

# JOHNSTON TESTERS

TEST DATA												
Formation <b>Cretaceous</b>		Zone Thickness		Ft.	Elevation <b>Not Reported</b>							
Interval <b>2374</b>	To	<b>2404</b>	T.D.	<b>3080</b>	Bottom Hole Choke Size <b>1/2"</b>							
Type of Test <b>Open Hole, Straddle, By-Pass</b>						Fluid Cushion Type						
Time Started in Hole <b>0215</b>		Hrs.	Tool Open <b>0500</b>		Hrs.	Amount						
First Flow	<b>7</b>	Min.	Shut In		<b>60</b>	TOOL SEQUENCE						
Second Flow	<b>15</b>	Min.	Final Shut In		<b>0</b>	Tool	Length	O.D.				
Pulled Loose @	<b>0640</b>	Hrs.	Out of Hole			<b>D.P. Sub.</b>	<b>.50</b>	<b>5 1/2"</b>				
Wt. Set on Packer	<b>40,000</b>	#	Pulled Loose Wt.		<b>35,000</b>	<b>Shut in Tool</b>	<b>6.05</b>	<b>4 5/8"</b>				
Remarks <b>Tool was Chased 25 Feet During Test Period.</b>						<b>Hyd. Tool</b>	<b>7.45</b>	<b>4 5/8"</b>				
Description of Blow During Test <b>Weak Blow. Mis-Run, Seat Failure.</b>						<b>Jars</b>	<b>4.15</b>	<b>4 5/8"</b>				
						<b>Safety Jt.</b>	<b>1.75</b>	<b>4 5/8"</b>				
						<b>H. Sub.</b>	<b>.80</b>	<b>4 5/8"</b>				
						<b>T.C. &amp; Pkr.</b>	<b>6.30</b>	<b>6 5/8"</b>				
						<b>T.C. &amp; Pkr.</b>	<b>5.70</b>	<b>6 5/8"</b>				
						<b>Total</b>	<b>32.70</b>					
						<b>Stub</b>	<b>1.40</b>	<b>4 5/8"</b>				
						<b>Perf.</b>	<b>12.60</b>	<b>4 5/8"</b>				
						<b>R. Sub.</b>	<b>.70</b>	<b>4 5/8"</b>				
						<b>Recorder</b>	<b>5.90</b>	<b>4 7/8"</b>				
GAS BLOW MEASUREMENTS						<b>Recorder</b>	<b>5.90</b>	<b>4 7/8"</b>				
Measured with			I.D. Riser or Est. <input type="checkbox"/>			<b>T.C. &amp; Stub</b>	<b>3.50</b>	<b>6 5/8"</b>				
Type of Instrument						<b>Total Interval</b>	<b>30.00</b>					
Time	Sf. Choke	Reading Inches		Cubic Feet/Day		<b>Pkr.</b>	<b>3.70</b>					
						<b>T.C. &amp; Packer</b>	<b>6.30</b>	<b>6 5/8"</b>				
						<b>Perf.</b>	<b>5.00</b>	<b>4 5/8"</b>				
						<b>Sub.</b>	<b>1.70</b>	<b>6 3/16"</b>				
						<b>D.P.</b>	<b>656.10</b>					
						<b>Sub.</b>	<b>1.30</b>	<b>6 3/16"</b>				
						<b>Perf. &amp; B. N.</b>	<b>2.50</b>	<b>4 5/8"</b>				
						<b>Total Below Intv.</b>	<b>676.60</b>					
FLUID RECOVERY												
Was Test Reverse Circulated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>												
Fluid Recovered (Total)		<b>910'</b>		Ft.	<b>Total Length</b>		<b>739.30</b>					
Description of Fluid Recovered <b>910' Drilling Fluid.</b>						MUD AND HOLE DATA						
Remarks <b>Mis-Run, Seat Failure.</b>						Mud Type <b>Gel and Water</b> W.L.						
						Filter Coke <b>2/32</b>			Visc.	<b>37</b>	Wt. <b>9.2</b>	
						Time Taken <b>January 23, 1965 @ 2000 hrs.</b>						
						Contractor <b>Mobil Oil of Canada, Ltd.</b>			Rig No. <b>4</b>			
						Drill Pipe Size			<b>4 1/2 IF</b>			
Drill Collar Size <b>2 7/8 ID</b>			Length			<b>374'</b>						
Main Hole Size			<b>8 5/8"</b>									
Rat Hole Size												
Co. Rep.	<b>A. Claire</b>											
Tester	<b>D. Matson</b>											
District	<b>Edmonton</b>		Ticket No.		<b>C 3330</b>		Date <b>January 24/65</b>					
Company	<b>Socony Mobil Oil of Canada</b>					Address <b>P.O. Box 240, Dawson Creek, B. C.</b>						
Well Name	<b>SMWM Ellen #1 YTC-24</b>					Test No.		<b>2</b>				
Number	<b>66°-33'-8.87"N-137°-50'-8.15"W</b>		Field		<b>Wildcat</b>		J.T.L. Test No. <b>3</b>					
Formation	<b>Cretaceous</b>		DST#		<b>#2</b>		Province <b>Yukon</b>					
and Interval	<b>2374-2404</b>					Consultant						
Distribution of Reports						<b>8 - Dawson Creek</b>						

