Box 1470 Midland, Texas

Drilling & Exploration Co., Inc. Box 35366, Airlawn Station Dallas 35. Texas

Mr. John Anderson Regional Oil and Gas Supervisor United States Geological Survey P. O. Box 6721 Roswell, New Mexico

Mr. E. S. Johnny Walker Commissioner of Public Lands P. O. Box 791 Santa Fe, New Mexico

Mr. and Mrs. W. H. Milner 609 S. Lea Roswell, New Mexico

Martha Featherstone 236 Petroleum Building Roswell, New Mexico Harvey E. Roelofs
Trustee for Olen F. Featherstone, II
c/o Olen F. Featherstone
236 Petroleum Building
Roswell, New Mexico

P. O. Box 1094 Midland, Texas

Dorothy E. Cox McCormick and husband, Don G. McCormick c/o Reese, McCormick, Lusk & Paine 3 Bujac Building 112 North Canyon Carlsbad, New Mexico

L. N. Hapgood and wife, Mary C. Hapgood P. O. Box 966 Casper, Wyoming

E. F. Howe and wife, Frances E. Howe c/o New Mexico Bank & Trust Hobbs, New Mexico

Thomas Joseph Sheehan and wife, Louise Sheehan 112 West Fairview Boulevard Inglewood, California

R. R. Herrell Oil & Gas Properties P. O. Box 1656 Midland, Texas

Western Oil Fields, Inc. P. O. Box 1139 Denver, Colorado

Ernest A. Hanson P. O. Box 852 Roswell, New Mexico

E. B. Todhunter P. O. Box 852 Roswell, New Mexico United States Smelting Mining & Refining Co. P. O. Box 1877 Midland, Texas

Texaco, Inc. P. O. Box 1720 Fort Worth, Texas

Pan American Februleum Corporation P. O. Box 68 Hobbs, New Mexico

Herbert Aid Estate c/o J. T. Sivley 212 Booker Building Artesia, New Mexico

OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO

Date 3/6/6/ HEARING DATE 3/3/61 9 am CASE NO. 2206 My recommendations for an order in the above numbered case(s) are as follows. Enter an order authoring this to conduct interference tests in accordance of the following: 1. applicant may immediately shat in lea Unit # 1 Bone Springs and lea Unit # 1 Devonion, transferring the seemance to hea thint # 2 Bone Springs and Lea Wint # 2 Devonia respectively effective the date of short in or the late said \$ 2 wed is expense of producing and has rec'd an anthoughd allowable of its own, which ever date is later. 2. Upon completion of hea think # 4 as either a Devonion or as a Bone Springs producer or leoth, splicant may apply for a approval to shut it in in either I transfer its allowable to (# 2) in the equivalent goal or podo or applica auster a portion of the allowable # 1 Bone Springs of The # 1

In no event shall sallowable be transferred from a well in the Devorior participating area to a well authorite the Devorior jarticipating area or from vice versa, er from a wree outside a Devonion P. a. to another well on the a Dami (PA - senter may such Pla share be effective, when approved, to at framefor, least the die of such transfer, The elear shed also apply to extension of existing P.a.s all of the foregoing should also applif to transfer of any applifs to the Bone Spring formations. Operator shall ferrish the Commission All monthly t-116 a on the weeks Which are voducing any partion of a Shut-in well accountage, inducation thereon the quantities of oil, water, and ges produced during the period of the feest which should be of the least this during

GOVERNOR EDWIN L. MECHEM CHAIRMAN

State of New Wexico Oil Conservation Commission

LAND COMMISSIONER E. S. JOHNNY WALKER MEMBER



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

Atweed & Malone Box 867 Roswell, New Mexico Re: Case No. 2236
Order No. R. 1966
Applicant:

The Ohio 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

Carbon copy of order also sent to:

Hobbs OCC ____
Artesia CCC ___
Aztec OCC ___
OTHER ______ Mr. Terrell Couch

DEFORE THE OIL COMMERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEATING CALLED BY THE OIL COMBERVATION CONSIDERION OF NEW MEXICO FOR THE PURPOSE OF COMBIDERING:

> CASE No. 2206 Order No. R-1906

APPLICATION OF THE ONIO OIL COMPANY FOR PERMISSION TO TRANSFER ALLOWANIES IN THE LEA UNIT, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMCLESION:

This cause came on for hearing at 9 o'clock a.m. on March 3, 1961, at Santa Fe, New Hexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinefter referred to as the 'Commission,' in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 17th day of March, 1961, the Commission, a quorum being present, having considered the application, the evidence adduced, and the rudoumendations of the Exemiser, Deniel 5. Nutter, and being fully advised in the premises,

FIDEDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, The Ohio Oil Company, is the operator of the Lat Unit as approved by Order No. R-1540.
- (3) That applicant's Lea Unit Well No. 1, located in the NW/4 SW/4 of Section 12, Township 20 South, Range 34 East, MEPH, Lea County, New Mexico, is presently completed in the Bone Springs and Devonian formations; that applicant's Lea Unit Well No. 2. located in the SE/4 HW/4 of said Section 12 is presently drilling as a projected dual completion in the Bone Springs and Devonian formations; that applicant's Lea Unit Well No. 4, located in the SE/4 NE/4 of Section 11, Township 20 South, Range 34 East, is also presently drilling as a projected dual completion in the Bone Springs and Devonian formations; and that applicant is either currently drilling or is contemplating certain other wells in the Bone Springs and Devonian formations within said Lea Unit Area.
- (4) That the applicant seeks permission to conduct interference tests among the above-described wells in the Lea Unit by (a) shutting-in Well No. 1 in either or both formations and

-2-CASE No. 2206 Order No. R-1906

transferring its allowable to Well No. 2, or to other wells, when completed in either or both formations, respectively; and (b) by shutting-in Well No. 4, when completed, in either or both formations and transferring its allowable to Well No. 2, or to other wells, when completed, in either or both formations, respectively.

- (5) That the applicant should be rutherized to fellow the procedure specified in (4) (a) above effective the date Well No. 1 is shut-in or on the date the well receiving any such transferred allowable has been authorized an allowable as a completed producer, whichever date is later.
- (6) That any transfer of allowable from Devomian wells should be made to Devomian wells, and any transfer of allowable from Bone Springs wells should be made to Bone Springs wells. Purther, that no transfer of allowable should occur among any wells until all wells involved in such transfer are in an approved participating area, or an approved expansion thereof, for the subject some of transfer, unless such participating area or any revision thereof shall be made retroactive at least to the date of such transfer.
- (7) That a Form C-116 should be filed with the Commission monthly on each well producing any portion of the allowable of a shut-in well with the quantities of oil, gas, and water produced during a 24-hour period at the then current daily rate of production indicated thereon.
- (8) That the allowable transfer provisions of this order should terminate at 7:00 a.m., January 1, 1962.
- (9) That approval of the subject application will neither cause waste nor impair correlative rights.

