CONFIDENTIAL

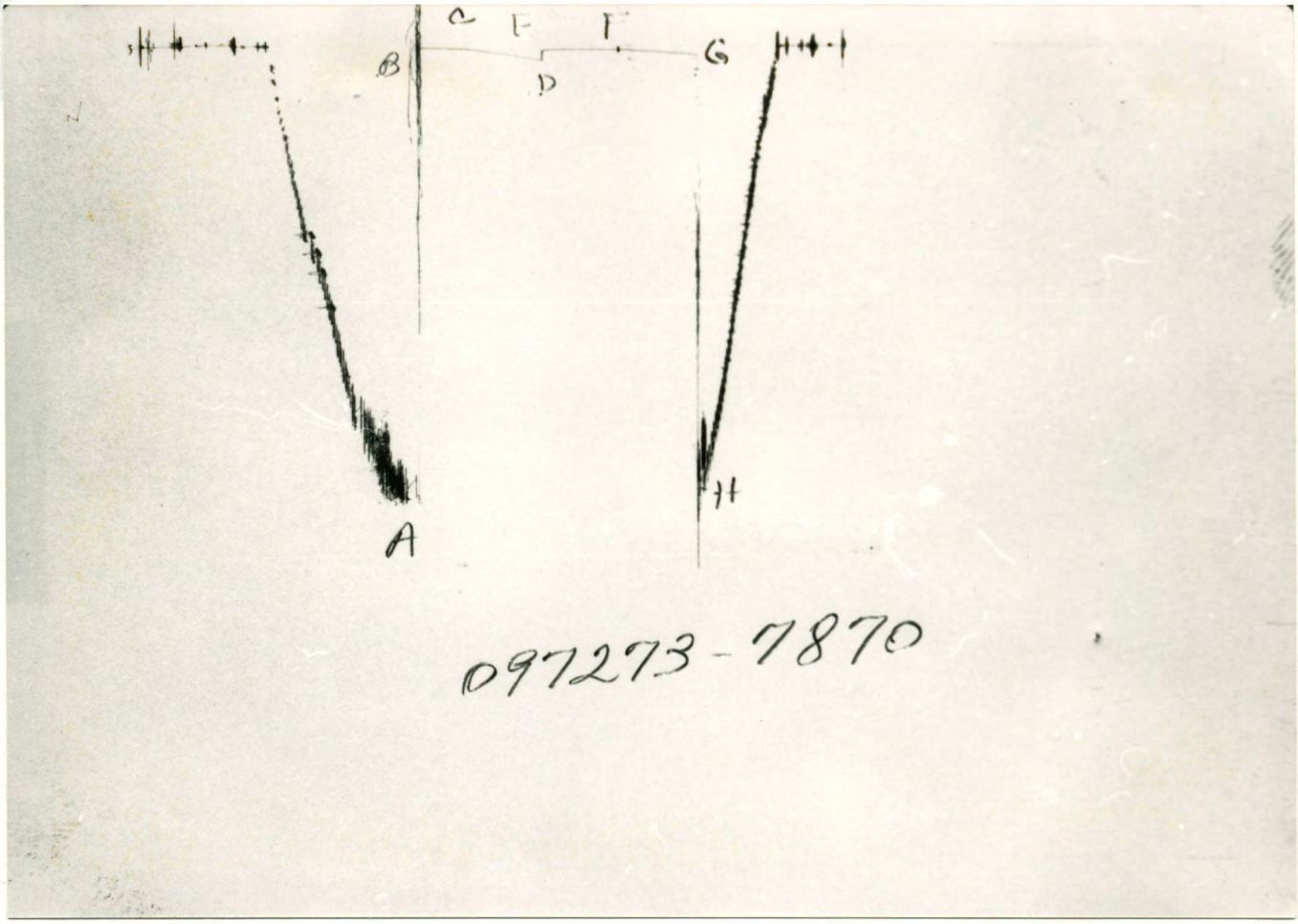
C4/25/86

HALLIBURTON
SERVICES

TICKET NO. 09727300
13-NOV-85
HAYS

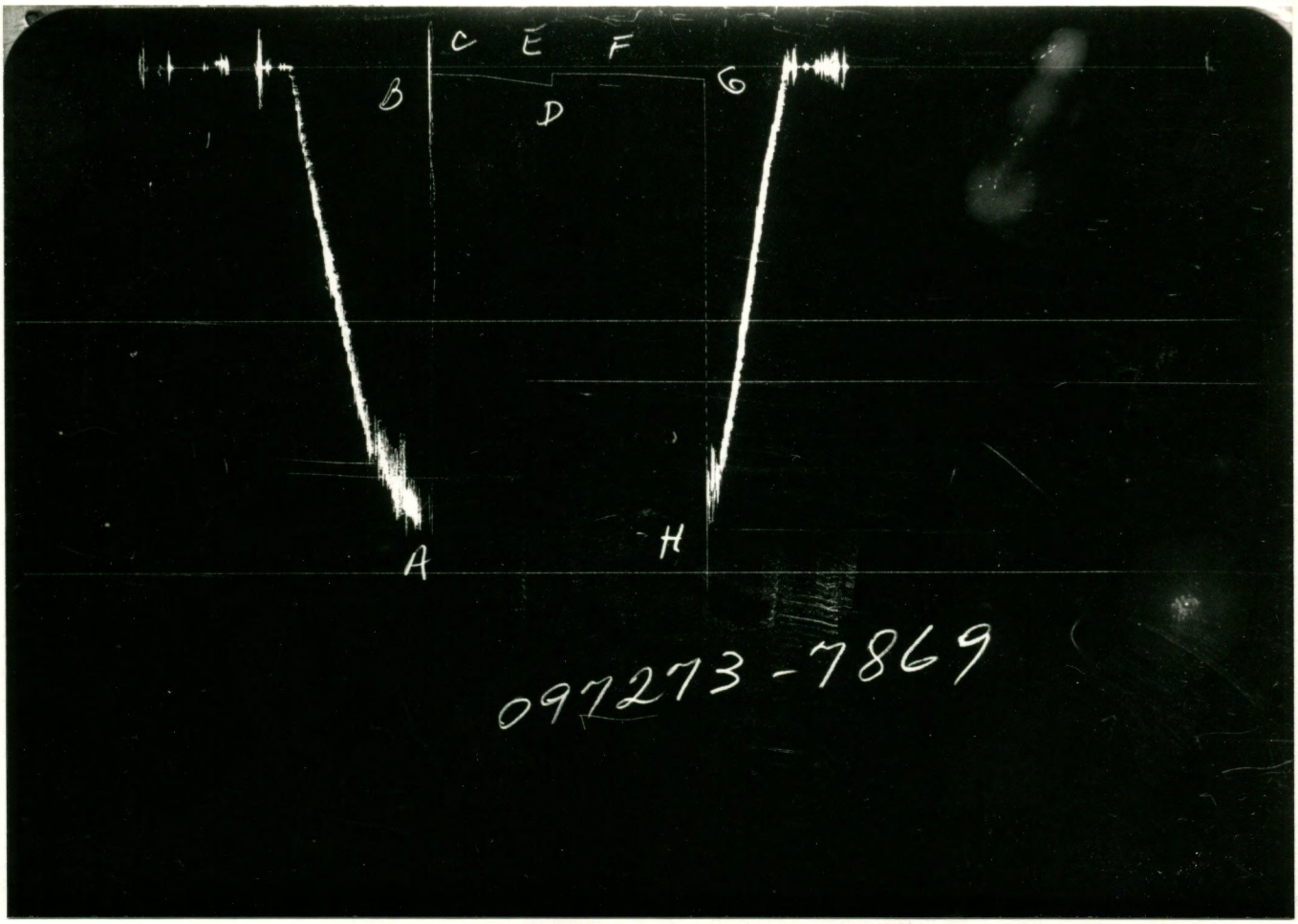
FORMATION TESTING SERVICE REPORT

GROSS LEASE NAME	C-1 WELL NO.	1 TEST NO.	3181.0 - 3198.0 TESTED INTERVAL		C. H. TRAPP OIL OPERATIONS LEASE OWNER/COMPANY NAME
LEGAL LOCATION SEC. - TWP. - RNG.	5-15-13	FIELD AREA	TRAPP	COUNTY RUSSELL	STATE KANSAS IC



GAUGE NO: 7870 DEPTH: 3170.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		1712.7			
B	INITIAL FIRST FLOW		7.8	30.0	30.0	F
C	FINAL FIRST FLOW		13.6			
C	INITIAL FIRST CLOSED-IN		13.6	45.0	45.0	C
D	FINAL FIRST CLOSED-IN		57.7			
E	INITIAL SECOND FLOW		20.7	45.0	45.0	F
F	FINAL SECOND FLOW		14.0			
F	INITIAL SECOND CLOSED-IN		14.0	45.0	45.0	C
G	FINAL SECOND CLOSED-IN		34.0			
H	FINAL HYDROSTATIC		1708.7			



