6-14S-29W
C E2-SW

HALLIBURTON
SERVICES

TICKET NO. 74859100
26-JUL-84
NESS CITY

FORMATION TESTING SERVICE REPORT

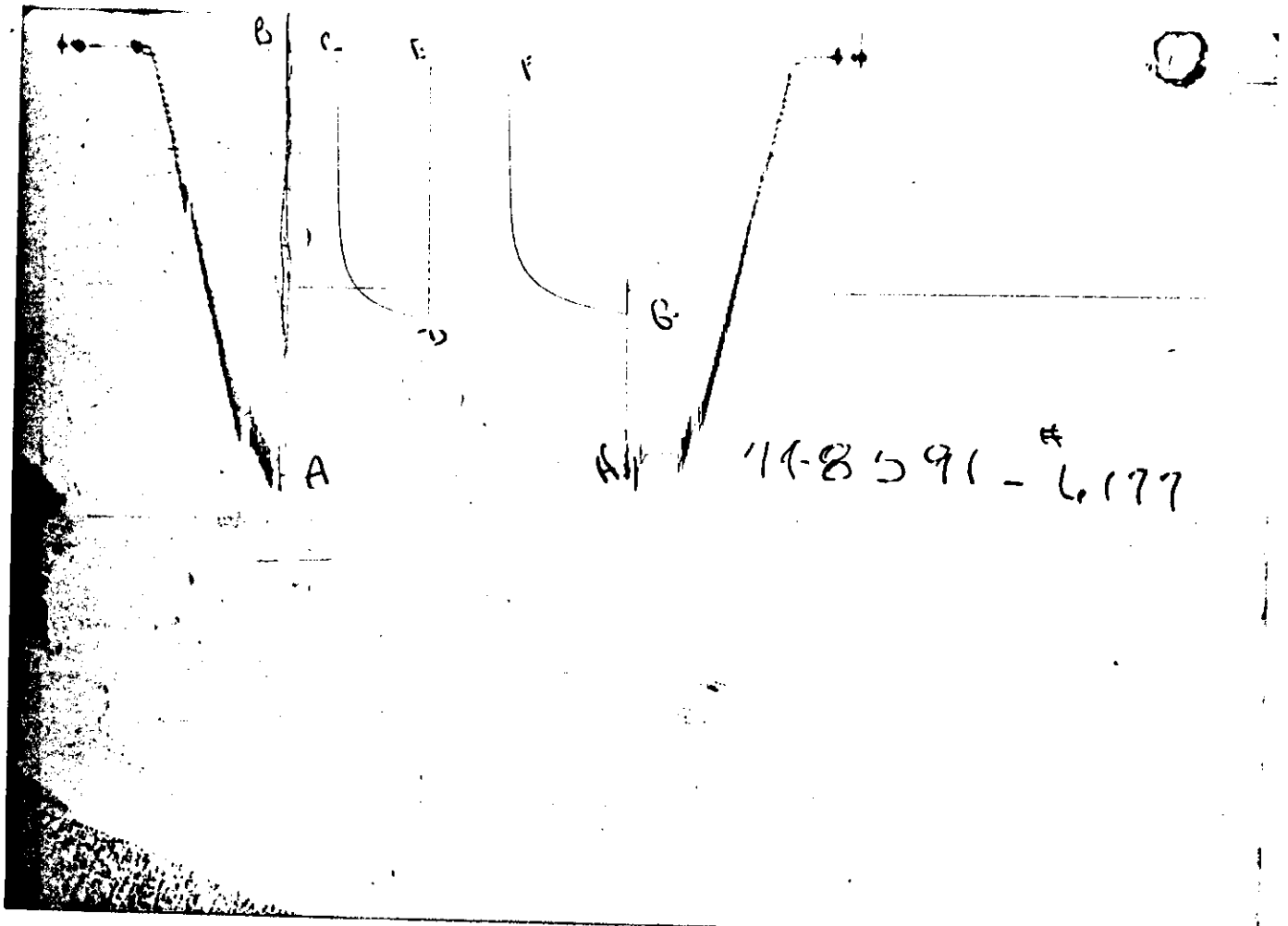
LEGAL LOCATION SEC. - TWP. - RNG.	WELL NO.	TEST NO.
6-14-29W		

FIELD AREA	TESTED INTERVAL
INPOOL	

COUNTY	STATE
GOVE	KANSAS NM

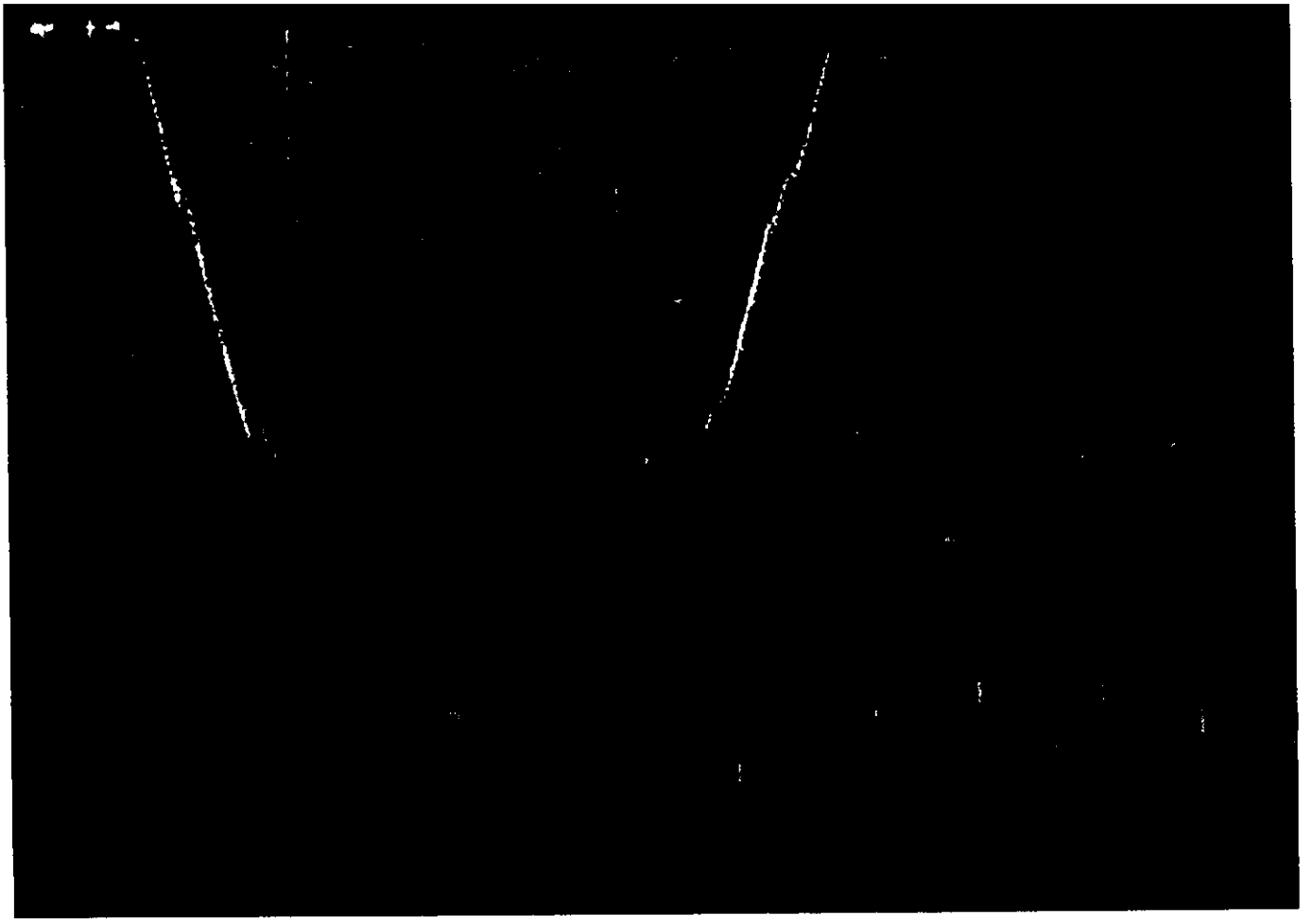
LEASE NAME

LEASE OWNER/COMPANY NAME



GAUGE NO: 6177 DEPTH: 3668.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	1736	1801.7			
B	INITIAL FIRST FLOW	15	9.2	30.0	31.0	F
C	FINAL FIRST FLOW	42	42.0			
C	INITIAL FIRST CLOSED-IN	42	42.0	60.0	58.1	C
D	FINAL FIRST CLOSED-IN	1131	1120.6			
E	INITIAL SECOND FLOW	63	64.8	45.0	47.6	F
F	FINAL SECOND FLOW	84	78.1			
F	INITIAL SECOND CLOSED-IN	84	78.1	75.0	75.0	C
G	FINAL SECOND CLOSED-IN	1089	1086.0			
H	FINAL HYDROSTATIC	1694	1757.2			



GAUGE NO: 6178 DEPTH: 3715.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	1834.0				
B	INITIAL FIRST FLOW	48.1		30.0	31.0	F
C	FINAL FIRST FLOW	68.7				
C	INITIAL FIRST CLOSED-IN	68.7		60.0	58.1	C
D	FINAL FIRST CLOSED-IN	1140.6				
E	INITIAL SECOND FLOW	118.2		45.0	47.6	F
F	FINAL SECOND FLOW	104.3				
F	INITIAL SECOND CLOSED-IN	104.3		75.0	75.0	C
G	FINAL SECOND CLOSED-IN	1105.5				
H	FINAL HYDROSTATIC	1775.1				

EQUIPMENT & HOLE DATA

FORMATION TESTED: PLASTMOUTH
NET PAY (ft):
GROSS TESTED FOOTAGE: 35.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 7.875
ELEVATION (ft): 2710
TOTAL DEPTH (ft): 3718.0
PACKER DEPTH(S) (ft): 3683
FINAL SURFACE CHOKE (in):
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 9.40
MUD VISCOSITY (sec): 42
ESTIMATED HOLE TEMP. (°F): 105
ACTUAL HOLE TEMP. (°F): 100 @ 3713.0 ft

TICKET NUMBER: 74859100

DATE: 7-21-84 TEST NO: 1

TYPE DST: OPEN HOLE

HALLIBURTON CAMP: NESS CITY

TESTER: J. THOMPSON

WITNESS: C. SPRADLIN

DRILLING CONTRACTOR: SLAWSON RIG # 2

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
PIT	@ °F	6000 ppm
RECOVERY	@ °F	12000 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:

144 FEET OF MUDDY SALT WATER

MEASURED FROM TESTER VALVE

REMARKS:

READING FROM TEMPERATURE CHART IS QUESTIONABLE.

TYPE & SIZE MEASURING DEVICE: _____ TICKET NO: 74859100

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
7-21-84					
1400					CALLED OUT.
1800					ON LOCATION - RIG PULLING PIPE.
1850					PICKED UP AND MADE UP TOOL.
1930					SET TOOL IN THE TABLE.
1945					RIG STARTED PIPE.
2050					TOOL ON BOTTOM.
2100					OPENED TOOL WITH A FAIR BLOW -
					4" IN THE BUCKET.
2130					CLOSED TOOL.
2230					OPENED TOOL WITH A WEAK BLOW -
					1/2" IN THE BUCKET.
2315					CLOSED TOOL.
7-22-84					
0030					OFF BOTTOM.
0220					TOOL THROUGH THE TABLE.
0225					RIG BROKE AND LAID DOWN THE TOOL
0330					JOB COMPLETE.

