

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool SOUTH FOUR LAKES Formation DEVONIAN County LEA
Initial ✓ Annual Special Date of Test 6-18-65
Company HUMBLE OIL & REFINING CO. Lease SOUTH FOUR LAKES UNIT Well No. 2
Unit G Sec. 2 Twp. 12 Rge. 34 Purchaser EL PASO NATURAL GAS
Casing 5 1/2 In. 17.0 I.D. 4.892 Set at 12924 Perf. 12678 To 12698
Tubing 2 In. 4.7 I.D. 1.995 Set at 12670 Perf. NONE To -
Gas Pay: From 12678 To 12698 L 12670 x G_{WH} 1.3192 - GL 16712 Bar. Press. 13.2
Producing Thru. Casing Tubing ✓ Type Well SINGLE
Date of Completion: 6-18-65 Packer 12670 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. 201°F

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)

Type Taps

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
1.	4	3/4	8.2	8.1	82					
2.	4	3/4	7.8	5.0	82					
3.	4	3/4	7.7	4.5	80					
4.	4	3/4	7.4	2.5	72					
5.										

FLOW CALCULATIONS SECOND STAGE

No.	Coefficient (24-Hour)	$\sqrt{h_{wpe}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	3.435	66.4	-	0.9795	0.9141	-	204.3
2.	3.435	39.0	-	0.9796	0.9141	-	119.9
3.	3.435	34.7	-	0.9813	0.9141	-	106.8
4.	3.435	18.5	-	0.9887	0.9141	-	57.4
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 3432 cf/obl.
Gravity of Liquid Hydrocarbons 51.8 deg.
P_c - (1-e^{-s}) -

Specific Gravity Separator Gas 0.7180
Specific Gravity Flowing Fluid 1.3130
P_c 4805.2 P_c 23089.9

BHP @ (-8531) 12688 * USED FOR PRESSURE CALCULATIONS

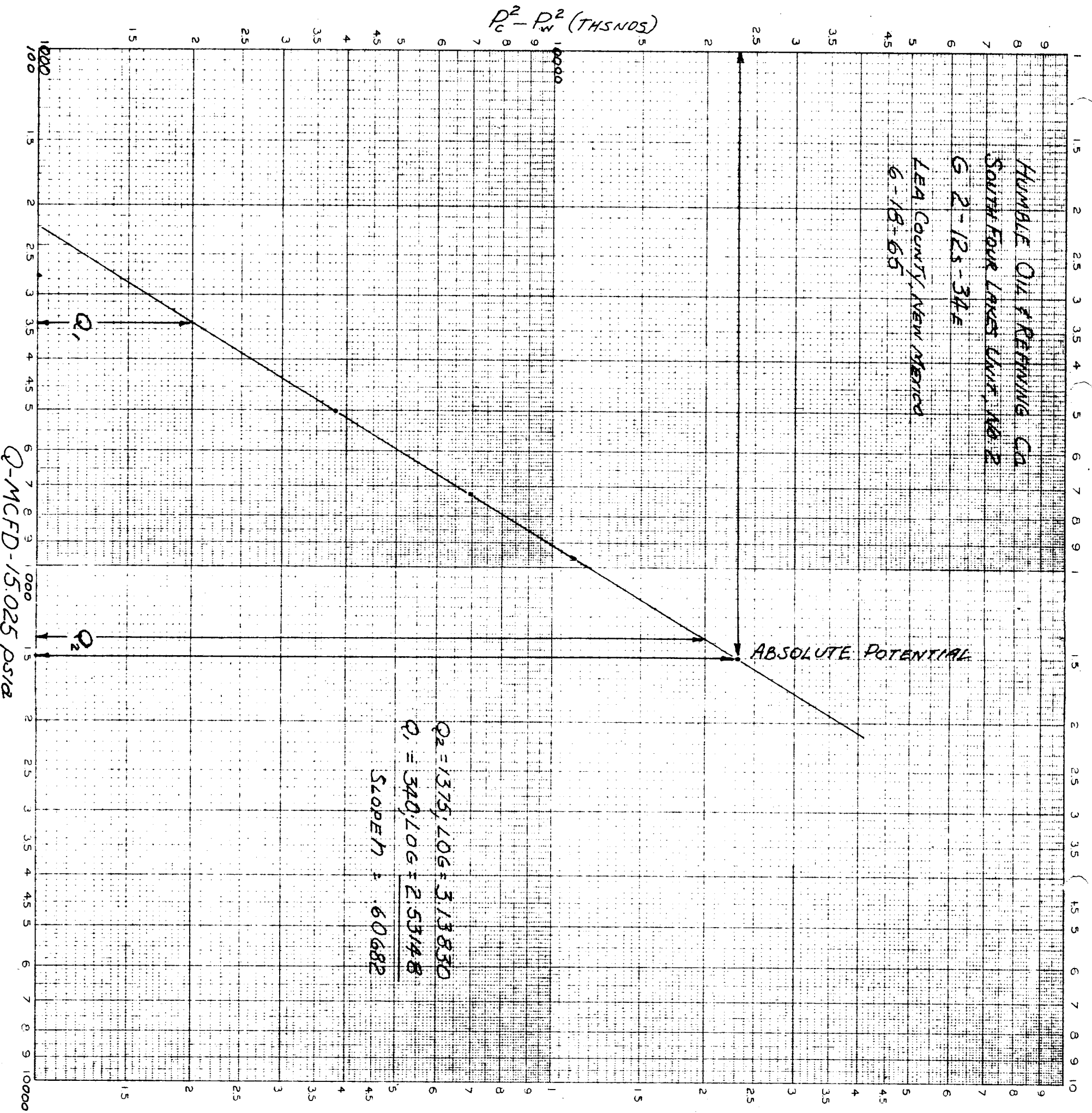
No.	P _w BHP psia	P _c ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _w ²	P _c ² -P _w ²	Cal. P.	P _w /P _c
1.	3467.2	-	-	-	-	12021.5	11968.4	-	-
2.	4012.6	-	-	-	-	16097.7	6992.2	-	-
3.	4389.2	-	-	-	-	19265.1	3824.8	-	-
4.	4699.2	-	-	-	-	22082.5	1007.4	-	-
5.									

