

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Formation Queen County Lee
Initial A Annual Special Date of Test 12/12-13/53
Company Bob Dean Ltd. Lease Acad? State 7 Well No. 1
Unit 5 Sec. 7 Twp. 16 Rge. 32 Purchaser Phillips Pipe Line Co.
Casing 4 1/2" Wt. 9.5 I.D. 4.090 Set at 4118' Perf. 3308' To 3318'
Tubing 2 3/8" Wt. 4.7 I.D. 1.999 Set at 3253' Perf. - To -
Gas Pay: From 3308' To 3318' L 325 xG 0.8600 -GL 2795 Bar.Press. 13.2
Producing Thru: Casing Tubing Type Well Single
Date of Completion: 10-25-53 Packer None Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. 85

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)Type Taps -

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. DWT psig	Diff. h _w	Temp. °F.	Press. DWT psig	Temp. °F.	Press. DWT psig	Temp. °F.	
SI										
1.	2"	1 1/4-15/64	101	-	45	990	45	991	45	72.0 Hrs.
2.	2"	1 1/4-9/64	86	-	25	251	25	534	25	4.0
3.	2"	1 1/4-6/64	62	-	24	455	24	585	24	4.0
4.	2"	1 -3/64	51	-	28	685	28	790	28	4.0
5.						883	28	913	28	4.0

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpt}}$	Pressure DWT psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	35.67	-	114.2	1.0137	0.8353	1.008	3.476.816
2.	35.67	-	95.2	1.0344	0.8353	-	3.057.354
3.	35.67	-	75.2	1.0365	0.8353	-	2.322.377
4.	22.06	-	64.2	1.0323	0.8353	-	1.221.205
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.
Gravity of Liquid Hydrocarbons - deg.
F_c 9.936 (1-e^{-s}) 0.175
Specific Gravity Separator Gas 0.8600
Specific Gravity Flowing Fluid -
P_c 1127.2 P_c 1270.6

Bottom Hole Pressure * (953) Intum 3313' Used For Calculations

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.	117.2	-	-	-	-	214.4	756.2	-	-
2.	103.2	-	-	-	-	613.4	557.2	-	-
3.	855.2	-	-	-	-	808.5	452.0	-	-
4.	1035.2	-	-	-	-	1071.5	155.0	-	-
5.									

Absolute Potential: 5.150MCFPD; n 0.75COMPANY Bob Dean Ltd.ADDRESS 1605 Midland National Bank Bldg., Midland, TexasAGENT and TITLE Solomon Petroleum Engineering Co., Inc.WITNESSED COMPANY REMARKS
* Mid Point of Casing Perforations

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 .

DEC 24 11 19 AM '63

HOBBS OFFICE O.C.C.