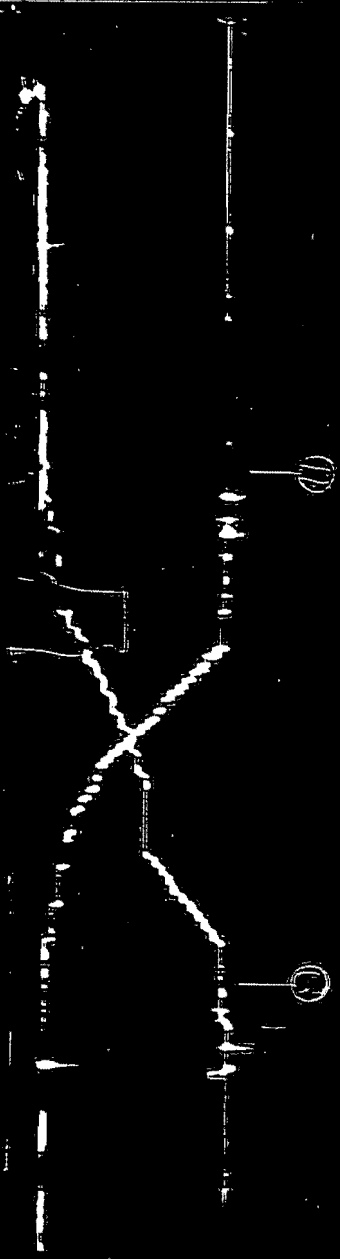
JTL-CD.4

①

②

TICKET# C3330

REC# T-53



NET# 03330 REC# T-49

# JOHNSTON TESTERS

## Pressure Data

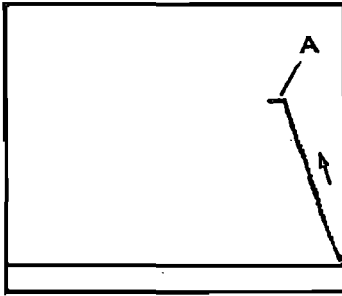
Test Ticket No. C 3330

Recorder No.	T-52	T-49		
Capacity (P.S.I.G.)	7000	7000		
Recorder Depth	2388	2394		
Pressure Gradient P.S.I./Ft.				
Well Temperature °F.	100° Est.	100° Est.		
A Initial Hydrostatic	1141#	1160#		
B First Initial Flow				
C Initial Shut-In-Pres	MIS-RUN.	SEAT FAILURE.		
D Flowing Pres				
E Final Flow				
F Final Shut-In				
G Final Hydrostatic	1100#	1135#		

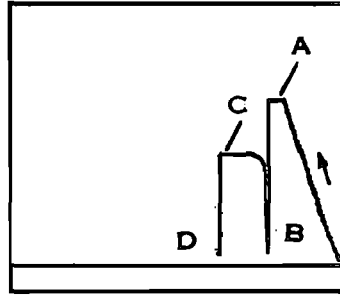
Remarks

**T-52 - Outside Recorder****T-49 - Outside Recorder**

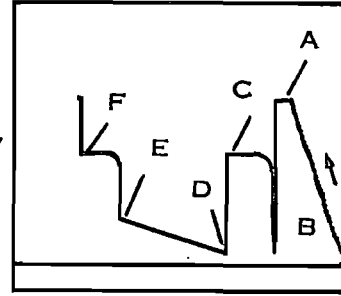
# GUIDE TO INTERPRETATION AND IDENTIFICATION OF DRILL STEM TEST PRESSURE CHARTS



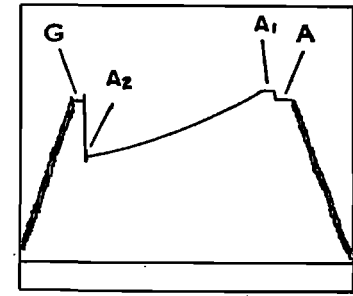
1 The pressure chart records the build-up in hydrostatic pressure as the testing assembly is lowered into the hole. Upon reaching the testing depth the hydrostatic head or pressure of mud column is recorded.



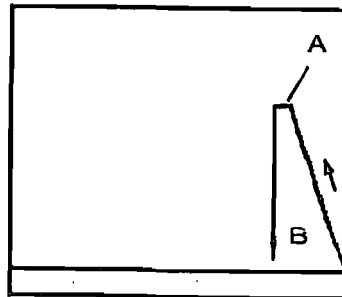
4 The chart indicates a pressure drop. The test tool has been opened to the surface by rotating the 4 stage shut-in tool into the open position. Permitting the open formation to produce.



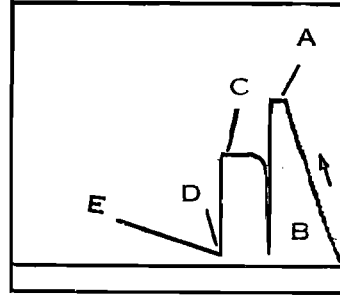
7 The chart shows the equalizing, the by-pass ports have been opened permitting the drilling fluid to flow through the packer to the test zone. Thus, pressure is equalized above and below the packer. The equalization of the pressure facilitates easier removal of the packer from the packer seat.



