

Case No.

221

Application, Transcript,
Small Exhibits, Etc.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

CASE NO. 221
ORDER NO. R-21

IN THE MATTER OF THE APPLICATION
OF CONTINENTAL OIL COMPANY FOR AN
ORDER GRANTING PERMISSION TO DUALY
COMPLETE ITS "M. E. WANTZ NO. D"
WELL LOCATED IN THE NW/4 SE/4 SECTION
21, TWP. 21 SOUTH, R. 37 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO, FOR PRODUCING
GAS FROM THE TUBB SAND, AND OIL FROM
THE DRINKARD FORMATION.

ORDER OF THE COMMISSION

This matter came on for hearing at 10:00 O'clock
A. M., on May 23, 1950 pursuant to legal notice, at
Santa Fe, New Mexico, before the Oil Conservation Com-
mission of New Mexico, hereinafter referred to as the
"Commission."

The Commission having heard the evidence and being
fully advised in the premises, FINDS:

1. That due public notice having been given as re-
quired by law, the Commission has jurisdiction of the
subject matter and of the interested parties.
2. That although recent experiments tend to show
that mechanical packers and other devices are now avail-
able for engineering successful dual completion, the
Commission is yet to be convinced of the soundness of
dual and multiple completion as a general practice in
New Mexico without specific control of each such project,
and

IT IS THEREFORE ORDERED that effective May 23, 1950,
the Continental Oil Company, the applicant herein, be and
it is hereby authorized to dually complete and produce
its "M. E. Wantz No. D" well located in the NW/4 SE/4 of
Section 21, Township 21 South, Range 37 East, N.M.P.M.,
Lea County, New Mexico in order that gas from the Tubb
Sand (6120' to 6195') may be produced through the annulus
between the casing and tubing, and oil from the lower
Drinkard formation (6546' to 6584') through the tubing
by proper perforation and proper packer or packers;

PROVIDED, HOWEVER, that said "M. E. Wantz No. 3-D"
well shall be completed and produced in such a manner
that there will be no commingling within the well bore
of the said well of gas, or oil and gas produced from
the two separate strata, and

PROVIDED FURTHER that said well shall be equipped in such a manner that reservoir pressures may be determined separately for each of the two separate strata, and further be equipped with all necessary connections required to permit recording meters to be installed and used at any time as may be required by the Commission or its representatives, in order that natural gas, or oil and oil and gas, from each separate stratum may be accurately measured and the gas-oil ratio determined and

PROVIDED FURTHER that the operator shall make any and all tests including segregation tests by not excluding other tests and/or determinations at any time and in such manner as may be deemed necessary by the Commission.

The original and all subsequent tests shall be witnessed by a representative of the Commission and by representatives of offset operators if any there be, and the results of each test properly attested to by the applicant and all witnesses and shall be filed with the Commission within ten (10) days after the actual completion of each such test and,

PROVIDED FURTHER that prior to the time said well is dually completed, the applicant shall supply the Commission, for its approval, with plat or drawing showing the proposed method and manner of completion, together with an electrical or radio-activity log showing the location and extent of each separate stratum and the proposed perforations, and

PROVIDED FURTHER that upon the dual completion of the well the applicant shall submit to the Commission a diagrammatic sketch of the mechanical installation which was actually used to produce the seal from both zones or strata, showing tube and location of packers, other devices used, location and extent of perforations, name and depth of each producing zone or strata and special report of production, gas-oil ratio and reservoir pressure determination of each horizon or stratum at the time of completion.

IT IS FURTHER ORDERED that jurisdiction of this case is hereby retained by the Commission for such further order or orders in the premises as may from time to time seem necessary or convenient to the Commission and this case shall not be considered as establishing a precedent for authorizing general dual completions in the Drinkard Pool, and upon failure of the applicant to comply with any provision or provisions of this order, by the authority hereunder shall terminate, upon ten (10) days' written notice by the Commission.

DONE AT SANTA FE, NEW MEXICO this 13th day of July, 1950.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION
Thomas J. Mabry
THOMAS J. MABRY, CHAIRMAN

GUY SHEPARD, MEMBER
R. R. Spurrer
R. R. SPURRER, SECRETARY

July 20, 1950

Oil Conservation Commission
P. O. Box 1545
Hobbs, New Mexico

Gentlemen:

We enclose herewith, signed copy of Case No. 221, Order No. R-21, issued
in connection with the hearing held in Santa Fe, New Mexico, on May 23,
1950.

Very truly yours,

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

R. R. Spurrier
Secretary-Director

RRS:bw
encl.

July 20, 1950

Mr. E. L. Shafer
Continental Oil Company
Drawer C8
Hobbs, New Mexico

Dear Mr. Shafer:

We enclose herewith, signed copy of Case No. 221, Order No. R-21, issued
in connection with the hearing held in Santa Fe, New Mexico, on May 23,
1950.

Very truly yours,

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

R. R. Spurrier
Secretary-Director

RRS:bw



CONTINENTAL OIL COMPANY

Hobbs, New Mexico
January 30, 1951

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

Gentlemen:

As ordered in Case 221, Order No. R-21, dated July 13, 1950, in regard to the dual completion in the Drinkard and Tubb formations of Continental Oil Company's Mary E. Wantz No. 3-D, Drinkard Pool, Lea County, New Mexico, the following report is submitted:

1. The well was originally completed on January 8, 1948, in the Drinkard formation at a total depth of 6630'. The 7" production casing was set at 6627' and perforated opposite the Drinkard formation in the intervals: 6546' to 6553', 6558' to 6564', 6568' to 6573', and 6580' to 6584'. The initial flowing potential was 240 barrels oil per day, no water, through a 1" choke, and a gas-oil ratio of 1,908 cubic feet per barrel. The original bottom-hole pressure taken during May 1948, was recorded as 1,678 psi and the tubing and casing pressures were 400 psi and 50 psi respectively. A bottom-hole pressure measurement taken in June 1950, indicated a pressure of 1,510 psi. A gas-oil ratio test taken in April 1950, indicated a productivity of 37 barrels oil per day, no water, and 107.9 MCF gas for a gas-oil ratio of 2,910 cubic feet per barrel.

2. The well was dually completed in the Tubb and Drinkard

formations between the dates September 20, 1950, and September 27, 1950. The well was killed with oil and a Baker Model "D" production packer was set at 6525'. The oil above the packer was then displaced with mud and the casing was perforated opposite the Tubb formation with four jet shots per foot from 6120' to 6190'. Tubing was run, the mud displaced with oil, and the formation treated through the perforations with 1,000 gallons of 15% acid. At that time it flowed an estimated 3,000 MCF per day and the pack off between the formations was completed by setting the tubing, equipped with a Baker Multi-U tubing seal nipple, down on the packer. The Drinkard formation was then swabbed in. This mechanical set-up is shown on the attached sketch.

3. A back-pressure test was then taken on the Tubb formation with the following results: (chart attached)

Open flow potential (calculated)	5370 MCF/day
Deliverability at 1,000 psi	3100 MCF/day
Deliverability at 600 psi	4500 MCF/day
Deliverability at 150 psi	5300 MCF/day
Shut-in bottom-hole pressure	2162 psi

Tests on the Drinkard indicated no change in productivity and on January 4, 1950, a test showed a productivity of 30 barrels oil per day, 1.67 barrels water per day, and a gas-oil ratio of 3090 cubic feet per barrel. A bottom-hole pressure test of the Drinkard taken in November 1950, after the dual completion showed that the pressure had declined to 1050 psi. This decline in pressure and slight increase in gas-oil ratio is considered normal at this stage of depletion of a volumetrically controlled reservoir.

The data as presented above, and in particular the difference

N.M. Oil Conservation Commission
Page 3

of pressure between the formations, and the gas-oil ratio tests on the Drinkard formation are evidence that the Mary E. Wantz No. 3-D has been dually completed as an oil well in the Drinkard formation and a gas well in the Tubb formation in such a manner that there is no co-mingling within the well bore of the hydrocarbons from the two formations.