TICKET NO: 74859100	GAUGE NO: 6177
CLOCK NO: 16165 HOUR: 12	DEPTH: 3668.0

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	9.2			
	2	5.0	12.6	3.4		
	3	10.0	18.0	5.4		
	4	15.0	24.8	6.9		
	5	20.0	31.6	6.8		
	6	25.0	36.1	4.5		
	7	30.0	41.2	5.1		
C	8	31.0	42.0	0.8		
		FIRST CLOSED-IN				
C	1	0.0	42.0			
	2	4.0	837.5	795.4	3.5	0.943
	3	8.0	930.3	888.3	6.4	0.688
	4	12.0	979.1	937.1	8.7	0.555
	5	16.0	1011.2	969.2	10.6	0.468
	6	20.0	1034.2	992.2	12.2	0.407
	7	24.0	1051.7	1009.7	13.5	0.360
	8	28.0	1065.9	1023.9	14.7	0.324
	9	32.0	1077.4	1035.4	15.8	0.294
	10	36.0	1087.5	1045.5	16.7	0.270
	11	40.0	1095.3	1053.3	17.5	0.249
	12	44.0	1102.4	1060.4	18.2	0.232
	13	48.0	1109.0	1067.0	18.9	0.217
	14	52.0	1114.1	1072.1	19.4	0.203
	15	56.0	1118.7	1076.7	20.0	0.191
D	16	58.1	1120.6	1078.5	20.2	0.186
		SECOND FLOW				
E	1	0.0	64.8			
	2	5.0	55.6	-9.2		
	3	10.0	57.0	1.4		
	4	15.0	59.1	2.1		
	5	20.0	62.4	3.4		
	6	25.0	65.6	3.2		
	7	30.0	68.6	3.0		
	8	35.0	71.4	2.8		
	9	40.0	73.9	2.5		
	10	45.0	77.0	3.1		
F	11	47.6	78.1	1.1		
		SECOND CLOSED-IN				
F	1	0.0	78.1			
	2	5.0	785.8	707.7	4.7	1.226
	3	10.0	884.7	806.6	8.9	0.947
	4	15.0	934.0	855.9	12.6	0.796
	5	20.0	965.2	887.1	15.9	0.694

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
		SECOND CLOSED-IN - CONTINUED				
	6	25.0	989.3	911.2	19.0	0.617
	7	30.0	1008.1	930.0	21.7	0.560
	8	35.0	1024.0	945.8	24.2	0.512
	9	40.0	1036.3	958.2	26.5	0.472
	10	45.0	1046.6	968.5	28.6	0.439
	11	50.0	1055.9	977.8	30.6	0.411
	12	55.0	1063.2	985.0	32.4	0.386
	13	60.0	1069.6	991.5	34.0	0.364
	14	65.0	1075.5	997.4	35.6	0.344
	15	70.0	1081.2	1003.1	37.0	0.327
G	16	75.0	1086.0	1007.9	38.4	0.312

REMARKS:

TICKET NO: 74859100	GAUGE NO: 6178
CLOCK NO: 28184 HOUR: 12	DEPTH: 3715.0

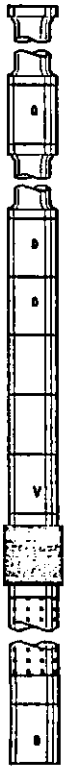
HALLIBURTON SERVICES

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	48.1			
	2	5.0	43.2	-4.9		
	3	10.0	46.4	3.2		
	4	15.0	51.2	4.7		
	5	20.0	56.9	5.7		
	6	25.0	62.2	5.2		
	7	30.0	67.3	5.1		
C	8	31.0	68.7	1.4		
			FIRST CLOSED-IN			
C	1	0.0	68.7			
	2	4.0	828.1	759.4	3.5	0.947
	3	8.0	937.3	868.6	6.4	0.687
	4	12.0	988.8	920.1	8.7	0.553
	5	16.0	1022.7	954.0	10.6	0.468
	6	20.0	1046.9	978.2	12.2	0.406
	7	24.0	1065.1	996.5	13.5	0.361
	8	28.0	1081.1	1012.4	14.7	0.324
	9	32.0	1093.8	1025.2	15.8	0.294
	10	36.0	1104.2	1035.6	16.7	0.270
	11	40.0	1113.0	1044.3	17.5	0.249
	12	44.0	1120.4	1051.7	18.2	0.232
	13	48.0	1127.2	1058.5	18.9	0.217
	14	52.0	1132.3	1063.6	19.4	0.203
	15	56.0	1138.1	1069.4	20.0	0.192
D	16	58.1	1140.6	1071.9	20.2	0.186
			SECOND FLOW			
E	1	0.0	118.2			
	2	5.0	90.8	-27.3		
	3	10.0	86.0	-4.8		
	4	15.0	85.9	-0.1		
	5	20.0	87.9	2.0		
	6	25.0	90.4	2.5		
	7	30.0	94.0	3.5		
	8	35.0	97.1	3.1		
	9	40.0	99.4	2.3		
	10	45.0	102.3	2.9		
F	11	47.6	104.3	1.9		
			SECOND CLOSED-IN			
F	1	0.0	104.3			
	2	5.0	796.1	691.8	4.7	1.226
	3	10.0	897.5	793.2	8.8	0.949
	4	15.0	946.3	842.0	12.6	0.796
	5	20.0	979.2	874.9	15.9	0.694

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND CLOSED-IN - CONTINUED			
	6	25.0	1002.6	898.3	19.0	0.618
	7	30.0	1022.1	917.8	21.7	0.559
	8	35.0	1038.1	933.8	24.2	0.512
	9	40.0	1050.7	946.4	26.5	0.472
	10	45.0	1062.5	958.2	28.6	0.439
	11	50.0	1071.8	967.5	30.6	0.411
	12	55.0	1080.2	975.9	32.4	0.386
	13	60.0	1087.6	983.3	34.0	0.364
	14	65.0	1094.2	989.9	35.6	0.344
	15	70.0	1100.0	995.7	37.0	0.327
G	16	75.0	1105.5	1001.2	38.4	0.312

REMARKS:

TICKET NO. 74859100



		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	3531.0	
50	IMPACT REVERSING SUB.....	5.000	2.250	1.0	3532.0
4	FLEX WEIGHT.....	4.500	3.750	124.0	
12	DUAL CIP VALVE.....	5.000	0.870	6.0	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	3666.0
80	AP RUNNING CASE.....	5.000	2.250	4.0	3668.0
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	3683.0
20	FLUSH JOINT ANCHOR.....	5.000	2.375	28.0	
83	HT-500 TEMPERATURE CASE.....	5.000		1.0	3713.0
81	BLANKED-OFF RUNNING CASE.....	5.000		4.0	3715.0

TOTAL DEPTH 3718.0

EQUIPMENT DATA

TEMPERATURE

RECORDER

CHART

10° each circle.

EQUATIONS FOR DST GAS WELL ANA

Indicated Flow Capacity	$kh = \frac{1637\ Q_g\ T}{m}$	md-ft
Average Effective Permeability	$k = \frac{kh}{h}$	md
Skin Factor	$S = 1.151 \left[\frac{m(P^*) - m(P_f)}{m} - \text{LOG} \frac{k(t/60)}{\phi\ \mu\ c_t r_w^2} + 3.23 \right]$	—
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