: CERRETO ESCRESSIT AL TI

- (1) That the applicant, The Ohio Oil Company, is heraby authorized to transfer allowables in the Lea Unit, Lea County, New Mexico, according to the following provisions:
- (a) The Lea Unit Well No. 1, located in the NW/4 SW/4 of Section 12, Township 20 South, Range 34 East, may be shut-in in either or both the Bone Springs and Devonian formations and the allowable transferred to the Lea Unit Well No. 2, located in the SE/4 NW/4 of said Section 12, when completed, in either or both formations, respectively.
- (b) The Lea Unit Well No. 4, located in the SE/4 MB/4 of Section 11, Township 20 South, Range 34 East, may be shut-in in either or both the Bone Springs and Devonian formations, when

-3-CASE No. 2206 Order No. R-1906

completed, and the allowable transferred to the above-described lim wall No. 2 in either or both formations, respectively.

PROVIDED HOWEVER, That applicant may transfer the allowables, or portions thereof, of the aforesaid Lea Unit Well No. 1 and No. 4 to wells within the Lea Unit Area other than the aforesaid Lea Unit Well No. 2 which are not within 660 feet of the Lea Unit Boundary, provided administrative approval of such transfer has been obtained from the Secretary-Director of the Commission.

PROVIDED FURTHER, That any transfer of allowable from Devomian wells shall be made only to Devomian wells, and any transfer of allowable from Bone Springs wells shall be made only to Bone Springs wells. Provided further, that no transfer of allowable shall occur among any wells not within an approved participating area, or an approved expansion thereof, for the subject some of transfer, unless such participating area or any revision thereof shall be made retroactive at least to the date of such transfer.

- (2) That a Form C-116 shall be filed with the Commission monthly on each well producing any portion of the allowable of a shut-in well with the quantities of oil, gas, and water produced during a 24-hour period at the then current daily rate of production indicated thereon.
- (3) That this order shall become effective immediately but that no allowable transfer provisions contained herein shall become effective until the date the test well is shut-in or the date the well or wells receiving the transferred allowable have been authorized an allowable as a completed well, whichever date is later. Provided further, that this order and the allowable transfer provisions contained herein shall expire at 7:00 o'clock a.m., January 1, 1962.

DONE at Santa Fo, New Mexico, on the day and year herein-above designated.

STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

EDWIN L, MECHEM, Chairman

Es bohnny walke

E. S. WALKER, Member

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

esr/

P. C. Box 2107 Hobbs, New Mexico

May 26, 1961

New Mexico 011 Conservation Coumission P. O. Dem 2045 Making Mass Mexico

Attention: Nr. J. B. Ransy

Boor Sir:

In reference to our tolephone conversation of this date this will serve to confirm that The Chie Gil Company has sequended interference testing in the Las Unit, Las Sevenian Poel. Buring the interference testing the allowables for the Devenian zones of Las Unit, Well Mas. I and 4 were transferred to Las Unit. Well Mas. I and 4 were transferred to Las Unit. B-1906. Effective May 26, 1961 we are transferring the Devenian allowables back to Las Unit, Well Mas. I and 4.

You will be advised of any future allowable transfers in the subject pool.

Yours very truly,

THE SHIP OIL COMPANY Engineering Separtment

Original Signed By T. O. Webb

T. O. Wohb Petroloum Engineer

TOW:ble

15.00

cc: NNGC - Santa Fe
L. H. Shearer
J. A. Grimes
J. O. T. Couch
T. A. Steele
B. V. Kitley
B. L. Welters

File

P. 8. Sox 2107 Hobbs, New Mexico

September 7, 1961

Now Maxico 811 Conservation Commission P. G. Box 2045 Hobbs, Hew Hexiso

Attention: Mr. J. D. Ramey

Boor Sir:

in reference to our telephone conversation of this date, this will serve to confirm that The Ohio Oil Company has suspended interference testing in the Loc Unit, Loc Bone Springs Pool. Buring the interference testing, the allowable for the Gone Springs some of Loc Unit, Well No. 4 was transferred to Loc Unit, Well No. 1 in accordance with the provisions of Order No. 8-1906, Effective September 7, 1961, we are transferring the Bone Springs allowable back to Loc Unit, Well No. Well No. 4.

Yours very truly,

THE ONIO OIL COMPANY Engineering Department

Original Signed 34 T. C. Webb

T. C. Webb řetrojem tagineer

TON: ble

cc: MMCC - Sente Fo

L. H. Shearer

J. A. Grimes

J. S. T. Couch

T. A. Steele

D. V. Kitley

8. L. Walters ffle

Car 7706

BEFORE THE OTH CONSERVATION COMMISSION Santa Fe, New Mexico March 3, 1961

IN THE MATTER OF:

Application of The Onio Oil Company for permission) to transfer allowables. Applicant, in the above-) styled cause, seeks permission to shut-in certain) wells in the Lea Unit, both in the Devonian and Bone Springs formations. and transfer the allowable) for such wells, for a limited period of time, to other wells within said Lea Unit, Township 20 South,) Ranges 34 and 35 East, Lea County, New Mexico.

0ase 2206

BEFORE:

Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: Case 2206.

MR. MORRIS: Application of The Ohio Oil Company for permission to transfer allowables.

MR. CONCH: J. O. Terrell Couch; I am appearing for Chic Cil Company. The records of the Commission will show that Atwood & Malone, our New Mexico Counsel, have entered an appearance in this case for us.

port rules for the Lea Devonian and the Lea Bone Springs Pool, being orders 1826 and 1827, indicated very definitely the Commission desired that Ohio conduct interference tests in both pools. Therefore, in order for Ohio to conduct those tests without losing



RQUE, NEW MEXICO

15

Đ

current allowable from the shut-in wells, it is necessary for us to obtain authority to transfer allowables from wells within each of the pools to other wells within the respective pools. Our application sets forth the extent of authority which we seek, and it is rather broad. We consider it necessary, in order to effectively attempt to conduct these tests, that we be granted rather broad authority for the transfer of allowables, subject to restrictions as set out in our application.

We will have one witness in this case, Mr. Roy Young.

We will have one witness in this case, Mr. Roy Young
(Witness sworn.)

ROY M. YOUNG

called as a witness, having been previously duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. COUCH:

Q Would you please state your name, by whom you are employed and your professional qualifications?

A My name is Roy M. Young. I am employed by The Ohio Oil Company as a reservoir engineer, a position which I have held for approximately nine and a half years. I have previously testified before the Commission, and my qualifications as to my education and training as a petroleum engineer are contained in the records of those prior hearings. I am the same Roy M. Young who testified in New Mexico Oil Conservation Commission Cases 2118 and 2119 which resulted in the issuing of Orders R-1826 and R-1827 which



DEARNLEY-MEIER REPORTING SERVICE, Inc. ALBUQUERQUE, NEW MEXICO

5

granted temporary 30-acre spacing and 80-acre proration for the subject pools. I have continued to study all the engineering and geological data pertaining to these pools to determine the proper well spacing which should ultimately be adopted for each of these pools.

