

B.T. Gauge Numbers			1114	1113	Ticket Number		787847
Initial Hydrostatic			PRESSURE 1288	PRESSURE 1362	Elevation		3259 ft.
Final Hydrostatic			1226	1248	1st Flow		- MCF
1st Flow	Initial	Time	127	194	Production Rate	2nd Flow	1445 MCF
	Final	30	398	413		3rd Flow	- MCF
	Closed In Pressure	90	1270	1281	Hole Size		7.875 in.
2nd Flow	Initial	Time	362	360	Footage Tested		75 ft.
	Final	120	596	606	Mud Weight		8.9 lbs./gal.
	Closed In Pressure	240	1270	1276	Gas Viscosity		0.02 cp
3rd Flow	Initial	Time			Gas Gravity EST.		0.60 —
	Final				Gas Compressibility		0.825 —
	Closed In Pressure				Temperature		84 °F
Extrapolated		1st	1280	1292			
Static Pressure		2nd	1285	1290			
		3rd	-	-			
		1st	-	-			
Slope P/10		2nd	1206	1216			
		3rd	-	-			

Remarks: CHARTS INDICATE NON-STABILIZED DOWN HOLE FLOWING PRESSURE DURING THE 1ST FLOW PERIOD. DID NOT USE REPORTED RATE FOR ANY CALCULATIONS.

SUMMARY			B.T. Gauge No. 1114/2688'			B.T. Gauge No. 1113/2831'		
PRODUCT	EQUATION	FIRST	SECOND	THIRD	FIRST	SECOND	THIRD	UNITS
Transmissibility	$\frac{Kh}{\mu} = \frac{1637 Q_r ZT}{m}$		5394.7			5724.7		$\frac{md. ft.}{cp}$
Theoretical Flow Capacity	$Kh = \frac{Kh}{\mu} \mu$		107.89			114.49		md. ft.
Average Effective Permeability	$K = \frac{Kh}{h}$		-			-		md.
	$K_1 = \frac{Kh}{h_1}$		1.439			1.527		md.
Indicated Flow Capacity	$(Kh)_s = \frac{3200 Q_r \mu ZT \log(0.472 b/r_w)}{P_s^2 - P_r^2}$		43.638			44.022		md. ft.
Damage Ratio	$DR = \frac{\text{Theo. Flow Cap}}{\text{Indicated Flow Cap}} \frac{Kh}{(Kh)_s}$		2.473			2.601		—
Indicated Flow Rate	$OF_1 = \frac{Q_r}{P_s^2 - P_r^2} P_s^2$ Max.		1841			1854		MCFD
	$OF_2 = \frac{Q_r}{\sqrt{P_s^2 - P_r^2}} P_s$ Min.		1631			1637		MCFD
Theoretical Potential Rate	$OF_3 = OF_1 DR$ Max.		4552			4822		MCFD
	$OF_4 = OF_2 DR$ Min.		4032			4257		MCFD
Approx. Radius of Investigation	$b \approx \sqrt{Kt} \text{ or } \sqrt{Kt_0}$		-			-		ft.
	$b_1 \approx \sqrt{K_1 t} \text{ or } \sqrt{K_1 t_0}$		15.0			15.4		ft.
Potentiometric Surface *	$Pot. = (EI - CD) + (2.319 Ps)$		3551			3420		ft.

NOTICE: These calculations are based upon information furnished by you and taken from Drill Stem Test pressure charts, and are furnished you for your information. In furnishing such calculations and evaluations based thereon, Halliburton is merely expressing its opinion. You agree that Halliburton makes no warranty express or implied as to the accuracy of such calculations or opinions, and that Halliburton shall not be liable for any loss or damage, whether due to negligence or otherwise, in connection with such calculations and opinions.