6-14S-29W
C E2-SW

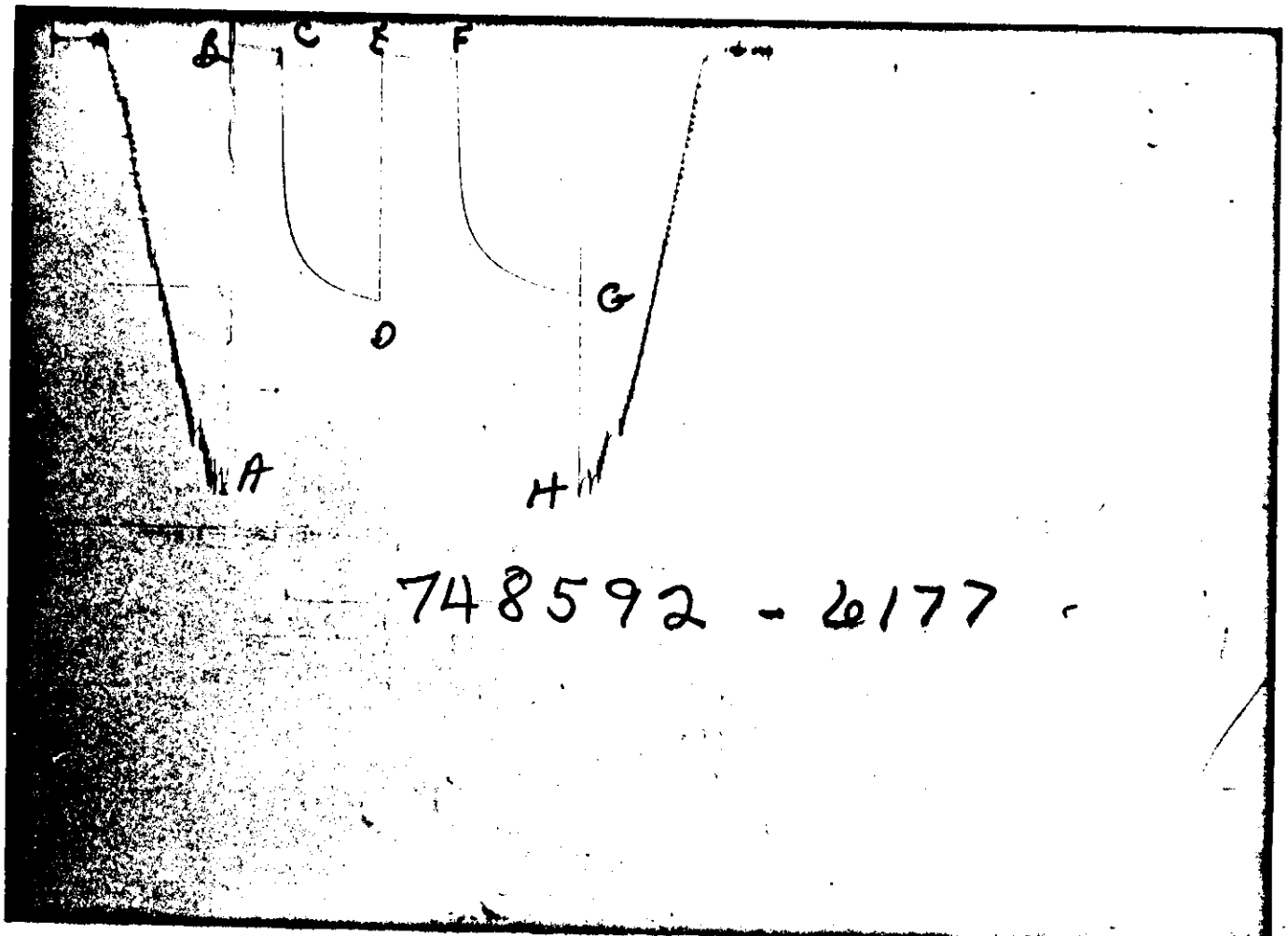
HALLIBURTON
SERVICES

TICKET NO. 74859200
28-JUL-84
NESS CITY

FORMATION TESTING SERVICE REPORT

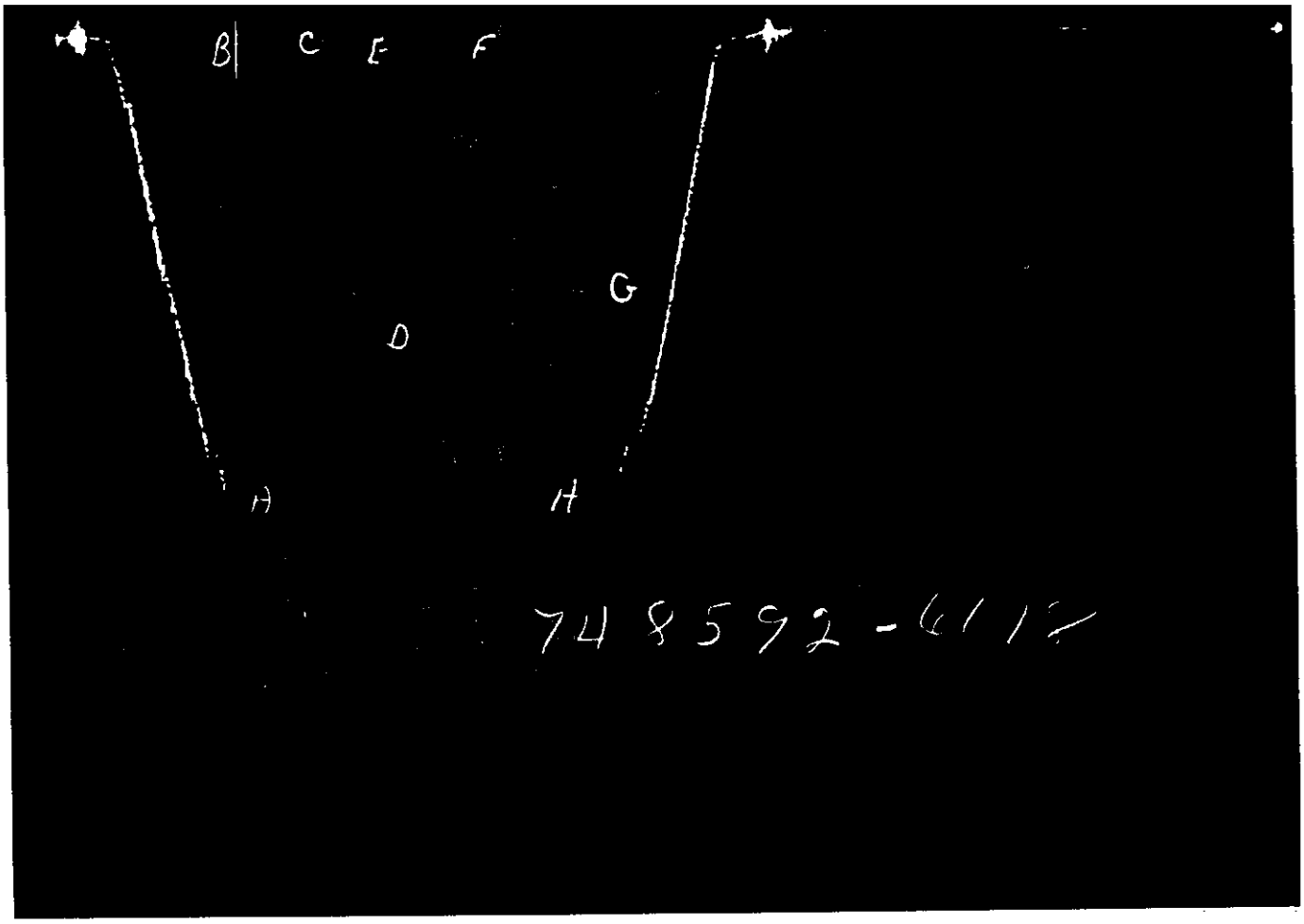
LEGAL LOCATION SEC. - TWP. - RNG.	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME
6-14-29W				
FIELD AREA	COUNTY	STATE		
INPOOL	GOVE	KANSAS		

LEASE NAME



GAUGE NO: 6177 DEPTH: 3709.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		1778.6			
B	INITIAL FIRST FLOW		15.5	30.0	30.6	F
C	FINAL FIRST FLOW		36.8			
C	INITIAL FIRST CLOSED-IN		36.8	60.0	59.9	C
D	FINAL FIRST CLOSED-IN		1044.9			
E	INITIAL SECOND FLOW		46.3	45.0	44.9	F
F	FINAL SECOND FLOW		63.3			
F	INITIAL SECOND CLOSED-IN		63.3	75.0	75.2	C
G	FINAL SECOND CLOSED-IN		1008.5			
H	FINAL HYDROSTATIC		1769.9			



GAUGE NO: 6178 DEPTH: 3747.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	1884	1800.6			
B	INITIAL FIRST FLOW	21	19.7	30.0	30.6	F
C	FINAL FIRST FLOW	63	46.4			
C	INITIAL FIRST CLOSED-IN	63	46.4	60.0	59.9	C
D	FINAL FIRST CLOSED-IN	1089	1047.4			
E	INITIAL SECOND FLOW	84	84.0	45.0	44.9	F
F	FINAL SECOND FLOW	84	72.7			
F	INITIAL SECOND CLOSED-IN	84	72.7	75.0	75.2	C
G	FINAL SECOND CLOSED-IN	1070	1013.5			
H	FINAL HYDROSTATIC	1884	1787.3			

EQUIPMENT & HOLE DATA

FORMATION TESTED: TORONTO
NET PAY (ft): 5.0
GROSS TESTED FOOTAGE: 26.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 7.875
ELEVATION (ft): 2710
TOTAL DEPTH (ft): 3750.0
PACKER DEPTH(S) (ft): 3724
FINAL SURFACE CHOKE (in):
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 9.40
MUD VISCOSITY (sec): 47
ESTIMATED HOLE TEMP. (°F): 106
ACTUAL HOLE TEMP. (°F): 104 @ 3745.0 ft

TICKET NUMBER: 74859200

DATE: 7-22-84 TEST NO: 2

TYPE DST: OPEN HOLE

HALLIBURTON CAMP: NESS CITY

TESTER: J. THOMPSON

WITNESS: C. SPRADLIN

DRILLING CONTRACTOR: COMPANY TOOLS #2

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
SYSTEMS	@ °F	5000 ppm
RECOVERY	@ °F	15000 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:

80' OF MUDDY SALT WATER

MEASURED FROM TESTER VALVE

REMARKS:

TYPE & SIZE MEASURING DEVICE: _____ TICKET NO: 74859200

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
7-22-84					
0945					CALLED OUT, PULLED DRILL PIPE
1115					ON LOCATION-RIG WAITED FOR 45
					MINUTES
1120					PICKED UP AND MADE UP TOOL
1210					SET TOOL IN TABLE
1220					RIG STARTED PIPE
1332					TOOL ON BOTTOM
1335					OPENED TOOL WITH A VERY WEAK
					BLOW, 1/4" IN BUCKET
1405					CLOSED TOOL WITH A VERY WEAK
					BLOW
1505					OPENED TOOL WITH A WEAK BLOW
1550					CLOSED TOOL
1705					OFF BOTTOM
1820					TOOL THROUGH TABLE
1850					RIG BROKE AND LAID TOOL DOWN
1910					JOB COMPLETED

TICKET NO: 74859200

CLOCK NO: 16165 HOUR: 12

HALLIBURTON SERVICES

GAUGE NO: 6177

DEPTH: 3709.0

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	15.5			
	2	5.0	17.3	1.8		
	3	10.0	22.1	4.9		
	4	15.0	25.4	3.3		
	5	20.0	28.7	3.3		
	6	25.0	33.0	4.3		
C	7	30.6	36.8	3.8		
			FIRST CLOSED-IN			
C	1	0.0	36.8			
	2	4.0	703.3	666.5	3.5	0.935
	3	8.0	806.7	769.9	6.3	0.683
	4	12.0	865.8	829.0	8.6	0.550
	5	16.0	904.3	867.5	10.5	0.464
	6	20.0	931.9	895.1	12.1	0.402
	7	24.0	952.7	916.0	13.4	0.357
	8	28.0	971.6	934.8	14.6	0.320
	9	32.0	987.1	950.3	15.6	0.291
	10	36.0	999.1	962.3	16.5	0.267
	11	40.0	1009.3	972.5	17.3	0.247
	12	44.0	1018.2	981.4	18.0	0.229
	13	48.0	1026.7	989.9	18.7	0.214
	14	52.0	1032.9	996.1	19.3	0.201
	15	56.0	1039.9	1003.1	19.8	0.189
D	16	59.9	1044.9	1008.1	20.2	0.179
			SECOND FLOW			
E	1	0.0	46.3			
	2	9.0	47.4	1.1		
	3	18.0	52.7	5.3		
	4	27.0	57.4	4.7		
	5	36.0	60.1	2.6		
F	6	44.9	63.3	3.3		
			SECOND CLOSED-IN			
F	1	0.0	63.3			
	2	5.0	664.5	601.2	4.7	1.209
	3	10.0	769.4	706.0	8.9	0.931
	4	15.0	822.7	759.4	12.5	0.781
	5	20.0	861.8	798.4	15.8	0.679
	6	25.0	890.6	827.3	18.8	0.604
	7	30.0	913.0	849.7	21.5	0.546
	8	35.0	930.5	867.2	23.9	0.499
	9	40.0	944.8	881.5	26.1	0.461
	10	45.0	958.5	895.1	28.2	0.428
	11	50.0	969.6	906.3	30.1	0.400

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
		SECOND CLOSED-IN - CONTINUED				
	12	55.0	979.6	916.3	31.8	0.375
	13	60.0	989.1	925.8	33.4	0.354
	14	65.0	996.0	932.6	34.9	0.335
	15	70.0	1003.2	939.8	36.3	0.318
G	16	75.2	1008.5	945.1	37.7	0.302

REMARKS:

TICKET NO: 74859200

CLOCK NO: 28184 HOUR: 12

HALLIBURTON SERVICES

GAUGE NO: 6178

DEPTH: 3747.0

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	19.7			
	2	5.0	27.9	8.3		
	3	10.0	33.1	5.1		
	4	15.0	36.6	3.5		
	5	20.0	39.7	3.1		
	6	25.0	42.8	3.1		
C	7	30.6	46.4	3.5		
			FIRST CLOSED-IN			
C	1	0.0	46.4			
	2	4.0	690.4	644.0	3.5	0.939
	3	8.0	797.3	751.0	6.4	0.681
	4	12.0	855.5	809.1	8.6	0.550
	5	16.0	895.3	849.0	10.5	0.464
	6	20.0	928.4	882.1	12.1	0.402
	7	24.0	950.8	904.4	13.5	0.356
	8	28.0	969.2	922.8	14.6	0.321
	9	32.0	985.6	939.2	15.6	0.291
	10	36.0	999.0	952.7	16.5	0.267
	11	40.0	1010.1	963.7	17.3	0.247
	12	44.0	1020.6	974.2	18.0	0.229
	13	48.0	1028.3	982.0	18.7	0.214
	14	52.0	1035.5	989.1	19.3	0.201
	15	56.0	1041.6	995.2	19.8	0.189
D	16	59.9	1047.4	1001.1	20.2	0.179
			SECOND FLOW			
E	1	0.0	84.0			
	2	9.0	59.9	-24.1		
	3	18.0	61.5	1.6		
	4	27.0	65.9	4.4		
	5	36.0	69.1	3.2		
F	6	44.9	72.7	3.6		
			SECOND CLOSED-IN			
F	1	0.0	72.7			
	2	5.0	653.5	580.8	4.7	1.208
	3	10.0	758.5	685.7	8.9	0.930
	4	15.0	818.1	745.4	12.5	0.780
	5	20.0	857.7	784.9	15.8	0.678
	6	25.0	887.7	814.9	18.8	0.604
	7	30.0	910.9	838.2	21.5	0.546
	8	35.0	930.6	857.9	23.9	0.499
	9	40.0	945.8	873.1	26.1	0.461
	10	45.0	959.7	887.0	28.2	0.428
	11	50.0	972.2	899.5	30.1	0.400

