HALLIBURTON
SERVICES

TICKET NO. 09990200
05-AUG-85
NESS CITY

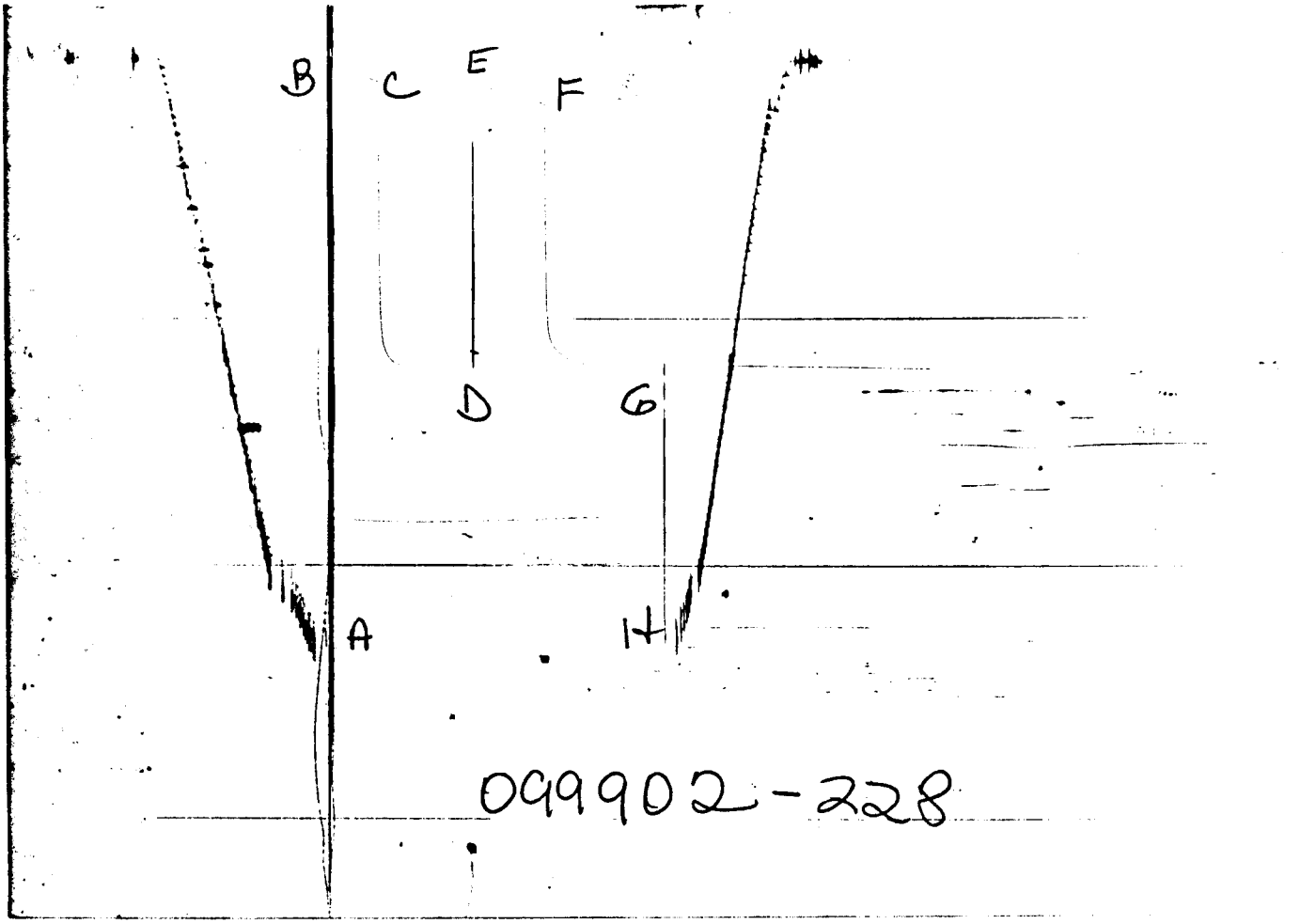
NE - S W - NE

RECEIVED
AUG 29 '85
GREAT BEND
Conservation Office

