

NEW MEXICO OIL CONSERVATION COMMISSION

HOODS OFFICE OCC Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Langlie-Wattix Formation Queen County Lea AM 8:20
Initial _____ Annual _____ Special X Date of Test 2-11-57
Company The Atlantic Refining Company Lease State I Well No. 1
Unit B Sec. 25 Twp. 25-S Rge. 37-E Purchaser KPM
Casing 7" Wt. 23 I.D. _____ Set at 2911 Perf. _____ To _____
Tubing 2" Wt. 4.7 I.D. _____ Set at 3192 Perf. _____ To _____
Gas Pay: From 2911 To 3238 L 3192 xG .660 -GL 2107 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 6-11-53 Packer None Reservoir Temp. _____

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.	
SI						725		725		72
1.	1	1.250	270	19.36	75	614		614		24
2.	1	1.250	261	23.04	75	590		596		24
3.	1	1.250	252	34.81	73	550		560		24
4.	1	1.250	274	50.41	74	483		489		24
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w P_f}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	9.643	74.02	283.2	.9859	0.9535	1.026	688.
2.	9.643	79.45	274.2	.9859	0.9535	1.025	738
3.	9.643	96.05	265.2	.9877	0.9535	1.025	894
4.	9.643	120.28	287.2	.9868	0.9535	1.027	1121.
5.							

PRESSURE CALCULATIONS

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

Specific Gravity Separator Gas .660
Specific Gravity Flowing Fluid _____
P_c 738.2 P_c² 544.9

No.	P _w 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.	631.2					398.4	146.5		.855
2.	609.2					371.1	173.8		.828
3.	573.2					328.6	216.3		.776
4.	512.2					262.3	282.6		.684
5.									

Absolute Potential: 1950 MCFPD; n 0.844

COMPANY The Atlantic Refining Company
ADDRESS P.O. Box 1038 Denver City, Texas
AGENT and TITLE Mr. H.A. Carr, District Sup.
WITNESSED _____
COMPANY _____

REMARKS

ELVIS A. UTZ
GAS 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} = Supercompressability 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 .