Yours very truly,

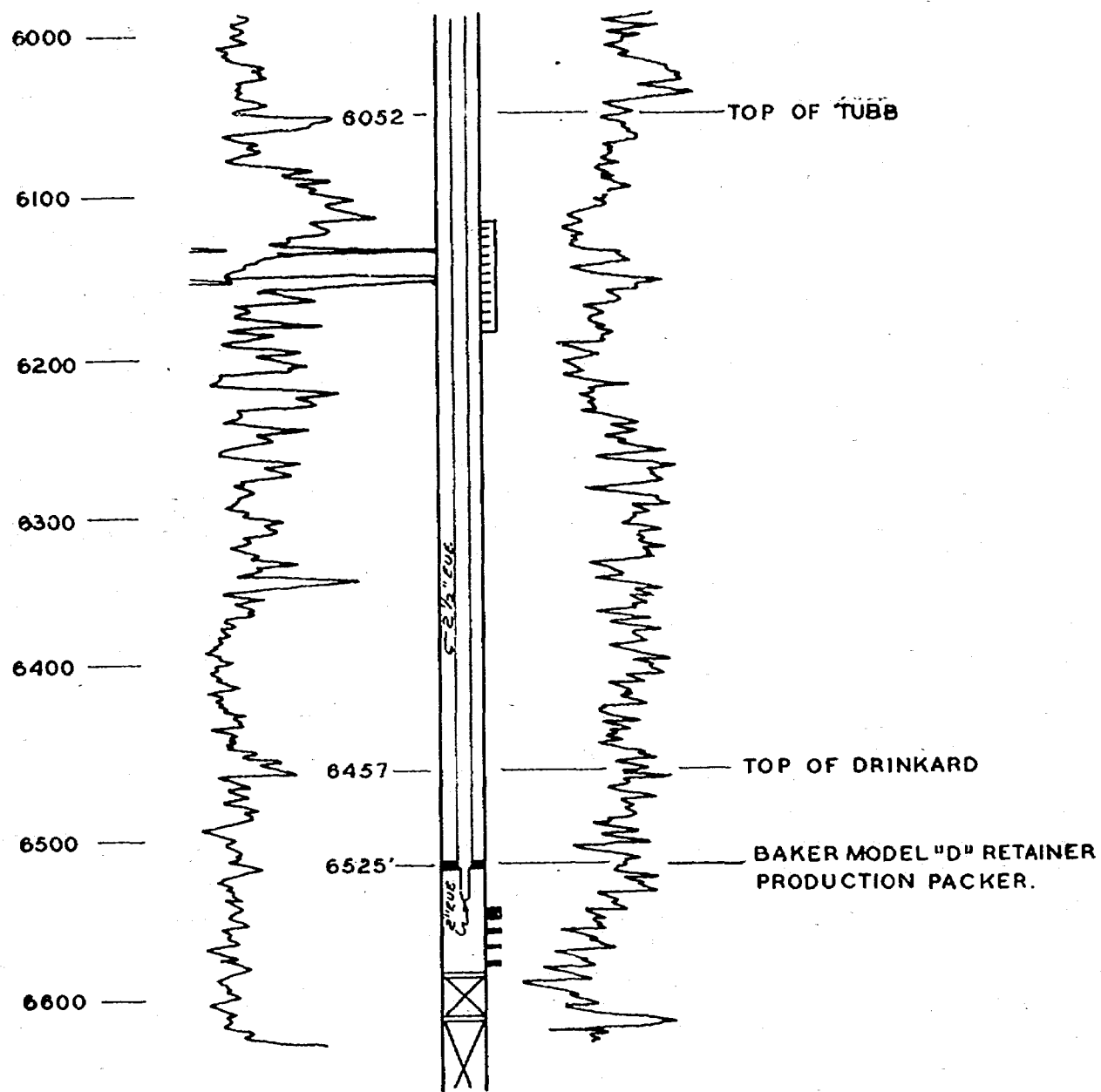


E. L. SHAFER
Supt., New Mexico District
West Texas-New Mexico Division
Production Department

ELS-MFM

CONTINENTAL OIL COMPANY
WANTZ NO.3-D

ELEV.: 3458'



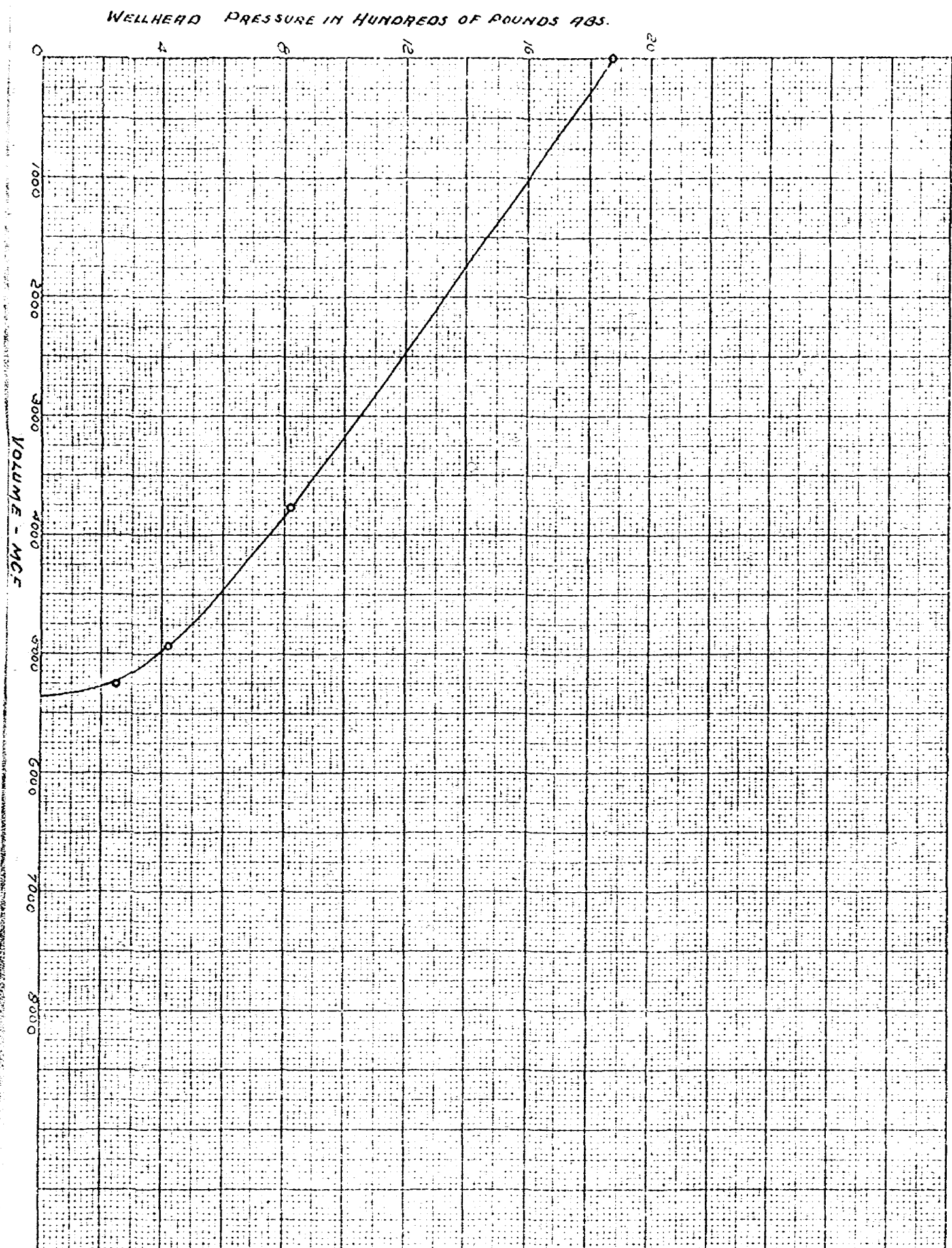
METHOD OF DUAL COMPLETION

T.D. 6730' P.B. 6586'

PERFORATIONS NOW OPEN FOR OIL PRODUCTION
IN DRINKARD: 6546-53', 6558-64', 6568-73' &
6530-84'.

