

FORMATION TESTING

Technical Report

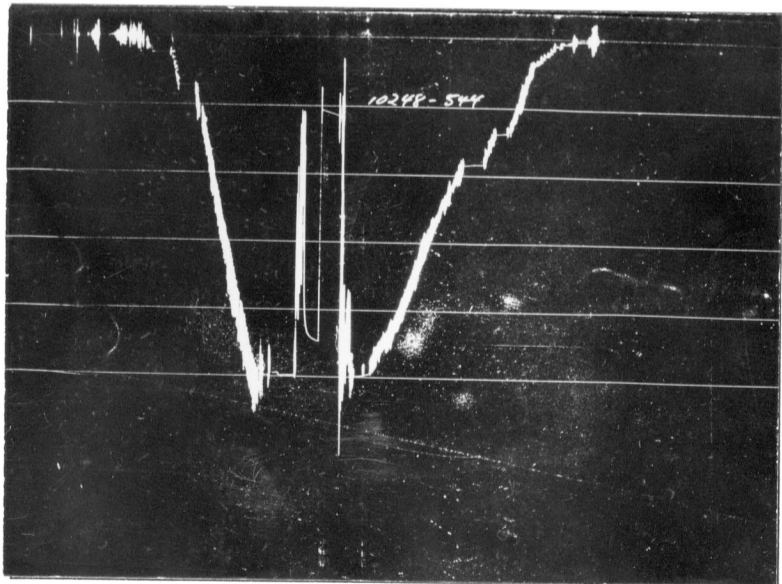
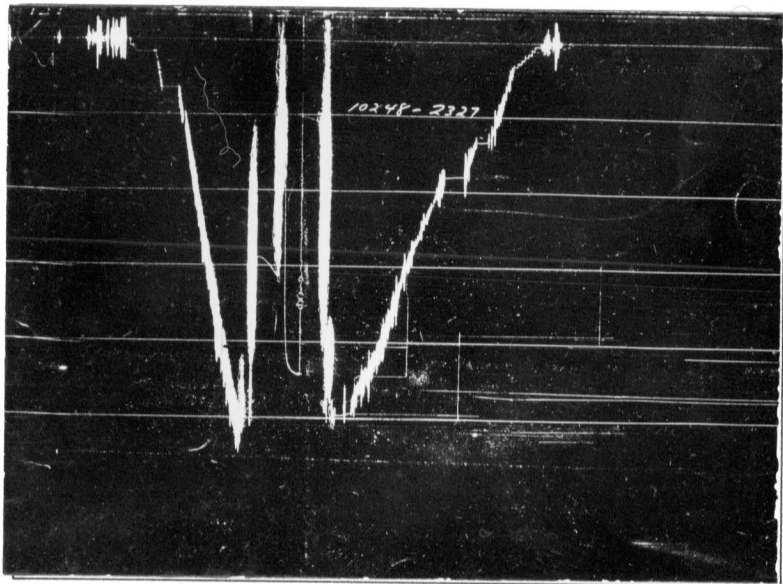
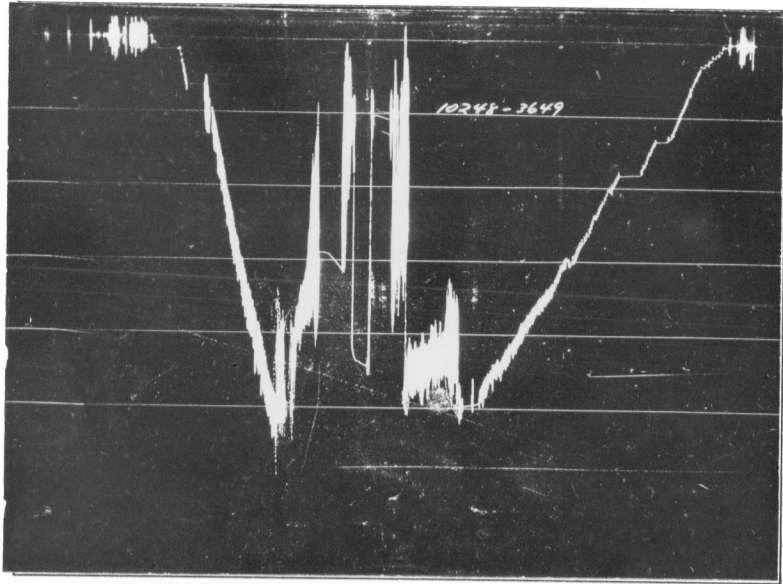