Absolute Potential: 1500 MCFPD; n .61COMPANY HUMBLE OIL & REFINING COMPANYADDRESS P.O. BOX 1100, HOBBS, NEW MEXICOAGENT and TITLE COLEMAN PETROLEUM ENGINEERING CO. Joe A. ColemanWITNESSED PUMPERCOMPANY HUMBLE OIL & REFINING CO.

REMARKS

* MID POINT OF CASING PERFORATIONS

* TOTAL GAS
959.2
725.2
501.5
278.3





COLEMAN PETROLEUM ENGINEERING COMPANY

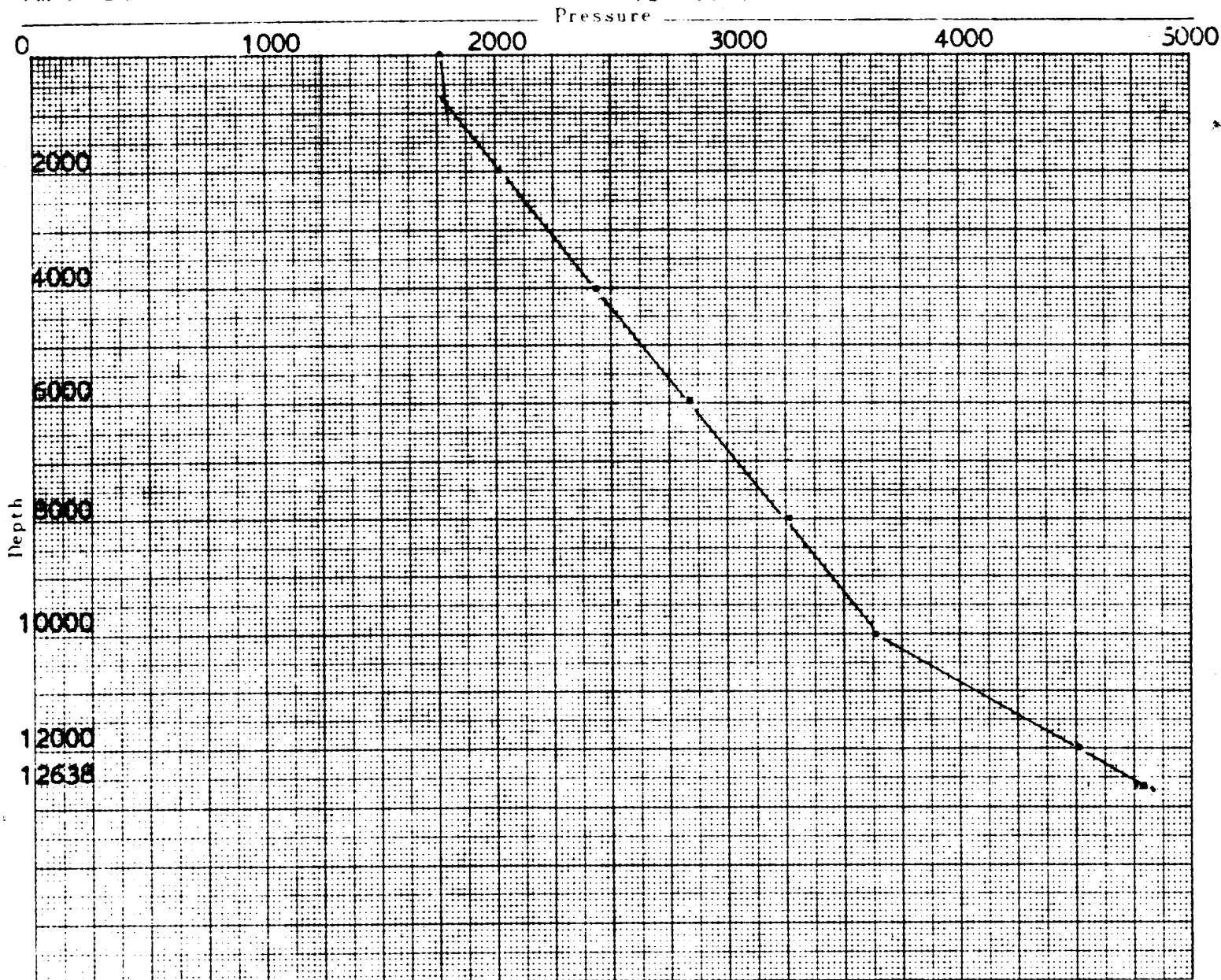
PHONE EXPRESS 3-3913
611 GRIMES
P. O. BOX 1829
HOBBS, NEW MEXICO

BOTTOM HOLE PRESSURE RECORD

OPERATOR **HUMBLE OIL & REFINING CO.**
FIELD **S. FOUR LAKES FORMATION DEVONIAN**
LEASE **S. FOUR LAKES UNIT WELL No. 2**
COUNTY **LEA** STATE **NEW MEXICO**
DATE **6-18-65** TIME **8:00 AM**
Status **SHUT IN** Test depth **12638'**
Time S **72.0 HRS** Last test date **INITIAL**
Tub Pres **1770 DWT** BHP last test **-**
Gas. Pr **PKR.** BHP change **-**
Elev **4157' DB** Fluid top **800'**
Datum **(-8531)**** Water top **10000'**
Temp **201° F.** Run by **ALLMAN**
Cal. No **A3076N** Chart No. **1**

Depth	Pressure	Gradient
0	1770	-
