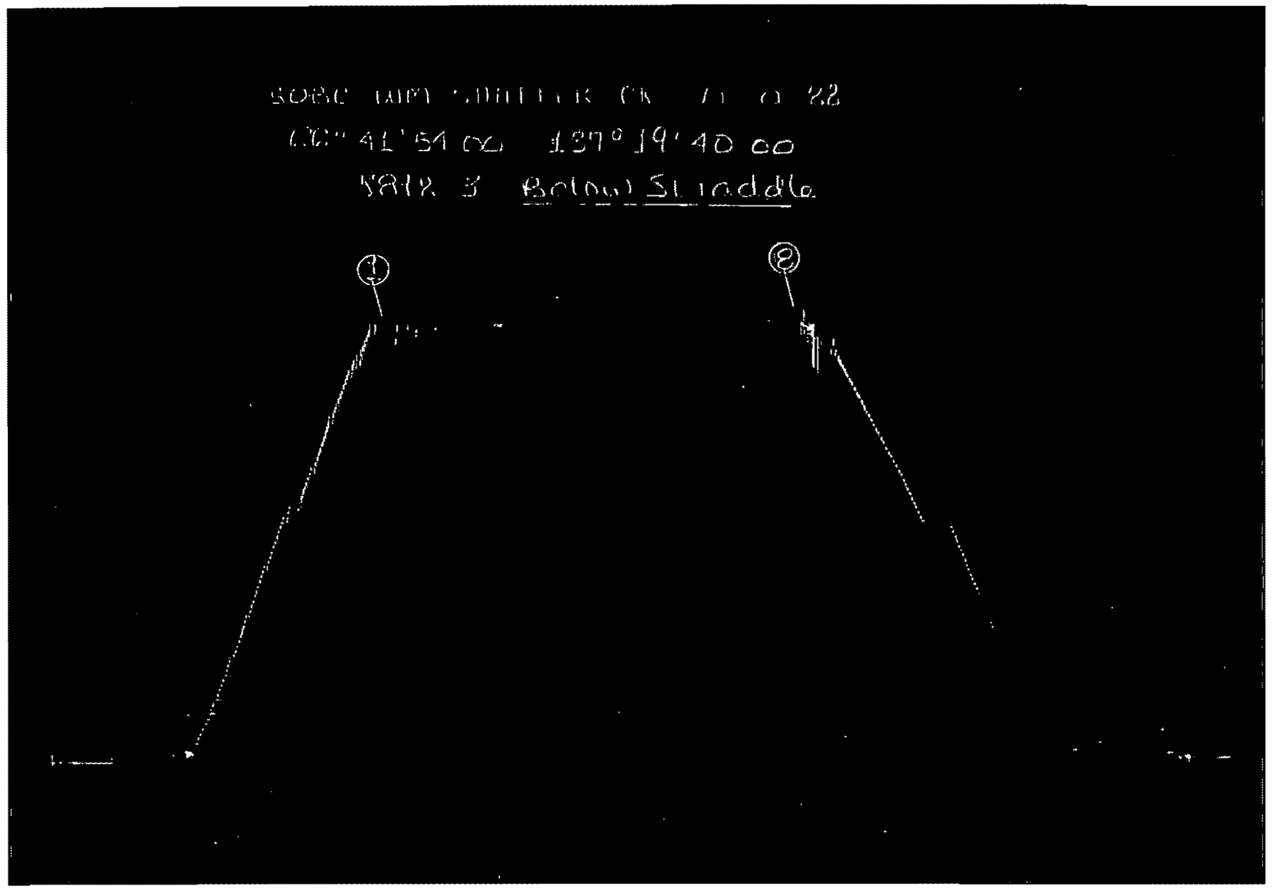
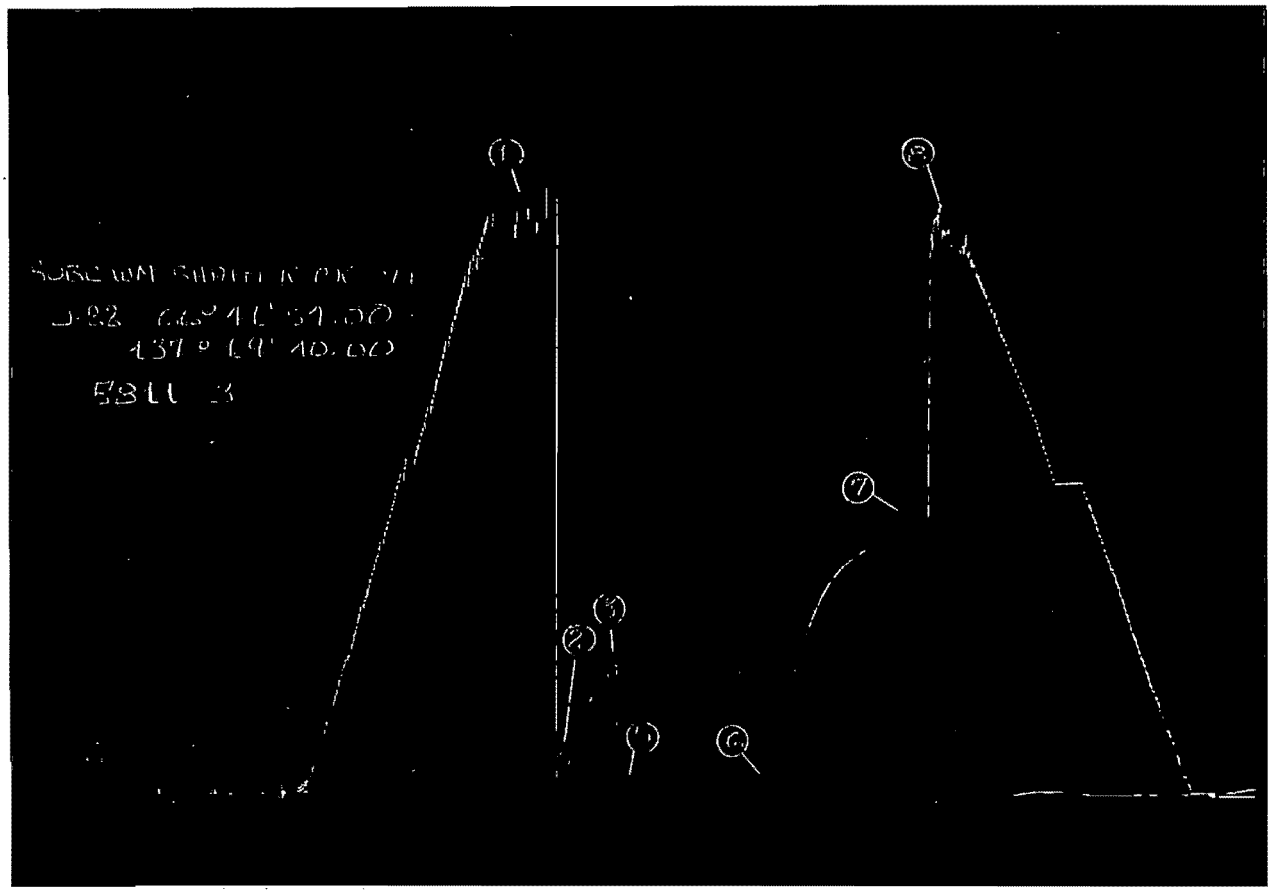