GAUGE NO: 7869 DEPTH: 3195.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	1710	1731.1			
B	INITIAL FIRST FLOW	29	29.1	30.0	30.0	F
C	FINAL FIRST FLOW	39	34.7			
C	INITIAL FIRST CLOSED-IN	39	34.7	45.0	45.0	C
D	FINAL FIRST CLOSED-IN	78	75.3			
E	INITIAL SECOND FLOW	29	27.2	45.0	45.0	F
F	FINAL SECOND FLOW	29	29.6			
F	INITIAL SECOND CLOSED-IN	29	29.6	45.0	45.0	C
G	FINAL SECOND CLOSED-IN	59	51.1			
H	FINAL HYDROSTATIC	1749	1728.3			

EQUIPMENT & HOLE DATA

FORMATION TESTED: LANSING
NET PAY (ft): 5.0
GROSS TESTED FOOTAGE: 17.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 7.875
ELEVATION (ft): 1820.0 KELLY BUSHING
TOTAL DEPTH (ft): 3198.0
PACKER DEPTH(S) (ft): 3176, 3181
FINAL SURFACE CHOKE (in):
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 9.80
MUD VISCOSITY (sec): 47
ESTIMATED HOLE TEMP. (°F):
ACTUAL HOLE TEMP. (°F): 92 @ 3192.0 ft

TICKET NUMBER: 09727300
DATE: 11-8-85 TEST NO: 1
TYPE DST: OPEN HOLE
HALLIBURTON CAMP: HAYS
TESTER: KELLY SCHMEIDLER
WITNESS: MIKE BAIR
DRILLING CONTRACTOR: EMPHASIS #6

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm

SAMPLER DATA

Psig AT SURFACE:
cu.ft. OF GAS:
cc OF OIL:
cc OF WATER:
cc OF MUD:
TOTAL LIQUID cc:

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): @ °F
GAS/OIL RATIO (cu.ft. per bbl):
GAS GRAVITY:

CUSHION DATA

TYPE	AMOUNT	WEIGHT

RECOVERED:

20 FEET OF MUD WITH A FEW OIL SPOTS

MEASURED FROM TESTER VALVE

REMARKS:

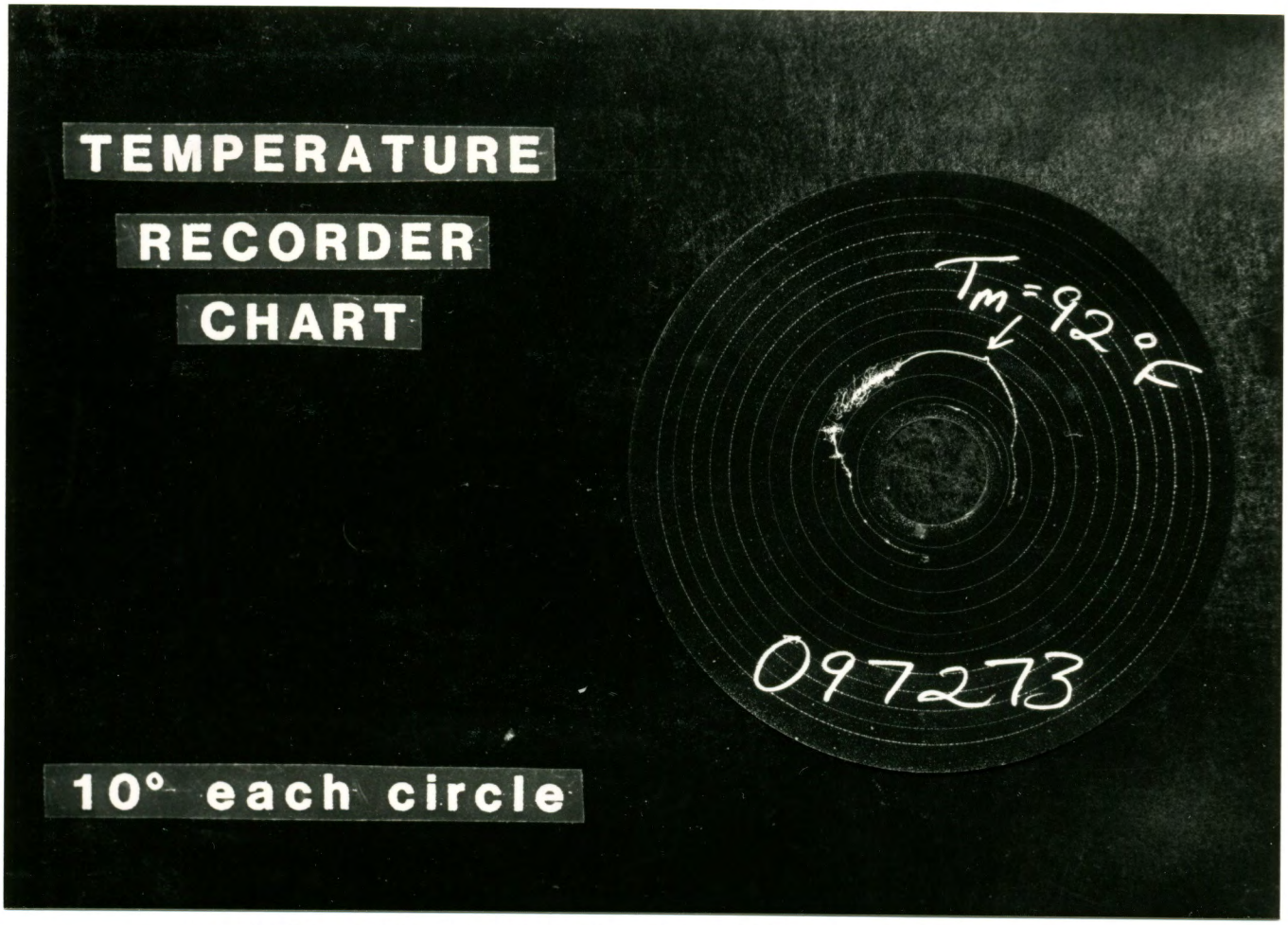
TYPE & SIZE MEASURING DEVICE: _____ TICKET NO: 09727300

