

C O P Y
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CONTINENTAL OIL COMPANY
Hobbs, New Mexico
December 21, 1949

TO: Mr. E. L. Shafer - Hobbs, New Mexico
SUBJECT: BACK-PRESSURE TEST - BRITT B-15 NO. 3

The subject well was originally completed as an oil well November 17, 1938 at a total depth of 3836', for an initial potential of 216 barrels oil and 1836 MCF gas per day. The well tested 26 barrels oil and 8 barrels water per day with a gas-oil ratio of 105,211 cubic feet per barrel on October 27, 1942. The well was shut in November 1, 1942 and remained shut-in until commencement of workover operations.

On December 8, 1949 after perforating the Queen sand, the well was recompleted as a gas well for an initial potential of 6,550 MCF sweet gas per day, based on an 8 hour back-pressure test. This back-pressure test was made to determine the theoretical open flow capacity of the well at zero bottom-hole pressure and the deliverability of the well at various well-head pressures.

Attached are curves representing the calculated open-flow potential and deliverability and a chart tabulating the data obtained by this test.

A summary of the results obtained during this test are as follows:

BEFORE THE
OIL CONS
SANTA FE, NEW MEXICO 3
CASE 1112

Mr. E.I. Shafer
Page 2

Calculated Open-Flow Potential	6,550 MCF
25% of Potential	1,637.5 MCF
Deliverability at 600 psi	4,733 MCF
Deliverability at 150 psi	app. open flow

G.P. M., H₂S, and Acid Gas Content are not available at the present time.

/s/ L. D. Alston
L. D. ALSTON
Gas Tester
New Mexico District
West Texas-New Mexico Division
Production Department

LIA-MFM
Enc.

CC: (c/o HM) HLJ MND-3 HM File-2

Case File

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

October 31, 1956

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Mr. Jason Kellahin
P. O. Box 597
Santa Fe, New Mexico

Dear Sir:

On behalf of your client, Continental Oil Company, we enclose two copies of Order R-~~407~~ issued October 26, 1956, by the Oil Conservation Commission in Case No. 1112, which was heard on July 25, 1956.

Very truly yours,

A. L. Porter, Jr.
Secretary-Director

jh
encls.

OK
to deny 10/8/56
wmm

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date 10/5/56

CASE 1112

Hearing Date 7/25/56

My recommendations for an order in the above numbered cases are as follows:

Two in ^{with} General
in case 1154

Enter an order denying this application for 480 acres. My reasons:

The well is located 1980' FSL of the unit and only 330' FWL of the unit. Order R-520, while it may not necessarily be perfect, was wise in making certain restrictions on the amount of acreage that may be granted a well administratively when the well is crowding its tract boundary. These restrictions may have been intended to apply not only to administrative approvals but exceptions by hearing also. Maximum acreage that may be assigned to a well ~~330~~ located 660-1980 is only 320 acres, whereas this well is only 330-1980 and seeks 480 acres.

Another factor worthy of consideration in this case is the objection of Amerade

Staff Member

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date _____

CASE 1112 (cont)

Hearing Date _____

My recommendations for an order in the above numbered cases are as follows:

to the assignment of a 480^{acre} allowable to a well offsetting their acreage by only 330 feet.

If the application is denied, Coult has a well, Britt B-15 No 8, located in the NW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Sec. 15, T 20 S, R 37 E, ~~which~~ which is ^{so} located structurally ~~so~~ that a Eunout Gas Well should be possible. This well could be dually or plugged back ~~if~~ ^{when} it is no longer productive in the Monument Pool and assigned 160 acres consisting of the W $\frac{1}{2}$ of the E $\frac{1}{2}$ of Sec 15 ⁵⁰² and 320 acres consisting of the W $\frac{1}{2}$ of the E $\frac{1}{2}$ and the E $\frac{1}{2}$ of the E $\frac{1}{2}$ of section 15. These two tracts would have to be communitized to effect such a unit, but Coult has an interest in both of the tracts and should be able to negotiate such a communitization without too much difficulty.