PERFORATIONS NOW OPEN FOR GAS PRODUCTION
IN TUBB SAND: 6120-00'.





DELIVERABILITY CURVE

WANTZ NO. 3-D



CODEX ROCK COMPANY, INC. NORWOOD MASSACHUSETTS
PAINTED IN U.S.A.

NO. 318 20 DIVISIONS PER INCH HORIZONTAL 100 BY 200 DIVISIONS.

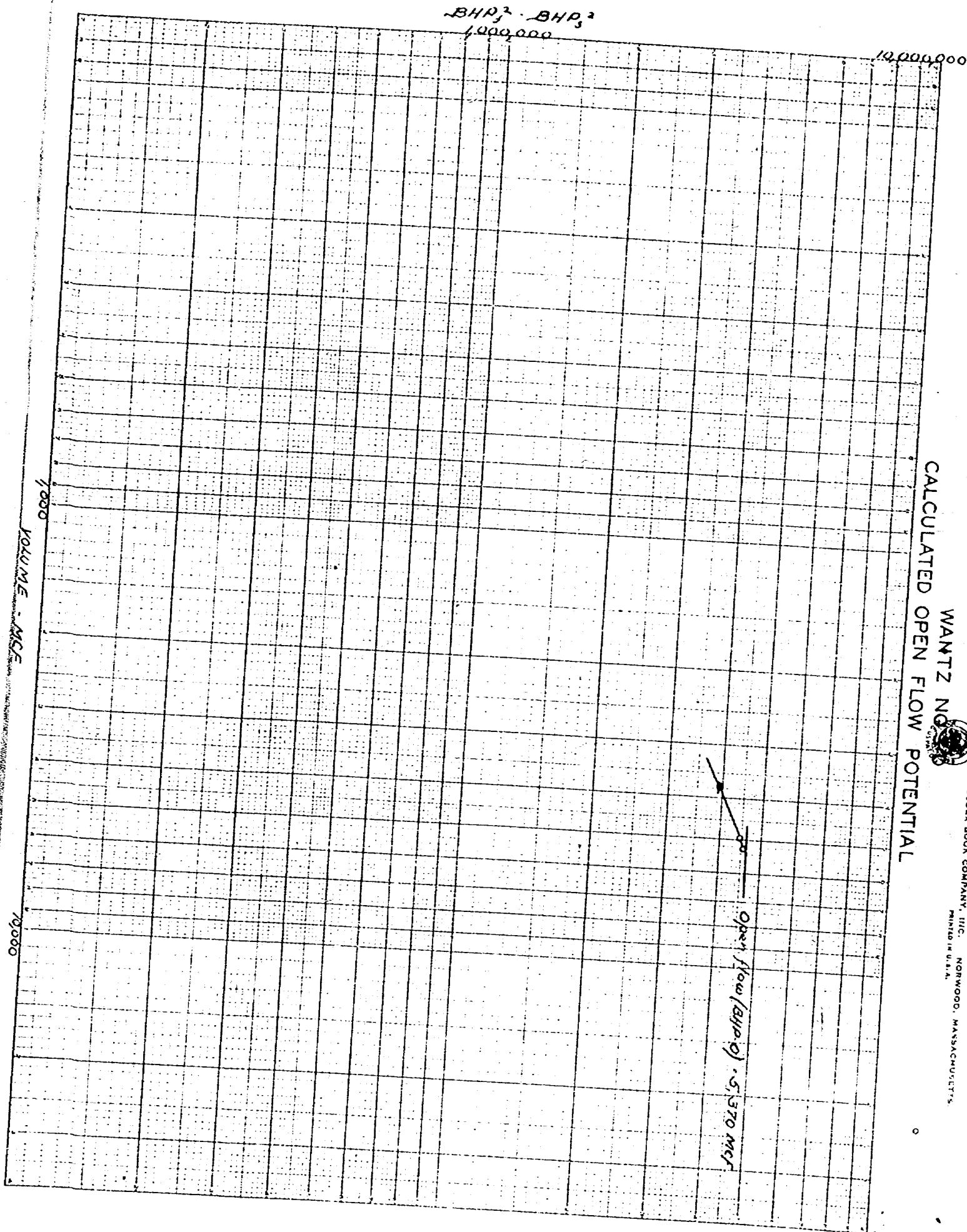
NO. 3123, LOGARITHMIC, 2 1/2" BY 2 1/2" INCH CYCLES.

CALCULATED OPEN FLOW POTENTIAL

WANTZ NO. 100



CODEX BOOK COMPANY, INC., NORWOOD, MASSACHUSETTS.
PRINTED IN U.S.A.



BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

CASE NO. 221
ORDER NO. R-21

IN THE MATTER OF THE APPLICATION
OF CONTINENTAL OIL COMPANY FOR AN
ORDER GRANTING PERMISSION TO DUALY
COMPLETE ITS "M. E. WANTZ NO. D"
WELL LOCATED IN THE NW/4 SE/4 SECTION
21, TWP. 21 SOUTH, R. 37 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO, FOR PRODUCING
GAS FROM THE TUBB SAND, AND OIL FROM
THE DRINKARD FORMATION.

July 25, 1950
ORDER OF THE COMMISSION

Amended Petition
This matter came on for hearing at 10:00 O'clock
A. M., *on May 23, 1950* pursuant to legal notice, at
Santa Fe, New Mexico, before the Oil Conservation Com-
mission of New Mexico, hereinafter referred to as the
"Commission."

The Commission having heard the evidence and being
fully advised in the premises, FINDS:

1. That due public notice having been given as re-
quired by law, the Commission has jurisdiction of the
subject matter and of the interested parties.

2. That although recent experiments tend to show
that mechanical packers and other devices are now avail-
able for engineering successful dual completion, the
Commission is yet to be convinced of the soundness of
dual and multiple completion as a general practice in
New Mexico without specific control of each such project,
and

July 23
IT IS THEREFORE ORDERED that effective May 23, 1950,
the Continental Oil Company, the applicant herein, be and
it is hereby authorized to dually complete and produce
its "M. E. Wantz No. D" well located in the NW/4 SE/4 of
Section (21), Township 21 South, Range 37 East, N.M.P.M.,
Lea County, New Mexico in order that gas from the Tubb
Sand (6120' to 6195') may be produced through the annulus
between the casing and tubing, and oil from the lower
Drinkard formation (6546' to 6584') through the tubing
by proper perforation and proper packer or packers;

*Set 7th
4th 26
235.136*

PROVIDED, HOWEVER, that said "M. E. Wantz No. 3-D"
well shall be completed and produced in such a manner
that there will be no commingling within the well bore
of the said well of gas, or oil and gas produced from
the two separate strata, and

PROVIDED FURTHER that said well shall be equipped in such a manner that reservoir pressures may be determined separately for each of the two separate strata, and further be equipped with all necessary connections required to permit recording meters to be installed and used at any time as may be required by the Commission or its representatives, in order that natural gas, or oil and oil and gas, from each separate stratum may be accurately measured and the gas-oil ratio determined and

PROVIDED FURTHER that the operator shall make any and all tests including segregation tests ^{and tests for} not excluding other tests and/or determinations at any time and in such manner as may be deemed necessary by the Commission, ^{and shall} ~~to and~~ ^{and remedy any situation reflected}

The original and all subsequent tests shall be witnessed by a representative of the Commission and by representatives of offset operators if any there be, and the results of each test properly attested to by the applicant and all witnesses and shall be filed with the Commission within ten (10) days after the actual completion of each such test and,

PROVIDED FURTHER that prior to the time said well is dually completed, the applicant shall supply the Commission, for its approval, with plat or drawing showing the proposed method and manner of completion, together with an electrical or radio-activity log showing the location and extent of each separate stratum and the proposed perforations, and

PROVIDED FURTHER that upon the dual completion of the well the applicant shall submit to the Commission a diagrammatic sketch of the mechanical installation which was actually used to produce the seal from both zones or strata, showing tube and location of packers, other devices used, location and extent of perforations, name and depth of each producing zone or strata and special report of production, gas-oil ratio and reservoir pressure determination of each horizon or stratum at the time of completion.

