MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS Revised 12-1-55

Angels		r	ormation	- 35,17,07			_County	San Jiu	an	
ialX	An	inual		Speci	ial		_Date of	Test	9-2-59	
any Pan Amer	rican Pet	roleum (orp. 1	ease_J.	C. Davi	dson "P"	Wel	1 No	1	
H Se	ec. 28	Twp. 28	N Rge	10W	Purcl	naser <u>S</u> c	outhern Un	1on Car	Company	
ng 4-1/2 Wt	11.6	_I.D4	.000 _{Set}	at_ 670	OL Per	cf. 6558	t	To	6635	
ng 2-3/8 Wt	t. 4.7	I.D. 1.	995 Set	at 6%	7 Per	open	ended; n	o perfe	prations	
cing Thru:	Casing		Tut	oing 1	K.	Type We	ell Singl	e ear		
of Completi	ion: 🙎	18-59	Packer	. None	Sing	le-Brade Reservo	enhead-G.	G. or 0	.O. Dual	
01 00mp2002									· · · · · · · · · · · · · · · · · · ·	
d Through	(Choke)				Type Taps					
				— т	Tubing	Data	<u> </u>		·	
	(Choke)	Press	Diff.	Temp.						
(Line) Size	Size		h _w	°F.	psig	o _F .	psig	∘ _F .	of Flow Hr.	
					1998		1995			
£	3/4"	ANOU		V-(885)	003	-	1303		3 hours.	
			+					 		
			F	LOW CALC	CULATIONS	3				
Coefficient			Pressure Flow To		lemp.	Gravity			Rate of Flow Q-MCFPD	
(24-Hour) √		h _w p _f psia		Ft	:	Fg	Fpv		@ 15.025 psia	
12.355			492	1,000	, 0	.9258	1.062		5981	
										