FORMATION TESTING SERVICE REPORT

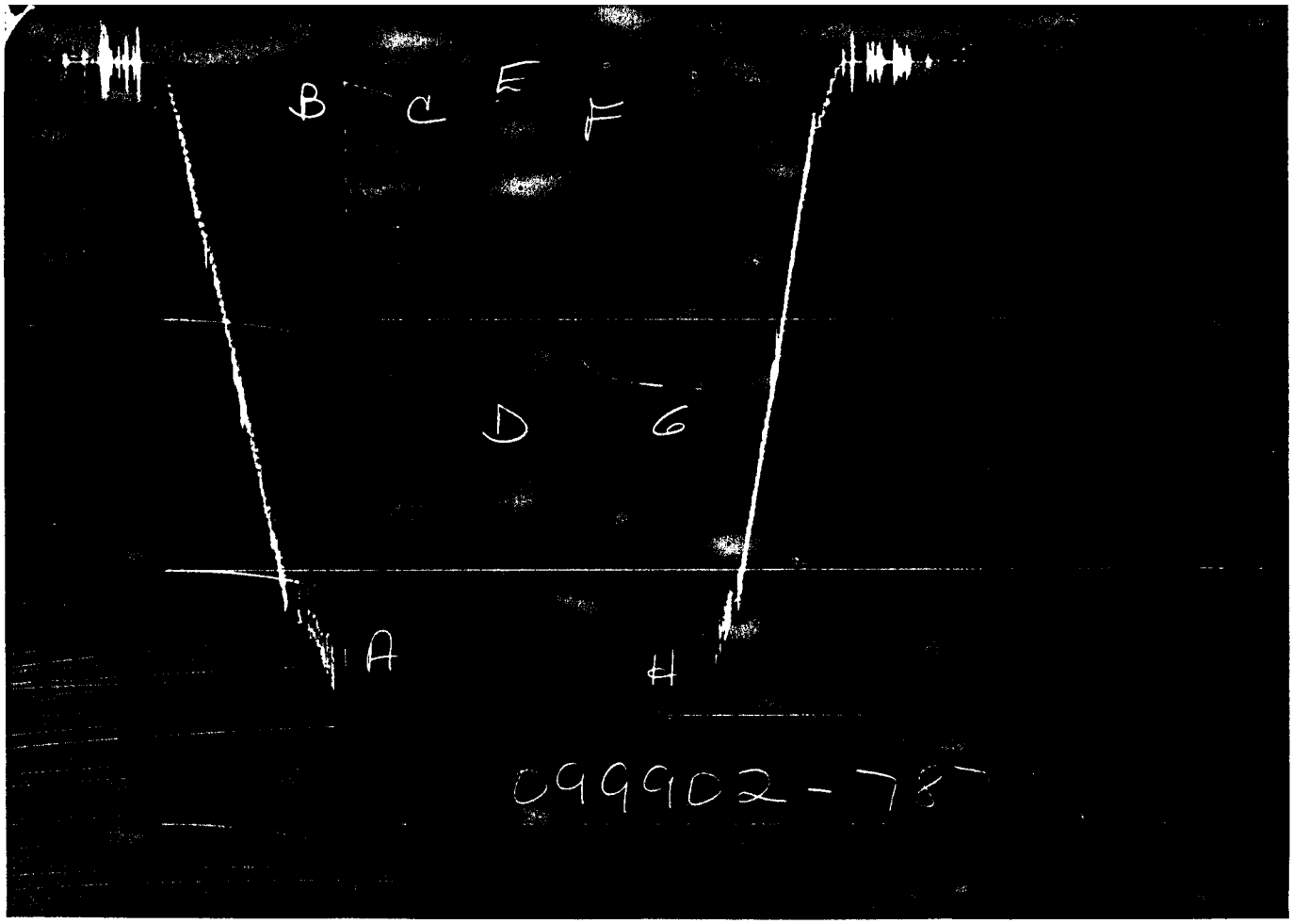
LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME
TOADVINE	C-1	1	4521.0 - 4621.0	DONALD C. SLAWSON

