

NEW MEXICO OIL CONSERVATION COMMISSION
MAIN OFFICE 600

Form C-122
Revised 12-1-55

1057 NOV 13 AM 9:47 00 DEC 9 AM 10 30
MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalnet Formation Yates County Lea
Initial Annual Special X Date of Test 4-22-57 to 4-26-57
Company Humble Oil & Refining Company Lease G. B. Hadfield Well No. 1
Unit J Sec. 21 Twp. 25-S Rge. 37-E Purchaser El Paso Natural Gas Co.
Casing 7" Wt. 24 I.D. 6.336 Set at 2998 Perf. 3087 To 3135
5" O. D. liner set from 2958 - 3182
Tubing 2" Wt. 4.7 I.D. 1.995 Set at 3123 Perf. - To -
Gas Pay: From 3087 To 3135 L 3123 xG 0.660 -GL 2061 Bar. Press. 31.2
Producing Thru: Casing Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 6-4-36 Packer None Reservoir Temp. -

OBSERVED DATA

Tested Through (Prover) (Gibbs) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Gibbs) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						542				72
1.	4	1.000	128	7.84	70	489				24
2.	4	1.000	140	18.49	72	431				24
3.	4	1.000	247	14.44	79	363				24
4.	4	1.000	246	19.36	77	301				24
5.										

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.	6.135	33.27	141.2	0.9905	0.9535	1.012	195
2.	6.135	53.22	153.2	0.9887	0.9535	1.014	312
3.	6.135	61.30	260.2	0.9822	0.9535	1.023	360
4.	6.135	70.84	259.2	0.9840	0.9535	1.023	417
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.
Gravity of Liquid Hydrocarbons deg.
F_c 9.936 (1-e^{-s}) 0.132
Specific Gravity Separator Gas 0.660
Specific Gravity Flowing Fluid
P_c 555.2 P_c² 308.2

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.	502.2	252.2	1.94	3.76	0.50	252.7	55.5	502.7	0.905
2.	444.2	197.3	3.10	9.61	1.27	198.4	109.8	445.4	0.802
3.	376.2	141.5	3.50	12.81	1.69	142.8	165.4	377.9	0.681
4.	324.2	98.7	4.14	17.14	2.26	100.1	208.1	316.4	0.570
5.									

Absolute Potential: 517 MCFPD; n 0.566

COMPANY Humble Oil & Refining Company
ADDRESS P. O. Box 2347, Hobbs, New Mexico
AGENT and TITLE H. M. Carty District Superintendent
WITNESSED E. G. Smith
COMPANY El Paso Natural Gas Co.

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 .