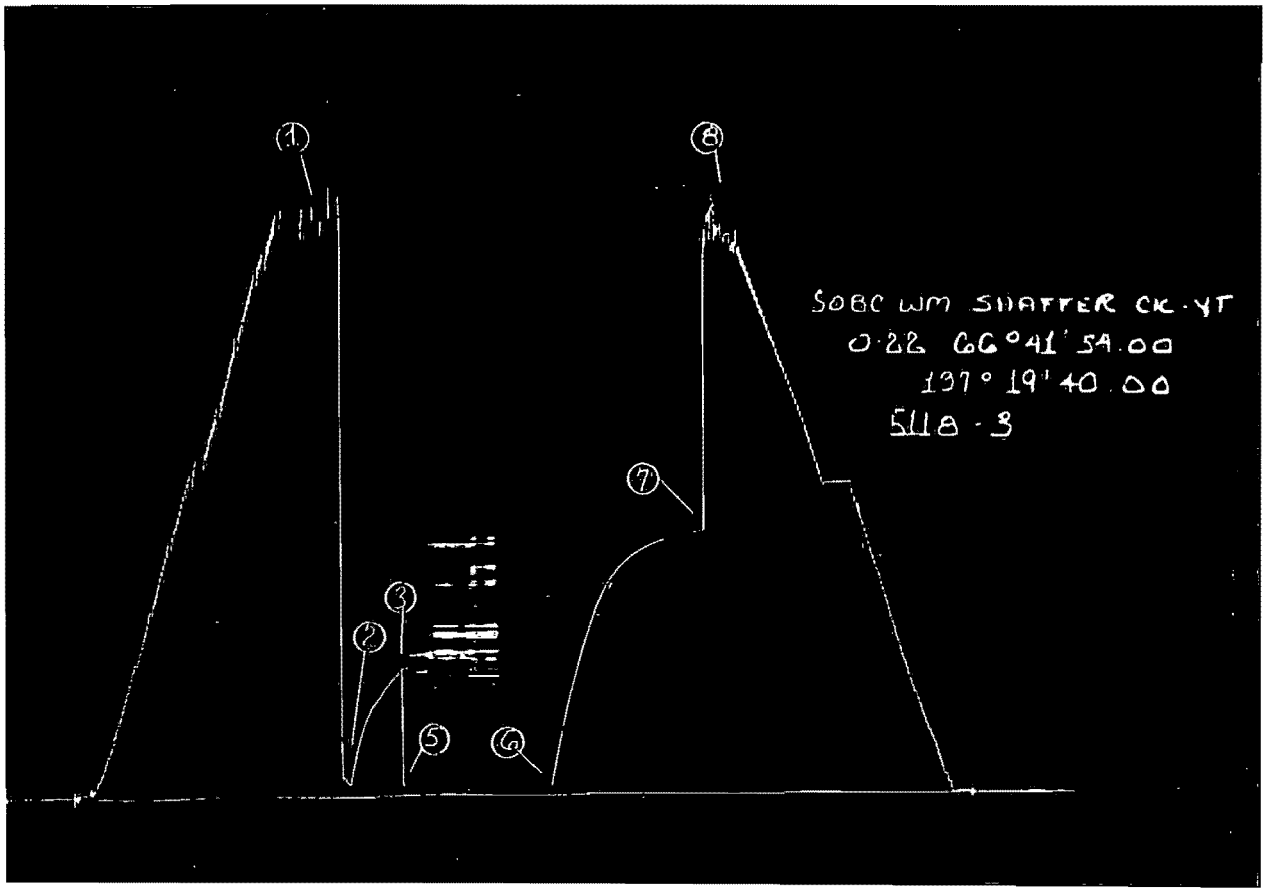