MR. COUCH: Are the qualifications of this witness acceptable?

MK. NUTTER: Yes, sir. Please proceed.

Mr. Young, as I have stated in my preliminary statement, the request for interference tests included in the orders granting temporary pool rules -- will this require the shutting in of exist! ing wells?

Yes, sir, it will. Α

In order to do this without jeopardizing correlative rights of unit owners and losing allowables, will it be necessary to transfer allowables from the existing wells?

Yes, sir, it is. Α

Will you tell us, in your opinion, the necessity for running these interference tests promptly, as early as possible?

It is my opinion, and as I previously testified in Case 2118, that a Devonian reservoir in the Lea Devonian Pool will have a water drive as its reservoir mechanism. Because of this, pressure interference tests in the Devonian, as in any water drive reservoir, may be inconclusive. To have a chance to obtain positive results from interference tests in a water drive reservoir it is



CH 3-6691

necessary the interference tests be conducted as early as possible.

What is your recommendation as to the effective date for transferring of allowables?

It is my recommendation that approval of this application as soon as possible be made effective March the 3rd, 1961, so that the operator can transfer allowables and begin interference tests very soon after Well No. 2 is completed and potentialled.

Is it necessary for us to have flexibility of transferring allowables within the Lea unit?

In my opinion it is.

Will you please look at the exhibit labelled Ohio's Exhibit 1 in this case and state whether that was prepared under your supervision and direction?

Ohio's Exhibit 1 was prepared under my direction and supervision.

Explain to us the symbols shown on Exhibit 1, please. Q

Exhibit 1 is a map of the Lea Unit area which is located in Township 20 South, Range 34 and 35 East, Lea County, New Mexico The Lea Unit area is shown on Exhibit 1 as outlined by the hashed line. It contains approximately 2560 acres.

The two wells shown there as producing wells, which are Q those?

The two wells shown on Exhibit 1 as producing wells are the Ohio Lea Unit No. 1, located in the NW/4 SW/4 of Section 12. This well is actually on production. Well No. 2, located in the



3-6691

3

DEARNLEY-MEIER REPORTING SERVICE, Inc.

ALBUQUERQUE, NEW MEXICO

SE/4 NW/4 of Section 12 is in the process of being completed and It is expected to be on production very soon. Well No. 2, like Well No. 1, will be an oil-oil dual completion in the Devonian and Bone Springs formations.

There are three wells currently drilling in the vicinity Will you refer to those briefly, please?

Yes, sir. The Ohio Lea Unit No. 4, located in the SE/4 NE/4 of Section 11 is currently drilling at approximately 13,100 feet. The Ohio Lea Unit No. 5, located in the NW/4 SE/4 of Section 12 is currently drilling at about 6,000 feet. The third well currently drilling is the U.S. Smelting Federal No. 1, which is west of the unit and located in the SE/4 NW/4 of Section 11.

There is one dry hole which has penetrated the Devonian in this vicinity. Will you identify that?

Sinclair 6025 Federal No. 1, located in the SW/4 NW/4, Section 7, Township 20 South, Range 35 East.

That is east of andoutside the boundary of the unit area?

Yes, sir, it is.

Will the transfer of allowables as we have requested in our application endanger correlative rights, in your opinion?

In my opinion it will not.

Will you state briefly the basis for that conclusion, Q Mr. Young?

Yes, sir. In the Lea Unit the working interest owners share in the unit production throughout the unit on a fixed per-



MEXICO

ALBUQUERQUE, NEV

ij

centage which is based upon surface acreage and each working interest owner is chargeable with their respective overrides.

What about the royalty and overriding royalty interests; are they also unitized?

The royalty and overriding royalty interests are unitized, but the rights of these owners to share in unit production are determined on the basis of surface acres of the respective tracts which are included in participating areas as approved by the State Land Commissioner and the U.S.G.S.

The participating area for each pool as intended, is it initially designated and a little enlarged to include all acreage reasonably deemed to be productive from that pool?

- That's correct.
- As provided in the unit agreement itself?
- Yes, sir.
- Until a participating area has been established or enlarged, what does the unit agreement provide in respect to payments that would be affected by the designation of that participating area?

Until a participating area is established, a portion of all payments affected thereby may be impounded in a manner mutually acceptable to the owners of the working interests except royalties due the United States and the State of New Mexico.

And the necessity for that is that it cannot be determined just exactly what the royalty interest owners will receive



DEARNLEY-MEIER REPORTING SERVICE, Inc.

Š

until the participating area boundary has been fixed; is that right?

- A That's correct.
- Q The agreement also includes provision for adjustments of reyalty to the United States or State of New Mexico if that is necessary by the designation of the area?
 - A Yes, sir. That is provided in the unit agreement.
- Q You have shown on Exhibit 1 an area outlined in red. What is that, please, sir?
- A The area outlined in the red on Exhibit 1 is the boundary of the present Devonian participating area. It contains 360 acres and it is nine 40-acre tracts about Well No. 1, the discovery well.
- Q Nine square 40's around the well, including the one the well is located on?
 - A Yes, sir.
- Q The area you have outlined in orange on Exhibit 1 represents what?
- A The area outlined in orange, which contains 2280 acres, is the proposed first revised Devonian participating area, and the proposed initial Bone Springs participating area. Applications for approval of these areas are now pending with the U.S.G.S.
- Q Please explain the shaded areas shown in sort of a blue stippled shade on Exhibit 1.
- A The shaded areas shown on Exhibit 1 is the acreage which is presently dedicated to the various wells.



DEAKINLE Y - MEIEK ALBUQUERQUE, NEW MEXICO

ALBUQUERCCE, NEW MEXICO

PHONE CH 3-6691

With respect to Wells ? and 4, were Forms C-128, dedicating acreage to them filed before approval of the temporary 80acre spacing orders?

That's correct.

And both wells were commenced before the effective dates of those orders?

Α Yes, sir.

Initially only 40 acres were dedicated to each of those Q wells?

Yes, sir. Α

In respect to Well No. 2 about to be completed, has re-Q vised Form C-128 been filed for that well?

Yes, sir, it has. Α

Dedicating 80 acres? Q

Yes, the S/2 of the NW/4 of Section 12. Α

No. 4 still has only 40 acres dedicated to it; is that Q correct?

That's correct. Α

All acreage presently dedicated to wells 1, 2 and 4 is with in the existing Devonian participating area?

Yes, sir.

And all of the acreage dedicated to Wells 1 and 2 is also on the same basic lease?

Yes, sir. A

Obviously, no allowable can be transferred to and from



ALBUQUERQUE, NEW MEXICO

3

Well No. 4 until It is completed?

That's correct, and the completion of that will probably take another two months.

Is it possible by that time the Devonian participating area will be enlarged?

Α Yes, sir.

And the Bone Springs participating area will be approved initially so as to include all acreage that might be dedicated to Well 4 within the same participating area as the other wells?

Yes, sir.

