## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Size   Size   psig   hw   OF.   psig   OF.	ool _	Undedes	ignated		Fo	rmation	Pictu	red Cli	ffs	_County_F	iio Arri	ba	
Sec. 17   Twp. 23   Rge. 24   Purchaser 31   Pamo   Batural   Gas Co.	nitial	LX	A	(nnua)	L		Spec	ial		_Date of	Test_10	-22-60	
singl 1/2   Wt. 9.5   I.D. 4.090   Set at 3077   Perf. 3004   To 3014   bing 2 3/8   Wt. 4.7   I.D. 1.995   Set at 3029   Perf. 3029   To	ompany	_August_	& Wagge	nsell	ar		Lease	licarill.	Apache.	Wel	l Noa	D-17 (0 )	
singl 1/2   Wt. 9.5   I.D. 4.090   Set at 3077   Perf. 3004   To 3014   bing 2 3/8   Wt. 4.7   I.D. 1.995   Set at 3029   Perf. 3029   To													
Description   Size   Press   Diff   Temp.   Press   Temp.   Duration of Flow   Size   Press   Diff   Temp.   Press   Temp.   Duration of Flow   Size   Press   Diff   Temp.   Press   Temp.   Duration of Flow   Size   Press   Diff   Temp.   Press   Temp.   Duration of Flow   Size   Press   Diff   Temp.   Press   Temp.   Duration of Flow   Size   Press   Diff   Temp.   Press   Temp.   Press   Temp.   Duration of Flow   Size   Press   Diff   Temp.   Press   Temp.   Press   Temp.   Duration of Flow   Size   Press   Diff   Temp.   Press   Temp.   Press   Temp.   Duration of Flow   Size   Press   Diff   Temp.   Press   Temp.   Press   Temp.   Duration of Flow   Size   Press   Diff   Temp.   Press   Temp.   Press   Temp.   Duration of Flow   Size   Press   Diff   Temp.   Press   Temp.   Duration of Flow   Size   Press   Diff   Temp.   Press   Temp.   Duration of Flow   Size   Press   Diff   Temp.   Press   Temp.   Duration of Flow   Size   Press   Diff   Temp.   Press   Temp.   Duration of Flow   Diff   Diff   Temp.   Press   Temp.   Duration of Flow   Diff   Dif			-		•								
S   Pay:   From   3004   To   3014   L   3029   x6 0.65   TGL   1969   Bar.Press.   12.0											_		
Size   Size   Press   Diff.   Temp.   Press.   Temp.   Duration   Size   Size   Press.   Diff.   Temp.   Press.   Temp.   Duration   Of Plot   Press.   Pr													
Completion: 10-13-60   Packer   Reservoir Temp. 125										-			
Completion: 10-13-60   Packer   Reservoir Temp. 125	oduci	ing Thru:	Casin	ug		Tu	bing	X Sir	Type We ngle-Brade	ell <u>Sing</u> enhead-G.	le G. or G	.O. Dual	
Type Taps	te of	Complet:	ion: <u>10</u> .	-13-60	0	Packe	r		Reserve	oir Temp	125		
Flow Data							OBSERVI	ED DATA					
Choke   Press   Diff   Temp   Press   Temp   Press   Temp   Duration of Flow   Size   psig   hw   of   psig   of	sted	Through	(Prever	(Cr	noke)	(Meter)				Туре Тар	s		
Contine   Size   psig   hw   OF   psig   OF   psig   OF   Psig   OF   Hr.													
Part   Pt   Pt   Pt   Pt   Pt   Pt   Pt		(Line)	(Choke	الم	j	i	1		· ·		1	of Flow	
Pressure   Flow Calculations   Factor		Size	Size		psig	h <sub>w</sub>	o <sub>F</sub> .		F.		F.		
FLOW CALCULATIONS   Flow Temp.   Gravity   Compress.   Rate of Flow   Factor   Fac								9 <b>0</b> 9		946		SI	
FLOW CALCULATIONS   Flow Temp.   Gravity   Compress.   Rate of Flow   Factor   Fac	Τ		04		~		P (			7.70			
Coefficient			3/4	$\Box$	72		<b>3</b> 0			179		3 hrs.	