and Under	amban Da	+:-			ALCUIATIO		fia Convi	tu Sono	anaton Cas	
quid Hydroc y of Liquid		rbons		CSSURE CAcf/bbl.	ALCU ATI(Speci Speci	fic Gravi	ty Flow	rator Gas	
				cf/bbl.	ALCUI ATIC	Speci Speci		ty Flow	ving Fluid	
	Hydroca	rbons(1-e ^{-s})		cf/bbl. deg.		Speci Speci P _C	fic Gravi	ty Flow	ving Fluid 000,000	
y of Liquid		rbons		cf/bbl. deg.	Q) ²	Speci Speci P _C _2	fic Gravi	ty Flow PC 4.	ving Fluid	
y of Liquid	Hydroca	rbons(1-e ^{-s})		cf/bbl. deg.	Q) ²	Speci Speci P _C	fic Gravi	ty Flow PC 4	ving Fluid 000,000	
y of Liquid	Hydroca	rbons(1-e ^{-s})		cf/bbl. deg.	Q) ²	Speci Speci P _C _2	fic Gravi	ty Flow PC 4	ving Fluid 000,000	
y of Liquid	Hydroca	rbons(1-e ^{-s})		cf/bbl. deg.	Q) ²	Speci Speci P _C _2	fic Gravi	ty Flow PC 4	ving Fluid 000,000	
y of Liquid	P _t ²	rbons _(1-e ^{-s})		cf/bbl. deg. (Fc	Q) ² -e-s)	Speci Speci P _c _2	fic Gravi	ty Flow PC 4	ving Fluid 000,000	
y of Liquid Pw Pt (psia) ute Potenti	P _t ²	rbons _(1-e ^{-s}) F _c Q	(F _c Q) ²	cf/bbl.deg. (Fc (1-	Q) ² -e-s)	Speci Speci P _c _2	fic Gravi	ty Flow PC 4	ving Fluid 000,000	
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y of Liquid Pw Pt (psia) ute Potenti	Pt Pt American	rbons_(1-e ^{-s}) F _c Q	(F _c Q) ²	cf/bbl. deg. (Fo (1-	n_ 0.75	Speci Speci P _c _2	fic Gravi	ty Flow PC 4	ving Fluid 000,000	
Pw Pt (psia) ute Potenti	Pt Pt American	rbons_(1-e ^{-s}) F _c Q	(F _c Q) ²	cf/bbl. deg. (Fo (1-	n_ 0.75	Speci Speci Pc_2 Pw2 729,225	fic Gravi	ty Flow PC 4	ving Fluid 000,000	
	Pan Amer Y Se any Pan Amer Y Se ang 4-1/2 Wt ang 2-3/6 Wt Pay: From acing Thru: of Completi d Through (Frever) (Line) Size Shut in 2"	Sec. 28 A-1/2 Wt. 11.6 Ang 2-3/8 Wt. 4.7 Pay: From 6558 To acing Thru: Casing of Completion: Add Through (Choke) (Line) (Shires Size Shut in 15 days Coefficient (24-Hour)	Sec. 28 Twp. 28 1 Sec. 28 Twp. 28 1 July Pan American Petroleum (2-3/8 Wt. 11.6 I.D. 4.6 1 July 2-3/8 Wt. 4.7 I.D. 1.6 2-	Sec. 28 Twp. 28N Rge 1.090 Rge Rge 1.090 Rge Rge	Any Pan American Petroleum Corp. Lease J. M Sec. 28 Twp. 28N Rge. 10W 7.2 4.090 A.090 Set at 670 A.090 A.090 Set at 670 A.090 A.090 Set at 670 A.090 Completion: A.090 Set at 670 A.090 A.090 Set at 670 A.090 Completion: A.090 Set at 670 A.090 Completion: A.090 Set at 670 A.090 Completion: A.090 Completion: A.090 Set at 670 A.090 Completion: A.090 Completion: A.090 Set at 670 A.090 Completion: A.090 Completion: A.090 Completion: A.090 Completion: A.090 Set at 670 A.090 Completion: A.09	N Sec. 28 Twp. 28N Rge. 10W Purch	H Sec. 28 Twp. 28N Rge. 10W Purchaser Sec. 28 Twp. 28N Rge. 10W Purchaser Sec. 28 Twp. 28N Rge. 10W Purchaser Sec. 28 Twp. 4.090 Set at 670k Perf. 6556 Rg 4-1/2 Wt. 11.6 I.D. 4.000 Set at 670k Perf. 6556 Rg 2-3/8 Wt. 4.7 I.D. 1.995 Set at 6547 Perf. Rgy: From 6558 To 6635 I. 6547 xG 0.70(est)-GL 4.000 Set at 6547 Perf. Reserved of Completion: 8-18-59 Packer Now Reserved	Any Pan American Petroleum Corp. Lease J. C. Davidson "F" Wel M Sec. 28 Twp. 28N Rge. 10W Purchaser Southern the A.090 Set at 6704 Perf. 6558 To 4.090 Set at 6704 Perf. 6558 To 558 To 6635 L 6547 RG 0.70(est)-GL 4583 To 6558 To 6635 L 6547 RG 0.70(est)-GL 4583 To 6558 To 6635 L 6547 Reservoir Temp. OBSERVED DATA Type Tap OBSERVED DATA Type Tap Flow Data Tubing Data Casing D (Line) (SELECT) (Choke) (Press. Diff. Temp. Press. Temp. Press. (Line) Size Size psig hw OF. psig OF. psig Shut in 15 days 1995 Shut in 15 days 1995 FLOW CALCULATIONS Coefficient Pressure Flow Temp. Gravity Factor Factor Factor Factor Factor Factor Factor Factor Factor Factor Factor Factor	Flow Data Tubing Data Casing Data (Roser) (Choke) Press. Diff. Temp. Press. Temp. Press. Temp. (Line) Size Size psig hw OF. psig OF. psig OF. Shut in 15 days 1995 FLOW CALCULATIONS Coefficient Pressure Flow Temp. Gravity Compress. Factor Factor Factor Factor Factor Fpv	

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 I Actual rate of flow at end of flow period at W. H. working pressure ($P_{\rm W}$). MCF/da. @ 15.025 psia and 600 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.
- $h_{\mbox{\scriptsize W}}\mbox{\small I}$ Differential meter pressure, inches water.
- F_g I Gravity correction factor.
- F_t Flowing temperature correction factor.
- Fpv Supercompressability factor.
- n I Slope of back pressure curve.
- Note: If $P_{\mathbf{W}}$ cannot be taken because of manner of completion or condition of well, then $P_{\mathbf{W}}$ must be calculated by adding the pressure drop due to friction within the flow string to $P_{\mathbf{t}}$.