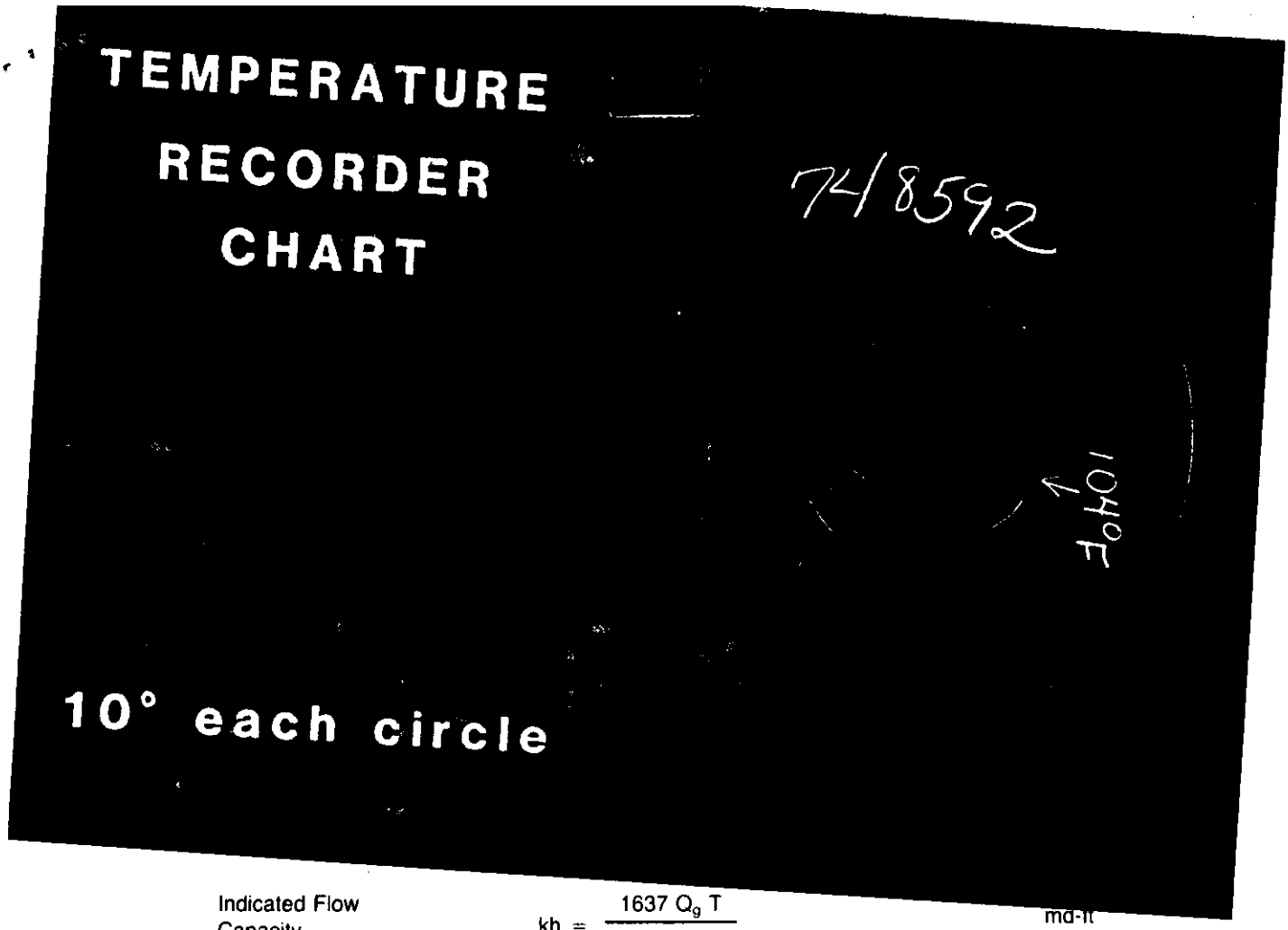
REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
		SECOND CLOSED-IN - CONTINUED				
	12	55.0	981.3	908.6	31.8	0.375
	13	60.0	991.4	918.7	33.4	0.354
	14	65.0	999.9	927.2	34.9	0.335
	15	70.0	1006.4	933.7	36.3	0.318
G	16	75.2	1013.5	940.8	37.7	0.302

REMARKS:

TICKET NO. 74859200

		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	3572.0	
50	IMPACT REVERSING SUB.....	5.000	2.750	1.0	3573.0
4	FLEX WEIGHT.....	4.500	2.764	124.0	
12	DUAL CIP VALVE.....	5.000	0.820	8.0	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	3707.0
80	AP RUNNING CASE.....	6.000	2.250	4.0	3709.0
15	JAR.....	6.000	1.750	5.0	
16	VR SAFETY JOINT.....	5.000	1.000	3.0	
70	OPEN HOLE PACKER.....	6.750	1.530	6.0	3724.0
20	FLUSH JOINT ANCHOR.....	5.000	2.370	19.0	
83	HT-500 TEMPERATURE CASE.....	5.000		1.0	3745.0
81	BLANKED-OFF RUNNING CASE.....	5.000		4.0	3747.0
	TOTAL DEPTH				3750.0

EQUIPMENT DATA



Indicated Flow Capacity	$kh = \frac{1637\ Q_g\ T}{m}$	md-ft
Average Effective Permeability	$k = \frac{kh}{h}$	md
Skin Factor	$S = 1.151 \left[\frac{m(P^*) - m(P_1)}{m} - \text{LOG} \frac{k(t/60)}{\phi\ \mu\ c_t r_w^2} + 3.23 \right]$	—
Damage Ratio	$DR = \frac{m(P^*) - m(P_1)}{m(P^*) - m(P_1) - 0.87\ mS}$	—
Indicated Flow Rate (Maximum)	$AOF_1 = \frac{Q_g\ m(P^*)}{m(P^*) - m(P_1)}$	MCFD
Indicated Flow Rate (Minimum)	$AOF_2 = Q_g \sqrt{\frac{m(P^*)}{m(P^*) - m(P_1)}}$	MCFD
Approx. Radius of Investigation	$r_i = 0.032 \sqrt{\frac{k(t/60)}{\phi \mu c_t}}$	ft

