

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1957 OCT 25 PM 3:10

Pool Blinbry Formation Blinbry County LeaInitial Retest Annual Special Date of Test 9/19-27/57Company Sunray Mid-Continent Oil Co. Lease Linam-Hardy Unit Well No. 1-CUnit 160 Acres Sec. 29 Twp. 21S Rge. 37E Purchaser Permian Basin Pipeline CompanyCasing 5 1/2" Wt. 15.5# I.D. 4.976 Set at 7,900' Perf. 5,600' To 5,650'Tubing 2-3/8" Wt. 4.7# I.D. 1.995 Set at 6,239' Perf. - To -Gas Pay: From 5,600' To 5,650' L 5,600 xG See Below GL See Below Bar.Press. 13.2Producing Thru: Casing X Tubing - Type Well Gas - Gas Dual

Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 4/27/57 Packer - Reservoir Temp. -

OBSERVED DATA

Tested Through (Prover) (Choke) (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								1543.0		72 S.I.P.
1.	4"	2.250"	489.4	4.2	65			1179.6		24
2.	4"	2.250"	491.2	7.2	68			1033.2		24
3.	4"	2.250"	499.4	12.2	73			850.3		24
4.	4"	2.250"	496.5	18.0	74			651.9		24
5.										

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.	40.53	45.95		0.9952	0.9393	1.057	1840
2.	40.53	60.27		0.9924	0.9393	1.058	2409
3.	40.53	79.08		0.9877	0.9393	1.055	3137
4.	40.53	95.79		0.9860	0.9393	1.055	3796
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio See below cf/bbl.Gravity of Liquid Hydrocarbons 44.7 deg.F_c 1.758 (1-e^{-s}) See belowSpecific Gravity Separator Gas .680Specific Gravity Flowing Fluid BelowP_c 1556.2 P_c 2421.8

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.	1192.8	1422.8	3.235	10.47	2.816	1425.6	996.2	1194.2	.77
2.	1046.4	1095.0	4.235	17.94	4.844	1099.8	1322.0	1048.7	.67
3.	863.5	745.6	5.515	30.42	8.153	753.8	1668.0	868.2	.56
4.	665.1	442.4	6.673	44.53	11.58	454.0	1967.8	673.8	.43
5.									

Absolute Potential: 4,670 MCFPD; n 1.00 (Limited)COMPANY Sunray Mid-Continent Oil CompanyADDRESS Box 1168, Snyder, Texas (Roy G. Miller, Jr., Engineer)AGENT and TITLE J. D. Horton and R. L. West

WITNESSED

COMPANY Permian Basin Pipeline Company

REMARKS

Run	Gas-Liquid Ratio	G Mix	1-e-s	GL
1	20,690	.814	.269	4558
2	20,338	.816	.270	4570
3	21,196	.811	.268	4385
4	27,309	.783	.260	4542

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 .