

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Jalnet Formation Utah County Lee
Initial _____ Annual _____ Special X Date of Test 1-13-57
S.W. _____
Company Humble Oil & Refining Co. Lease Harrison Well No. 1
Unit H Sec. 25 Twp. 243 Rge. 36E Purchaser EPNG
Casing 7" Wt. 24 I.D. 6.366 Set at 3235 Perf. 2800 To 2991
Tubing 2" Wt. 4.7 I.D. 1.975 Set at 2775 Perf. _____ To _____
Gas Pay: From 2800 To 2991 L 2775 xG 0.460 -GL 1832 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: October, 1955 Packer 2775 Reservoir Temp. _____

OBSERVED DATA

Tested Through (Packer) (Orifice) (Meter)Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Packer) (Line) Size	(Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						705				72
1.	4	1.500	240	22.1	40	590				24
2.	4	1.500	231	29.7	42	583				24
3.	4	1.500	239	35.3	48	487				24
4.	4	1.500	249	44.4	48	401				24
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	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	74.60	251.2	1.0196	0.9535	1.009	1047
2.	13.99	76.42	234.2	1.0107	0.9535	1.007	1395
3.	13.99	114.31	252.2	1.0117	0.9535	1.008	1641
4.	13.99	131.93	253.2	1.0117	0.9535	1.009	1838
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
c 9.936 (1-e^{-s}) 0.118

Specific Gravity Separator Gas 0.460
Specific Gravity Flowing Fluid _____
P_c 718.2 P_c 515.8

No.	P _t (psia)	P _t 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 _w	P _w / P _c
1.	608.2	369.9	10.4	108.2	12.8	376.7	139.1	603.7	0.835
2.	516.2	266.3	13.3	176.9	28.9	319.2	196.6	565.0	0.796
3.	482.2	232.4	14.3	205.7	31.4	262.0	250.8	511.9	0.712
4.	414.2	171.6	18.2	331.2	39.1	210.7	305.1	459.0	0.699
5.									

Absolute Potential: 2645 MCFPD; n 0.7146COMPANY Humble Oil & Refining Co.ADDRESS Box 2347, Hobbs, New MexicoAGENT and TITLE Mr. M. R. Morgan Dist. Sup.WITNESSED SmithCOMPANY El Paso Natural Gas Co.

REMARKS

FEB 1 1957
OCC. ENGINEER

INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

NOMENCLATURE

Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w).
MCF/da. @ 15.025 psia and 60° F.

P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater.
psia

P_w = Static wellhead working pressure as determined at the end of flow period.
(Casing if flowing thru tubing, tubing if flowing thru casing.) psia

P_t = Flowing wellhead pressure (tubing if flowing through tubing, casing if flowing through casing.) psia

P_f = Meter pressure, psia.

h_w = Differential meter pressure, inches water.

F_g = Gravity correction factor.

F_t = Flowing temperature correction factor.

F_{pv} = Supercompressibility factor.

n = Slope of back pressure curve.

Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t .