

Legal Location
Sec. - Twp. - Rng.

17 24 22

Field Area

County

HODGEMAN

State

KANSAS

Flow Time	1st 30	Min.	2nd 40	Min.	Date	2-14-64		Ticket Number	381198 S	
Closed In Press. Time	1st 40	Min.	2nd 40	Min.	Kind of Job	OPEN HOLE		Halliburton District	GREAT BEND	
Pressure Readings	Field		Office Corrected		Tester	R. ADAMS, JR.		Witness	BOB LINDSEY	
Depth Top Gauge	4685 Ft.		no Blanked Off		Drilling Contractor	LEREN DRILLING COMPANY				
BT. P.R.D. No.	1838		12 Hour Clock		Elevation	2382'		Top Packer	4700'	
Initial Hydro Mud Pressure	2492		2479		Total Depth	4717'		Bottom Packer	--	
Initial Closed in Pres.	1212		1201		Interval Tested	4700' - 4717' (7') Net		Formation Tested	Mississippi	
Initial Flow Pres.	36		1 20		Casing or Hole Size	7 7/8"		Casing Perfs.	{ Top Bot.	
Final Flow Pres.	74		2 74		Surface Choke	1"		Bottom Choke	1"	
Final Closed in Pres.	74		1 67		Size & Kind Drill Pipe	4 1/2" FH		Drill Collars Above Tester	I.D. - LENGTH 2.5" x 240'	
Final Hydro Mud Pressure	92		2 107		Mud Weight	9.8		Mud Viscosity	47	
Depth Cen. Gauge	1157		1152		Temperature	118 °F Est.		Anchor Size & Length	ID 3 1/8" OD 4 1/2" X 17'	
BT. P.R.D. No.					Depths Mea. From	--		Depth of Tester Valve	4680 Ft.	
Initial Hydro Mud Pres.					TYPE	AMOUNT		Cushion	--	
Initial Closed in Pres.					Recovered	120		Feet of heavy oil & gas cut mud.	Mea. From Tester Valve	
Initial Flow Pres.	1				Recovered	60		Feet of oil cut mud.		
Final Flow Pres.	2				Recovered	65		Feet of very slight oil cut mud.		
Final Closed in Pres.	1				Recovered			Feet of		
Final Hydro Mud Pres.	2				Oil A.P.I. Gravity	38		Water Spec. Gravity		
Depth Bot. Gauge	4717 Ft.		yes Blanked Off		Gas Gravity			Surface Pressure	psi	
BT. P.R.D. No.	1839		12 Hour Clock		Tool Opened	12:25 A.M.		Tool Closed	2:15 A.M.	
Initial Hydro Mud Pres.	2490		2492		Remarks	Tool opened @ 12:25 for a 30 minute first flow with a steady weak blow. Closed tool @ 12:55 for a 40 minute initial closed in pressure. Reopened tool @ 1:35 for a 40 minute second flow with a steady weak blow throughout test. Closed tool @ 2:15 for a 40 minute final closed in pressure.				
Initial Closed in Pres.	1210		1208							
Initial Flow Pres.	36		1 41							
Final Flow Pres.	92		2 87							
Final Closed in Pres.	73		1 73							
Final Hydro Mud Pres.	110		2 114							
Final Closed in Pres.	1173		1161							
Final Hydro Mud Pres.	2471		2492							

FORMATION TEST DATA

Gauge No. 1838			Depth 4685'			Clock 12 hour		Ticket No. 381198		
	First Flow Period		Initial Closed In Pressure			Second Flow Period		Final Closed In Pressure		
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.
P ₀	.000	20	.000	--	67	.000	74	.000	--	107
P ₁	.0418	35	.0269	.9429	631	.0693	85	.0305	1.2287	619
P ₂	.0836	44	.0538	.6888	884	.1386	95	.0610	.9526	850
P ₃	.1254	52	.0807	.5550	986	.2079	102	.0915	.8001	945
P ₄	.1672	60	.1076	.4687	1050	.2770	107	.1220	.6975	1006
P ₅	.2090	67	.1345	.4072	1095			.1525	.6218	1048
P ₆			.1614	.3607	1127			.1830	.5629	1079
P ₇			.1883	.3242	1152			.2135	.5153	1104
P ₈			.2152	.2947	1171			.2440	.4759	1124
P ₉			.2421	.2702	1187			.2745	.4425	*
P ₁₀			.2690	.2496	1201			.3050	.4138	1152