IT IS FURTHER ORDERED that jurisdiction of this case is hereby retained by the Commission for such further order or orders in the premises as may from time to time seem necessary or convenient to the Commission and this case shall not be considered as establishing a precedent for ^{Long} authorizing general dual completions in the Drinkard Pool, and upon failure of the applicant to comply with any provision or provisions of this order, by the authority hereunder shall terminate, upon ten (10) days' written notice by the Commission.

DONE AT SANTA FE, NEW MEXICO this 13th day of July, 1950.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

THOMAS J. HARRY, CHAIRMAN

GUY SHEPARD, MEMBER

R. R. SPURRIER, SECRETARY



CONTINENTAL OIL COMPANY

Hobbs, New Mexico
May 4, 1950

IN THE MATTER OF THE APPLICATION OF
CONTINENTAL OIL COMPANY FOR AN ORDER
GRANTING PERMISSION TO DUALY COMPLETE
"M. E. WANTZ NO. 3-D WELL", DRINKARD
POOL, NW/4 SE/4, SECTION 21, TOWNSHIP
21 SOUTH, RANGE 37 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

APPLICATION

COMES NOW Continental Oil Company, a Delaware Corporation, operating in New Mexico from a field office in Hobbs, New Mexico, and respectfully represents to the Oil Conservation Commission of the State of New Mexico that it has completed the M. E. Wantz No. 3-D well, located in the NW/4 SE/4, Section 21, Township 21 South, Range 37 East, N.M.P.M., Lea County, New Mexico. This well is presently producing from the Drinkard formation through perforated intervals extending from 6546 feet to 6584 feet and is equipped with 2 1/2" EUE tubing. Seven-inch casing is set at 6627 feet.

Applicant further represents that a high pressure gas zone exists at an approximate depth of 6150 feet in the Tubb Sand section of the M. E. Wantz No. 3-D well as evidenced by gas production from the Tubb section in the North offset to said well and a drill-stem test yielding 4301.4 MCF gas per day from the Tubb section in the South

Application
Page 2

offset to said well and that it is practical and economically feasible to dually complete this well to produce liquid hydrocarbons through the tubing and gas through the annulus between the casing and tubing with proper packer and wellhead connections.

WHEREFORE, applicant asks that permission be granted to recomplete said well to produce oil from the Drinkard formation and gas from the Tubb formation.

Attached hereto is (1) plat showing well to be dually completed and other wells in the vicinity and (2) diagram showing proposed method of dual completion. Copies of this application with attached plat and diagram have been furnished to all offset operators.

Done at Hobbs, New Mexico on this 4 day of May 1950.

Respectfully submitted,
CONTINENTAL OIL COMPANY


E. L. SHAFER

EIS-MFM
Enc.

CC: Oil Conservation Commission
Santa Fe, New Mexico - 3

Oil Conservation Commission
Hobbs, New Mexico

C. G. Staley
Hobbs, New Mexico

HLJ-2 HM

Trinity Drilling Company

Barnsdall Oil Company

S. E. Cone et al

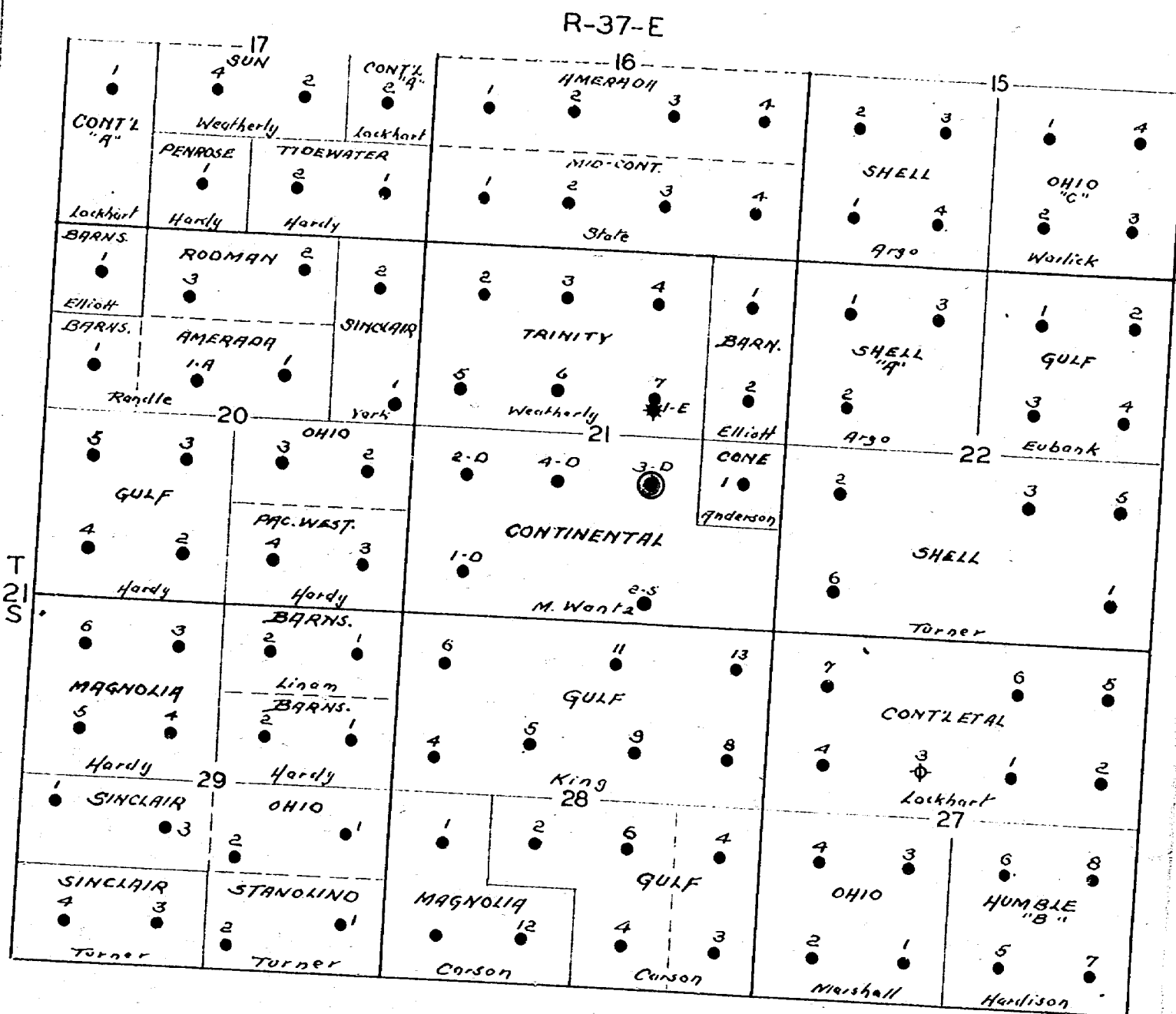
Shell Oil Company

Gulf Oil Corp.

