

MULTI-POINT BACK PRESSURE TEST FOR GAS HOLES

HOBBS OFFICE OCC

Pool Jalmat Formation Yates County Lea
Initial Annual Special x Date of Test 1959 AUG 24 AM 8:14:59
Company Carper Drilling Company, Inc. Lease Carper-Continental "A" Well No. 1
Unit A Sec. 12 Twp. 22 S Rge. 35 E Purchaser Phillips Petroleum Company
Casing 5 1/2" Wt. 14.0# I.D. 5.012 Set at 3848' Perf. 3782' To 3810'
Tubing 2 3/8" Wt. 4.7# I.D. 1.995 Set at 3793 Perf. To
Gas Pay: From 3740' To 3810' L 3793 xG Mix .677 -GL 2522 Bar. Press. 13.2
Producing Thru: Casing Tubing x Type Well Single
Date of Completion: 4-11-55 Packer none Single-Bradenhead-G. G. no G.O. Dual
Reservoir Temp. 89

OBSERVED DATA

Tested Through (~~Rxaxr~~) (~~Gcholex~~) (Meter) Type Taps Pipe

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								341		70 SI
1.	4.000	2.000	23.0	2.5	74			322	80	3
2.	4.000	2.000	25.0	11.0	72			281	80	3
3.	4.000	2.000	25.5	14.5	70			272	80	3
4.	4.000	2.000	25.0	16.0	68			268	80	3
5.	4.000	2.000	25.0	16.0	68			239	80	21

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w P_f}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	29.92	9.513		0.9868	.9413	1.038	275.1
2.	29.92	20.52		0.9887	.9413	1.029	588.0
3.	29.92	23.69		0.9905	.9413	1.028	674.4
4.	29.92	24.75		0.9924	.9413	1.025	769.0
5.	29.92	24.75		0.9924	.9413	1.024	768.4

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 235,600 cf/bbl.
Gravity of Liquid Hydrocarbons 31.6 deg. @ 60° F
P_c 9.936 (1-e^{-S}) 0.159
Specific Gravity Separator Gas 0.665
Specific Gravity Flowing Fluid 0.677
P_c 354.2 P_c² 125.46

No.	xxx 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.	335.2	12.36	2.714	7.366	1.171	113.53	11.98	337.0	0.951
2.	294.2	86.55	5.842	34.13	5.427	91.92	33.48	303.3	0.856
3.	285.2	81.34	6.751	45.58	7.247	889.59	36.87	297.6	0.840
4.	281.2	79.07	7.045	49.63	7.891	86.96	38.50	294.7	0.833
5.	252.2	63.60	7.039	49.55	7.878	71.48	53.98	267.4	0.755

Absolute Potential: 1,414 MCFPD; n 0.819
COMPANY Carper Drilling Company, Inc.
ADDRESS 200 Carper Building, Artesia, New Mexico
AGENT and TITLE Vincent Foster, Assist. Prod. Supt. & Engineer
WITNESSED
COMPANY

REMARKS

No witness was available, as Phillips Petroleum Company does not send representatives to witness testing.

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1958 SEP 11 AM 10:39

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 .

UNITED DRILLING COMPANY, INC.

Garner-Continental A #1

A -22S-35E

Lea County, New Mexico

Date: 12-14-59

HOBBS OFFICE OCC

1959 AUG 24 AM 8:45

