Case 531

INTERFERENCE TEST

May 1 - 3, 1 9 5 2

Pettigrew-Tocito Field

Rio Arriba County, N.M.

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LOWRY et al OPERATING ACCOUNT

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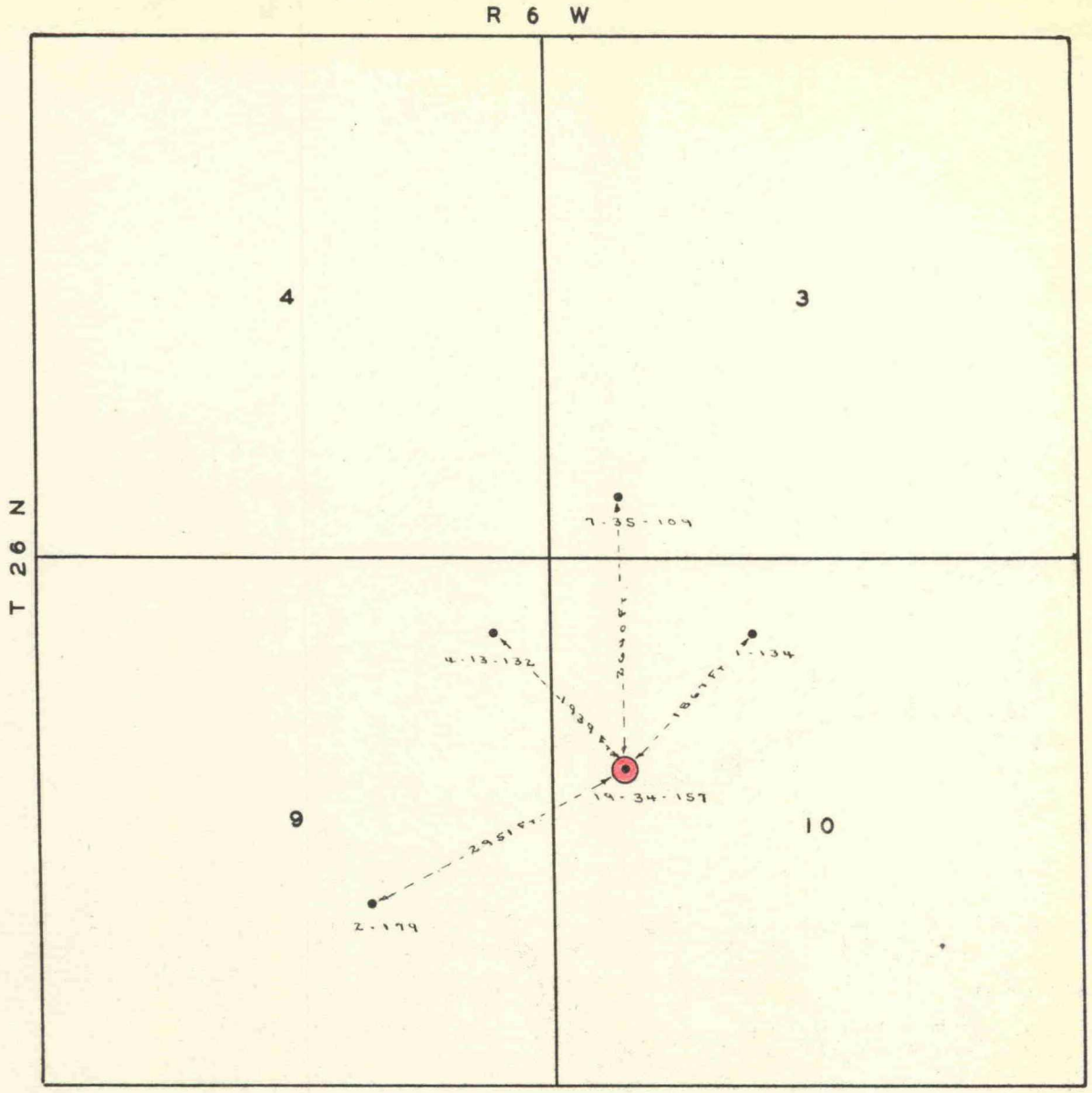
WEST TEXAS ENGINEERING SERVICE, INC.
Midland, Texas