Gauge No.		1839		Depth		4717 ′		Clock		12 hour	
P ₀	.000	41	.000	--	73	.000	87	.000	--	114	
P ₁	.0412	47	.0272	.9331	556	.0683	92	.0308	1.2188	643	
P ₂	.0824	53	.0544	.6800	880	.1366	103	.0616	.9433	864	
P ₃	.1236	60	.0816	.5471	987	.2049	110	.0924	.7912	956	
P ₄	.1648	67	.1088	.4614	1052	.2730	114	.1232	.6891	1015	
P ₅	.2060	73	.1360	.4004	1098			.1540	.6138	1056	
P ₆			.1632	.3545	1132			.1848	.5553	1089	
P ₇			.1904	.3184	1157			.2156	.5080	1113	
P ₈			.2176	.2893	1178			.2464	.4689	1134	
P ₉			.2448	.2651	1196			.2772	.4358	1144	
P ₁₀			.2720	.2448	1208			.3080	.4074	1161	
Reading Interval			6			4			10		
									4 Minutes		

REMARKS:

TICKET NO.

381198

BT GAUGE NO.

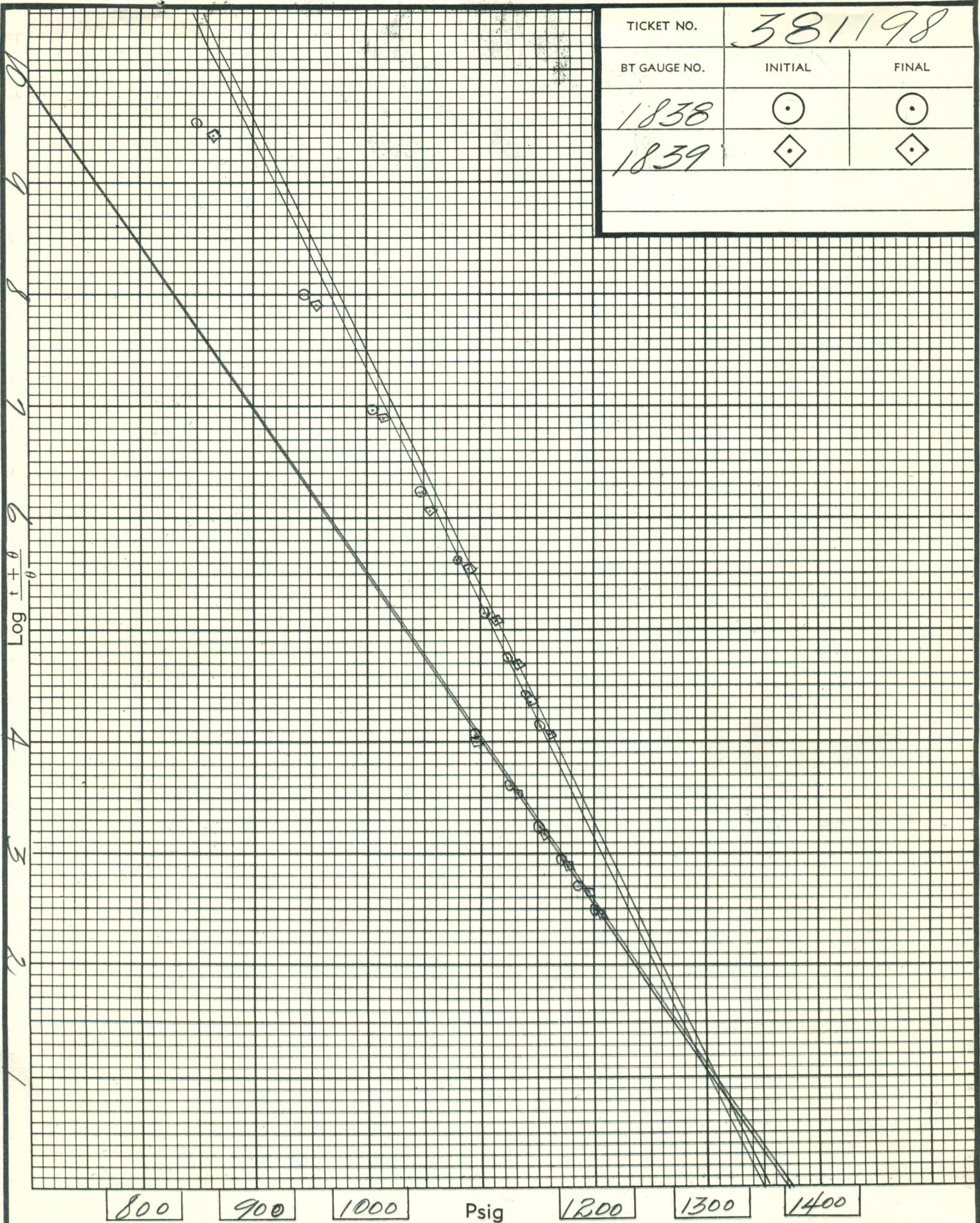
INITIAL

FINAL

1838



1839



EXTRAPOLATED PRESSURE GRAPH

Liquid Production

B.T. Gauge Numbers			1383	1839	Ticket Number	2/14/64	381198
Initial Hydrostatic			PRESSURE	PRESSURE	Elevation		2382 ft.
Final Hydrostatic			2479	2492			
1st Flow			2479	2492	Indicated Production		1st Flow bbls. day
Initial			Time		Total Flow		bbls. day
Final			20	41			
Initial Closed In Pressure			30	67	Drill Collar Length		240 ft.
Final			40	73			
Initial Closed In Pressure			40	1201	Drill Collar I.D.		2.5 in.
Final			40	1208			
2nd Flow			Initial	74	Drill Pipe Factor		.01422 bbls. ft.
Final			40	87			
Initial Closed In Pressure			40	107	Hole Size		7.87 in.
Final			40	114			
Final Closed In Pressure			40	1152	Footage Tested		7 ft.
Initial			40	1161			
Extrapolated Static Pressure			Initial	1370	Mud Weight		9.8 lbs. gal.
Final			1350	1375			
Initial			1350	1355	Viscosity, Oil or Water		3.0 cp
Final			1355	1355			
Slope of Pressure			Initial	785	Oil API Gravity		38
Final			870	785			
P 10			870	880	Water Specific Gravity		---