Ohio Oil Company

Pacific Western Oil Company

Repollo Oil Company

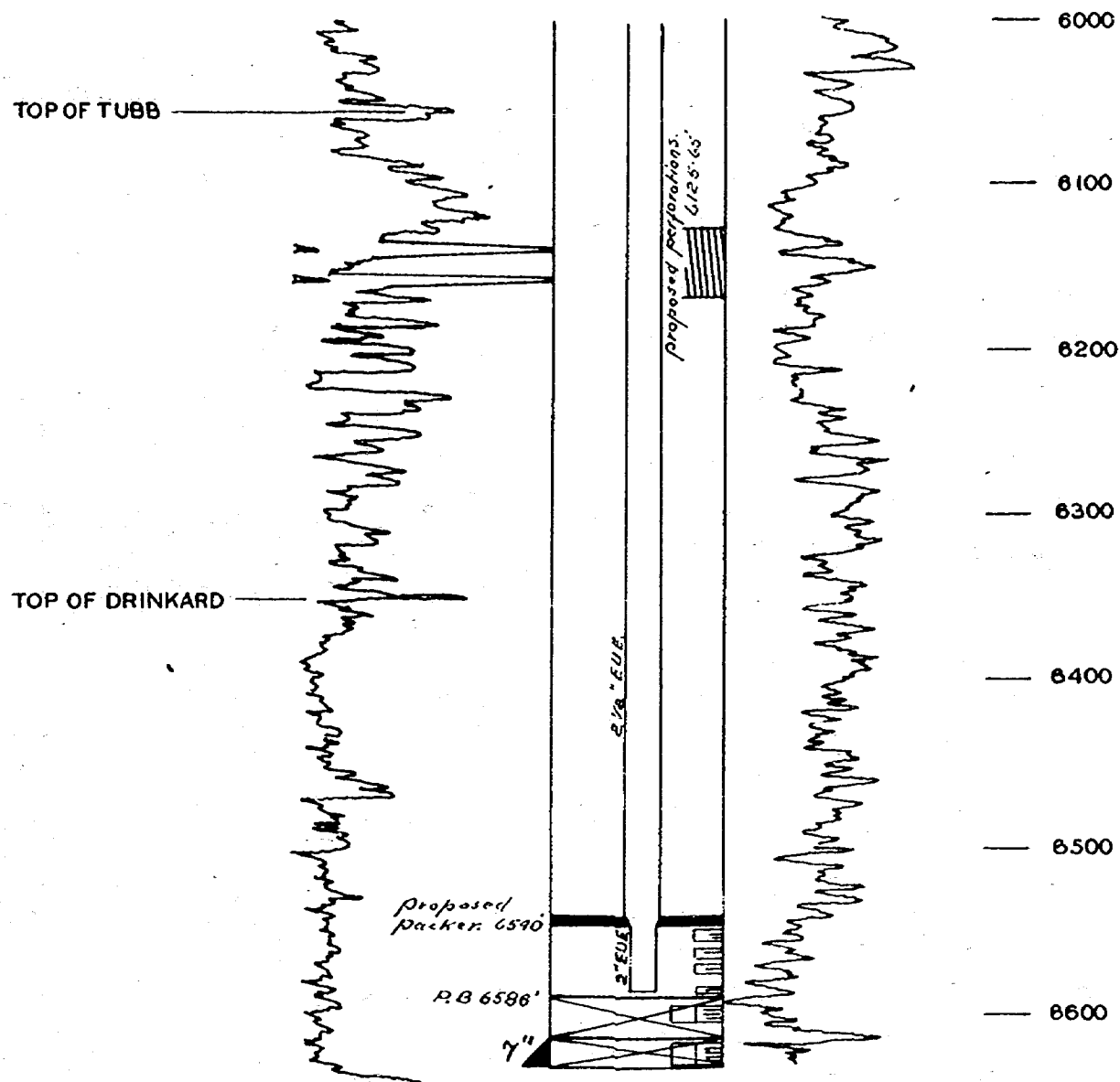


CONTINENTAL OIL COMPANY
WANTZ NO 3-D
AND
OFFSET WELLS
SCALE: 1 INCH=2000 FT.

N. M. DIST. OFFICE

MAY 5th, 1950.

CONTINENTAL OIL COMPANY
WANTZ NO. 3-D
ELEV: 3458'



PROPOSED METHOD OF DUAL COMPLETION

NOTICE OF PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

The State of New Mexico by its Oil Conservation Commission hereby gives notice pursuant to law and the rules and regulations of said Commission promulgated thereunder, of the following public hearing to be held May 23, 1950, beginning at 10:00 o'clock a.m. on that day in the City of Santa Fe, New Mexico, in the Capitol (Hall of Representatives).

STATE OF NEW MEXICO TO:

All named parties in the following cases and notice to the public:

Case 220

In the matter of the application of the Skelly Oil Company for an exception to Rule 104 for the formation of an unorthodox unit in Section 2, Township 23S, Range 36E, N.M.P.M., Langlie-Mattix pool, Lea County, New Mexico.

Case 221

In the matter of the application of Continental Oil Company for an order granting permission to dually complete its "M.E. Wantz No. 3-D" well, located in the NW/4 SE/4 Section 21, Township 21S, Range 37E, N.M.P.M., Lea County, New Mexico, for producing gas from the Tubb sand, and oil from the Drinkard formation.

Case 222

In the matter of the application of Barnett and Rector for an order permitting the drilling of an unorthodox location 1370 ft. from the south line and 330 ft. from the west line (SW/4 NW/4 SW/4) of Section 20, Township 17S, Range 35E, N.M.P.M., along the northern limits of the Vacuum pool, Lea County, New Mexico.

Given under the seal of the Oil Conservation Commission of New Mexico, at Santa Fe, New Mexico, on May 9, 1950.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

/s/ R. R. SPURRIER, SECRETARY

LEA COUNTY OPERATORS COMMITTEE
HOBBS, NEW MEXICO
May 11, 1950

SKELLY OIL COMPANY
Tulsa 2, Oklahoma
May 5, 1950

Mr. R. R. Spurrier
Box 871
Oil Conservation Commission
Santa Fe, New Mexico

Dear Sir:

In furtherance of our application which we believe is set for hearing at 10 o'clock a. m. Tuesday May 23rd we find that both our application and letter fails to state that El Paso Natural Gas Company should be advised of our application and hearing and should therefore receive notice of our hearing. Their address is 1901 National Standard Building, Houston 2, Texas, to the attention of Mr. Tucker.

We also wish to make a correction in Paragraph 4 of our application following the word "unit", in the 3rd line by striking the remainder of the sentence which reads, "and it is the understanding of this applicant that they will propose to locate their gas well in the center of the W/2 of their 160 acre unit."

Very truly yours,

/s/ George W. Selinger

GWS:

LEA COUNTY OPERATORS COMMITTEE
POBBS, NEW MEXICO
May 11, 1950

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF)	CAUSE _____
THE SKELLY OIL COMPANY FOR AN EXCEPTION)	
TO RULE 104 FOR THE FORMATION OF AN)	FILED _____
UNORTHODOX UNIT IN SECTION 2,)	
TOWNSHIP 23 SOUTH, RANGE 36 EAST,)	
LANGLIE-MATTIX, LEA COUNTY, NEW MEXICO)	

A P P L I C A T I O N

Comes now Skelly Oil Company and alleges and states:

1. That it is the owner of Lease No. 16629, described as the S/2 SE/4 Section 2, Township 23 South, Range 36 East, and Lease No. 5943, described as the S/2 SW/4 Section 2, Township 23 South, Range 36 East, Lea County, New Mexico, which leases lie in the so-called Langlie-Mattix Field in an area where gas wells are located.

2. That since August, 1948, applicant has been attempting to form a unit to comprise the SE/4 of Section 2, Township 23 South, Range 36 East, but has been unsuccessful in so forming a unit due to the particular circumstances in which the El Paso Natural gas Company has certain arrangements with Shell Oil Company as to gas rights and Shell Oil Company retaining oil rights, and due to such provisions of their contract applicant is unable to negotiate a unit covering such SE/4 of said Section 2-23S-36E.