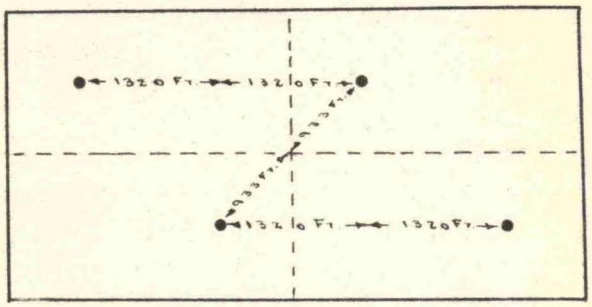


Interference Test

May 1 - 3, 1952

Pettigrew-Tocito Field

Well No. 19-34-157



80-acre typical spacing pattern

Datum -168 ft.

Shut in pressure at start of test	2137 p.s.i.
Shut in pressure at completion of test	2130 p.s.i.
Pressure drop (40hours)	7 p.s.i.

DESCRIPTION OF INTERFERENCE TEST

Federal 19-34-157

May 1, 1952 to May 3, 1952

An interference test was conducted during the period 4:45 P.M. May 1, 1952 to 8:45 A.M. May 3, 1952 for Lowry et al Operating Account Well no. 19-34-157 of the Pettigrew-Tocito Pool, Rio Arriba County, New Mexico. This test was conducted by the West Texas Engineering Service of Midland, Texas, to determine if communication in the reservoir could be detected between wells, thereby furnishing evidence as to the effective drainage area for wells of this Pool.

At the time the test was conducted, there were four wells completed, and one well, Federal 1-134, was in the process of being completed in the Tocito formation. All wells, with the exception of Federal 1-134 were shut in prior to the test for bottomhole pressure measurements. Results of this bottomhole pressure survey were as follows:

Well No.	Shut In Time - Hours	Bottomhole pressure Datum -100 feet
Federal 2-179	76½	2,112
Federal 4-13-132	76½	2,069
Federal 19-34-157	99	2,115
Federal 7-35-109	193	2,103

Volumetric average reservoir pressure 2,150 p.s.i.

After completion of the bottomhole pressure tests, the bottomhole pressure gauge was lowered to the top of the Tocito zone for Well Federal 19-34-157, and the gauge remained in the well for a period of forty hours with the well shut in. The remaining wells were placed on production and produced the following amounts of oil:

	Oil Production - Barrels		
Well No.	First 24 hours	Next 16 hours	Total - 40 hours
Federal 1-134	90.19	48.95	139.14
Federal 2-179	490.64	362.50	853.14
Federal 4-13-132	254.21	171.50	425.71
Federal 7-35-109	18.67	0	18.67
	853.71	582.95	1436.66

At the start of the interference test the bottomhole pressure at the top of the Tocito zone (6,819 ft. or -168 feet datum) was 2137 p.s.i., and at the conclusion of the 40-hour test, the bottomhole pressure measured 2130 p.s.i.

It is concluded that this 7 p.s.i. decrease in bottomhole pressure was occasioned by oil being produced from the reservoir by other wells.

The distance of well Federal 19-34-157 from other wells producing from the same reservoir is as follows:

Federal 1-134	1,867 feet
Federal 2-179	2,951 feet
Federal 4-13-132	1,939 feet
Federal 7-35-109	2,640 feet

From a review of the factual data of the test, it is concluded that oil drainage occurs for a distance of at least 1,867 feet for wells of the Pettigrew-Tocito reservoir. It is concluded that one well will readily drain economically and efficiently an 80-acre proration unit since the maximum drainage area for wells of this proration pattern is 1,320 feet.

