

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Jalmat Formation Yates County Lea
Initial _____ Annual _____ Special X Date of Test 4-6/4-10/1959
Company SOUTHERN CALIFORNIA PETROLEUM CORPORATION Lease Woolworth Well No. 4
Unit M Sec. 8 Twp. 25 Rge. 37 Purchaser El Paso Natural Gas Co.
Casing 5½ Wt. 14 I.D. 5.012 Set at 2906 Perf. _____ To _____
Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 3072 Perf. _____ To _____
Gas Pay: From 2910 To 3085 L 3072 xG .650 -GL 1999 Bar. Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Re- _____ Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 2-23-59 Packer none Reservoir Temp. _____
Compl. 3-27-51

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) ✓Type Taps F/g.

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						440		494		72
1.	4x1.000		207	4.84	72	376		428		24
2.	4x1.000		220	5.76	56	338		412		24
3.	4x1.000		215	12.25	52	305		350		24
4.	4x1.000		225	20.25	53	260		295		24
5.										

FLOW CALCULATIONS

No.	Coefficient Flg. (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.	6.135	32.65	220.2	.9837	.9603	1.020	194.1
2.	6.135	36.65	233.2	1.0039	.9608	1.024	222.1
3.	6.135	52.87	228.2	1.0078	.9608	1.023	321.3
4.	6.135	69.45	238.2	1.0068	.9603	1.024	422.1
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 141.4 cf/bbl.
Gravity of Liquid Hydrocarbons 36.0 deg.
P_c Measured (1-e^{-s})

Specific Gravity Separator Gas .650
Specific Gravity Flowing Fluid _____
P_c 507.2 P_c 257.3

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.	389.2	151.5				194.6	62.7	412	87
2.	351.2	123.3				180.8	76.5	422	87
3.	318.2	101.3				131.9	125.4	363.2	77.6
4.	273.2	74.6				95.8	162.3		6.5
5.									

Absolute Potential: 535 MCFPD; n .723
COMPANY SOUTHERN CALIFORNIA PETROLEUM CORPORATION
ADDRESS Box 1071, Midland, Texas
AGENT and TITLE Division Engineer (4-30-59)
WITNESSED Herbert H. Kerby
COMPANY El Paso Nat'l Gas Co.

REMARKS

Special Test after C/o, hot-oil treatment & installing tbg.

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 .