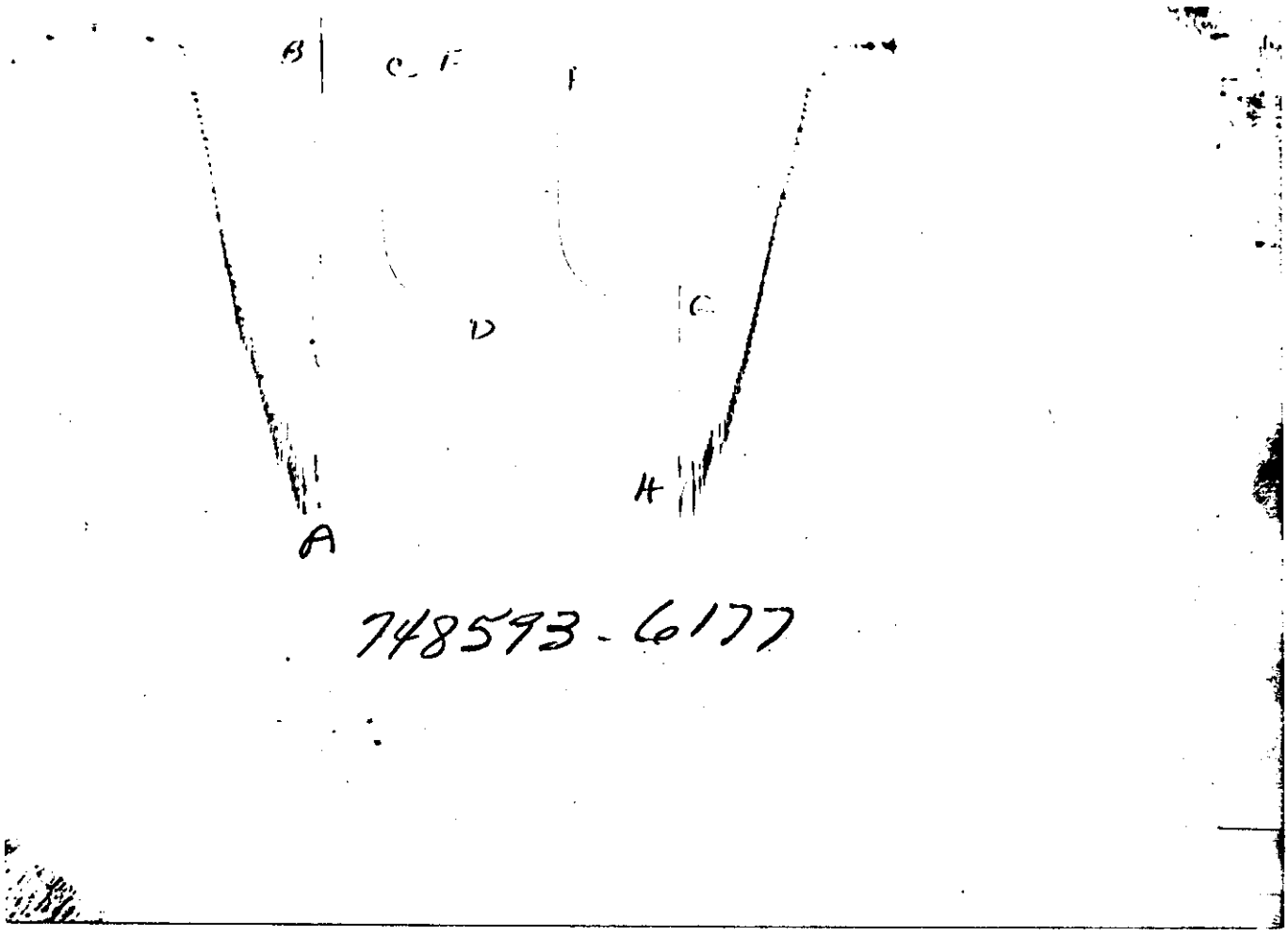
6-14S-29W
E2-SW

HALLIBURTON
SERVICES

TICKET NO. 74859300
27-JUL-84
NESS CITY

FORMATION TESTING SERVICE REPORT

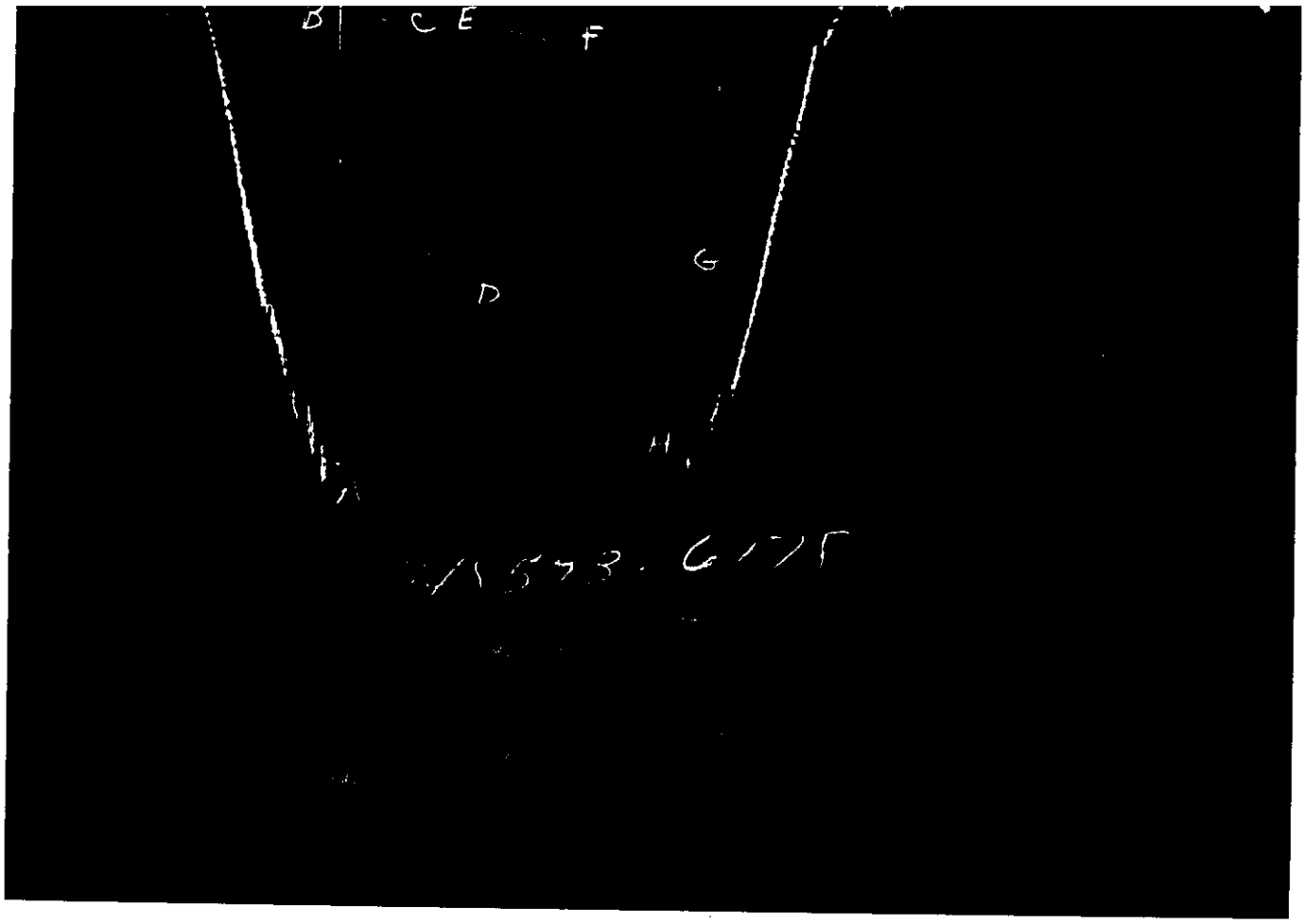
BEESLEY E	1	J	3752' - 3775'	DUNHILL L. SLAWSON	
LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME	
LEGAL LOCATION SEC. - TWP. - RNG.	FIELD AREA	COUNTY	STATE		
6-14-29W	INPOOL	GOVE	KANSAS	IC	



748593-6177

GAUGE NO: 6177 DEPTH: 3737.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	1718	1749.8			
B	INITIAL FIRST FLOW	21	15.4	30.0	34.0	F
C	FINAL FIRST FLOW	84	88.3			
C	INITIAL FIRST CLOSED-IN	84	88.3	60.0	56.5	C
D	FINAL FIRST CLOSED-IN	1067	1076.5			
E	INITIAL SECOND FLOW	106	108.9	45.0	47.0	F
F	FINAL SECOND FLOW	169	168.5			
F	INITIAL SECOND CLOSED-IN	169	168.5	75.0	72.5	C
G	FINAL SECOND CLOSED-IN	1089	1059.9			
H	FINAL HYDROSTATIC	1778	1748.3			



GAUGE NO: 6178 DEPTH: 3772.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		1783.5			
B	INITIAL FIRST FLOW		36.6	30.0	34.0	F
C	FINAL FIRST FLOW		99.5			
C	INITIAL FIRST CLOSED-IN		99.5	60.0	56.5	C
D	FINAL FIRST CLOSED-IN		1083.7			
E	INITIAL SECOND FLOW		143.2	45.0	47.0	F
F	FINAL SECOND FLOW		177.4			
F	INITIAL SECOND CLOSED-IN		177.4	75.0	72.5	C
G	FINAL SECOND CLOSED-IN		1067.2			
H	FINAL HYDROSTATIC		1774.9			

EQUIPMENT & HOLE DATA

FORMATION TESTED: LANSING
NET PAY (ft): 5.0
GROSS TESTED FOOTAGE: 23.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 7.875
ELEVATION (ft): 2710
TOTAL DEPTH (ft): 3775.0
PACKER DEPTH(S) (ft): 3752
FINAL SURFACE CHOKE (in):
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 9.40
MUD VISCOSITY (sec): 60
ESTIMATED HOLE TEMP. (°F): 110
ACTUAL HOLE TEMP. (°F): ___ @ ___ ft

TICKET NUMBER: 74859300

DATE: 7-23-84 TEST NO: 3

TYPE DST: OPEN HOLE

HALLIBURTON CAMP: NESS CITY

TESTER: JIM THOMPSON

WITNESS: C. SPRADLIN

DRILLING CONTRACTOR: SLAWSON RIG #2

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
PIT	___ @ ___ °F	5000 ppm
RECOVERY	___ @ ___ °F	26000 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:

345 FEET OF SALTWATER WITH A SHOW OF OIL

MEASURED FROM TESTER VALVE

REMARKS:

UNABLE TO READ TEMPERATURE CHART.

TYPE & SIZE MEASURING DEVICE: _____ TICKET NO: 74859300

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
7-23-84					
0000					CALLED OUT
0130					ON LOCATION-RIG PULLING PIPE
0250					PICKED UP AND MADEUP TOOLS
0320					SET TOOL IN TABLE
0325					RIG STARTED PIPE
0457					ON BOTTOM
0500					OPENED TOOL WITH A STRONG BLOW
					8" IN BUCKET
0530					CLOSED TOOL
0630					OPENED TOOL WITH A FAIR BLOW
					3" IN BUCKET
0715					CLOSED TOOL
0830					OFF BOTTOM
0945					TOOL THROUGH TABLE
0950					RIG BROKE AND LAID DOWN TOOL
1100					JOB COMPLETED

TICKET NO: 74859300	GAUGE NO: 6177
CLOCK NO: 16165 HOUR: 12	DEPTH: 3737.0

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	15.4			
	2	5.0	25.0	9.6		
	3	10.0	42.2	17.2		
	4	15.0	54.3	12.1		
	5	20.0	64.0	9.7		
	6	25.0	73.4	9.4		
	7	30.0	81.3	7.9		
C	8	34.0	88.3	7.0		
		FIRST CLOSED-IN				
C	1	0.0	88.3			
	2	4.0	851.2	762.9	3.6	0.978
	3	8.0	924.5	836.2	6.5	0.719
	4	12.0	964.3	876.0	8.9	0.584
	5	16.0	990.9	902.6	10.9	0.495
	6	20.0	1009.8	921.5	12.6	0.431
	7	24.0	1024.5	936.2	14.1	0.384
	8	28.0	1035.8	947.5	15.4	0.345
	9	32.0	1045.7	957.4	16.5	0.314
	10	36.0	1052.4	964.2	17.5	0.289
	11	40.0	1058.7	970.4	18.4	0.267
	12	44.0	1064.0	975.7	19.2	0.249
	13	48.0	1068.3	980.1	19.9	0.233
	14	52.0	1072.6	984.3	20.6	0.219
	15	56.0	1075.5	987.2	21.2	0.206
D	16	56.5	1076.5	988.2	21.2	0.205
		SECOND FLOW				
E	1	0.0	108.9			
	2	5.0	104.0	-4.9		
	3	10.0	112.3	8.3		
	4	15.0	119.8	7.5		
	5	20.0	128.4	8.5		
	6	25.0	136.5	8.1		
	7	30.0	143.2	6.6		
	8	35.0	151.0	7.8		
	9	40.0	157.7	6.8		
	10	45.0	164.8	7.1		
F	11	47.0	168.5	3.7		
		SECOND CLOSED-IN				
F	1	0.0	168.5			
	2	5.0	848.4	679.9	4.7	1.238
	3	10.0	914.7	746.2	8.9	0.960
	4	15.0	951.4	783.0	12.7	0.806
	5	20.0	975.7	807.3	16.1	0.703

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
		SECOND CLOSED-IN - CONTINUED				
	6	25.0	994.8	826.3	19.1	0.628
	7	30.0	1008.1	839.7	21.9	0.568
	8	35.0	1019.3	850.8	24.5	0.520
	9	40.0	1028.2	859.7	26.8	0.481
	10	45.0	1035.4	866.9	28.9	0.447
	11	50.0	1041.4	872.9	30.9	0.418
	12	55.0	1047.1	878.7	32.7	0.393
	13	60.0	1051.6	883.1	34.5	0.371
	14	65.0	1055.6	887.1	36.1	0.351
	15	70.0	1059.3	890.8	37.6	0.334
G	16	72.5	1059.9	891.5	38.3	0.326

REMARKS:

TICKET NO: 74859300

CLOCK NO: 28184 HOUR: 12

HALLIBURTON SERVICES

GAUGE NO: 6178

DEPTH: 3772.0

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	36.6			
	2	5.0	38.8	2.2		
	3	10.0	53.3	14.5		
	4	15.0	66.3	13.0		
	5	20.0	76.5	10.2		
	6	25.0	85.3	8.8		
	7	30.0	93.7	8.4		
C	8	34.0	99.5	5.8		
			FIRST CLOSED-IN			
C	1	0.0	99.5			
	2	4.0	847.0	747.5	3.5	0.982
	3	8.0	922.1	822.6	6.5	0.722
	4	12.0	964.6	865.1	8.9	0.584
	5	16.0	991.8	892.3	10.9	0.496
	6	20.0	1011.3	911.8	12.6	0.431
	7	24.0	1027.6	928.1	14.1	0.383
	8	28.0	1040.0	940.5	15.4	0.345
	9	32.0	1050.3	950.8	16.5	0.315
	10	36.0	1057.9	958.4	17.5	0.289
	11	40.0	1065.2	965.7	18.4	0.267
	12	44.0	1071.7	972.2	19.2	0.249
	13	48.0	1076.2	976.7	19.9	0.233
	14	52.0	1079.8	980.3	20.6	0.219
	15	56.0	1083.1	983.5	21.2	0.206
D	16	56.5	1083.7	984.1	21.2	0.205
			SECOND FLOW			
E	1	0.0	143.2			
	2	5.0	124.2	-19.0		
	3	10.0	124.4	0.2		
	4	15.0	130.6	6.3		
	5	20.0	138.5	7.9		
	6	25.0	145.3	6.9		
	7	30.0	153.3	8.0		
	8	35.0	161.1	7.8		
	9	40.0	168.0	7.0		
	10	45.0	175.1	7.1		
F	11	47.0	177.4	2.4		
			SECOND CLOSED-IN			
F	1	0.0	177.4			
	2	5.0	843.3	665.8	4.7	1.234
	3	10.0	913.6	736.2	8.9	0.959
	4	15.0	953.1	775.6	12.7	0.805
	5	20.0	978.0	800.5	16.0	0.703