CALGARY, ALBERTA

A **Halliburton** Company

↓ PRESSURE
 TIME →

Each horizontal line equal to 1000 psi



TEMPERATURE RECORD

Each concentric line equals 10° F.
 Temperature increases outwardly
 Ticket No. 10248
 Temperature Range °F

250°F to 350°F

A to B — Initial CIP

B to C — 2nd Flow

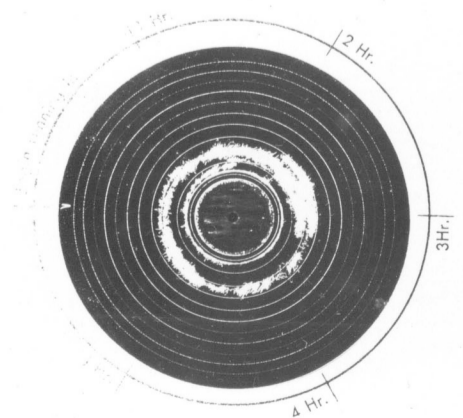
C to D — Final CIP

A _____ °F

B _____ °F

C MAX °F

D 275 °F



FORM 47



FORMATION TESTING
DATA SHEET

REFER TO INVOICE NO. 10248

HALLIBURTON DISTRICT
Ft. Nelson

JOB DATE February 19, 1973

OWNER, OPERATOR OR HIS AGENT STATES THE WELL IS IN CONDITION FOR THE SERVICE JOB TO BE PERFORMED AND SUBMITS THE FOLLOWING DATA:

PRESSURE DATA			
	TOP	CENTRE	BOTTOM
GAUGE NUMBER	3649	2327	544
GAUGE DEPTH	11234	11257	11396
BLANKED OFF	<input checked="" type="checkbox"/> /NO	<input checked="" type="checkbox"/> /NO	YES/ <input checked="" type="checkbox"/>
HOUR CLOCK TRAVEL	24	24	24
INITIAL HYDROSTATIC	4920	4932	4970
FIRST FLOW	INITIAL		
	FINAL		
FIRST CLOSED IN	4420	4428	4467
SECOND FLOW	INITIAL		
	FINAL		
SECOND CLOSED IN			
THIRD FLOW	INITIAL		
	FINAL		
THIRD CLOSED IN			
FINAL HYDROSTATIC	4912	4924	4946

TYPE OF TEST Dual Bottom Hole	TESTER B. Miller	EMPL. NO. 219
WITNESS J. Lee	DRILLING CONTRACTOR Peter Bawden #31	

EQUIPMENT AND WELL DATA			
FORMATION TESTED	GAUGE DEPTH	275 OF MEAS. OF EST.	
NET PRODUCTIVE THICKNESS	MUD TYPE	Gel	
K B ELEVATION	MUD WEIGHT	8.6	MUD VISC. 68
ALL DEPTHS MEASURED FROM:	<input checked="" type="checkbox"/> KB <input type="checkbox"/> GROUND		
PACKER DEPTHS	CASING OR HOLE SIZE	8 1/2"	
DEPTH OF TESTER VALVE	RATHOLE SIZE	NA	
CASING PERFORATED INTERVAL	DRILL PIPE	5"	OD WEIGHT 19.50
TOTAL DEPTH	DRILL COLLARS ABOVE TESTER	2 7/8"	ID LENGTH 646'
AMOUNT AND TYPE CUSHION	SURFACE CHOKE	1"	
	BOTTOM CHOKE	5/8"	

FLUID SAMPLER DATA

SAMPLER PRESSURE AT SURFACE _____ PSIG

RECOVERY: C.C. OIL _____ CU.FT. GAS _____

C.C. WATER _____

C.C. MUD _____

TOTAL LIQUID C.C. _____

OIL GRAVITY _____ API @ _____ OF _____

GAS/OIL RATIO _____ CU.FT./BBL.