3. That applicant seeks an exception to Rule 104 so as to permit the assignment of 160 surface contiguous acres and to permit the drilling of a well in the center of the E/2 of such proposed unit.

4. That El Paso Natural Gas Company and Shell Oil Company, in the provisions of their contract on the remainder of the S/2 of said Section 2-23S-36E and can assign a similar 160-acre unit, and it is the understanding of this applicant that they will propose to locate their gas well in the center of the W/2 of their 160-acre unit.

5. That the establishment of such units as an exception to Rule 104 will not be detrimental to any of the offset operators insofar as only two wells will be located on the S/2 of Section 2-23S-36E.

6. The following offset operators to applicant's two leases should be notified of the filing of this application:

Shell Oil Company, Midland, Texas
Sinclair Oil & Gas Company, Fair Building, Fort Worth, Texas
Texas Pacific Coal & Oil Company, Ft. Worth National Bank Building,
Fort Worth, Texas
Cities Service Oil Company, Bartlesville, Oklahoma
Gulf Oil Corporation, Fort Worth, Texas
Tide Water Associated Oil Company, Mellie Esperson, Houston, Texas
R. Olsen Oil Company, Apco Tower, Oklahoma City, Oklahoma
Continental Oil Company, Fair Building, Fort Worth, Texas
Atlantic Oil & Refining Company, Box 2819, Dallas, Texas
Stanolind Oil & Gas Company, Fair Building, Fort Worth, Texas
Standard Oil Company of Texas, Box 1249, Houston, Texas

Application
Page 2

Western Natural Gas Company, El Paso, Texas
Magnolia Petroleum Company, Dallas, Texas

WHEREFORE, premises considered, applicant prays that this Commission set this matter down for hearing after the giving of proper notices and that from the evidence adduced at such hearing, grant this applicant an exception to assign the S/2 of the S/2 of Section 2, Township 23 South, Range 36 East, Langlie-Mattix Gas Field, Lea County, New Mexico, and permit the drilling of a well in the center of the E/2 thereof, and for such other orders, rules and regulations that may be necessary in the premises.

Respectfully submitted,

SKELLY OIL COMPANY

By: George W. Selinger

LEA COUNTY OPERATORS COMMITTEE
HOBBS, NEW MEXICO
May 11, 1950

LEA COUNTY NEW MEXICO

T 23S - R 36 E

SINCLAIR CLAY *4		GULF *1		R. OLSEN *1
3	T.P.C. & O.	2 SHELL		1 TIDEWATER
		SKELLY 5943	SKELLY 1 16629	*1
10	CITIES SERVICE	T.P.C. & O.	T.P.C. & O. *16	CONTINENTAL CLAY *1
	T.P.C. & O.			WESTERN GAS
11		12		12

CONTINENTAL OIL COMPANY
Hobbs, New Mexico
May 4, 1950

IN THE MATTER OF THE APPLICATION OF
CONTINENTAL OIL COMPANY FOR AN ORDER
GRANTING PERMISSION TO DUALY COMPLETE
"M. E. WANTZ NO. 3-D WELL", DRINKARD
FOOL, NW/4 SE/4, SECTION 21, TOWNSHIP
21 SOUTH, RANGE 37 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

APPLICATION

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Applicant further represents that a high pressure gas zone exists at an approximate depth of 6150 feet in the Tubb Sand section of the M. E. Wantz No. 3-D well as evidenced by gas production from the Tubb section in the North offset to said well and a drill-stem test yielding 4301.4 MCF gas per day from the Tubb section in the South offset to said well and that it is practical and economically feasible to dually complete this well to produce liquid hydrocarbons through the tubing and gas through the annulus between the casing and tubing with proper packer and wellhead connections.

WHEREFORE, applicant asks that permission be granted to recomplete said well to produce oil from the Drinkard formation and gas from the Tubb formation.

Attached hereto is (1) plat showing well to be dually completed and other wells in the vicinity and (2) diagram showing proposed method of dual completion. (Not included.) Copies of this application with attached plat have

Application
Page 2

been furnished to all offset operators.

Done at Hobbs, New Mexico on this 4th day of May 1950.

Respectfully submitted,

CONTINENTAL OIL COMPANY

/s/ E. L. Shafer

ELS-MFM
Enc.

LEA COUNTY OPERATORS COMMITTEE
May 11, 1950
HOBBS, NEW MEXICO

R-37-E

-17 Sun			-16				-15		
4 x	2 x	Cont'l 2 1/4	1 x	Amerada 2 x	3 x	4 x	2 x	3 x	1 x
Weatherly		Lockhart	Mid-cont.				Shell		Ohio "C"
Penrose 1 x	Tidewater 2 x	1 x	1 x	2 x	3 x	4 x	1 x	4 x	2 x
Hardy		Hardy	State				Argo		Warlick
Rodman 3 x	2 x	2 x	2 x	3 x	4 x	1 x	1 x	3 x	1 x
Amerada		Sinclair	Trinity			Barn.	Shell "A"		Gulf
1-A x	1 x	1 x	5 x	6 x	7 x	2 x	2 x		3 x
Randle	20	York	Weatherly			01-E	Elliott	Argo	22 Eubank
3 x	Ohio 3 x		2-D x	4-D x	3-D 0	Cone 1 x	2 x		3 x
Gulf	Pac. West.		Continental				Shell		
2 x	4 x	3 x	1-D x	2 1/8			6 x	Turner	
Hardy		Hardy	M. Wantz						
3 x	2 x	1 x	6 x	11 x	13 x	7 x	6 x		
Magnolia		Linam	Gulf				Cont'l Et Al		
4 x	2 x	1 x	4 x	5 x	9 x	8 x	4 x	3 x	1 x
Hardy		Hardy	King			Lockhart			
Sinclair	29	Ohio	28				27		
x 3	2 x	x 1	1 x	2 x	6 x	4 x	4 x	3 x	6 x
Sinclair		Stanolind	Magnolia			Gulf		Ohio	Humble "B"
3 x	2 x	x 1	x	12 x	4 x	3 x	2 x	1 x	5 x
Turner	Turner	Turner	Carson		Carson		Marshall		Hardison

CONTINENTAL OIL COMPANY
WANTZ NO. 3-D
and
OFFSET WELLS
SCALE: 1 INCH = 2000 FT.

N.M. DIST. OFFICE

MAY 5th, 1950

C O P Y

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
RECEIVED: MAY 9, 1950

Box 670
Roswell, New Mexico
May 8, 1950

AIR MAIL

Mr. R. R. Spurrier,
New Mexico Oil Conservation Commission,
Santa Fe, New Mexico.

Dear Sir:

Reference is made to my letter of April 24th and your reply of April 27th, regarding our request for a hearing before the Commission, for the purpose of obtaining approval to drill an irregular location.

The proposed location is 1370 feet from the South line and 330 feet from the West line of Sec. 20, T. 17 S., R. 35 E., Lea County, New Mexico. We have completed our State No. 1-F well, on the same lease, at a location 330 feet from the South line and 660 feet from the West line of Sec. 20; initial production was 72 barrels of oil per day, swabbing and flowing. We know that a location to the North should be structurally lower, and it is believed that a regular location on the north 40 acres of our lease might prove non-commercial. The proposed location does not crowd or involve any outside operators. The entire West half of the Southwest Quarter of Section 20 is a part of State Lease B-2245, and the leasehold rights above 5000 feet are held by Barnett & Rector, under a farmout from The Ohio Oil Company. No objection is offered to the proposed location by The Ohio Oil Company. Barnett & Rector also hold the leasehold rights above 4800 feet on the offsetting acreage to the West; this is a part of State Lease B-1398. A sketch of the location and adjoining acreage is attached.

We wish to request that a hearing before the Commission be scheduled at an early date, for the purpose of presenting our request, and looking toward approval of the irregular location.