Remarks: _____

SUMMARY

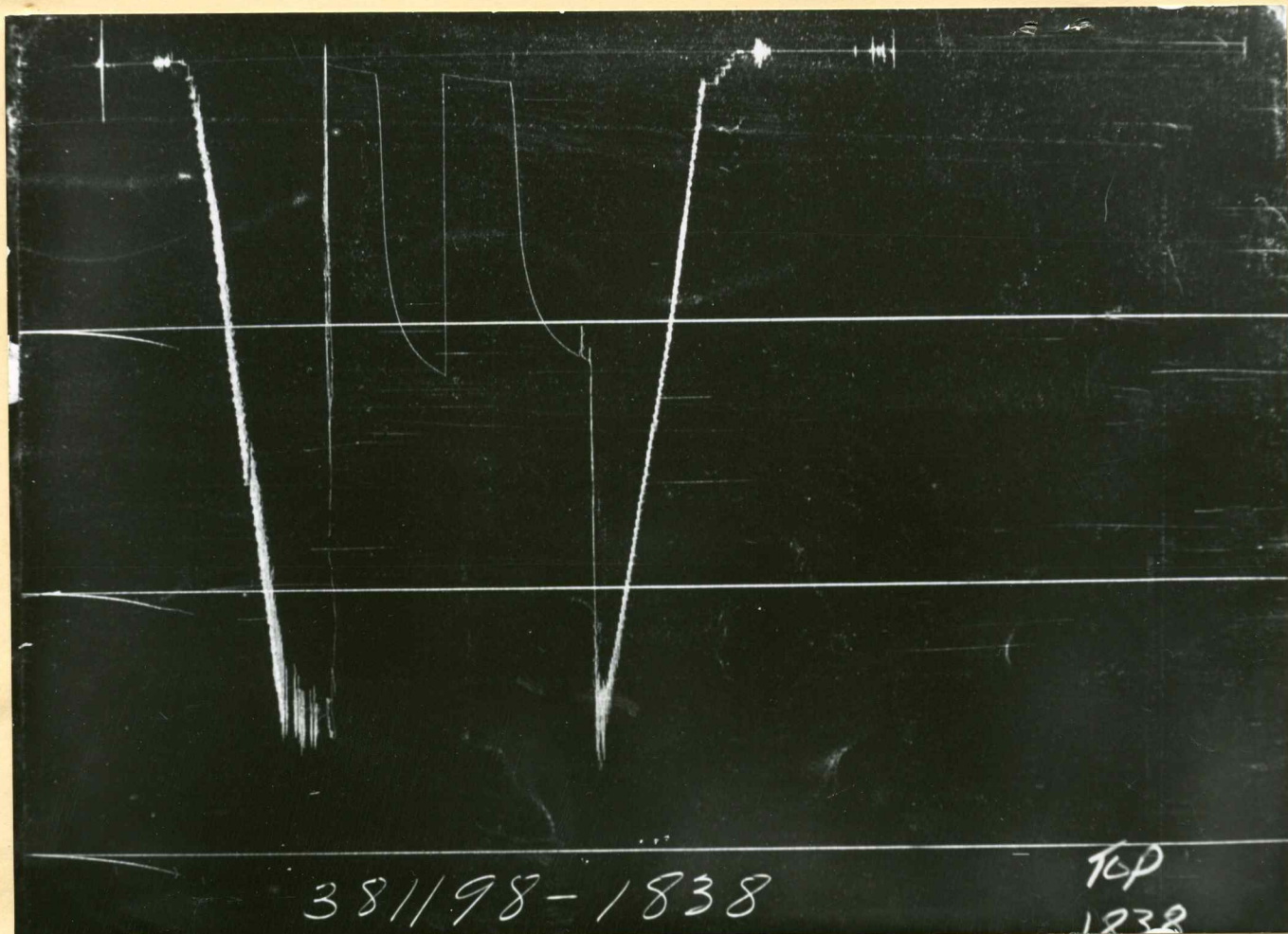
Gauge
No. 1838
Depth 4685'

Gauge
No. 1839
Depth 4717'

