

NEW MEXICO OIL CONSERVATION COMMISSION

HOODS OFFICE OCC

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

1957 FEB 11 AM 9:49
County Lea

Pool Dumont Formation Queen

Initial _____ Annual _____ Special _____ Date of Test 6-4-56

Company Amerada Petroleum Corporation Lease Sarah Phillips Well No. 2

Unit 1 Sec. 33 Twp. 19-S Rge. 37-E Purchaser Permian Basin Pipe Line

Casing Wt. 20# I.D. 6.049 Set at 3760 Perf. 3518 To 3624

Tubing Wt. 9.3# I.D. 2.922 Set at 3795 Perf. 3791 To 3795

Gas Pay: From 3518 To 3624 L 3518 xG .655 -GL _____ Bar.Press. 13.2

Producing Thru: Casing X Tubing - Type Well Gas-oil Dual

Single-Br. Ienhead-G. G. or G.O. Dual

Date of Completion: 12-12-55 Packer 3721 Reservoir Temp. 90°

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"	2.25		7.0	560			942.1		72
2.	"	"		12.4	80			771.1		24
3.	"	"		19.3	65			709.3		24
4.	"	"		19.1	69			613.5		24
5.								566.1		24

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.	40.53	78.47	452.7	1.0039	.9571	1.082	2388.9
2.	"	75.03	451.3	.9813	"	1.063	3147.3
3.	"	94.84	456.9	.9952	"	1.060	3978.6
4.	"	94.82	461.9	.9915	"	1.052	3977.7
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 1.399 (1-e^{-s}) 0.147

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid .655
P_c 955.3 P_c² 912.6

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.	784.3	615.1	3.34	11.155	1.64	616.7	297.5	786.3	782.30
2.	722.5	522.0	4.402	19.378	2.85	524.9	390.6	725.0	775.88
3.	626.7	392.8	5.566	30.980	4.55	334.4	515.2	578.2	60.53
4.	579.3	335.6	5.565	30.969	4.55	340.2	572.0	584.0	61.13
5.									

Absolute Potential: 6800 MCFPD; n 0.96

COMPANY Amerada Petroleum Corporation
ADDRESS Drewer D - Monument, New Mexico
AGENT and TITLE W. G. Abbott, Dist. Engineer *W.G. Abbott*
WITNESSED _____
COMPANY Permian Basin Pipe Line Company

REMARKS

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 .