Below Straddle
1
8


SOBC WM SHAFFER CK-YT
O-22 66°41'59.00
137°19'40.00
5811-3


SOBC WM SHAFFER CK-YT
O-22 66°41'59.00
137°19'40.00
5118-3

NOMENCLATURE (Definition of Symbols)

Q	=	average production rate during test, bbls./day
Q_g	=	measured gas production rate during test, MCF/day
k	=	permeability, md
h	=	net pay thickness, ft. (when unknown, test interval is chosen)
μ	=	fluid viscosity, centipoise
Z	=	compressibility factor
T_f	=	reservoir temperature, ° Rankine
m	=	slope of final SIP buildup plot, psig/cycle (psig²/cycle for gas)
b	=	approximate radius of investigation, feet
r_w	=	wellbore radius, feet
t_o	=	total flowing time, minutes
P_o	=	Extrapolated maximum reservoir pressure, psig
P_f	=	final flowing pressure, psig
P.I.	=	productivity index, bbls./day/psi
$P.I._t$	=	theoretical productivity index with damage removed, bbl./day/psi
D.R.	=	damage ratio
E.D.R.	=	estimated damage ratio
AOF	=	absolute open flow potential, MCF/D
AOF_t	=	theoretical absolute open flow if damage were removed
$\bar{Z}$	=	subsea depth
W	=	water gradient based on salinity
H_w	=	potentiometric surface

DEFINITION OF SYMBOLS

Recorder Depth 8322 ft. Subsea depth ..... ft. Ticket No. 2932 Hour Recorder No. 5811

t_o = 10 Mins. Initial Shut-In Pressure				Second Flow Pressure		t_o = 190 Mins. Final Shut-In Pressure			
Time, Min. Ø	$\frac{t_o + Ø}{Ø}$	PSIG	PSIG² ÷10⁶ (Gas)	Time Defl. .000"	PSIG	Time, Min. Ø	$\frac{t_o + Ø}{Ø}$	PSIG	PSIG² ÷10⁶ (Gas)
						0	-----	72	
						10	20.000	476	
						20	10.500	794	
0	-----	89				30	7.333	1067	
5	3.000	236				40	5.750	1287	
10	2.000	371				50	4.800	1489'	
15	1.667	538				60	4.167	1648	
20	1.500	633				70	3.714	1773	
25	1.400	715				80	3.375	1865	
30	1.333	767				90	3.111	1930	
35	1.285	816				100	2.900	1985	
40	1.250	871				110	2.727	2025	
45	1.222	921				120	2.583	2058	
50	1.200	965				130	2.461	2085	
55	1.181	998				140	2.357	2111	
60	1.167	1042				150	2.267	2131	
						160	2.187	2148	
Initial shut-in pressure not extrapolated						170	2.117	2168	
						180	2.056	2181	

