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NEW MEXICO OIL CONSERVATION COMMISSION

MAIN OFFICE OCC

MAY 16 1965
Form C-122

1957 JUL 31 PM 1:25 MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55
ARTESIA OFFICE

Pool Wildcat Formation 25 Penn. County Eddy
Initial X Annual _____ Special _____ Date of Test 7-26-57
Company El Paso Natural Gas Company Lease Welch Unit Well No. 1-X
Unit D Sec. 21 Twp. 26 Rge. 27 Purchaser El Paso Natural Gas Company
Casing 7 Wt. 32.0 I.D. _____ Set at 12,614 Perf. _____ To _____
Tubing 2 7/8 Wt. 6.5 I.D. _____ Set at 12,366 Perf. 11,630 To 12,340
Gas Pay: From 11,630 To 12,340 L _____ xG .650 (Assumed) -GL _____ Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 7-26-57 Packer None Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Shoke) (Meter) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Shoke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								3951		96
1.	6	2.000	174	28.0	62	3170		3230		3
2.	6	2.000	209	36.0	63	2383		2510		3
3.	6	2.000	217	39.69	67	1690		1870		3
4.	6	2.000	223	40.96	64	1095		1343		3
5.	6	2.000	136	27.04	80	737		986		24

FLOW CALCULATIONS

No.	Coefficient Flange (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.	24.74	72.48		.9981	.9608	1.017	1.749
2.	24.74	89.40		.9971	.9608	1.021	2.163
3.	24.74	95.55		.9933	.9608	1.021	2.303
4.	24.74	98.32		.9962	.9608	1.023	2.382
5.	24.74	63.48		.9813	.9608	1.012	1.498

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c Measured (1-e^{-s})
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 3964.2 P_c 15,714.9

No.	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.	3183.2	10,132.8				10,518.3	5,196.5	3213.2	.82
2.	2396.2	5,741.8				6,366.5	9,348.4	2523.2	.64
3.	1703.2	2,900.9				3,546.4	12,168.5	1883.2	.48
4.	1108.2	1228.1				1,839.3	13,875.6	1356.2	.34
5.	750.2	562.8				998.4	14,716.5	999.2	.25

Absolute Potential: 1,540 MCFPD; n .492
COMPANY El Paso Natural Gas Company
ADDRESS P. O. Box 1384 - Jal, New Mexico
AGENT and TITLE R. T. Wright R. T. Wright
WITNESSED Herbert H. Kerby
COMPANY El Paso Natural Gas Company

REMARKS

Slope greater than .499 - Slope of .499 drawn thru 24 hr. point.

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 .