RESISTIVITY/REFRACTOMETER/SP. GR. READING _____ CHLORIDE CONTENT _____

RECOVERY WATER _____ OF _____ PPM

RECOVERY MUD FILTRATE _____ OF _____ PPM

MUD PIT SAMPLE FILTRATE _____ OF _____ PPM

SAMPLE SHIPPED TO LABORATORY: YES NO

TIME PERIODS						
	FIRST	SECOND	THIRD		AM	PM
FLOW	5	35		TESTER OPENED	11:20	
CLOSED IN	30			PACKER UNSEATED		

LIQUID RECOVERY DATA	
FEET	DESCRIPTION OF LIQUID
MEASURED FROM TESTER VALVE	
	TOTAL LIQUID RECOVERY

GAS FLOW RATE DATA						
FLOW TIME	INSTRUMENT PRESSURE			ORIFICE SIZE	GAS TEMP.	GAS RATE MCFD @ 60°F
	"WATER	"MERC.	PSI			

REMARKS No blow during first flow. Packer seat failed after 3 1/2 min of second flow.

COMPANY: AMOCO CANADA PETROLEUM CO LTD.
 LEGAL DESCRIPTION: 65 41' 12.62
 133 07' 52.10
 PROVINCE OR TERRITORY: YUKON
 FIELD OR AREA: CRANSWICK
 TEST NUMBER: 5
 TESTED INTERVAL: 11257 - 11400
 WELL NAME AND NUMBER: AMOCO PCP B-1 CRANSWICK

NOMENCLATURE

AOF	= absolute open flow potential, MCFD
AOF _t	= theoretical absolute open flow potential if damage were removed, MCFD
B	= formation volume factor, res bbl/ST bbl
c	= compressibility, psi ⁻¹
D	= gauge depth from KB, ft
DR	= damage ratio, dimensionless
E	= KB elevation, ft
F	= drill pipe capacity, bbl/ft
G	= hydrostatic gradient of recovery fluid, psi/ft
h	= net productive thickness of formation, ft
h ¹	= thickness of test interval, ft
k	= average effective permeability, md
k ¹	= estimated average effective permeability, md
m	= slope of final CIP buildup plot, psig/cycle (psig ² /cycle for gas)
M	= slope of flow plot, min ⁻¹
P _D	= average pressure drop across damaged zone during flow, psig
P _f	= reservoir pressure, psig
P _s	= wellbore flow pressure, psig
\bar{P}	= weighted average wellbore flow pressure, psig
PI	= productivity index, bbl/day-psi
PI _t	= theoretical productivity index if damage were removed, bbl/day-psi
PS	= potentiometric surface, fresh water corrected to 100°F, ft
Q	= average liquid production rate during test, bbl/day
Q _g	= measured gas production rate, MCFD at 60°F, 14.4 psig, sp. gr. 0.60
Q _m	= maximum production rate, U.S. gal/min
Q _{mt}	= maximum theoretical production rate if damage were removed, U.S. gal/min
q	= flow rate calculated from hydrostatic of recovery, psi/Xmin
r _i	= radius of investigation, ft
r _w	= wellbore or shaft radius, ft
R _s	= solution gas-oil ratio, MCFD/ST bbl
s	= fluid saturation, fraction
t	= effective flow time, min
t _f	= time interval from start of continuous production to some future point of interest, min
T	= reservoir temperature, °R
μ	= viscosity, cp
x	= time increment during which q values are calculated, min
Z	= compressibility factor, dimensionless
ϕ	= porosity, fraction
θ	= time point during the closed-in period, minutes

Subscripts

g	= gas
o	= oil
w	= water
t	= total