Regardless of how these participating areas are ultimately designated, because of this provision for impounding royalties until it is known how they will be shared, and overriding royalties, will the correlative rights of the royalty and overriding royalty owners be protected?

Yes, sir, it will. The third restriction contained in Ohio's application for this hearing was included to protect the correlative rights of the royalty and overriding royalty interests in the event of transfer of allowable between wells not on the same base lease and prior to the time all acreage dedicated to the wells is included in the same participating area.

What if the U.S.G.S. approved Ohio's application for the proposed enlargement of the Devonian and for the initial Bone Springs participating area?

In that event there would be no problem of ownership in



ALBUQUERQUE, NEW MEXICO

S

either pool.

- Q That is, both royalty and working interests would be common throughout?
 - A Yes, sir.
- Q As to all the acreage involved in these wells; is that right, sir?
 - A Yes, sir.
- Q Suppose the U.S.G.S. denies these pending applications; is it reasonable to assume that at a minimum, the Land Commission and U.S.G.S. would approve enlargement of the Devonian and designation of a Bone Springs area that would include all acreage within nine 40-acre tracts, nine regular quarter-quarter sections around each completed well?
 - A Yes, sir.
- Q That is sort of a minimum established rule of thumb the U.S.G.S has followed in these instances, is it not?
 - A Yes, sir, that's correct.
- Q Does it, therefore, appear to you it is virtually certain the additional acreage to be assigned to No. 4 is going to end up in the same participating area as Wells 1 and 2?
 - A Yes, sir.
- Q In the meantime, can we commence interference tests using just wells No. 1 and 2?
- A Yes, sir. They are both in the same Devonian participating area and both on the same base lease.



DEARNLEY-MEIER REPORTING SERVICE,

MEX

Š

What about the correlative rights of interested parties having leases outside of the unit boundary; what would be done to protect those correlative rights?

The correlative rights of parties outside of the unit would be protected by the proposed restriction, that no allowable shall be transferred to any well located within 660 feet of the unit boundary.

We have asked authority to transfer these allowables from the effective date of the authority until December 31st, 1961, this year; is that right?

Yes, sir.

Is it likely there will be a well located even 660 feet from the unit boundary before that time?

Since it requires six months to drill and complete a Devonian well in this area it is my opinion that a well will not be completed nearer than 1320 to the unit boundary prior to December 31st, 1961.

In your opinion, that restriction will adequately protect the rights, as well as the practical impossibility of drilling a closer well; that will protect the rights of the offset leases?

Yes, sir.

In order to improve the chances of obtaining an effective interference test, what is your intention with regard to production of these transferred allowables?

In conducting the interference tests we expect to pro-



ALEUQUERQUE, NEW MEXICO

PHON : CH 3-6691

duce all transferred allowables from Well N . 2 until No. 5 is completed, and at that time the transferred allowables may be split botween Wells 2 and 5.

- That is going to depend on a decision at that time as to whether it should be split or whether it is preferable to continue to produce all transferred allowables from No. 2?
 - Yes, sir.
- What about sustained production rates of the amount in-Q volved in such transfers; how would that affect these wells?
- A sustained production rate of 600 barrels of oil per day from the Devonian in Well No. 1, during a three-day drawdown test in July of 1960 resulted in a pressure drawdown of 73 psi. This, in my opinion, shows the Devonian wells will be capable of producing the anticipated production rates for the proposed interference tests.
 - Without causing waste or damage to the reservoir? Q
 - Yes, sir. Α
 - What about the Bone Springs? Q
- Sustained production rates greater than the current Bone Springs allowable in Well No. 1 on a drawdown test in October of 1960 showed that the No. 1 well was capable of producing approximatchy 200 barrols of oil per day, but with a drawdown exceeding 2,000 psi. This indicates to me that a double allowable may not be possible to be produced from a single Bone Springs completion. Well No. 2, on a preliminary flow test, flowed 234 barrels of oil



Š

18 barrels of acid water in $16\frac{1}{2}$ hours. This is a flow rate of 340 barrels of oil per day. No. 2, however, may not be able to sustain this amount of production over a long period of time.

- Even with transfer of allowable privileges for the Bone Springs, is it possible that the operators will suffer a loss in current allowable in attempting to conduct these interference tests for the Bone Springs?
 - Yes, sir, it is.
- Because of the possibility the Bone Springs can't produce at these higher rates?

That's correct. It is my opinion, however, that the possibility of the positive results from the interference tests for the Bone Springs would justify the risk of losing some current allowable.

This is a risk we are prepared to take if we can get the Q benefit of transferring allowables to the extent it is feasible to do so?

Yes, sir. Α

It is possible, during the running of these interference Q. tests, it will be determined No. 2 can produce at even higher rates than anticipated?

That's correct. Λ

If so, we would want to re-evaluate this situation as to the Bone Springs well at that time?

<u>Yes, sir.</u>



LEUQUERQUE, NEW MEXICO

Do you plan to initially determine the optimum rates of production for the Bone Springs well?

Yes, sir.

Will you use that as a guide for determination of how much allowable you will transfer from the shut-in well to the producing well?

Α Yes, sir.

These possibilities of making revisions during the course of the test are evidence of the need for flexibility in trying to effectively conduct these tests, are they not?

Yes, sir.

Is it your opinion that the production rates which are anticipated will cause waste or underground damage?

In my opinion no damage will be done to either reservoir or cause underground waste.

In that connection, do we plan to conduct monthly production tests during the period of interference tests?

Yes, sir. The Ohio plans to conduct monthly production tests on each flowing well to which allowable is transferred, and report these results to the Commission on Form C-116.

We also, of course, plan to report to the Commission the time at which we transfer allowable from one well to anothe, , and the amount of allowable so transferred, would we not?

A Yes, sir.

We would also furnish any other reports of a reasonable



ALBUQUEPQUE, NEW MEXICO

nature the Commission would call for?

Α Yes, sir.

Would you summarize, Mr. Young, briefly, your position about the conducting of these interference tests?

In summary, it is my opinion that interference tests are, in some instances, a useful and proper tool to be used with other scientific data to establish the proper well spacing requirements of any reservoir. The results of such tests may be informative in these pools. However, since the Devonian will probably have a water drive, the need for beginning interference tests as soon as possible cannot be overemphasized. For this reason I strongly recommend that the Commission grant approval as soon as possible for the transfer of allowable which is necessary to afford the unit operator a reasonable opportunity to attempt the taking of effective interference tests.

Is it your opinion that this proposal of transfer of allowables will not damage correlative rights, and not cause any physical waste?

A It is my opinion that the transfer of allowables will not damage correlative rights or cause physical waste. On the contrary the interference test tests resulting from the transfer of allowables can possibly serve to help us to more quickly establish permanent rules for the proper well spacing to be used in this pool and may ultimately prevent the drilling of unnecessary wells.

We will also be measuring bottom hole pressures periodi-



Ş

cally in connection with these wells?

A Yes, sir, and these bottom hole pressures will aid us in planning a more efficient depletion of the pools. This will aid in provention of waste and protection of correlative rights.