LEGAL LOCATION SEC. - TWP. - RNG.	FIELD AREA	COUNTY	STATE
18 - 18 - 26	WILDCAT	NESS	KANSAS



GAUGE NO: 228 DEPTH: 4506.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2243	2246.8			
B	INITIAL FIRST FLOW	10	14.7	30.0	30.3	F
C	FINAL FIRST FLOW	81	76.6			
C	INITIAL FIRST CLOSED-IN	81	76.6	60.0	59.1	C
D	FINAL FIRST CLOSED-IN	1236	1237.9			
E	INITIAL SECOND FLOW	85	84.8	45.0	44.9	F
F	FINAL SECOND FLOW	162	166.1			
F	INITIAL SECOND CLOSED-IN	162	166.1	75.0	75.7	C
G	FINAL SECOND CLOSED-IN	1216	1220.2			
H	FINAL HYDROSTATIC	2239	2249.0			



GAUGE NO: 7873 DEPTH: 4618.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		2307.9			
B	INITIAL FIRST FLOW		74.8	30.0	30.3	F
C	FINAL FIRST FLOW		129.9			
C	INITIAL FIRST CLOSED-IN		129.9	60.0	59.1	C
D	FINAL FIRST CLOSED-IN		1292.7			
E	INITIAL SECOND FLOW		146.2	45.0	44.9	F
F	FINAL SECOND FLOW		215.2			
F	INITIAL SECOND CLOSED-IN		215.2	75.0	75.7	C
G	FINAL SECOND CLOSED-IN		1271.4			
H	FINAL HYDROSTATIC		2300.3			

EQUIPMENT & HOLE DATA

FORMATION TESTED: CHEROKEE-MISSISSIPPI
NET PAY (ft): 6.0
GROSS TESTED FOOTAGE: 100.0
ALL DEPTHS MEASURED FROM: KB
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 7.875
ELEVATION (ft): 2650.0 KELLY BUSHING
TOTAL DEPTH (ft): 4621.0
PACKER DEPTH(S) (ft): 4521
FINAL SURFACE CHOKE (in):
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 9.30
MUD VISCOSITY (sec): 46
ESTIMATED HOLE TEMP. (°F): 121
ACTUAL HOLE TEMP. (°F): 132 @ 4616.0 ft

TICKET NUMBER: 09990200

DATE: 7-30-85 TEST NO: 1

TYPE DST: OPEN HOLE

HALLIBURTON CAMP: NESS CITY

TESTER: TED J. FUCHS

WITNESS: CHARLIE SPRADLIN

DRILLING CONTRACTOR: SLAWSON DRILLING COMPANY RIG #2

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY		CHLORIDES
SYSTEM	@ °F		9000 ppm
RECOVERY	@ °F		17000 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:

357 FEET OF MUDDY SALTWATER WITH A FEW SPECKS OF OIL ON TOP.....

MEASURED FROM TESTER VALVE

REMARKS:

TYPE & SIZE MEASURING DEVICE: ______________ | TICKET NO: 09990200

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
7-30-85					
0830					CALLED OUT
1120					ON LOCATION - RIG PULLED DRILL
					PIPE.
1300					PICKED-UP AND MADE-UP TOOL
1320					TOOL IN TABLE
1335					STARTED TOOL TOWARD BOTTOM
1518					TOOL ON BOTTOM
1521	1/4"BH				OPENED TOOL - 1/4" BLOW
					INCREASING TO 2 1/2".
1551					CLOSED TOOL
1651	1/4"BH				REOPENED TOOL
1736					CLOSED TOOL
1851					TOOL OFF BOTTOM
					TOOL IN TABLE
					TOOL BROKE AND LAID DOWN
					JOB COMPLETED