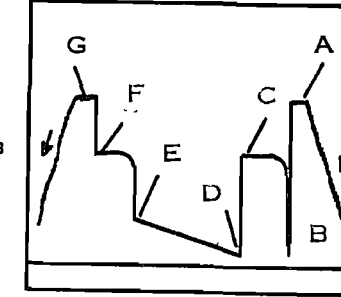
The above is a typical illustration of a chart from a recorder that is run below the bottom packer on a conventional straddle test. Only the hydrostatic mud pressures are recorded. When the tool is opened, there is a pressure differential across the bottom packer. This differential is lessened by the rubber flow of the packer element, which in turn causes a draw-down in pressure. If the below straddle chart reads the same as a chart that is run to record pressures of the test zone, then the bottom packer has failed. If this occurs, all zones below the top packer are being tested.



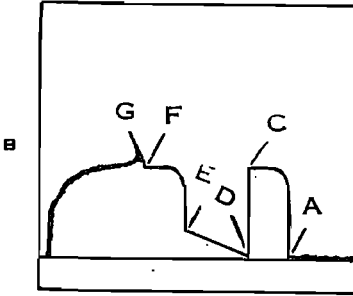
2 The packer is expanded and set to isolate the test zone. When the test valve is opened, a pressure drop is indicated on the pressure chart. This pressure drop is caused by removal of the hydrostatic mud pressure from the formation, allowing the formation to produce.



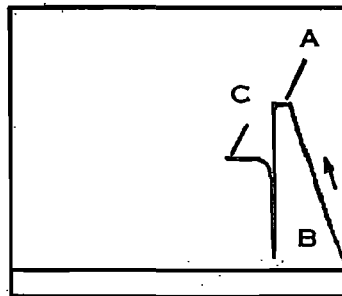
5 The pressure of fluid flowing from the formation into the well bore, through the perforated anchor, and into the drill pipe, is recorded on the chart.



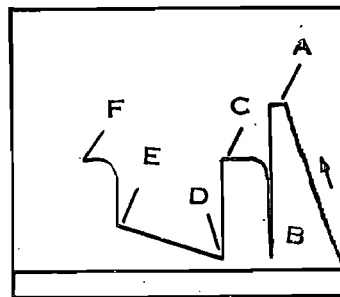
B The packer has been unseated. The testing assembly is being removed from the hole.



In this case a recorder has been run in an air chamber. The hydrostatic mud pressures are not influencing the recorder while going in or coming out of the hole due to the main tester valve being closed. The flow pressures and shut-in pressures are recorded while the main tester valve is opened.



3 This chart shows the initial shut-in pressure. There is one mechanical method commonly used to obtain this pressure. A 4 stage shut-in tool, that is run-in in the open position and rotated closed when the desired amount of initial flow time is obtained. This initial shut-in pressure is the best method yet devised for recording the original undisturbed reservoir pressure of a formation.



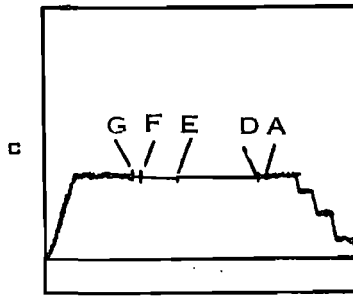
6 The final shut-in pressure is taken by stopping the flow of formation fluid into the drill pipe. Note the characteristic build-up curve. The well bore pressure is approaching equilibrium with the static reservoir pressure. When the shut-in curve levels-off the static reservoir pressure has been reached.

## INDEX OF LABELED POINTS:

- A—Initial Hyd. Mud
- B—First Initial Flow
- C—Initial Shut-in
- D—Initial Flow
- E—Final Flow
- F—Final Shut-in
- G—Final Hyd. Mud

The following points are either fluctuating pressures or points indicating other packer settings, (testing different zones).

- A-1, A-2, A-3, etc. Initial Hyd. Pressures.
- B, B-1, B-2, B-3, First Initial Flow.
- C-1, C-2, C-3, etc. The Initial Shut-in Pressures.
- D-1, D-2, D-3, etc. Flowing Pressures.
- E1, E-2, E-3, etc. The Final Flow Pressures or Final Shut-in Pressures.
- F-1, F-2, F-3, etc. The Final Shut-in Pressures.
- G-1, G-2, G-3, etc. Final Hyd. Mud Pressures.
- Z — Special pressure points such as pumping pressure recorded for formation breakdown.



In this case a recorder has been run above the main tester valve with a fluid cushion used in the drill pipe. No pressure is recorded as the testing tool is being lowered into the hole. Then the fluid cushion pressure is recorded as the drill pipe is filled with fluid. As more stands are run into the hole, the recorder registers the hydrostatic pressures of the cushion. When the main testing valve is opened the pressure of the cushion column or the flowing pressure of the formation, (which ever is greater), is recorded.