MR. COUCH: That concludes our direct testimony and presentation in the case, Mr. Examiner, and I will say this: that the Commission has in its records rather detailed data, on the pool rules hearings, on the characteristics encountered in the No.

1. We have accumulated a little additional reservoir information with Well No. 2. We relt, however, it is not directly pertinent to this hearing; therefore, rather than lengthen the record we have not offered it. If the Commission staff is interested in this information we would submit it for their use, or, if you desire, put it in the record.

MR. NUTTER: I think the information may be pertinent at the hearing, maybe a year from now, when these cases are reopened.

MR. COUCH: Yes, sir, and we are accumulating that for this purpose.

MR. NUTTER: Does anyone have any questions of the witness?

MR. PAYNE: Yes, sir.

DY MR. PAINE:

Q Mr. Young, how many wells do you have in the Bone Springs?

A We have one completed well, which is Well No. 1, and No.

2 is in the process of being completed now. We do have a prelim-



Inc.

DEAKNLEY-MEIEK KEPUI

inary flow test, 234 barrels in 165 hours, 340 barrels per day. That is a preliminary flow test.

- But it is not actually completed?
- No, sir. It should be completed in the near future.
- How can we make this order effective March 3rd, which you suggested, today, inasmuch as you have only one well?

You asked about the Bone Springs, Mr. Payne. My recommendation as to the March 3rd date is actually pertaining directly to the Devonian, but since both zones are included in this hearing I would think that the Commission would issue a single order to cover both the zones and, therefore, the March 3rd date is in my opinion, needed primarily for the Devonian, to permit us to transfer allowable just as soon as the No. 2 well is completed because of having to conduct, or wanting to conduct, pressure interference tests in water drive reservoirs just as soon as possible.

MR. COU. 4: I would say, we would have no objection to saying those allowables will be transferred from or to a well until the well is finally completed. We just picked an effective date to be sure we could get the authority as promptly as possible.

- (By Mr. Payne) What well do you propose to shut in in Bone Springs, No. 1?
 - Yes, sir. Λ
 - And transfer its allowable to No. 2? Q
 - Yes, sir. Α
 - Maybe No. 5 later?



Yes, sir.

- Q what is the GOR of these wells?
- A The gas-oil ratio in the Devonian is approximately 300 cubic feet per barrel.
 - Q It is the same in both wells?
 - A We have no flow test in the No. 2 well in the Devonian.
- Q What disposition is being made of the casinghead gas; is it being flared?
 - A Yes, sir.
- Q When you transfer your allowable, if you transfer from a low GOR well to a higher GOR well, there will be more casinghead gas?
- In my opinion, in the Devonian we will never have a high gas-oil ratio in the No. 2. I base that on the fact the reservoir pressure in the Devonian is approximately 6,000 psi, the crude highly under-saturated, bubble point pressure 557 psi. Therefore, we could never have a high producing gas-oil ratio greater than the solution until the reservoir pressure decreased to approximately 557 psi.

BY MR. NUTTER:

Q I don't suppose you expect the Devonian to decrease to 557?

A I certainly don't.

BY MR. PAYNE:

Q You testified the drive mechanism in the Devonian was



ALBUQUERQUE, NEW MEX

3

water; what about Tone Springs?

- A Solution gas drive.
- Q Inasmuch as the Devonian is a water drive pool, isn't it your opinion it is rate sensitive?

A It will be rate sensitive to the total reservoir with-drawals. Based upon the data that we now have available the reservoir is of sufficient size that the few wells which we have, or will have in here during the next year, the allowables from those wells certainly would not be large enough to cause an inefficient rate, in my opinion.

- Q I believe you testified you wouldn't propose to transfer the allowable to any well closer than 660 feet to the unit boundary; is that right
 - A That's correct.
- Q How do you protect the owners in the unit who are not in the participating area; do you also propose that 660 foot limitation?

A No, sir, because as far as the Devonian goes we only have one well that is not within 660 feet of a participating area boundary, so it would be impossible to apply that under our proposal to transfer the allowables to Well No. 2.

MR. COUCH: May I suggest, within the unit all working interests would be unitized. There is no problem there between the working interest owners except as to what part of their interest would be chargeable with some override. That might reduce, to



NEW MEXICO

VHOTE CH

3-6691

some extent, their interest. As to overriding royalties, under the unit agreement we are in effect placed in the position of having to hold up payments of royalties until such time as participating areas are actually designated.

MR. NUTTER: Except to the United States or State of New Mexico?

MR. COUCH: Yes, sir.

MR. PAYNE: In other words, I share back to the original date of the unit?

MR. CCUCH: No, sir, back to the effective date of the participating or to the enlargement of the participating area as finally approved by the U.S.G.S.. That can be made retroactive to the date of completion of the well which either caused the designation or enlargement of the participating area.

MR. PAYNE: Until such time as an 80-acre is taken into the participating area it doesn't share, does it, so it could be drained?

MR. COUCH: Until such time as the effective date of the designation of the participation of that 80-acre tract, the owner of the royalty and overriding in that tract would not participate. but these are designated retroactively, quite frequently, so I understand, considering what would be a fair date, considering the rights of the parties.

MR. NUTTER: Some unit agreements require the effective date of the area be the date of first production?



ALBUQUERQUE, NEW MEXICO

well?

HONE CH 3-6691 DEARNLEY-MEIER REPORTING SERVICE, Inc.

MR. COUCH: I think, as far as initial designation is concerned, my resulted list in that the agreement does provide, in regard to the enlargement of the unit area, once it is approved I believe the provisions are more flexible and, in effect, leave that date up to the Land Commissioner and U.S.G.S. to pick a date that will be reasonable under the circumstances and will give recognition to the rights of the parties. Actually, the participating area designation is principally and fundamentally to work out a fair way for allocation of overrides and royalties, and with that in mind, that is what makes it clear to me those interests are going to be borne in mind, taken care of, royalty paid on the basis of the participating areas as formed and enlarged.

MR. NUTTER: If the unit agreement does provide this flexibility there would be no problem in making an enlargement of the participating area effective to the date of first production, particularly if that well was a transfer well; would there be any problem there?

MR. COUCH: I would say there should not be, Mr. Nutter. As a matter of fact, our pending applications, I believe, request the enlarged Devonian area and the initial Bone Springs area both be made effective as of a date very shortly after the first production from the well, the date on which we ran the drawdown test on the No. 1 well.

MR. PAYNE: The date of first production from the original



NEW MEXICO

3-6691

£

MR. COUCH: I think our request is that they be paid effective as of the date of the drawdown test on the No. 1 well, which indicated the size and area extent of the reservoir; about a month after the completion of the well.

MR. YOUNG: Our application for enlargement of the Devonian area is asked for as of August 1st.

MR. COUCH: 1960?

MR. YOUNG: Yes. The drawdown test on the Devonian which furnished us some information to justify enlarging the Devonian participating area was made in the middle of August, and the unit agreement provides we can make the enlargement effective the 1st of the month following, of the month in which we gained information to justify enlarging the unit.

