MULTI-POINT BACK-PRESSURE TEST FOR GAS WELLS

Pool __Jalmat__ Formation __Yates__ County __Lea__

Initial _____ Annual _____ Special __X__ Date of Test __1-28 to 2-1 57__

Company __Southern California Pet. Corp.__ Lease __Liberty Royalties__ Well No. __3__

Unit __L__ Sec. __3__ Twp. __25 S__ Rge. __37 E__ Purchaser __El Paso Natural Gas Company__

Casing __5-3/16__ Wt. __17__ I.D. _____ Set at __3290__ Perf. __2970__ To __3062__

Tubing __None__ Wt. _____ I.D. _____ Set at _____ Perf. _____ To _____

Gas Pay: From __2970__ To __3062__ L __2970__ xG __.650__ -GL __1931__ Bar.Press. __13.2__

Producing Thru: Casing __X__ Tubing _____ Type Well __Single__

Date of Completion: __11-12-46__ Packer __None__ Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. _____

OBSERVED DATA

Tested Through (~~Prover~~) (~~Choke~~) (Meter) Type Taps __Flange__

No.	Flow Data (Line) Size	(Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Temp. °F.	Casing Data Press. psig	Temp. °F.	Duration of Flow Hr.
SI								646		72
1.	4	1.250	445	16	61			446		24
2.	4	1.250	391	23.04	59			392		24
3.	4	1.250	321	38.4	62			322		24
4.	4	1.250	248	59.3	67			249		24
5.										

FLOW CALCULATIONS

No.	Coefficient Flange (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.	9.643	85.69		.9990	.9608	1.047	830
2.	9.643	96.48		1.0010	.9608	1.043	933
3.	9.643	113.31		.9981	.9608	1.035	1084
4.	9.643	124.39		.9933	.9608	1.024	1172
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl. Specific Gravity Separator Gas _____

Gravity of Liquid Hydrocarbons _____ deg. Specific Gravity Flowing Fluid _____

F_c __.9583__ $(1-e^{-s})$ __.124__ P_c __659.2__ P_c^2 __434.5__

No.	P_w (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2 (1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	459.2	210.9	.795	.632	.078	210.9	223.6		
2.	405.2	164.2	.894	.799	.099	164.3	270.2		
3.	335.2	112.4	1.04	1.08	.133	112.5	322.0		
4.	261.2	68.2	1.12	1.25	.155	68.4	366.1		
5.									

Absolute Potential: __1,340__ MCFPD; n __.774__

COMPANY __Southern California Petroleum Corporation__

ADDRESS __Box 1071, Midland, Texas__

AGENT and TITLE __Joe A. Coleman, P.E., New Mexico, Cert. No. 2208__

WITNESSED __Well tested by El Paso Natural Gas Company__

COMPANY __Exal-Coleman Engineering Company__

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} = 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.