Gas [illegible]

B.T. Gauge Numbers			1639	1638	Ticket Number		508795	
			PRESSURE	PRESSURE				
Initial Hydrostatic			4196	4247	Elevation		--	ft.
Final Hydrostatic			4078	4128	Production Rate	1st Flow		MCF
1st Flow	Initial	Time	88	153		2nd Flow	95.5	MCF
	Final	32	91	170		3rd Flow		MCF
	Closed In Pressure	60	2485	2508	Hole Size		7.875	in.
2nd Flow	Initial	Time	55	111	Footage Tested		18	ft.
	Final	118	117	155	Mud Weight		9	lbs./gal.
	Closed In Pressure	120	2763	2789	Gas Viscosity	Est.	.0215	cp
3rd Flow	Initial	Time			Gas Gravity		.6	—
	Final				Gas Compressibility		.874	—
	Closed In Pressure				Temperature		151	°F
Extrapolated Static Pressure		1st						
		2nd	3162	3168				
		3rd						
Slope P/10		1st						
		2nd	2046	2082				
		3rd						

Remarks:

SUMMARY

PRODUCT	EQUATION	B.T. Gauge No. 1639 Depth 8501' FIRST	SECOND	THIRD	B.T. Gauge No. 1638 Depth 8583' FIRST	SECOND	THIRD	UNITS
Transmissability	$\frac{Kh}{\mu} = \frac{1637\ Q_g\ ZT}{m}$		14.4			14.6		$\frac{md.\ ft.}{cp}$
Theoretical Flow Capacity	$Kh = \frac{Kh}{\mu}\ \mu$		.309			.315		md. ft.
Average Effective	$K = \frac{Kh}{h}$		-			-		md.
Permeability	$K_1 = \frac{Kh}{h_1}$		.017			.017		md.
Indicated Flow Capacity	$(Kh)_2 = \frac{3200\ Q_g\ \mu\ ZT\ \mathrm{Log}(0.472\ b/r_w)}{P_s^2 - P_f^2}$		.159			.160		md. ft.
Damage Ratio	$DR = \frac{\text{Theo. Flow Cap}}{\text{Indicated Flow Cap}}\ \frac{Kh}{(Kh)_2}$		1.94			1.97		—
Indicated Flow Rate	$OF_1 = \frac{Q_g\ P_s^2}{P_s^2 - P_f^2}$ Max.		95.63			95.73		MCFD
	$OF_2 = \frac{Q_g\ P_s}{\sqrt{P_s^2 - P_f^2}}$ Min.		95.56			95.62		MCFD
Theoretical Potential Rate	$OF_3 = OF_1\ DR$ Max.		185.4			188.2		MCFD
	$OF_4 = OF_2\ DR$ Min.		185.2			188.0		MCFD
Approx. Radius of Investigation	$b \leq \sqrt{Kt}$ or $\sqrt{Kt_0}$		-			-		ft.
	$b_1 \leq \sqrt{K_1 t}$ or $\sqrt{K_1 t_0}$		1.9			1.9		ft.
Potentiometric Surface *	$Pot. = (El - GD) + (2.319\ Ps)$		-1168			-1236		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.