Jan Nuttle
Staff Member

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CONTINENTAL OIL COMPANY
BACK-PRESSURE TEST DATA
BRIEF B-15 NO.3

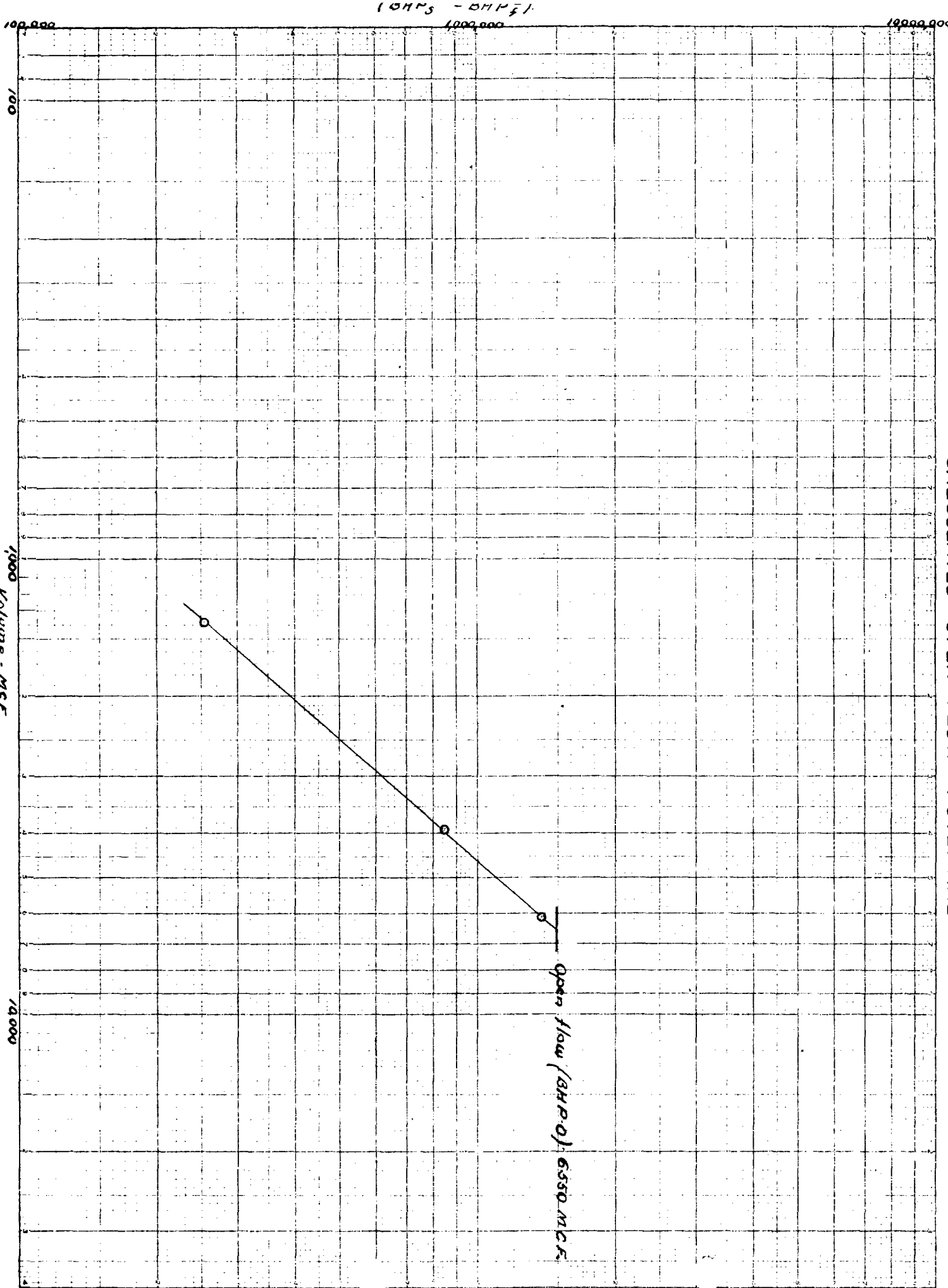
<u>VOLUME</u> (CALCULATED MCF)	<u>B. H. P.</u> (CALCULATED PSI ABS)	<u>B.H.P.</u> ²	<u>(BHP² - BHP²)</u>	<u>SURFACE PRESSURE</u> PSI ABS
0	1223.8	1,497,686	-- --	1137.2
1,392	1116.2	1,245,902	251,784	1039.2
3,910	808.2	653,187	844,499	746.2
6,103.5	344.7	118,818	1,378,868	294.2