MR. NUTTER: Have you received any indication from the U.S.G.S. that they are going to approve this enlarged area?

MR. COUCH: No official indication; they are presently under consideration in Washington, and I think we must just wait for the ultimate decision. As Mr. Young stated in his original direct testimony, the initial Devonian area has, of course, been designated, nine square 40's around the well, including the 40 on which the first well was located. We first made an application fdr Done Springs area of exactly that same area, but after the drawdown tests were run it became apparent that the initial area shouldn't be that rule of thumb area the U.S.G.S. frequently uses, so we asked that they withhold designation until we could file



ALBUQUERQUE, NEW MEXICO

PHONE CH 3-6691

an amended request asking that the first Bone Springs area be that shown in orange, and any point for consideration is that, if the U.S.G.S. does not approve this large area shown by orange, it seems to be almost a virtual certainty they would approve the initial Bone Springs area at least as large as the area outlined in red, and, also, that applying this minimum rule of thumb, upon completion of Well No. 4 they would then enlarge that area to include nine square 40's around that well as to both pools. I think we can rely on that. I don't think we can rely on positive approval of the applications.

BY MR. PAYNE:

Inasmuch as the share of each owner does relate back to Q the date around first production, we don't have any problem with the transfer well in a participating area impairing somebody else's correlative rights in the unit, but not in the participating area; is that right?

He will share back to the date of first production; yes, A sir.

MR. NUTTER: What is the status of the Coxon-Hammond lease in Section 13? Is that still in the unit agreement?

MR. COUCH: Mr. Nutter, in my mind it is. In my mind it is in full force and effect. There has been a decision rendered by Mr. Enriques to the effect that that lease -- if it is the one you are referring to, I am sure it is -- is terminated, under a very technical construction of the statutes and regulations.



3

ALBUQUERQUE, NEW MEXICO

 (A, \cdot)

were, in that decision, expressly granted the authority to appeal from 1t. We have taken the necessary steps as to perfect that appeal and are now in the process of preparing briefs which we hope to submit very shortly to the Solicitor, and which will, we hope, result in a revision of the Solicitor's opinions. There, again, I can't give you guarantees.

MR. NUTTER: At the present time we don't know if this lease will be in the participating area?

MR. COUCH: Except to this extent, Mr. Nutter, the Government, of course -- that is a Federal lease -- and the Government retains the right to require any lessee to join in and operate in accordance with an approved Federal Unit; if that lease is ultimately held to be terminated the Government, when it leases that land again, would, I feel quite certain, lease it subject to the Lea Unit agreement.

MR. NUTTER: So you would expect it to be in the unit regardless?

MR. COUCH: That would be my opinion, it would definitely œ.

BY MR. PAYNE:

Would you relate how Onio Oil Company takes an interference test?

Yes, sir. We plan, in this instance, to shut in No. 1, transfer its allowable, if the Commission grants our request, to Well No. 2, produce both allowables out of Well No. 2, with No. 1



NEW MEXICO

£

shut in, and periodically measure bottom hole pressures in Well No. 1 to detect any possible interference in Well No. 1.

You say, take them periodically. How often would you take bottom hole pressures?

Recalling again, Mr. Payne, that this is a highly undersaturated crude, we should have a solid liquid column in Well No. 1. I cannot foresee you could have any gas in the wellhead of Well No. 1. We can take deadweight pressure measurements on the fubing of Well No. 1, and probably, in my mind, more accurately see any pressure change than we can with the bottom hole pressure gauge.

MR. COUCH: This is as to the Devonian reservoir?

Yes, sir. This is the Devonian. If we could just detect one or two pounds in the surface measurements of the No. 1 Well, that would be, in my mind, time to run a bottom hole pressure. As to the exact period between tests, I would recommend that we run them at least weekly for awhile.

With bombs or on the surface?

With bombs; the surface measurement is just incidental, A certainly.

MR. COUCH: This would be a clue you ought to run a bottom hole pressure test, even if you had run one the day before?

In other words, we are going to have, not only in this instance, we not only have to rely on our bottom hole pressure. gauges, but we can rely on the surface measurements.

BY MR. PAYNE:



3-6691

5

DEARNLEY-MEIER REPORTING SERVICE,

₹

I take It you feel an interference test is more valuable in a water drive pool if you start it soon after the well's completion?

By all means. It is within this initial period in a Α water drive, if you get positive results it will be in this period. Later on, after the water drive becomes effective and you have no pressure decline in your reservoir you would never pick up decline in pressure in any well.

The same is true to a certain extent in solution gas drive field?

Yes, sir. You do have a slightly higher drop in pressure per unit withdrawals in initial stages of solution gas drive than you would have at some later date.

BY MR. NUTTER:

No well in this area has penetrated the water-oil contact Q has it?

Α No, sir, it has not.

Do you have any information as to what that water-oil contact is, particularly with the Sinclair well to the east?

No, sir. The Sinclair well out to the east is across the fault. You will note it is approximately 400 feet lower than the unit wells, and it is Devonian across a fault. That is shown on the structure map which was Exhibit 1 in Case 2118. In regard to your answer, the No. 1 Well was drilled in excess of 200 feet below its current perforations. It was, all of the net pay was



¥

. . .

perforated. There is 200 fact below the bottom of the perforations of the No. 1, dense limestone, which contains neither oil or water. No. 2 drilled to a total depth equal to the subaga depth of the bottom perforations in Well No. 1. Therefore, I have no information as to where the water-oil contact is. It did not encounter the oil-water contact.

If structural conditions in the No. 2 are similar to those in the No. 1, then you might have 200 feet of dense lime below this perforated interval of the No. 2?

Based on the logs of both wells and the core analysis in the No. 2, it would be my opinion we would find approximately 20 feet of still porous interval below "he T.D. of Well No. 2, and then go into this 200 feet of dense lime.

- Which, if it is the same as No. 1, would be water free?
- Yes, sir.
- What is the allowable for the Devonian in here at the present time?

MR. PAYNE: This is the deepest well in the State?

This is the deepest oil production in the State of New Mexico. The top allowable, currently, for the Devonian is 362 barrels a day.

(By Mr. Nuiter) Do you believe the No. 2 well can produce 700 barrels of oil per day without coming water in from the bottom?

Yes, sir, I do.



NEW MEXICO

ALBUQUERQUE,

In view of the 200 feet of dense lime it is waterfree?

A That, plus the fact, Mr. Nutter, that if the psi of this weil, the No. 2, is the same as the No. 1, 8.18 barrels per day psi, 700 barrels only would cause a drawdown of approximately 80 pounds in the No. 2 well. Lowest perforation in the No. 2 is 40 feet above the T.D. of the well, and at T.D. we were still in the oil column. Even if the oil-water contact was at T.D. of the well we still have 40 feet of pay above that T.D., or assumed oil-water contact, and with the approximately 80-pound drawdown, that is 700 barrels per day. In my opinion there wouldn't be any water coning at all.