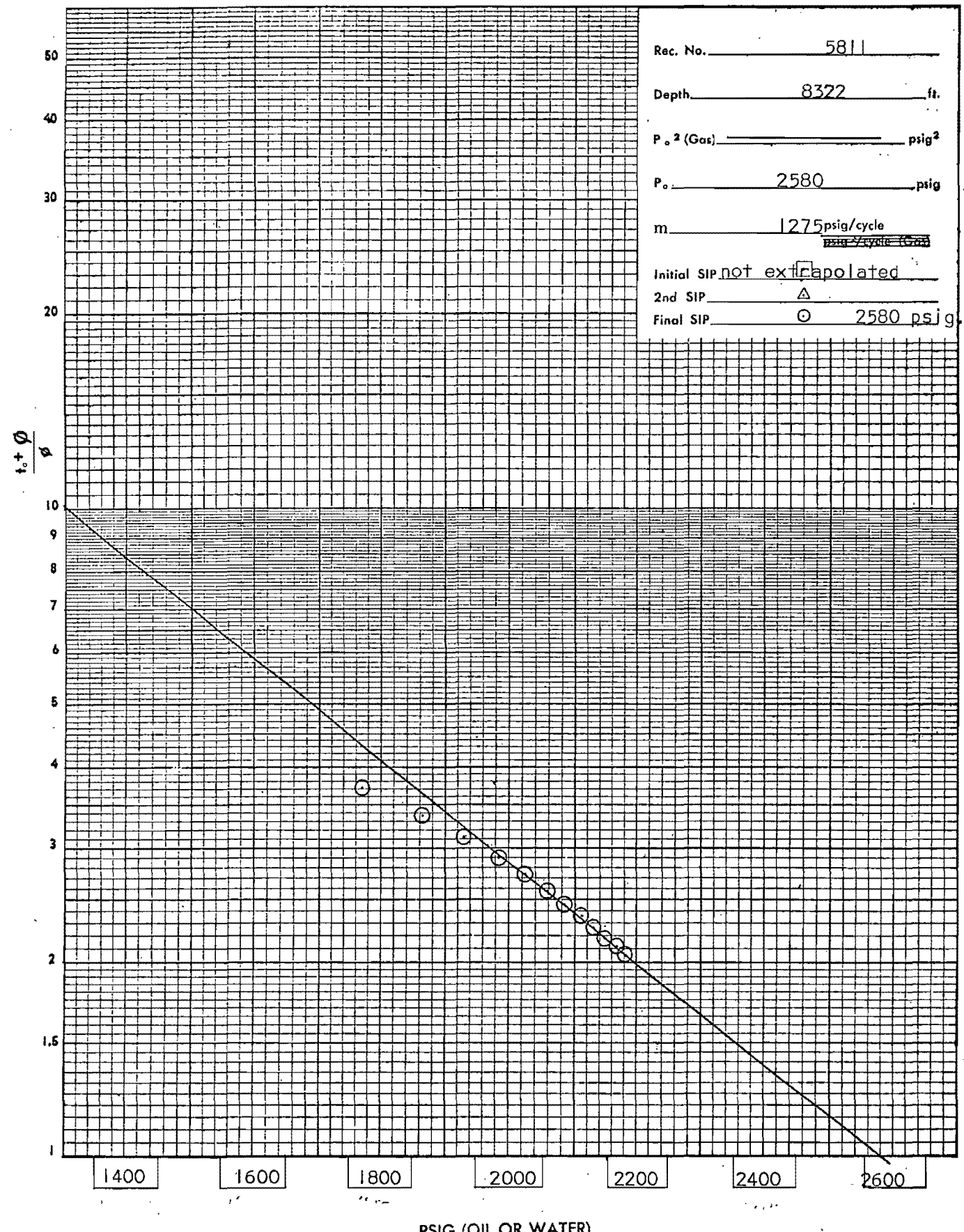
Recorder Depth ..... ft. Subsea depth ..... ft. Ticket No. ..... Hour Recorder No. .....