NOTE: Volume corrected for specific gravity
and atmospheric pressure.

Date Tested: December 8, 1949

LDA-MPV
Hobbs, N.M.
12-21-49

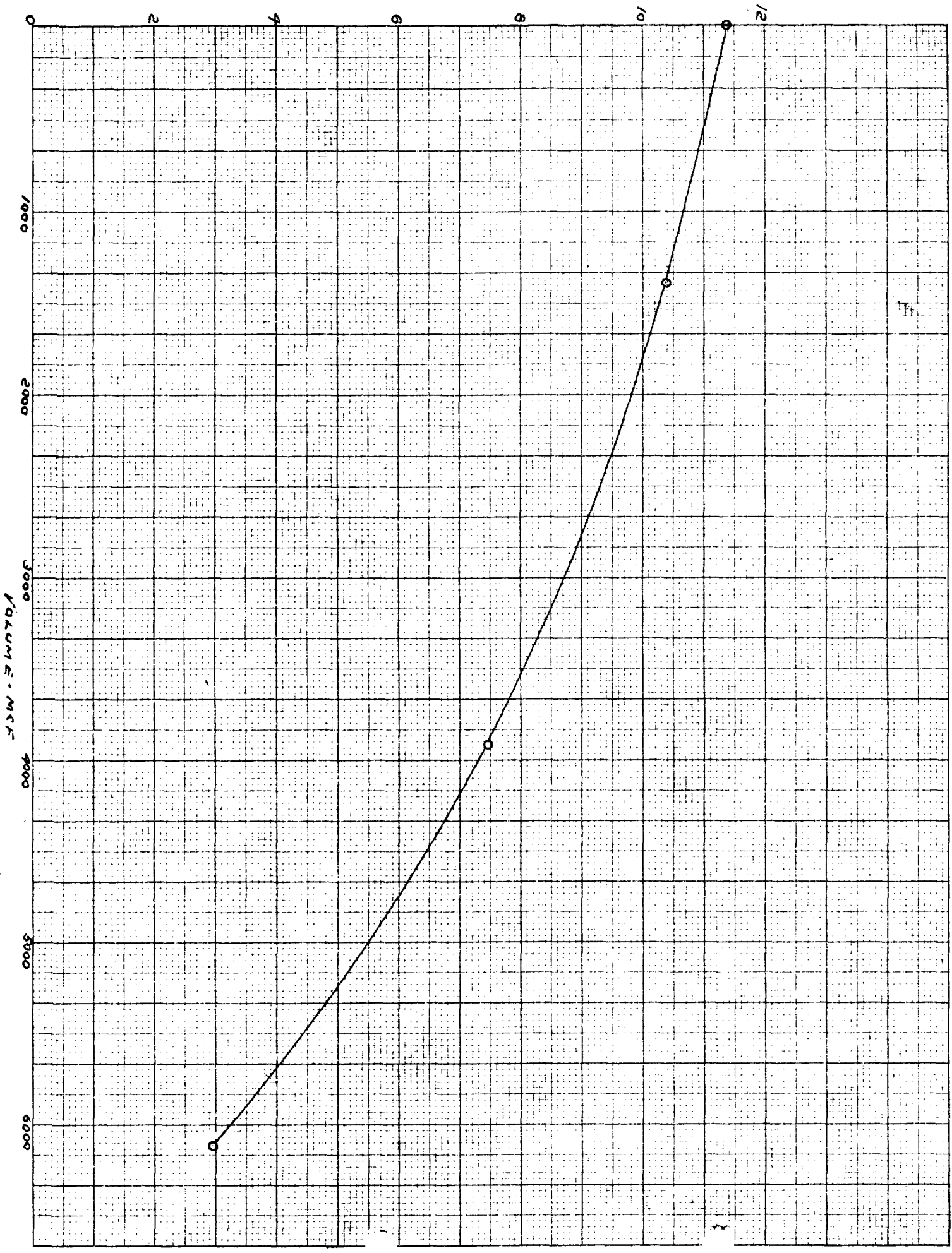
BRITTO B-15 CALCULATED OPEN FLOW POTENTIAL

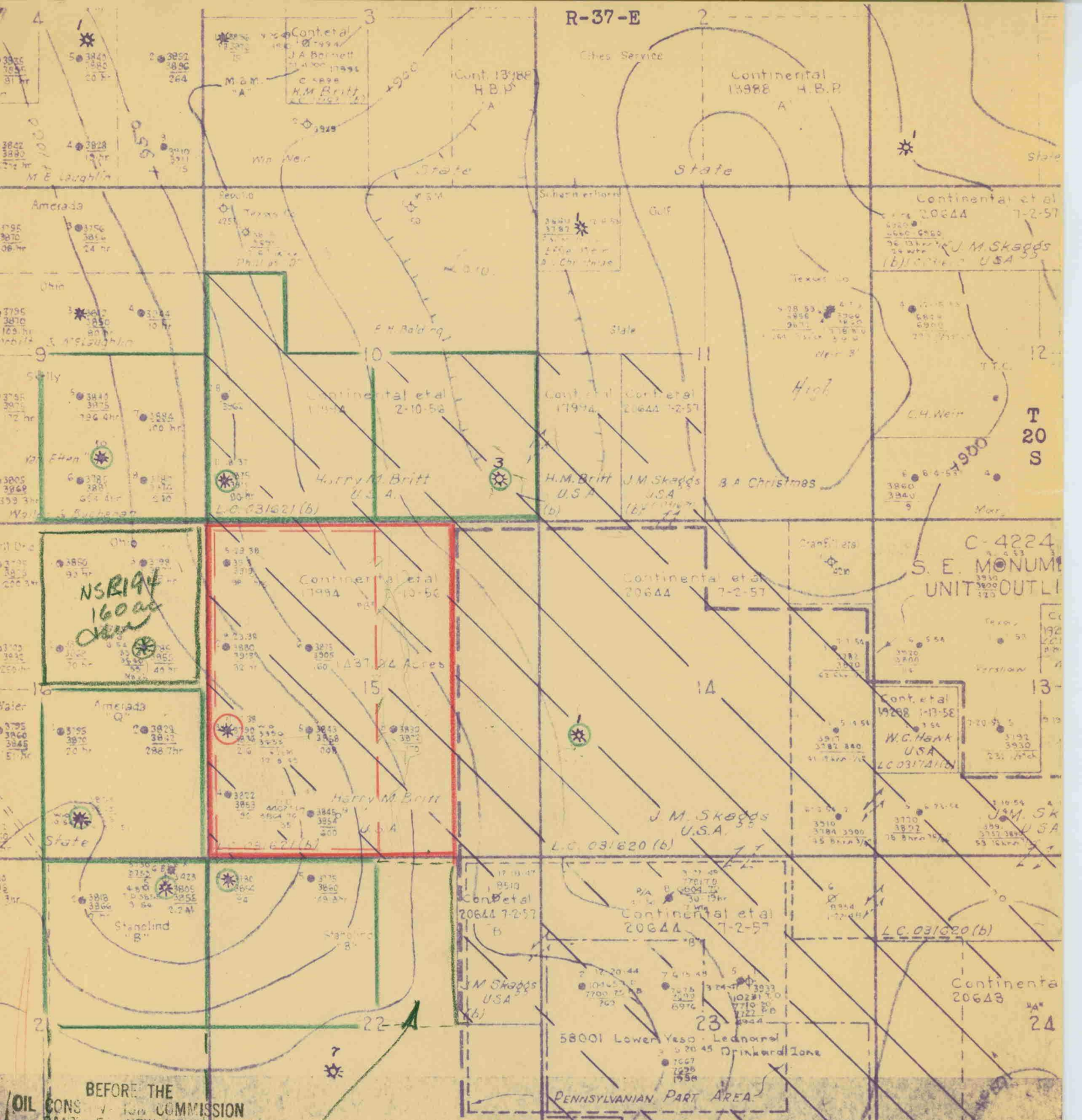


BRITT B-15 NO. 1
DELIVERABILITY CURVE



NO. 381 20 DIVISIONS PER INCH 1940 EDITION
CODEX BOOK COMPANY, INC.
PRINTED IN U.S.A.





BEFORE THE
OIL CONS. COMMISSION
SANJA FE, NEW MEXICO
EXHIBIT No. 1
CASE 1112

CONTINENTAL OIL COMPANY

scale: 1"=2000' 25' contours on top of Yates

- Subject Gas Well
- Offset Gas Well
- Acreage Proposed for Gas Well
- Acreage Now Assigned to Gas Well
- Acreage Assigned to Offset Gas Well

320 acres
July 1956
R855
dm

240 acres R834
dm

CASE: 1112
EXHIBIT: #1

COPY

EL PASO NATURAL GAS COMPANY
MINIMUM CONTRACT TEST
 (To Determine Wellhead Deliverability at 100 PSIG)