Q You say you would take monthly tests and report on C-116?

A We propose that provision for that very purpose, to give the Commission all the pertinent facts of the producing characteristics of these producing wells which will be producing at these high production rates.

Q I presume some arrangements will be made to alter your method of production in the event No. 2 should start making any water?

A Certainly.

BY MR. PAYNE:

Q Do you plan to conduct these tests continuously until December 31, 1961?

A To answer that, Mr. Payne, I would say that it would depend upon the results we get before then.



CH 3-6693

But you would like to have authority to continue it that long, if necessary?

A Yes, sir.

BY MR. NUTTER:

What is the U. S. Smelting and Refining Well drilling at the present time?

It is around 12 or 13,000 feet; that is as close as I can answer that.

How soon do you expect your No. 4 at 13,100 to be completed?

Final completion, in my opinion, would be approximately Α two months.

Do you believe you will transfer some of the allowable ର to the No. 4 when it is completed; in other words, share the Devonian allowable between the 2 and 4?

To answer that, Mr. Nutter, I would say that our current plans are to transfer No. 4's allowable to Well No. 2.

BY MR. PAYNE:

You mean, transfer Wells No. 1 and No. 4 both to Well No. 2? How much would 2 be producing?

1,086 barrels. A

And you would shut in No. 4 and conduct interference Q tests in it, too?

Yes, sir.

BY MR. NUTTER:



IJ

So this isn't a request for approval to shut in just No. Q 1, then?

No, sir. A

What about this No. 5, when it is completed, what are you going to do with it?

My personal opinion there would be to share, let No. 2 and 5 snare all of the transferred allowables from 1 and 4.

Is this an edge water drive, or do you have any idea where it would be coming from?

It certainly would be an edge water drive. Well No. 1 doesn't have any bottom water.

You think the water is coming from the west?

Yes, sir, it is. Of course, the fault to the east would prevent it from coming, in my opinion, from coming from all directions except the west.

BY MR. PAYNE:

In your opinion, what would be the most efficient rate to produce this pool?

Not knowing exactly the amount of oil in place I don't believe we could answer that at this time, Mr. Payne.

You don't think a thousand barrels of oil from one well is too high?

As far as the reservoir is concerned, no, sir. A

BY MR. NUTTER:

How many net fect of pay do you have in the No. 1 well?



ALBUQUERQUE, NEW MEXICO

CH 3-669

A 81 feet in the 1, but still in the porous oil zone at T.D. Assuming the structure conditions of the No. 2 are the same as Well No. 1 I would say No. 2 would probably have 98 to 100 feet of net pay.

MR. NUTTER: Any further questions of Mr. Young? He may be excused.

MR. COUCH: I have another.

REDIRECT EXAMINATION

BY MR. COUCH:

Mr. Young, by obtaining permission to transfer allowables. Q from any well to any other well within the same pool in this unit, as shown by your testimony, we are, in effect, seeking authority to transfer allowables in such a way that there could be very substantial high rates of production from one well; is that right?

That's correct. Α

Obviously, as operator of this unit, we intend, regard-Q less of what reports the Commission requires, to keep a very close watch on these wells and the rates at which they are produced to ascertain whether there is any indication that waste is occurring, or that the wells should not be produced at that high a rate?

That's correct. A

So that when you say your proposed test procedure might Ç result in producing 1,086 barrels per day from Well No. 2, you are saying that, certainly, with the reservation that that rate would not be maintained if the tests on the well showed that there was



any possibility of damaging that reservoir; isn't that right?

That's correct.

wik. COUCH: I have no further questions.

BY MR. PAYNE:

Is this reservoir similar to the Gladiola Devonian?

I will have to answer that, Mr. Payne, by saying that I am not familiar enough with the Gladiola Devonian to make a compa

BY MR. NUTTER:

What is the comparison between the reservoir here, and Q the Denton?

The comparison that I would make first, Mr. Nutter, is Α that the oil column at Denton is something on the order of 1500 to 1800 feet, whereas here our net pay is on the order of 100 feet, and a gross oil column of approximately 215 feet, and the net pay seems to be, in the first two wells, of course, pretty well grouped rather than scattered as it is at Denton Devonian.

- Ohio has wells in the Denton?
- Yes, we do, one lease, containing six or seven wells.
- Do you recall several years ago when considerable concern was expressed as to whether the rates of withdrawal in the Denton; which were in the neighborhood of 225 barrels per day per well, were excessive with the 1500 foot oil column and active water drive?
 - Yes, sir. I was familiar with that hearing. Α
 - Did you share those beliefs in the Denton?



3-6693

5

NEW MEXICO

ij DEARNLEY-MEIER REPORTING SERVICE, Inc. NEW MEXICO

The problem there was the number of wells times this current allowable of, I believe you said, 225.

It was in that neighborhood.

The number of wells times 225 was a rather large production rate to be coming from a single reservoir. It was my opinion at that time, and still is, that the water encroachment in the Denton Devonian was at its normal depletion and normal expectation in a water drive reservoir. Here, all the data, to me, leads me to the opinion we have a sizeable reservoir here, so that the withdrawal of three or four wells times the current well allowable would be a very small rate in relation to the number of barrels which I believe is in place here, so that it is my opinion there will certainly be no damage at this time in these rates.

In other words, the withdrawals per acre foot of pay are going to be less than they were in Denton?

Yes, sir. I believe that.

BY MR. PAYNE:

That is particularly true since this pool is now being developed on 80-acre spacing?

Yes, sir.

REDIRECT EXAMINATION

BY MR. COUCH:

In speaking of rate sensitivity of a water drive reservoir, I believe in your direct testimony, or in cross examination, you pointed out it is the cumulative withdrawal, cumulative rate



DEARNLEY-MEIER REPORTING SERVICE, Inc. ALBUQUERQUE, NEW MEXICO

of withdrawal that is particularly important rather than the rate on a particular well, did you not?

It is the sum of the rates of all the wells rather than the rate of one well. I will make that distinction. I reserve cumulative for the total cumulative that has ever been produced out of a reservoir.

BY MR. NUTTER:

That wouldn't stand true in the case of coning from the Q, bottom?

No, sir. Α

MR. NUTTER: Any further questions?

BY MR. PORTER:

Do you think you might have had more ultimate recovery Q. in the Denton on wider spacing?

I don't believe I am qualified to answer that, Mr. Porter. MR. NUTTER: Any further questions of Mr. Young? He

may be excused.

MR. COUCH: May I briefly close to state, as set forth in our application: All our working interest owners have approved this request for this rather broad authority set forth in the application. I will say this, if the Commission does not think it appropriate at this time to grant the broad authority we have asked for, then we do ask that the Commission grant us as broad authority as it considers is possible under the circumstances, recognizing the reports it will be receiving, and that if the authority is not



PHONE CH 3-6691

order a provision authorizing administrative approval of additional transfers and such matters as that so that additional hearings will not be necessary as we proceed with this program, for time is of the essence in getting an effective test, particularly in the Devonian. So, if we are set up with full flexibility, or a set-up whore we can come in for administrative approval and receive prompte attention without necessity of notice and hearing, we think we can do a better job of trying to run effectively the tests which the Commission has indicated they want to have run. I offer the Exhibit No. 1.

as broad as we asked, we urge that the Commission Include in the

MR. NUTTER: Ohio's Exhibit No. 1 in this case will be admitted.

