Liquid Production

B.T. Gauge Numbers			1516	1496	Ticket Number	631295
			PRESSURE	PRESSURE		
Initial Hydrostatic			5141	5157	Elevation	3980 ft.
Final Hydrostatic			5095	5129	Indicated Production 1st Flow	- bbls./day
1st Flow	Initial	Time	2955-Q	2852	Indicated Production 2nd Flow	1575 bbls./day
	Final	16	3359	3401	Indicated Production 3rd Flow	- bbls./day
	Closed In Pressure	127	4246	4278	Drill Collar Length	333 ft.
2nd Flow	Initial	Time	2903	2935	Drill Collar I.D.	2.25 in.
	Final	90	4091	4117	Drill Pipe Factor	0.01422 bbls./ft.
	Closed In Pressure	242	4215	4 249	Hole Size	7.875 in.
3rd Flow	Initial	Time			Footage Tested	51 ft.
	Final				Mud Weight	8.8 lbs./gal.
	Closed In Pressure				Viscosity, Oil or ~~Water~~	0.12* cp
Extrapolated Static Pressure		1st	4248	4280	Oil API Gravity	—
		2nd	4222	4255	Water Specific Gravity	—
		3rd	-	-	Temperature	°F
Slope P/10		1st	-	-		
		2nd	4167	4202		
		3rd	-	-		

Remarks: * Viscosity corrected for sampler G.O.R. of 1858.4. Calculations based on 116 barrels of recovery and reversing for the total of 106 minutes of flow time. There appears to be a pressure drop between the initial and final extrapolated pressures.
Q-Questionable

SUMMARY

		B.T. Gauge No. 1516 Depth 11341'			B.T. Gauge No. 1496 Depth 11346'			
PRODUCT	EQUATION	FIRST	SECOND	THIRD	FIRST	SECOND	THIRD	UNITS
Production	$Q = \frac{1440\ R}{t}$		1575			1575		bbls. day
Transmissability	$\frac{Kh}{\mu} = \frac{162.6\ Q}{m}$		4658.7			4834.5		md. ft. / cp
Indicated Flow Capacity	$Kh = \frac{Kh}{\mu}\ \mu$		559.05			580.15		md. ft.
Average Effective	$K = \frac{Kh}{h}$		-			-		md.
Permeability	$K_1 = \frac{Kh}{h_f}$		10.962			11.376		md.
Damage Ratio	$DR = .183\ \frac{Ps - Pf}{m}$		0.43			0.47		—
Theoretical Potential w. Damage Removed	$Q_1 = Q\ DR$		1575			1575		bbls. day
Approx. Radius of Investigation	$b \backsimeq \sqrt{Kt}$ or $\sqrt{Kt_0}$		-			-		ft.
	$b_1 \backsimeq \sqrt{K_1 t}$ or $\sqrt{K_1 t_0}$		34.0			34.7		ft.
Potentiometric Surface *	$Pot. = El - GD + 2.319\ Ps$		2430			2501		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.