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
11-8-85					
0745					CALLED OUT
0900					ON LOCATION
1035					PICKED UP TOOL
1055					TOOL IN TABLE
1227					ON BOTTOM
1230					OPENED TOOL WITH A WEAK BLOW
					BUILDING TO 1/2" IN BUCKET
1300					CLOSED TOOL
1345					OPENED TOOL WITH 3/4" BLOW
					INCREASING TO 1 1/2" BLOW
1430					CLOSED TOOL
1515					OFF BOTTOM
1625					TOOL IN TABLE
1650					TOOL LAID DOWN
1700					JOB COMPLETED

TICKET NO. 09727300

		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	3034.2	
50	IMPACT REVERSING SUB.....	5.750	2.250	1.0	3034.2
1	DRILL PIPE.....	4.500	3.826	123.5	
12	DUAL CIP VALVE.....	5.000	0.870	5.0	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	3168.0
80	AP RUNNING CASE.....	5.000	2.250	4.1	3170.0
70	OPEN HOLE PACKER.....	6.750	1.530	4.1	3176.0
70	OPEN HOLE PACKER.....	6.750	1.530	5.8	3181.0
20	FLUSH JOINT ANCHOR.....	5.000	2.370	9.5	
83	HT-500 TEMPERATURE CASE.....	5.000		1.5	3192.0
81	BLANKED-OFF RUNNING CASE.....	5.000		4.3	3195.0
	TOTAL DEPTH				3198.0

EQUIPMENT DATA



EQUATIONS FOR DST GAS WELL ANALYSIS

Indicated Flow Capacity	$kh = \frac{1637\ Q_g\ T}{m}$	md-ft
Average Effective Permeability	$k = \frac{kh}{h}$	md
Skin Factor	$S = 1.151\left[\frac{m(P^*) - m(P_f)}{m} - \text{LOG}\left(\frac{k(t/60)}{\phi\ \mu\ c_t r_w^2}\right) + 3.23\right]$	—
Damage Ratio	$DR = \frac{m(P^*) - m(P_f)}{m(P^*) - m(P_f) - 0.87\ mS}$	—
Indicated Flow Rate (Maximum)	$AOF_1 = \frac{Q_g\ m(P^*)}{m(P^*) - m(P_f)}$	MCFD
Indicated Flow Rate (Minimum)	$AOF_2 = Q_g \sqrt{\frac{m(P^*)}{m(P^*) - m(P_f)}}$	MCFD
Approx. Radius of Investigation	$r_i = 0.032 \sqrt{\frac{k(t/60)}{\phi \mu c_t}}$	ft