

DRILL STEM TEST
TECHNICAL SERVICE REPORT

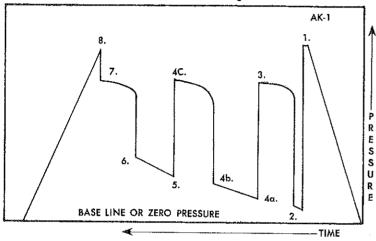
LYNES UNITED SERVICES LTD.

Final Flow 120 Mins. Final Shut-in 120 Mins. Company Rep. R. Hansen Tester P. McDonnell Contractor GP Ticket No. 2930 Date Ap Service Reports To: blow on preflow. Strong air blow on main flow decreasing slightly throughout the test. GAS BLOW MEASUREMENTS Measured with Mud Type Gel Chem Weight 10.9 Viscosity 162 W Filter Cake 2/32" Bottom Hole Te Time Surface Choke Reading Inches Cubic Feet/Day Main Hole or Casing Size 8 3/4"	ne Yt - 1-13 46 ¹ 58.00 vation
Interval Tested 2486 Ft. to 2548 Ft. Address 14605 - 118 Aven Feet of Net Pay Tested 62 Ft. Edmonton, Albert Type of Test Inflatable Straddle Amount Ft. Well Name SCCC Win E. Porcup Storted in Hole of 8:00 Hrs. Tool Open at 0:35 Hrs. Well Number 660 02 35.00 137 Pre-Flow 5 Mins. Initial Shut-in 30 Mins. K.B. Elevation 1660 Sub-Sect 2nd Flow Mins. Second Shut-in Mins. Area East Porcup Ine East Porcup Ine East Porcup Ine East P. McDonnel Individual Mins. Mins. Mins. Company Rep. R. Hansen P. McDonnel Individual Mins.	ne Yt - 1-13 46 ¹ 58.00 vation
Feet of Not Pay Tested 62 Ff. Edmonton, Albert Type of Test Inflatable Straddle Cushion nil Amount Ff. Well Name SCCC Wm E. Porcup Force in Hole at 8:00 Hrs. Tool Open at 10:35 Hrs. Well Number 660 02' 35,00 137 Pre-Flow 5 Mins. Initial Shut-in 30 Mins. K.B. Elevation 1660 Sub-Sec 1 2nd Flow Mins. Second Shut-in Mins. Area East Porcupine Final Flow 120 Mins. Final Shut-in 120 Mins. Company Rep. R. Hansen Remarks: Tester P. McDonnell Contractor GP Ticket No. 2930 Date Ap Blow: Good initial puff. Strong air blow Service Reports To: blow on preflow. Strong air blow 8 - above address on main flow decreasing slightly throughout the test. GAS BLOW MEASUREMENTS Mud AND HOLE DATA Measured with Mud Type Gel Chem Weight 10.9 Viscosity 162 W Filter Cake 2/32'' Bottom Hole Tata Time Surface Choke Reading Inches Cubic Feet/Doy Time Surface Choke Reading Inches Cubic Feet/Doy Main Hole or Casing Size 8 3/4''	ne Yt - 1-13 46 [†] 58.00 vation
Type of Test Cushion nil Amount Amount Ft. Well Name SCC Wm E. Porcup Storted in Hole at 8:00 Hrs. Tool Open at 0:35 Hrs. Well Number 660 02' 35,00 137 Pre-Flow 5 Mins. Initial Shut-in 30 Mins. Repert Storted in Hole at 8:00 Hrs. Tool Open at 0:35 Hrs. Well Number 660 02' 35,00 137 Well Number 660 02' 40 Filter Number 660	10
Cushion nil Amount Ft. Well Name SCCC Wm E. Porcup Started in Hole at 8:00 Hrs. Tool Open at 0:35 Hrs. Well Number 660 02' 35.00 137 Pre-Flow 5 Mins. Initial Shut-in 30 Mins. K.B. Elevation 1660 Sub-Sea 1 Porcupine Final Flow 120 Mins. Second Shut-in Mins. Area East Porcupine Final Flow 120 Mins. Final Shut-in 120 Mins. Company Rep. R. Hansen Final Flow 120 Mins. Final Shut-in 120 Mins. Company Rep. R. Hansen Flow 120 Mins. Final Shut-in 120 Mins. Company Rep. R. Hansen Flow 120 Mins. Final Shut-in 120 Mins. Company Rep. R. Hansen Flow 120 Mins. Company Rep. R. Hansen 120 Mins. Company Rep. R. Hansen 120 Mins. Mins. Area East Porcupine Reports Flow 120 Mins. Company Rep. R. Hansen 120 Mins. Report Reports Flow 120 Mins. Report	46 58,00
Started in Hole at 8:00 Hrs. Tool Open at 0:35 Hrs. Well Number 660 02' 35.00 137 Pre-Flow 5 Mins. Initial Shut-in 30 Mins. K.B. Elevation 1660 Sub-Sea 1 Pre-Flow 5 Mins. Second Shut-in Mins. Area East Porcupine Final Flow 120 Mins. Final Shut-in 120 Mins. Company Rep. R. Hansen Tester P. McDonnell Contractor GP Ticket No. 2930 Date Ap Ticket No. 2930 Date Ap Service Reports To: Blow on pre-flow. Strong air blow On main flow decreasing slightly Throughout the test. GAS BLOW MEASUREMENTS Measured with Mud Type Gel Chem Weight 10.9 Viscosity 162 W Filter Cake 2/32' Bottom Hole Te Time Surface Choke Reading Inches Cubic Feet/Day Main Hole or Casing Size 8 3/4"	46 58,00
Pro-Flow 5 Mins. Initial Shut-in 30 Mins. K.B. Elevation 1660 Sub-Sea 1 20 Mins. Second Shut-in Mins. Area East Porcupine Eas	vation Vulcan