WEST TEXAS
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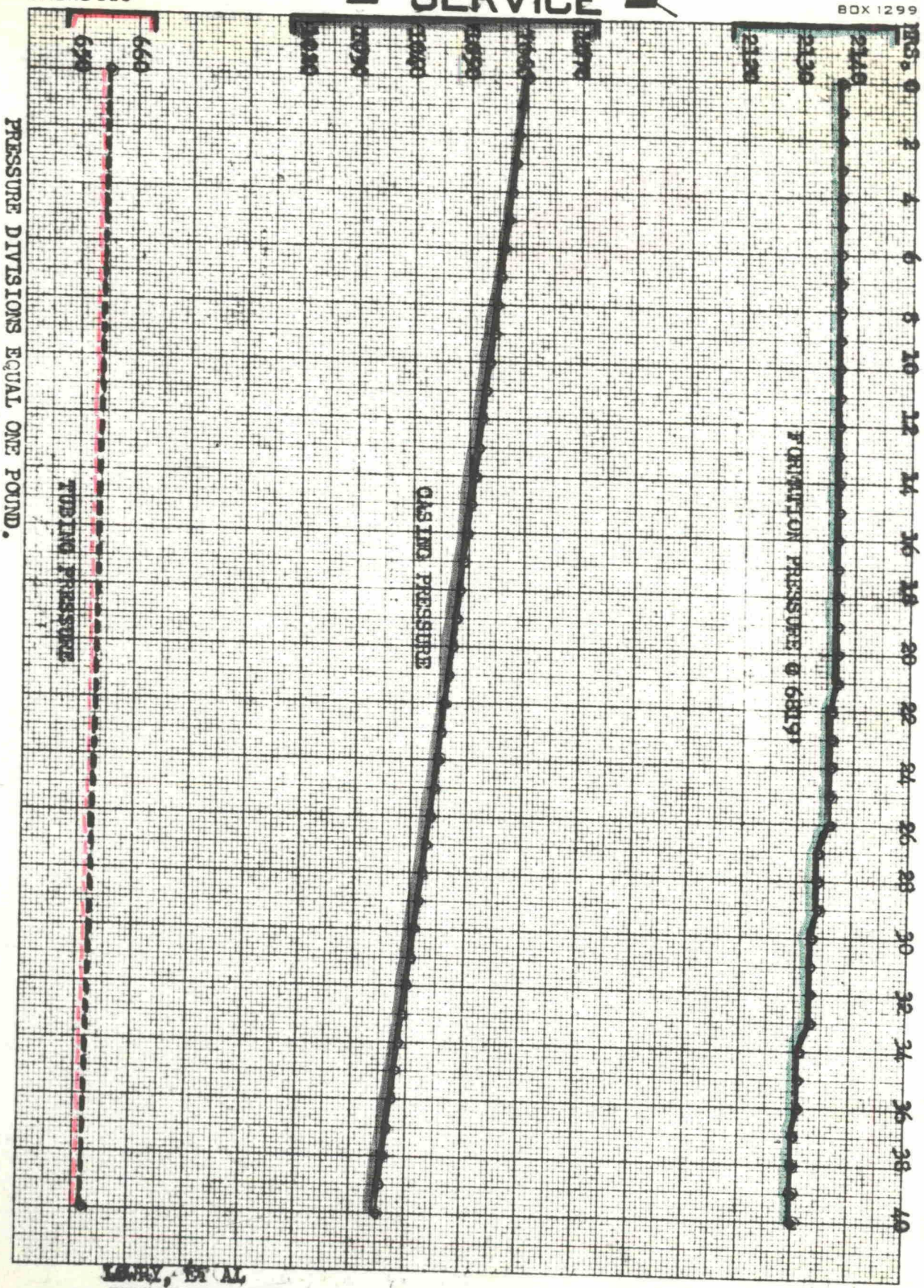

LEWIS, ET AL

OPERATOR OPERATING ACCOUNT LEASE FEDERAL DOSWELL WELL NO. 19-34-157

POOL PETTIGREW TOCITO COUNTY RIO ARRIBA DATE 5-1-52 to 5-3-52

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MIDLAND, TEXAS

CONTINUOUS RECORDING OF BOTTOM HOLE PRESSURE
AT A DEPTH OF 6819'.

Hours	Pressure	Hours	Pressure
Arrival @ Bottom	2137	21	2137
1	2137	22	2136
2	2137	23	2136
3	2137	24	2136
4	2137	25	2136
5	2137	26	2136
6	2137	27	2134
7	2137	28	2134
8	2137	29	2134
9	2137	30	2133
10	2137	31	2133
11	2137	32	2133
12	2137	33	2133
13	2137	34	2131
14	2137	35	2131
15	2137	36	2131
16	2137	37	2130
17	2137	38	2130
18	2137	39	2130
19	2137	40	2130
20	2137		