

MULTI-POINT BLOW-OUT TEST FOR GAS WELLS

Pool Sumont Location Queen City County Lea
Initial Date of Test 6-11 to 6-15-56
Company Humble Oil & Refining Company Lease N.M. State F Well No. 1
Unit K Sec. 17 Twp. 20S Rge. 37E Purchaser El Paso Natural Gas Company
Casing 5½ Wt. 17 I.D. 4.892 Set at 3749 Perf. 3340 To 3495
Tubing 2 Wt. 4.7 I.D. 1.995 Set at 3349 Perf. 3345 To 3348
Gas Pay: From 3340 To 3495 L. 3345 G. .670 -GL 2241 Bar.Press. 13.2
Producing Thru: Casing Tubing X Type Well single
Date of Completion: 4-18-53 Packer 3318 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. 90

TESTING DATA

Tested Through ~~3348~~ (Meter) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. in. H ₂ O	Temp. °F	Press. psig	Temp. °F	Press. psig	Temp. °F	
SI						968				72
1.	4	1.500	566	10.24	65	841				24
2.	4	1.500	564	17.64	64	776				24
3.	4	1.500	557	25.50	67	718				24
4.	4	1.500	598	37.82	72	610				24
5.										

FLOW CORRECTIONS

No.	Coefficient (14 down)	$\sqrt{h_{wof}}$	Pressure psia	Pressure psia	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	13.99	77.01	579.2	.9952	.9463	1.062	1078
2.	13.99	100.9	577.2	.9962	.9463	1.064	1416
3.	13.99	120.6	570.2	.9933	.9463	1.062	1684
4.	13.99	152.1	611.2	.9887	.9463	1.067	2124
5.							

PERFORMANCE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Specific Gravity Separator Gas
Gravity of Liquid Hydrocarbons Specific Gravity Flowing Fluid
F_c 9.936 (1-e⁻⁵) 0.143 P_{sc} 981.2 P_c 962.8

No.	P _w P _t (psia)	P _c	F _{o2}	(F _{o2}) ²	(P _{o2}) ² (1-e ⁻⁵)	P _w ²	P _c ² -P _w ²	Cal. P _w	P _w /P _c
1.	854.2	729.7	10.80	116.6	16.7	746.4	216.4	864.0	.87
2.	789.2	622.8	14.07	198.0	28.3	651.1	311.7	806.9	.81
3.	731.2	534.7	16.73	279.9	40.0	574.7	388.1	758.1	.77
4.	673.2	388.4	21.10	445.2	63.7	452.1	510.9	672.4	.68
5.									

Absolute Potential: 3500 MCFPD 0.80
COMPANY Humble Oil & Refining Company
ADDRESS Box 2347, Hobbs, N.M.
AGENT and TITLE Denny District Superintendent
WITNESSED
COMPANY El Paso Natural Gas Company

ELVIS A. UTZ
SAS 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 .