Thanking you, we are

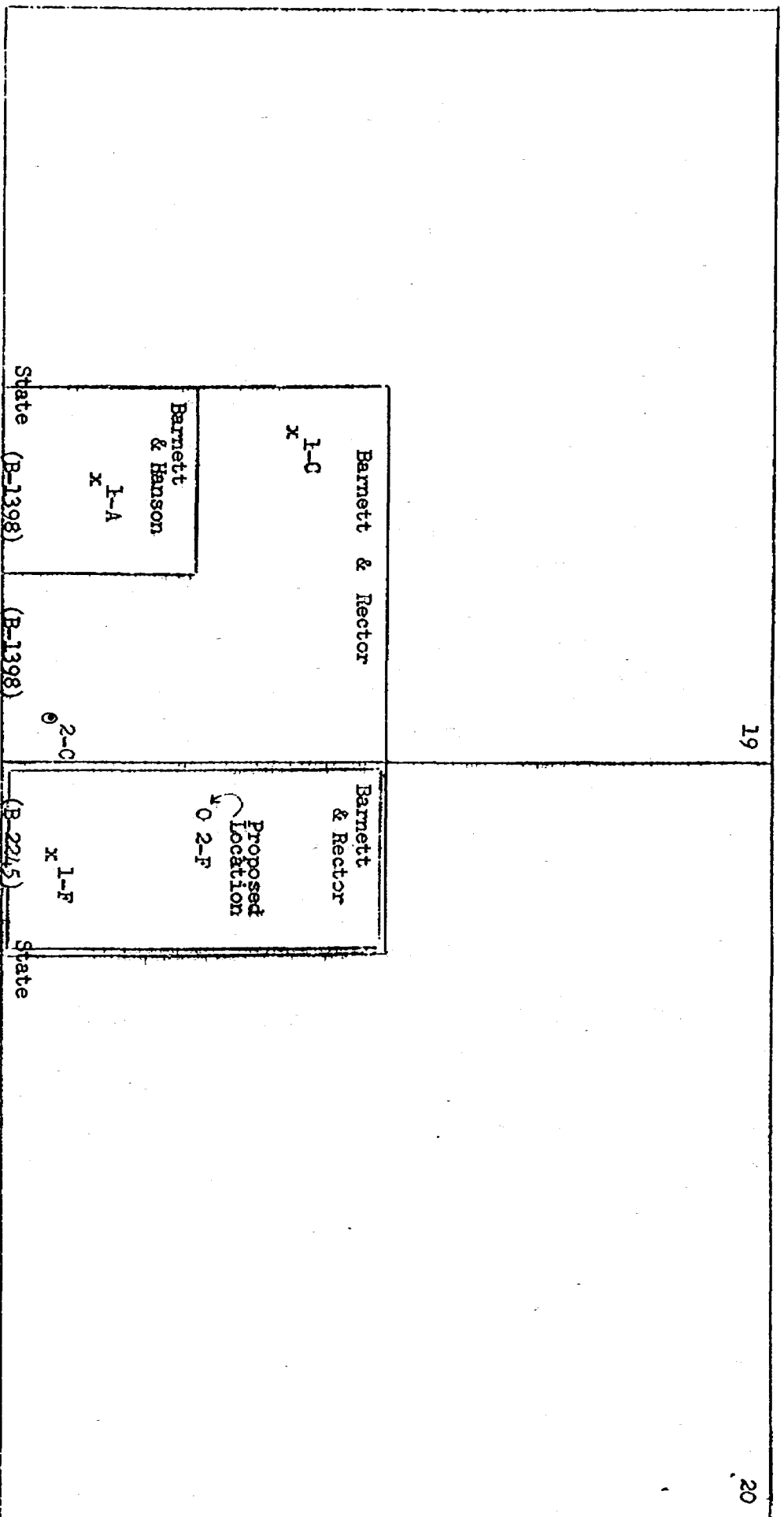
Yours very truly,
BARNETT & RECTOR
John A. Barnett

JAB:b

/s/

P.S. This was informally discussed with Mr. Spurrier in Roswell last night, and he requests that this be handled promptly, in order that it be included in the agenda for the hearing now scheduled for May 23, 1950.

J.A.B.



SECTIONS 19 & 20, T17S, R35E.
LEA COUNTY, N. MEX.

Scale 1" = 1000'

N

NOTICE FOR PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

The State of New Mexico by its Oil Conservation Commission hereby gives notice pursuant to law and the rules and regulations of said Commission promulgated thereunder, of the following public hearing to be held May 23, 1950, beginning at 10:00 o'clock a.m. on that day in the City of Santa Fe, New Mexico, in the Capitol (Hall of Representatives).

STATE OF NEW MEXICO TO:

All named parties in the following
cases and notice to the public;

Case 223

In the matter of application of Cooperative Producing Association for the establishment of a secondary recovery program on all of Section 31, Twp. 12S, R. 32E., N.M.P.M., Lea County, New Mexico.

Given under the seal of the Oil Conservation Commission of New Mexico at Santa Fe, New Mexico on May 10, 1950.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

R. R. SPURRIER, SECRETARY

LEA COUNTY OPERATORS COMMITTEE
HOBBS, NEW MEXICO
May 15, 1950



SCALE : 1 INCH=2000 FT.

MAY 5th, 1950.



Affidavit of Publication

State of New Mexico }
County of Santa Fe } ss.

I, Will Harrison, being first duly sworn,
declare and say that I am the (Business Manager) (Editor) of the Santa Fe
New Mexican, a daily newspaper, published in the English
Language, and having a general circulation in the City and County of Santa Fe, State of
New Mexico, and being a newspaper duly qualified to publish legal notices and adver-
tisements under the provisions of Chapter 167 of the Session Laws of 1937; that the
publication, a copy which is hereto attached, was published in said paper once each week
for one time ~~consecutive weeks~~ and on the same day of each week in
the regular issue of the paper during the time of publication, and that the notice was
published in the newspaper proper, and not in any supplement, once each week for
one time ~~weeks consecutively~~, the first publication being on the
11th day of May, 1950, and the last publica-
tion on the Monday of May, 1950; that payment
for said advertisement has been (duly made), or (assessed as court costs); that the
undersigned has personal knowledge of the matters and things set forth in this affidavit.

PUBLISHER'S BILL

48 lines, one time at \$ 4.80
lines, times, \$
Tax \$
Total \$ 4.80

Received payment,

By _____

Will Harrison
Editor-Manager

Subscribed and sworn to before me this 12th
day of May, A.D., 1950
Anna K. Ormsbee
Notary Public

My Commission expires

June 14, 1953

Case 221

TESTIMONY

WANTZ NO. 3-D DUAL COMPLETION

1. LEASE DESCRIPTION

The Mary E. Wantz Lease consists of 280 acres of patented land in Sec. 21, T-21-S, R-37-E, Lea County New Mexico. The lease has two producing wells in the Penrose-Skelly pay operated by the Trinity Drilling Company. There are also four producing wells in the Drinkard, two in the Hare Pool (McKee Sand) and two in the Brunson Pool (Ellenburger) all operated by the Continental Oil Company. Since these oil producing horizons are recognized as separate reservoirs, the remaining portion of this testimony concerns only the "Drinkard Sandy Member" and Lower Yeso.

2. PRODUCING FORMATIONS

In Bulletin No. 29, published by the New Mexico Bureau of Mines and Mineral Resources, the author, E. Russell Lloyd, has divided the Yeso formation into four parts. These are Upper, Middle, Drinkard Sandy Member and Lower. The Drinkard Sandy Member is also commonly referred to as the "Tubb Sand." To avoid confusion "Tubb Sand" is used here.

Between the top of this sand and the base of the Drinkard pay horizon there is approximately 600 feet of

formation. This can be divided as follows:

1. Tubb, 160 feet, chiefly sand and sandy dolomite.
2. 150 feet of dolomite to the top of the Drinkard.
3. 300 feet of Drinkard pay horizon, chiefly lime and dolomite. Oil and gas accumulation being mainly in the bottom 200 feet.