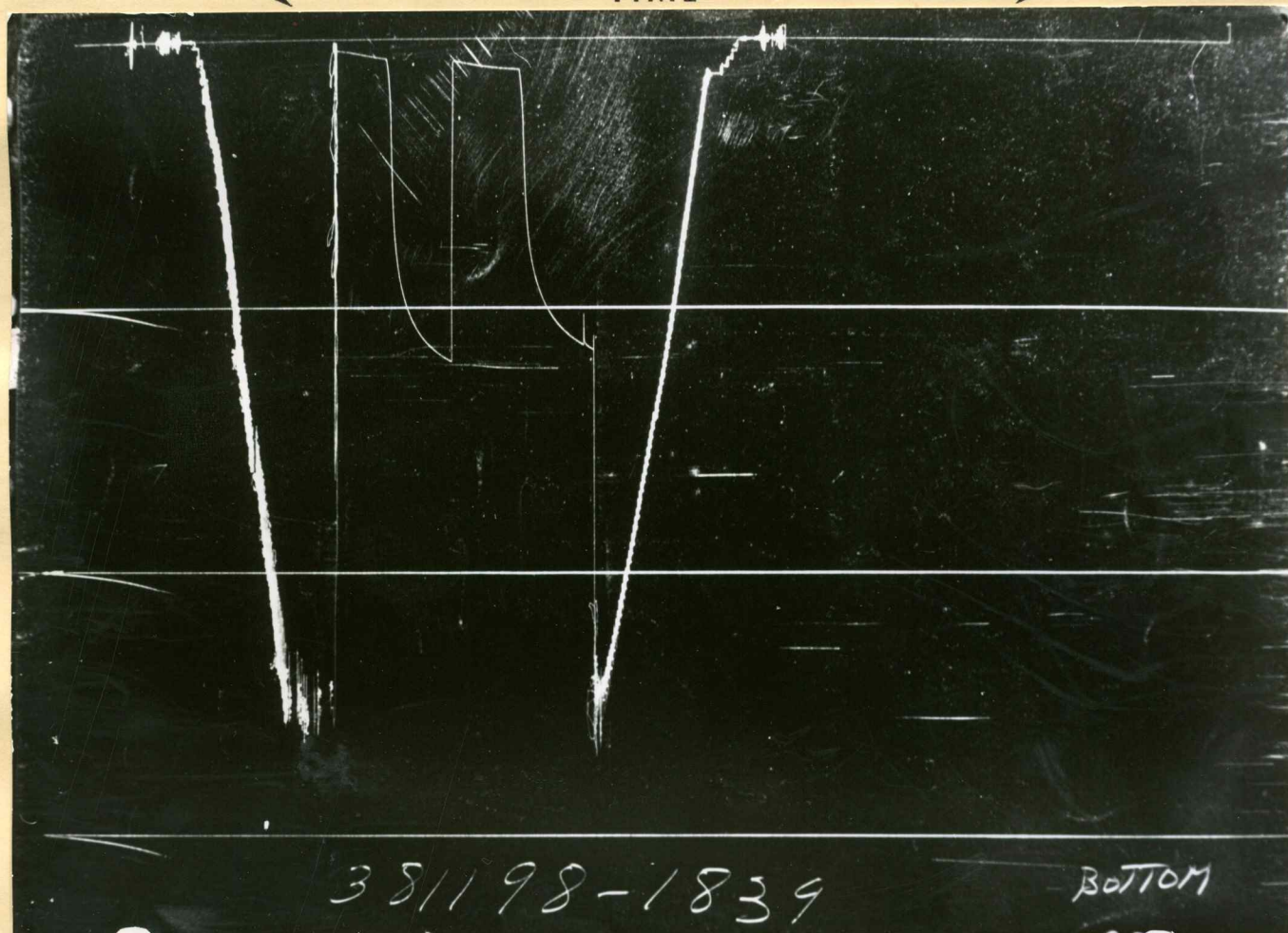
Product	Equation	Initial	Final	Initial	Final	Units
Production	$Q = \frac{1440 R}{t}$	32.2	39.8	26.2	41.5	bbls. day
Transmissability	$\frac{Kh}{\mu} = \frac{162.6 Q}{m}$	8.9	13.4	7.2	14.2	md. ft. cp
Indicated Flow Capacity	$Kh = \frac{Kh}{\mu} \mu$	26.9	40.4	21.7	42.7	md. ft.
Average Effective	$K = \frac{Kh}{h}$	--	--	--	--	md.
Permeability	$K_r = \frac{Kh}{h_r}$	3.85	5.78	3.09	6.10	md.
Damage Ratio	$DR = .183 \frac{P_s - P_f}{m}$	.407	.473	.403	.478	---
Theoretical Potential w/Damage Removed	$Q_1 = Q DR$	.32.2	39.8	26.2	41.6	bbls. day
Approx. Radius of Investigation	$b \approx \sqrt{Kt}$ or $\sqrt{Kt_0}$	10.7	20.1	9.6	20.6	ft.
Potentiometric Surface *	$Pot. = EI - GD + 2.319 P_s$	874	827	853	807	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.

↑
PRESSURE
↓



← TIME →



Each Horizontal Line Equal to 1000 p.s.i.