Coefficient  Coefficient  Coefficient  Compress.  Compress.  Rate of Flow Temp. Factor	<u> </u>						<u> </u>		<u> </u>		L		
Pactor   Factor   F										. <del></del>			
C24_Hour   V hwpf		Coefficie	ent		Pre								
PRESSURE CALCULATIONS  Liquid Hydrocarbon Ratio cf/bbl. Specific Gravity Separator Gas Specific Gravity Flowing Fluid C1-e-S 0.133 Pc 92 Pc 917,764.  Pw Pt (psia) Pt FcQ (FcQ)2 (FcQ)2 Pw2 Pc-Pw Cal. Pw Pc Pc 91,764.  Pw Pt (psia) Pt FcQ (FcQ)2 (FcQ)2 Pw2 Pc-Pw Cal. Pw Pc Pc Pc Pc Pw Pc Pc Pc Pw Pc		(24-Hou	r) 🗸	h <sub>w</sub> p <sub>f</sub>	.   ,	psia	F <sub>1</sub>	t	Fg	Fpv		9 15.025 psia	
PRESSURE CALCULATIONS  Liquid Hydrocarbon Ratio cf/bbl. Specific Gravity Separator Gas Specify of Liquid Hydrocarbons deg. Specific Gravity Flowing Fluid Pc 958 Pc 917,764.  Pw Pt (psia) Pt FcQ (FcQ)2 (FcQ)2 Pw2 Pc-Pw Cal. Pw Pc Pc Pc Pc Pw Pc													
PRESSURE CALCULATIONS  Liquid Hydrocarbon Ratio cf/bbl. Specific Gravity Separator Gas Specify of Liquid Hydrocarbons deg. Specific Gravity Flowing Fluid Pc 958 Pc 917,764.  Pw Pt (psia) Pt FcQ (FcQ)2 (FcQ)2 Pw2 Pc-Pw Cal. Pw Pc Pc Pc Pc Pw Pc	<del></del>	14.1605				81.	1 0030		0 0600	1 0000		1 710	
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Specific Gravity Flowing Fluid  P <sub>c</sub> 958  P <sub>c</sub> 917,764   P <sub>w</sub> P <sub>t</sub> (psia)  P <sub>t</sub>	⊥		1	-		PR.	ESSURE CA	ALCU ATI	CONS		L		
Pw Pt (psia) Pt FcQ (FcQ)2 (FcQ)2 Pw2 Pc-Pw Cal. Pw Pc Pc Pw Pc Pc Pc Pw Pc Pc Pw Pc Pc Pc Pc Pw Pc	vity	of Liquid		arbon	ns 		deg.		Speci	fic Gravi	ty Flow	ing Fluid	
Pt (psia)	9-4L	12		\	~	0.133			- c <del>-95</del>	· · · · · · · ·	c <del>91</del>	7,764,	
solute Potential: 1 18c MCFPD; n 0.85/1.0356  MPANY August & Waggenseller  DRESS 170 So. Beverly Drive, Beverly Hills, California ENT and TITLE Morris B. Jones, Consulting Engineer M. B. JONES  INESSED John J. August  MPANY August & Waggenseller	Pw	ſ	<sub>P</sub> 2	FO		(F 0)2	<b>प</b> )	0)2	P 2	<sub>p</sub> <sup>2</sup> _p <sup>2</sup>	Ca	P.,	
solute Potential: 1 18c MCFPD; n 0.85/1.0356  MPANY August & Waggenseller  DRESS 170 So. Beverly Drive, Beverly Hills, California ENT and TITLE Morris B. Jones, Consulting Engineer M. B. JONES  INESSED John J. August  MPANY August & Waggenseller		(psia)	*t	· c		(- C4)	(1	-e <sup>-s</sup> )	- w-	- G - W			
Solute Potential: 1 18c MCFPD; n 0.85/1.0356  MPANY August & Waggenseller  DRESS 170 So. Beverly Drive, Beverly Hills, California ENT and TITLE Morris B. Jones, Consulting Engineer M. B. JONES  INESSED John J. August  MPANY August & Waggenseller	-										<del> </del>		
MPANY August & Waggenseller DRESS 170 So. Beverly Drive, Reverly Hills, California ENT and TITLE Morris B. Jones, Consulting Engineer M. B. JONES ENESSED John J. August MPANY August & Waggenseller	<b></b>								36,841	880,923		1.042	
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MPANY August & Waggenseller	ENT a	and TITLE	Morri	s B.	Jones	Consu	lting En	gineer	M. B. J	ONES			
						ller_	DEW.	ADVC					

## 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
- $P_{\rm W}$  Static wellhead working pressure as determined at the end of flow period. (Casing if flowing thru tubing, tubing if flowing thru casing.) psia
- Pt Flowing wellhead pressure (tubing if flowing through tubing, casing if flowing through casing.) psia
- Pf Meter pressure, psia.
- $h_{\mathbf{w}}$  Differential meter pressure, inches water.
- Fg Gravity correction factor.
- $F_t$  Flowing temperature correction factor.
- $F_{pv}$  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  $P_{\mathbf{t}}$ .

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