A number of drill stem tests on wells in the area have shown the presence of gas in the lower portion of the Tubb Sand. A north offset to the Wantz No. 3-D was completed in this section for a potential of 6,000 MCF gas per day. While drilling a well, the Wantz No. 2-S, to the McKee Sand, one location south of the Wantz No. 3-D, the Continental Oil Company took a drill stem test of the Tubb Sand. During the test the section produced gas at the rate of 4,300 MCF per day.

The Wantz No. 3-D plus three direct and two diagonal offsets are producing oil from the lower 200 feet of the Drinkard.

Electrical logs, sample analysis and drill stem tests all indicate the 150 feet of dolomite between the base of the Tubb Sand and the top of the Drinkard to be mainly

dense and barren. The Continental Oil Company's Wantz No. 1-S was cored through the Drinkard section. The core analysis of the top 30 feet showed no permeability while the next 70 feet showed only a few scattered feet with permeability.

This information all indicates that the Drinkard pay and the gas horizon in the Tubb Sand are separate reservoirs.

In the Wantz No. 3-D the top of the Tubb Sand is at 6050 feet and extends to 6210 feet. The section carrying gas is, by correlation with other wells, between 6120 feet and 6195 feet.

The top of the Drinkard pay horizon is at 6345 feet while the main porosity and permeability start at 6500 feet. The well was drilled to a total depth of 6630 feet, the base of the Drinkard.

3. WELL AND OFFSET DATA

The Wantz No. 3-D was completed January 7, 1948 for an initial potential of 240 barrels oil per day. This production was through casing perforations in the Drinkard pay at 6546-53, 6558-64, 6568-73 and 6580-84 feet.

On February 9, 1950, the well tested 32 1/2 barrels oil in 4 1/2 hours. Cumulative production as of April 1, 1950, was 32,080 barrels.

The 40 acre unit offsetting the Wantz 3-D to the north is operated by the Trinity Drilling Company. It contains two wells, one producing oil from the Drinkard and the other gas from the Tubb Sand. The Trinity Drilling Company's

M. Weatherly No. 7 was completed February 5, 1948, for an initial potential of 228 barrels oil per day. This was from the Drinkard through perforations at 6516-28, 6534-58 and 6566-84 feet. During March 1950, this well produced 1,692 barrels. The cumulative production to April 1, 1950, was 58,771 barrels. The Trinity Drilling Company's Weatherly No. 1-E was completed April 27, 1949, for an initial potential of 6,000 MCF gas per day. This was from the Tubb section through perforations 6143-53 and 6158-80 feet. During March 1950, the well produced 38,612 MCF gas plus approximately 1,250 barrels distillate. Cumulative production to April 1, 1950 was 78,080 MCF gas and 2,378 barrels distillate.

The east offset to Wantz No. 3-D is the Gordon Cone, Anderson No. 1. This well was completed April 29, 1948, for an initial potential of 446 barrels oil per day from the Drinkard through perforations 6510-35, 6550-80 and 6590-28 feet. During March 1950, the well produced 2,092 barrels of oil. It had a cumulative production as of April 1, 1950, of 60,814 barrels.

The west offset is Continental Oil Company's Wantz No. 4-D. It was completed for an initial potential of 360 barrels oil per day on August 25, 1948. It was completed in the Drinkard through perforations 6570-6602 and 6630-40 feet. During March 1950, the well produced 943 barrels of oil. The cumulative production as of April 1, 1950 was 19,842 barrels.

4. COMPLETION METHOD

The proposed method of dual completion will prevent commingling of the Tubb Sand and Drinkard production inside the casing. Separation of production from the two zones will be accomplished by means of a Baker Model "D" retainer type production packer. This packer was designed for dual completion work and is capable of withstanding a differential pressure of 2,000 pounds per square inch. The packer has two sets of slips which set in the casing. After both slips have been set and the packer rubber has been expanded against the pipe, it is impossible to move the packer up or down and it can be removed only by drilling it out. The packer has a circular opening in the center through which the production string is run. On the production string is an O-ring seal assembly which seats in the packer and forms a perfect seal. This O-ring seal is recognized throughout the oil industry as the best type of seal for such uses. Once the production string is in place, oil from the Drinkard formation will be produced through the tubing and gas from the Tubb Sand will be produced through the annular space between the tubing and casing.

The static bottom hole pressure of the Drinkard pay in the Wantz No. 3-D was 1,502 pounds in November 1949. It is estimated that the flowing bottom hole pressure is greater than 700 pounds. The Tubb Sand is expected to have a static

formation pressure of 2,400 pounds (The shut-in drill stem test pressure on Wantz No. 2-S was 2,377 pounds). Flowing pressure from this zone is expected to be 2,000 pounds. The maximum differential pressure across the dual completion packer would occur when the Drinkard pay was producing oil and the gas horizon was shut in. Under that condition a differential of 1,700 pounds would exist. This is below that for which the packer is designed.

This completion method will allow both zones to be produced to depletion.

The Drinkard oil will be flowed through the 2 1/2 inch tubing. When natural flow ceases, it will be possible to pump or gas lift the remaining recoverable oil.

The gas horizon is expected to flow to depletion through the annulus.

5. ECONOMICS

It is economically sound to dually complete the Wantz No. 3-D because two producing offsets can be met with one well.

To dually complete the present Wantz No. 3-D will cost approximately \$10,000. To drill a gas well to meet the offset producing from the Tubb Sand would cost \$75,000. A saving of \$65,000 can, therefore, be expected by dual completion of the Wantz No. 3-D.

Case 220 - Skelly

Copies of Application and Notice of Publication:

Glenn Staley
Shell Oil Co., Midland, Texas
Sinclair Oil & Gas Co., Ft. Worth
Texas Pacific Coal & Oil, Ft. Worth
Cities Service Oil Co., Bartlesville
Gulf Oil Corp.
Tide Water Associated, Houston
R. Olsen, Oklahoma City
Continental Oil, Ft. Worth
Atlantic Oil & Refg. Co., Dallas
Stanolind, Ft. Worth
Std. Oil of Texas, Houston
Western Gas Co., El Paso
Magnolia Petroleum, Dallas

Copy of Notice to El Paso Natural Gas Co. - Houston.
Copy of Notice to G. W. Selinger, Skelly Oil Co., Tulsa.

May 9, 1950

copy of petitions - Continental
+ Barnett
also to Staley.

NOTICE OF PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

The State of New Mexico by its Oil Conservation Commission hereby gives notice pursuant to law and the rules and regulations of said Commission promulgated thereunder, of the following public hearing to be held May 23, 1950, beginning at 10:00 o'clock a.m. on that day in the City of Santa Fe, New Mexico, in the Capitol (Hall of Representatives).

STATE OF NEW MEXICO TO:

All named parties in the following
cases and notice to the public:

Case 220

In the matter of the application of the Shelly Oil Company for an exception to Rule 104 for the formation of an unorthodox unit in Section 2, Township 23S, Range 36E, N.M.P.M., Langlie-Mattix pool, Lea County, New Mexico.

Case 221

In the matter of the application of Continental Oil Company for an order granting permission to dually complete its "M.E. Wells No. 3-D" well, located in the SW/4 SE/4 Section 21, Township 21S, Range 37E, N.M.P.M., Lea County, New Mexico, for producing gas from the Tubb sand, and oil from the Drinkard formation.

Case 222

In the matter of the application of Barnett and Rector for an order permitting the drilling of an unorthodox location 1370 ft. from the south line and 330 ft. from the west line (SW/4 NW/4 SW/4) of Section 20, Township 17S, Range 35E, N.M.P.M., along the northern limits of the Vacuum pool, Lea County, New Mexico.

Given under the seal of the Oil Conservation Commission of New Mexico, at Santa Fe, New Mexico, on May 9, 1950.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


R. R. CURRIER, SECRETARY