Accorded Flow Mins. Second Shut-in Mins. Area East Porcupine inal Flow 120 Mins. Final Shut-in 120 Mins. Company Rep. R. Hansen Tester P. McDonnell Contractor GP Ticket No. 2930 Date Ap Service Reports To: blow on preflow. Strong air blow 8 - above address on main flow decreasing slightly throughout the test. GAS BLOW MEASUREMENTS MUD AND HOLE DATA Accorded With Mud Type Gel Chem Weight 10,9 Viscosity 162 W Filter Cake 2/32" Bottom Hole Te Time Surface Choke Reading Inches Cubic Feet/Day Time Surface Choke Reading Inches Cubic Feet/Day Main Hole or Casing Size 8 3/4"	vince Yukon
inal flow 120 Mins. Final Shut-in 120 Mins. Company Rep. R. Hansen Tester P. McDonnell Contractor GP Ticket No. 2930 Date Ap Service Reports To: Blow on preflow. Strong air blow On main flow decreasing slightly throughout the test. CAS BLOW MEASUREMENTS Acasured with Mud Type Gel Chem Weight 10,9 Viscosity 162 W Filter Cake 2/32" Bottom Hole Te Time Surface Choke Reading Inches Cubic Feet/Day Main Hole or Casing Size 8 3/4"	
Tester P. McDonnell Contractor GP Ticket No. 2930 Date Ap Town Good initial puff. Strong air blow on preflow. Strong air blow on main flow decreasing slightly throughout the test. CAS BLOW MEASUREMENTS Weight 10.9 Viscosity 162 W Filter Cake 2/32" Bottom Hole Te Time Surface Choke Reading Inches Cubic Feet/Day Time Surface Choke Reading Inches Time Surface	TUKOTI
Contractor GP Ticket No. 2930 Date Ap Service Reports Tel	
Ticket No. 2930 Date Ap Service Reports To: blow on preflow. Strong air blow on main flow decreasing slightly throughout the test. AS BLOW MEASUREMENTS MUD AND HOLE DATA Mud Type Gel Chem Weight 10.9 Viscosity 162 W Filter Cake 2/32!! Bottom Hole Te Time Surface Choke Reading Inches Cubic Feet/Day Main Hole or Casing Size 8 3/4!!	Rig No. 14
Service Reports To:	i1 30/71
blow on preflow. Strong air blow on main flow decreasing slightly throughout the test. AS BLOW MEASUREMENTS MUD AND HOLE DATA Mud Type Gel Chem Weight 10.9 Viscosity 162 W Filter Cake 2/32" Bottom Hole Te Time Surface Choke Reading Inches Cubic Feet/Day Drill Pipe Size 4 1/2" Fh Drill Collars 5"H90 I.D. 2 3 Main Hole or Casing Size 8 3/4"	1 30///
On main flow decreasing slightly throughout the test. As BLOW MEASUREMENTS MUD AND HOLE DATA Mud Type Gel Chem Weight 10.9 Viscosity 162 W Filter Cake 2/32" Bottom Hole Te Time Surface Choke Reading Inches Cubic Feet/Day Drill Pipe Size 4 1/2" Fh Drill Collars 5"H90 I.D. 2 3 Main Hole or Casing Size 8 3/4"	
throughout the test. AS BLOW MEASUREMENTS MUD AND HOLE DATA Mud Type Ge Chem Weight 10,9 Viscosity 162 W Filter Cake 2/32" Bottom Hole Te Time Surface Choke Reading Inches Cubic Feet/Day Drill Pipe Size 4 1/2" Fh Drill Collars 5"H90 I.D. 2 3 Main Hole or Casing Size 8 3/4"	
MUD AND HOLE DATA Mud Type Ge Chem Weight 10.9 Viscosity 162 W Filter Cake 2/32 Bottom Hole Te	
Mud Type Ge Chem Weight 10.9 Viscosity 162 W	
Weight 10.9 Viscosity 162 W	
Filter Cake 2/32 Bottom Hole Te	
Time Surface Choke Reading Inches Cubic Feet/Day Drill Pipe Size 4 1/2" Fh Drill Collars 5"H90 I.D. 2 3 Main Hole or Casing Size 8 3/4"	ter Loss 7.2
Drill Collars 5 ¹¹ H90 I.D. 2 3 Main Hole or Casing Size 8 3/4 ¹¹	
Main Hole or Casing Size 8 3/4"	Veight
	II Feet Run
	of Feet
Bottom Hole Choke Size 3/411	
Surface Choke Size adjustable	
Packer Rubber Size	res suggest ty within
REMARKS Shut-in press	es suggest
very low permeabi	ty within
the interval test	
COMPN	
COVERY DISCOVERED TO COLUMN ASSOCIATION OF THE COLUMN ASSOCIATION OF T	
OTAL FLUID RECOVERED 150 Ft. Consisting of:	
120 Ft. of mud	
30 Ft. of water (filtrate)	
Ft, of	
ist was/was not Reverse Circulated Was not	
linity	
RESSURE READINGS	
	sideOutside
	4 '
Capacity 2950 Capacity 3000 Capacity 6000	apacity
Depth 2494 Depth 2494 Depth 2563	pth
	·
TUBED KEV	1
UMBER KEY:	
- INITIAL HYDROSTATIC 1432 1364 1504 178	
- INITIAL SHUT-IN 933 ' 931	
- 2nd INITIAL FLOW	
· 2nd FINAL FLOW	
: • 2nd SHUT-IN	
• 3rd INITIAL FLOW 99 96 124	
• FINAL FLOW 125 124 1050	
- FINAL SHUT-IN 1059 1024	
- FINAL HYDROSTATIC 1432 1364 1589	