MR, PAYNE: Would you like tohave the Commission send you a telegram when an order is entered in this case?

MR. COUCH: We would certainly appreciate it.

MR. NUTTER: Does anyone have anything further to offer in this case? Case will be taken under advisement.

ALBUQUERQUE, NEW MEXICO

STATE OF NEW MEXICO)

COUNTY OF BERNALILLO)

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

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 6th day of March, 1961.

Notary Public - Court Reporter

My Commission expires: May 11, 1964.



INDEX			
WITNESS	PAGE		
ROY M. YOUNG			
Direct Examination by Mr. Couch	2		
QUESTIONS by Mr. Payne	16		
QUESTIONS by Mr. Nutter	18		
QUESTIONS by Mr. Payne	18		
QUESTIONS by Mr. Nutter	26		
QUESTIONS by Mr. Payne	28		
QUESTIONS by Mr. Nutter	29		
QUESTIONS by Mr. Payne	2 9		
QUESTIONS by Mr. Nutter	30		
QUESTIONS by Mr. Payne	30		
Redirect Examination by Mr. Couch	31		
QUESTIONS by Mr. Payne	32		
QUESTIONS by Mr. Nutter	32		
QUESTIONS by Mr. Payne	33		
Redirect Examination by Mr. Couch	33		
QUESTIONS by Mr. Nutter	34		
QUESTIONS by Mr. Porter	34		

EXHIBITS

NUMBER	EXHIBIT	IDENTIFIED	OFFERED	ADMITTED
Ex.#1	Location Map	4	35	35

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2206, heard by me on 33, 1961.

New Mexico Oil Conservation Commission



ALBUQUERQUE, NEW MEXICO

13/14)

DRAFT

RSM/esr March 14, 1961

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

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

CASE No. 2206

Order No. R-1906

APPLICATION OF THE OHIO OIL COMPANY FOR PERMISSION TO TRANSFER ALLOWABLES IN THE LEA UNIT, LEA COUNTY, NEW MEXICO.

FOR PERMISSION TO TRANS
IN THE LEA UNIT, LEA CO

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on March 3, 1961, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

MOW, on this day of March , 1961, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter , and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, The Ohio Oil Company, is the operator of the Lea Unit as approved by Order No. R-1540.
- (3) That applicant's Lea Unit Well No. 1, located in the NW/4 SW/4 of Section 12, Township 20 South, Range 34 East, NMPM, Lea County, New Mexico, is presently completed in the Bone Springs and Devonian formations; that applicant's Lea Unit Well No. 2, located in the SE/4 NW/4 of said Section 12 is presently drilling as a projected dual completion in the Bone Springs and Devonian formations; that applicant's Lea Unit Well No. 4, located in the SE/4 NE/4 of Section 11, Township 20 South, Range 34 East, is also presently drilling as a projected dual completion in the Bone Springs and Devonian formations; and that applicant is

3/1/2

in the Bone Springs and Devonian formations within said Lea Unit

- (4) That the applicant seeks permission to from the ference feets among the above-described wells in the Lea Unit by (a) shutting-in Well No. 1 in either or both formations and transferring its allowable to Well No. 2, or to other wells, when completed, in either or both formations, respectively; and (b) by shutting-in Well No. 4, when completed, in either or both formations and transferring its allowable to Well No. 2, or to other wells, when completed, in either or both formations and transferring its allowable to Well No. 2, or to other wells, when completed, in either or both formations, respectively.
- (5) That the applicant should be authorized to follow the procedure specified in (4) (a) above effective the date Well No. 1 is shut-in or on the date the well receiving any such transferred allowable has been authorized an allowable as a completed producer, whichever date is later.
- (6) That any transfer of allowable from Devonian wells should be made to Devonian wells, and any transfer of allowable from Bone Springs wells should be made to Bone Springs wells. Further, that no transfer of allowable should occur among any wells until all wells involved in such transfer are in an approved participating area, or an approved expansion thereof, for the subject zone of transfer, unless such participating area or any revision thereof shall be made retroactive at least to the date of such transfer.
- (7) That a Form C-116 should be filed with the Commission monthly on each well producing any portion of the allowable of a shut-in well with the quantities of oil, gas, and water produced during a 24-hour period at the then current daily rate of production indicated thereon.
- (8) That the allowable transfer provisions of this order should terminate at 7:00 a.m., January 1, 1962.
- (9) That approval of the subject application will neither cause waste nor impair correlative rights.

IT IS THEREFORE ORDERED:

- (1) That the applicant, The Ohio Oil Company, is hereby authorized to transfer allowables in the Lea Unit, Lea County, New Mexico, according to the following provisions:
- (a) The Lea Unit Well No. 1, located in the NW/4 SW/4 of Section 12, Township 20 South, Range 34 East, may be shut-in in either or both the Bone Springs and Devonian formations and the allowable transferred to the Lea Unit Well No. 2, located in the SE/4 NW/4 of said Section 12, when completed, in either or both formations, respectively.
- (b) The Lea Unit Well No. 4, located in the SE/4 NE/4 of Section 11, Township 20 South, Range 34 East, may be shut-in in either or both the Bone Springs and Devonian formations, when completed, and the allowable transferred to the above-described Lea Unit Well No. 2 in either or both formations, respectively.

PROVIDED HOWEVER, That applicant may transfer the allowables, or portions thereof, of the aforesaid Lea Unit Well No. 1 and No. 4 to wells within the Lea Unit Area not within 660 feet of the Lea Unit Boundary other than the aforesaid Lea Unit Well which are not within 660 feet of the Lea Unit Boundary, No. 2 provided administrative approval for such transfer has been obtained from the Secretary-Director of the Commission.

PROVIDED FURTHER, That any transfer of allowable from Devonian wells shall be made only to Devonian wells, and any transfer of allowable from Bone Springs wells shall be made only to Bone Springs wells. Provided further, that no transfer of allowable shall occur among any wells not within an approved participating area, or an approved expansion thereof, for the subject zone of transfer, unless such participating area or any revision thereof shall be made retroactive at least to the date of such transfer.

(2) That a Form C-116 shall be filed with the Commission monthly on each well producing any portion of the allowable of a shut-in well with the quantities of oil, gas and water produced during a 24-hour period at the then current daily rate of production indicated thereon.

(3) That this order shall become effective immediately but that no allowable transfer provisions contained herein shall become effective until the date the test well is shut-in or the date the well or wells receiving the transferred allowable have been authorized an allowable as a completed well, whichever date is later. Provided further, that this order and the allowable transfer provisions contained herein shall expire at 7:00 o'clock a.m., January 1, 1962.

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