2000	2028	.129
4000	2438	.205
6000	2848	.205
8000	3260	.206
10000	3672	.206
12000	4505	.417
12638	4771	.417
12688 (-8531)	4792* **	(.417)

*EXTRAPOLATED PRESSURE
**MID POINT OF CASING PERFORATIONS





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BOTTOM HOLE PRESSURE RECORD

OPERATOR **HUMBLE OIL & REFINING CO.**
FIELD **S. FOUR LAKES FORMATION DEVONIAN**
LEASE **S. FOUR LAKES UNIT WELL No. 2**
COUNTY **LEA** STATE **NEW MEXICO**
DATE **6-18-65** TIME **8:30 PM**
Status **FLOWING ON** Test depth **12638'**
XXXXXX 6/64" CH. Last test date **-**
Tub. Pres. **1523 DWT** BHP last test **-**
Cas. Pres. **PKR.** BHP change **-**
Elev **4157' DB** Fluid top **SURFACE**
Datum **(-8531)**** Water top **SURFACE**
Temp. **201° F.** Run by **ALLMAN**
Cal. No. **A3076N** Chart No. **3**

Depth	Pressure	Gradient
0	1523	-
2000	1852	.165
4000	2323	.236
6000	2787	.232
8000	3383	.298
10000	3953	.285
12000	4517	.282
12633	4674	.246
12683 (-8531)	4686* **	(.246)

*EXTRAPOLATED PRESSURE
** MID POINT OF CASING PERFSORATIONS