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND CLOSED-IN - CONTINUED			
	6	25.0	996.8	819.3	19.1	0.628
	7	30.0	1012.1	834.7	21.9	0.568
	8	35.0	1023.5	846.1	24.4	0.521
	9	40.0	1032.3	854.9	26.8	0.480
	10	45.0	1040.3	862.9	28.9	0.447
	11	50.0	1046.8	869.3	30.9	0.418
	12	55.0	1052.5	875.1	32.7	0.393
	13	60.0	1057.2	879.7	34.5	0.371
	14	65.0	1062.0	884.6	36.1	0.351
	15	70.0	1065.6	888.1	37.6	0.334
G	16	72.5	1067.2	889.7	38.3	0.326

REMARKS:

TICKET NO. 74859300

		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	3600.0	
50	IMPACT REVERSING SUB.....	5.000	2.750	1.0	3601.0
4	FLEX WEIGHT.....	4.500	3.750	124.0	
12	DUAL CIP VALVE.....	5.000	0.870	6.0	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	3735.0
80	AP RUNNING CASE.....	5.000	2.250	4.0	3737.0
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	3752.0
20	FLUSH JOINT ANCHOR.....	5.000	2.375	16.0	
83	HT-500 TEMPERATURE CASE.....	5.000		1.0	3770.0
81	BLANKED-OFF RUNNING CASE.....	5.000		4.0	3772.0
	TOTAL DEPTH				3775.0

EQUIPMENT DATA

TEMPERATURE RECORDER CHART

#74593

10° each circle

Indicated Flow Capacity	$kh = \frac{1637\ Q_g\ T}{m}$	md-ft
Average Effective Permeability	$k = \frac{kh}{h}$	md
Skin Factor	$S = 1.151 \left[\frac{m(P^*) - m(P_f)}{m} - \text{LOG} \frac{k(t/60)}{\phi\ \mu\ c_t r_w^2} + 3.23 \right]$	—
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

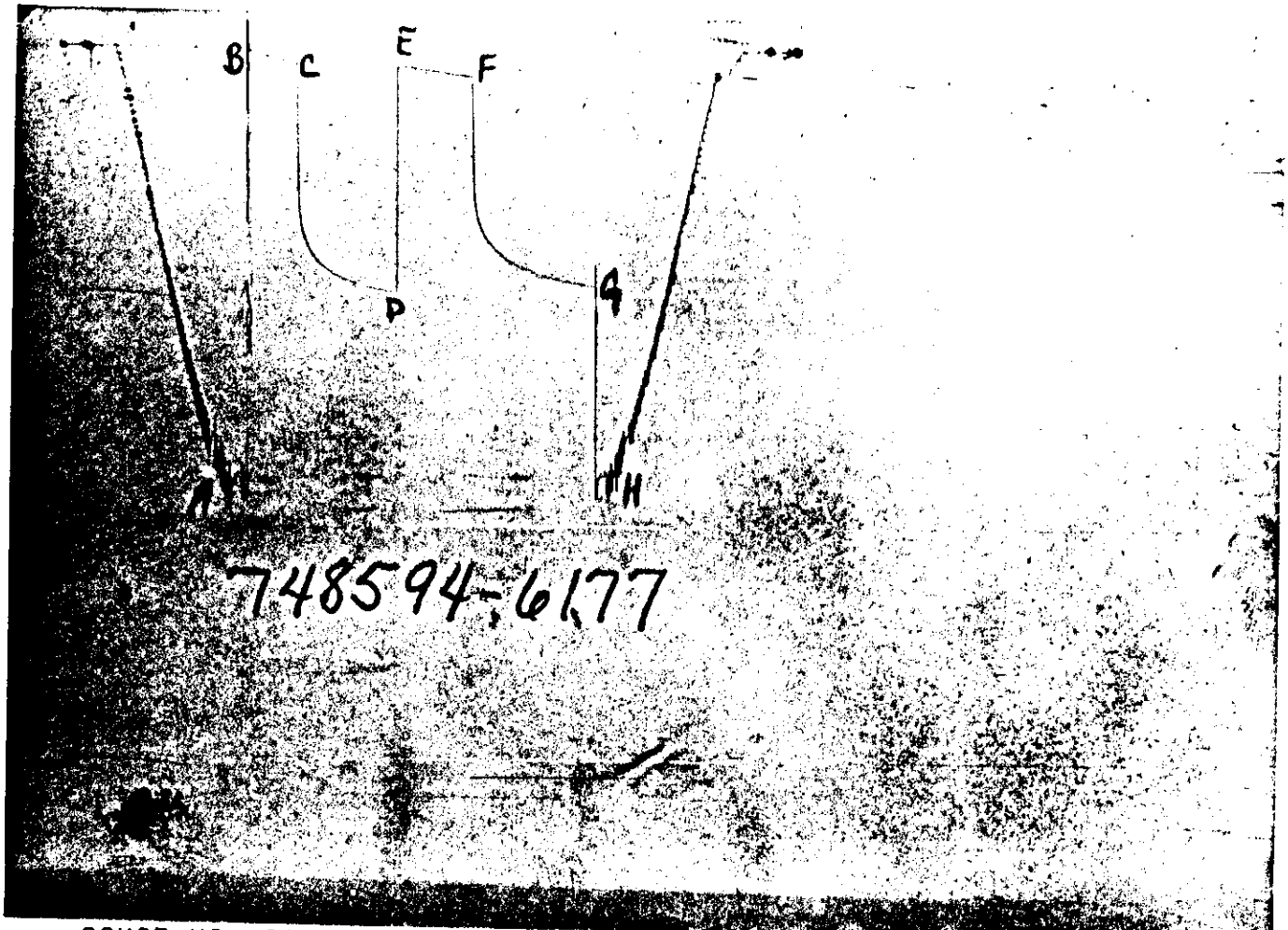
6-14S-29W
C E2-SW

HALLIBURTON
SERVICES

TICKET NO. 74859400
27-JUL-84
NESS CITY

FORMATION TESTING SERVICE REPORT

RECEIVED					
LEASE NAME	WELL NO.	TEST NO.			
LEGAL LOCATION SEC. - TWP. - RNG.	6-14-29W	FIELD AREA	INPOOL	COUNTY	GOVE
		TESTED INTERVAL			
				STATE	KANSAS
				LEASE OWNER/COMPANY NAME	BG



GAUGE NO: 6177 DEPTH: 3769.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	1788	1782.2			
B	INITIAL FIRST FLOW	21	10.5	30.0	29.9	F
C	FINAL FIRST FLOW	63	59.5			
C	INITIAL FIRST CLOSED-IN	63	59.5	60.0	61.2	C
D	FINAL FIRST CLOSED-IN	1006	1000.0			
E	INITIAL SECOND FLOW	63	70.0	45.0	44.8	F
F	FINAL SECOND FLOW	105	104.1			
F	INITIAL SECOND CLOSED-IN	105	104.1	75.0	75.3	C
G	FINAL SECOND CLOSED-IN	965	966.1			
H	FINAL HYDROSTATIC	1788	1769.1			

GAUGE NO: 6178 DEPTH: 3811.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		1808.1			
B	INITIAL FIRST FLOW		38.0	30.0	29.9	F
C	FINAL FIRST FLOW		78.6			
C	INITIAL FIRST CLOSED-IN		78.6	60.0	61.2	C
D	FINAL FIRST CLOSED-IN		1012.3			
E	INITIAL SECOND FLOW		126.5	45.0	44.8	F
F	FINAL SECOND FLOW		122.4			
F	INITIAL SECOND CLOSED-IN		122.4	75.0	75.3	C
G	FINAL SECOND CLOSED-IN		978.9			
H	FINAL HYDROSTATIC		1798.3			

EQUIPMENT & HOLE DATA

FORMATION TESTED: LANSING 35-50
NET PAY (ft): 5.0
GROSS TESTED FOOTAGE: 30.0
ALL DEPTHS MEASURED FROM: KB
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 7.875
ELEVATION (ft): 2710
TOTAL DEPTH (ft): 3814.0
PACKER DEPTH(S) (ft): 3784
FINAL SURFACE CHOKE (in):
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 9.30
MUD VISCOSITY (sec): 51
ESTIMATED HOLE TEMP. (°F): 110
ACTUAL HOLE TEMP. (°F): ___ @ ___ ft

TICKET NUMBER: 74859400

DATE: 7-24-84 TEST NO: 4

TYPE DST: OPEN HOLE

HALLIBURTON CAMP: NESS CITY

TESTER: THOMPSON

WITNESS: SPRADLIN

DRILLING CONTRACTOR: SLAWSON DRILLING COMPANY RIG #2

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
PIT	___ @ ___ °F	7000 ppm
RECOVERY	___ @ ___ °F	26000 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:

216' OF SALTWATER, NO SHOW OF OIL

MEASURED FROM TESTER VALVE

REMARKS:

TEMPERATURE CHART WAS NOT RECEIVED FOR PROCESSING.

TYPE & SIZE MEASURING DEVICE: _____ TICKET NO: 74859400

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
7-23-84					
2030					CALLED OUT
2230					ON LOCATION, RIG PULLING COLLARS
2245					SET CLOCKS, PICKED UP TOOL AND
					CHANGED ANCHOR.
2320					SET TOOL IN TABLE
2330					RIG STARTED PIPE
7-24-84					
0058					TOOL ON BOTTOM
0100					OPENED TOOL WITH A FAIR BLOW, 4"
					IN BUCKET.
0130					CLOSED TOOL
0230					OPENED TOOL WITH A WEAK BLOW,
					1/4" IN BUCKET.
0315					CLOSED TOOL
0430					OFF BOTTOM
0615					TOOL THROUGH TABLE
0620					RIG BROKE AND LAID TOOL DOWN
0800					JOB COMPLETED.