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

AK-1 recorders. Read from right to left.

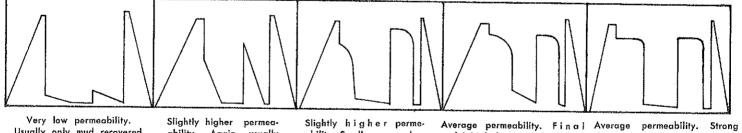


K-3 recorders. Read from left to right.

- INITIAL HYDROSTATIC MUD-PRESSURE
- PRE-FLOW
- INITIAL SHUT-IN
- 4a. 2nd INITIAL FLOW
- 4b. 2nd FINAL FLOW
- 4c. 2nd SHUT-IN
- 3rd INITIAL FLOW
- FINAL FLOW
- 7. FINAL SHUT-IN
- FINAL HYDROSTATIC MUD PRESSURE

N.B. When only two shut-in and flow periods are run, 4a, 4b and 4c are omitted.

Typical charts for visual field analysis ranging from very low to high permeability.



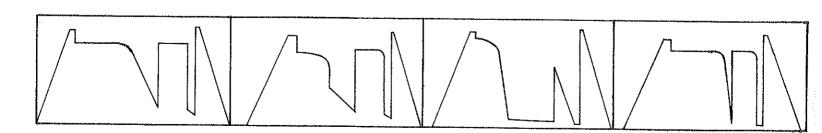
Usually only mud recovered from interval tested. Virtually no permeability.

ability. Again usually mud recovered.

ability. Small recovery, less than 200' ft).

psi,

and initial shut-ins differ by 50 damage effect. High shut-in pressure, low flow pressure.



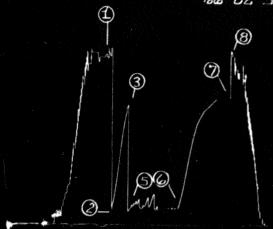
Excellent permeability where final flow final shut-in pressure.

High permeability where ISIP and FSIP are within 10 psi.

Deep well bore invasion or damage. Final shut-in higher than the initial shut-in.

Tight hole chamber tester. Permeability very difficult to interpret unless the recovery is less than chamber length. Flow pressure builds up rapidly if recovery is large, similar to a shut-in.

SORC WM E PORCUPINE YT 1.13
66°02'35.00 137°46' 38.00
5578-9



SOBC WM E PORCUPINE YT-1-13 66°02'35'.00 137°46'58.00 8 4319-9

