Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS   Revised 12-1-55

Pool __Pine Lake__   Formation __Picture Cliff__   County __Rio Arriba__

Initial __X__   Annual _____   Special _____   Date of Test __9-21-60__

Company __Honolulu Oil Corporation__   Lease __Jicarilla Apache "A"__ Well No. __2-A__

Unit _____ Sec. __25__ Twp. __26 N__   Rge. __3 W__   Purchaser __--__

Casing _____ Wt. __14__ I.D. __5 1/2__ Set at __4101__ Perf. __3967__   To __4019__

Tubing _____ Wt. _____ I.D. __1 1/4__ Set at __4021__ Perf. __O.E.__   To _____

Gas Pay: From __3965__ To __4019__ L __4021__ xG __.753__ -GL __3027__ Bar.Press. __12 psia__

Producing Thru: Casing _____ Tubing __X__   Type Well __Single__

Date of Completion: __9-21-60__ Packer __None__   Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. __110° F__

OBSERVED DATA

Tested Through x~~(Prover)~~(Choke) (Meter)   Type Taps __Flange__

No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	Duration of Flow Hr.
	Flow Data					Tubing Data		Casing Data		
SI	2.000	1.000			60	1020	60	1020	60	7 days
1.	2.000	1.000	504	22	60	505	60	620	60	16 hours
2.										
3.										
4.										
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.	4,946.38	106.54	516	1.000	1.2127	1.064	680
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio __500.000__ cf/bbl.   Specific Gravity Separator Gas __.680__

Gravity of Liquid Hydrocarbons __---__ deg.   Specific Gravity Flowing Fluid __.753*__

F_c __24.62__ $(1-e^{-s})$ _____ P_c __1032__ P_c^2 __1065__

*Measured at wellhead

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	$\frac{P_w}{P_c}$
1.						399.4	665.6		.593
2.									
3.									
4.									
5.									

Absolute Potential: __1,115__ MCFPD; n __.85__

COMPANY __Honolulu Oil Corporation__

ADDRESS __Drawer 1391, Midland, Texas__

AGENT and TITLE __G. B. Evans__   G. B. Evans, Division Gas Engineer

WITNESSED __Donald Ferrari__

COMPANY __Southern Union Gas Company__

REMARKS

Flow rate and casing pressure stable for the last four hours of the test.
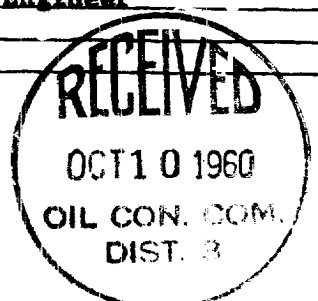
INSTRUCTIONS

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.