t_o = Mins. Initial Shut-In Pressure				Second Flow Pressure		t_o = Mins. Final Shut-In Pressure			
Time, Min. Ø	$\frac{t_o + Ø}{Ø}$	PSIG	PSIG² ÷10⁶ Ø	Time Defl. .000"	PSIG	Time, Min. Ø	$\frac{t_o + Ø}{Ø}$	PSIG	PSIG² ÷10⁶ (Gas)

Interval of Pressure Readings (Mins.) ISIP 5 2nd Flow Press. FSIP 10

Remarks: DST # 3

PRESSURE DATA



DST # 3

PRESSURE EXTRAPOLATION PLOT

LYNES UNITED SERVICES LTD.

TEST DATA					GENERAL INFORMATION	
Test No.	3	Lynes Test				
Formation		T.D.	10,370	Ft.	Company	Chevron Standard Ltd.
Interval Tested	8314	Ft. to	8420	Ft.	Address	400 - Fifth Avenue S.W.
Feet of Net Pay Tested	106			Ft.		Calgary, Alberta
Type of Test	Inflatable Straddle					
Cushion	nil	Amount		Ft.	Well Name	SOBC WM Shaeffer Ck YT-0-22
Started in Hole at	1:30 Hrs.	Tool Open at	6:49	Hrs.	Well Number	66o 41' 54.00 137o 19' 40.00
Pre-Flow	10 Mins.	Initial Shut-in	60	Mins.	K.B. Elevation	1155 Sub-Sea Elevation
2nd Flow	Mins.	Second Shut-in		Mins.	Area	Eagle Plains Province Yukon
Final Flow	180 Mins.	Final Shut-in	180	Mins.	Company Rep.	Mr. Larry Grumbly
Remarks:					Tester	Pat MCDonnell
					Contractor	GP Rig No. 15
					Ticket No.	2932 Date May 3/71
Blow:	Good initial puff. Strong blow. Gas to surface in 4 minutes on main flow				Service Reports To:	10 - aboveaddress

GAS BLOW MEASUREMENTS			
Measured with too small to measure. Caught 2 samples but had to shut flare line off 35 minutes for 20 psi.			
Time	Surface Choke	Reading Inches	Cubic Feet/Day

MUD AND HOLE DATA					
Mud Type	Gel Chem				
Weight	10.4	Viscosity	210	Water Loss	5.5
Filter Cake	2/32"	Bottom Hole Temperature			
Drill Pipe Size	4 1/2" FH	Weight			
Drill Collars	5"H90	I.D.	2 7/8	Feet Run	214.78
Main Hole or Casing Size	8 3/4"				
Rathole or Liner Size		No. of Feet			
Bottom Hole Choke Size	3/4"				
Surface Choke Size	adjustable				
Packer Rubber Size	7 x 72"				
REMARKS	Shut-in pressures suggest low permeability within the interval tested.				

RECOVERY	
TOTAL FLUID RECOVERED	120 Ft. Consisting of:
120 Ft. of	drilling mud
Ft. of	
Ft. of	
Ft. of	
Test was/was not Reverse Circulated	was not
Oil Recovery A.P.I.	Water Specific Gravity
Salinity	

PRESSURE READINGS				
	Inside ___ Outside X	Inside ___ Outside X	Inside ___ Outside X	Inside ___ Outside ___
	Recorder No. 5811	Recorder No. 5118	Recorder No. 5812	Recorder No.
	Capacity 6000	Capacity 6000	Capacity 8200	Capacity
	Depth 8322	Depth 8322	Depth 8435	Depth
NUMBER KEY:				
1 - INITIAL HYDROSTATIC	4788	4773	4890	
2 - PRE-FLOW	89	91		
3 - INITIAL SHUT-IN	1042	1037		
4a - 2nd INITIAL FLOW				
4b - 2nd FINAL FLOW				
4c - 2nd SHUT-IN				
5 - 3rd INITIAL FLOW	79	84		
6 - FINAL FLOW	72	79		
7 - FINAL SHUT-IN	2181	2175		
- FINAL HYDROSTATIC	4788	4773	4969	

Chevron Standard Ltd. — Company

SOBC WM Shaeffer CK - YT - O-22 — Well Name and Description

66° 41' 137° 19' — Well Name and Description

DST # 3 — Test No.