TICKET NO: 09990200	GAUGE NO: 228
CLOCK NO: 27315 HOUR: 12	DEPTH: 4506.0

HALLIBURTON SERVICES

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			FIRST FLOW			
B	1	0.0	14.7			
	2	5.0	23.3	8.6		
	3	10.0	35.1	11.7		
	4	15.0	44.7	9.6		
	5	20.0	54.5	9.8		
	6	25.0	64.9	10.4		
C	7	30.3	76.6	11.6		
			FIRST CLOSED-IN			
C	1	0.0	76.6			
	2	4.0	1120.5	1043.9	3.5	0.935
	3	8.0	1161.7	1085.1	6.3	0.680
	4	12.0	1181.7	1105.1	8.6	0.547
	5	16.0	1194.8	1118.2	10.5	0.462
	6	20.0	1204.1	1127.5	12.0	0.400
	7	24.0	1210.8	1134.2	13.4	0.355
	8	28.0	1216.3	1139.7	14.5	0.318
	9	32.0	1220.8	1144.2	15.6	0.289
	10	36.0	1224.1	1147.5	16.4	0.265
	11	40.0	1227.1	1150.6	17.2	0.245
	12	44.0	1229.9	1153.3	17.9	0.227
	13	48.0	1232.3	1155.7	18.6	0.212
	14	52.0	1234.6	1158.0	19.1	0.199
	15	56.0	1236.2	1159.6	19.6	0.188
D	16	59.1	1237.9	1161.3	20.0	0.179
			SECOND FLOW			
E	1	0.0	84.8			
	2	5.0	87.7	2.8		
	3	10.0	98.3	10.6		
	4	15.0	109.4	11.1		
	5	20.0	118.3	8.9		
	6	25.0	128.1	9.7		
	7	30.0	137.3	9.2		
	8	35.0	145.1	7.8		
	9	40.0	153.5	8.4		
F	10	44.9	166.1	12.7		
			SECOND CLOSED-IN			
F	1	0.0	166.1			
	2	5.0	1103.0	936.9	4.7	1.208
	3	10.0	1139.1	973.0	8.9	0.929
	4	15.0	1157.2	991.0	12.5	0.779
	5	20.0	1169.0	1002.8	15.8	0.678
	6	25.0	1178.7	1012.6	18.8	0.603
	7	30.0	1185.7	1019.6	21.4	0.545

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND CLOSED-IN - CONTINUED			
	8	35.0	1191.5	1025.4	23.9	0.498
	9	40.0	1196.4	1030.2	26.1	0.459
	10	45.0	1200.1	1033.9	28.2	0.426
	11	50.0	1205.3	1039.1	30.0	0.399
	12	55.0	1209.2	1043.1	31.8	0.374
	13	60.0	1211.8	1045.7	33.4	0.353
	14	65.0	1214.6	1048.5	34.9	0.334
	15	70.0	1217.1	1051.0	36.3	0.317
G	16	75.7	1220.2	1054.1	37.7	0.300

REMARKS:

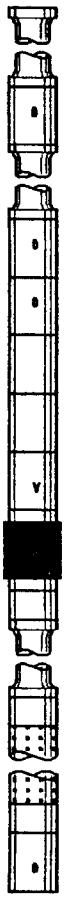
TICKET NO: 09990200		GAUGE NO: 7873
CLOCK NO: 14248 HOUR: 12	HALLIBURTON SERVICES	DEPTH: 4618.0