Company Continental Oil Company Lease Lockhart #18 Well No. 3
 Unit K Sec. 18 Twp. 21S Rge. 36E County Lea
 Pool Bumont Type Well Single Date of Test 7-18-55
 Producing Thru: Casing X Tubing _____ Gravity 0.675 Bar. Pressure 13.2
 n_t from Previous Test: 1.000 Date of Previous Test: 3-13-53

No.	FLOW DATA			TUBING DATA			CASING DATA		Duration of Flow Hr.	
	Line Size	x Orifice Size	Press. psig	Diff. h_w	Temp. °F	Press. psig	Temp. °F	Press. psig		Temp. °F
Shut-in								811 826		24 48
1.	4 X	1.500	601	5.0	58			605		24
2.										

Choke wide open

No.	Coefficient (24-Hour)	$\sqrt{h_w P_w}$	Pressure psia	Flow Temp. Factor F_t	Gravity Factor F_g	Compress. Factor F_{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	13.99	55.41		1.0019	.9427	1.072	785
2.							

$$D_t = Q \left[\frac{P_c^2 - P_d^2}{P_c^2 - P_t^2} \right]^{n_t}$$

$P_c^2 =$ 704.3
 $P_d^2 =$ 12.81
 $P_t^2 =$ 382.2

$$\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_t^2} \right] = \frac{691.5}{322.1} = 2.147 = B$$

n_t = Slope of Wellhead Deliverability Curve ($P_c^2 - P_t^2$ vs. Q)
 Q = Actual flow @ end of Flow Period at Wellhead Pressure P_t
 P_c = Maximum Shut-in Pressure observed in a 48 hour period, PSIA
 P_t = Flowing Wellhead Pressure (tubing if flowing thru tubing and vice versa), psia
 P_d = Deliverability Pressure (113.2 psia for Minimum Contract Requirements)
 D_t = Wellhead Deliverability at Deliverability Pressure (P_d), MCF/Day

$\text{Log } B =$ 1.331832 $\times (n_t)$ 1.000 $=$ _____ ; Antilog $=$ _____ $= B^{n_t}$
 $Q =$ 785 $\times (B^{n_t})$ 2.147 $=$ 1,685 $= D_t$

I hereby swear and affirm that the information given above is true and correct.
 Name /s/ Charles H. Cole
 Position Gas Engineer

Witnessed by:
 Name _____
 Company _____
 Name Edward Mabe (/s/ EM)
 Company El Paso Natural Gas Company