

WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURES (P_c or P_w)

Form C-12LF
Adopted 9-1-65

FROM KNOWN BOTTOM HOLE PRESSURE (P_f or P_s)

COMPANY Citas S.A. LEASE WELL NO. DATE

LOCATION: Unit Section Township Range

L 10,971 H 10,971 L/H 1 G .5949 % CO₂ .7 % N₂ 1.4 % H₂S - 0 -

GH 6527 Per 673 For 349

TABLE IX & X

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LINE		1	2	3	4	5	6	7	8
1	T_w (W.H. °F)	510	510	516	516	519	519	521	521
2	T_g (B.H. °F)	650	650	650	650	650	650	650	650
3	$T = \frac{T_w + T_g}{2}$	580	580	583	583	585	585	586	586
4	Z (Est.)	.901	.900	.930	.972	.920	.665	.920	.917
5	TZ	523	522	571.3	520	490	506	480	496
6	GH/TZ	12.479	12.504	11.424	12.55	13.606	12.896	13.5479	13.1502
7	e^x (Table XIV)	1.5967	1.598	1.534	1.60	1.67	1.62	1.67	1.64
8	P_f or P_s	4397.2	4397.2	4186.2	4186.2	3660.2	3660.2	2914.2	2914.2
9	P_f or P_s^2	19,335	19,335	17,524	17,524	13,397	13,397	8492.5	8492.5
10	$P_c^2 = P_f^2$ or $P_w^2 = P_s^2/e^x$	12,116	12,099	11,424	10,957	8022.2	8210	5085.4	5178
11	P_c or P_w	3480	3478.4	3380	3309	2637.3	2876	2255	2276
12	$P = \frac{P_w + P_s}{2}$ or $\frac{P_c + P_f}{2}$	3933.6	3937.8	3783	3748	3246.3	3268	2585	2595
13	$P_r = (P/P_c)$	5.85	5.85	5.62	5.57	4.82	4.86	3.34	3.86
14	$T_r = (T/T_c)$	1.66	1.66	1.67	1.67	1.68	1.68	1.68	1.68
15	Z (Table XI)	.900	.900	.892	.891	.865	.865	.847	.847