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			FIRST FLOW			
B	1	0.0	74.8			
	2	5.0	82.8	8.1		
	3	10.0	91.1	8.3		
	4	15.0	98.7	7.6		
	5	20.0	108.6	10.0		
	6	25.0	119.3	10.7		
C	7	30.3	129.9	10.6		
			FIRST CLOSED-IN			
C	1	0.0	129.9			
	2	4.0	1173.9	1043.9	3.5	0.932
	3	8.0	1216.3	1086.4	6.3	0.680
	4	12.0	1236.9	1107.0	8.6	0.548
	5	16.0	1250.4	1120.5	10.5	0.461
	6	20.0	1259.4	1129.5	12.0	0.401
	7	24.0	1266.7	1136.8	13.4	0.354
	8	28.0	1271.9	1142.0	14.5	0.318
	9	32.0	1276.3	1146.4	15.6	0.289
	10	36.0	1279.7	1149.8	16.4	0.265
	11	40.0	1282.8	1152.9	17.2	0.245
	12	44.0	1285.7	1155.8	17.9	0.227
	13	48.0	1288.1	1158.2	18.6	0.212
	14	52.0	1289.9	1160.0	19.1	0.199
	15	56.0	1291.5	1161.6	19.6	0.188
D	16	59.1	1292.7	1162.8	20.0	0.179
			SECOND FLOW			
E	1	0.0	146.2			
	2	5.0	143.2	-3.0		
	3	10.0	153.5	10.3		
	4	15.0	163.8	10.3		
	5	20.0	171.7	7.9		
	6	25.0	180.8	9.1		
	7	30.0	189.5	8.7		
	8	35.0	197.6	8.2		
	9	40.0	207.1	9.5		
F	10	44.9	215.2	8.1		
			SECOND CLOSED-IN			
F	1	0.0	215.2			
	2	5.0	1151.8	936.6	4.7	1.203
	3	10.0	1189.0	973.8	8.8	0.932
	4	15.0	1208.9	993.8	12.5	0.779
	5	20.0	1221.7	1006.5	15.8	0.677
	6	25.0	1232.2	1017.0	18.8	0.602
	7	30.0	1239.7	1024.5	21.5	0.545

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND CLOSED-IN - CONTINUED			
	8	35.0	1245.9	1030.7	23.9	0.498
	9	40.0	1250.5	1035.3	26.1	0.459
	10	45.0	1255.4	1040.2	28.1	0.427
	11	50.0	1258.9	1043.7	30.0	0.398
	12	55.0	1261.2	1046.0	31.8	0.374
	13	60.0	1264.5	1049.3	33.4	0.353
	14	65.0	1267.0	1051.8	34.9	0.334
	15	70.0	1269.7	1054.5	36.2	0.317
G	16	75.7	1271.4	1056.2	37.7	0.300

REMARKS:

TICKET NO. 09990200

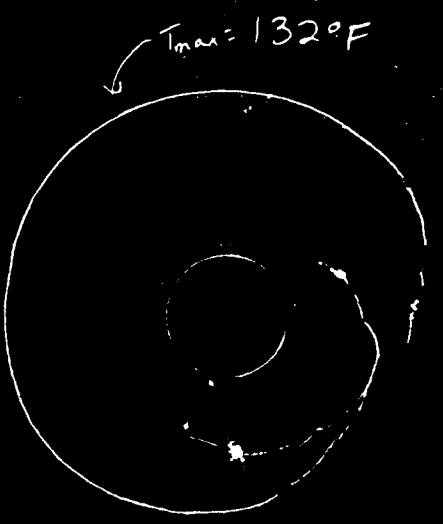


		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	4369.0	
50	IMPACT REVERSING SUB.....	5.000	2.750	1.0	4369.0
1	DRILL PIPE.....	4.500	3.826	124.0	
12	DUAL CIP VALVE.....	5.000	0.875	6.0	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	4504.0
80	AP RUNNING CASE.....	5.000	2.250	4.0	4506.0
15	JAR.....	5.000	1.750	5.0	
16	VR SAFETY JOINT.....	5.000	1.000	3.0	
70	OPEN HOLE PACKER.....	6.750	1.530	6.0	4521.0
5	CROSSOVER.....	5.000	2.750	1.0	
1	DRILL PIPE.....	4.500	3.826	62.0	
5	CROSSOVER.....	5.000	2.750	1.0	
20	FLUSH JOINT ANCHOR.....	5.000	2.375	29.0	
83	HT-500 TEMPERATURE CASE.....	5.000		1.0	4616.0
81	BLANKED-OFF RUNNING CASE.....	5.000		4.0	4618.0

TOTAL DEPTH 4621.0

EQUIPMENT DATA

TEMPERATURE RECORDER CHART



099902

10° each circle

EQUATIONS FOR DST GAS WELL ANALYSIS

Indicated Flow Capacity	$kh = \frac{1637\ Q_g\ T}{m}$	md-ft
Average Effective Permeability	$k \quad \frac{kh}{h}$	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