TICKET NO: 74859400	GAUGE NO: 6177
CLOCK NO: 16165 HOUR: 12	DEPTH: 3769.0

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	10.5			
	2	5.0	17.4	7.0		
	3	10.0	29.8	12.3		
	4	15.0	40.1	10.3		
	5	20.0	49.1	9.0		
	6	25.0	54.3	5.3		
C	7	29.9	59.5	5.2		
			FIRST CLOSED-IN			
C	1	0.0	59.5			
	2	4.0	767.0	707.5	3.6	0.925
	3	8.0	830.9	771.4	6.3	0.674
	4	12.0	867.1	807.6	8.5	0.543
	5	16.0	894.4	834.9	10.4	0.457
	6	20.0	914.4	854.9	12.0	0.397
	7	24.0	929.5	870.0	13.3	0.351
	8	28.0	941.8	882.3	14.4	0.316
	9	32.0	952.7	893.2	15.4	0.287
	10	36.0	962.0	902.5	16.3	0.262
	11	40.0	970.4	910.9	17.1	0.242
	12	44.0	977.7	918.2	17.8	0.225
	13	48.0	983.9	924.4	18.4	0.210
	14	52.0	989.3	929.8	19.0	0.197
	15	56.0	994.5	935.0	19.5	0.186
	16	60.0	999.0	939.5	19.9	0.175
D	17	61.2	1000.0	940.4	20.1	0.173
			SECOND FLOW			
E	1	0.0	70.0			
	2	5.0	70.8	0.8		
	3	10.0	73.9	3.1		
	4	15.0	78.3	4.4		
	5	20.0	83.4	5.1		
	6	25.0	87.8	4.4		
	7	30.0	92.5	4.6		
	8	35.0	96.2	3.7		
	9	40.0	99.7	3.5		
F	10	44.8	104.1	4.4		
			SECOND CLOSED-IN			
F	1	0.0	104.1			
	2	4.0	704.4	600.4	3.8	1.293
	3	8.0	767.4	663.3	7.2	1.016
	4	12.0	804.9	700.8	10.3	0.859
	5	16.0	832.3	728.2	13.2	0.753
	6	20.0	852.3	748.2	15.8	0.676

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND CLOSED-IN - CONTINUED			
	7	24.0	869.5	765.4	18.2	0.614
	8	28.0	884.4	780.3	20.4	0.565
	9	32.0	896.4	792.3	22.4	0.523
	10	36.0	906.0	801.9	24.3	0.488
	11	40.0	914.9	810.8	26.0	0.458
	12	44.0	923.7	819.6	27.7	0.431
	13	48.0	930.8	826.7	29.2	0.408
	14	52.0	937.0	832.9	30.7	0.387
	15	56.0	942.8	838.7	32.0	0.368
	16	60.0	948.4	844.3	33.3	0.351
	17	64.0	953.6	849.5	34.5	0.336
	18	68.0	958.1	854.0	35.6	0.322
	19	72.0	962.8	858.7	36.7	0.309
G	20	75.3	966.1	862.0	37.5	0.299

REMARKS:

TICKET NO: 74859400

CLOCK NO: 28184 HOUR: 12

HALLIBURTON SERVICES

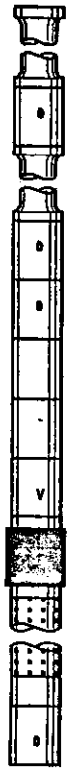
GAUGE NO: 6178

DEPTH: 3811.0

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	38.0			
	2	5.0	40.2	2.2		
	3	10.0	49.4	9.2		
	4	15.0	58.7	9.3		
	5	20.0	67.8	9.2		
	6	25.0	74.2	6.4		
C	7	29.9	78.6	4.4		
			FIRST CLOSED-IN			
C	1	0.0	78.6			
	2	4.0	765.6	686.9	3.6	0.925
	3	8.0	834.0	755.4	6.3	0.675
	4	12.0	873.4	794.8	8.6	0.543
	5	16.0	899.4	820.8	10.4	0.457
	6	20.0	920.4	841.8	12.0	0.397
	7	24.0	937.6	859.0	13.3	0.352
	8	28.0	951.9	873.3	14.5	0.315
	9	32.0	964.0	885.4	15.5	0.286
	10	36.0	973.8	895.2	16.3	0.262
	11	40.0	981.6	903.0	17.1	0.242
	12	44.0	988.9	910.3	17.8	0.225
	13	48.0	995.4	916.8	18.4	0.210
	14	52.0	1001.5	922.9	19.0	0.197
	15	56.0	1006.3	927.6	19.5	0.186
	16	60.0	1011.3	932.7	19.9	0.175
D	17	61.2	1012.3	933.7	20.1	0.173
			SECOND FLOW			
E	1	0.0	126.5			
	2	5.0	99.0	-27.5		
	3	10.0	94.8	-4.2		
	4	15.0	96.9	2.1		
			101.1	4.1		
				4.1		
				3.9		
				4.9		
				2.8		
				1.5		
			IN			
					3.8	1.297
					7.2	1.014
					10.3	0.860
					13.2	0.754
					15.8	0.675

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND CLOSED-IN - CONTINUED			
	7	24.0	878.2	755.9	18.2	0.614
	8	28.0	892.2	769.9	20.4	0.564
	9	32.0	904.5	782.2	22.4	0.523
	10	36.0	915.6	793.2	24.3	0.488
	11	40.0	925.5	803.2	26.1	0.457
	12	44.0	933.8	811.4	27.7	0.431
	13	48.0	941.3	819.0	29.2	0.408
	14	52.0	949.2	826.8	30.7	0.387
	15	56.0	955.2	832.9	32.0	0.368
	16	60.0	961.7	839.3	33.3	0.351
	17	64.0	966.5	844.1	34.5	0.336
	18	68.0	970.4	848.1	35.6	0.322
	19	72.0	975.7	853.3	36.7	0.309
G	20	75.3	978.9	856.5	37.5	0.299

TICKET NO. 74859400



		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	3632.0	
50	IMPACT REVERSING SUB.....	5.000	2.750	1.0	3633.0
4	FLEX WEIGHT.....	4.500	3.764	124.0	
12	DUAL CIP VALVE.....	5.000	0.870	6.0	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	3767.0
80	AP RUNNING CASE.....	5.000	2.250	4.0	3769.0
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	3784.0
20	FLUSH JOINT ANCHOR.....	5.000	2.370	23.0	
83	HT-500 TEMPERATURE CASE.....	5.000		1.0	3809.0
81	BLANKED-OFF RUNNING CASE.....	5.000		4.0	3811.0
	TOTAL DEPTH				3814.0

EQUIPMENT DATA

6 - 14S - 29W
C E2 - SW

EQUIPMENT & HOLE DATA

FORMATION TESTED: KANSAS CITY
NET PAY (ft): 10.0
GROSS TESTED FOOTAGE: 109.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 7.875
ELEVATION (ft): 2710
TOTAL DEPTH (ft): 4013.0
PACKER DEPTH(S) (ft): 3904
FINAL SURFACE CHOKE (in):
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 9.50
MUD VISCOSITY (sec): 45
ESTIMATED HOLE TEMP. (°F): 110
ACTUAL HOLE TEMP. (°F): ___ @ ___ ft

TICKET NUMBER: 74845000
DATE: 7-25-84 TEST NO: 5
TYPE DST: OPEN HOLE
HALLIBURTON CAMP: NESS CITY
TESTER: B. CROSSWHITE
WITNESS: C. SPRADLIN
DRILLING CONTRACTOR: DONALD C. SLAWSON RIG #2

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
RECOVERY	___ @ ___ °F	3000 ppm
SYSTEM	___ @ ___ °F	3000 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

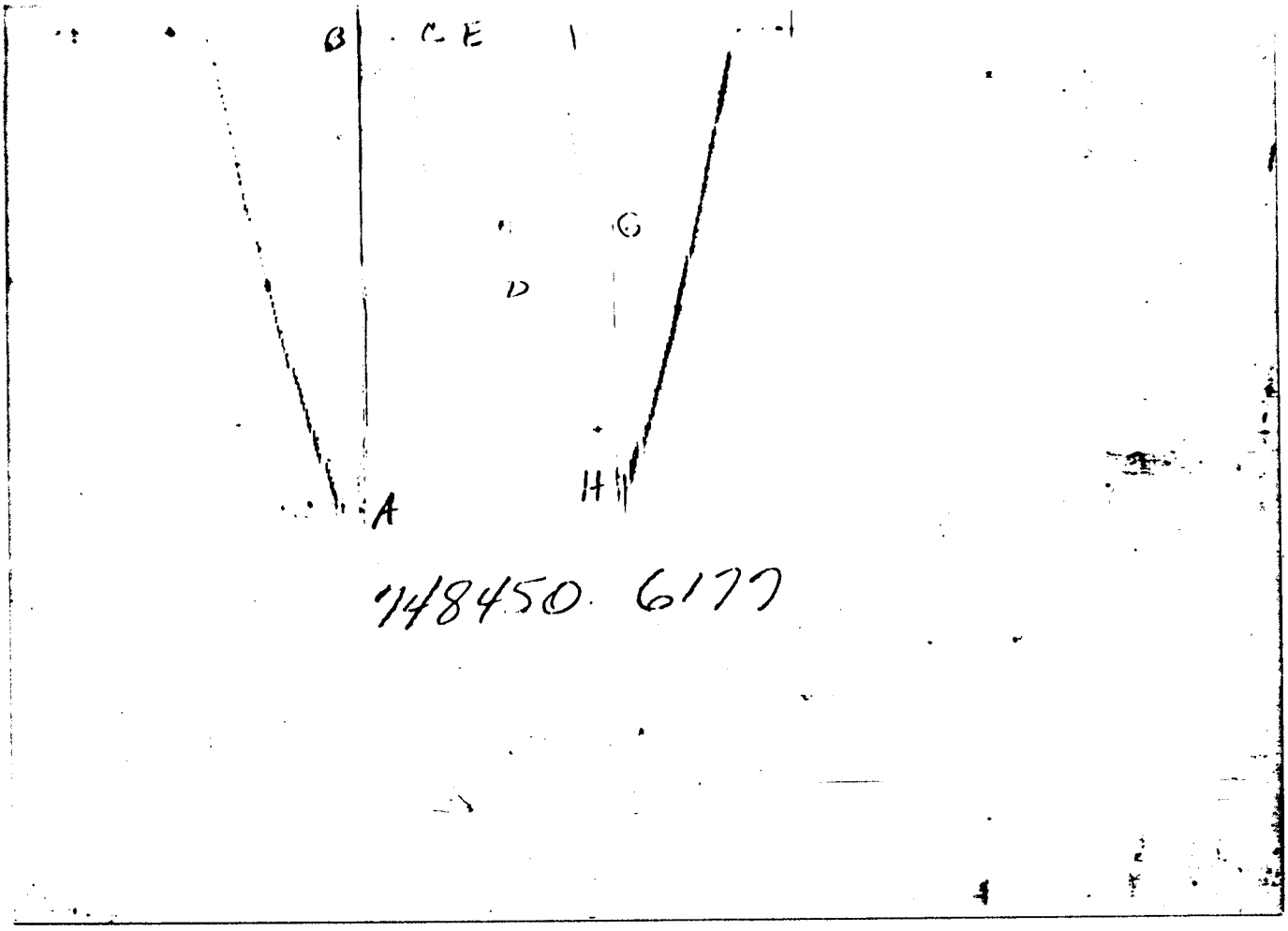
TYPE	AMOUNT	WEIGHT

RECOVERED:

65 FEET OF DRILLING MUD WITH SPOTS OF OIL

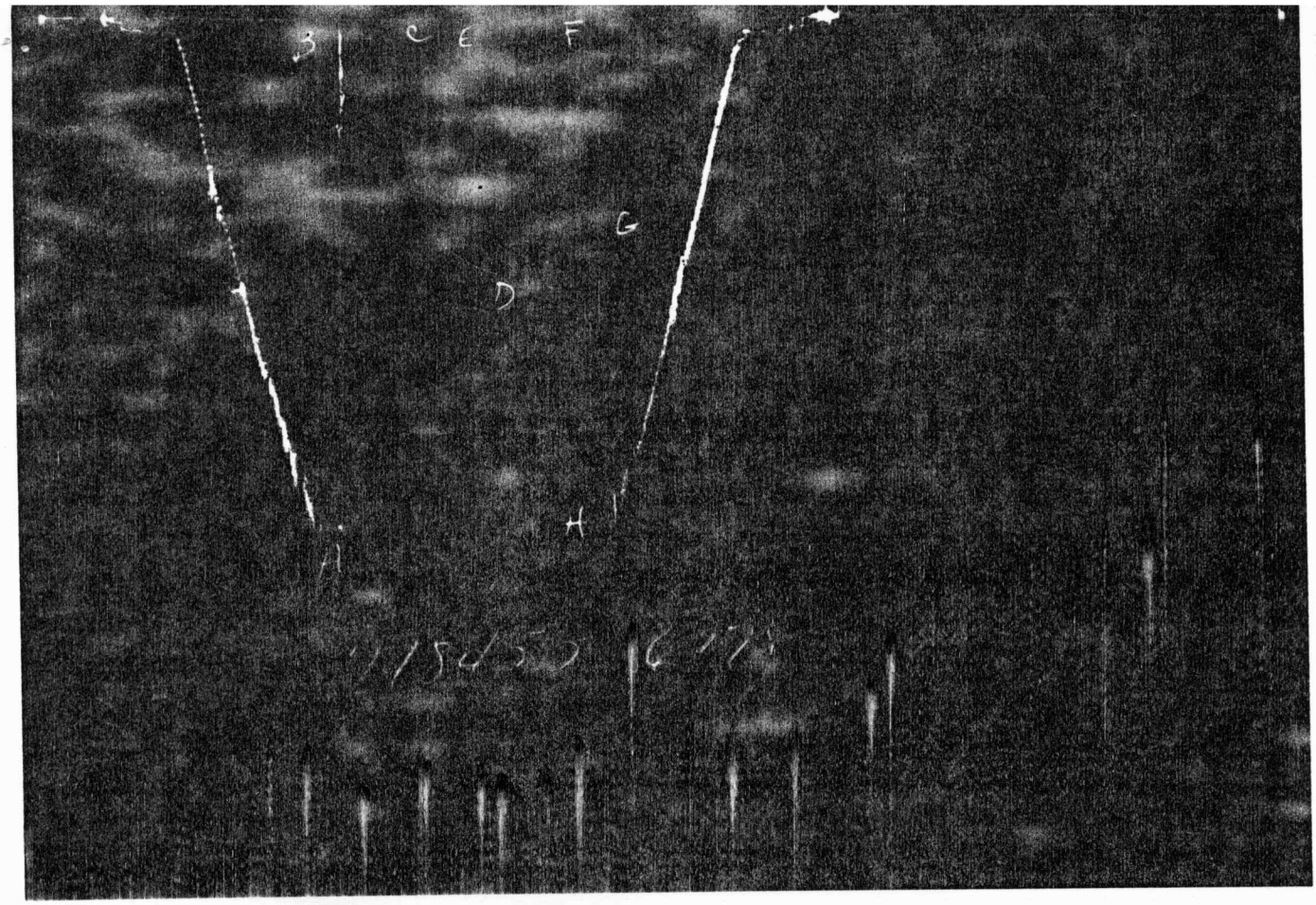
MEASURED FROM TESTER VALVE

REMARKS:



GAUGE NO: 6177 DEPTH: 3889.0 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	1894	1896.3			
B	INITIAL FIRST FLOW	10	12.1	30.0	29.9	F
C	FINAL FIRST FLOW	21	25.6			
C	INITIAL FIRST CLOSED-IN	21	25.6	60.0	59.3	C
D	FINAL FIRST CLOSED-IN	964	977.9			
E	INITIAL SECOND FLOW	21	40.8	30.0	29.5	F
F	FINAL SECOND FLOW	31	37.3			
F	INITIAL SECOND CLOSED-IN	31	37.3	30.0	31.3	C
G	FINAL SECOND CLOSED-IN	798	802.8			
H	FINAL HYDROSTATIC	1894	1905.3			



GAUGE NO: 6178 DEPTH: 4010.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		1957.3			
B	INITIAL FIRST FLOW		86.3	30.0	29.9	F
C	FINAL FIRST FLOW		87.2			
C	INITIAL FIRST CLOSED-IN		87.2	60.0	59.3	C
D	FINAL FIRST CLOSED-IN		1025.0			
E	INITIAL SECOND FLOW		119.2	30.0	29.5	F
F	FINAL SECOND FLOW		95.1			
F	INITIAL SECOND CLOSED-IN		95.1	30.0	31.3	C
G	FINAL SECOND CLOSED-IN		847.8			
H	FINAL HYDROSTATIC		1964.6			

TYPE & SIZE MEASURING DEVICE: _____ TICKET NO: 74845000

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
7-25-84					
0200					CALLED OUT
0400					ON LOCATION-RIG PULLING COLLARS
0430					PICKED UP AND MADE UP TOOLS
0510					SET TOOL IN TABLE
0520					STARTED DRILL PIPE
0656					ON BOTTOM
0659					OPENED TOOL WITH A WEAK BLOW 1"
					DECREASING TO 1/4" IN BUCKET
0729					CLOSED TOOL
0829					OPENED TOOL WITH NO BLOW
0859					CLOSED TOOL
0929					OFF BOTTOM
1100					TOOL IN TABLE
1135					TOOL BROKE AND LAID DOWN
1145					JOB COMPLETED

TICKET NO: 74845000	GAUGE NO: 6177
CLOCK NO: 16165 HOUR: 12	DEPTH: 3889.0

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	12.1			
	2	5.0	13.0	0.8		
	3	10.0	16.7	3.7		
	4	15.0	19.6	3.0		
	5	20.0	22.1	2.5		
	6	25.0	23.7	1.6		
C	7	29.9	25.6	1.9		
		FIRST CLOSED-IN				
C	1	0.0	25.6			
	2	4.0	335.1	309.5	3.5	0.926
	3	8.0	542.2	516.6	6.3	0.674
	4	12.0	655.1	629.5	8.6	0.543
	5	16.0	733.3	707.6	10.4	0.458
	6	20.0	788.0	762.3	12.0	0.397
	7	24.0	829.1	803.5	13.3	0.351
	8	28.0	860.4	834.7	14.5	0.315
	9	32.0	885.7	860.0	15.5	0.286
	10	36.0	906.5	880.9	16.3	0.263
	11	40.0	924.4	898.8	17.1	0.242
	12	44.0	938.4	912.8	17.8	0.225
	13	48.0	951.8	926.2	18.4	0.210
	14	52.0	963.2	937.6	19.0	0.197
	15	56.0	971.4	945.8	19.5	0.186
D	16	59.3	977.9	952.2	19.9	0.177
		SECOND FLOW				
E	1	0.0	40.8			
	2	5.0	33.0	-7.8		
	3	10.0	33.3	0.3		
	4	15.0	33.6	0.3		
	5	20.0	34.4	0.7		
	6	25.0	35.0	0.6		
F	7	29.5	37.3	2.3		
		SECOND CLOSED-IN				
F	1	0.0	37.3			
	2	2.0	108.0	70.7	1.9	1.493
	3	4.0	234.5	197.2	3.7	1.204
	4	6.0	365.4	328.1	5.4	1.038
	5	8.0	455.7	418.3	7.1	0.923
	6	10.0	521.5	484.2	8.6	0.842
	7	12.0	575.2	537.9	10.0	0.774
	8	14.0	617.0	579.7	11.3	0.719
	9	16.0	650.8	613.5	12.6	0.673
	10	18.0	680.1	642.8	13.8	0.633

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
		SECOND CLOSED-IN - CONTINUED				
	11	20.0	706.4	669.0	15.0	0.598
	12	22.0	727.3	690.0	16.1	0.568
	13	24.0	748.2	710.9	17.1	0.541
	14	26.0	764.8	727.5	18.1	0.516
	15	28.0	780.9	743.6	19.0	0.494
	16	30.0	795.8	758.5	19.9	0.474
G	17	31.3	802.8	765.5	20.5	0.462

REMARKS:

TICKET NO: 74845000	GAUGE NO: 6178
CLOCK NO: 14248 HOUR: 12	DEPTH: 4010.0

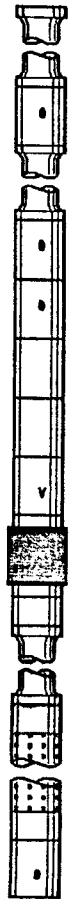
HALLIBURTON SERVICES

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	86.3			
	2	5.0	80.1	-6.1		
	3	10.0	80.7	0.6		
	4	15.0	82.3	1.5		
	5	20.0	84.4	2.1		
	6	25.0	85.8	1.4		
C	7	29.9	87.2	1.4		
			FIRST CLOSED-IN			
C	1	0.0	87.2			
	2	4.0	374.5	287.3	3.6	0.924
	3	8.0	581.2	494.1	6.3	0.676
	4	12.0	701.0	613.8	8.6	0.542
	5	16.0	775.7	688.6	10.4	0.457
	6	20.0	829.3	742.1	12.0	0.397
	7	24.0	871.8	784.7	13.3	0.351
	8	28.0	903.5	816.4	14.4	0.315
	9	32.0	929.4	842.2	15.4	0.286
	10	36.0	950.3	863.2	16.3	0.262
	11	40.0	968.4	881.3	17.1	0.242
	12	44.0	983.4	896.3	17.8	0.225
	13	48.0	997.2	910.1	18.4	0.210
	14	52.0	1008.9	921.8	19.0	0.197
	15	56.0	1018.5	931.4	19.5	0.186
D	16	59.3	1025.0	937.8	19.9	0.177
			SECOND FLOW			
E	1	0.0	119.2			
	2	5.0	99.0	-20.2		
	3	10.0	95.1	-3.9		
	4	15.0	94.0	-1.1		
	5	20.0	94.1	0.1		
	6	25.0	94.7	0.6		
F	7	29.5	95.1	0.4		
			SECOND CLOSED-IN			
F	1	0.0	95.1			
	2	2.0	164.4	69.3	1.9	1.489
	3	4.0	286.8	191.7	3.7	1.203
	4	6.0	410.1	315.0	5.5	1.037
	5	8.0	498.6	403.5	7.1	0.924
	6	10.0	564.4	469.3	8.5	0.843
	7	12.0	616.7	521.6	10.0	0.775
	8	14.0	661.1	566.0	11.3	0.719
	9	16.0	695.6	600.5	12.6	0.674
	10	18.0	726.3	631.2	13.8	0.633

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND CLOSED-IN - CONTINUED			
	11	20.0	752.0	656.9	15.0	0.598
	12	22.0	773.4	678.3	16.0	0.569
	13	24.0	793.1	698.0	17.1	0.541
	14	26.0	810.8	715.8	18.1	0.517
	15	28.0	825.8	730.7	19.0	0.495
	16	30.0	840.4	745.3	19.9	0.474
G	17	31.3	847.8	752.7	20.5	0.462

REMARKS:

TICKET NO. 74845000



		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	3752.0	
50	IMPACT REVERSING SUB.....	5.000	3.000	1.0	3752.0
1	DRILL PIPE.....	4.500	3.826	124.0	
12	DUAL CIP VALVE.....	5.000	0.870	6.0	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	3887.0
80	AP RUNNING CASE.....	5.000	3.060	4.0	3889.0
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	3904.0
5	CROSSOVER.....	5.000	3.000	1.0	
1	DRILL PIPE.....	4.500	3.826	62.0	
5	CROSSOVER.....	5.000	3.000	1.0	
20	FLUSH JOINT ANCHOR.....	5.000	2.870	38.0	
83	HT-500 TEMPERATURE CASE.....	5.000		1.0	4008.0
81	BLANKED-OFF RUNNING CASE.....	5.000		4.0	4010.0
	TOTAL DEPTH				4013.0

EQUIPMENT DATA