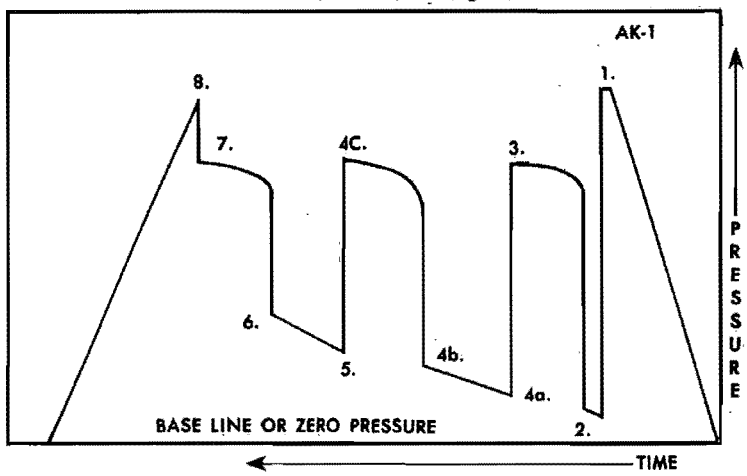
May 3/71 — Date of Test

LYNES

GUIDE TO INTERPRETATION AND IDENTIFICATION OF

LYNES DRILL STEM TEST PRESSURE CHARTS

AK-1 recorders. Read from right to left.

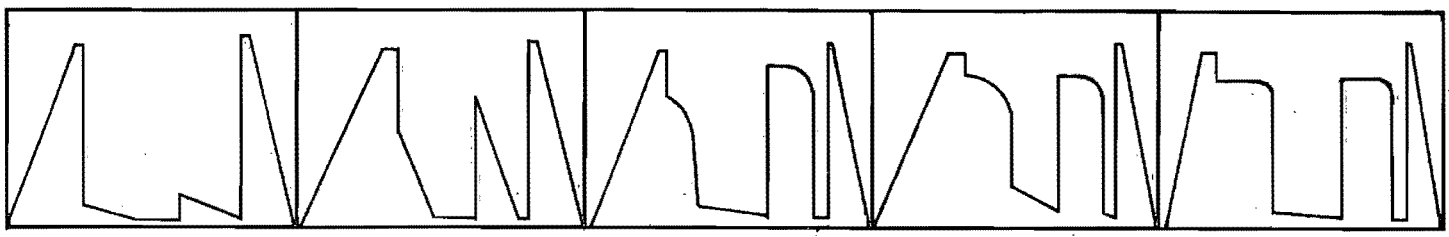


K-3 recorders. Read from left to right.

1. INITIAL HYDROSTATIC MUD PRESSURE
2. PRE-FLOW
3. INITIAL SHUT-IN
4a. 2nd INITIAL FLOW
4b. 2nd FINAL FLOW
4c. 2nd SHUT-IN
5. 3rd INITIAL FLOW
6. FINAL FLOW
7. FINAL SHUT-IN
8. 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.



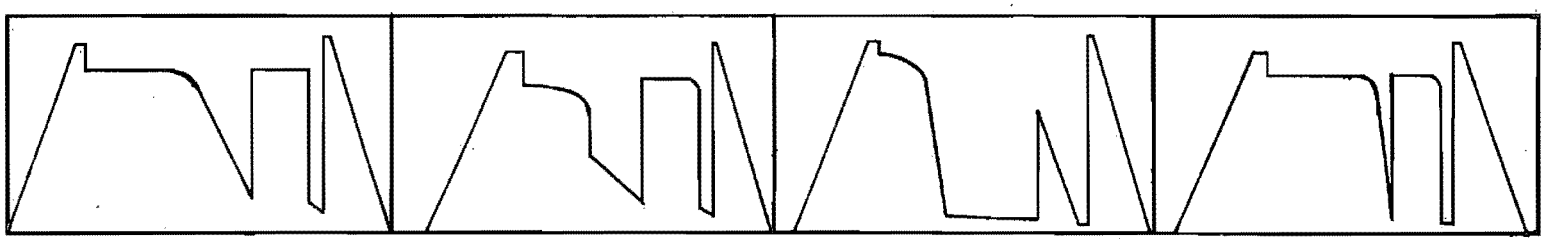
Very low permeability. Usually only mud recovered from interval tested. Virtually no permeability.

Slightly higher permeability. Again usually mud recovered.

Slightly higher permeability. Small recovery, less than 200' ft).

Average permeability. Final and initial shut-ins differ by 50 psi.

Average permeability. Strong 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.